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The investment decision process of real estate owners

How to determine property uses in development projects

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Master of Science thesis

Title	The investment decision process of real estate owners – How to determine property uses in development projects
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Abstract

Mixed-use developments have shown to have positive effects on areas' attractiveness and have thus turned into a planning principle in Swedish urban areas. To ensure that a mix of property uses is obtained and that a sufficient amount of housing is built, many municipalities use constraints in the detailed development plans. Despite the many positive aspects of mixed-use developments there are also challenges. Real estate owners are the long-term investors and which projects and property uses they choose to develop are a matter of risk. Real estate development is characterized by complexity and uncertainty where the end product should result in leasable space over time. In order to succeed, a real estate owner needs to make correct forecasts of future demand and supply for the different property uses. The property owner also needs to manage risk related to detailed development plans, permits, flexibility in the design, construction and lease.

The aim of this study is to explore how property owners decide which property uses to include in development projects. The objective is to identify the most important factors behind the decision and to contribute to the body of knowledge concerning the investment decision process of property uses in development projects. The study uses a qualitative method with an abductive approach where semi-structured interviews with 11 of the largest real estate owners in Stockholm have been conducted.

The information from the interviews resulted in a general description of the process real estate owners undertake to decide which property uses to include in development projects. The most important factors behind the decision were shown to be the demand in the area, the will of the municipality, the preconditions of the site and the profitability analysis of the project. The detailed development plan, controlled by the municipality, is what ultimately regulates which property uses that can be developed. Real estate owners can negotiate with the municipality when new plans are developed over which property uses to be included, but in the end it is the municipality who has the final say in the matter.

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Stockholm, 31th of May 2018

Amanda Hjelte Jonasson
Cecilia Prick

Examensarbete

Titel	Fastighetsägares beslutsprocess – hur bestäms verksamhetstyper i utvecklingsprojekt?
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Nyckelord	Verksamhetstyper, fastighetsinvestering, beslutsteori, fastighetsutveckling

Sammanfattning

Att kombinera olika verksamhetstyper i utvecklingsprojekt har visat sig ha flera positiva effekter på områdets attraktivitet och har därmed blivit en allt mer vanligt förekommande princip inom stadsplanering. För att säkerställa att en blandning av verksamhetstyper erhålls och att tillräckligt med bostäder byggs reglerar därför många kommuner användningen av kvartersmarken i detaljplaner. Trots de många positiva aspekterna med att kombinera verksamhetstyper i utvecklingsprojekt finns det även utmaningar. Fastighetsägare är långsiktiga investerare och vilka projekt och verksamhetstyper de utvecklar är en fråga om risk. Fastighetsutveckling präglas av komplexitet och ovisshet där den färdiga produkten ska resultera i uthyrningsbar yta över tid. För att lyckas måste den framtida efterfrågan och utbud för de olika verksamhetstyperna prognostiseras. Fastighetsägaren behöver även hantera risker relaterade till detaljplaner, tillstånd, flexibilitet i design, konstruktion och uthyrning.

Syftet med studien är att undersöka hur fastighetsägare går tillväga för att komma fram till vilka verksamhetstyper som ett utvecklingsprojekt ska innehålla. Målet med arbetet är att identifiera de viktigaste faktorerna som ligger bakom beslutet och att bidra till den samlade kunskapen om hur beslutsprocessen ser ut vid val av verksamhetstyper i utvecklingsprojekt. Studien har använt en kvalitativ metod med en abduktiv ansats där halvstrukturerade intervjuer har genomförts med 11 av de största fastighetsägarna i Stockholm.

Informationen från intervjuerna resulterade i en generell beskrivning av fastighetsägares beslutsprocess för att komma fram till vilka verksamhetstyper ett utvecklingsprojekt ska innehålla. De viktigaste faktorerna bakom beslutet visade sig vara efterfrågan i området, kommunens vilja, platsens förutsättningar och projektets lönsamhetsanalys. Det är detaljplanen som styr vilka verksamhetstyper en utvecklingsprojekt ska innehålla, vilken regleras av kommunen. Fastighetsägarna har möjlighet att komma med förslag på verksamhetstyper vid en detaljplaneprocess men det är i slutändan kommunen som har den sista talan i frågan.

Table of contents

- 1. INTRODUCTION 1**
 - 1.1 BACKGROUND 2
 - 1.2 PURPOSE 3
 - 1.3 RESEARCH QUESTIONS 3
 - 1.4 LIMITATIONS 3
- 2. QUALITATIVE METHOD 4**
 - 2.1 ABDUCTIVE RESEARCH APPROACH 4
 - 2.2 SEMI-STRUCTURED INTERVIEWS 4
 - 2.2.1 *Company presentation* 6
 - 2.3 INTERVIEW ANALYSIS 8
 - 2.4 VALIDITY AND RELIABILITY 9
- 3. THEORETICAL FRAMEWORK 11**
 - 3.1 DECISION THEORY 11
 - 3.2 PORTFOLIO THEORY 13
- 4. LITERATURE REVIEW 15**
 - 4.1 THE PROPERTY MARKET 15
 - 4.1.1 *The user market* 15
 - 4.1.2 *The asset market* 16
 - 4.1.3 *The development of new supply* 18
 - 4.2 URBAN PLANNING 20
 - 4.2.1 *The process of the detailed development plan* 20
 - 4.3 REAL ESTATE DEVELOPMENT 23
 - 4.3.1 *Market Analysis* 24
 - 4.3.1.1 *Demand drivers by property use* 26
 - 4.3.1.2 *Real Estate Development Valuation* 28
 - 4.3.1.3 *Development risks* 30
- 5. ANALYSIS 32**
 - 5.1 DECIDING FACTORS 32
 - 5.2 THE PROCESS BEHIND THE DECISION 35
- 6. DISCUSSION 45**
 - 6.1 FURTHER STUDIES 47
- 7. CONCLUSION 49**
 - 7.1 THE DECIDING FACTORS 49
 - 7.2 THE INVESTMENT DECISION PROCESS 49
 - 7.3 THE REAL ESTATE OWNERS’ LEVEL OF IMPACT 50
- REFERENCES 52**
- APPENDIX A - INTERVIEW QUESTIONS 56**

1. Introduction

A lot of today's urban areas in the Western world are divided into single-use developments, such as housing, offices or shopping districts. A city structure like this is an effect from the introduction of the car into the urban community. Residents of the city could move outside of town without having trouble to keep their jobs in the city. As a consequence spaces for living, working, shopping, entertainment etc. became separately located to form an urban sprawl (Liusman, Ho, Lo, & Lo 2017). The critique against the single-use division has grown not only in Sweden but in all of the Western world. The division makes the citizens car dependent and the separate neighborhoods become empty during different hours of the day: housing areas are deserted during the day and the opposite for office and shopping areas. The mixed-use planning is considered to be the solution to these problems (Bellander 2005).

During the past years the modern society has become more environmentally conscious and modes of transportation such as biking and public transport are gradually replacing the automobile. Because of this change together with the critique of the single-use neighborhoods, mixed-use has turned into a planning principle used for new development in Swedish urban areas. The positive effects of integrating different property uses, such as offices, residential, hotels, retail etc. are believed to be numerous. A more even traffic flow, co-usage of utilities, larger customer groups for services and restaurants, reduced commuting costs and more active and safer neighborhoods, just to name a few (Bellander 2005). A positive effect for real estate owners when mixing different property uses into a smaller space is that rents are likely to be higher, as a consequence of the accompanied benefits. Mixed-use development leads to a more effective land use and the positive outcomes improve environmental quality, social equity as well as economic strength (Liusman et al. 2017).

Mixed-use development was the dominant city planning strategy before the car revolution, when walking was the most common type of transportation. Old city centers are now used as examples for modern city development (Liusman et al. 2017). Other property uses can be incorporated within built districts, either in vacant spaces between buildings or by adding volume on existing buildings and create mixed-use buildings. Many municipalities use constraints in the detailed development plans to make sure more housing units are developed in the city center as well as retail spaces on the ground floor of office and housing buildings (Bellander 2005).

In spite of the many positive effects of a mixed-use community, some challenges have been brought to light. There are some difficulties real estate owners encounter when trying to implement some property uses in the mix. For example, ground floor businesses on less central locations have trouble surviving. The reason for this is believed to be the lingering consumer behaviour. Today's consumers are looking for convenience, competitive prices and a variety of products and are travelling far to make their purchases. In a community where people shop at large outlets and visit well known stores, cafés and restaurants - local businesses have trouble becoming commercially viable. There are many positive effects but also challenges with mixed-use development. The real estate owners are the long-term investors and which projects and property uses they choose to develop are a matter of risk (Grant & Perrott 2011).

1.1 Background

A lot of research has been made on how the decision process is structured when investing in a new property or developing an undeveloped real estate (Demong & Lu 2012). However, previous research is narrow on how the process looks like when deciding on which property uses to include in new development projects and how large share of the project each use should occupy. This is where the research gap exists in this topic and is what this study aims to fill.

Real estate development projects are characterized by high returns. However, projects have a duration of several years where a lot can happen with the economy (Demong & Lu 2012). An expansion and a boom cause a positive spiral where growth drives up asset prices that justify further investments, which in turn boost further growth. The boom will however not last forever. Property markets move in cycles where factors contributing to one phase will lead to development of the next phase in the cycle. The demand for premises will depend on the economic situation and a recession will lead to a decrease in rents and higher vacancy rates (Thedéen 2017).

Real estate projects are therefore also subject to high risk (Demong & Lu 2012). It is crucial for real estate owners to carefully analyze the investment. It is not only the decision of whether to develop or not, all aspects need to be considered such as size, location and property uses (Geltner 2007). Different property uses are affected by different market and macroeconomic factors and are thereby subject to diverse risks (Katzler 2016). It is also a

matter of risk connected to the detailed development plan and its various regulations (Gehner 2007).

Each property use does also have separate demand drivers. The demand within particular urban areas is caused by many different components, such as economic, social and cultural factors (Manganelli 2015). Naturally, population growth has an impact on the need of real estate. More people mean a larger requisite for everything: housing, workplaces, hotels, services and so on. The demography has an influence on the demand as well, since different family sizes, ages etc. have varied preferences (McMahan & McGraw-Hill 2007).

1.2 Purpose

The aim of this study is to explore how property owners decide which property uses to include in development projects. The objective is to identify the most important factors behind the decision and to contribute to the body of knowledge concerning the investment decision process of property uses.

1.3 Research questions

The background to the research problem and the aim of the study have led to the forming of three research questions:

- What are the factors behind the decision of which property uses to include in a development project?
- What is the process behind property owners' decision of which property uses to include in development projects?
- To what extent can property owners have an impact on which property uses to include in their projects?

1.4 Limitations

In this study, development projects refers to both new construction on undeveloped land, new construction replacing existing buildings as well as to existing buildings that are being considerably updated or converted. Furthermore, the study focuses on developments within urban areas in Stockholm and mixed-use is applied on buildings, blocks and city districts.

The interviews will be held with representatives from property owners who hold different property uses within their portfolios. The property owners interviewed are some of the largest ones in Stockholm and the interviews are held with professionals working in Stockholm.

2. Qualitative method

The philosophical position addresses the assumptions about the way researchers view the world, which will support the chosen research strategy and data collection techniques. The research philosophy adopted for this study is interpretivism. Interpretivism focuses on subject meanings, allows for interpretation and suits studies of a social context (Saunders, Lewis & Thornhill 2012).

Research methods can be divided into qualitative and quantitative methods. Quantitative methods seek statistical and quantifiable results. The method emphasizes on objectivity and the result should be based on a large sample of data. Qualitative methods on the other hand focus on the interpretation of words and meanings. The method emphasizes on quality and aims to develop a deeper understanding of the subject studied (Bryman & Bell 2013).

The aim of this study is to explore and describe how property owners decide which property uses to include in development projects. A qualitative method was therefore used to allow for interpretation and to develop a deeper understanding of the process and the factors behind the decision. It was furthermore believed that by using a qualitative method, the complexity behind the decision would be captured.

2.1 Abductive research approach

Saunders et al. (2012) distinguish between an inductive and a deductive research approach. A study that enhances an inductive research approach collects data and develops a theory by analyzing the data. The deductive does the opposite and develops a theoretical framework, which is tested by using data. However it is possible to combine the two approaches and depending on the research, Saunders et. al. (2012) stress that combining both an inductive and a deductive approach could often be an advantage.

This research study uses an abductive research approach, which combines both the inductive and deductive approaches. The abductive research approach uses empirical data in combination with previous research to get a better understanding of the studied phenomena. This research approach suits this study since alterations between theory and empirics are needed as previous research is narrow on the subject (Olsson & Sörensen 2011).

2.2 Semi-structured interviews

Interviews are commonly categorized as structured, semi-structured and unstructured. Structured interviews are highly formal and aim to gather quantifiable data. The interviewer

reads questions from a standardized questionnaire to the respondents and the answers are recorded to a schedule with pre-coded answers. Unstructured interviews are informal and the opposite to structured interviews. There is no questionnaire, instead the respondents are able to talk freely around specific subjects. Somewhere in between is where semi-structured interviews are found. Semi-structured interviews consist of open-ended questions, which are prepared in advance. Unlike the structured interviews, the researcher can adapt the questions to the respective interview and the open-ended questions allow for adjustments and clarifications during the interviews (Saunders et al. 2012).

The data collection technique used in this study has been semi-structured interviews with representatives from property owners. Semi-structured interviews, which combine flexibility with structure, create conditions for high quality empirical data. Semi-structured interviews are suitable when the purpose of a study is to explore a subject (Gillham 2008), which is aligned with the aim of this study.

The choice of property owners was based on their property portfolio and geographical locations. It was believed that property owners who hold several property uses would be able to fully reflect the complexity behind the decision of which property uses to include in development projects. Stockholm was chosen as geographical area so the interviewed property owners also had to own properties in Stockholm. Approximately fifteen property owners were contacted by mail in February and twelve semi-structured interviews were held with eleven different property owners in Mars. Two interviews were made at Jernhusen, with representatives respectively responsible for their business areas city development and Stockholm station - both relevant to the subject of this thesis. Some of the property owners who were contacted answered that they could not participate due to lack of time.

The research questions formed the major topics for the interviews and became our key questions. With the literature review as a basis, attendant questions were formulated under each key question as a guide to keep the interviews on the right track and to get a deeper understanding of each topic. The key questions were sent to the respondents approximately a week before the interviews. Both the aim of the study and the concept of semi-structured interviews were explained in the mail to create conditions for a fruitful interview for both parties, see Appendix A for interview questions. The interviews were then held at the property owners' offices and lasted for approximately one hour. All representatives agreed on being recorded except one. The recordings were then transliterated.

When performing interviews it is important to be aware of interviewers' tendency to make their own interpretations of what has actually been said. We all have preconceived notions based on experience, existent knowledge and preferences, which affect how people interpret new knowledge. This is important to consider as this can cause biases. The interviewer needs to be open-minded and be observant of her own expectations of the findings from the interviews (Gillham 2008). It is also important to note that the different representatives in this study do not have the same profession or experience which will together with their personalities influence their angle of approach when answering the questions.

Furthermore, it is important to be aware of humans' tendency to express opinions, which are not in line with how they actually behave. This can ultimately give a skewed picture of how the decisions are actually made (Gillham 2008).

2.2.1 Company presentation

Below follows a short presentation of each property owner interviewed. The table below shows property uses, ownership and locations of each company.

Atrium Ljungberg

Angela Berg, Business Area Director for the business area Project. Atrium Ljungberg owns, develops and manages 53 properties with a property value of SEK 41 billion (Atrium Ljungberg 2018).

Castellum

Maria Jonsson, Head of Property Development for the region Stockholm north. Castellum owns, develops and manages 676 properties with a property value of SEK 81 billion (Castellum 2018).

Fabege

Charlotte Liliegren, Head of Property Development and Valuation. Fabege owns, develops and manages 90 properties with a property value of SEK 57,9 billion (Fabege 2018).

Folksam Fastigheter

Lars Johnsson, Head of Real Estate. Folksam Fastigheter owns and develops 152 properties with a property value of SEK 33,1 billion (Folksam 2018).

Humlegården

Maria Lidström, Head of Investment and Development. Humlegården owns, develops and manages 53 properties with a property value of SEK 22 billion (Humlegården Fastigheter 2018).

Jernhusen

Jennie Kastengren, Regional Development Manager for City development and Daniel Markström, Regional Development Manager for Stockholm station. Jernhusen owns, develops and manages approximately 161 properties with a property value of SEK 16,2 billion (Jernhusen 2018).

Klövern

Patrik Mellgren, Manager Project Development. Klöveren owns, develops and manages 405 properties with a property value of SEK 43 billion (Klövern 2018).

Kungsleden

Frida Stannow Lind, Head of Property Development. Kungsleden owns, develops and manages 222 properties with a property value of SEK 28,9 billion (Kungsleden 2018).

Niam

Hans Lisserkers, Head of Project Development. Niam owns and develops properties with a property value of €3 billion (Niam 2018).

Skandia Fastigheter

Åke Pettersson, Head of Business Development. Skandia Fastigheter owns, develops and manages 141 properties with a property value of SEK 55 billion (Skandia Fastigheter 2018).

Vasakronan

Per Dahlbeck, Senior Investment Manager. Vasakronan owns, develops and manages 179 properties with property value of SEK 127 billion (Vasakronan 2018).

Property Owner	Property types	Location	Owner
Atrium Ljungberg	Offices, retail, residential and other	Stockholm, Uppsala, Malmö and Gothenburg	Listed property company
Castellum	Offices, retail, warehouses, industrial and social housing	Owns properties in approximately 23 cities	Listed property company
Fabege	Offices, retail, industrial, warehouses and other	Stockholm Region	Listed property company
Folksam Fastigheter	Offices, residential, hotel and social housing	Stockholm, Gothenburg and Skåne	Folksam Liv, Folksam Sak, KPA Pension and KPs Pensionsstiftelse.
Humlegården	Offices, retail, garages and other	Stockholm	19 regional insurance companies, LF Liv and LF Sak
Jernhusen	Office, retail, hotels, warehouses, industrial, station facilities and other	Spread across Sweden	The Swedish State
Klövern	Offices, retail, warehouses and logistics	Stockholm, Kalmar, Linköping, Norrköping, Nyköping, Västerås, Örebro, Falun, Härnösand, Gothenburg, Karlstad, Malmö, Halmstad, Lund and Copenhagen	Listed property company
Kungsleden	Offices, retail, industrial, warehouses and other	Stockholm, Gothenburg, Malmö and Mälardalen	Listed property company
Niam	Offices, retail, residential and hotels	Denmark, Finland, Norway, Poland and Sweden— Stockholm, Åstorp, Gävle, Kalmar, Norrköping, Umeå and Mora	The investment company Stronghold
Skandia Fastigheter	Offices, shopping centres and residential	Uppsala, Stockholm, Gothenburg, Malmö, Helsingborg, Skövde and Trelleborg	Livförsäkringsbolaget Skandia
Vasakronan	Offices, retail and other	Stockholm, Uppsala, Gothenburg, Malmö and Lund	Jointly owned by the First, Second, Third and Fourth Swedish National Pension Funds

Table 1. Property uses, location and owner of each company interviewed.

2.3 Interview analysis

The raw data from the interviews were compiled in one document where each chapter represented one interview. Printouts of the transcriptions were then read through in order to get an overall impression of the content. Based on the purpose and research questions of this study, the substantial parts in each chapter were highlighted. The authors carried out this preliminary review separately. The process of analyzing empirics involves interpretation and selection. In order to avoid exclusion of substantial parts and a distortion of the content, the result from the preliminary reviews by respective author was then compared to each other. Gillham (2008) furthermore expresses that a preliminary review of the transcriptions also contributes to the identification of themes and categories within the text.

To identify a general process behind the decision of which property uses to include in a development project, different stages were distinguished from the content in the preliminary review. This was also executed separately and the results were then compared. The identification of the stages concerning the process evolved as the narratives from each

interview were worked through. There were a lot of similarities between the respondents' descriptions of their processes, which could therefore represent a generalizable description of the process. However, the different stages identified in the process do not fit all of the respondents' descriptions precisely. A single interview will therefore not contain evidence for all of the stages within the decision process presented in the analysis in this report. The substantial parts from the interviews concerning each stage were summarized in a general description along with example quotes.

The factors behind the decision of which property uses to include in a development project were identified by a thorough review of the substantial parts identified from the preliminary review. The factors identified were then ranked by the number of real estate owners who mentioned them. From the ranking, three levels of the factors were retrieved: most mentioned, second most mentioned and third most mentioned.

2.4 Validity and Reliability

Reliability refers to the degree of consistency, if the same result would be found if another researcher replicated the study. Validity refers to the level of accuracy between the empirics and the conclusions drawn. The two concepts are considered to be crucial for a study to be trustworthy. Both reliability and validity are derived from the positivistic approach and are commonly used in quantitative research (Eriksson & Kovalainen 2008).

When analyzing results from semi-structured interviews it is almost inevitable to not create subjective constructions of what the respondents have said. The process of data reduction means that the researcher will make assortments and interpret the answers from the respondents. Qualitative studies do not aim to answer questions of *how much* or *how many*. Qualitative studies aim to answer questions like *why* and are characterized by a close interaction between the researcher and the studied subject (Gillham 2008). Qualitative researchers therefore argue whether the two concepts are applicable on qualitative studies. As reliability and validity only partially can be applied on qualitative studies, the following conditions have evolved to assure trustworthiness in qualitative studies: credibility, transferability, dependability and confirmability (Eriksson & Kovalainen 2008).

Credibility refers to how well the result represents a trustworthy interpretation of the interviews, whether it is a strong logical link between the respondents' views and the findings (Korstjens & Moser 2017). To increase the level of credibility for this study, the interviews

were recorded which made it possible to go back and listen to what the respondents really said. The participants were also given the opportunity to read the analysis and discussion parts in this study before it was published which gave the respondents the opportunity to correct errors and to provide additional information if a clarification was needed.

Transferability refers to in what extent the results from this study are useful or applicable to other settings with other respondents. It is up to the reader to make the judgement of whether the result is transferable but it is the researcher's responsibility to enable the reader to make this judgement. The study should therefore include a thick description of the research process, describing participants, method and analysis in detail (Korstjens & Moser 2017). The methodology section in this study includes descriptions of research design, choice of participants, how the interviews were analyzed as well as potential problems and pitfalls that need to be considered.

Dependability refers to the stability of findings over time, which means that the findings should be consistent and repeatable if similar respondents were used within a similar context. The aim is to assure that the result is consistent with the information gathered from the interviews (Korstjens & Moser 2017). In order to increase the dependability in this study, the data was analyzed separately, as described earlier in this chapter, and the result was then compared. The study has also been peer reviewed at regular intervals.

Confirmability refers to the degree of neutrality. The authors need to consider their role in the research process and make sure that the interpretations of the interviews are not based on their preferences or that they have influenced the respondents' answers (Korstjens & Moser 2017). By using semi-structured interviews the tendency for leading questions will decrease. The methodology section in this study has considered preconceived notions, people's tendency to make their own interpretations and the possible effects of self-construal in the respondents' answers. These aspects have been considered throughout the research process.

3. Theoretical framework

The following section presents the main theories used in this thesis. The portfolio theory was used to understand how real estate owners could diversify their property portfolios by investing in different property uses. The decision theory was applied in the analysis of the interviews and helped to interpret how the real estate owners make their decisions.

3.1 Decision theory

Decision theory is the study of assessment models engaged when making considered choices. In the real estate investment sector there are several models for the pricing and allocation of assets. These models are largely focused on the risk and previous performance of the respective assets. Though, in many cases, the final determination will be a result of factors other than which theoretical models can explain - to many decision makers' unawareness (French 2001).

Two types of models are usually defined in decision theory literature - the descriptive and the normative. There is a distinctive difference between the models, based on from where they are constructed. The normative type focuses on how decisions *should* be made, while the descriptive type focuses on how decisions *actually are* made. If all decisions were to be made as they should be made, there would be no variance between the models. Nevertheless, there is a heavy volume of proof showing that this is not the case (French 2001).

Roberts and Henneberry (2007) provide a normative model of the decision making process of real estate acquisitions based on a composition of normative models proposed in the literature. The model includes ten stages:

1. Goals and decision criteria are formulated for the real estate investment, which form the foundation of the investment strategy in the next stage.
2. An investment strategy is formulated which sets the framework of the investment decision process as a whole. The strategy includes requirements and criteria of location, size, risk and returns, which will guide the decision maker along the process.
3. A search for potential properties in line with the investment strategy is initiated.
4. Market conditions such as the economic and political situation as well as the property market at a local and national level are analyzed using market databases, historical returns and information of forecasts. The possible properties found in the previous stage are analyzed to

determine if there is a fit between the property and the real estate portfolio.

5. Based on the information gathered from the analyzes in the previous stage, predictions on outcomes of the different properties are made. This will show which property that is expected to provide the highest return at the required level of risk.

6. The alternative properties to invest in are compared to the investment strategy and the decision criteria formulated in the beginning. Are there any properties that match the goals of the investment exactly? The comparison presuppose that the decision maker is objective and only answers yes or no to the question above.

7. If the decision maker cannot answer yes, a trade-off has to be made between the different properties. The characteristics of the investments are put against each other to assess which one best meeting the goals and criteria's stipulated in the strategy.

8. Based on the information gathered so far from the previous stages, the properties that either not meet the decision criteria or only meet parts of the criteria are excluded and are no longer potential investments.

9. If there is more than one property that passed the previous stage, the decision-maker selects the one that best fits their portfolio.

10. Negotiations with the owner of the selected property are initiated.

Most asset allocation models are normative and make judgements regarding the future based on historical data. The retrospective focus is a deficiency for the models in the way that they do not take the current circumstances of the market into consideration. Past performance is an important part of the decision, but not exclusively. Modern portfolio theory, often referred to today and pioneered by Harry Markowitz in 1959, employs asset allocation models. The theory makes assumptions that all preferences regarding the investment decision are based on financial outcomes alone. So, if some factor besides the financial outcome has an influence on the decision - the result will deviate from the model's predictions (French 2001).

The backbone in the process of decision-making is how the investor registers risk. Risk will be extra important to analyze in decision situations under uncertainty (French 2001). In reality, the majority of people are not consistent in how they approach risk. Although investors' intention is to act rational and make informed decisions, behavioral aspects affect

the decision process and cause investors to deviate from the normative models (Roberts & Henneberry 2007).

Research has shown that due to limitations of cognitive capacity and information processing, decision makers may take shortcuts and use rules of thumb during the investment decision process to overcome these limitations. People do also have the tendency to be overconfident about their abilities, which can cause investors to invest in what is familiar instead of taking all information available into account (Ritter 2003). Furthermore, research has shown that people who observe the same phenomena perceive or interpret it differently. People have the tendency to seek for information or interpret information in accordance with expectations and beliefs (Nickerson 1998). Studies have also shown that people who were aggressive in one case could be cautious in another. Managers in the working life are continually faced with decisions with uncertain consequences. It is therefore of great importance that managers understand risk, to enlarge their chances to make good decisions (Divekar, Bangal & Sumangala 2012).

3.2 Portfolio theory

Harry Markowitz's portfolio theory sets the groundwork for the modern portfolio theory often used today. To simplify the basic concept of portfolio theory it says "*do not put all your eggs in one basket*". Portfolio business is a matter of risk control and takes its shape in the concept of diversification. Diversification occurs when the risk of the portfolio is allocated between different assets within it, resulting in a lower risk for the portfolio as a whole. The expected return of the portfolio is the weighted average of the expected returns of the included assets. The risk of the portfolio however, depends on the correlation of the assets' returns. If they are positively correlated, they react to the same macroeconomic news and events and their returns move up and down simultaneously. If the asset returns are positively correlated, the risk of the portfolio is the weighted average of the assets' risks and no diversification is exploited. Though, if the assets' returns are negatively correlated and move in the opposite directions, diversification occurs. The risk of the portfolio is lowered since its assets react differently on the market (Baum & Hartzell 2011).

Within portfolio theory there are two types of risk identified: specific risk and market risk. Each risk discovered can be allocated to one of the two types, which is important to do since specific risk can be diversified, as explained in the previous section, whereas market risk cannot. The specific risk for real estate concerns the property's particular qualities such as

size and location (Katzler 2005). These qualities can result in a risk for vacancy. The risk depends on all the different features of a property and can be described as the deviation between the expected revenue and the actual revenue (Lind & Lundström 2009).

Portfolio theory is used by real estate owners when creating their collection of properties. The usual strategy when creating real estate portfolios is to diversify by property use and/or geographical location. There are many indicators which point to that returns of different property uses react to different economic factors. On the same terms there should be differences in the performance between regions (Eichholtz, Hoesli, MacGregor & Nanthakumaran 1995).

4. Literature review

The following section explains the property market, the urban planning and the real estate development. The review of the property market is used to understand how different property uses are affected by different market factors. The urban planning and its process are used to comprehend the municipality's impact on developments. The real estate development and its process are used to understand how the procedure of real estate owners' developments is generally made.

4.1 The Property Market

General price theory can be applied to real estate where the interaction between supply and demand affects the price. The property market is connected to two interlinked markets: the user market and the financial asset market where a change in one leads to changes in the other. The property market is in equilibrium when both submarkets respectively are in equilibrium (DiPascal & Wheaton 1992).

4.1.1 The user market

The user market refers to users who occupy or seek to occupy space (Ball, Lizieri & MacGregor 2002). The demand for space constitutes of individuals, households and firms who want to use space either by renting or owning. The figure 1 below shows the interaction between supply and demand in the short run. For tenants, rent is the annual cost to occupy space. For owners, the rent is defined as the annualized cost connected with the ownership (Geltner 2007).

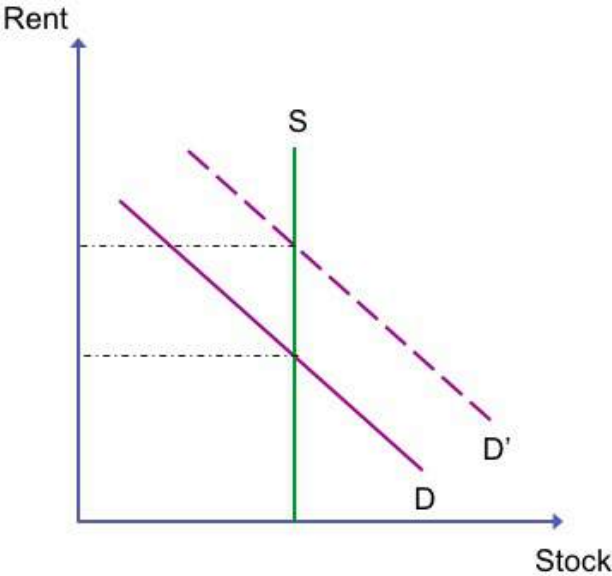


Figure 1. The interaction between supply and demand in the user market. Authors' own copyright.

The demand curve shows the demand for space for different rent levels, all else equal. The lower the rent, the greater the demand for space (Ball et. al. 2002). The supply of space will depend on the amount of space currently on the market and the amount of newly constructed space that has been completed. The slope of the supply curve shows how price sensitive the supply is. Compared to other markets, in the property market it takes time to increase the quantity supplied. Buildings have a long economic life and it takes time to construct new ones. Newly constructed spaces therefore only constitute a small portion of the existing stock of space. This means that in the short run, the slope of the supply curve in the property market is vertical. As new space will arise and some will diminish, the supply curve will shift to the left or right, though still vertical. In the short run, price changes on the property market are therefore predominantly connected to changes in demand. Demand is also the major determinant of rental price (Lind & Persson 2011).

The interaction between supply and demand determines the rental price and signals the current value of space. It also provides information of whether there is an excessive supply or a shortage. The demand for space depends on both the rent level but also exogenous factors such as income, number of households and firms' level of production (DiPasquale & Wheaton 1992). For example, if firms' outputs increase, the office employment will grow. This will in turn increase the demand for office space since more space is needed to house these new workers. The increase in demand for office space will shift the demand curve to the right as shown by D' in Figure 1, which will raise the rents with a constant supply (Ball et. al. 2002). This increase in demand can be translated to that space users are willing to pay more for the same location than they did before (Geltner 2007).

4.1.2 The asset market

Property can also be seen as a financial asset and therefore also belong to the asset market. The asset market is the market of ownership of real estate assets which includes land and possible buildings thereon (Wyatt 2008). The supply side in this market consists of real estate owners who want to sell real estate assets and the demand side consists of investors who want to buy real estate assets (Geltner 2007). The price of these assets depends on the demand for each property use and the current stock available. The price of shopping malls for example depends on how many investors who seek to own these types of properties and the number of available shopping centers on the market (DiPascal & Wheaton 1992). Real estate asset values are in general determined by interactions between supply and demand (Geltner 2007).

The demand for ownership on the asset market depends on the rent levels determined in the user market. Changes in rent levels on the user market affect investors' current and future income streams which make it more or less attractive to hold real estate assets (DiPascal & Wheaton 1992). Figure 2 below shows the interaction between rent and property price in the asset market. The ray from the origin is the ratio of rent to price, which is called the capitalization rate. The capitalization rate is the yield that investors demand in order to own real estate assets (Geltner 2007). The capitalization rate is used by investors to, together with the incomes from rent, determine the price of the property. The net operating income is usually provided from the seller so the price that the investor is willing to pay depends on which capitalization rate he or she chooses. Usually investors look at the rates other investors have chosen in similar transactions close in time. The capitalization rate can be seen as a risk-adjusted discount rate minus the expected percentage change in value (McDonald 2015).

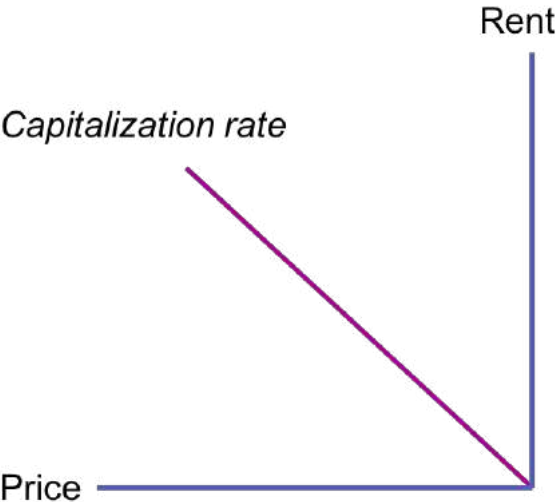


Figure 2. The interaction between rent and property price in the asset market. Authors' own copyright.

The capitalization rate determined by investors depends on several factors. The opportunity cost of capital is one factor. If interest rates and current yields on stocks or bonds are higher than those on real estate assets, investors are more willing to hold these types of assets instead of real estate. The expectations of future income growth also affect the capitalization rate. The future level of net rent depends on supply and demand in the space market where the property is located. This is something investors need to try to forecast. If investors believe the current state of the market is below the long-run equilibrium, it could be due to future plans in the area with a new subway station for example. Therefore the demand for space is expected to

increase and investors will be willing to pay more for the property per dollar of current net rent and the capitalization rate will be lower. Risk is another factor affecting the capitalization rate. Using the same example as above where there are plans for a new subway station in connection to the property: if it is already decided that a new subway station will be built in the next 5 to 10 years, then the net income from the property would be seen as less risky than if the plan for a new station had just begun and investors did not know yet whether the new station would become reality or not (Geltner 2007).

4.1.3 The development of new supply

Figure 3 below shows how the asset market and the user market interrelate. The quadrant in the top right corner represents the demand for space as explained in the section above. In equilibrium, the demand for space equals the stock of space and the current interaction between them determines the rent. The top left corner shows the asset market. Moving from the rent set in the user market through a determined capitalization rate and down to the horizontal axis a, price level for real estate assets is determined (DiPascal & Wheaton 1992).

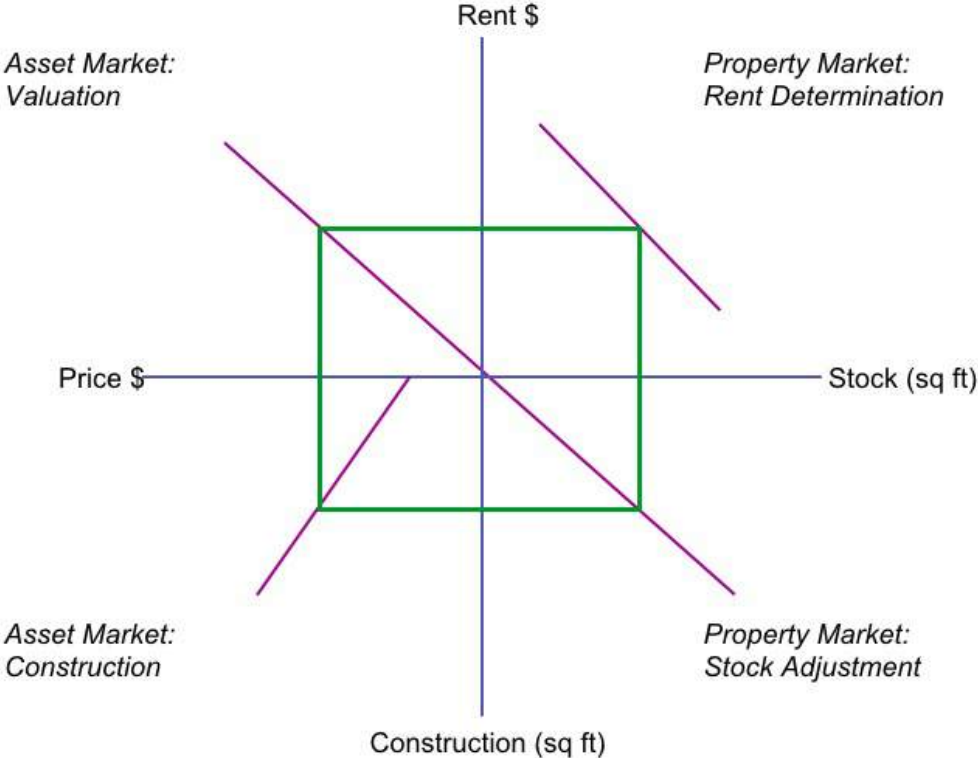


Figure 3. The relation between the asset market and the user market (DiPascal & Wheaon 1992).

The level of new supply depends on the price level of real estate assets determined in the asset market relative to the cost of replacing and construction. The bottom left corner shows how the construction of new assets is determined. The slope represents the replacement cost, which indicates that the more space developed, the more will the cost of construction increase. It also shows that as prices of real assets increase, more space will be constructed (DiPascal & Wheaton 1992).

Development of new supply will only take place if demand exceeds the existing supply, or in other words, where the price of real estate assets exceeds the replacement cost. Where real estate asset prices equal their replacement cost, no further development will occur, the markets are in equilibrium. Moving from the price determined in the asset market, down to the slope of the replacement cost and over to the vertical axis, the level of new construction is shown. The bottom right corner represents the annual flow of new construction completed in the long run. The annual level of construction (on the vertical axis) that is needed in order to keep the particular stock level (on the horizontal level) constant is represented by the slope (DiPascal & Wheaton 1992).

Continuing with the same illustrative example as from the user market section where an increase in firms' output causes the demand curve to shift to the right - causing rents to increase with a constant supply. The increase in rent causes asset prices to increase in the top left quadrant, see figure 4 below. The increase in price of real estate assets causes prices to exceed the replacement cost. This will encourage new development, which will eventually lead to an increase in the stock of space (Ball et. al. 2002).

The user market ultimately determines the rent considering a given level of existing stock. The rent does in turn, together with the capitalization rate determine the price of real estate assets. The price of real estate determines the level of construction which when completed adds to the stock of supply. The two markets are in equilibrium when the level of stock at the top right corner equals the new level of stock in the bottom right corner (DiPascal & Wheaton 1992).

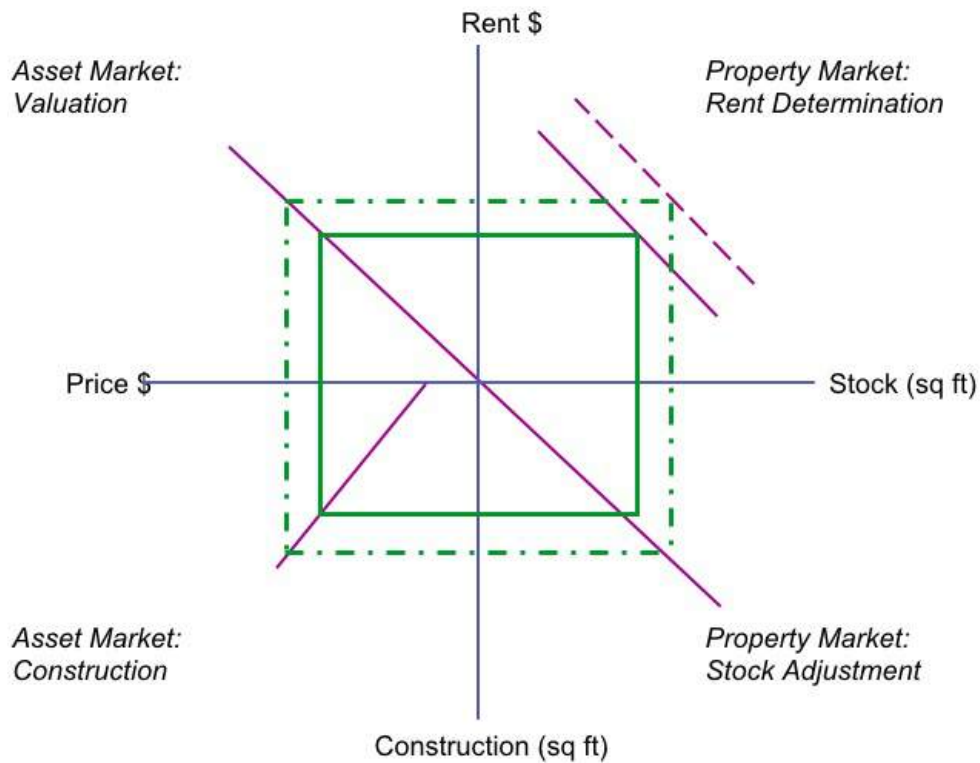


Figure 4. The relation between the asset market and the user market when demand increase (DiPascal & Wheaon 1992).

4.2 Urban planning

More people want to live in urban areas and with more people moving into the cities, municipalities face the challenge to sustain and create attractive urban environments. Mixed-use developments and densification have become two concepts within sustainable urban development that are said to have positive effects on social, ecological and economic sustainability (Bellander 2005). Social sustainability in urban development refers to integration where conditions are created for people to meet and interact and where segregation is actively counteracted (Boverket 2009). Densification of urban areas link different parts of the city together and cross invisible barriers. A mix of property uses does in turn increase accessibility to different services and activities. An area consisting of housing, retail and offices creates conditions for a more lively area where there is a flow of people both during the day and night. Together with densification, areas become safer and the level of services in the areas is improved (Boverket 2009; Boverket 2016b).

Ecological sustainability concerns the reduction of humans' negative impact on the environment and sustains the biological diversity. Cities need to reduce their ecological footprint and by densifying urban areas and combining different property uses, the car

dependency will decrease. Closeness to work and other businesses and activities, creates opportunities to use other means of transportation such as biking or walking (Sveriges Kommuner & Landsting 2010). Economic sustainability can both be referred to economic developments that do not interfere with social or ecological sustainability or economic growth that is considered to be sustainable as long as the amount of capital increases (Kungliga Tekniska Högskolan 2015). Economic sustainability applied to urban development can be referred to the challenge to create attractive and creative environments that attract firms and investments. A mix of property uses within an area or district promotes business establishments and a combination of housing and offices creates a larger customer base (Sveriges Kommuner & Landsting 2010).

The municipalities are responsible for the planning of land and water areas and are the only ones who have the authority to approve detailed development plans or decide whether or not planning of an area should take place (Boverket 2016a). A detailed development plan regulates land and water use as well as how the development should look like in a specific area. The plan regulates public spaces, urban areas, water areas and how these are to be used and formed within each specific area. The use within these areas is controlled by plan regulations. What *needs to be* regulated and what *can be* regulated are both established in the Swedish Planning and Building Act. The municipality should for example regulate the use in development districts. That is, if it should be housing, offices, retail, hotels and/or schools etc. If the area is suitable for various uses, a combination of uses can be stipulated. Several-use plans become more flexible than plans with only one use (Boverket 2017a). The detailed development plan is legally binding and gives individuals the right to exploit in accordance with the plan during a period of 5-15 years (Boverket 2016a). Municipalities does therefore ultimately have a considerable role when it comes to sustainable development and their decisions will have a great impact on the urban environments and its public spaces (Sveriges Kommuner & Landsting 2015).

However, there are a lot of stakeholders involved when new detailed development plans are to be developed and thereby conflicting objectives to manage for municipalities (Sveriges Kommuner & Landsting 2010). Both individual and public interests need to be weighted together in an open and democratic process (Boverket 2016a). There are also challenges with densification of urban areas and by regulating a mix of property uses within detailed development plans. By adding buildings within a built environment the level of noise can increase and green spaces diminish (Boverket 2016b). A challenge with regulating a mix of

property uses in detailed development plan is to forecast whether these type of property uses will be adequate and attractive for possible operators in the long-term. Since a detailed development plan is legally binding for 10 to 15 years, an area unable to attract these type of occupants will run the risk of empty premises which will not contribute to a lively urban area and ultimately not to sustainability (Boverket 2009).

4.2.1 The process of the detailed development plan

The Swedish Planning and Building Act regulates in which cases a detailed development plan has to be established before a building permission can be given. However, it is the municipalities who control when and where a plan is going to be established. A detailed development plan needs to be developed if a new built environment requires extensive building permits for the construction works. A plan also needs to be developed for a single new construction work in the following three cases: the construction has a significant impact on the surroundings, the construction is being built on land where there is a large demand for land or if the construction could have a significant impact on the environment. A detailed development plan is also required if the built environment is to be changed or needs to be preserved (Boverket 2014a).

The process municipalities undertake when planning land and water areas with a detailed development plan includes several stages. Depending on how extensive the plan is aimed to be and the level of interest from the public, the process can either constitute of a standard procedure or an extended procedure (Boverket 2014b). The standard process is displayed in figure 5 below and the following text will be based on this procedure. A detailed development plan can be initiated by real estate owners or developers who want to make changes or by the municipalities themselves. The development idea will be tested with the conditions of the site during the process. Questions concerning how the site are to be used, how existing buildings should be used, what type of new buildings are needed, what kind of public spaces are needed and how should the area be connected with surrounding areas are addressed. The proposal will be presented and negotiated several times before the consultation stage, the official first stage of the detailed development plan process (Stockholm Stad 2018).



Figure 5. The standard process when developing detailed development plans (Boverket 2018)

During the consultation stage the municipality will consult with concerned stakeholders such as the County Administrative Board, the Cadastral Authority, identified parties and residents concerned. When the proposal has been consulted, the information and comments gathered will be processed. The municipality will then, prior to the review, announce the proposal of the detailed development plan on their pin-board and send it to the stakeholders concerned (Boverket 2018). When the proposal has been announced it will be available for review for at least two weeks. During this stage authorities, concerned parties, affected parties and those who for other reasons want to review the plan will be able to submit comments on the proposal (Boverket 2015). If the comments from the review will cause the proposal to change substantially, it will be subject to another review. The comments from the review will then be compiled in a review report, which will include the municipality's standpoint concerning the submitted comments.

It is the municipality's role to determine whether or not the planning process have shown that the land or water area is suitable for the proposed idea. The decision to adopt a detailed plan should then be announced on their pinboard and sent to the concerned stakeholders. Those who are not satisfied with the adopted detailed development plan have the right to appeal if they have submitted comments in the review stage at latest and if they will be affected by the plan. If the detailed development plan has not been appealed after three weeks and the Count Administrative Board has not decided to re-examine the plan it will take legal force. However, if the detailed development is appealed or the Count Administrative Board wants the plan to be re-examined, the plan can either be re-appealed or the appeals need to be settled before the plan can take legal force (Boverket 2017b).

4.3 Real estate development

Real estate development is characterized by complexity and uncertainty. A development project should result in usable space over time with associated services where customers want

to spend their time. In order to succeed, a developer needs to make correct forecasts of future demand and supply. The developer also needs to manage risk related to detailed development plans, permits, flexibility in the design, construction, lease and the long time horizon. Due to this complexity and uncertainty, it is crucial that the development is carefully analyzed in order to assess risks in an early phase (Gehner 2007).

Real estate development is the transformation of an idea into a construction meeting the developer's objective. The development process can be divided into five different phases: initiation, feasibility, commitment, construction and management (Miles, Berens, Eppli & Weiss 2007). Since this thesis focuses on the investment decision process of which property uses to include in a development project, the next section will concentrate on the first two stages.

A development project starts with an idea. The ideas can emerge in different ways, in some cases a property owner has a property that is in need of redevelopment. It could also be that a tenant has moved out of a building and the property owner needs to find a new use for the building. Alternatively, it could be an organization that is looking for new space and the property owner has a site possible to fit the organization's needs (Miles et. al. 2007). Even though it is just an idea, the realization of the idea will ultimately affect the surrounding environments. In turn, the surrounding environments will affect the success of the developed property (Miles et. al. 2007). It is therefore crucial that the property owner understands the market and analyzes the demand and supply of the planned property use on the market (Costello & Preller 2010).

4.3.1 Market Analysis

In order to gather the information required to identify the demand and supply of a particular property use, a real estate market analysis should be conducted. The aim of the analysis is to investigate and make a forecast of the future demand for a certain use of property and then relate the demand to the relevant supply. The real estate market has three characteristic features important to understand in a market analysis: the uniqueness of each property, the set location and the long duration (Lind & Persson 2011). A market analysis can ultimately back up the investment decision of which property uses to invest in on a specific usage market (Geltner 2007). Depending on the particular property use, different data sources and procedures will be required and used. However, despite what the investment is concerning, there are some basic steps all market analyzes should contain. In general terms, four levels of

the analysis can be identified (Lind & Persson 2011):

- Macroeconomic analysis
- District analysis
- Real estate market analysis
- Property analysis

The market analysis should start at a general level where the macroeconomic state of the country, business cycle fluctuations, interest rates, inflation and GDP are analyzed (Lind & Persson 2011). Numerous studies have shown the influence on local submarkets by national factors such as GDP, government policy, demography, employment etc. where property values are affected. Though, the correlations are rather complicated and the effects from the macroeconomy on the local real estate markets are somewhat delayed (Manganelli 2015).

The district analysis will brighten the picture of how the economic development looks in the specific area. The geographic conditions are studied by looking at location, population, businesses and local economy. Potential development in the district is evaluated by examining the infrastructure and the quality of education and services (Lind & Persson 2011). The distribution of employment will show the stability of the regional economy. If all employment is focused to a few industries, there is a potential instability in the economy, which will affect not only those industries but the entire community. The planning ideas and regulations can show the future expectations of the area and give an idea if other actors are investing in the region. This could also be indicated by the number and types of businesses as well as their volume (Manganelli 2015). The rent levels and occupancy rate of buildings in the area will give useful data to understand the current market situation. Together with the district's condition of population and business development - the future rent levels, vacancies and property price progress can be estimated (Lind & Persson 2011).

The analysis of the real estate market will give basic market data such as current property prices and actors on the market. Thereafter a property analysis can be conducted and is made to assess the concerned real estate's quality and characteristics (Lind & Persson 2011). A lot of property investments are made without a thorough analysis, only by studying the physical characteristics and by summing the potential return. For more complex projects a more detailed investigation should definitely be done of the concerned property, the local submarket and the quantity and quality of the future estimated income stream. A property has

a potential income that is a function of the attractiveness in comparison to its competitors and the relationship between the market's supply and demand. The supply and demand will decide the rent levels and give an indication of how much space that can be occupied in the project (Manganelli 2015).

There are even more parameters to think about when investing in a new construction project. Investigations should be made regarding the potential users of the finished building. Target profiles should be made, to get a picture of who the future customers are. By doing this, the project can be designed to fit the needs of these users and thereby be more attractive to them. Before starting a new construction project it is also important to look at comparative projects, both existing and planned. These projects have the potential to compete with the project over future customers. Undeveloped land with coinciding planned usage and buildings close to the end of their useful life are two other types of property with potential to compete with a planned project (Manganelli 2015).

After the competitive supply has been thoroughly outlined, the next step in the market analysis is to make a prediction over the potential demand for the investment period. The demand will be different depending on which use of property the investment considers. Looking from a real estate owner's perspective, all investments apply to leasable areas. Therefore the analysis must comprehend a longer period of time, since the aim is not only to get the units sold but to make sure they stay leased (Manganelli 2015).

4.3.1.1 Demand drivers by property use

The demand for real estate comes partly from population growth. Both at a national and local level, the forecast of population growth will have an impact on the need for real estate in the future. The characteristics of the population will also influence the demand such as changes in age structures, marriages and family sizes (McMahan & McGraw-Hill 2007).

Demand for real estate is also influenced by the level of employment. Firms, their prosperity and expectations determine the level of employment, which in turn sets the general level of the households' income. Increases in employment for a period of time cause income levels to increase as well. A rise in households' income will thereby increase their capacity to spend money on housing and retail. An increase in employment usually also means a rise in the business activity, which ultimately affect the demand for industrial and office space (McMahan & McGraw-Hill 2007). Figure 6 below illustrates how the wealth from households and firms influence each property use. Industrial will be excluded from the text below since

this master thesis focuses only on property uses within urban areas.

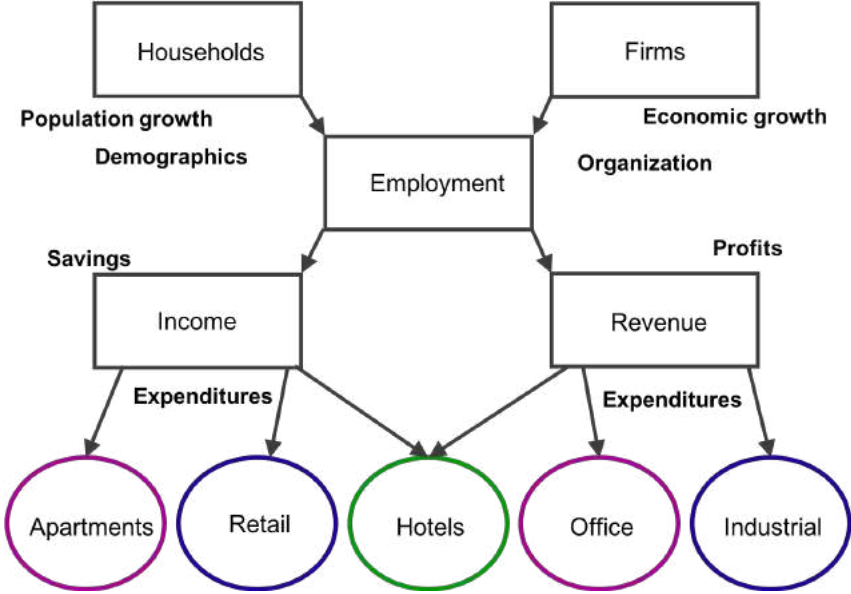


Figure 6. Households and firms influence on property use (McMahan & McGraw-Hill 2007).

The demand for residential in the local market area comes from households’ expenditures and preferences. Household expenditures are determined by the number of households, their level of income and expectations of the future (McMahan & McGraw-Hill 2007). Increases in income lead to a greater demand for houses as people can afford houses that are more expensive than they did before. Expectations are also an important influence on the demand for housing. People tend to look at the historical price development and expect the same increase for prices tomorrow. If there has been an increase in prices in the past, people will tend to expect prices to continue to increase and buy residential (Boverket 2013).

The demand for tenant-owned apartments or single-family houses is also affected by the real mortgage interest rate as it will determine the households’ cost of housing. A decrease of the interest rate reduces the price that households are willing to pay (DiPascal & Wheaton 1992). The demand for rental housing is influenced by construction cost, financing and maintenance cost. Increases in construction cost will require higher rents, which will decrease the demand for rentals (McMahan & McGraw-Hill 2007).

The demand for retail space comes from the number of households, their ages, level of income and spending patterns. The number of households and the population growth in the trade area lay the foundation of potential customers and the level of income affects the portion

spent on goods and services. The development of e-commerce the past years has changed people's spending patterns and has ultimately had an effect on the demand for retail space (McMahan & McGraw-Hill 2007).

The number of firms, their affluence and expectations of the future influence the demand for office space. A strong economic growth with positive expectations of the future will in general increase the business activities and cause a rise in employment, which in turn will increase the demand for office space. The demand for office space however also depends on the type of industry, culture and the image of the company (McMahan & McGraw-Hill 2007). The technological development has made it possible to hand over more repetitive tasks to computers and has made it possible for firms to decrease the space per worker. By sharing information in clouds, employees can work from home or other locations such as coffee shops (Miller 2014). Changes in workplace solutions such as open-plan and activity-based offices have decreased the space needed to house the same number of employees compared to the traditional office. The technological development could ultimately lead to a lower rate of growth in the demand for space in the future (McMahan and McGraw-Hill 2007).

Both firms and households spend money on hotels. The demand for hotels is therefore partly determined by households' level of income. The more money they have left, the more they can spend on tourism. Firms use hotels for business trips, business meetings and conferences. Firms' affluence and revenue will affect how generous they will be with their expenditures, which in turn have an influence on demand for hotels (McMahan and McGraw-Hill 2007).

4.3.2 Real Estate Development Valuation

The decision to invest in a development of a property will hopefully increase the value of the real estate. Consequently, before investing it is a good idea to make a thorough analysis whether the investment will improve the valuation of the property. The value of a property is estimated by an authorized valuer whom by making examinations of the property arrives at a value. The valuation is based on the property's physical characteristics as well as the market conditions and comparable estates. Important factors in the physical analysis are the property's size, structure and location (Bond, Sims & Dent 2013).

The appraisal of development is a more complex process than other types of valuations since the object to be valued does not exist yet. The main concern for the developer is to make sure the project is economically feasible. This means that the value of the finished property less the costs of construction and land as well as the profit, must be higher than the value of the

existing land use. Because of this, development contains risk and a lot of things can go wrong with the planned construction. Consequently, risk management is an essential part of the appraisal process (Wyatt 2008).

The valuation method mostly used by developers is *the residual valuation*. The aim of the method is to estimate either the site value (if not owned by the developer) or the profit of the development. The estimate is made by withdrawing the development cost from the completed site value, which will leave a residual amount. The method is not so complex itself but the values are difficult to measure. The residual method can be used for three different intentions during the development process (Morley 2002):

- Estimate the maximum possible value of a development site. The value can then be used to compare with the asking price of the property and the developer can decide if it is worth acquiring the real estate and to start the development. If the property has existing buildings, the valuation will include a feasibility study of redevelopment or renovation.
- Estimate the expected profit from starting a development when the site is already in possession. Then the value of the site counts as a known cost in the project and the residual is the expected profit of the development.
- Estimate a maximum construction cost for a project when land is already owned and thereby a known cost. The maximum cost will ensure a good profit margin.

As the development progresses, the valuation estimate will become more accurate. Valuations used by developers of the private sector are exclusively built on values and costs for the developer themselves. They do not use cost benefit methods, which consider values and costs for a lot others than the developer alone. The value of land is decided by what can be developed there and the cost and value of the development. This applies in a market economy when the new supply of buildings is a small part of the number of existing buildings. The value of development cannot directly be connected to its production cost, but is determined by the supply and demand for properties with similarity to the developed real estate (Morley 2002).

The residual valuation method is mostly used in the early stages of a development project, to

make a judgement if the project is viable. *The cash-flow valuation* can make a more specific appraisal and is often used for much bigger and more complex developments. For example the cash-flow method is useful for housing projects divided into stages, when some of the units might be moved into before others are even constructed. The big deviation between the two valuation methods is how the timing of costs and incomes is presented. The residual method makes an assumption that the income of the development is realized at the end of the project and through 50% of the project, 50% of the costs are obtained. The cash-flow method on the other hand, divides the project into months or quarters to make more detailed assessments of the flows for expenses and revenues. This allows for a more precise estimate of interest payments and to see if the timing of costs and revenue affects the value of the development (Wyatt 2008).

4.3.3 Development risks

The decision to develop a property means a current sacrifice with intent that it will pay back in the future. The sacrifice can for example take shape in lost rental income for the construction period and the cost of development. The benefits of a property development investment can consist of an increased income stream, return of invested capital and a growth in property value. By making an assessment of the present value of the anticipated income stream, the risk of doing a bad investment can be reduced (Manganelli 2015).

There are also risks directly connected to the property characteristics. Depending on property use, quality and location of the project - it will react differently to local economic changes and social activities. Then there is the risk of competing projects, tenant vacancy and increased drifting costs. There are risks in the planning stage as well, such as changes in laws and regulations or resistance from the local public - risks that could result in a project stop or a project revision (Manganelli 2015). The choice of property use is also affected by the tenant risk. The real estate owner must think about the tenants' contract duration and ability to pay rent when valuing what property use and which tenant to invest in within new development projects (Nordlund 2015).

Every property development project has its stakeholders and there are usually lots of them. Some of the most significant stakeholders are landowners, financiers, end users, municipalities and regional and national government. Other stakeholders often involved are real estate development companies, building contractors, consultants, architects and citizens. All of the stakeholders mentioned are vital for the development to succeed. The decision

process is dependent on these stakeholders' commitment both for the outcome to be as successful as possible and because the development cannot be decided by one single party (Clumac, Blokhuis & Han 2011).

The extent to which the project is affected by risk also depends on how it is financed. If the project is partly financed by a loan there will be an extra cost because of the interest. Furthermore, the project's yield has to correspond to the increase in investment risk caused by the borrowed capital (Manganelli 2015). The different risks are summarized and captured in Figure 7.

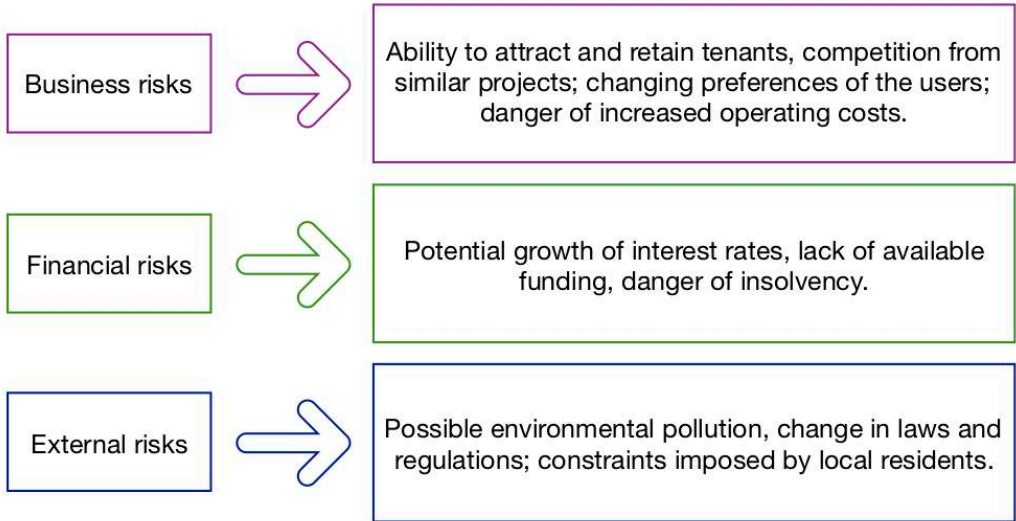


Figure 7. Risks connected to property development (Manganelli 2015).

up as well and the representatives point to the importance of making sure the return on the development exceeds the cost.

“I believe that if you go into a development project, you should be open for anything. In general most real estate owners probably choose the most lucrative use for the site and usually that would be what people demand, you cannot develop something people do not want.”

Jernhusen

Many of the interviewed representatives described a difference between how they investigate the demand in the area, depending on where they develop. In new neighborhoods, where the real estate owner does not own any developed properties from before, the general demand is investigated more closely. In well-known places, where the real estate owner already possesses developed properties with long-term clients, the demand or need of those clients has the largest significance when developing new projects in the area. In such cases the new development and its property uses become more of a support function. Humlegården talks about how they are currently building a new hotel in Solna as a support to their office clients in the area, after a request from the same clients.

“One can say that we adapt the property mainly to what is demanded by the customers, both in short-term and long-term.”

Castellum

Portfolio theory was brought up by some of the representatives. Though, it was talked about as an important factor on company level but not as much on property level concerning which mix to develop. Different positive effects from a mix of property uses were discussed however, other than the diversification outcome. A mix of property uses increases the feeling of safety in a neighborhood because of the continuous flow of people during various hours of the day. Jernhusen believes mixes of property uses in new exciting ways will be an essential part of real estate owners' future, in order to keep up with the evolving community.

The progress of the surrounding areas has an effect on the choice of property uses as well, according to the interviewed. Kungsleden talks about the adjacent detailed development plans as another factor to take in consideration. What the neighbors are developing is also mentioned as an influencing element. In a similar view, Skandia Fastigheter describes the discussions with other actors involved in a bigger development area at Backaplan in

Gothenburg as a balance between what every single actor wants to develop. Which property uses to be developed and their allocation between the properties depend on the discussions, which the municipality naturally is involved in as well.

Many of the interviewed mention avoiding risk as an impacting factor to which property uses they choose to develop. Different property uses are exposed to different risks and the e-commerce is brought up by several of the interviewed as an insecurity of investing too much in retail for the future. Some of the interviewed talked more about risk of particular clients than about risk of different property uses. Feeling and faith are also mentioned as deciding factors, when an investment is made in a riskier property use because it is believed to create hype and attract people to the site.

“The introduction of e-commerce and digitalization has made us reflect on whether retail will be as successful in the future. Retail and offices are more sensitive to business cycles than residential. Offices are affected first. So it is determined by the mix of property uses - how large exposure one wants to the cycle evolvments versus how stable revenue one wants.”

Skandia Fastigheter

The mixture between shortage of property use in the area, future demand and flexibility shows the complexity of development. The requirement of parking lots in new developments, especially for apartment buildings, gives a good example of this complexity. Some of the representatives brought up parking and the car norm as something they believe will decline drastically in the near future. Naturally, this makes a problematic balance for how many parking lots to develop today. Because of this, real estate owners search for a flexible alternative. Parking floors below the ground are expensive and it is hard to find another usage for them than parking. Skandia Fastigheter describes a situation on Backaplan in Gothenburg where the municipality also has realized the potentially changing car usage and therefore demands a parking deck to be built above ground so that it could be used for other uses in the future. Though, the problem for the real estate owners is that the properties in the area are highly valued for construction of for example apartment buildings and to build parking deck would lower the value for the intended property. Furthermore, the framework of a building is such a small part of the construction cost - the large costs lies within the installations and interior design, which cannot be reused as easy for different property uses.

5.2 The investment decision process

The reason to initiate a new development project can be, according to the respondents, due to several factors. It could be a large tenant who decides to relocate. This was for example the reason why Vasakronan initiated their development project Sergelhuset. The largest tenant made the decision to move which gave Vasakronan the opportunity to modernize the building. It could also be the case that the technical status of the building has become outdated and something needs to be done in order to meet customer needs. It could moreover be buildings that have high vacancy rates due to lack of demand. Kungsleden gives an example of this concerning one of their office buildings located in Kista with high vacancies. They realized that the building would never become a good location for offices since there are office buildings with vacant space with better locations in Kista. They started to analyze what they could use the building for instead and began moving the current tenants to other office buildings close by. Some of the property owners have also bought properties for the purpose of future development, which then is initiated when the public interest in the particular area starts to grow.

“The decision to develop our existing buildings could be for the simple reason that the maintenance of the building has been neglected and the offices have become outdated. Then we have to decide whether we should do something that will put us back on the map or if we should just continue on the same track as today.”

Klövern

“What can we do with this building? This will never be an appropriate office location, what opportunities are there to do something else instead?”

Kungsleden

In relation to the initiation of a new development project, attention is brought to the current detailed development plan of the concerned area. Which changes are allowed within the current plan? What type of use is allowed within the plan? Is the use in line with those property uses the company aims to hold and what seem suitable for the area? Is the plan flexible and allows for several uses or is only a single use allowed? Which building volume is permitted? The property owners need to make a decision whether or not they should start the process to develop a new detailed development plan or if they should develop the property within the current plan.

“The first question will in general be what type of use the current detailed development plan allows for. Because there is always a risk to proceed with something other than what is allowed within the plan today.”

Vasakronan

The possible outcome of developing the property within the current plan needs to be compared with the possible outcomes if they initiate a process to develop a new detailed development plan. However, based on the interviews, one can generally say that a new detailed development plan is almost always initiated when a larger urban area is to be exploited. The representative from Faberge expresses that they prefer to buy properties within a very close geographical region in the suburb and develop new urban areas. The current detailed development plans for these kinds of areas do seldom allow for the different types of uses needed to create an attractive urban area, often they only allow for industrial uses. So in these cases, the question of whether to develop within the current detailed development plan or not does not arise. Instead, the question of which property uses the property owner should aim for to obtain within the new detailed development plan needs to be further investigated.

For both larger urban developments and other types of development projects, the decision of which property uses to include is partly based on a market analysis. For the former, the market analysis provides a foundation of which property uses the property owner should aim for within the new plan. For the latter, the market analysis provides a foundation of which property uses to include and whether or not a new detailed development plan should be initiated. All of the representatives interviewed emphasize the importance of a thorough analysis to be able to make a rational decision.

Within the market analysis, the area where the property is located is analyzed. What is built in the area today? What is happening in the area at the moment and is there any plans for the area in the near future? It could be the case that detailed development plans are being developed in adjacent areas. Is the municipality planning for new infrastructure in the area which will become reality in a couple of years? The demand for the specific property use or property uses is also investigated both at the moment and the expected long-term demand. The competitive supply is also investigated. How many similar buildings are there today and how many will be finished approximately around the same time as the planned project? Rent levels and vacancy rates are analyzed using historical data.

The majority of the property owners express that they almost always proceed from the company's portfolio strategy when it comes to determining which property use or property uses to investigate in the market analysis. The portfolio strategy states which types of assets the company should hold (offices, retail, industrial, hotels, dwellings etc.). In most cases the property owners do some kind of idea, perception or background analysis in advance concerning what use that is suitable for the property, depending on its location and configuration. However, during the market analysis, other property uses that are not within their strategy may be found suitable for the specific project. All of the property owners therefore express that they do deviate from their portfolio strategy. This tendency differs depending on the specific property owner but below follows examples of situations where the property owners deviated from their strategy.

"The detailed development plan does in general regulate the use of the building and of course we have an idea of possible uses before the project is initiated."

Atrium Ljungberg

"We continuously evaluate what the best use for each property would be. One can say that you should always have some kind of background analysis of residential, office, retail, hotel, school or whatever use that could suit the property."

Vasakronan

The majority of the property owners, that according to their portfolio strategy should only hold commercial properties, express that they deviate from their strategy when it comes to developing tenant-owned apartments. If it turns out that the best use for the specific area is for residential purposes they initiate a detailed development plan for residential, obtain development rights and then sell it to a residential developer. The representative from Folksam Fastigheter expresses that the current market situation has made it difficult in some locations for other property uses to compete with tenant-owned apartments in terms of value, which has led to a deviation from their strategy.

"We do not hold residential in our portfolio, but we pursue quite many detailed development plans to create development rights which we then sell."

Kungsleden

“It is the regulations within the detailed development plan that controls the use to be developed, but if there is a choice it has been very hard to compete with tenant owned apartments in Stockholm.”

Folksam Fastigheter

Stockholm municipality is obligated to ensure that the land and water areas are used in its best compatible way. For new larger urban development projects where different property uses such as schools, health centers, retail, residential and offices are needed - the majority of the property owners involved in these types of projects express that they are usually compliant to develop property uses outside their strategy since it is crucial in order to obtain an attractive area. The representative from Humlegården expresses that Stockholm municipality priorities housing construction in new detailed development plans due to the political objectives set by the municipality to build 40 000 new homes by 2020. This means that the municipality usually demands that the property owner in question builds dwellings for new detailed development plans to be accepted. A mix of property uses could both be a demand from the municipality and a will from the property owner as well.

“We only work with commercial properties. However, the market in Stockholm has caused the municipality to require dwellings in order to get new detailed development plans approved and there is a great need for that. We must always consider the best way to use the land.”

Humlegården

“It may be that we develop a whole block and a corner becomes housing as it is needed in the area, but we try to make it a separate property in case we want to divest that part at a later stage.”

Castellum

Property uses outside property owners' strategy can indirectly create values for their core business. An area that only contains offices will fall asleep after 5 pm which will make it harder to attract for example high-end restaurants since they want customers in the evenings as well. A mix between residential and offices makes it easier to attract these restaurants and other services which could in turn increase the demand for offices in the area. A hotel nearby can also make the offices become more attractive and in turn increase rents in that area. This

was for example the case for Kungsleden for their project in Vasastan in Stockholm. The existing building had once been a lamp factory and parts of the building had been used for storage. They started to analyze whether offices could be suitable but it turned out that perhaps some parts could be more suitable for hotel. The end product resulted in a hotel and some offices facing the street. This hotel with its restaurants made the offices become more attractive and they could ultimately get a higher rent than they would have gotten if they only had developed offices.

“It may be a requirement from the municipality, but it may also be because we want to create a mixed-used city. Because if there is only a workplace area, it will fall asleep after 5pm.

Humlegården

“If you have an office there, you get some fame from the hotel into the bargain.”

Kungsleden

As possible property uses are identified and investigated further in the market analysis, they are evaluated concurrently in a profitability analysis. The calculations are similar to a real estate valuation where estimations of costs (operating cost and the cost of the investment), long-term rents and vacancy rates are made. If there is an existing building, the market value of that building and the businesses it holds is estimated. The value of undeveloped land is measured by the value of the development right to what could be constructed there. The project ideas with their different property use combinations are calculated as alternative values to the current market value. Then the future market values are assessed for the various scenarios, where the construction cost is taken into consideration. For the development investment to be viable, the estimated future market value should be higher than the current market value plus the construction cost. If a property use, already allowed within the current plan, is found suitable from the market analysis as well as two other property uses which will need a new detailed development plan, calculations are made for the different scenarios. Alternatives with different proportions of each property use within the development project are tested.

“You get to the point where you consider what is really profitable to build. Then you have to set up a rough calculation, what are the market values of the different property uses in this area?”

Skandia Fastigheter

“We try to twist and turn as many different property uses as possible. We had a project in Råsunda for example where I think we looked at 10 different options. We had a very flexible detailed development plan so we had the opportunity to choose between different property uses. So then you test every possibility: student housing, school, retirement home, office and hotel etc. and then you look at different combinations as well.”

Fabege

Before the property owner makes the decision of which property uses to include and whether or not they should aim for a new detailed development plan they must take into consideration what the municipality has in mind for the area. Do the municipality have an articulated vision or strategy for the area? Are there any detailed development plans in the surroundings that are currently being developed? The representative from Vasakronan mentions that depending on what the current use is and what the property owners want to change in the new detailed development plan, the risk associated with the planning process will be different. If the changes are politically viable then there is a greater chance the politicians and urban planners are positive to the changes and that the planning process will run smoothly.

Time as a risk factor also needs to be addressed. The representative from Niam expresses that both the possibility to get through with a change in the detailed development plan and the time the process adds to the project have to be considered. The process to change a detailed development plan takes approximately 2 to 3 years and depending on the specific situation for the development, time as a risk factor is assessed differently when it comes to the willingness to initiate a new plan or not. The representative from Vasakronan expresses that if you have an existing building on the concerned property that runs the risk of becoming vacant or getting a high vacancy rate during the process of developing a new plan, the losses in rental income needs to be considered. A vacant property in the central business district can possibly lose around 150 million Swedish krona per year in rental income, which can kill the profitability of the project. Considering undeveloped land, not as much capital is tied to the property and the interest is much less in delay cost than the interest on a building worth a

billion or so.

“Normally, a change in a detailed development plan takes a couple of years to carry through for commercial properties. So the question then becomes whether you can afford it or not?”

Vasakronan

The possibility to get volume changes approved in a new plan could make it worthwhile to wait a couple of years for a new plan. The interviews gave the perception that the property owners want to maximize the volumes in order to get as big development rights as possible. It could be the case that the volume has to increase in order for the calculations to work when initiating a new plan. However, several of the representatives also express that the municipality often demand dwellings if added volumes are to be approved. One of the representatives from Jernhusen gave an example of this when they wanted to increase the volume when redeveloping a hotel. The municipality approved increased volumes with the demand that dwellings should be added on the roof. For Jernhusen it would have been a better financial deal if offices were built instead but that was not approved. So the possibility to add volumes also needs to be addressed as well as the possible consequences that could bring in return.

“To make ends meet in a calculation, it is often necessary to increase the volume of the building. It does not have to be so, but it is often the case.”

Niam

The market analysis and the profitability analysis are exercised simultaneously and the property owners jump back and forth between them as property uses are rejected and further analyzed. When the property owners ultimately have performed the market analysis, evaluated different scenarios and considered the risks connected to the initiation of a new detailed development plan - the decision is made whether the process to develop a new plan should be initiated or if the property should be developed within the current plan. If the decision is to start the process of a new plan, a dialogue with the municipality is initiated as well as a development proposal. During the dialogue, the municipality will have opinions on the content and the property owners will have to make further calculations of the most

profitable mix of property uses and their share as well as which property uses that could increase the attractiveness of the area. The property owners cannot decide the mix themselves, it is a dialogue and negotiation with the municipality.

“Then we start the detailed development process with the municipality where we need to consider our long-term objectives, what property uses and what value we want. We also need to consider what will be the best economic mix and the proportions.”

Jernhusen

“And the choice of mix of property uses, this we cannot decide ourselves. It is a dialogue with the municipality. Then you need to balance the urban development project so that it becomes as profitable as it can be.”

Skandia Fastigheter

When the new detailed development plan is approved or if the property owners decided to develop within the current plan, they bring their attention to the specific buildings within the plan. Based on what property uses that are allowed for the various properties, they investigate what type of offices or retail areas etc. that is most suitable. The market analysis can provide further information of possible companies that would be interested in renting space and their size and solvency. The profitability analysis can confirm whether the size and configuration is economically viable. If the property owner owns several properties within the detailed development plan, they tend to look at the long-term profitability for the portfolio of projects and not as much on building by building. This means that they can accept a lower yield on a hotel or dwellings etc. if this can give a higher yield for the offices and ultimately create an attractive entity.

“When we consider our major projects we may not always need to optimize each individual project, instead we can look at the profitability for the entire portfolio of projects. Then it may be that we can allow for a lower return on a hotel or on housing as there will be a higher return on the offices which will make the return on the investment.”

Jernhusen

The perception is that the decision process of the real estate owners is not constructed linearly. The property owners shift back and forth between the different phases presented

above, in order to arrive at the optimal choice of property uses. Some of the stages are also processed collaterally. Even though it is not an obviously linear process, the representatives underlined the importance to run through all phases to ensure making rational decisions. The majority of the real estate owners mention that they perform more comprehensive market analyses in larger development projects and in projects initiated on unfamiliar locations.

“Since we know our locations quite well the risk is lower than if we go into a new market, which we try to avoid. If we would establish ourselves on a new location, we would want more background information to minimize the risk.”

Atrium Ljungberg

“We have noticed that when the outcome of a project did not fall out as expected or if our objectives were not achieved, it has usually been because we have taken shortcuts in our decision-making process.”

Castellum

5.3 The real estate owners’ level of impact

Which property uses the project should contain are primarily determined by the detailed development plan. Depending on how flexible the plan is, the final mix of property uses and their size portion of the project are then decided by the property owners more specifically. Since the municipality is responsible for the detailed development plan process, they automatically have the highest determining role in which property uses to be developed on each property and they want the property use to give as much value to the city and its inhabitants as possible. This means that if the real estate owners aim to create a new plan and want to enable their chances to get it approved, their development proposal should contain as much value for the city and the public as possible. The process to create a new detailed development plan with changed property uses is a negotiation with the municipality, so the real estate owner’s impact also depends on their ability to negotiate. A value that often is demanded by the municipality in new development projects is the construction of housing.

“Stockholm municipality is short on planning resources and is therefore tough on prioritization over which detailed development plan suggestions to move forward with. It is all about knowing how to package the concept and show them how the project contributes value to the city.”

Jernhusen

The real estate owners also discuss the municipality's regulations of retail on the ground floor and how it can be difficult to succeed with. Some parts of the municipality's regulations to ensure mixed-use development could end up having the opposite effect and create neighborhoods with empty premises at street level. Besides retail on the ground floor, it appeared from the interviews that when new neighborhoods are developed, the mix of property uses is not applied as much on building level but more generally for the entire area.

“The detailed development plan often regulates retail on the ground floor, which sometimes can be challenging. Some municipalities have too much faith in that retail on the ground floor will make the area alive and safe. We try to discuss this a lot with the municipalities, it is not possible to fill every ground floor within each city district with retail - they will not be occupied. Places with flows of people are needed for it to work.”

Jernhusen

In cases when there is flexibility in the detailed development plan, many of the interviewed property owners express that they still would want to create a mixed-use development because of all the positive effects it creates, such as making the neighborhood more alive. Though, when asked, several of them reflect over that it would be difficult to pass on a large client who wants to occupy an entire building or so.

If it is a good stable client who can occupy the entire building, then I think most real estate owners would probably go for it.”

Vasakronan

6. Discussion

The general perception is that the real estate owners interviewed for this thesis intend to make rational decisions when deciding which property uses to include in their projects. They seek to maximize utility and aim to make the decision based on objective and unbiased facts. The process the real estate owners seem to undertake to decide which property uses to include in development projects appear to be comparable to Roberts and Henneberry's (2007) normative model presented in the theoretical framework. The majority of the real estate owners expressed that they started from their investment strategy, gathered information of market conditions and performed analyzes of possible property uses. A prediction of possible outcomes and a profitability analysis are performed to determine which property uses that would be the most profitable in the long run.

The decision process expressed by the real estate owners therefore seems to be in line with a normative model. However, as noted in the theoretical framework, even though the intention is to make rational decisions and follow a structured method, people tend to deviate from normative models due to behavioral aspects. Even if they undertake the different steps they have described, there is still a possibility that they will seek information that confirms their original development idea, which is a deviation from a normative model. There is also a possibility that it is a deviation between how the representatives should do the process “by the book” to determine property uses and how they actually make the decision. As explained in the method chapter, humans have the tendency to express opinions, which are not always in line with how they actually behave. This could have an impact on their tendency to deviate from the process, which did not come forward in the interviews.

The decision process for the real estate owners has appeared not to be linear. To arrive at the optimal decision, the property owners seem to shift back and forth between the different stages and some are worked through collaterally. All steps described in the analysis chapter are made, but a difficulty was encountered when trying to find a clear order. Likewise, it was hard to distinguish if there was any apparent difference between the property owners' processes. However, a general distinction in all real estate owners' processes could be found in the market analysis' comprehension depending on project size and the familiarity of the location.

Some of the representatives talked about feeling and faith as an influencing factor of which property uses to include in a development. In parallel, the interviewed also emphasized the

importance of going through all steps in the process, in order to not make improper decisions. This indicates a rational behavior among the real estate owners, as described by the decision theory. Though, going with a feeling is probably not done in combination with a proper process in most cases, which would be a deviation from a rational behavior.

There are some factors the real estate owners have talked about that could be difficult to combine. Avoiding risk in combination with feeling and faith is hard to manage and one of the factors will have to be overlooked. Current people flow and possible people flow are two other interesting factors, not impossible to combine per se, but in need of prioritization. Will the current flow of people or the possible flow of people be the leading cause to which property uses the real estate owner chooses to develop?

The two factors avoiding risk and long-term value can both be connected to the portfolio theory and the previous studies of the property market, presented in this thesis. By applying portfolio theory on the stock of properties, the real estate owner can reduce risk and will hopefully achieve a long-term value on the investments. The price of properties is determined by the supply and demand on the market and is naturally affecting the value of the property. Depending on the changes in the property market, different property uses could be more or less risky to invest in and with a larger or smaller likelihood of containing a long-term value. The demand of the various property uses, both current and future, is a large influencer on both factors. The importance of the demand is described in the chapter on market analysis earlier in this study. Moreover, the market analysis supported by the literature study is comparable to the market analysis described by the real estate owners.

The negative effects of mixed-use developments are mentioned both by previous studies, referred to earlier in this thesis, as well as by the representatives. Foremost, it is the commonly applied regulations of retail on the ground floor that is argued. There seems to be a problem for local businesses on less central locations to become commercially viable. The reason for this, as discussed by previous studies, is believed to be the lingering consumer behavior. So, perhaps pushing the mixed-use city planning too hard in combination with the current consumer behavior will cause a negative reaction against the mixed-use concept.

If the property uses the property owner wants to develop are not accepted by the current plan, they could try to develop a new one. Though, a new detailed development plan takes time to create and it is not only a question whether it will be approved or not but if it will be worth the time. The time is a deciding factor since it is accompanied by risk, which is mainly

economical because of lost rental income and cost of resources during the plan work process. The time factor can therefore be described as a business risk, as explained by Manganeli (2015). The decision to develop a property means a current sacrifice with intent that it will pay back in the future. It makes it a complex decision where potential benefits and possible losses have to be weighted against each other.

It appeared from the interviews that when new neighborhoods are developed, the mix of property uses is not employed as much on building level but more generally for the entire area. Perhaps mixed-use buildings are not needed to the same extent when new areas are developed from scratch as when new developments occur by volume addition into built environment. Maybe a mixed-use neighborhood has the same positive and sustainable effects whether it contains various mixed-use buildings or several diverse single-use buildings. The neighborhood will be integrated, less car dependent and more attractive to offices and other businesses to establish themselves in. As mentioned earlier in this thesis, a mixed-use development has many positive effects - creating a more sustainable environment from an economical, ecological and social perspective. In the cases where volume is added into built environments there often is a demand from the municipality that housing is part of the addition. Because of this, many mixed-use buildings are evolved in office dense blocks of the inner city.

All of the representatives talk about how a mixed-use city makes the city more alive. At the same time when asked, several of them reflect over that it would be difficult to pass on a large client who wants to occupy an entire building or so. This behavior can be described as a shortcut in decision-making, which is supported by the decision theory chapter.

6.1 Further studies

The aim of this study has been to explore and describe how property owners decide which property uses to include in development projects, using a qualitative method with semi-structured interviews. Since previous research is narrow on the subject this was a suitable research method in order to get a deeper understanding of the complexity behind the decision. This approach has, however, contributed to a rather wide study, which resulted in a general description of the process real estate owners undertake and the factors behind the decision. Further studies could therefore be performed on the subject where more specific situations are studied.

It could for example be interesting to perform a case study of a new development project

currently in the initiation or feasibility phase. This would provide valuable information of how the decision actually is made and contribute to a more detailed explanation of the process and the different stages within. The case study could furthermore be compared with the description of the decision process in this study to investigate whether it is a difference between how the property owners expressed they made the decision in this study and how the decision actually was made in the case study. It could also be interesting to perform a study and investigate whether it is a difference between real estate owners within larger cities and smaller ones.

It could furthermore be interesting to investigate whether it is a difference between long-term property owners and purely real estate developers in how they determine property uses. Developers and real estate owners have different objectives with development projects. Real estate owners develop properties, which are in general added to their portfolio while developers develop properties to sell them and make a profit once they are occupied. It is therefore possible that the process to determine property uses and the factors behind the decision could differ among the two.

It is also believed that this subject could enhance both qualitative and quantitative methods. Experimental research could therefore also be carried out to investigate the investment decision process concerning property uses. As discussed earlier, even though the intention is to make rational decisions and follow a structured method, people tend to deviate from normative models due to behavioral aspects. It could therefore be interesting to conduct an experiment where representatives from the property owners are faced with different information and are challenged to make decisions over which property uses to include in different projects.

7. Conclusion

The aim of this study has been to explore how property owners decide which property uses to include in development projects. The objective has been to identify the most important factors behind the decision and to contribute to the body of knowledge concerning the investment decision process of property uses. The background to the research problem and the aim of the study resulted in three research questions, which are answered below.

7.1 The deciding factors

In total, 21 factors behind the decision of which property uses to be developed in new projects were identified. Four of the factors were identified as the most important ones: demand in the area, will of the municipality, profitability analysis and preconditions of the site. These were the factors most real estate owners talked about during the interviews. Furthermore, six of the factors were found to be the second most important ones: client needs, long-term value, portfolio theory, avoiding risk, shortage in the area and future demand. Ultimately, eleven factors were identified as the third most important: support function, new exciting mix, feeling of safety, possible people flow, feeling & faith, other actors' will, support function, flexibility, adjacent plans, current people flow and neighbors' development. The number of real estate owners who mentioned each factor during the interviews conducted the ranking.

7.2 The investment decision process

Below follows the main stages, identified from the analysis, that the real estate owners undertake to decide which property uses to include in a development project. The process behind the decision of which property uses to include is not linear. To arrive at the optimal decision, the property owners shift back and forth between the different stages and some are processed parallel.

When a development project has been initiated attention is brought to the current detailed development plan of the concerned area. Which changes are allowed within the current plan? What type of use is allowed? Is the allowed use in line with those property uses the company aims to hold and what seem suitable for the area? Is the plan flexible and allows for several uses or is only a single use allowed?

A market analysis is performed using the property uses within the portfolio strategy as a starting point. Demand for each property use is investigated as well as competitive supply. Rent levels and vacancy rates are also analyzed using historical data. If property uses outside

the portfolio strategy are found to be suitable they are investigated as well. The area where the property is located is analyzed. What is built in the area today? What is happening in the area at the moment and is there any plans for the area in the near future?

As possible property uses are identified and investigated in the market analysis, they are evaluated concurrently in a profitability analysis. The project ideas with their different property use combinations are calculated as alternative values to the current market value. The future market values are assessed for the various scenarios, where the construction cost is taken into consideration. For the development investment to be viable, the estimated future market value should be higher than the current market value plus the time as a risk factor and the construction cost.

The property owner also examines what the municipality has in mind for the area. Does the municipality have an articulated vision or strategy for the area? Are there any detailed development plans in the surroundings that are currently being developed? The risks concerning a development of a new detailed development plan are considered.

The market analysis, profitability analysis and the will of the municipality form the basis of what property uses that would be most profitable in the long-term. If the decision is to start the process of a new plan, a dialogue with the municipality is initiated as well as a development proposal. During the dialogue with the municipality, the property owners make further calculations of the most profitable mix of property uses and their share as well as which property uses that could increase the attractiveness of the area.

When the new detailed development plan is approved or if the property owners decided to develop within the current plan, attention is brought to the specific buildings within the plan. Based on what property uses that are allowed for the various properties, they investigate what type of offices or retail etc. that is most suitable. The market analysis can provide further information of possible companies that would be interested in renting space, their size and solvency. The profitability analysis confirms whether the size and configuration is economically viable.

7.3 The real estate owners' level of impact

The detailed development plan regulates how the properties within the plan area are to be used. This means that ultimately it is the municipality who determines which property uses that can be developed on each particular property. The municipalities are responsible for the

planning of land and water areas and are the only ones who have the authority to approve plans or decide whether or not planning of an area should take place. If the area is suitable for various uses, then a combination of uses can be stipulated. Several-use plans become more flexible than plans with only one use, but the plans can also be strictly regulated. Many plans are regulating the properties to have retail on the ground floor and often when new plans are developed, residential uses are a requirement.

Real estate owners can present suggestions to change and add property uses within the detailed development plan, but in the end it is the municipality who has the final say in the matter. The process to create a new detailed development plan with changed property uses is a negotiation with the municipality. With a greater contribution to the value of the city and its inhabitants, the chances will be higher for the suggestion to be approved and if the property owners meet the municipality's requests in one matter, they could get other wishes of their own approved.

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Appendix A - Interview questions

Brief: Below you will find the interview questions. The aim of the study is to explore property owners' decision-making processes regarding the mix of property uses in new development projects. The questions are relatively open in order to provide an opportunity for discussion and make room for further development.

Could you tell us a bit about your role at the company?

What property uses do the company hold in its portfolio?

- *What is the reason behind that choice?*
 - *Is it a part of your business strategy to focus just on these?*
- *Do you evaluate other property uses prior to new development projects than those mentioned above?*

What are the factors behind the decision of which property uses you include in a development project?

- *When do you decide to initiate new development projects?*

How do you decide what property uses to include in a new detailed development project?

- *How does the decision-making process look like?*
- *What kind of information is taken into account?*
- *Is it possible to divide the process into different steps?*
- *Do you deviate from the process?*

How do you assess the risk of each property use?

- *How do you consider flexibility in new development projects?*

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