

Promotion of local public objectives with public land development

Is it effective?

Eero Valtonen

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Abstract

The megatrend of urbanisation is predicted to continue on all continents in the foreseeable future. This calls for intensive property development to provide urban facilities for people and businesses. Public authorities have the important responsibility of ensuring that this development occurs sustainably. In addition, they usually provide certain public infrastructures supporting private properties. Public land development is one of the approaches that public authorities can employ to fulfil these tasks.

This thesis investigates, mainly in the Finnish context, the opportunities and challenges that public land development can provide to municipalities from the perspective of promoting public objectives. It also explores how effective this approach can be in such promotion. The thesis employs the mixed methods research approach following the pragmatist research philosophy. The empirical research involves institutional-level case studies of three countries—Finland, Sweden and the Netherlands—and six project-level case studies of large-scale urban development projects within these countries. The case studies are complemented by a survey targeting the project managers of the Finnish large-scale urban development projects.

It can be concluded that public land development has its strengths in the promotion of the qualitative development goals, public value capturing and, to some extent, the coordinated realisation of development. Its weaknesses lie in the exposure of the public to the economic risks of land development. Effective management of these economic risks seems to be difficult to arrange in practice. Development-led planning appeared as an essential tool in this risk management. However, the results concerning its effectiveness were quite far from encouraging. In addition, the empirical results highlight the importance of consistent long-term land policies in the promotion of the equitable treatment of landowners when public land development is used. Such land policies can be challenging to achieve in democratic systems with relatively short-term governments.

The thesis contributes to public land development research by combining institutional- and project-level analysis involving more than one institutional framework. Thus far, such studies have been scarce. Furthermore, previous academic research on public land development has mostly employed Dutch data. Therefore, this work strengthens the understanding of public land development by introducing findings from other, less studied countries with a significant tradition in public land development. It also suggests that the classification of land use planning practices to plan-led and development-led practices might not be sufficient anymore. In addition to the academic contribution, the thesis also provides some practical policy implications that can be employed by decision makers in Finland.

Keywords public land development, value capturing, cost recovery, planning objectives, urbanisation, equitability, effectiveness

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Kaupungistumisen megatrendin ennustetaan jatkuvan lähitulevaisuudessa kaikilla mantereilla. Tällainen kehitys vaatii intensiivistä kiinteistökehitystä, jotta ihmisten ja yritysten urbaanien tilojen tarpeeseen voidaan vastata. Julkishallinto on tärkeässä roolissa siinä, että kiinteistökehitys tapahtuu kestäväällä tavalla. Se on myös tavallisesti vastuussa monen yksityisiä kiinteistöjä tukevan julkisen infrastruktuurin tuottamisesta. Näiden tehtäviensä täyttämiseen julkishallinto voi käyttää aktiivista maapolitiikkaa.

Tässä työssä tutkitaan millaisia mahdollisuuksia ja haasteita aktiivinen maapolitiikka tarjoaa kunnille edistää julkisia tavoitteita. Työssä tarkastellaan myös aktiivisen maapolitiikan tehokkuutta tavoitteiden edistämiseksi ja turvaamisessa. Tutkimuksessa hyödynnetään pragmaattisen tutkimusfilosofian mukaista monimenetelmällistä lähestymistapaa. Empiirinen tutkimus käsittää instituutiotaan tapaustutkimukset kolmessa maassa – Suomessa, Ruotsissa ja Alankomaissa – sekä kuusi projektitason tapaustutkimusta laajamittaisista aluekehityshankkeista näissä maissa. Tapaustutkimuksia tukee suomalaisten aluekehityshankkeiden projektipäälliköille kohdistettu kysely.

Työssä tehdyn empiirisen tutkimuksen perusteella voidaan todeta, että julkisvetoisen maan kehittämisen vahvuuksia ovat laadullisten kehitystavoitteiden, arvonleikkauksen ja jossakin määrin koordinoitun kehittämisen edistäminen. Sen heikkoudet puolestaan piilevät julkisen sektorin altistumisessa taloudellisille riskeille. Näiden riskien tehokas hallinta vaikuttaa käytännössä vaikealta. Kumppanuuskaavoitus osoittautui tärkeäksi työkaluksi tässä riskinhallinnassa, joskin tulokset sen tehokkuudesta olivat varsin kaukana rohkaisevista. Empiiriset tulokset korostavat myös pitkäjänteisten maapoliittisten linjausten merkitystä maanomistajien tasapuolisen kohtelun kannalta, kun aktiivista maapolitiikkaa harjoitetaan. Tällaisten maapoliittisten linjausten saavuttaminen voi olla hankalaa demokraattisissa järjestelmissä, joissa poliittisten päätöksentekijöiden toimikaudet ovat suhteellisen lyhytaikaisia.

Tämä työ edistää alan tutkimusta analysoimalla sekä institutionaalista järjestelmää että käytännön aluekehityshankkeita useammassa institutionaalisessa kontekstissa, mikä on ollut harvinaista aiemmassa tutkimuksessa. Lisäksi aiempi akateeminen tutkimus aktiivisesta maapolitiikasta on nojannut merkittävästi alankomaalaisiin aineistoihin. Näin ollen tämä työ laajentaa ymmärrystä aktiivisesta maapolitiikasta esittelemällä tuloksia myös Suomesta ja Ruotsista, joissa molemmissa on vahva aktiivisen maapolitiikan traditio. Työ antaa myös ymmärtää, että maankäytön suunnittelun käytäntöjen kohdalla olisi tarvetta uudennaisille luokitteluille. Akateemisen kontribuutionsa lisäksi työ tarjoaa käytännön päätelmiä suomalaisten päätöksentekijöiden hyödynnettäviksi.

Avainsanat aktiivinen maapolitiikka, arvonleikkaus, julkisten kustannusten kattaminen, suunnittelutavoitteet, kaupungistuminen, tasapuolisuus, tehokkuus

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The roots of education are bitter, but the fruit is sweet.

–Aristotle

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List of Articles

This doctoral thesis consists of a summary and of the following articles, which are referred to in the text by their numerals:

1. Valtonen, Eero; Falkenbach, Heidi; Viitanen, Kauko. 2018. Securing public objectives in large-scale urban development: Comparison of public and private land development. Elsevier. *Land Use Policy*, volume 78, pages 481-492. ISSN: 0264-8377. Available at: <https://doi.org/10.1016/j.landusepol.2018.07.023>.

2. Valtonen, Eero; Falkenbach, Heidi; van der Krabben, Erwin. 2017. Risk management in public land development projects: Comparative case study in Finland, and the Netherlands. Elsevier. *Land Use Policy*, volume 62, pages 246-257. ISSN: 0264-8377. Available at: <https://doi.org/10.1016/j.landusepol.2016.12.016>.

3. Valtonen, Eero; Falkenbach, Heidi; Viitanen, Kauko. 2017. Development-led planning practices in a plan-led planning system: empirical evidence from Finland. Taylor & Francis. *European Planning Studies*, volume 25, issue 6, pages 1053-1075. ISSN: 0965-4313. Available at: <https://doi.org/10.1080/09654313.2017.1301885>.

Author's Contribution

Article 1: Securing public objectives in large-scale urban development: Comparison of public and private land development

The author was responsible for initiating, executing and writing the paper. The co-authors provided advice, comments and suggestions.

Article 2: Risk management in public land development projects: Comparative case study in Finland, and the Netherlands

The author was responsible for initiating, executing and writing the paper except for the data collection and analysis of the Dutch case study, which was conducted by Prof. van der Krabben. Otherwise, the co-authors provided advice, comments and suggestions.

Article 3: Development-led planning practices in a plan-led planning system: empirical evidence from Finland

The author was responsible for initiating, executing and writing the paper. The co-authors provided advice, comments and suggestions.

1. Introduction

1.1 Motivation and background

The megatrend of urbanisation is predicted to continue on all continents in the foreseeable future (United Nations, 2015). This calls for intensive property development to provide urban facilities for people and businesses. The property development activities typically cause many external benefits and costs (Webster, 1998), burdening public authorities with the important responsibility of ensuring that the development occurs in a sustainable manner (Campbell, 1996). Furthermore, public authorities usually not only control the development but also provide certain public infrastructures supporting the developed properties (Brueckner, 1997).

The property development process can be divided into land and building development stages (Needham and Verhage, 1998). Land development refers to the provision of serviced building plots on which buildings can be constructed and building development to the actual construction of the buildings on the serviced plots. Usually, the actual land development works are preceded by the land use planning process as well as land assembly or readjustment processes. In this study, land development refers to the process involving land assembly (or readjustment), land use planning allowing development, and the actual works of servicing the building plots. This follows the interpretation of land development as a broader strategy of the public authority to arrange urban development (van der Krabben and Jacobs, 2013).

There are many different approaches to land development (Muñoz Gielen et al., 2017; Needham and Verhage, 1998; van der Krabben and Jacobs, 2013). The classifications of land development approaches differ to some extent depending on the purpose of the classification. In this study, the approach with the highest involvement of the public sector is commonly referred to as public land development (following, e.g. van der Krabben and Jacobs, 2013). In the literature, public land development is often called “active land policy” as well (see, e.g. Hartmann and Spit, 2015; Louw et al., 2003; Priemus and Louw, 2003).

In the public land development approach, the public planning authority (usually the local municipality) acquires the land to be developed, plans the development, subdivides the land following the plan, services the subdivided building plots with the public infrastructure, and sells the developable building plots to the building developers in the property markets (Needham, 1997). In the other approaches one or more of these activities are to some extent within

the responsibility of private developers (see, e.g. Muñoz Gielen et al., 2017; Needham and Verhage, 1998; van der Krabben and Jacobs, 2013).

Generally, developed market economies have been relatively reluctant to use public land development (van der Krabben and Jacobs, 2013). In Europe, Finland (Havel, 2009; Valtonen et al., 2017b), Sweden (Caesar, 2016) and the Netherlands (Buitelaar, 2010) stand out as exceptions to this standard by widely employing the public land development approach. Outside Europe, China, in particular, relies on the approach due to the restrictions for private land ownership (see, e.g. Tan et al., 2009; Ye et al., 2018). Furthermore, the public land development approach is, from time to time, suggested as a potential method for overcoming urban development problems in countries employing other land development approaches (see, e.g. Adams, 2015). Hence, public land development is a globally relevant and important topic to be studied in the field of property development research.

Indeed, public land development has been studied from many different perspectives (see, e.g. Valtonen et al., 2017a for a summary). However, a significant share of the empirical research on the topic has focused on institutional-level assessments (e.g. Hartmann and Spit, 2015; van der Krabben and Jacobs, 2013) calling for the empirical investigations of actual real-life practices. Furthermore, in Europe, the research has notably focused on the institutional context of the Netherlands. Although some examples of empirical research taking place in other institutional contexts (in addition to the articles of this thesis) exist (e.g. Caesar, 2016; Olsson, 2018), the volume of the public land development research located in the Dutch context is overwhelming compared to other European locations.

Since land development is inherently related to the public land use planning process, and the land use planning systems have significant variation over countries (Nadin and Stead, 2008), institutional framework has an especially important role in evaluating land development approaches. Therefore, analysis of public land development in less studied institutional frameworks is necessary to build a more holistic academic understanding of the approach. This thesis approaches such analysis from the perspective of promoting public objectives. Next, the public objectives of land development are discussed further from the perspective of public land development to provide an adequate background for outlining the precise aim and scope of the thesis.

1.2 Public objectives and public land development

Analysis of public objectives in urban development should be started with the fundamental justification for public involvement in urban development. Within market economies, such rationale must undoubtedly come from market failures. As already mentioned in Section 1.1 property development causes many positive and negative externalities (Webster, 1998). Furthermore, land and property markets are far from perfect due to the unique location of each land parcel (Alexander, 2014). When the intervention occurs via locationally specific (instead of generic) regulation following public law, it is generally un-

derstood as land use planning (Needham, 2006, p. 20). The land development approaches offer different avenues for further intervention that rely, to a different extent, on statutory public law rules or voluntary private law agreements (Muñoz Gielen et al., 2017).

Hartmann and Spit (2015) derive, based on DeRidder and Schut (1995), Needham (2007, 2014), Spit and Zoete (2009) and VROM (2002), four essential objectives for spatial land use planning and related land management, which can be combined with a term land policy (see Gerber et al., 2018, pp. 10-12). These essential objectives of the land policy are democratic legitimacy, effectiveness, efficiency and fairness.

Generally, in democracies, any government intervention, including the land policy, should have democratic legitimacy. Legitimation can be argued to be derivable from public interests that the intervention serves (Needham, 2012, p. 23). However, the public interest is quite impossible to accurately identify since it is an aggregation of all private interests (Bozeman, 2007, pp. 12-13). Furthermore, the public interest can be approached from the perspectives of the process or the outcome which can be labelled as input- and output-legitimacy, respectively (Scharpf, 1999). Input-legitimacy depends on the representation of citizens' interests in the decision making processes within the political system and output-legitimacy on how accurately the achieved outcomes match citizens' collective goals (Hartmann and Spit, 2015).

Whereas democratic legitimacy focuses on the extent to which the outcomes are in public interest, effectiveness measures the ability to achieve these outcomes and efficiency the received outcomes in relation to the costs of achieving them (Hartmann and Spit, 2015). The difference between these three related factors can be described in the following manner. A land policy as a public intervention can be regarded as democratically legitimate when the realised outcome, i.e. built environment, represents public interests. If the realised outcome is achieved within a schedule following the public interest, the land policy can be regarded as effective. If two different land policies were able to produce the desired outcome at exactly the same schedule, the one costing less would be more efficient than the other. These three factors are challenging to analyse in practice due to the difficulty in determining the public interest and the actual value of the complex built environment (Hartmann and Spit, 2015).

Compared to democratic legitimacy, effectiveness and efficiency, fairness does not focus on the provision of the actual development outcome but concerns the distribution of the development profits within the society (Hartmann and Spit, 2015). Fairness is especially complex in the urban development since, as Needham (2006, p. 3) points out, "Land-use planning allows, arbitrarily it would sometimes seem, some people to become millionaires while others must remain poor farmers.". Thus, the pure existence of land use planning causes inequity in society. Furthermore, the whole concept of fairness is debated and very differently perceived in different political perspectives on justice (Sterba, 1999).

Democratic legitimacy, effectiveness, efficiency and fairness are factors that the public authorities should certainly take into account when deliberating

different land policies. However, as mentioned all these factors are quite complex to observe and assess in practice. Thus, the literature often focuses on more concrete, practical and easily observable rationales that can be used to justify public land development. Next, these more practical rationales are presented, and their connection to the presented objectives of the land policy are discussed.

Usually, one of the main rationales to favour public land development is the potentially more effective public control on the quality and coordination of development (Louw et al., 2003; Priemus and Louw, 2003). These advantages are provided by the position of public authority as a building plot supplier in the property markets.

There may be some preferred land uses that can be regarded to be in the public interest, e.g. social housing, but cannot be regulated via public law land use planning (van der Krabben and Jacobs, 2013). Thus, private law voluntary agreements are needed to achieve these uses. Albeit other land development approaches can involve private law agreements as well, the negotiation position of the public authority is different in public land development (Muñoz Gielen et al., 2017; Samsura et al., 2010). If the public land development approach can promote the achievement of such desired uses that cannot be regulated via land use planning, it contributes to the output-legitimation of the approach. The precondition for this is, of course, that provision of the particular land use actually is in the public interest.

The public authority may have limited means to control the timing of property development via public law land use planning (Priemus and Louw, 2003). The building plot supplier position and the related private law agreements offer a potential solution to solve also this issue. The potentially increased control on timing would be positive from the effectiveness perspective since the effectiveness of the land policy is defined as the ability to achieve the desired outcome. It would also contribute to the output-legitimation of the approach if it can help to tackle the urban sprawl that has several negative environmental (Johnson, 2001) and social effects (Ewing et al., 2008). However, as long as the public authority does not become a building developer, implementation of the land use plans is eventually dependent on the decisions of others.

Another often cited rationale for public land development is its potential in public value capturing (Alterman, 2012; Louw, 2008; van der Krabben and Jacobs, 2013; van der Krabben and Needham, 2008). The rationale of value capturing comes from the positive externalities in the property markets related to the public land use planning decisions enjoyed by the lucky landowners (Alterman, 2012).

Public land development is one of the methods to capture the positive externalities from the landowners to the public authority. Other methods (see, e.g. Alterman, 2012 and Muñoz Gielen et al., 2017 for a review) may or may not be more effective in this. The strength of public land development is that the public authority certainly captures all the value increment from the acquisition value to the value of a serviced building plot. For other land development approaches, it can often be challenging to provide such certainty. However, it is

essential to note that, unless the acquisition value equals the value of the land in its existing use but contains any speculative value, value capturing is not complete in public land development either (van der Krabben and Jacobs, 2013).

Many times the alternatives to public land development involve negotiations about voluntary contributions from the landowners or developers (in money or in kind) to the public authority (see, e.g. Muñoz Gielen et al., 2017). These negotiations are often highly complex (Samsura and van der Krabben, 2012; Samsura et al., 2010, 2015) and may also have negative consequences from both input- and output-legitimacy perspectives (Campbell et al., 2000; Crow, 1998; Fox-Rogers and Murphy, 2015; Mäntysalo and Sagle, 2010). In public land development, such negotiations are avoided.

The contributions are often justified with public cost recovery rather than public value capturing rationales. However, they can be regarded as indirect public value capturing (Alterman, 2012). In public land development, public cost recovery is achieved if the building plot sales incomes can cover public land development costs. Therefore, public cost recovery can often be more uncertain in public land development than in many other approaches where the public costs are financed with agreement-based or statutory contributions from the landowners or developers to the public authority (Muñoz Gielen et al. 2017; van der Krabben and Jacobs, 2013).

However, in return for accepting the additional uncertainty of public cost recovery, the public authority has a possibility to profit from public land development. Due to the different public risk profiles of the land development approaches, public cost recovery is quite a difficult aspect to compare between different approaches. Also, since the institutional framework defines the degrees of freedom in the contributions from the landowners or developers to the public authority, the risk profiles are evidently quite context-specific rather than universal. However, it is clear that, since the efficiency of the land development approach depends on the extent that desired results are produced without wasting resources, the promotion of public cost recovery also promotes the efficiency of the land policy.

The profit motives and financial risks embedded in public land development are the sources of the severest academic criticism directed to the approach. The criticism boils down to a so-called dual-hats dilemma (Needham, 2007, p. 184). The expression refers to the two hats that the public authority has to wear when public land development is used. One hat belongs to the land use planning authority that should determine all allowed developments according to the public interests. The other hat belongs to the building plot supplier competing against other suppliers in the property markets. Interests embedded in these two roles can conflict with each other.

The output legitimacy may be endangered if the land use planning decisions do not anymore reflect the overall public interests but instead place more than optimal weight on the financial land development objectives (van Rij and Korthals Altes, 2010). This can have wider market consequences if the building plot supply is systematically limited below social equilibrium to gear up finan-

cial profits (Evans, 2004, p. 185). There can be strong incentives for this because the potential profits can become an important source of income, and the potential losses can be significant of magnitude, especially for smaller municipalities (van Oosten et al., 2018; Woestenburg et al., 2018). However, it is crucial to note that, as already mentioned, the negotiable contributions from the private landowners and developers in other land development approaches are also a source of potential legitimacy problems.

Finally, public land development is certainly complex from the fairness point of view. As already mentioned, there is always unavoidable inequity embedded in land use planning decisions. Public land development internalises the concrete effects of land use planning decisions because the public authority also owns the land (assuming that the land is acquired before the planning decision is made). Thus, one rationale to use public land development can be that no other than the society should benefit from the land use planning decisions if the common understanding of justice within the society supports this.

However, then, the public authority can be claimed to favour itself in the planning decisions (van Dijk and van der Vlist, 2015). If such favouring is fair or unfair depends entirely on the prevailing concept of justice. For example, limitation of private landowners' rights in order to increase public incomes would probably be a nightmare for a classical libertarian. For a devoted socialist, it would probably be almost a dream come true.

Regardless of the concept of justice, public land development creates such public decisions with potential equitability issues that do not exist in other approaches. The terms of public land acquisitions may endanger the equitable treatment of landowners. It could be argued that when the land is acquired with voluntary private law agreements equitability would not be an issue. However, when the other party in the agreement is the land use planning authority controlling the development opportunities of the other party, voluntariness is certainly limited to some extent. The public authority may also have rights to acquire land by compulsory purchase that may further deviate the transactions from truly voluntary transactions (van der Krabben and Jacobs, 2013). Of course, the effect of compulsory purchase depends on the detailed delineation of these rights.

The new, potentially inequitable, public decisions are not limited to land acquisitions but also include land sales and leases. Since the public authority offers business opportunities to building developers when selling or leasing building plots, the selection processes should be transparent to eliminate potential claims of favouring certain developers. However, in practice, these processes can be far from transparent (Caesar, 2016).

The publicly controlled selection processes of building developers can also have positive effects on the markets. Supply of new buildings into the markets can easily concentrate (Ball, 2003; Coiacetto, 2009) which would decrease the efficiency of the property markets. If the public authority focused on increasing competitiveness among building developers, they could prevent unwanted supply concentration with the building developer selections. Potentially increased competition in the building development markets can be regarded to

promote output legitimacy of the land policy since more efficient markets are a key public interest in market economies. However, such control would come with the price of potentially low transparency and possible suspicion of unfair favouring of specific building developers.

In conclusion, it can be said that, on the practical level, the rationales to use public land development include increased control over development quality (increasing output-legitimacy) and coordination (increasing output-legitimacy and effectiveness), competition enhancement (increasing output-legitimacy) and enhanced public value capturing (increasing fairness). It must be highlighted that using public land development to enhance public value capturing is a controversial issue from the perspective of the fairness of the land policy. It only increases the fairness if the societal understanding of justice supports the idea that the society instead of the landowners should profit from unavoidably inequitable land use planning decisions. Furthermore, a decision to use public land development creates new equitability challenges although it may avoid the original one related to inequitable land use planning. How these challenges are solved affects the fairness of land policy. Finally, increased public cost recovery would promote the efficiency of the land policy. However, justification of public land development with increased public cost recovery requires a high tolerance for the additional public financial risks involved in the approach.

1.3 Research problem and questions

Based on the recognised gaps in the existing research, this thesis aims to contribute to land development research by investigating public land development, mainly in the Finnish context, from the perspective of the promotion of public objectives. The aim is approached with two research questions covering both institutional- and project-level aspects of public land development:

RQ 1: What kind of opportunities and challenges to promote and secure public objectives does the public land development approach offer to municipalities?

RQ 2: How effectively can municipalities promote and secure public objectives with the public land development approach in practice?

RQ 1 employs an analysis of the Finnish institutional context, providing the framework where public land development takes place, to recognise the opportunities and challenges embedded in public land development in Finland. In order to determine how unique the opportunities and challenges are for the Finnish institutional framework, examples of other institutional frameworks are investigated as well.

RQ 2 involves a more practical viewpoint on the level of real-life projects. The project-level analysis allows the evaluation of the effectiveness of the public land development approach in the promotion and securing of public objectives within the respective institutional framework. Although the study focuses

on public land development, it is not completely limited to it since RQ 2 cannot be consistently answered without also investigating the alternative approaches to some extent.

Regarding RQ 2, it is important to highlight what is actually meant with the effectiveness of public land development in the promotion and securing of public objectives. As already described in Section 1.2, effectiveness generally means the ability of certain activity to produce the desired outcome. In RQ 2, this desired outcome is the promotion and securing public objectives. It should be noted that the public objectives that may or may not be promoted and secured by public land development are not necessarily related to the effectiveness of the land policy (of which desired outcome is the realised built environment) but can affect the democratic legitimacy, efficiency and fairness of the land policy as well (see discussion in Section 1.2).

Both research questions approach public land development from the perspective of the public objectives of municipalities. Thus, the research excludes the private objectives as well as the objectives of regional and national governments unless they directly relate to the objectives of the municipality. The study investigates the practical objectives of public land development represented in Section 1.2. These include control of development quality, coordination of development, public value capturing, public cost recovery, equitable treatment of landowners and competition enhancement among building developers. The more theoretical objectives of the land policy were not selected as the objectives to be studied because of the high number of simplifications that were assumed to be necessary in that case. Such simplifications have been necessary for the studies focusing only on the institutional level analysis (Hartmann and Spit, 2015). The required simplifications would certainly not be fewer when project-level analysis of real-life practices are involved in the study. Thus, it was elaborated that for the purpose of this study it is reasonable to make the simplification already in the selection of the studied objectives.

Furthermore, the study focuses, in its project-level analysis, on the large-scale development projects creating new neighbourhoods since such projects can be assumed to have a higher than moderate significance for the achievement of the public urban development objectives. Thus, the research excludes infill development projects that aim to densify existing neighbourhoods. Although infill development is also important for the achievement of the public urban development objectives, public land development is usually less relevant in it due to the characteristics of the approach.

1.4 Methodology

Generally, in research, inquiry paradigms or schools of thought can be divided into logical positivism and interpretive phenomenology (Amaratunga et al., 2002). Logical positivism focuses on testing hypotheses by employing quantitative and experimental methods. Interpretive phenomenology is instead interested in gaining a holistic understanding and explanation of a phenomenon by using qualitative and naturalistic methods. The difference between these

two paradigms is highlighted by their ontological positions. Whereas positivism relies on one objective reality, interpretivism takes reality as a constantly changing social construct (Sale et al., 2002).

However, despite the differences between the positivist and interpretive paradigms or exactly because of them, another paradigm, mixed methods research, has been suggested (Johnson and Onwuegbuzie, 2004; Creswell, 2009). The paradigm takes a more pragmatic research philosophy trying to benefit from the strengths of both quantitative and qualitative methods. This seems especially fruitful since qualitative research can also often aim for generalizable conclusions belonging to the positivist paradigm (Lin, 1998).

This study applies the pragmatist research philosophy employing the mixed methods research approach due to its potential of benefiting from both quantitative and qualitative methods. Since the research aims to increase the knowledge of the opportunities and challenges provided by the public land development approach, primarily qualitative methods are employed. This is also supported by the explorative research questions of this study. As Yin (2009) points out, the appropriate research methods are dependent on the type of research questions. Due to the research questions posed, case study analysis was selected for the primary research method in this research. However, a survey involving the quantitative analysis of the collected data was conducted as well. Next, the research and data collection methods used for answering each research question of the study (see Table 1) are discussed.

Table 1. The research methods and data collection in the study

Research questions	Articles	Research methods	Data collection/sources
RQ 1: What kind of opportunities and challenges to promote and secure public objectives does the public land development approach offer to municipalities?	1,2	Literature review Case studies <ul style="list-style-type: none"> • 3 countries <ul style="list-style-type: none"> - Finland - Sweden - the Netherlands 	Review of academic literature Investigation of legislation
RQ 2: How effectively can municipalities promote and secure public objectives with the public land development approach in practice?	1,2,3	Case studies <ul style="list-style-type: none"> • 6 large-scale urban development projects <ul style="list-style-type: none"> - 3 in Finland - 2 in Sweden - 1 in the Netherlands Online questionnaire	Interviews of stakeholders in the case projects Investigation of documents in public archives Responses of the public sector project managers of large-scale urban development projects in Finland

The purpose of RQ 1 is to recognise the opportunities and challenges that public land development may provide for municipalities to promote and secure public objectives. This purpose also involves the evaluation of how context-specific the recognised opportunities are. Therefore, first, a review of aca-

demographic literature was carried out to gather a holistic understanding of the potential opportunities and challenges on a more universal level. Second, the institutional frameworks in three European countries with a tradition to use public land development were studied. Although the study focuses on Finland, the reachable conclusions are certainly more valuable if the Finnish institutional framework is compared to other institutional frameworks as well. The research of the three institutional frameworks was conducted by investigation of the legislation of the case countries.

RQ 2 aims to analyse the effectiveness of the public land development approach in the promotion and securing of public objectives. Whereas for RQ 1 empirical research of the institutional frameworks alone could be sufficient, it is reasonable for RQ 2 to be approached on a more detailed level of practices in individual projects. This allows a more comprehensive analysis of the effectiveness of public land development in practice. Thus, the research for RQ 2 was conducted by means of case studies as well as a questionnaire.

The selected case studies include six large-scale urban development projects: three in Finland, two in Sweden and, one in the Netherlands. Thus, the cases allow an analysis of project-level practices within the institutional frameworks that, on their own, are the cases studied for RQ 1. The Finnish cases include two cases where the public land development approach was primarily used and one case that relied on other approaches. The Swedish cases include one case where the public land development approach was the primary approach and one case where alternative approaches were employed for the majority of the project. The Dutch case project, in its beginning, followed a development approach that could be described as a public-private partnership. However, the partnership was dissolved during the project implementation, and the case started to follow the public land development approach after that.

The data in the case studies were collected by interviewing key informants and by investigating documents in public archives. The selection of the key informants was based on the delineation of the study to local public objectives. Thus, the interviews were mostly limited to the staff of the respective municipalities because it was expected in many cases that they are the only stakeholders that can provide accurate information of the cases relevant to the aim of this study. However, the interviews were complemented with the analysis of the documents in public archives to increase the validity of the case studies (see Section 3.4 for the evaluation of the research).

The case studies are complemented by an online questionnaire aimed at the public sector project managers of large-scale urban development projects in Finland. It focuses on the project managers' perceptions of the implementation practices and challenges of their respective projects allowing quantitative analysis with more generalizable results.

1.5 Structure of the thesis

The thesis consists of three published research articles. Each of the articles was peer-reviewed following generally accepted academic standards before their

publication. Figure 1 summarises the structure of the thesis. It illustrates how the articles and research questions are connected with each other in this thesis.

Articles 1 and 2 contribute to both of the research questions of this thesis. Both articles approach public land development with case studies of institutional frameworks and real-life projects. Article 1 studies two case projects in Finland and two in Sweden, following a framework of public objectives derived from the literature. In both countries, one project mainly followed the public land development approach, and the other, more private-oriented approach. The background for the project case studies is provided through the investigation of the respective institutional frameworks as case studies.

Article 2 takes a risk management perspective to investigate one public land development case project in Finland and one in the Netherlands. Similarly to Article 1, the foundation for the project-level case studies is laid down by the investigation of the institutional frameworks. Thus, in the article, the public land development approach is investigated within two institutional frameworks—first on the institutional level and then on the project level.



Figure 1. The structure of the thesis

Article 3 contributes to RQ 2 by studying the views of the public project managers from Finnish large-scale urban development projects with an online questionnaire. The questionnaire was designed to collect public sector project managers' experiences from the projects they were responsible for. For the analysis, the data was divided into two groups based on the use of partnership planning in the projects. Thereby, the article focuses on studying how the experiences regarding the implementation challenges differ between the two respondent groups. Article 3 is directly connected to the other articles due to its focus on partnership planning. Article 1 revealed partnership planning to be an important tool in the securing of coordinated implementation in public land development. Article 2 found it to be important in the management of the financial risks of the approach.

This summary of the thesis consists of three chapters. This first chapter presents the background and motivation for the research, the aim of the research, the research questions, the methodology employed in the research and the structure of the thesis. The second chapter summarises the three published research articles included in the thesis. The third chapter summarises the results of the thesis, presents its main academic contribution and provides policy implications from the Finnish perspective. It also contains an evaluation of the research quality and suggestions for future research.

2. Summaries of the research articles

This chapter briefly summarises the research articles that this thesis is based on. Each summary includes the objective, methodology, findings and contribution of the respective article. The articles are appended to the thesis.

2.1 Article 1: Securing public objectives in large-scale urban development: Comparison of public and private land development

Article 1 contributes to both research questions of this thesis by analysing the added value of the public land development approach in the securing of public objectives. It provides a holistic foundation for answering the research questions on which Articles 2 and 3 build on with their more narrowed angles.

To fulfil the aim of Article 1, four on-going large-scale urban development projects, and the respective institutional frameworks providing the setting for land development, were studied. The studied projects are located in two Nordic countries, Finland and Sweden. In both countries, the studied projects included one project where the public land development approach was used for most parts of the project and one project where alternative, more private-oriented approaches, were mainly used. Thus, the article analyses the added value of the public land development approach by comparing it to the available alternatives.

The cases were studied via a framework of public urban development objectives recognised in a literature review (see Figure 2). In the framework, the objectives are classified based on the three dimensions of sustainable development: economic, environmental and social sustainability. Quality of the developed environment affects mainly environmental and social sustainability, whereas coordinated realisation of development is mostly related to environmental and economic sustainability. Public cost recovery is a key factor in determining economic sustainability, whereas public value capturing affects both economic and social sustainability. Finally, equitable treatment of landowners has a clear social sustainability rationale.

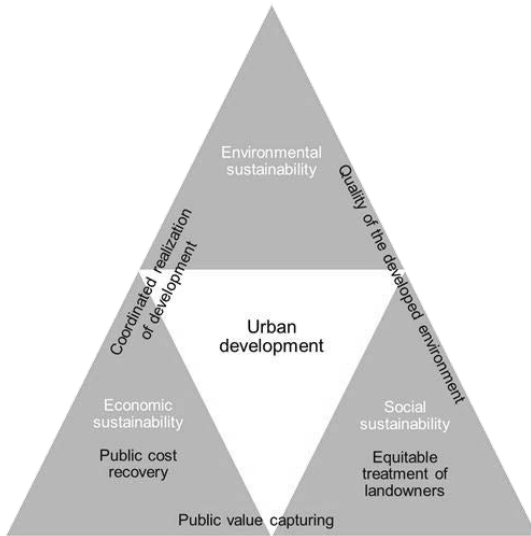


Figure 2. The framework used in Valtonen et al. (2018, p. 483)

The data for the cases were collected by interviewing key informants and by studying public archives. Most of the key informants were municipal project managers of the case projects. Table 2 summarises the data collection for the article.

Table 2. The data collection in Valtonen et al. (2018, p.484)

Case	Kivistö Centre, FIN	Barkarbystaden, SWE	Suurpelto, FIN	Stora Ursvik, SWE
Interviews (length)	Municipal project manager (92 minutes)	Municipal project managers of Barkarbystaden I & II detailed plans (110 min)	Municipal project manager (103 min)	Municipal project manager (77 min) CEO of Stora Ursvik kb (93 min) NCC regional manager (56 min)
Studied planning documents (includes plans under preparation)	1 partial master plan 17 detailed plans	2 partial master plans 7 detailed plans	16 detailed plans	1 partial master plan 9 detailed plans
Key implementation documents studied (non-exhaustive list)	Around 40 building plot sales decisions Around 50 decisions on street and park implementation schemes A development agreement with the private landowner 3 co-operation agreements with partner developers 2 land acquisition agreements	Around 30 building plots sales decisions and agreements Implementation strategies of the plans	5 development agreements 2 agreements to replace monetary payments of development agreements with land transactions 3 building plot sales decisions Municipality's financial statements 2008–2017 Municipality's budget 2014–2018	Around 10 development agreements 2 larger implementation agreements for the two parts of the project (+ 1 update) Land sales agreement concerning municipality's land (+ price adjustment agreement)

The case studies provided several conclusions:

1. The statutory control that can be imposed via land use plans seems to significantly affect the added value of the public land development approach in the promotion of the qualitative objectives. This was most clearly observed in the abilities to promote affordable housing provision.
2. The public land development approach appears to provide significant added value for the coordinated realisation of development due to the position of the municipality as a major building plot supplier.
3. The institutional framework seems to have a significant effect on the added value that the public land development approach can bring to the public cost recovery and value capturing. This suggests that the potential economic advantages of the public land development approach seem to be quite context-specific.
4. In addition to the potential economic advantages, the public cost recovery and public value capturing arrangements appear to be important from the perspective of the equitable treatment of landowners.
5. The long-term consistency of the municipal land policies appears to be a necessity for the equitable treatment of landowners.

In addition to the actual conclusions, the profitability of the studied cases suggests that future research should investigate the relationship between the use of the public land development approach and the building plot supply.

Article 1 contributes to the discussion concerning the most efficient land development approach by investigating real-life case projects in two countries. These countries have received a limited amount of attention in the literature concerning public land development despite their relatively widespread use of this approach. Furthermore, comparative research concerning the public land development approach and its alternatives on the project level within more than one institutional context has been scarce. On the practical level, the findings of the article can be employed by public authorities in the deliberation of their land policies as well as in the structuring of the planning and development institutions.

2.2 Article 2: Risk management in public land development projects: Comparative case study in Finland, and the Netherlands

Article 2 contributes to both research questions of this thesis by investigating what kind of tools public authorities can use to manage the financial risk of public land development and how effective they are. Concurrently, it aims to determine the costs of using these tools in relation to the spatial planning-related and societal interests that are motivating the use of public land development.

The aim of the article was approached by studying two ongoing real-life development projects and their respective institutional frameworks. The studied

cases are located in Finland and the Netherlands. Both cases were under implementation when the Global Financial Crisis of 2007–2009 (GFC) occurred. The cases are located in secondary cities of these countries. The selection of the locations was intentional since it was assumable that the effects of the GFC were more severe in the secondary cities.

The data for the case studies were collected by interviewing key informants and investigating documents in public archives. The cases were analysed with an intention to recognize the motivation for the municipalities to execute the projects through public land development, the risk management tools used in the projects, the effect of the GFC on the projects and the success of the risk management tools in controlling and transferring the risks after the occurrence of the GFC.

In order to analyse the risk management tools and their effectiveness systematically, the literature on the motivations to use the public land development approach was reviewed. From the motivations, the typical risks to be managed were derived with a logic that the motivations to use public land development implicitly translate into the public risks related to land development. Based on these risks, a framework was constructed. The framework consists of two main groups of risks: the risks of not reaching specific public planning goals and the financial risks taken in the public land development approach. The risks related to the unachieved planning goals include unbalanced housing supply, insufficient plan quality, monopolies in housing supply, and insufficient capture of unearned value increment. The financial risks of public land development include higher than expected land servicing and capital costs and lower than expected incomes from selling the building plots.

Table 3 summarises the risk management tools recognised in the case studies. The tools are grouped according to the risk management framework. Furthermore, each risk management tool is categorized as a risk/loss control, risk transfer, or loss financing tool following the general risk management literature. The timing of the use of a tool in relation to the GFC is also indicated in the table.

Based on the analysis of the effectiveness of the tools in the projects, the main conclusion of the article is that, whereas the public land development approach seems to support management of the risks related to the achievement of the planning goals, the management opportunities of the financial risks appear to be limited. In both cases, the partnership arrangements were important in managing the risks related to the market demand of building plots. However, these arrangements seemed to be eventually more favourable for the private property developers than the municipalities. Moreover, the findings highlight the important role of the institutional framework in the creation of the conditions for effective risk management.

Table 3. Recognized risk management tools in Valtonen et al. (2017a, p. 255)

		Risk management tools: Vuores	Risk management tools: Waalsprong
Risks related to the achievement of the planning goals	Housing supply not meeting housing demand	<ul style="list-style-type: none"> Detailed masterplan for the plan area based on population forecasts (C) Conditions in building plot transfer contracts (C) Letters of intent with the state and metropolitan area municipalities setting targets (not limits) for regional housing supply (C, A) 	<ul style="list-style-type: none"> Detailed masterplan for the plan area based on population forecasts (C) Conditions in building plot transfer contracts (C) Adjustments to the master plan twice with involvement of (future) residents (C, A) Regional coordination across municipalities on housing supply (C, A)
	Qualitative planning goals not reached (housing mix, public spaces, visual quality etc.)	<ul style="list-style-type: none"> Plan regulations in the master plan and succeeding local detailed plans (C) Qualitative requirements in building plot transfer contract conditions (C) Selection of developers based on their building project plans (C) Quality group approval for a building development before building plot transfer (C) 	<ul style="list-style-type: none"> Plan regulations in the master plan and succeeding detailed zoning plans (C) Qualitative requirements in partnership contract conditions (C) Qualitative requirements in building plot transfer contract conditions (C)
	Monopolies in housing supply	<ul style="list-style-type: none"> Acquisition of all land in the project area prior to the approval of the master plan (C) Developer selection process for partnership planning (C) Developer selection process for building plot transfers (C) 	<ul style="list-style-type: none"> Acquisition of almost all land in the project area prior to master plan implementation (C) Developer selection process for partnership (C) Developer selection process for building plot transfer (C, A)
	Insufficient capture of unearned value increment	<ul style="list-style-type: none"> Acquisition of all land in the project area prior to the approval of the master plan (C) 	<ul style="list-style-type: none"> Acquisition of almost all land in the project area prior to master plan implementation (C) Separate contracts with a few private developers outside the partnership for remaining land (C)
Financial risks related to the public land development approach	Underestimated land servicing costs	<ul style="list-style-type: none"> Annually updated project plan including project budget estimation and monitoring (C) 	<ul style="list-style-type: none"> Annual financial risk assessment by municipal land department of all PLD projects (C) Municipality's financial reserve dedicated to PLD-related risks (F)
	Overestimated building plot transfer incomes—real estate market risk	<ul style="list-style-type: none"> Annually updated project plan including project budget estimation and monitoring (C) Partnership planning with selected developers in preparing some local detailed plans (C) Reduced regulations in the local detailed plans (C) Variety of the housing mix (C) Detailed master plan limiting the development opportunities also on the neighbouring municipality's jurisdiction (C) Plot reservation contracts in partnership planning with reservation fees (T, A) Some adjustments to housing mix requirements that were possible without adjusting the master plan (C, A) 	<ul style="list-style-type: none"> Annual financial risk assessment by municipal land department of all PLD projects (C) Municipality's financial reserve dedicated to PLD-related risks (F) Establishment of the partnership with presale agreement of building sites (T) Cost reducing adjustments to planned infrastructure (C, A) Adjustments to the master plan twice with involvement of (future) residents (C, A) Adjustments to housing mix, timing of development and number of building plots for sale (C, A) Regional coordination across municipalities on housing supply (C, A)
	Delayed building plot transfers—increased capital costs	<ul style="list-style-type: none"> Annually updated project plan including project budget estimation and monitoring (C) 	<ul style="list-style-type: none"> Annual financial risk assessment by municipal land department of all PLD projects (C) Municipality's financial reserve dedicated to PLD-related risks (F) Adjustments to loan structure (C, A)

C = Risk/loss control, T = Risk transfer, F= Loss financing, A = After GFC measure

Article 2 contributes to the discussion concerning the advantages and disadvantages of the public land development approach by studying the topic from a novel risk management perspective. It does this by providing information on practices in Finland and the Netherlands, two countries where the approach is used extensively. The results of the article also benefit the academics and practitioners of other countries if they consider the suitability of the public land development approach to their institutional contexts.

2.3 Article 3: Development-led planning practices in a plan-led planning system: empirical evidence from Finland

Article 3 contributes to RQ 2 by investigating the relationship of the development-led planning practices and the implementation challenges of large-scale urban development projects. Development-led (or partnership) planning was recognised as an important tool to secure the public objective of coordinated implementation in Article 1 and to manage the financial risk of public land development in Article 2. Article 3 aims to provide more generalizable findings concerning this tool than the research methods used in Articles 1 and 2 allowed. Moreover, Article 3 observes the findings from a perspective of planning legitimacy, strengthening the connection of the thesis to the planning literature as well.

In order to achieve the aim of the article, a questionnaire was sent to the public project managers of the Finnish urban development projects with a population target exceeding 1% of the population in the respective municipality. Infill development projects, aiming to densify already existing neighbourhoods, were excluded from the survey due to the fundamental differences in decision-making processes and development incentives of the private landowners compared to the non-infill projects. The project information was taken from the ATRA database, which was the only available database of such projects in Finland. 23 project managers were surveyed, and 18 of them responded forming the sample for the study.

In order to analyse the data, the projects were divided into two groups based on the use of development-led planning practices, i.e. involvement of private developers in the preparation of legally binding zoning plans. Regarding this selection, the development-led group included projects with various landownership conditions. However, the majority of them mostly relied on the public land development approach. Surprisingly, the plan-led projects also involved some projects where the municipality was not a major landowner. However, those projects were in their early stages, and it seemed reasonable to assume that the municipalities were most probably planning to increase their land ownership within these project areas.

The responses regarding the perceived project challenges were given on a scale ranging from 1 (not a challenge) to 4 (very significant challenge). The mean, median and rank (rank 1 indicating the challenge with the highest mean in the respective group) of the responses in both groups of projects are reported in Table 4. The differences in the distributions of the responses

between the studied groups were tested by the Mann and Whitney test. The only challenge that was found to have such difference was front-loadedness of the investments. Thus, otherwise, the observed differences should be interpreted as indications of potentially different perceptions—not statistically generalizable facts.

The results of the survey suggest that development-led planning practices can have significant limitations in securing the implementation of land use plans. This is interesting when it is recognised that such practices can mostly be legitimised with output-based rather than input-based rationales. The findings of the study question the legitimation with output-based rationales to some extent since uncertainty related to the property markets and implementation time was regarded on average more significant by the respondents of the development-led group. On the other hand, the study indicates that the main advantages of development-led practices are related to the financing of public investments. Thus, legitimation of the development-led practices by the rationale of securing the completion of public works appears to be supported by the results.

In addition, the results suggest that development-led practices appear not to be related to more significant implementation challenges caused by citizens' court appeals or political uncertainty of plan approvals. Thus, based on these two measures, the development-led practices do not necessarily reduce the input-based legitimation, which is to some extent against the arguments of many earlier studies.

The main contribution of Article 3 is that it provides additional knowledge to the ongoing debate regarding the suitability of development-led planning practices in a plan-led planning system. The results also have practical value when the considerations regarding the use of development-led planning practices are made in such planning systems. Finally, it should be noted that the results of Article 3, which contrast the previous research to some extent, suggest that the classification of planning approaches based on the plan-led development-led division might be too narrowed nowadays, and there seems to be a need for developing the classifications further.

Table 4. Challenges in the surveyed projects in Valtonen et al. (2017b, p. 1068)

	Plan-led n=10					Development-led n=8								
	Mean	Median	1	2	3	4	Rank	Mean	Median	1	2	3	4	Rank
Implementation feasibility														
Economic cycles	3.00	3.00	0	1	8	1	2	3.00	3.00	0	3	2	3	1
The quantity of new developments in the project in relation to the transaction volume in the property markets	2.40	2.50	2	3	4	1	7	2.63	3.00	0	3	5	0	3
Uncertainty of the development of the property markets during the project implementation	2.30	2.00	0	7	3	0	9	2.88	3.00	0	3	3	2	2
Uncertainty related to the implementation time	2.30	2.00	2	4	3	1	10	2.50	3.00	1	2	5	0	6
Excessively detailed local detailed plans	2.20	2.00	2	5	2	1	11	1.75	2.00	3	4	1	0	13
Planning process														
Appeals postponing or preventing the plans becoming legally valid	2.40	2.00	1	5	3	1	8	2.50	2.50	2	2	2	2	5
Political uncertainty of plan approvals	1.90	2.00	3	5	2	0	13	1.88	2.00	3	4	0	1	12
Project finance														
Front loadedness of the investments: finance is required in the early phase and the incomes from the investments are realized in the later phase	3.10	3.00	0	2	5	3	1	2.13	2.00	2	3	3	0	9
Investment size of the project in relation to the municipality budget	2.80	3.00	0	4	4	2	3	2.38	2.50	2	2	3	1	7
Uncertainty of budget finance in the long-term	2.60	2.00	1	5	1	3	4	2.38	2.50	2	2	3	1	8
Financial situation of the municipality	2.50	3.00	1	3	6	0	5	2.50	2.50	1	3	3	1	4
Availability of debt finance	1.40	1.00	7	2	1	0	16	1.38	1.00	5	3	0	0	15
Project implementation														
Short sightedness of the politicians in the decisions related to implementation	2.50	2.00	0	7	1	2	6	2.13	2.00	3	2	2	1	10
Differing aims of the project actors	2.00	2.00	2	6	2	0	12	2.13	2.00	2	3	3	0	11
Too few suitable bids from potential contractors when the municipality acts as a developer	1.80	2.00	4	4	2	0	14	1.25	1.00	6	2	0	0	16
Land ownership situation in the project area	1.70	1.50	5	3	2	0	15	1.50	1.00	5	2	1	0	14

3. Discussion and conclusions

3.1 Summary of the results

As presented in Section 1.3, this thesis aims to contribute to land development research by investigating public land development, mainly in the Finnish context, from the perspective of the promotion of public objectives. The aim was approached with two research questions covering both institutional- and project-level aspects of public land development:

RQ 1: What kind of opportunities and challenges to promote and secure public objectives does the public land development approach offer to municipalities?

RQ 2: How effectively can municipalities promote and secure public objectives with the public land development approach in practice?

Based on the empirical studies carried out for this thesis, it can be concluded that the opportunities and challenges provided by the public land development approach appear to be to a large extent context-specific. The public law land use planning system, which is to some extent unique in every country, determines how the planning authority can control landowners' rights to develop their properties. Similarly, the same planning system sets a foundation for the responsibilities of landowners to contribute to the public infrastructure provision. Since, in the public land development approach, the municipality internalises land ownership, the institutional framework significantly affects the potential added value provided by public land development.

The allowed controls in the public law land use planning system define the basic level of the available control over the environmental and social qualities of the development. The landowner position of the municipality in public land development offers an opportunity to control qualities of the development via private law building plot sale or lease agreements. These agreements allow case-by-case discretion for controlling development on an individual building plot level after the land use plans have already been approved. In the studied cases, this additional control seemed to be most effective in affordable housing provision – an issue that cannot be effectively controlled in land use plans within the studied countries and that generally has high importance in the prevention of social segregation. Based on the control of this important issue, it seems that public land development allows the municipalities to effectively

promote such qualitative land use planning goals that they regard important and that they cannot control via land use planning.

Moreover, the public law statutory responsibilities of landowners to contribute to the public infrastructure provisions determine the secure incomes traded off for the potential economic profits in the public land development approach. This can be illustrated by comparing Finland and Sweden. Whereas in Finland the public authorities can freely negotiate private law agreements on the contributions, in Sweden private law agreements cannot include contributions that go beyond the collectable statutory charges limited to technical infrastructure costs. Due to the institutional differences, in Finland, the risk position of the municipality in private land development is vaguer and more case-dependent than in Sweden. Finnish municipalities can aim to cover all the costs related to the development and do not even have to recover specific costs but can instead focus on capturing value increments in the voluntary agreements.

In Article 1 case projects in Helsinki and Stockholm Metropolitan areas, the municipal profits in public land development appeared to be higher than in private land development which is in line with the exposure to the property market risk in public land development. Furthermore, the profits, in general, seemed quite high, indicating that the municipalities might have geared up the profits of the studied projects with the help of the land use planning decisions. However, it is appropriate to highlight that the project level case studies cannot be used to confirm or reject this possibility since it would require an investigation of the planning decisions and building plot supply in the whole urban area.

In addition, the comparative case studies of Article 2 in Tampere and Nijmegen – secondary cities in their countries – suggest that the possibilities of the municipalities to manage the economic risks in public land development can be quite limited in practice when there is a negative shock in property demand. Article 3 strengthened this indication in Finland where development-led land use planning practices appeared not to be effective in treating the uncertainties related to the property markets and project implementation time. In the public land development context, these challenges may relate to the delays in building plot sales (or leases) or delays in actual implementation of building development on the already sold building plots. Of course, only the first kind of delay affects the public cost recovery (unless the potentially increased indirect tax incomes and other economic gains dependent on the realisation of building development are accounted for).

It can be concluded that effectiveness of public land development in the promotion of public cost recovery seems to mostly depend on the circumstances of the property markets outside the control of the municipality, although they can control the supply of developable building plots. However, regardless of market circumstances, the incentives to ration building plot supply for managing economic risks always exist and may conflict with the socially optimal supply of developable building plots to the property markets.

Whereas public cost recovery appears to be quite a context-dependent issue, public land development seems to provide quite universal opportunities to promote public value capturing. However, the significance of the opportunity depends on the public law regulation of land use planning and compulsory purchase. Three regulatory aspects that promote public value capturing can be recognized: (1) ability to prevent development of non-municipality-owned land, (2) ability to use compulsory purchase if the landowner refuses to sell the land, and (3) ability to deduct value increment related to the expectations of future planning decisions (so-called hope values) from compensation in compulsory purchase.

The studied countries and cases allowed an investigation of the differences in compulsory purchase regulation. In all studied countries, the municipality is the sole planning authority within its boundaries. Thus, in each country, municipalities can prevent the development of non-municipality-owned land within its jurisdiction. The important difference between the countries is that, whereas in Finland and Sweden the municipality has, within its jurisdiction, almost unlimited right to acquire land with compulsory purchase for urban development purposes, in the Netherlands, the municipality cannot use compulsory purchase if the land is owned by a competent landowner willing to conduct the planned development.

Although the research conducted in Article 2 did not involve comparison of the public value capturing between the Finnish and the Dutch case project, the path that the Dutch project initially took is quite a typical example of cooperation between private and public landowners in the Netherlands in so-called Vinex locations during the recent decades. One of the fundamental reasons why this kind of model emerged was that the municipalities had only limited rights to use compulsory purchase (see. e.g. Buitelaar, 2010; van der Krabben and Jacobs, 2013). Thus, the Dutch legislation concerning compulsory purchase has forced the municipalities to cooperate with the private landowners (when they are private building developers) if they want development to happen. Finnish and Swedish municipalities do not face similar pressure but can more freely facilitate development with the approaches they prefer.

The regulations of compulsory purchase in Finland and Sweden mainly differ concerning the opportunity to deduct the hope values in the compulsory purchase. In Finland, the deduction exists but concerns only the expectations regarding a specific local detailed plan that has been decided to be prepared. From 2010, the deduction of hope values has not existed anymore in Sweden. However, during the land acquisitions of the Swedish public land development case project in Article 1, the old legislation concerning the deduction still applied. The old Swedish deduction covered all expectations concerning possibly allowed uses in future. Thus, the opportunities for value capturing, regardless of the actual timing of the land acquisition, were probably higher in Sweden than in Finland back then, and now the situation is the opposite.

The Finnish public land development case projects of Articles 1 and 2 point out the importance of the timing of the land acquisitions. In the Article 1 project, the municipality acquired significant parts of the project area after the

legally binding partial master plan was approved. In the Article 2 project, the municipality acquired the land before or during the preparation process of a partial master plan that was, thus, not yet approved or legally binding. In the Article 1 project, the land acquisition costs were around 65 €/m² and in the Article 2 project around 1 €/m². The Article 2 figure is a very rough estimate by the real estate director of the municipality. However, even with the inaccuracy, the figures illustrate how effective public value capturing in public land development depends on correct timing of the land acquisitions in relation to the decisions concerning different layers of land use plans. The potential deductions of hope values in compulsory purchase compensations may reduce the importance of correct timing but only within the limits of excludable hope values.

Besides public value capturing, public land development appears to provide quite universally an opportunity to promote the coordinated realisation of the public land use plans. Of course, the existence of the opportunity depends on how effective the alternative public law measures are in forcing the landowners to implement the land use plans. It is assumable that, in most cases, public supply of building plots to many competing developers gives more control on the actual implementation.

However, it seems that, in practice, public land development is more effective in preventing speculative postponement of development in relatively good market conditions. In weaker market conditions, the effectiveness in promoting implementation seems limited. Based on the project case studies in Article 1 and 2, the main reason for this seems to be that, although it is relatively easy to include building development deadlines in building plot sale or lease agreements, there may not be such agreements to make if market declines. Even if there are building developers that have already signed pre-agreements of buying the building plots at a given time, it seems that such deadlines are less effective and more difficult to enforce than the ones in the building plot sale or lease agreements. In addition, the results of Article 3 suggest that involvement of binding implementation times to the agreements, in general, varies quite much over projects.

Finally, as discussed in Section 1.2, one of the most complex objectives for the municipality in urban development is equitable treatment of landowners since all land use planning decisions lack equitability to some extent. As explained in Section 1.2, in public land development, equitability question concerns the treatment of original landowners and the future landowners, i.e. the building developers to whom the building plots are sold (or leased).

In public land acquisitions, the nature of equitability question is highly dependent on the rules of compulsory purchase. As described in the context of public value capturing, the legislation in the studied countries differs over these rules. Whereas Finland and Sweden have given the municipalities quite unlimited rights to use compulsory purchase for urban development purposes, the Netherlands has weighed the private property rights and do not allow compulsory purchase if the land is owned by a willing and competent developer. In practice, this means that a Dutch landowner has more probably

an opportunity to sell the land also to a private developer than a Finnish or Swedish landowner. Thus, the Dutch institutional framework appears to guarantee a fair market price for the landowners. The only deviations can come from unequitable planning decisions. However, if a municipality wants to have some area developed it cannot set strict conditions over the land ownership.

In Finland and Sweden, the situation is completely different. Any private developer planning to buy undeveloped land for development purposes knows that there is always a threat that the municipality may acquire the land by using compulsory purchase regardless of the developer's willingness and competence to implement the land use plans. Due to the practically unlimited right to use compulsory purchase to acquire undeveloped land for urban development reasons, Finnish and Swedish municipalities can categorically refuse to approve land use plans for non-municipality-owned undeveloped land without any consequences for the final outcome (assuming the municipality also has the political will to use compulsory purchase). Thus, a Finnish or Swedish landowner may end up in a situation where the municipality is a monopolistic buyer of undeveloped land that can use the compulsory purchase if the land is not sold "voluntarily".

With this kind of compulsory purchase legislation, it matters less if the land acquisition is made with a voluntary transaction or by using compulsory purchase since no transaction is a truly voluntary market transaction. Thus, the possible differences in the acquisition values of undeveloped land between landowners are a source of equitability problems. Furthermore, as pointed out in respect to public value capturing, the timing of the acquisitions in relation to the planning decisions is also a relevant equitability question. Finally, since the land market does not work freely due to the extensive compulsory purchase rights, probably the most major equitability issue relates to potentially non-consistent use of public land development.

The Finnish public land development case of Article 1, actually offers a valid example of the equitability problems related to the non-consistent use of public land development. The case municipality was traditionally reluctant to use compulsory purchase and, therefore, a development agreement was signed with a landowner unwilling to sell in the case project area. In the agreement, the landowner was able to keep almost 50 % of the total value of the building right assigned on his land (instead of using compulsory purchase where the landowner would have been able to keep significantly less).

Later on, the willingness of the municipality towards approving local detailed plans on non-municipality-owned land decreased. Within the same partial master plan area (quite close to the case project area), the municipality decided to use compulsory purchase to acquire land for which the owner had already earlier received a conditional offer from a private developer. The condition was that the municipality agrees to approve a local detailed plan allowing development on the land. However, the municipality refused to do this and acquired the land with compulsory purchase for urban development purposes with a significantly lower price than the conditional offer. Undoubtedly, the landowner whose land was acquired by compulsory purchase and the one who

received the relatively more favourable development agreement could have been treated more equitably. However, everything went in accordance with the Finnish law according to the administrative court ruling. In the Netherlands, the outcome would most probably have been completely different because the private developer would have acquired the land from the landowner without the condition of planning since the developer would have known that the municipality cannot use compulsory purchase anymore after the developer has bought the land.

When it comes to public land sales and leases, the main source of equity problems is the lack of requirements to use open bidding competition. None of the studied countries requires this. The only restriction is that the municipalities are not allowed to sell or lease building plots for businesses below the market value due to the EU-level regulation. It could be argued that, since in the Netherlands the private building developers can truly compete against the municipality in the land markets, the equity of building plot sales and leases is less relevant. After all, a building developer can outbid the municipality in the land markets and acquire development opportunities.

In Finland and Sweden, the equity of building plot sales and leases is probably more important because of the compulsory purchase legislation and its effect on the land markets. The main question is then by which means the building developers receiving the plots are selected. The studied public land development cases of Article 1 and 2 have widely involved, mostly quality-based, competitions for the plots. An open competition is probably the most effective manner to increase the equity, although quality-based selections contain quite a notable amount of subjectivity. Furthermore, an open competition or any other action promoting equity of developer selections does not remove the fact that the whole equity issue would not exist if other land development approaches than public land development were used.

Finally, regarding the competition enhancement objective which is also dependent on the developer selections, the findings of the study are quite limited. Since the studies did not involve holistic evaluation of the competition conditions among building developers in the property markets, the only competition control aspect that can be assessed relates to the local monopolies within the studied case projects. None of the projects in Article 1 or 2 showed such monopolies, which could indicate that public land development seems effective in preventing them. However, the private land development cases of Article 1 did also involve many building developers operating in the project areas. Thus, it remains quite inconclusive if public land development can be said to promote the competition. According to the results, it seems that at least it seems not to weaken it notably.

To summarise the main findings, it can be concluded that, whereas the public land development approach seems to provide quite universal opportunities to promote public value capturing and coordinated implementation, the opportunities to promote public cost recovery and the quality of the developed environment are more dependent on the institutional framework and the economic conditions. Moreover, based on the studied development projects, the

public land development approach seems to be relatively effective in the promotion of public value capturing and quality of the developed environment, whereas the effectiveness in the promotion of public cost recovery and coordinated implementation can be notably limited in unfavourable market conditions.

Finally, the question of whether public land development provides opportunities or challenges for equitable treatment of landowners depends on how the concept of justice is understood. The studied development projects suggest that the most major equitability issue, independent of the fundamental concept of justice, relates to inconsistent use of the public land development approach over time. Thus, the effectiveness of public land development in the promotion of equitable treatment of landowners seems to mostly depend on consistent policies regarding use of the approach. In representative democracies with relatively short electoral terms, achievement of such policies can be quite difficult to achieve in practice. Furthermore, public land development also causes equitability issues related to building plot sales and leases that would not exist if other approaches were used.

3.2 Contribution of the thesis

The thesis contributes to land development research in several ways. It provides comparative research combining institutional- and project-level analysis within several institutional frameworks. Thus far, most case studies of public land development at the project level have involved only one institutional framework (see, e.g. van der Krabben and Needham, 2008). The studies involving more than one institutional framework have mainly focused on institutional-level comparisons (see, e.g. Hartmann and Spit, 2015; Havel, 2009; van der Krabben and Jacobs, 2013). A combination of institutional and project-level research that can be found in this thesis does not, to the author's knowledge, exist in previous research (however, see Muñoz Gielen et al., 2017).

Furthermore, despite the common use of public land development approach in Finland and Sweden, academic research of public land development employing data from urban development projects of the studied countries has been to a large extent absent thus far (however, see Olsson, 2018). Thus, the thesis provides empirical results from institutional contexts underrepresented in the research. Since the land use planning systems differ among countries (Nadin and Stead, 2008), research of public land development in scarcely studied contexts significantly widens the academic knowledge of the approach.

The key findings are generally in line with existing public land development research, mainly employing Dutch data. However, the research design allows derivation of more concrete conclusions supported by empirical data from several real-life projects with the institutional aspects taken into account as well. The thesis reaches these conclusions by employing a holistic framework of public objectives and by analysing empirical data from altogether three institutional frameworks of which two are relatively scarcely studied. Thus, the

thesis contributes to land development research by strengthening the holistic understanding of institutional effects on public land development.

The thesis also provides some important conclusions that are either novel or slightly contrasting to the existing research. First, it can be concluded that, whereas more qualitative risks related to the planning goals can be effectively managed in public land development, management of economic risks appears to be challenging—if not impossible—in economic downturns. The explicit risk management perspective of Article 2 is a novel one providing valuable information on the often overlooked riskiness of the public land development approach. Furthermore, the analysis of the different risk management tools offers useful knowledge for risk management when the public land development approach is used.

The thesis also investigates the implementation challenges of large-scale urban development projects from the perspective of development-led planning practices in plan-led systems (Article 3). These practices are especially important in the context of the public land development approach due to their importance as risk management tools. The achieved results allow a conclusion that the use of development-led practices is not necessarily connected with less significant challenges relating to the property market uncertainties or implementation time. However, it neither seems to be connected with more significant challenges related to the appeals of citizens or the uncertainty of political approvals. This conclusion challenges, to some extent, a common perception in planning literature that the development-led practices can be legitimised by the output-based rationales and criticised for the shortcomings relating to the input-based legitimacy (see, e.g. Mäntysalo and Saglie, 2010).

However, due to the indicative nature of the results, they should not lead to an abandonment of earlier perceptions. There certainly are more nuances in land use planning than captured by the relatively crude plan-led development-led division. Actually, the questionnaire data of Article 3 revealed that there were many different forms of involvement of the private developers in land use planning. However, due to the small dataset, they had to be aggregated in two groups. Furthermore, it is quite possible that the plan-led practices may have involved some more unofficial input from private developers that the survey was not able to reveal. This can be regarded even relatively probable taken into account the dependence of plan implementation on private investments. Thus, these slightly controversial results encourage to elaborate that maybe the classification of land use planning to plan-led and development-led practices is nowadays already outdated. However, the conducted empirical research did not allow to deliberate the planning classifications further.

3.3 Policy implications

In addition to the academic contribution, the empirical research conducted in this thesis raised several policy implications for the Finnish development legislation and practice. They could be taken into account while deliberating plan-

ning and development institutions and governing land development in Finland.

Based on the conducted research, it seems that the Finnish land use planning and development legislation is slightly questionable regarding the responsibility of landowners to participate in the public infrastructure provision costs. Unlike for example in Sweden, the arrangements to fulfil this responsibility follow private agreement freedom. Although statutory development charges with detailed conditions exist in the legislation, to the author's understanding, they have never been formally used in Finland. This seems logical since the negotiation position of a municipality regarding the private law "voluntary" agreements is superior compared to that of the landowner. After all, if the landowner does not sign a "voluntary" agreement, the municipality can acquire the land by using compulsory purchase (for which it has almost unlimited rights). Alternatively, it can, as an uncontested planning authority, leave the area without the required development-allowing local detailed plan.

Although the position of a municipality in these negotiations is superior, quite controversially, public land development appears to be almost a norm in Finland when it comes to the development of undeveloped land. This is most probably a result of the incentive to avoid the time-taking negotiations with the landowners and also of the standard development agreement content resulting from the agreement freedom. In the (relatively rare) cases where private undeveloped land is planned for large-scale development, to the author's understanding, quite usual format of the agreement is a fixed "price" of building right per square metre that the landowner pays to the municipality (as it was in the studied private land development case in Finland). Such an agreement leaves the infrastructure cost risk, similarly to public land development, to the municipality. Furthermore, the agreed payments are often much lower than the expected uncertain incomes from the building plot sales in the public land development option (that in growth areas are however quite certain in the long-term). When these factors are taken into account, public land development appears to be quite difficult to argue against based on economic risk/profit rationales.

The Swedish regulation concerning the landowner contributions appears to provide a system where the lengthy negotiations about the contributions are avoided. The Swedish regulation makes landowners responsible for paying the provision costs of technical infrastructure serving the landowners' properties. The law also prevents deviations from this statutory principle with a voluntary development agreement. This kind of regulation of the landowner contributions could solve some of the shortcomings of the current Finnish system. Thus, it could make private land development a more viable alternative for an economically rational municipality, especially if the contributions were made to also include the provision costs of service infrastructure. Certainly, this kind of regulation would make private land development in Finland more transparent and equitable.

Actually, the legitimation for the landowner contributions within the Finnish legislation comes from the responsibility to participate in the public infrastruc-

ture provision costs. Thus, already nowadays, the agreements should be somehow directly connected to the infrastructure provision costs if the legitimization of the agreements were taken into account. However, typical development agreements are more in line with value capturing than cost recovery without any direct links to the actual provision costs of infrastructure. A change towards a system that is more similar to the Swedish one would fix this conflict between practice and legislation.

The landowner contributions are not the only part of the legislation that could be critically reviewed. It is relevant to ask if the compulsory purchase legislation is fair for private property owners. The view that the government should have the right to acquire a parcel of land by force from a landowner opposing development that would significantly benefit the public is quite undisputed. However, it can be questioned if the government should be able to use compulsory purchase to acquire land from such landowners who are both willing and able to develop their land according to the plans. In the Netherlands, the answer has been negative, and it should be considered if the private property in Finland should be given similar protection.

This change would not affect the development outcome. The land would still be developed according to the plans (since the compulsory purchase could still be used if the development-capable landowner became unwilling to develop). The change would mainly affect the value increments that the municipality could capture from the private property owners. However, since the state government can freely decide on the taxation that the municipalities could impose on land development, the state could deliberate if the current approach of using public land development supported by extensive rights for compulsory purchase is the most efficient and fairest way to arrange value capturing. Certainly, e.g. taxation, would be a less controversial method from the perspective of the protection of private property rights recognised by the European Convention on Human Rights.

Besides adjustment of the legislation, also some policy implications to the Finnish land development practices (and to the development practices in countries similar to Finland) can be derived from the empirical studies of this thesis. First, it became quite clear that only consistent long-term land policies can secure the equitable treatment of landowners. However, reliable long-term policies are easier in theory than in practice since any municipal council has a four-year term, after which changes may occur. This fact can be regarded as the most significant single reason to adjust the legislation as suggested since the proposed changes would protect the landowners against sudden policy changes to some extent.

Second, it was found that partnership planning (i.e. involvement of the private developers in the preparation of a local detailed plan) is a widely used method, which plays an important role in the management of the risks related to building plot demand in public land development. However, it appears that, during economic downturns, partnership planning has significant limitations in securing the acquisition of the building plots. One potential remedy is to formally agree, with financial penalties, on the acquisition schedule of the

building plots beforehand. However, such agreement conditions are certainly taken into account by the developers in their price offers.

Furthermore, there is a potential threat that the penalties would not be collected due to the lack of necessary political will. If this happens, then it is probably better not to include plot acquisition obligations with financial penalties in partnership planning. Otherwise, the municipality may end up receiving lower offers for the building plots without receiving any concrete benefits from the risk management perspective. The complexity of the acquisition deadlines with financial penalties should not be forgotten while deliberating the conditions for partnership planning although concrete suggestions for generally preferable practices cannot be given based on this study.

3.4 Evaluation of the research

In the social sciences, the quality of the research design is commonly evaluated based on four factors: construct validity, internal validity, external validity and reliability (Yin, 2009). In this section, the research of this thesis is evaluated from these perspectives. The quality of the research of the individual articles is assessed in them. Therefore, this evaluation focuses on the quality of the research design of the whole thesis.

Construct validity refers to the question of whether the operational measures of the research have been correct, which is an especially typical challenge in case studies (Yin, 2009). Yin presents three potential tactics to improve the construct validity: use of multiple sources of evidence, establishment of a chain of evidence, and reviews of case study reports by key informants. The empirical research in this thesis consists of multiple case studies and a survey containing information from 18 development projects. Thus, multiple sources of information were employed to support the conclusions. Furthermore, in each case study, multiple sources of information were used. These sources included public documents and formal interviews as well as more informal discussions with the experts from academia and industry. Moreover, the research establishes a consistent chain of evidence where the research questions justify the data collection procedures, and the conclusions are derived from this systematically collected and documented data.

Internal validity is, to some extent, a different concept in causal and explanatory research than in descriptive or exploratory research (Yin, 2009). The research in this thesis is descriptive and exploratory by nature. According to Yin, in exploratory research, internal validity is merely limited to the broader concept of making inferences. Inferences are always unavoidable when a particular event cannot be directly observed. Yin notes that specific tactics for overcoming the problems related to making inferences are difficult to identify.

Internal validity is increased when rival explanations and possibilities are considered, and the convergence of evidence is taken into account. Each of the articles included in this thesis contains a thorough discussion of the results, increasing the explicitness of the inferences behind the conclusions. Further, the conclusions have been made and reported cautiously, encouraging the

readers to treat them as the most plausible indications rather than as undisputed facts. In addition, each of the three articles that this thesis is based on has been carefully reviewed by the respective co-authors. Thus, eventually, the inferences in the articles come to represent a common understanding of three researchers—not only the interpretation of the author.

External validity relates to the generalizability of the results beyond the study context (Yin, 2009). It has been promoted in this study through several means. Each article contains the descriptions of the institutional contexts where the empirical project-level research took place. Thus, a careful reader recognises that the results must be reflected upon in the institutional framework before interpreting them.

Furthermore, the conclusions of the thesis and individual articles discuss to what extent the findings appear to be context-dependent. Thus, some findings have been indicated as potentially more generalizable than others. However, even the findings that are indicated as more context-dependent can be generalised to some extent after taking into account the characteristics of the institutional contexts involved in this research.

Finally, the empirical case studies follow carefully constructed theoretical frameworks derived from the literature. This provides an opportunity to test the generalizability of the research by replicating the research with data from different cases. Similarly, the survey could be replicated with a different data set to test the generalizability.

Reliability refers to the repeatability of the research (Yin, 2009). Regarding the survey data, the reliability has been promoted by saving the online questionnaire used in the study and the received responses. Since generally accepted methods of quantitative analysis were used, anyone could analyse the saved data with the same methods and should reach the same conclusions.

In the case studies, the reliability has been advanced by carefully archiving all collected data. Thus, if someone would like to repeat the case studies as they were conducted, it would be possible. It should be recognized that it is unavoidable that interpretation by the researcher is a fundamental part of any case study. However, the author has strived to make the interpretations as explicit as possible by including thorough discussions of the results in the articles. The results have also been reviewed by the other authors and the peer-reviewers of the articles as well as several other experienced academics. This should reduce the weight of the author's individual interpretations in the conclusions.

3.5 Future research

This thesis opens several interesting avenues for future research. The research in this thesis was limited to the development of new neighbourhoods. However, densification of existing neighbourhoods by infill development is, nowadays, becoming more and more important in urban development. Thus, the opportunities related to the public land development approach could be studied in the context of densifying infill development as well.

Furthermore, the research was mostly limited to municipalities and metropolitan areas where the population was increasing relatively quickly and, therefore, the expected demand for new dwellings was relatively high. Thus, it would be interesting to study public land development in metropolitan areas where the population growth is lower or even negative and, therefore, the economic risks of public land development are higher.

The research was also limited to the three market economies where, according to the literature, public land development seem to be most extensively used in Europe. However, public land development is used elsewhere too. Thus, research involving institutional contexts not included in this study would probably be beneficial.

Since the research problem of this study was exploratory, the results call for wider empirical research concerning the causal relationships between the public land development approach (as well as other land policies) and the property markets. Based on the results, two potentially fruitful topics emerged.

First, from the perspective of affordable housing, it would be interesting to see if the public land development approach could actually be proven to lead to a higher amount of affordable housing. It was found that the public land development approach can offer more detailed control over the provision of price- and rent-controlled housing. However, within a wider context, it could be studied if this additional control has a significant effect on housing prices in general, or if the potential gains are counterweighed by potentially higher prices of freely traded units.

Second, in the Helsinki and Stockholm metropolitan areas, the public land development approach appears to have produced relatively high profits for the municipalities. This indicates that the housing supply may be on a socially sub-optimal level within these metropolitan areas. Since, in public land development, the municipality has more direct and significant interests related to building plot prices, it would be interesting to investigate the relationship between the use of the public land development approach and the prices of building plots or developed properties.

Finally, the survey results regarding implementation challenges of large-scale projects raised a concern for applicability of the plan-led development-led division of planning practices to present day property markets. Development of new theoretical conceptions of land use planning classifications goes beyond the scope and aim of this thesis. However, it should be investigated in more detail if some other kinds of classifications could describe the participation of private developers in public land use planning more accurately.

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Urbanisation is predicted to continue on all continents in the foreseeable future. Public land development is one of the approaches public authorities can employ to secure that the required property development activities occur sustainably. This thesis investigates the opportunities and challenges that the public land development approach can provide to municipalities and the effectiveness of the approach in practice. It is concluded that the strengths of public land development are in the promotion of the qualitative development goals, public value capturing, and coordinated realisation of development. On the other hand, the weaknesses relate to the economic risks of land development that were found difficult to manage, and to the equitable treatment of landowners. Beside the academic contribution, the thesis also provides some practical policy implications for Finnish decision makers.



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