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*Published in:*  
European Planning Studies

*DOI:*  
[10.1080/09654313.2017.1301885](https://doi.org/10.1080/09654313.2017.1301885)

Published: 03/06/2017

*Document Version*  
Peer reviewed version

*Please cite the original version:*  
Valtonen, E., Falkenbach, H., & Viitanen, K. (2017). Development-led planning practices in a plan-led planning system : empirical evidence from Finland. *European Planning Studies*, 25(6), 1053-1075. Advance online publication. <https://doi.org/10.1080/09654313.2017.1301885>

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# **Development-led planning practices in a plan-led planning system: Empirical evidence from Finland**

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## **Acknowledgements**

This work was supported by Tekes – the Finnish Funding Agency for Innovation under Grant 1961/31/2012. We are thankful for the support. We would also like to thank the two anonymous referees, Dr Xavier Albacete, Anahita Rashidfarokhi and Tuulia Puustinen for their constructive comments that helped us with this work.

This is an Accepted Manuscript of an article published by Taylor & Francis in European Planning Studies on 16/03/2017, available at <http://www.tandfonline.com/10.1080/09654313.2017.1301885>.

## Abstract

*Planning systems are generally divided into plan-led and development-led systems. However, it is quite common that the planning practice follows development-led planning although the planning system would structurally be plan-led. To study how development-led planning affects the implementation of large-scale urban development projects, we conducted a cross-sectional survey in Finland - a country with a hierarchical setting of legally-binding zoning plans which can be prepared by following either plan-led or development-led practices. The survey respondents were civil servants managing implementation of large-scale urban development projects. Our results quite surprisingly suggest that development-led planning may cause the projects to become more vulnerable to property market uncertainty compared to the projects following the plan-led practises. These results challenge the usual output-based legitimation of development-led planning to some extent.*

**Keywords:** planning, urban, development, implementation, survey, land-use

## 1. Introduction

Inefficiencies of the land and property markets cause a need for some sort of land-use planning (Alexander, 2014) which regulate and constrain as well as shape and stimulate these markets (Jones, 2014). The planning systems can generally be divided into plan-led and development-led systems based on the existence of legally-binding zoning plans defining the allowed land uses (Faludi, 1987; Nadin & Stead, 2008; Muñoz Gielen & Tasan-Kok, 2010). In a plan-led system, such plans approved by the public authorities are required before the developers can apply for building permits. Generally, the rule is that if the development proposal follows the zoning plan, the building permit must be granted. In other cases, the building permit is not to be given. In a development-led system, the public authority instead judges all the development proposals on their case by case merits without any legally binding zoning plans limiting these judgements.

Even in the countries with a plan-led planning system, the legally binding plans are often prepared in close co-operation with the property developers (see e.g. Muñoz Gielen & Tasan-Kok, 2010; Buitelaar & Sorel, 2010; Buitelaar, Galle, & Sorel, 2011). In these cases, the public zoning plan no longer guides the development proposals but rather the inputs from the private developers start to guide the planning outcome. As for example

Mäntysalo and Saglie (2010) have discovered, this has been legitimized by the claims that the implementation of the plans, which is the prerequisite for achieving any common good related to the development, is dependent on private investments. Therefore, it has been suggested by the advocates of development-led planning practices that the legally binding zoning plans should be made to facilitate the proposals of these private investors.

The aim of this paper is to study how the development-led planning practices affect implementation of large-scale urban development projects in a plan-led planning system. Until now, the research of development-led planning practices has mainly focused on the legitimacy problems in the planning process arising from unequal participation opportunities (Fiskaa, 2005; Haila, 2008; Sager, 2009; Mäntysalo & Saglie, 2010; Falleth, Hanssen, & Saglie, 2010; Hanssen, 2010; Hanssen & Falleth, 2014), planning gain negotiations (Crow, 1998; Campbell, Ellis, Henneberry, & Gladwell, 2000; Campbell & Henneberry, 2005; Cass, Walker, & Devine-Wright, 2010; Fox-Rogers & Murphy, 2015) and lost legal certainty (Buitelaar & Sorel 2010; Buitelaar et al. 2011). To the authors' knowledge, the actual effect of the planning practices on the implementation of the plans has been studied only in a limited number of case studies in few institutional contexts (see e.g. Alexander, 1998; Muñoz Gielen & Tasan-kok, 2010; Farthing, 2011). Also, studies that would involve comprehensive comparison of the plan-led and development-led practices in the same institutional context seem to be currently non-existent.

To fulfil the aim of the paper, we study the application of the plan-led and the development-led planning practices in Finland. Development in Finland takes place in a planning system with a hierarchical system of several legally binding zoning plans. The local detailed plans that provide the basis for the building permits can be prepared by the municipality alone or in cooperation with the private property developer(s) (see e.g. Havel, 2009; Mäntysalo & Saglie, 2010; Valtonen, Falkenbach & van der Krabben 2017). Thus, Finland is a useful context for a study with our focus. We approach the research problem by a cross-sectional survey of the opinions of civil servants responsible for large-scale urban development projects in Finland. The survey allows us to compare development-led and plan-led planning practices regarding the implementation challenges of the plans. Hence, the paper contributes to the on-going debate concerning the suitability of the development-led planning practices to a plan-led planning system. The results have practical value in any country where

development-led practises are used in a plan-led planning system. Since every country has its unique institutional context, we also briefly describe the Finnish planning system to make it easy for people from other countries to reflect on the implications of our survey results.

The rest of the paper is structured as follows. First, strengths of and criticism towards the development-led planning are discussed (Section 2). This is followed by a brief overview of the Finnish planning system (Section 3). After this, the survey is presented and its results are discussed (Section 4). Finally, the paper is closed by the conclusion (Section 5).

## **2. Strengths of and criticism towards development-led planning**

As already noted, planning systems can be divided into plan-led and development-led systems. A plan-led system with legally-binding zoning plans preceding the property developers' development proposals clearly relies on the idea that the public planning authority can predict the land uses that will best serve the community in the future. Already Faludi (1983) argued that this kind of assumption is inconsistent. Furthermore, Alexander (1998) pointed out that public planners may regard an approved plan, rather than an implemented plan, as the end-product of the planning process causing a missing link between planning and implementation. When property development is in the private domain, the plans remain unimplemented if they do not enable profitable development opportunities. Thus, a plan-led system can become ineffective regarding the implementation of the legally binding zoning plans.

A development-led system does not have the problems related to unprofitable development opportunities in the legally binding zoning plans because such plans do not exist in the system. This kind of complete flexibility compared to a plan-led system comes, however, with a price. From the legal certainty point of view, Moroni (2007) has argued that development-led systems with no rigidity over future land uses create unpredictability and instability for the public. However, he has also suggested that the legal certainty is quite limited in plan-led systems as well. This is due to the fact that the public land-use plans are usually not limited to stable and general rules concerning every property, but instead include location-specific regulations that are often changed.

Although many planning systems recognize by law that legally binding zoning plans must exist, the planning practice determines if the planning has more plan-led or development-led characteristics (see e.g. Muñoz Gielen & Tasan-kok, 2010; Buitelaar & Sorel, 2010; Buitelaar et al., 2011). In practice, the legally binding zoning plans (that are supposed to exist before developers apply for the building permits) may be prepared for developments negotiated with the private developers beforehand (see e.g. Mäntysalo & Saglie, 2010; Falleth et al., 2010). Thus, the requirement for legally binding zoning plans in a plan-led system might not cause a notable practical difference to a development-led system.

Following communicative/collaborative planning principles (see Healey, 1996; 2006), the creation of a legally binding zoning plan in the plan-led system is often designed to involve the direct participation of the affected parties in addition to the indirect participation through voting in a parliamentary system. The idea of involving the affected parties relates to the legitimization of planning by input-based terms (see Scharpf, 1999). The affected parties can be determined differently (Schmitter, 2002) and the determination is affected notably by the framing of the planning problem (Klausen & Sweeting, 2004). If society wants to protect the private property rights, at least the landowners and land lessees within the development area must be regarded as affected parties.

Development-led planning practices allow the private developer to have a privileged position as a participant in the planning process (Hanssen & Falleth, 2014). This privileged position of the private developer is usually related to closed-door negotiations between the developer and the public authority over the plan content and the developer's contributions to the public infrastructure provision (Mäntysalo & Saglie, 2010; Falleth et al., 2010). The combination of planning decisions and developers' contributions to public infrastructure have been criticized even in more development-led planning systems due to possible planning integrity shortcomings (Crow, 1998; Campbell et al., 2000; Campbell & Henneberry, 2005; Cass et al., 2010; Fox-Rogers & Murphy, 2015). Available infrastructure contributions add a financial aspect to the planning decisions which raises a question if the developers can buy favourable planning decisions by offering higher contributions. Furthermore, although the position of the private developers is privileged in the development-led planning systems due to the fundamental idea of the system, the rights of the affected parties to participate in planning

and especially to appeal planning decisions has been a source for critical debate (see e.g. Ellis, 2004; Clinch, 2006; Willey, 2006).

Thus, it is evident that the development-led planning practices can be mainly legitimized by output-based rather than input-based reasons<sup>1</sup>. As Mäntysalo & Saglie (2010) point out in their case studies, this legitimation can appear by highlighting the contributions of the private developer to the public spaces and facilities as well as the dependency of the plan implementation on the private investments. The former means legitimation by the quality of the output and the latter by the ability to reach a realized output at all.

Finally, in addition to the decreased input-based legitimacy, development-led planning has also received critique regarding the reduced legal certainty that is one of the main advantages of a plan-led system (Buitelaar & Sorel, 2010; Buitelaar et al., 2011). However, it should be noted that if any kind of location specific planning regulations exist, legal certainty remains quite debatable even in a plan-led system (Moroni, 2007).

### **3. Planning system in Finland**

Since 01/01/2000, the Finnish planning system has been regulated by the Land Use and Building Act (1999). Unless otherwise mentioned, the following brief overview of the Finnish planning system is based on this act.

In Finland, the planning system is based on a hierarchy of legally-binding zoning plans where the more general plan should always guide the preparation of the next plan. There are three levels of legally-binding zoning plans: regional plan, local master plan and local detailed plan. The creation and approval of the regional plans are under the jurisdiction of the regional council, a joint body of all municipalities within the region. Local master and detailed plans are created and approved by the municipalities, although two or more municipalities can decide to draft a master plan in cooperation.

The regional council has the responsibility to keep the regional plan updated. The plan can be updated for the whole region or for some particular part of the region only. The municipality has the responsibility to update the local master plan covering the whole municipality area and the local detailed plans covering smaller

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<sup>1</sup> It should be noted that input-based legitimacy arises from the direct participation opportunities of the citizens (input legitimacy through voice) and from the citizens' opportunity to show their satisfaction in the elections (input legitimacy through vote) (see e.g. Falleth et al., 2010 for a wider review in the urban planning context). Thus, in democratic societies input legitimacy through vote always exists albeit input legitimacy through voice can be limited by the reduced direct participation opportunities.

specific areas. As for the regional plans in the regional level, the local master plan can be updated for the whole municipality or for some particular part of the municipality only. The municipalities (and the regional councils) decide independently when and where planning processes are started within their jurisdictions.

Before a landowner or land lessee can develop his property, a building permit is required. Basically, for any significant building project, a building permit can be granted only if a legally binding local detailed plan allowing the proposed development exists. Boundaries of different public and private land-uses as well as the allowed building volumes must always be regulated in the local detailed plans. In addition, the local detailed plans can include as many and as extensive regulations for the allowed land-uses as the municipality perceives necessary for securing the achievement of the public planning goals.

It should be noted that the regulation of land-uses cannot cause unreasonable harm to the landowners or other titleholders if the harm can be avoided without weakening the achievement of the set planning goals. Thus, if the municipality can justify the existence of a specific plan regulation by its necessity regarding the planning goals, the harm caused to a specific landowner does not prevent the inclusion of such a regulation. Furthermore, the content of the local detailed plan is to some extent limited by the regulations included in the regional plan and the master plan because they guide the preparation of a local detailed plan. The extent to which the municipality can deviate from these more general plans depends on the case. A minimum requirement is that the municipality provides reasonable justifications why the more detailed plan deviates from the more general plan.

When a local detailed plan exists, the building permit must be given if it is in conformance with the regulations set in the local detailed plan, meets the minimum technical requirements that any building in Finland must meet, fits into the built environment and landscape, and fulfils the requirements of beauty and proportion. Until April 2016, the municipality was not able to allow more than minor deviations from a legally-binding local detailed plan concerning the type and volume of the building right on a specific building plot (Land Use and Building Act, 1999, amendment 2016/196). Major deviations were judged by the state organization responsible for land-use planning issues. From April 2016, the municipality has possessed an independent right to decide on all deviations.



In the Finnish planning process, many interested parties including “*the landowners in the area and those on whose living, working or other conditions the plan may have a substantial impact, and the authorities and corporations whose sphere of activity the planning involves*” (Land Use and Building Act, 1999, §62) can participate on the plan preparation. A private landowner-developer can try to affect the final content of the plan drafts when they are publicly presented like any other interested parties. This kind of developer participation in plan drafting must be accounted to still belong to the normal plan-led planning process instead of being regarded as a development-led planning practice. However, the legislation favours the use of private-law land use agreements to settle the developer contributions to the public infrastructure provision. By having this position to negotiate about the contributions, the private landowner is in most cases automatically more involved in the plan creation than other interested parties.

It is not strictly determined how the municipality must arrange the planning process in practice. The municipality must at least notify the interested parties of the initiation of planning, prepare a participation and assessment scheme containing the participation and interaction procedures applied in the planning process, and present the plan proposal publicly before its approval. The interested parties, human and legal residents of the municipality, and those who own real property within the municipality must be reserved an opportunity to state their objections on the publicly presented proposal. In addition, the municipalities usually secure sufficient participation of the interested parties in the plan preparation by also publicly presenting a preliminary plan draft which is then updated to a final plan proposal.

After the plans are approved by the municipality (or by the regional council) the approval decisions can be appealed by following the Local Government Act (2015). All the parties that have a right to state their objections on the plan proposal also have a right to appeal against the plan approval decision up to 30 days after the information of the plan approval was given. Since March 2007, only the interested parties have been able to appeal against an approval decision of an amendment of a local detailed plan with a small impact (Land Use and Building Act, 1999, amendment 2006/1441).

The law does not regulate how the municipality responsible for planning arranges the plan preparation tasks. Only the sufficient participation of the interested parties in the planning process must be guaranteed. Thus, it is completely within the municipality’s discretion if it decides to involve private property developers in the

creation of a legally-binding zoning plan. In this regard, the Finnish planning system is similar to many European planning systems with a plan-led system of legally-binding zoning plans (Muñoz Gielen & Tasan-Kok, 2010; Buitelaar & Sorel, 2010; Buitelaar et al., 2011; Caesar, 2016).

## **4. Survey of large-scale projects**

This section presents our survey of the opinions of the civil servants responsible for the large-scale urban development projects in Finland. First, the data collection is described which is followed by the presentation of the results and the discussion.

### **4.1. Data collection**

The aim of the study was to explore the effect of development-led practices on the challenges of plan implementation in a plan-led planning system. To achieve this, we arranged a survey to explore how the civil servants responsible for large-scale urban development projects in Finland perceive the implementation of the projects. Due to the focus on large-scale projects we approached only projects which had a population target exceeding 1% of the respective municipality population (31/12/2012 level). The use of the relative limit guarantees that the projects are large-scale projects within the municipality they are located in. By using population targets as a measure for the project size we excluded from our analysis the projects of which the main purpose is the provision of new business areas. In addition to the project size limitation, we excluded also so-called infill development projects aiming to the densification of existing neighbourhoods. This was due to the fundamental differences in decision making processes and development incentives of the private landowners compared to the non-infill projects (see e.g. Puustinen & Viitanen, 2015).

The data collection was arranged by sending an online questionnaire to the civil servants responsible for specific large-scale development projects. The questionnaire content was designed based on several pre-interviews with the experts of the urban development field. The contacted persons were identified from the ATRA database that consists of on-going large-scale development projects in Finland. The database is the only one available in Finland for such projects. When the questionnaire survey concerning the project practices was

arranged, in the autumn 2013, the database contained 23 projects fulfilling the scope of this research.<sup>2</sup> We received 18 useable responses to the questionnaire.<sup>3</sup> Thus, our project sample comprised 78.26 per cent of the database and, thus, constituted a representative sample<sup>4</sup>. We recognized that we were to some extent on the borderline of whether it is rational to analyse such a small sample. However, because the small sample was not due to a small response ratio, but attributable to the small total number of the projects, we still judged the analysis of the sample to be reasonable regarding the scope of this study.

## 4.2. Planning practices

To be able to categorize the sample projects into plan-led and development-led projects for the analysis, we asked the respondents to state the planning practices used in the projects. The pre-set alternatives given to the respondents are presented in Table 1.

The pre-set alternatives were constructed to represent different arrangements available for the local detailed plan preparation in the Finnish planning system. Alternatives 1-3 represent the plan-led planning practice where the plans are created by the municipality. Alternatives 4-7 represent the development-led practice where the developers have a significant role in plan drafting. In addition to the pre-set alternatives, we reserved an opportunity for the respondents to supplement the list by open answers. 1 of 18 respondents gave a missing alternative where the plan draft was prepared together with the consultants of the private landowners. It was judged to belong to the development-led practices because the interests of the non-developer private landowners can be assumed to correlate with the private developers to whom they hope to sell their land.

The respondents were asked to state the frequency of each practice in their respective projects on a per cent scale. The selection was to be made for each planning practice from numerical inputs of 0%, 1-10%, 11-20%, 21-30%, 31-40%, 41-50%, 51-60%, 61-70%, 71-80%, 81-90%, 91-99% and 100%. Figure 1 shows the calculated share of development led practices in the projects. In the calculation, the centres of the ranges were

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<sup>2</sup> The database contained information on the population targets of the projects and verbal descriptions concerning the type of developments.

<sup>3</sup> The total number of responses were 19. However, one respondent did not provide an answer to the question regarding the planning practices of the project, making the response unusable for our analysis.

<sup>4</sup> The database has been constantly updated and covers 25 projects at the moment of writing this article. Thus, our sample still represents 72 per cent of the database.

used.<sup>5</sup> For the analysis of the remainder of the results, we categorized the projects where at least 50 % of the plans were created by employing development-led practices as development-led projects (8 projects) and the rest of them as plan-led projects (10 projects). The vertical line in Figure 1 points out the separation of the projects to plan-led (on the left-hand side) and development-led ones (on the right-hand side).

### 4.3. Descriptive statistics

#### 4.3.1. Project size

The sizes of the projects, i.e. the project population targets as a proportion of the municipal population in 2012, are presented in Table 2. Mean, standard deviation and median are reported for both of the sample groups and all of the ATRA database projects. The population target is based on the information of the database. The populations of the respective municipalities in 31/12/2012 were acquired from Statistics Finland.

Regarding the mean, plan-led projects in the sample appear to be larger than the development-led projects but the larger mean is mainly explained by the much greater maximum value. The median suggests that the development-led projects are slightly larger. However, the difference is quite small regarding the standard deviation of these groups. Finally, the surveyed projects appear to be representative of the whole ATRA database regarding the project size.

#### 4.3.2. Municipality size

Table 3 presents the population statistics of the municipalities in our sample, in the data base, and also in the whole of Finland. These statistics give an overview of the municipalities where the large-scale development projects take place in Finland.

It seems that the plan-led projects are located in more populated municipalities than the development-led projects. However, the standard deviation in the plan-led group is much higher. The group includes projects located in the least and most populated municipalities in the sample and in the ATRA database. The sample also seems to cover the whole range of the database sufficiently.

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<sup>5</sup> The same approach was also used when the landownership situation (Section 4.3.4.), the contracting practices (Section 4.4.) and the financing practices (Section 4.5.) were studied.

When the database is compared to the average population statistics in Finland, it can be seen that large-scale development projects fulfilling our relative restriction of project size appear to be located mostly in the more populated municipalities. However, the least populated municipality in the database, and also in our sample, has a smaller population than the mean municipality population in Finland. Thus, the large-scale projects are not completely limited to the municipalities with relatively high populations.

The development-led projects are, on average, located in less populated municipalities. The cause for this might be the insufficient financial and organizational capabilities to handle the large-scale projects in smaller municipalities. However, the municipalities using development-led practices cannot be regarded as small municipalities from the Finnish perspective because their mean and median populations are over 150,000. Therefore, it is quite probable that the capabilities of the municipalities in both groups to carry out a large-scale project are generally good and no significant differences between the groups exist.

#### *4.3.3. Completeness of the projects*

The implementation phases of the projects measured as the completion of the project in terms of finished construction activities are presented in Figure 2 for the plan-led projects, and in Figure 3 for the development-led projects. The stated percentages represent the situation when the survey was arranged and are based on the survey responses. One respondent in the plan-led group clearly gave an erroneous answer to the stated question (100% and it was known that the project is still on-going) and is left out from the respective figure. The ATRA database does not contain completion information and thus, a comparison with the database cannot be provided.

In both groups, the share of the projects where the construction activities had not yet begun at the time of the survey is quite high: in the plan-led group 5 of 9 and in the development-led group 3 of 8 respectively. This means that, in almost half of the projects, the responses regarding the implementation of the project are mainly based on the expectations of the future implementation phase created with the knowledge acquired during the earlier stages of the project. Due to the small sample, we needed to accept this shortcoming, since the exclusion of not-yet implemented projects was not an option.

#### *4.3.4. Landownership situation*

In the Finnish institutional context, the landowners are involved in the planning process as interested parties. Thus, by owning land in the development area, the developers can influence the plan content with the rights of an interested party. If the municipality owns the land, then all the participation opportunities of the private developers are dependent on the municipality's discretion. In the case of private land ownership, additional participation of the landowner in the plan drafting is, however, also under the municipality's discretion. Theoretically, this additional influence can be avoided. However, in practice, any significant development requires landowner participation in the public infrastructure provision costs, which is usually settled within voluntary agreements. Because the plan content is a key determinant for the agreement-based contributions, it is practically impossible to receive the contributions from the landowners without allowing them to have some additional influence over the plan content.

To gather information on the landownership situation, the respondents were asked about the share of the municipality's land in the project area when the project was initiated. Figures 4 and 5 show the landownership situation of the plan-led and the development-led group respectively.

Generally, in both groups the projects where the municipality is the majority landowner are most common. Thus, in the large-scale development projects the municipalities seem to favour so-called active land policy where the municipality acquires the land to be developed (see e.g. Needham, 1992; van der Krabben & Jacobs, 2013; Valtonen et al., 2017). Development-led planning practices are also used in the situations where the active land policy is applied. Thus, they are not only limited to the situations of private land ownership in Finland.

Surprisingly, in two projects mostly relying on the plan-led practices, the municipality was only a minor landowner in the initiation of the project. In a large-scale project, it seems quite improbable that the private developer would not cooperate in the creation of the plan drafts with the municipality, when their contributions to the infrastructure costs are based on the negotiations. Both projects are still at the stage where the master plans for the areas are drafted. Therefore, it is assumable that the municipality is planning to acquire more land in the area.

#### 4.4. Contracting practices

To acquire knowledge of the contractual arrangements between private developers and the municipality, we asked the respondents how the municipality had agreed on the implementation time of the development through contracts with the private developer. We offered five contractual arrangements that could be applied to bindingly agree on the implementation time and one pre-set alternative wherein the implementation time was not regulated by binding contracts. We also gave the respondents an opportunity to give their own alternatives not included in our pre-set alternatives. Figures 6 and 7 show the share of the binding financially sanctioned implementation time contracts in the plan-led and the development-led group respectively.

In both groups, use of binding contracts on implementation time is surprisingly low. One would assume that the municipalities would like to secure the implementation of the local detailed plans by requiring binding commitments from the private developers. However, in 5 out of 10 plan-led projects and in 3 out of 8 development-led projects these commitments do not exist at all. Furthermore, in the development-led group there are two projects where contracts concerning the implementation time have been rare. It should be noted that respondents from project J of the plan-led group and project L of the development-led group did not report 100% of the contracting practices. Depending on the unreported part, the share of binding contracts could be slightly higher than reported here. However, even in such a case, the general picture would remain the same.

If binding contracts are not used, especially in the development-led group, the municipalities' ability to control the implementation of the plan becomes quite limited. When the municipality is the landowner, it is difficult to find other interested developers to acquire the building plots from the municipality, if the developer who participated in the plan creation is not interested in implementing the plan. When land is owned by the developer, the same applies, but the developer has also tied some capital to the land assets in addition to the capital invested in the plan creation. Therefore, in a privately-owned area, the developer is probably under greater pressure to start the plan implementation. However, regardless of the land ownership situation, the lack of binding contracts on the implementation schedule leaves the private developer with an opportunity to speculatively postpone its development activities, simultaneously slowing down the urban growth and related public benefits.

#### 4.5. Financing practices

To map out the different sources of financing, we asked the respondents to select the share of finance from seven pre-determined alternative sources. The sources included finance from the municipality's general budget and alternative financing specifically ear-marked to the project. The alternative financing sources involved project debt with or without municipality collateral, ear-marked building plot sales or lease incomes and ear-marked payments from the landowners. The respondents were also reserved an opportunity to indicate other sources, and one respondent stated a leasing arrangement for a public school. The shares of general budget financing in both the plan-led and the development-led projects are shown in figures 8 and 9. One respondent from both groups did not provide an answer to the question.

The projects in both groups are highly dependent on the general budget financing when it comes to the public parts of the projects. From the project implementation perspective, reliance on the budget financing means that the project needs to compete with other public investments and expenses in the political decision making. In the development-led group, there are, however, two projects where most of the financing has come from other sources. In both projects, the financing has come as ear-marked payments from the landowners.

#### 4.6. Project challenges

To study the challenges related to the implementation of the projects, the respondents were asked to evaluate the challenges caused by 16 factors. In addition, the respondents were reserved an opportunity to provide additional factors to ensure that our list is as comprehensive as possible. Only a few respondents reported any missing factors, which were all quite different from each other.

The respondents were supposed to select one out of four alternatives describing best the situation in their projects. The alternatives were: is not a challenge (1), slightly significant challenge (2), quite significant challenge (3) and very significant challenge (4). In Table 4 response means, medians and distributions are shown in both the plan-led and the development-led group. Also, the ranks of the challenges based on the response means are presented. For the analysis, we divided the stated challenge factors into wider themes that are implementation feasibility, planning process, project finance and project implementation.



Based on the ranks of the response means, we can conclude that the project finance challenges were generally evaluated as the most significant ones in the plan-led group. In the development-led group, the implementation feasibility challenges formed the most significant challenge theme. In turn, the project implementation challenges were generally regarded as the least significant challenges in both groups. Next, we discuss the results regarding each challenge theme separately, focusing on the differences between the plan-led and the development-led groups.

#### *4.6.1. Implementation feasibility*

The implementation feasibility challenge theme refers to those kind of challenges that arise from failures in the planning of the project regarding the ability of the plans to respond to the property demand in the markets. After all, planning has a key role in controlling the imperfect land and property markets (Alexander, 2014; Jones, 2014). The implementation feasibility challenge factors, except for the challenges related to excessively detailed local detailed plans, were regarded as generally more significant in the development-led group than in the plan-led group. However, only the challenge related to the uncertainty of the property markets during the project implementation had a notable difference in favour of the plan-led group. The differences concerning other challenges are quite low. The challenge related to the excessively detailed local detailed plans is the only implementation feasibility challenge factor that was evaluated as less challenging in the development-led group. This difference is also quite notable.

The results concerning the property market uncertainty are quite surprising from the perspective of the fundamental idea of development-led planning: it should provide plans which are regarded as implementable by the developer, who participates in the creation of those plans (see e.g. Muñoz Gielen & Tasan-kok, 2010). After all, the developers have provided their expertise concerning the property markets for the plan creation. Thus, the uncertainty of the implementation profitability of the plan should, in theory, be lower and the legitimation by the output-based reasons justifiable, unlike our results suggest.

However, the finding that the property market uncertainty has caused more challenges in the development-led projects is not so surprising when the contracting practices, reported in Section 4.4., are taken into account. Both the plan-led and the development-led group involve many projects where no binding agreements concerning implementation time have been made between the municipality and the private developer. In the

development-led group, lack of such agreements is probably more problematic because the plans are made following the specific ideas of the partner developer for the private properties. Thus, it is more difficult for the municipality to change the private developer compared to the plan-led group, even when holding the landowner position. Also, if the land is owned by the developer, the municipality has only limited tools available to force the developer to actually develop. Our analysis of the contracting practices does not, however, take into account more informal project management activities, such as communication and negotiations between the municipality and the private developers. These activities should be studied more before drawing too concrete conclusions regarding the causes of our results.

The observed difference in the significance of the challenge posed by excessively detailed local detailed plans is not that surprising. It seems logical that when the developer has participated in plan drafting, only those details that both the municipality and the developers are satisfied with are finally included. In the plan-led practice without developer participation in plan drafting, the plans can contain such details that turn out to be too problematic for the developers. These details can then endanger smooth implementation. We do not know if the level of detail of the plans in the plan-led and the development-led projects actually differs. However, in the development-led projects, the same level of detail may be less problematic because the developer has participated in the definition of those details.

#### *4.6.2. Planning process*

The planning process challenge theme involves the potential obstacles for the project implementation caused by the formal planning process. These obstacles include the political opposition towards the prepared plan drafts and the challenges to the approved plans in the administrative courts, to which all the interested parties and members of the municipality can appeal in Finland. Mäntysalo and Saglie (2010) have suggested that the early involvement of the developer in the plan preparation can cause problems in the later stages of the planning process.

Quite surprisingly, the differences are almost non-existent between the groups. Generally, it would seem that the development-led planning practices are not more vulnerable to political or citizen resistance in Finnish large-scale development projects. Although the cooperation between the municipality and the private developers in the plan preparation can decrease the input-based planning legitimacy through the reduced direct

participation opportunities of the citizens, it seems that our results challenge to some extent the criticism directed to development-led practices based on the input legitimacy shortcomings. At least, the results suggest that such shortcomings have been handled in a manner that do not lead to increased political or citizen resistance hampering implementation.

#### *4.6.3. Project finance*

The project finance challenges refer to the issues related to the municipality investments enabling the project implementation. Generally, they are regarded more significant in the plan-led group than in the development-led group whenever differences occur. The challenge perceptions related to the debt finance availability and the financial situation of the municipality do not notably differ between the groups. Of these, debt finance availability is evaluated to be a challenge of practically no significance to either group.

When it comes to the notable differences, the front-loadedness of the investments and the investment size of the project compared to the municipal budget were evaluated as more significant challenges in the plan-led group. The front-loadedness was actually the challenge factor, among all the challenges, that differed to the greatest extent between the groups. The difference regarding this factor was also the only one found to be statistically significant (significance level below 0.05) by the Mann and Whitney test, which is appropriate for two small independent samples.

The results appear logical. Debt finance is usually easily available to the Finnish municipalities via a special bank providing cheap debt for them. It would have been surprising if this challenge had been evaluated as more significant. The municipality's financial situation was evaluated as a slightly more significant challenge. However, no notable difference between the groups emerged. Any differences would have been quite surprising because the municipalities involved in the groups are not very different from each other.

The results concerning the front-loadedness of the investments, project investment size and budget finance uncertainty appear to be quite logical. Front-loadedness occurs when the public investments in land and public infrastructure are made before the municipal incomes related to the project are realized. In the development-led group, there are projects where investments in land acquisition are not needed because of the partnership planning with the private landowners. Also, when the private developers are involved in the planning process

on municipality land, agreements with them about the timing of infrastructure provision and land acquisition can be made. Thus, it is more probable that the municipality can synchronize the costs and the incomes more efficiently. When it comes to the investment size and the budget finance uncertainty, it is also rational that the respondents in the plan-led group evaluated their significance as a challenge higher than in the development-led group. As shown by already reported financing practices, reliance on budget finance is at high level in both groups. However, in the development-led group, other sources of finance, especially ear-marked payments from the landowners, have also been used. This affects the amount of budget financing needed and simultaneously decreases the problems related to its uncertainty.

#### *4.6.4. Project implementation*

In this study, the project implementation challenges refer to the possible obstacles in the project implementation that cannot be directly linked to the implementation feasibility of plans, the planning process issues or the project finance. Of these challenge factors, the land ownership situation in the project area, as well as the insufficient amount of bids from contractors to the municipality's projects, were regarded as quite insignificant challenges by the respondents in both groups. Both of them were evaluated as more significant in the plan-led group than in the development-led group, although the insufficient amount of bids to a relatively small degree. The differing aims of the project actors held greater significance in the development-led group, although only slightly. The short-sightedness of the politicians in the decisions affecting the project implementation was regarded as the most significant project implementation challenge factor in both groups. It was also evaluated to have more significance in the plan-led group than in the development-led group.

The results seem to be reasonable. It would have been surprising if the land ownership situation had been regarded as a significant challenge. The Finnish planning and development legislation provides the municipalities with a wide set of statutory tools, including compulsory and pre-emptive purchases, to acquire land for development if they decide to do that. Thus, the challenges related to the land ownership situation can be effectively tackled by the municipalities if necessary.

The low significance of the insufficient amount of bids for the municipality projects suggests that competition among contractors is generally sufficient in Finland. The lower significance in the plan-led group probably relates to the differences in local construction markets.

The absence of notable differences between the groups concerning the challenges caused by the differing aims of project actors was not surprising either. After all, a development project involves many different stakeholders and viewpoints. In the development-led practices, the communication of developer interests just occurs already in the planning process unlike in the plan-led practices. When it comes to the short sightedness of the politicians, its higher significance as an implementation challenge in the plan-led group is most probably related to the higher reliance on the budget finance, which makes the plan-led projects more dependent on the annual budget decisions made by the politicians. However, it can also indicate that the politicians of the municipalities where plan-led practices are favoured have greater desire to serve their own short-term interests by affecting the content of the plans.

## **5. Conclusion**

In this paper, we studied the implementation of on-going large-scale urban development projects in Finland, a country with a plan-led planning system where planning can also be arranged following development-led principles. Our results show that, still, the majority of the Finnish large-scale projects are relying on the plan-led practices. This is quite interesting considering the widely discussed neo-liberal shift in society.

Most interestingly, our results suggest that there are some significant limitations with the development-led practices in securing the implementation of the land-use plans. In particular, implementation challenges caused by the property market uncertainty appear to be more problematic in the projects employing development-led practices. These results are interesting taking into account that the development-led practices can mostly be legitimized by the output-based factors since the input-based legitimacy is rarely improved by them (see e.g. Mäntysalo & Saglie, 2010; Falleth et al., 2010). Our results suggest that such legitimation may lack some foundations. However, further studies with methods allowing more in-depth investigations of project management practices should be conducted to better understand the reasons behind the challenge perceptions found in our study. The part of our survey concerning the contracting practices between the municipality and the private developers provides some insight to help with such analysis. As our survey shows, it seems to be relatively common in Finland to not include binding implementation schedules in the development agreements. This can become especially problematic when development-led practices limiting the municipality's ability to change the private developer are used.

On the other hand, our study suggests that the main advantages from using development-led practices relate to the financing of the public works in the projects. In particular, the front-loadedness of public investments seems to be less problematic in those projects where development-led planning practices are mainly used. In addition, the investment size of the project in relation to the municipality budget appears to be less problematic in these projects. Thus, our survey provides quite strong support to the legitimation of development-led practices by output-based factors from the perspective of achieving the completion of the publicly implemented parts of the projects.

In addition to the output-based legitimation of the development-led planning practices, our study also provides information regarding possible shortcomings of the input-based legitimation for these practices. Interestingly, in contradiction to many earlier studies, our survey suggests that the possible challenges in the openness of the planning process appear not to result in reduced political acceptance of the plans or more significant implementation problems caused by the citizens' court appeals. Thus, the development-led planning practices seem to perform no worse than the plan-led practices when it comes to the input-based legitimation, if measured by the additional difficulties in the plan approval stage of a project.

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## Tables

Table 1 Planning practices in the sample projects

Plan-led practices	
1	Municipality prepared the local detailed plan → Developers selected in building plot transfers.
2	Municipality prepared the local detailed plan → Building plots reserved to the developers before preliminary plan draft was prepared.
3	Municipality prepared the local detailed plan → Building plots reserved to the developers before plan proposal was prepared.
Development-led practices	
4	Municipality prepared preliminary draft of a local detailed plan → Plan proposal was prepared with the developers.
5	Municipality prepared both preliminary draft and plan proposal of a local detailed plan with the developers.
6	Municipality prepared preliminary draft of a local detail plan → Developers prepared the plan proposal.
7	Developers prepared both preliminary draft and plan proposal of a local detailed plan.

Table 2 Population targets of the projects (Population data: Statistics Finland, 2015 municipality structure)

Population target over municipality population (31/12/2012)	Plan-led	Development-led	Whole sample	Database <sup>1,2</sup>
Mean	13.53 %	10.91 %	12.36 %	11.52 %
Standard deviation	26.34 %	11.41 %	21.09 %	19.19 %
Median	3.87 %	6.39 %	6.09 %	5.84 %
Minimum	1.24 %	1.10 %	1.10 %	1.10 %
Maximum	92.02 %	39.54 %	92.02 %	92.02 %
n	10	8	18	23
1 01/07/2016 database content				
2 Information of the population target concerning two projects was not available in the database				

Table 3 Population statistics of the surveyed municipalities (Population data: Statistics Finland, 2015 municipality structure)

Municipality population 31/12/2012	Plan-led	Development-led	Whole sample	Database <sup>1</sup>	Finland
Mean	348,366	152,901	261,493	275,668	17,119
Standard deviation	262,485	71,721	223,600	234,334	44,875
Median	430,396	162,165	198,080	190,847	5,922
Minimum	16,300	37,936	16,300	16,300	101
Maximum	603,968	256,824	603,968	603,968	603,968
n	10	8	18	25	317
1 01/07/2016 database content					

Table 4 Project challenges in the plan-led and development-led projects

	Plan-led n=10							Development-led n=8						
	Mean	Median	1	2	3	4	Rank	Mean	Median	1	2	3	4	Rank
<b>Implementation feasibility</b>														
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
<b>Planning process</b>														
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
<b>Project finance</b>														
Front loadedness of the investments: finance is required in the early phase and the incomes from the investments are realized in 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 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
<b>Project implementation</b>														
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

# Figures

Figure 1 Share of development-led practices in the sample projects

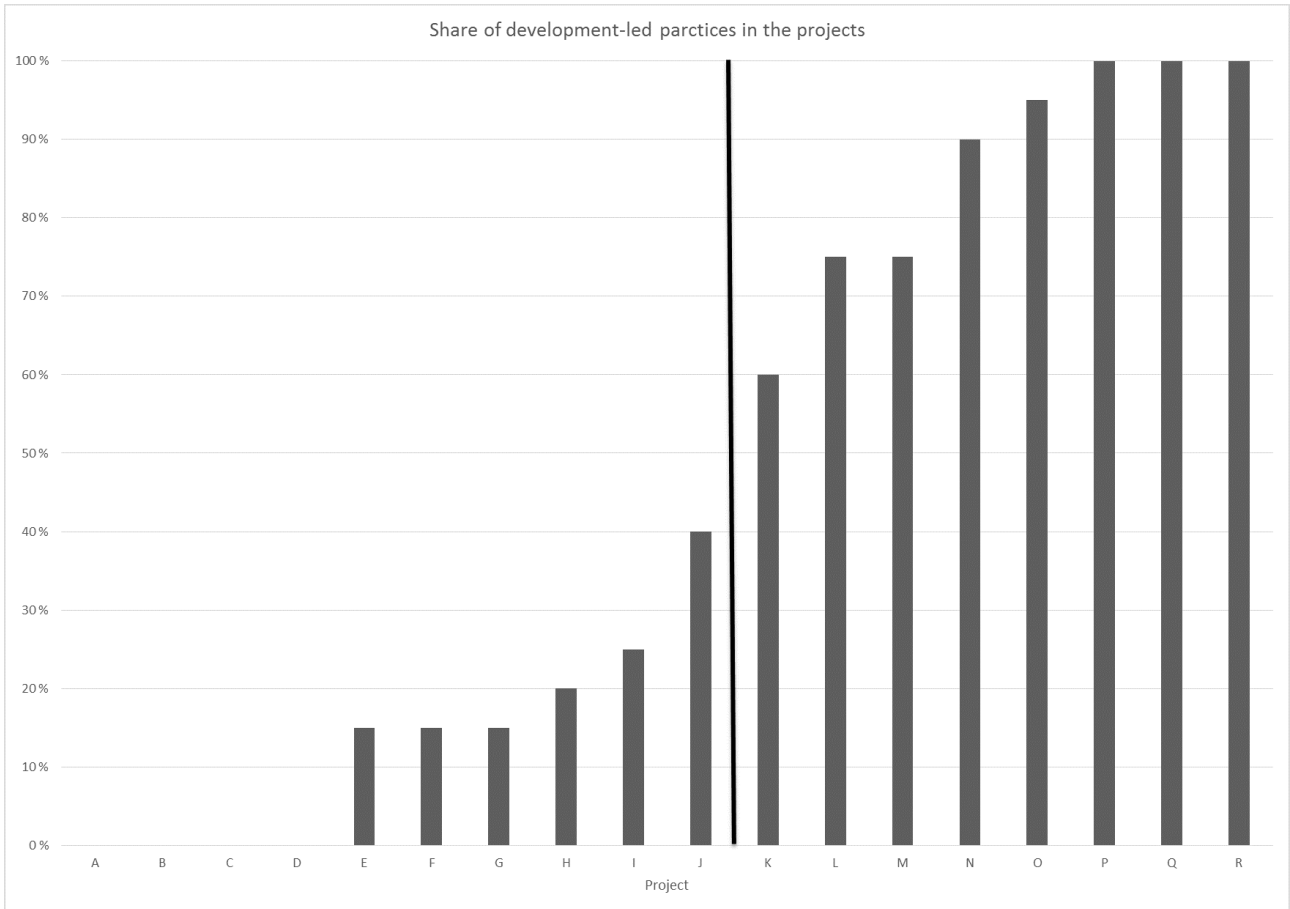


Figure 2 Completion of the plan-led projects measured by completed construction activities

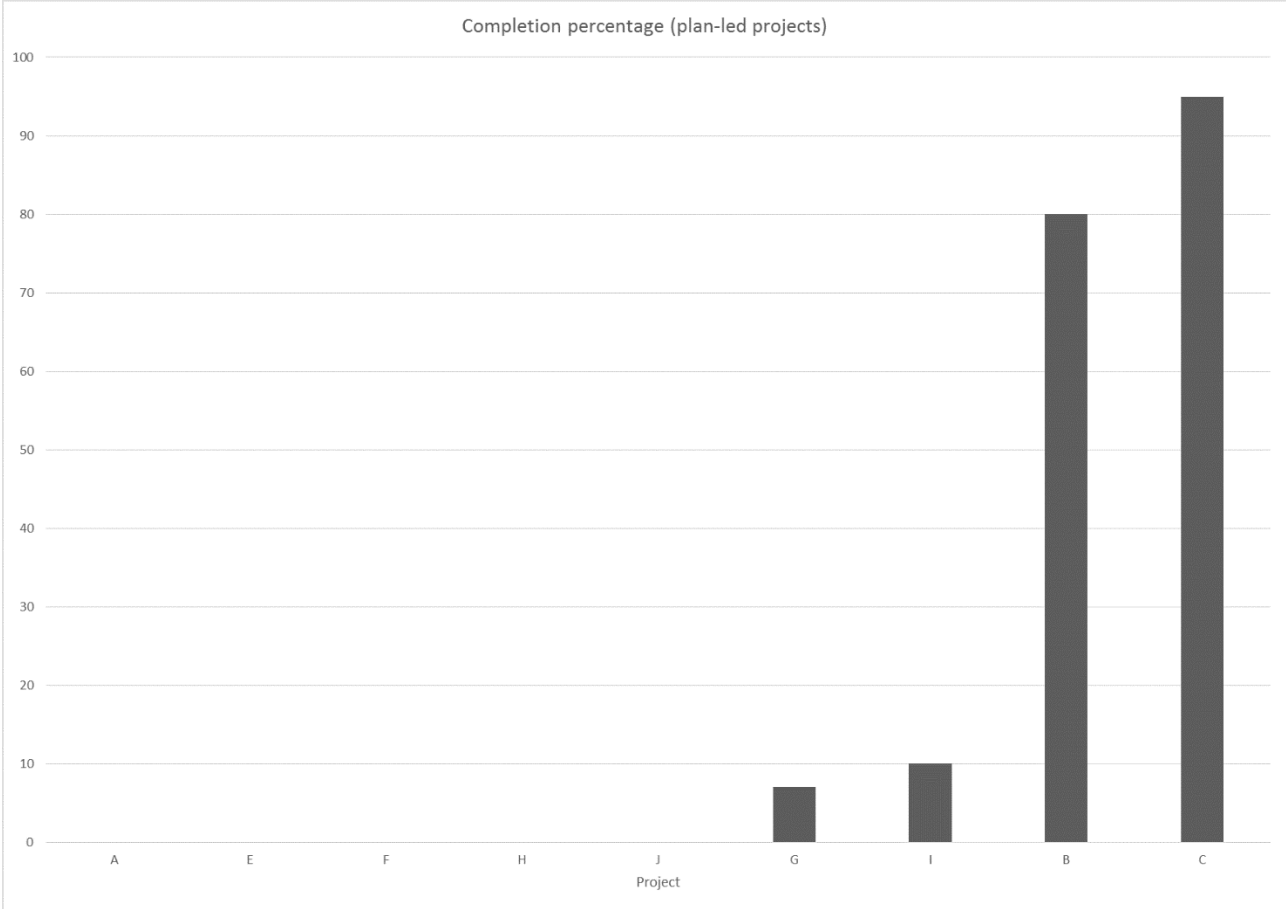


Figure 3 Completion of the development-led projects measured by completed construction activities

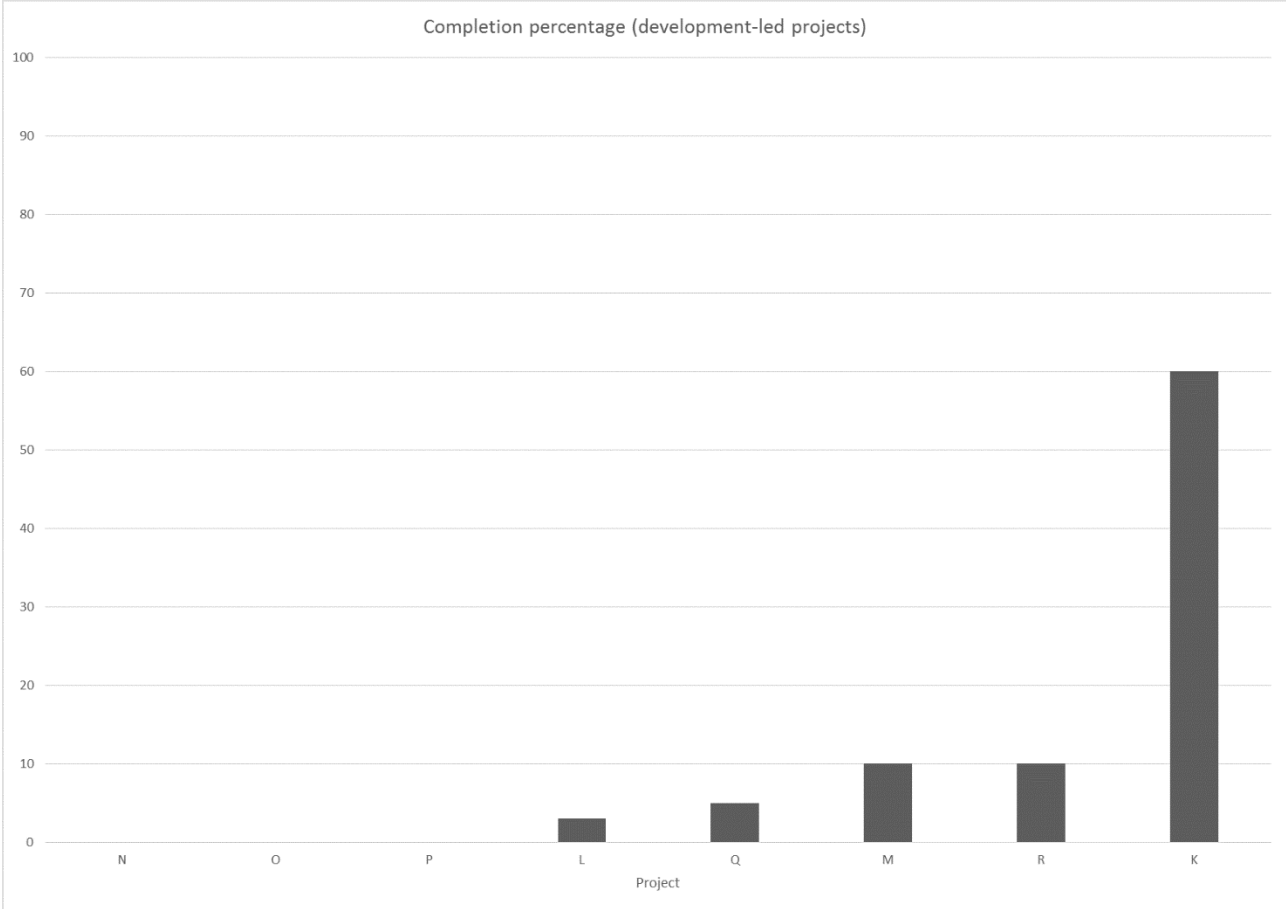


Figure 4 The share of land owned by the municipality in the plan-led projects

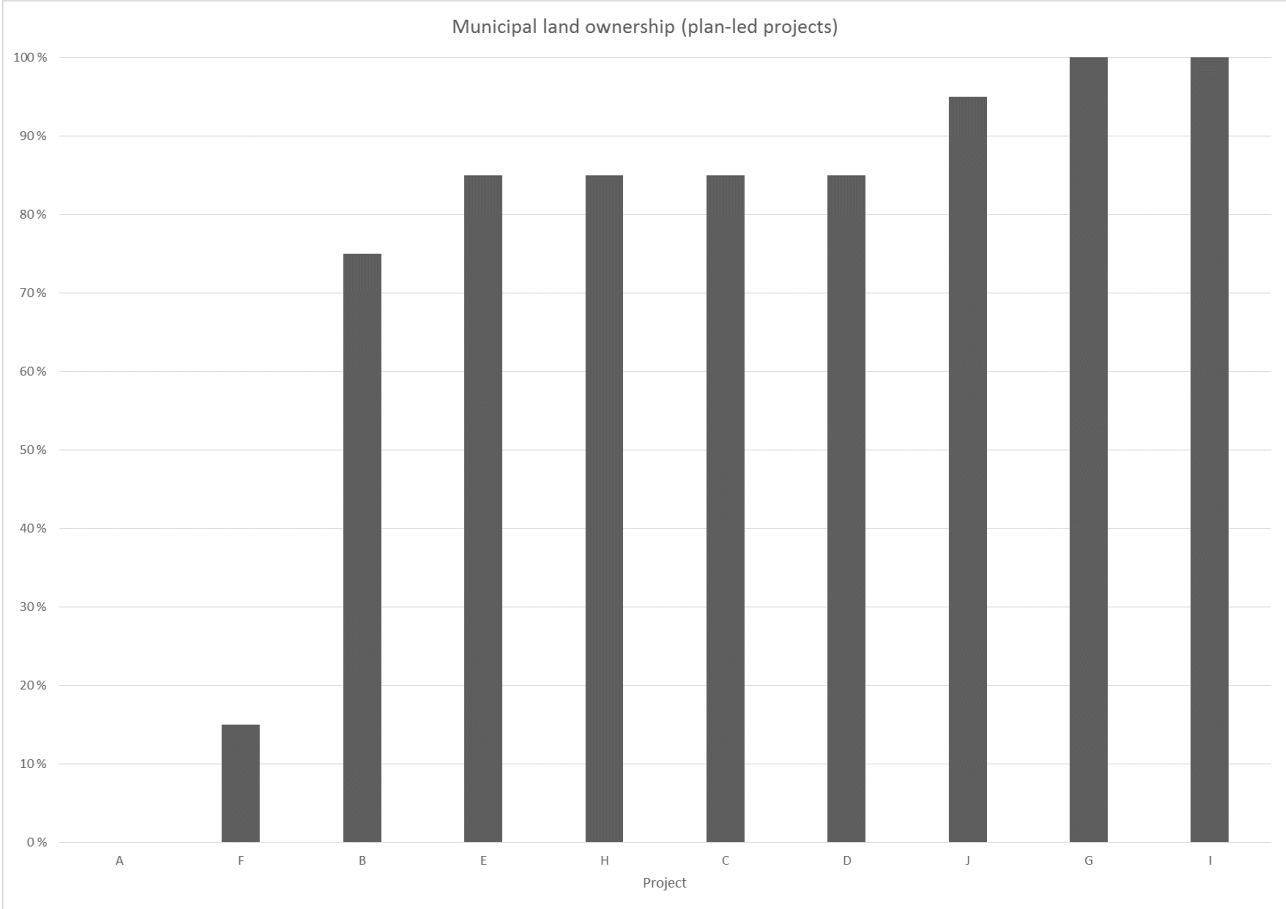


Figure 5 The share of land owned by the municipality in the development-led projects

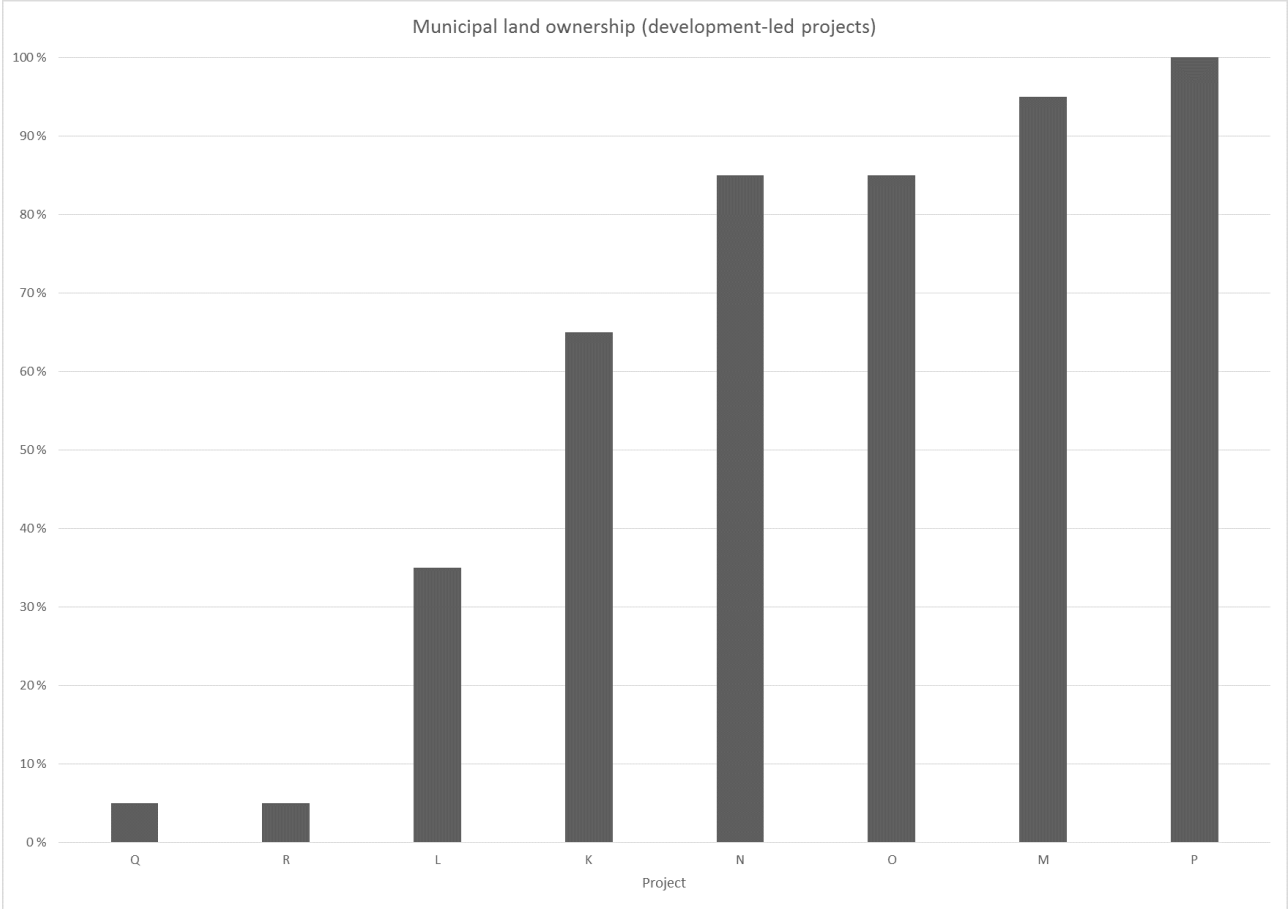




Figure 6 Share of development guided by contracts involving binding implementation time in the plan-led projects

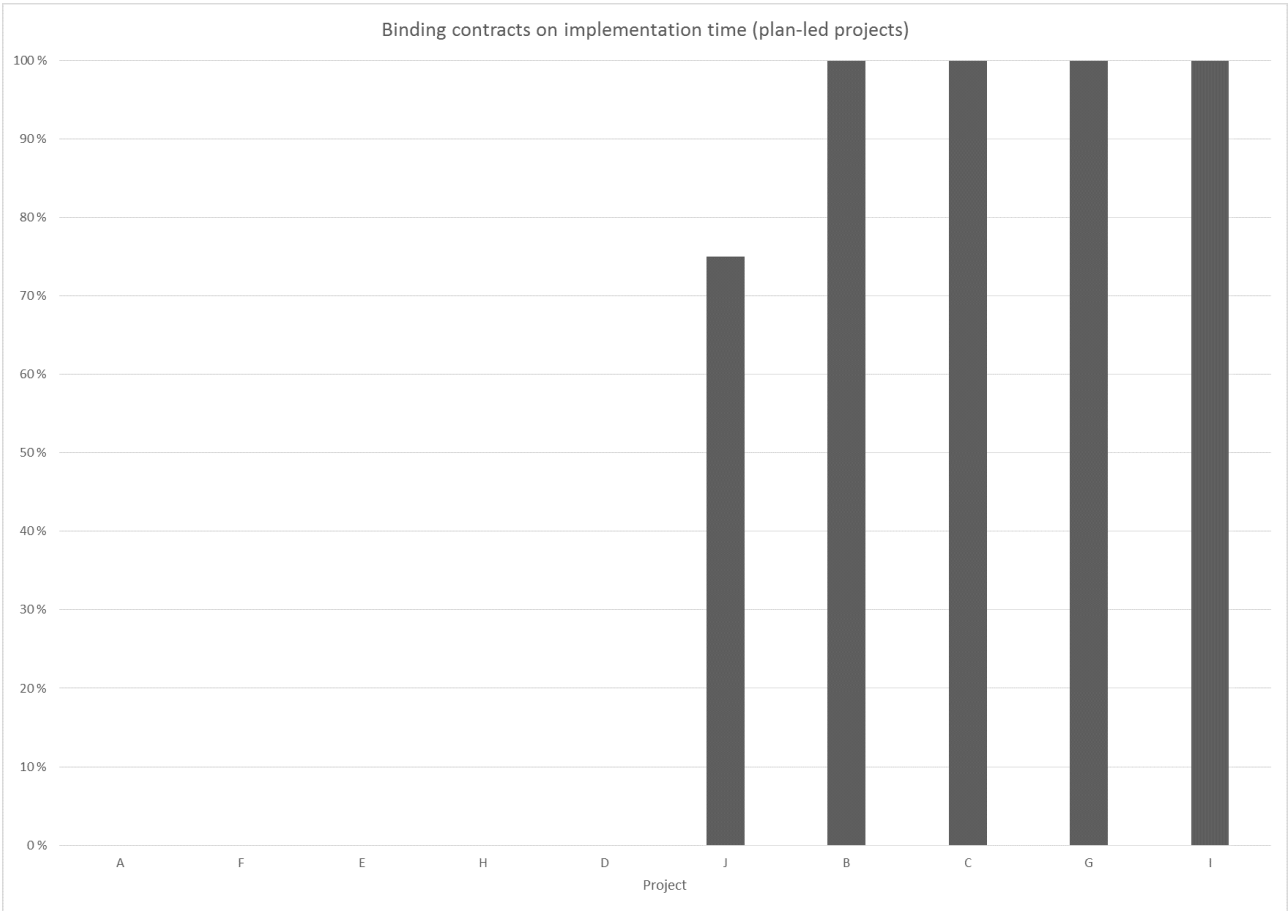


Figure 7 Share of development guided by contracts involving binding implementation time in the development-led projects

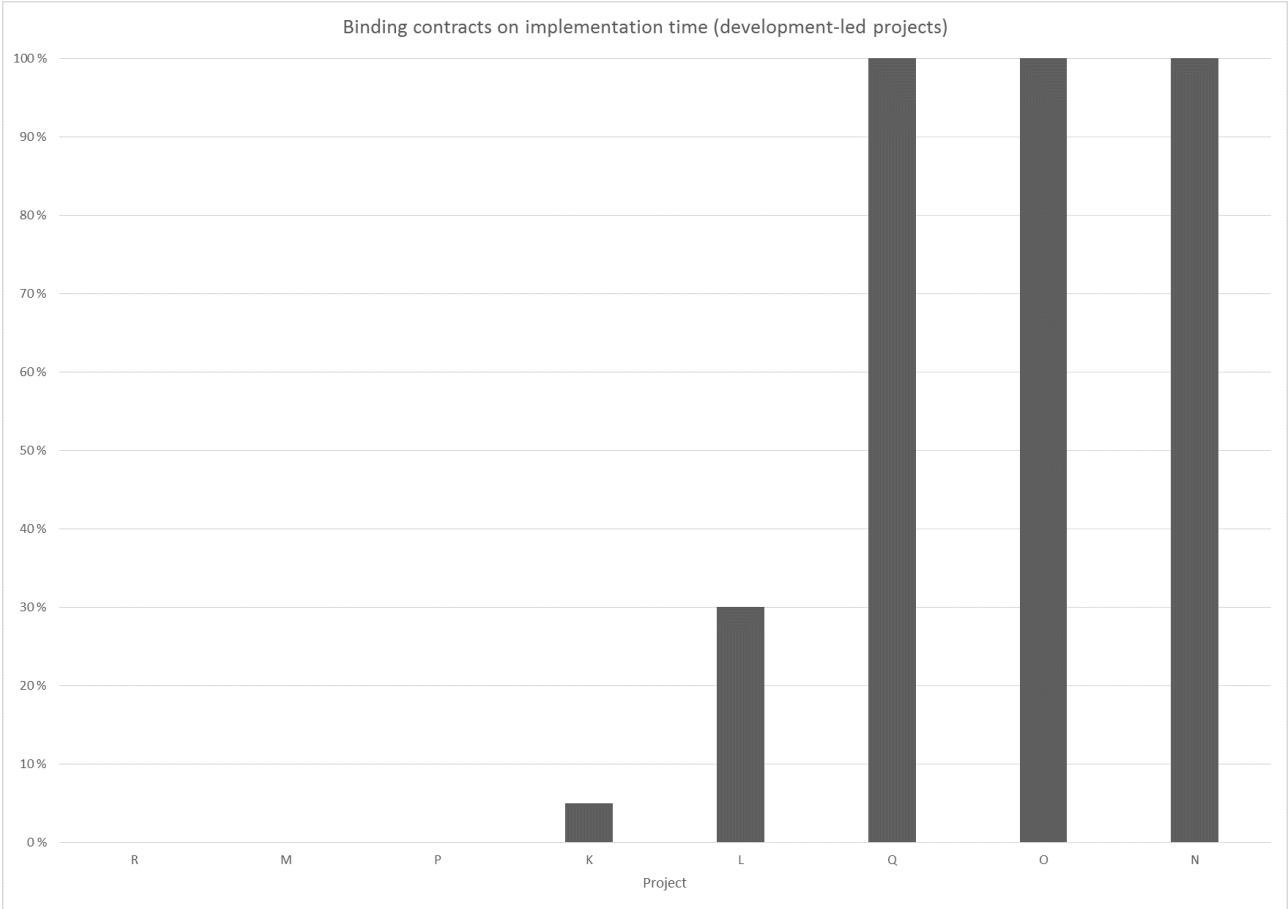


Figure 8 Use of budget financing for public works in the plan-led projects

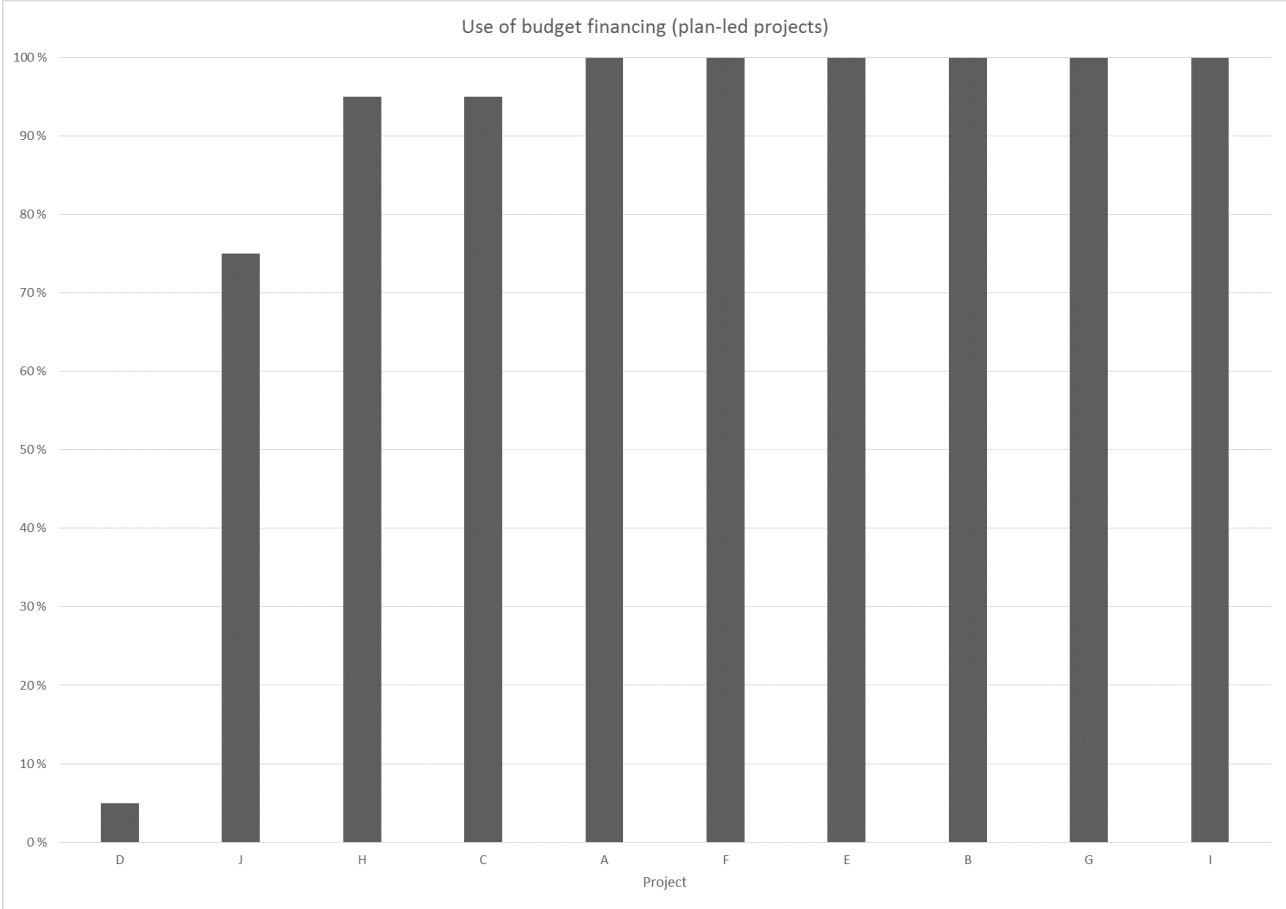


Figure 9 Use of budget financing for public works in the development-led projects

