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User Rights Regimes for Property Formation – Transactions and Efficiency in Norwegian Urban Transformation

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***Abstract.** This article analyses transactions and transaction costs in property formation processes from a user perspective, focusing on how institutions create user rights regimes and how these affect efficiency in transformation of land tenure structures in urban redevelopments. There are currently two possible user rights regimes in Norway: the Municipal Cadastral user rights regime and the Land Readjustment user rights regime, the latter resolving property formation through the Land Consolidation Court. The adopted analytical model is based on institutional and transaction cost theory applied to land development. It introduces generalizable categories of transactions and milestones in property formation based on empirical studies of formal institutions and case studies of comparable redevelopments where the regimes were applied. The findings indicate that, in this context, Norwegian land readjustment reduces transaction needs and costs, increases certainty, and employs more efficient coordinative procedures when compared to municipal regimes, which suffer under a fragmented formal institutional framework and organization. However, both regimes experience uncertainty, coordinative problems, and increased transaction costs in the handling of lesser rights and coordination of property formation toward planning and development control. The conclusion points to a substantial potential for enhancing process efficiency without compromising the quality of produced land tenure structures in urban redevelopment. As property formation through land readjustment is the exception, steps toward enhancing process efficiency of the municipal cadastral user rights regime is advisable as the study clearly indicates that transaction costs induced on users are substantial.*

***Keywords.** Property formation, urban redevelopment, urban transformation, user rights regime, institutions, transaction costs, cadastral registration, land readjustment, land assembly, land consolidation court*

1 Background

This article analyses transactions and transaction costs in property formation in Norwegian urban transformation. Property formation in urban redevelopment requires transformation of existing land tenure structures according to developers' needs under planning authorities' regulatory rule. Developers have to gather land and start the process to produce institutionally serviced plots for future developments. The planning authorities, through planning and development control procedures, set the stage for regulatory frameworks both for the production of institutionally serviced plots and the new property rights in land and floor space that will be produced in the building process (Ramsjord & Røsnes 2011a; 2013).

These transformation processes include different kinds of transactions that transfer and transform structures of ownerships through formal procedures, such as: processing of planning approval, building permits, surveying, cadastral and land book registrations, etc. Completing these tasks are preconditions, partly for the implementation of building projects, and partly for establishing security in property rights (in rem) in this process. Additionally, security concerning ownership and rights in land through registration is important for a well-functioning land market (Arruñada 2012; De Soto 2000). Institutional frameworks create formal connections and interdependencies between transactions that give rise to coordination needs (Buitelaar 2007 p. 5). Furthermore, transactions engender transaction costs; these are costs related to any single transaction as well as costs that appear "in between" transactions as the result of formal interdependencies created by connections between transactions and formal and informal institutions at different levels.

In recent years, environmental policies have renewed the arguments for compact city development and the transformation of existing urban areas towards higher densities (Ewing 1997; Miljøverndepartementet 2011). However, land tenure structures in existing urban areas are generally complex and fragmented and the public regulations concerning land use more detailed. This increases complexity levels when implementing redevelopments and, not least, the complexity in property formation processes in building projects implementation. The institutional framework governing property formation is normally designed for different conditions without specifications related to transformation and reuse of urban land. Recent research raises concerns about process-efficiency of property formation procedures during implementation of urban redevelopments (Adams et al. 2001; Ramsjord & Røsnes 2011b; 2013; Sagalyn 2007).

In Norway, there are currently two parallel and partially overlapping systems for property formation. In the usual approach, the municipal planning authority and cadastral unit is the producer of property formation services initiated on request from holders of property rights. They provide surveying services and are empowered with the necessary cadastral authority. The alternative when resolving the property formation tasks involves land readjustment (LR). In Norway the Land Consolidation Act (LCA) and the institutional framework surrounding the Land Consolidation Court define the content and possibilities of LR-procedures (jordskifte, "urbant" jordskifte). In light of international LR-literature the Norwegian system cover central aspects of LR like the handling of ownership constraints, distribution of

cost and value increases, surveying, property formation, registration etc. However the system stand out because of the court based organization (Hong & Needham 2007; Larsson 1997; Ramsjord 2014 p. 55–62). On the basis of legal access to suitable plots and adopted zoning plans, it is possible for developers to substitute the municipal property formation processes with LR. In both approaches, ownership constraints are, at this point, likely to have been resolved through voluntary acquisition prior or in parallel with preparation and adoption of privately initiated zoning plans. Similarly, in both approaches, registration in the land book formally ends the property formation process.

Several recent contributions within the fields of planning and land development have adapted concepts from new institutional economics (NIE) and developed analytical models for analysing planning and land use development processes (Alexander 2001; Buitelaar 2003; 2004; 2007; Needham 2006; Webster & Lai 2003; Webster 2005). The objective of some of these applications has been to identify connections between the institutional framework governing land use, transactions in land use development processes and transaction costs arising from these (Buitelaar 2003; 2004; 2007). The objective in this study is to apply and adapt this theoretical approach in a way that makes it suitable for analysing property formation transactions. The analysis of property formation transactions as integrated parts of (re)development processes distinguishes this research from other related research. Zevenbergen et al (2007 p. 5, 8) apply concepts from NIE to analyse real property transactions, but target simpler stylized situations; transfer of ownership to a single-family home and subdivision of a plot for a single-family home in a small town. These studies offer limited insights into how institutions affect transactions and transaction costs in this far more complex context. Analysing property formation as integrated parts of urban redevelopment processes will therefore be a new contribution to the field.

Buitelaar introduces the concept of user rights regimes and applies it to analyse the connections presented above. Transaction cost analysis is, in this context, a way of measuring process-efficiency of user right regimes. This model offers a method for analysing how design of user rights regimes and the different elements they are made up of affect transactions and transaction costs in land development processes. The model will also be further developed by introducing milestones as a way of breaking up and characterizing transactions in order to analyse interdependencies and contradictions. The two different approaches to property formation embedded in the Norwegian system can, due to major institutional differences, be considered as two separate user rights regimes. Together, they make up integrated parts of the Norwegian user rights regime for development of land.

These institutional approaches for property formation make possible the assumption that if new opportunities emerge and the actors have the opportunity to choose, they tend to adapt in order to reduce their transaction costs (North 1990). Provided this is so, three questions open up for further investigation: *How do developers adapt in order to increase process efficiency during implementation of urban redevelopment projects; which user rights regime is the most efficient and*

why; and, finally, how can differences in transaction costs be linked to institutional differences between the two user rights regimes for property formation?

The following presentation starts with the theoretical and methodological approach for developing the analytic model. After this, Norwegian user rights regimes are presented, focusing on the formal institutional framework. Then, two case studies are presented, before analysing and comparing the process-efficiency of the user rights regimes. Finally, concluding reflections on the institutional design of these user rights regimes are made.

2 Analysing User Rights Regimes

2.1 The Analytical Model

The analytical model is based on the concepts of user rights and user rights regimes (Buitelaar 2003; 2004; 2007). In this context the users are professional development actors. The user right and user rights regime concepts capture both property rights (in rem and in personem) and regulatory rights founded in public law institutions and their local application. These concepts and their connections to other central concepts from transaction cost theory and the fields of NIE are briefly presented below. A more comprehensive presentation can be found in Ramsjord (2014).

Buitelaar asks the question: *“How are the different institutional levels and transaction costs interrelated under different circumstances, and how does this affect the existence, size and incidence of transaction costs in development processes?”* (2007 p. 43). In this context, institutions can be understood, in line with North’s definition, as [...] *“rules of the game in society or,”* [...] *“humanly devised constraints that shape human interactions”* (North 1990 p.1). A distinction between formal and informal institutions can be made, as well as between macro, meso and micro institutional levels, in line with Alexander (2005), cited in Buitelaar (2007 p. 36). The institutional levels are introduced merely for pedagogical reasons. At the micro level, we find institutions that give rise to transaction costs during development processes; at the meso level, institutions that limit the scope of action; and, at the micro level, institutions which through laws and regulations govern development processes. The Planning and Building Act (PBA), the Cadastral Act (CA) and the Land Consolidation Act (LCA) are Norwegian examples of meso level institutions in this context. At the macro level, we find overarching formal institutions that follow constitutional branches and, in this context, public administration on the one hand and the court system on the other (Buitelaar 2007 p. 36). Additionally, social and cultural norms and values affect actors’ choices. Institutions can also be categorized according to modes of coordination: market, hierarchical and network coordination (Buitelaar 2003 p. 319–321).

Coordination through transfer, transformation or attenuation of user rights takes place through transactions, here widely defined as [...] *“means under operation of law and custom, of acquiring and alienating legal control of commodities, or legal control of the labor and management that will produce and deliver or exchange the commodities and services, forward to the ultimate consumers* (Commons 1931 p. 657 cited in Buitelaar 2007 p.43). To analyse

connections between institutions, transactions and transaction costs, the user rights regimes concept is introduced: “A user rights regime is a set of rules that coordinate changes in land use at a particular site. Such a regime consists of a set of rules that delineate, attenuate and sometimes take user rights” (Buitelaar 2003 p. 322). Accordingly, the user rights regime is created and used at micro, i.e. site specific, level. It consists of three sets of institutional frameworks: the property rights regime, the spatial planning regime and the location specific application of the spatial planning regime (Buitelaar 2003 p. 323), (cf. figure 1 below). The property rights regime is non site specific and comprises the civil law and institutions that give security of property rights and private interests in land that facilitate exchange of these categories of user rights between citizens, making it central in a functioning market (Arruñada 2012 p. 43; Buitelaar 2003 p. 318, 322; Webster & Lai 2003 p. 123). The term property rights is in this context defined in line with Arruñada (2012 p. 10), distinguishing between contractual rights (in personem) and property rights (in rem). The focus in this context is mainly on private property and Buitelaars definition of property rights regime has a somewhat different scope than Ekbäck (2009) that cites Bucht (2006). The spatial planning regime consists of “principles, norms, regulations and procedures which regulate actors’ behavior towards land use and development of land.” (Buitelaar 2003 p. 322). Spatial planning regulates the land market through public law regulations that attenuate user rights in land through zoning and building regulations, etc. In this context, public law regulations that directly or indirectly affect transformation of land tenure structures and property formation procedures are central parts of the user rights regimes for property formation. The design of user rights regimes affects transactions in development and property formation processes and, therefore also the presence and distribution of transaction costs.

The term transaction cost is applied here in a broad sense as all costs other than the costs of physical production (Lai 1994 p. 84, cited in Buitelaar 2004 p. 2540). To help identify transaction costs Buitelaar (2004 p. 2544) states: “So, if we want to carry out a transaction- cost analysis of the development process we must ask the question: would the costs that we find also be incurred in a neo-

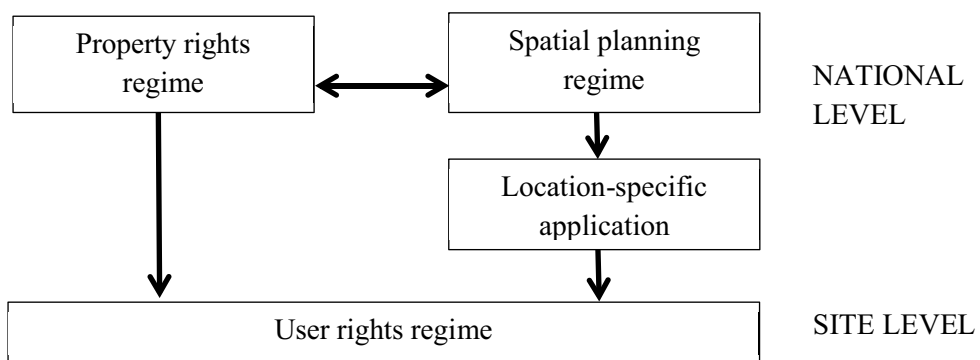


Figure 1: User rights regime (Buitelaar 2003 p. 323).

classical development process? If the answer is 'yes', those are production costs, if the answer is 'no' they are transaction costs". Transaction costs can therefore be seen as dead weight, not contributing to physical production in development processes. However, all creation and use of institutions involve transaction costs. The objective of the institutions governing land use development is to affect how land is used and to establish security around user rights according to policy goals. In order to do so, transaction costs must be endured, but other (transaction) costs, such as negative externalities, may be reduced. Transaction costs must therefore be seen as subordinate to policy output efficiency (Buitelaar 2007 p. 3, 177). Analytically, the concept of process efficiency treats input and output as "given" and focuses on transaction costs arising from different institutional arrangements (user rights regimes) enabling comparison of process-effectiveness relating to different institutional designs, i.e. in this context, different user rights regimes. However, process efficiency may also affect input and output, giving it an impact on output efficiency. Therefore, when applying this analytical model, it is relevant to investigate if the two user rights regimes have the same output efficiency.

To compare different user rights regimes for property formation in terms of process efficiency, transactions have to be identified and, to some extent, measured by some means. In former analysis of property formation processes, developers have pointed to time-, risk-, information- and communication-related costs, costs of work hours and qualified personnel and direct processing costs, such as fees (Ramsjord 2009; Ramsjord & Røsnes 2011a). These identified categories are in line with the transaction costs' dimensions of interdependence, uncertainty and timing applied by Buitelaar (2007 p. 30–35). They also largely correspond to the transaction cost categories: search cost, legal costs, administrative costs, financial costs and uncertainty costs related to real property transactions, as presented by Quigley (1996) cited in Zevenbergen et al (2007 p. 13–14).

2.2 Methodology

2.2.1 Comparing User Rights Regimes

The case study approach is appropriate for analysing and comparing user rights regimes as site specific institutions (Andersen 1997; Flyvbjerg 2006; Yin 2010). A precondition for comparing user rights regimes and their process efficiencies is that the involved authorities' capacities, processing times, practices and site specific application remain constant. As these variables vary over time and between administrative jurisdictions, generalizations can only be made with close attention to these factors. Some transaction costs are directly linked to formal institutional frameworks of each regime and can therefore, to a much larger extent, be generalized towards comparable redevelopments.

For this study, the point of departure is to identify property formation factors in order to select comparable cases. The existing land tenure structures, the content of zoning plans, building permits and developers' needs for certainty during the implementation process, particularly concerning property formation, are all parameters of importance. The case studies presented below have been selected

based on these criteria and both cases are from the city of Oslo in Norway. The challenges of property formation are very similar in both cases, but the means of resolving them are different. The land tenure structure of the transformed land for building is independent of choice of user rights regime; the formal public law requirements for property formation are the same for both regimes and the needs of the user (developer) are largely determined independently of choice of regime. This implies that both approaches have the same input and output, and should, therefore, have the same level of output efficiency. This makes it possible to isolate property formation as an “independent variable” and compare the user rights regimes on the basis of how their institutional design and distribution of user rights affect transactions and, based on certain conditions, transaction costs. This is a different, somewhat contrary, approach to the contributions that seek to explain and predict institutional change through transaction costs summarized in presentations by Lai (2005), Buitelaar (2004; 2007), Musole (2009). If comparative studies of the user rights regimes indicate differences, for example related to time consumption or risk levels, differences in transaction costs can relatively easily be identified. Sometimes the transaction costs may also be quantified, for example by calculating how increased time consumption has affected financial costs. In other cases, or for other categories of transaction costs, quantitative estimates will be hard or impossible to make.

Gathering the empirical data for these case studies has involved analysis of formal documents such as laws, by-laws, plans, building permits, property formation permits, court records, cadastral information, agreements, etc. from involved municipal planning and cadastral authorities, the land consolidation court and involved developers. To supplement this information and identify such documents, in-depth interviews were conducted with the developers’ project managers, lawyers and consultants, as well as municipal case officers, involved LR-judges and LR-personnel. The interviews were semi-structured following interview guides and documented with sound recordings. The LR-case study has been explored in two former articles (Ramsjord & Røsnes 2011b; Ramsjord & Røsnes 2013). The second case, “Lillohøyden”, has been selected solely for this analysis. The triangulation of data methods secures the reliability of empirical data from the various sources (Johansson 2000 p.68). The analytical model is designed with institutional and theoretical generalizations in mind. Privately initiated redevelopments, transformation of land tenure structures and public regulations concerning implementation of projects share characteristics and formal institutions that are more or less the same for the involved administrative jurisdictions throughout the country. Generalizations at different levels should therefore be possible for similar redevelopment projects facing similar conditions and challenges concerning property formation.

2.2.2 Identifying Milestones and Sequences

The analysis starts with identifying transactions during the property formation. All transfers, transformations or attenuations of user rights that affect property formation directly or indirectly, whether they are founded in the property rights

or spatial planning regime, are transactions. The transactions which in total make up the property formation processes are interrelated, and identifying milestones is useful for structuring the analysis and identifying relationships between transactions in the case study presentations. This approach can be seen as a further development of Buitelaar's contribution (Buitelaar 2007 p. 48). It facilitates identifying transaction costs that arise from formal interdependencies which "lie hidden in between" transactions. The transactions and transaction costs can, in turn, be linked to institutions, formal and informal at the different levels and characterized by coordination mode. The milestones presented below have been identified on the basis of formal institutional requirements founded at the macro and meso levels.

In the redevelopment process, the first milestone is passed when ownership or other means of legal access to development property has been gathered and a public law foundation enabling implementation of the intended project has been adopted, cf. Figure 2 below. This milestone implies that voluntary acquisition of land has been completed and a detailed zoning plan that enables implementation of the redevelopment project has been adopted. The formal institutional requirements are found in private and public law; to implement any development project, legal access to land and required plans and permits must have been obtained. The second milestone concerns establishing harmony between delimitation of the adopted zoning plan which includes the intended redevelopment area and the formally registered structures of property units and their boundaries. Establishing new delimitations of affected property units in accordance with the zoning plan or designated development areas outer boundaries, and transferring formal ownership to the developer completes milestone two. This must be based on the legal foundation established in milestone one and any lesser rights posing a threat to the development must also have been handled prior to formal ownership transfer. The third milestone is passed when the structures of formal ownerships, property units and lesser rights inside the redevelopment area have been "defragmented" through the merging of property units and parallel handling of any possible lesser rights. This requires cadastral authority approval and land book registration. Milestone three forms the foundation for creating new land tenure structures (Ramsjord & Røsnes 2013; Golland 2003; Louw 2008). The fourth milestone concerns production of "institutionally" serviced land, property units with suitable boundaries and attached lesser rights formally registered in the cadastre and land book according to public regulations and developer needs. The result of milestone four completes the "institutional" land assembly and enable the fifth milestone, organizing property units which enables transfer to final users through establishing co-owned properties with a property identification number for each building (apartment or commercial area). When this fifth milestone has been passed, the units have finally been organized for their intended uses and ownership (in rem) can be transferred to final users. This is of great importance to the developer as final monetary settlement is generally a precondition of formal ownership transfer, (cf. The Act Relating to Production of Residential Housing §§ 10, 11, 17, 43).

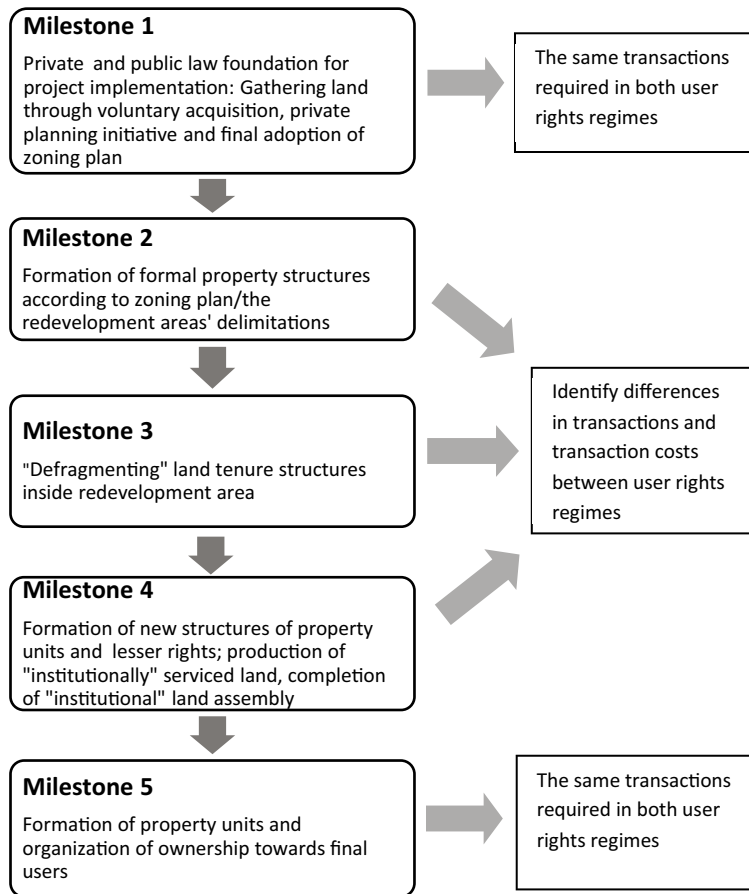


Figure 2: Milestones in property formation.

3 User Rights Regimes for Property Formation

3.1 Planning Development of Land

A substantial part of the institutional framework that directly or indirectly influences property formation is embedded in overarching institutions concerning development of land. This again forms part of the total user rights regime for land use and development and affects both user rights regimes for property formation during implementation of urban redevelopments.

Private law institutions that form the property rights regime consist of institutions concerning exchange of user rights (property rights) between citizens. The modes of transaction involved in these processes vary significantly depending on the situation (Bjaaland & Nielsen 2009; Janson 2011). They are all founded on the concept of freedom of contract, but within the limitations of formal institutional frameworks concerning contracts, conclusion of agreements, transfer of real property, etc. that limit types and contents of transactions, (cf. The Act Relating to

Conclusion of Agreements, The Act Relating to Sales of Real Property, The Act Relating to Production of Residential Housing, The Mortgage Act, etc.)

The spatial planning regime operates within the realm of public law and is enacted through public administration, sorted under the executive constitutional branch. At the meso level, processes are governed by the Public Administration Act (PAA), the PBA and CA, attached by-laws and general legal principles of public administration. The main actors at the micro level are municipal planning and building authorities, organized in various departments. The meso level's legal framework makes up and limits the scope and contents of actions related to land use planning and the processing of building permits, etc. which, in turn, indirectly affect how property formation processes can be structured and new land tenure structures established. In this context the PBA with attached by-laws is an important meso level formal institution. A central characteristic of Norwegian planning that has major impact on site specific application of the spatial planning regime is the private right to initiate planning through private zoning plan proposals. In the investigated cases, privately initiated project-based planning and the public law foundation for project implementation are laid down during these processes. This means that developers as initiators of urban redevelopments will steer towards regulatory solutions that secure project implementation (Røsnes & Kristoffersen 2009). Following adoption of plans, every building process requires a building permit. This is usually split into general and construction permits concerning detailed design of projects, usually according to planned building stages. Property formation may directly or indirectly rely on prior processing of these permits. The PBA requires all property formations to comply with public law regulations (cf. PBA § 1–6, CA § 10) and it states a series of requirements concerning establishing new or transforming existing land tenure structures. How all these formal institutional public law requirements are enacted depends on the situation and on how affected users and public authorities interpret them.

Registration of property unit ownership in co-owned (building) properties is done in accordance with the Property Unit Ownership Act (PUA). According to the PUA, registrations can only be resolved through municipal authorities (cf. §§ 7, 8, 9). Both user rights regimes have the fifth milestone in property formation processes in common. Registrations require a construction permit for the building in question and that the property has been formally registered as a property unit in the cadastre. If external (outdoor) areas are to be exclusively for specific units, a survey of these is required prior to registration.

Public law institutions concerning registration of interests in land, securing property rights (in rem) towards third party interests through land book registration is governed by the Land Registration Act (LRA) and enacted by the Land Book Authority, centrally organized under the Norwegian Mapping Authority (Statens kartverk). Registrations must comply with public law regulations and, in cases that establish or transform property units, are also preconditions prior to cadastral registration (cf. PBA § 1–6 CA § 10). Therefore, in these cases, land book registration depends on coordination of transactions founded in both public and private law in order to be complete (cf. LRA § 12a).

3.2 The Municipal Cadastral System

The municipal cadastral user rights regime is a part of the spatial planning regime, organized as public administration under the executive constitutional branch. At the macro level, the same institutional framework as for the rest of the spatial planning regime applies. At the meso level, the main formal public law institutions are the PBA and the CA, at micro level, the PBA and the CA are enacted by municipal authorities and for the LRA by the land book authority. Property formation includes surveying tasks which are in the hands of a municipal monopoly, cf. CA § 5a. Municipalities can decide to allow private surveyors to deliver surveying services but not cadastral registration. The property formation process involves four steps: (1) application and processing of permits according to the PBA and public law requirements (cf. PBA §§ 20–1 m, chapters 26–29, CA § 10), (2) completion of surveying tasks (cf. CA § 6, chapter 7), (3) completion of cadastral registration (cf. CA chapter 5) and (4) land book registration (cf. CA § 24, LRA § 12a). The municipalities have substantial freedom concerning organizing their operations within the scope of formal meso level institutions (Baldersheim & Rose 2000). In Oslo municipality, there are three different departments involved: the department handling property formation applications, in accordance with the PBA and/or PUA, the department responsible for surveying services and finally the department for cadastral registration.

Owners and lesers of landed property can on application initiate property formation processes (cf. PBA § 20–1 m, CA § 9). There are no competency requirements for applicants. Municipal case officers performing cadastral registration must have only completed a short course in cadastral registration. There are no other formal competency requirements for case officers or surveyors (Statens kartverk 2013). The CA enables merges of property units, subdivisions, transfer of land between property units, boundary adjustments and subdivision of three dimensional (3D) property units (cf. §§ 11, 15, 16, 18). Applications follow standard forms and also require attached documentation of legal access to land, consent from holders of lesser rights, etc. depending on the situation. Complaints put forward by the involved parties can be filed together with decisions in accordance with the PBA and CA (cf. PBA § 1–9, CA § 46, PAA chapter IV–VI). In the handling of applications as a result of the PBA, the municipal authority controls compliance with zoning plans and building permits and can make demands concerning the layout of property units and the registration of lesser rights to secure public interests in accordance with these regulations. The tasks are not integrated with other aspects of planning and building control. The official processing time limits according to the PBA is twelve weeks from completing the application (cf. PBA § 21–7). Surveying and cadastral registration follow CA time limits: six weeks for cases with no surveying and sixteen weeks to complete surveying and cadastral registration. Special reasons are required in order to complete cases without surveying (cf. CA § 6). The time limit runs from when cases are assessed as complete and a PBA-permit issued. The time limit can also be extended during the winter according to municipal regulations (cf. CA by-laws § 18). In all situations, processing permits, surveying and registration

should commence without unnecessary delays (cf. PAA). Land book registration is completed on the day the land book authorities receive complete documentation that fulfils formal requirements; in cases of late arrivals, registration occurs the day after (cf. LRA § 7). The municipal authorities in Oslo have capacity problems and reports frequently reveal exceeded time limits.

3.3 Land Readjustment and the Land Consolidation Court

The Land Consolidation Court (LCC) is a special court and part of the judiciary system at the macro institutional level. The purpose of LR and the LCC activities is to contribute to more efficient land use by implementing clarifications and transformations of land tenure structures and by reducing transaction costs associated with such processes. The LCC generally operates within the realm of private law and, as part of the judiciary system, is cut off from involvement in public administration tasks such as planning and processing of permits in accordance with the PBA. However, the Land Consolidation Act (LCA) and PBA have several special rules concerning property formation which transfer tasks that are normally resolved by municipal authorities to the LCC and its users. At the meso institutional level, the court operates within the boundaries of the LCA, the Civil Process Law, Law of Courts and, at the macro level, within general overarching court principles, with some LR-specific modifications (Ramsjord & Røsnes 2011b p. 256). Owners and holders of lesser rights in landed property can submit demands to the LCC in order to clarify existing land tenure structures, resolve land disputes and/or transform inefficient land tenure structures (cf. LCA §§ 1, 2, 3, 5, 16, 17, 17a, 88, 88a). Following such demands, the LCC can, within the legal requirements of no losses and shared increases in property values, apply several legal tools to create new suitable land tenure structures. It is the users' demands that define the scope of LR-processes, cf. LCA § 25 (Ramsjord & Røsnes 2011a p. 256).

The LCC (and its users) have the possibility to initiate subdivisions, merges and adjustments of boundaries; land swaps between properties; extinctions and establishment of lesser rights and also temporary rights; transformations of land tenure structures according to adopted zoning plans and distributions of value increases and costs on the basis of adopted zoning plans (cf. LCA §§ 2 litera a-i, 23, 86, 87). In all LR-cases, existing land tenure structures must be clarified before commencing any transformation of land tenure structures in order to secure users against losses and biased allocation of values. This clarification prevents future disputes and, when finalized, excludes neighbouring owners outside the designated LR-area from the case. LR-cases can also be split up and decisions finalized through legally binding decisions or judgments and final registration of these in cadastral and land book registers as the case commences (cf. LCA §§ 24, 62). There are exceptions in the PBA that remove the need for municipal processing of property formation permits if LR is implemented on the basis of adopted zoning plans (cf. PBA § 20–1 m).

The LCC's judges meet high formal educational and personal competency requirements (cf. LCA § 7). It also employs highly skilled surveyors and technical

personnel who, within the boundaries of the LCA, can implement property formation processes and coordinate these towards cadastral and land book authorities (cf. LCA §§ 24, 86, 87). At the micro institutional level, the court is designed and formally obliged to contribute to efficient processes and solutions. The formal aspects of these institutions have also given rise to informal institutions with an attitude towards resolving problems efficiently. The LCC generally takes on a holistic approach to transformations of land tenure structures, focusing on both private and public law aspects that contribute to securing user interests.

If, prior to application for LR, the user has performed voluntary transactions that give legal access to a redevelopment area, i.e. potential conflicts of interest with other (formal) owners and holders of lesser rights have been resolved and the zoning plan is approved, the conditions for optimizing the LR-process by tailoring it to this dominant user's needs should be very good. In such a situation, the scope of LR will be to complete institutional land assembly, produce institutionally serviced land and make way for organizing buildings and properties towards final users through property formation processes (Ramsjord & Røsnes 2013). It is the combination of the prior voluntary land assembly transactions and the formal and informal LR-institutions that constitute the LR user rights regime for property formation as an alternative to the municipal cadastral user rights regime. The municipalities still have responsibility for resolving cadastral registration tasks, and land book registration is still required to complete property formations. A major difference however is that the formal LR-institutions transfer these tasks to the court and by doing so also eliminate the user's needs for direct contact with municipal cadastral and land book authorities (Ramsjord & Røsnes 2011b).

4 The Regimes in Operation

4.1 The Municipal Cadastral System

Lillohøyden is a medium sized redevelopment project centrally located in Oslo where the property formation was resolved through the municipal cadastral system. The process was planned by the redevelopment's project manager and lawyer, with contributions from necessary involved parties, the developer's management and marketing department, external architects, entrepreneurs, etc. On the basis of this initial property planning, the lawyer coordinated the following property formation process towards municipal cadastral- and land book authorities.

The project's objective was to transform a brownfield area into three apartment blocks with subterranean parking facilities and attached collective functions such as access roads, a playground, park areas, etc. In the early phases, municipal authorities acquired half the redevelopment site for the purpose of building a new school. This reduced the redevelopment from six to three apartment blocks. This presentation only covers property formation of the remaining project. The initiation of the original project started with the developer's initiative to negotiate a voluntary agreement (much resembling voluntary LR) that secured legal access to the entire redevelopment area and a coordinated private planning initiative. The initiative was accompanied by the developer's parallel acquisition of remaining

properties within the site. By the time the zoning plan was approved, the developer had gathered legal access to all the properties within the site. The zoning plan proposal was recorded for public handling late August 2004 and approved mid-July 2007. On the completion of land acquisition and the approval of the zoning plan, milestone one was reached.

At this stage, formal ownership had been registered to the development company and all units inside the area also had the same mortgage rights registered. Prior to this, old servitudes and leases had been extinguished from land book records for some of the property units. This was time consuming to handle towards holders of lesser rights and land book authorities. The next step involved more detailed planning to transform existing property and rights structures in to serviced land suitable for project implementation and further organization towards final users. Because of marketing-, finance- and risk-related reasons, and considerations of future ownership and facility management, the three apartment blocks needed to be organized as three separate co-owned properties of registered property units. This meant that three surface properties had to be established alongside one 3D property unit, the latter for organizing ownership of the subterranean parking facilities. The developer considered other alternative means to organize the future land tenure structures, but concluded that the organization indicated above was the only realistic option. However, the developer also realized that this would make the property formation process more complicated.

The redevelopment area consisted of two entire property units and parts of four units, the latter being bits of neighbouring properties which zoning plan boundaries had “cut off”. The land had been acquired in the early phases but now, to continue the redevelopment procedures, property formation procedures handling these parcels had to be completed. This was resolved as two separate cases, both processed by the same municipal case officer. In addition, the two property units inside the redevelopment had to be merged. The merging of units required parallel handling of lesser rights resting on one of the units. A right to have a power station was handled voluntarily by the developer and the power company holding the right. This right was changed in land book records from being registered as a monetary right into a servitude just prior to merging the units. The demand was sent to the municipal authorities early August 2012, processed by municipal authorities just after and the merge finally registered in land book records four weeks later. Parallel to this, the first case was initiated. This was a small parcel that had to be transferred to the merged property unit. The application was due to the initial agreement on acquisition handled by the existing owner of the neighbouring property mid-August 2012, a notification of deficiencies in the application was made shortly after, a confirmation of transfer was made by the developer mid-December, and the permit was granted in early January 2013. Surveying and cadastral registration were completed mid-April 2013. Challenges with extinction of mortgage rights delayed this process.

The next three parcels were handled in a separate parallel case that formed one part of a larger application which, due to municipal interpretation of public law requirements, was split up. The developer sent the initial application for transferring

land from two properties, adjusting the boundary of one and establishing three surface properties and one 3D-property from the merged unit mid-August 2012. A notification of deficiencies in this case (leading to the application being split up) was received early September 2012. Supplementing information was sent the week after, and a permit for the three adjustments was granted around six weeks later. Surveying was handled in-office and cadastral registration procedures completed late November 2012. The developer requested prioritized handling of surveying and cadastral registration through informal channels and this was granted as the municipality had purchased the remaining parts of the properties as parts of the school plot. Land book registration was handled by the developer and registration completed early January 2013. Completing the transfers and merging of parcels meant reaching milestone two and three at about the same time. “Defragmentation” of land tenure structures were completed.

In the notification of deficiencies, municipal authorities had two requirements that affected the further process. The first requirement was that the subdivision of three surface properties (serviced building plots) could not be initiated before the subterranean parking facilities had obtained a construction permit, as this permit is required to register a 3D-property unit. This permit was issued late February 2013. The second was that the developer was required to apply for dispensation from the zoning plan (cf. PBA § 28–7) as organizing three surface properties rather than just one meant that all collective functions could not be fulfilled on each unit, but needed to be shared across property boundaries. The developer signalled that lesser rights securing these functions were to be registered, but the municipality kept the requirements and further processing of the permit could not happen before both permits had been obtained. The second part of the application was prepared in January and February 2013 and, due to a delayed construction permit, submitted in early April. The subdivision permit was granted in the end of 2013. The permit required parallel establishing of servitudes to secure shared functions of public interest. Surveying subdivisions, registration of 3D property and final land book registration was completed on the last days of November 2013. All surveying was completed in-office on the basis of coordinates gathered from plans and permits due to ongoing building activities, however this could not be determined before a surveyor finally had been assigned to the case. This completed the fourth milestone, making up “institutionally” serviced land, property units in accordance with the building plots with suitable boundaries and necessary attached lesser rights.

Due to municipal practices, the organizing of co-ownership properties and property units for final users could only proceed when the above registration procedures were nearly completed. The required construction permits for the first apartment blocks were already granted at this point. The application for the first apartment block was sent mid November 2013, a permit granted early February 2014 and final registration completed mid March. The application for the second apartment block was sent mid February, permit granted late June and final land book registration made in August 2014. The property formation process just kept up with the building process and planned transfer to final users in August

or September 2014, depending on progress in building processes. The total time from planning initiative to the first building stages being completed comes to ten years, seven years after the zoning plan was adopted. From work commencing on property formation at the second milestone to when the fifth milestone was reached it took two years in total for the first two building stages. The fifth milestone remains for the apartment block making up the last building stage.

4.2 Land Readjustment

The redevelopment site for “Grefsen stasjonsby” was formerly a goods terminal owned by Norwegian Rail. Norwegian Rail’s development company (ROM) is the developer and has engaged in a joint development through a single purpose company (SPV) together with a major real estate development and entrepreneur company, JM AS. Formal ownership title is held by Norwegian Rail, but the real ownership has been transferred via ROM to the SPV where both developers hold fifty percent of the shares. The SPV was established and work on planning the project initiated in 1999. The resulting zoning plan proposal then went through a ten year process before finally being approved in May 2009. The redevelopment site, which only covers parts of the planned area, is zoned for residential purposes mixed with some commercial, common and traffic areas. The zoning plan comprises seven main lots divided in two main sections. During the project planning, the plan’s content and delimitations and outlay of the area underwent numerous changes, including extensions to cover minor slices of neighboring properties. Consequently, further acquisitions became necessary to obtain access to the entire redevelopment site. The developer negotiated call option agreements with affected owners and lessees that secured legal access to the “parcels” created by the extended zoning plan if the plan was to be approved. At final approval, the call options were executed and milestone one was reached. At this moment, the two property formation processes start to differ.

The developer decided to resolve the property formation through LR. This choice was based on initial analysis of expected transaction needs after discussions with consultant experts on LR and urban property formation processes (Ramsjord 2009; Ramsjord & Røsnes 2011a; 2011b). The demand for LR was sent early February 2010 and, after initial meetings, the LR-case was accepted eight weeks later. The demand for LR stated that the case should be split up according to the progress of building activities: the need for subdivisions, the transformation of property units, clarifications of boundaries and the establishment of new structures of lesser rights. The demand specifically pointed out the need to establish registered property units in order to enable registration of mortgage rights on property units making up individual building plots according to the zoning plan. The demand also stated that the scope of the case might be extended.

The first phase of the LR-case was limited to the first stage of the redevelopment project that makes up a little less than half the redevelopment area. The demand for LR was drawn up according to the outer boundaries of the redevelopment area, not the outer delimitations of the zoning plan. This eliminated parts of the planning area that were not necessary for implementing the actual project. The LR-case thereby

only covers properties that are legally controlled by the developer. This strategy and the position secured at milestone one gave the developer a dominant position and almost full control of the following LR procedures (Ramsjord & Røsnes 2011a).

The LR-case commenced with the compulsory clarification of existing land tenure structures in accordance with LCA requirements and the LR-demand. The existing property boundaries and boundaries created by the zoning plan were surveyed and inspected. The neighboring owners made in-court compromises on all boundaries late May 2010 which largely excluded these from the subsequent processes.

The plan, agreements and clarified boundaries created the legal foundation to commence with subdivisions of the parcels created by the zoning plan. The LCC did all the cadastral and land book registration work of initial surveying, requesting property unit registration numbers and providing necessary documentation for cadastral registration and land book registration relating to these subdivisions. The developer contributed to formulating the necessary decisions based on conditions that would produce enough property units for the following transformation of the existing land tenure structure, thus saving time later in the process. The subdivisions were conducted within the frames of the zoning plan and no municipal processing of property formation permits from municipal authorities were needed (cf. PBA § 20–1 m). LR-personnel requested cadastral identifications, prepared geo-referenced cadastral maps and then sent the documents for the cadastral authority's registration early December 2010. Four weeks later, the cadastral numbers and prepared subdivision maps with coordinates were sent to the municipal cadastral authority for registration and, shortly after, the LCC's journal was registered in land book records.

Before the formal ownership to the subdivided property units could be transferred, all lesser rights posing a threat to the developers' interest had to be extinguished. The properties were subdivided from housing co-operatives and jointly owned properties, some of which were leaseholds. If the formal ownership title was to be transferred, leases had to be changed or extinguished and mortgage rights removed in compliance with the terms and conditions drawn up in the initial and supplementary agreements. The LR-court and municipal authorities are not parties in private transactions extinguishing such lesser rights. These involve decisions by the boards and general assemblies of the properties' owners, the financial institutions holding mortgage rights and final registration procedures with the land book authorities. This was resolved by board representatives of owning properties and their legal representatives. The lesser rights were finally handled and the last titles transferred late November 2012. In total, extinguishing these rights took approximately two years. The developer had little direct influence over these processes and points to fragmentation of roles, lack of communication between involved parties and the lack of one figure driving the process forward as factors which caused delays. Milestone two was reached when formal ownership to the last unit was transferred.

The following procedures involve transactions that transformed existing property structures and established new structures of lesser rights in one

coordinated procedure, implying that milestone three and four would be reached simultaneously. This transformation was based on traditional LCC tools for reallocating and swapping land between property units and on registration of new structures of lesser rights suitable for implementing the redevelopment, (cf. LCA §§ 2 b, c, 23). All decisions and registrations are temporary and will be finalized on completion of the redevelopment. This solution was chosen by the LCC in order to handle the stepwise implementation and to incorporate any changes that might become necessary due to changes in public regulations. The LCC also sent the draft solutions, developed in collaboration with the developer, to municipal cadastral authorities to assure compliance with CA and PBA-requirements prior to formal temporary LR-decisions and cadastral registration procedures. Earlier, the planning authority had clarified that details in building permits formulated as supplements to the zoning plans were in accordance with the zoning plan and need not be applied for. Because of the delays, necessary general and construction permits had already been issued, making way for the first registrations of 3D property units and final units.

The design of future property and rights structures was planned parallel to the developers' extinction of lesser rights and initiated when milestone two was reached. The temporary solutions were made and registrations decided by the LR-court mid-March 2013 and registered in the cadastre and land book a week later. Earlier in the cadastral registration process, there was some miscommunication between the LR-court and the municipal cadastral department that caused delay in cadastral registration. The property formation deviated from the zoning plan on some points, but was in line with building permits and dispensations issued later. This was documented in the court journal, but not picked up by the municipal case officer. The case was put on hold and a meeting was arranged to clarify the public law foundation for the property formation. Lack of internal communication within the municipal organization can explain these delays. After some initial problems, the LR-court and municipality now report a good and constructive relationship in these matters. The new structures of lesser rights incorporate both public law requirements embedded in the zoning plan and building permits, and private interests of the developer securing project implementation and private law aspects of future management. The LR-decision process followed the same principle as other decisions. The draft was based on lesser rights developed for another project and the consultants' suggestions which were further developed by the court before the final decision. The land tenure structures were transformed into institutionally serviced land such as suitable building plots, 3D-properties, common properties, traffic areas, etc. according to the zoning plan, building permits and planned organization of future co-owned properties of units, meaning that milestones three and four were reached for the first building steps.

The first apartment blocks were completed and the new owners moved in between January and March 2013. However, as the handling of lesser rights had postponed completion of milestone four, the process of establishing co-owned properties with property units could not be completed and formal ownership not transferred. The second apartment block was due for transfer in May and faced

the same problem. The applications for establishing co-owned properties was initiated in good time, parallel to the LR-case, and handled by special consultants. Because of the problems concerning production of serviced land, the case was first rejected then, at a later stage, re-submitted and put on hold. When serviced land had finally been produced, the process was started up again. The municipal authority caused delays during the late phases of milestone four, but does not seem to have prioritized completion of these cases. The final land book registration for both apartment blocks were completed late May 2013. The property formation and completion of milestone five did not keep up with the building process and planned ownership transfers. The delays have largely been caused by transactions resolved outside the LR-case and both the developer and judge report that the LR-court did not cause any of these. In total, reaching milestones two to five in the property formation process took around three years, from early 2010 to late May 2013 with around two years spent on matters outside the LR-case concerning defection of mortgage rights. The latter problems would also have been present in the municipal user rights regime.

5 Efficiency in User Rights Regimes

5.1 Milestones, Transactions and Transaction Costs

The objective of the following is to compare transactions and transaction costs relating to the milestones of the two user rights regimes investigated above. Differences are observed in process efficiency incurred, particularly by differences in stages of property formation. This comparison will contribute to answering the first part of the research question, how users adapt to the user rights regimes and which regime is most efficient. The analysis focuses on key transactions and discusses the transaction cost categories presented above.

The first milestone consists of transactions concerning gathering legal access to redevelopment sites, privately initiated project zoning planning for the project and adoption of zoning plan. These early phase transactions transfer user rights founded in the property rights and spatial planning regime. The case studies show that the two redevelopments much resemble each other concerning user approach and transactions during these early phases of redevelopment. The transactions secure the foundation for implementation and can also be seen as necessary preconditions and user adaptations to secure efficiency in the following property formation processes. The transaction costs induced on users during these early phase transactions are substantial, but the processes also generate large prospective property values. Since these transaction costs are present in both regimes, and not within the scope of this article, they will not be elaborated on any further.

Milestone two – when comparing initiation of property formation processes, the demand for LR gathered all the following transactions in one single coordinated case. In total, the municipal regime relied on three different applications initiated at different stages of the process, one of which was split into two parts due to terms in the property formation permit. LR not only gathers transactions in one coordinated process. It also cuts the number of transactions arising from

parallel applications. This more comprehensive approach has a positive impact on transaction costs compared to the fragmented approach of the municipal regime. This was also one of the main reasons behind demanding LR. The first transactions target formation of property units of land from parcels created by the zoning plan, cutting across existing land tenure structures. The results of these transactions are the same in both regimes: physical and institutional reorganization of land tenure structure for transferring the formal ownership to the developer. The approaches of the two regimes are however different, impacting transaction costs. LR starts with clarification of existing land tenure structures and results in legally binding boundaries. The municipal regime resolves milestone two through two separate cases. The initial processing of property formation permits takes time and is associated with formal requirements that, to a certain degree, are subject to unpredictable terms and conditions, cf. below. LR eliminates the need for application as long as the transactions are within the frames of the adopted zoning plan. This reduces time-, risk- and personnel-related transaction costs. The LR-court completes cadastral and land book registration on the basis of initial surveying completed when clarifying existing boundaries. The municipal regime relies on assigning a surveyor and determines how surveying will be resolved after each permit has been granted. The user does not know if surveying in the field will be required and is not given any clear opinion as to how long the process will take. When the LR-approach to surveying is compared with the municipal approach, it takes more time, creates risks for users and also seems rather outdated and impractical in light of user needs and the possibilities for digital, office-based solutions. Furthermore, the municipal process does not resolve potential ownership constraints or result in clarified land tenure structures or legally binding boundaries. This also means a higher level of risk through the redevelopment process and the transfer of these risks to the produced properties final users.

Common for both regimes is that any lesser rights posing a threat to the redevelopment must be extinguished or changed prior to transfer of formal ownership and further progress in the property formation process. This requires consent from the holders of these rights (mortgages, servitudes, etc.) and completion of formal registration procedures with the land book authority. In both user rights regimes, the handling of these transactions takes considerable effort for users and involved actors, incurring time-, risk-, and personnel-related transaction costs. The transaction costs caused by the delayed transfers to final users which, in turn, caused substantial financial costs, risks and inconveniences for the developer, and also risks for final users and involved financial institutions, can be traced partly to milestone two. The conclusion for milestone two is, since the delaying factors would have been present in both regimes, that the LR-regime reduces transaction costs for users.

The third milestone concerns “defragmentation” of land tenure structures, and the fourth the production of institutionally serviced land and completion of “institutional” land assembly. In the municipal regime, the third milestone was reached through merging property units in conjunction with milestone two. The extinction of lesser rights caused disruption, but when the lesser rights

were extinguished from the land book, the cadastral and land book registration progressed swiftly as no property formation permit or surveying was needed when merging parcels. The same challenges as in milestone two have potential impact on transaction costs and have the same effects in both regimes when merging units. However, the LR-regime resolved milestones three and four in one coordinated procedure. Therefore, this part of the property formation process becomes relatively different in terms of required transactions. As above, property formation applications and permits were not required in the LR-regime. Instead, temporary decisions and municipal control prior to cadastral registration were utilized to secure compliance with public regulations. In the municipal regime, application procedures were required and at this point of the process gave rise to unexpected requirements. The municipal authorities' interpretations of formal institutions, in this case concerning 3D-property units and dispensation requirements, not only had significant consequences for the following process, but also created new interdependencies between these requirements and the following transactions. Due to the requirements, the property formation permit could not be obtained before the construction permit and dispensation had been processed. As a consequence, the property formation was postponed until this was completed. The LR-specific transformation tools reached milestones three and four simultaneously, eliminating the municipal regime's two step property formation procedure based on merging and then subdividing property units. This direct re-parcelling contributes to reducing transaction costs in all the above categories for users. Surveying faces the same challenges as above. LR relies on in-office surveying based on digital coordinates from approved plans, permits and clarified boundaries; the municipal regime relies on assigning a surveyor before assessing whether or not surveying will be handled in the field or in-office.

Both the user right regimes depend on details from general building and construction permits that, to some degree, are being processed in parallel processes. The LR court cannot directly influence these permits any more than the users can. In the municipal regime, the possibilities of influencing transactions internally in the municipal organization should be greater. However, there is no obvious evidence of connections between planning, development control and property formation procedures being present in this site specific application of the municipal regime. The delays concerning cadastral registration during late phases of LR at milestone four were also caused by lack of internal communication in the municipal organization and, possibly, also informal institutional aspects concerning the relationship between the LR-court and municipality, prior to the clarifying meetings. Lack of coordination between transactions related to different aspects of public regulations have negative impact on transaction costs for users in both regimes. Completion of cadastral and land book registration procedures in the LR-user rights regime create significant needs for preparing documentation for municipal cadastral and central land book authorities. In the municipal regime, these tasks are divided between different parts of the municipal organization and user organizations. The complexity of these tasks increases during LR, both because of an unclear and complex formal institutional framework and the LR-

court's organization as part of the judiciary system (Ramsjord 2009; Ramsjord & Røsnes 2011a; 2011b).

The transformation of property structures cannot be seen independently of establishing new structures of lesser rights. In both regimes, lesser rights have to be registered in order to comply with public law (PBA) requirements. In the municipal regime, the property formation permits require lesser rights of public interest to be secured through land book registration in parallel with cadastral and land book registration. The developers must establish any lesser rights of private interest independently of this. In the LR-user rights regime, both lesser rights of public and private interests are established in one coordinated procedure. Stepwise implementation may require changes in lesser rights registered on completed building steps. The LR-court's temporary decisions facilitate this, whereas the municipal approach probably makes this very difficult to handle. The LR-process produces new lesser rights structures that are more detailed and balanced in terms of public and private interests compared to the municipal regime which enhances the institutional quality of the new structures of rights and reduces transaction costs, especially regarding risks related to the handling of lesser rights in stepwise implementation of redevelopment projects.

The fifth milestone demarcates organization of property units towards final users. The transactions follow a separate formal institutional framework (PUA) enacted by the municipal authority. Both user rights regimes are subject to the same transaction requirements. Registration of co-owned properties towards final users requires a construction permit in addition to completion of the fourth milestone above. The LR-regime has no impact on these transactions other than laying down the foundation for this process. In both regimes, it is possible to initiate parallel processing of permits prior to completion of milestone four. This possibility was utilized during LR and, although the coordination of transactions took some time, it is likely to have reduced time- and risk-related transaction costs. The terms imposed in the municipal process delayed completion of milestone four and is likely to have affected processing and completion of milestone five and, hence, had a negative impact on transaction costs. Any delays in milestone two to four may have an impact on when milestone five can be completed and, hence, when final units can be transferred to final users.

5.2 Certainty

The procedures for reaching the milestones are not necessarily streamlined and clear before the transactions start. This raises the question of what certainty exists for users to fulfill each step in these kinds of multi-polar problems without some kind of friction between involved public authorities and other stakeholders (Jowell 1973). The concern here is to point to institutional factors that reduce the certainty for users in property formation processes which, in turn, contribute to increasing the numbers of transactions and transaction costs.

When initiating property formation, users are faced with a fragmented formal institutional framework and two possible user rights regimes. This results in the consideration of several potential approaches and, at the same time, considerable

room for users to adapt. However, it also complicates the possibilities for sound pre-calculations. The LCA and LCC practices in site specific applications offer a wider span of transformation tools than the municipal regime. Moreover, the user has the possibility to frame the scope of the LR-process when designing the LR-demands. In the municipal regime, the user can design applications with series of transactions following CA transaction types or, alternatively, break this up into multiple applications. The findings indicate that the latter option is chosen. Pre-calculating how the municipal regime will handle complex applications and complete the necessary surveying and cadastral registration tasks proves very difficult as these estimates must include what terms and conditions will be drawn up, how parallel handling of lesser rights should be possible (cf. milestone 2 and 3), and how coordination towards development control will be resolved. The splitting up of municipal property formation processes becomes a way of handling and spreading these risks. The LR-regime's design secures far more coordinated handling and this process becomes therefore far more pre-calculable.

The differences in certainty arise from a combination of formal and informal macro and meso level institutions. At the macro level, the municipal regime is a part of public administration. Both formally and informally, handling transactions and organizing tasks are less adapted to user needs and more geared toward municipal needs, processing fees and public law aspects. This seems to create a system that produces simple cases oriented towards single transactions. The LR-regime at macro and meso levels operates through LCA-legislation and court principles. It is therefore to a much greater extent formally forced to balance public and private interests. Also, at the informal level, the LCC's mandate, its organization, employees and provision of services are geared towards solving cases efficiently for its users. The combination makes room for more complex processes that manage to handle the stakeholders of the institutional environment without creating unnecessary interdependencies and potential administrative loops that might generate increased transaction costs. At this point, the LR-regime's handling of public law aspects increases certainty for its users. Also, the integrated handling of surveying, cadastral and land book registration is far more pre-calculable and efficient than the municipal regime's fragmented approach, which is a result of CA requirements, local practices and municipal organization of tasks. The narrow exemptions concerning in-office surveying embedded in the CA, together with parallel processes and late assigning of surveyors, create uncertainties that could have been avoided in the municipal regime.

Both regimes also lack efficient tools for integrated handling of lesser rights. This especially affects risks related to monetary rights such as mortgages, but also leases and positive and negative servitudes. Handling these must involve respective rights holders and meet the legal requirements of the LRA and demands from land book authorities. The transactions are vulnerable to problems and delays, especially when ownership or lesser rights structures are fragmented. This is hard to pre-calculate in both regimes. For servitudes, the integration of handling and registration procedures adapted to complex redevelopments with several building steps would increase certainty. At this point, the LR-regime has

significant advantages, both concerning possibilities of integrated extinction and the change and establishment of new servitudes of both public and private interests. The municipal regime's scope is limited to servitudes of public interest. What servitudes will be demanded by municipal authorities, how they will be formulated and managed to cope with multiple building steps remains uncertain for users until the late stages of the process. As a last factor, the LR-regime produces legal certainty around the produced land tenure structures. This cannot be matched by the municipal regime. The conclusion is that the LR-regime in total appears far more certain and pre-calculable for users. It also has much further reaching possibilities for handling unexpected problems arising during the processes.

5.3 Coordinative Practices

When user rights regimes lack certainty, coordination needs tend to increase. This final section discusses differences in coordinative practices and focuses on why formal administrative procedures and the parties, the user and the authority, are forced to engage in coordinative procedures. The need for coordination can, just as in the discussion of certainty above, be traced to institutional differences. The coordinative practices of each regime are also important factors when analyzing connections between institutions and transaction costs.

The municipal regime to a large extent relies on hierarchical modes of coordination. The processing of permits is based on forms and written documentation, to some extent supplemented with communication via e-mail, telephone and, in larger cases, preparatory meetings. The municipal authority interprets the formal meso level institutional framework of the spatial planning regime and draws up terms and conditions for processing and granting property formation permits. An example of coordinative practices having impact on interdependency and process efficiency is the municipal practice of putting cases on hold, issuing letters of deficiencies and drawing up site specific requirements. This approach fails to attend to user needs and results in transaction costs that could have been avoided by communicating directly with users, coordinating public and private interests and paying more attention to the bigger picture when processing cases.

All formations and changes to property units, except merging, require surveying, but the surveyor first enters the case when a permit has been granted and the case has been transferred to the surveying department. All transactions concerning formation or changes of property boundaries require surveying in the field. In-office surveys are the exemption and only permitted under special conditions. Considerations of the economic impact that completion of surveying prior to cadastral registration has on users does not meet the legal requirements for granting in-office surveying. To complete property formation, each of these transactions are transferred to the department handling cadastral registration and, when completed, sent off for land book registration. This sequential processing requires coordination between involved departments within the municipal organization and between the departments and the user. The findings clearly indicate that users face challenges when determining where in this four step

process a case is. “Dead time” appears where users experience cases as being “lost” between departments during transfers. In complex property formations, the numbers of transactions increases. Due to user adaptations and the limited transaction types offered through the CA, this results in administrative loops into multiple parallel and sequential cases. The user and the different municipal authority departments and services must coordinate between cases as well as within each case. Further coordination is also required with land book authorities, holders of lesser rights and development control. There are no integrated solutions for handling coordination of the latter transactions. To clarify what tasks are necessary and what roles the user and different departments must play in the handling of interdependencies between transactions, they have to resort to the modes of coordination offered by the regime. This coordinative practice results in identification of specific cases, which is resolved through the efforts of the user, the assigned case officer and the surveyor’s assessments in each case. The combination of meso level formal institutions (CA, PBA, LRA and PUA), the joint organization of authority and service provision, and the formal interdependencies (milestones two to five) during implementation of redevelopments, create complex processes which cause extensive coordination needs. It is evident that the municipal regime’s design increases coordination needs and the practices adopted suffer under this fragmented formal institutional framework that does not appear capable of adapting to the types of transformation of land tenure structures required in redevelopment projects.

The LR-court’s competence is, in these kinds of matters, based on a network approach to coordinative practices. An important factor is that the LR-process to a much greater extent relies on direct oral communication, meetings and discussions with users about problems and direct user participation in designing solutions. This mode of direct communication follows court principles. Through preparatory meetings, the design of demand and coordination throughout the process, the LR-regime manages to focus on identifying problems and designing solutions, both to challenges concerning the process and the design of new land tenure structures. Formal institutions at the macro and meso level together with an informal institutional attitude geared toward resolving problems efficiently oblige the LCC to adopt coordinative practices that promote efficiency. This also forces the regime into balancing public and private interests. When the court also has capacity, a strong will to perform well in this new type of case and a “toolbox” much larger than the municipal regime’s, the chances of resolving transactions and coordinative needs efficiently increase substantially. In combination with the user’s strong position, due to private planning and acquisition initiative, coordination with other private parties has largely been resolved prior to LR. If voluntary network based solutions would have failed the court still have far reaching possibilities to apply hierarchical decision making to implement necessary transactions. Coordination with the municipal planning authority is also handled by the court, which also eliminates the user’s need for direct coordination with this authority. The court’s surveyors are active from the beginning of the LR-process and this coordinated practice leads to process efficiency through adoption of digital handling of

property formations. Finally, the LR-court coordinates cadastral and land book registration for the user. Although LR complicates registration procedures and increases coordination between the court and the municipal cadastral authority, the user only needs to interact with the LR-court. The user communicates with the regime through consultants with special LR-skills. Internal coordination within the developer's organization is necessary in order to provide necessary input during LR. Since several tasks are resolved directly by the court, the process appears more streamlined because the LR-regime contributes to the reduction of internal coordination needs.

In total, when coordinative practices are compared, the LCC's slogan "one stop shopping" becomes very descriptive of the coordinative practices it provides users. However, the LR-regime also suffers from some of the same weaknesses as the municipal regime and cannot completely eliminate coordination practices with other holders of rights and public authorities, e.g. when it comes to handling mortgages and the possibilities to engage in coordinative procedures with holders of rights and land book authorities. In addition, LR can adapt to, but not directly coordinate, public law aspects of property formation in the intersections with development control. Lastly, LR can, only to a limited degree, facilitate property formation with final users. This involves separate procedures that are part of the municipal cadastral user rights regime.

The relationships between user, public authority and service provider exhibit considerable institutional differences when comparing the two regimes. Trust is a factor that definitely has an impact on the actions of involved actors which, in turn, also have an impact on transaction costs and process efficiency of regimes. When investigating the two user rights regimes for property formation, it became very evident that the relationships between developers and public authorities have large differences. Users describe the land consolidation court and LR-process as a guarantee for efficient processes and solutions, pointing to the court's comprehensive approach, direct forms of communication, available property formation "tools", etc. as explanatory factors. At the same time, users sometimes criticize the municipal regime for slow, bureaucratic and fragmented processing, one sided focus on public law aspects, lack of attention to and knowledge about user needs and private aspects concerning implementation, an outdated approach to surveying, fear of making mistakes, orientation towards processing fees, etc. At times, the municipal authority criticizes developers for poor planning, lack of competence, for trying to get away with solutions that do not comply with public regulations, for delays and deficiencies, for not starting early enough and so on.

These perceptions can be linked to lack of trust, poor communication and a lack of overview and understanding of property formation processes as necessary integrated parts of urban redevelopments. When the LR-court works in combination with the developer's consultants, public and private interests are balanced and both parties contribute in driving the case through the system. This configuration resembles the Danish and Swedish way of resolving property formation (Kristiansen et al. 2006 p. 87, 495). In the municipal regime, the situation is not only more fragmented, the "toolbox" is much smaller and lack of trust

causes both sides to overestimate risks. This, in turn, seems to lead to suboptimal coordinative practices and a poor balance of interests. The user, developer and consultants can only contribute in driving cases forward to a limited degree due to a lack of formal influence. The fragmented coordinative practices also lack a strong figure that has the authority and incentives for driving cases forward. Together, these all contribute to reducing process-efficiency and also explain differences in transaction costs between these two user rights regimes.

6 Summary

The user rights regimes for property formation, the Norwegian municipal cadastral and the land readjustment regimes, have been explored using generalizable methodological categories and comparable cases of urban redevelopment. The functioning and efficiency of the user rights regimes have been investigated in detail according to milestones which are made up of transactions determined by formal institutions that make them applicable to all property formation processes in the context of urban transformation. The authorities enacting these institutions are also the same throughout the country. The conclusion from the analysis is that the formal institutional framework gives rise to uncertainties that involved users and authorities can only partially handle through coordination. Uncertainties generated by this fragmented formal institutional framework and the coordinative practices arising from managing a formally incomplete property formation system contribute to decreased process efficiency and increased transaction costs in urban redevelopments. Formal and informal practices of meso level formal institutions vary between geographical and administrative jurisdictions, municipalities and land consolidation courts. The practices and authorities' capacity change over time. More comparative studies or surveys targeting users and involved authorities could help us gain further knowledge about varying practices and challenges concerning property formation following both these user rights regimes.

In terms of process efficiency and transaction costs for users, time is a major factor; a longer project implementation time span, delays or late transfer to final users will induce transaction costs. Financial costs are the most significant of these. As an illustrative hypothetical example calculated in collaboration with the developer, a six month delay in the Lillohøyden redevelopment would induce approximately NOK 9.5 million in interest costs, equalling approximately NOK 50 000 a day or NOK 40 000 on each apartment produced. In addition to financial costs, shorter implementation time and/or less chance of delays contribute to reducing market, financial, regulatory and entrepreneur-related risks and associated transaction costs. Longer and/or more complex property formation processes also increase personnel costs significantly. In total, fees make up a relatively small proportion of the transaction costs induced on users and developers report that both fees and consultancy costs are of minor importance compared to the transaction cost categories above. They have also stated that they are more than willing to pay for a speedier process. The "dead weight" transaction costs identified can be reduced through more efficient property formations. Here, the LR-user rights regime has proven itself as more efficient than the municipal regime, even if it was

not designed for this purpose. On the basis of these findings, the main objective of policy makers should be to initiate further investigations and policy work toward improving efficiency in the municipal regime. The municipal regime resolves most of property formations and a more efficient regime would yield substantial gains for users and society. This would also possibly reduce the need for this category of LR-cases and contribute to reserving the land consolidation courts capacity for the real challenges arising from ownership constraints and planning across existing land tenure structures in early phases of urban redevelopments prior to milestone one.

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