

Modelling Public Regulations – A Theoretical Approach

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Abstract. *In this paper the author explores the concepts of public regulations in regard to land use and real property ownership. The results are used to develop a theoretical, conceptual model for public regulations influencing the landowners' use of the real property. The proposed classification aims at being independent of the legal systems they are created in and are intended to be used for classification of public regulations internationally. The purpose is to establish a terminological framework for international exchange of public regulation information. The development of the public regulation model is exemplified with Swedish public regulations influencing the owner's right to use his/her real property.*

Keywords: *Public regulation, restrictions, real property ownership, legal modelling, cadastral modelling, land management, land administration, urban planning, rural planning, land use, Legal Cadastral Domain Model*

1 Introduction

This paper is a contribution to the research on modelling the cadastral domain.

Public regulation is a rather wide term and means different things depending on the context in which it is used. However, regulations can be generalised as being the act or process of controlling by rule or restriction, and a rule or order having legal force usually issued by an administrative agency (Garner, 1891, p. 1064). The descriptions indicate that everything which is dictated by a public agency can be described as a public regulation. They are the result of political decisions, ranging from instructions issued from pan-national political institutions, e.g. an EU directive, down to fiscal measures, subsidies and planning regulations for land use issued locally and influencing the real property owners' right to use land, water and air. The term "land" is hereafter used as a synonym for land, water and air.

1.1 Problem Formulation

Land administration has been subject to conceptual modelling for some years,² but there are, to this author's knowledge, no agreed international classifications of

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² See Lemmen (2012, pp. 23–53) for a review of publications on land administration domain modelling.

public regulations for an exchange of information, regardless of the legal system they are created in. However, the subject has been discussed within the scientific community in recent years, e.g. by the development of the Legal Cadastral Domain Model and the Land Administration Domain Model, LADM. The Legal Cadastral Domain Model is an attempt to create a terminological framework for exchange of real property rights and public regulations. The model does not provide any detailed description on public regulations, but only describes them as being either limiting or beneficial to real property ownership (Paasch 2005; 2008). The Land Administration Domain Model, LADM, focus on the description of “rights”, “restrictions” and “responsibilities” as relations between a human or legal person³ and land (ISO, 2012). The LADM does, however, not describe the concept of public regulations in detail. Other attempts to describe public regulations have been done by Hespanha et al. (2009) and Zevenbergen (2004). These descriptions do however also not describe in detail how public regulations regulating land use influence real property ownership. A more detailed approach is therefore needed.

1.2 Scope and Delimitation

The scope of this paper is to develop a theoretical classification of publicly imposed regulations regulating the real property owner’s *right to use* his⁴ property.

The proposed model is a development of the Legal Cadastral domain Model and an input to the development of the Land Administration Domain Model, LADM, both mentioned above.

Being part of a political process, public regulations are subject to different interest groups, trying to influence the regulations in their favour (Evans, 2003). However, such interests are not explored in this paper. Nor are economical/fiscal issues, e.g. how they regulate property taxes or result in increasing/decreasing property value within a regulated area, dealt with.⁵

The classification is exemplified with Swedish public regulations. This paper is, however, not a case study on Swedish public regulations.

1.3 Methodology and Disposition

An introduction to the concepts of public regulations for land use in relation to real property ownership is given in section 2. The concept of real property ownership is in section 3 used as a theoretical basis for analysis of the functions of public regulations. The findings are used to develop a theoretical model of public regulations in section 4. Conclusions and suggestions for future research are found in section 5.

³ A person is here defined as a human or legal person, state, municipality or other private or governmental authority who owns real property according to legislation (Paasch, 2008, p. 123).

⁴ “His”/“he” is in this paper used as a synonym for any human or legal person (state, municipality or other private or governmental authority) who owns real property according to legislation.

⁵ See Evans (2003) and Fischel (1978; 2000) for discussions on political, social and economical aspects of public regulations.

2 Public Regulations and Real Property Ownership

The economical and social value of public regulations has been discussed by e.g. Evans (2003) and Fischel (2000; 1978). The theoretical departure in this paper is that public regulations execute two major functions in regard to land use: 1) to licence the use of land, mandating prior approval for a number of specified land uses (Ogus, 1994) i.e. to regulate *externalities*, and 2) to avoid or reduce *transaction costs*.⁶ Public regulations are thus means used by the public administration to regulate social costs and further public interest (Coase, 1960).⁷

A *negative externality* is in principle the result of the unrestricted (private) market not regulating land use problems on its own, i.e. resulting in a “market failure” (Sterner, 2003; Ogus, 1994). Examples are that resources produced, stored or used on one real property may cause damage to goods or people on a neighbouring property, e.g. by the spreading of pesticides or it might for an individual company not be cost effective to refine, deposit or otherwise take care of its industrial waste. This creates a negative effect, i.e. a loss of welfare for the neighbouring landowner(s) (Pearce and Turner, 1990). Public regulations also regulate land with the purpose to secure so-called *positive externalities*, where benefits are “shared by the public as a whole or by some group within” (Ogus, 1994, p. 33), i.e. furthering the public interest. They range from e.g. national security and the construction of public roads, to the establishment of nature reserves and providing access to e.g. lakes and seashores for the public. These facilities may not be of interest for the individual entrepreneur since there may not be a profit involved, but are of value for the community.

Negative and positive externalities will always influence the land owners’ ownership right, i.e. *right to use* and *manage* his property, the *right to exclude* others from the property, the *right to added value* from the property and the *right to transfer* the property,⁸ as illustrated in figure 1.

These rights are as a collection sometimes with a single term referred to as ownership right and sometimes called a *bundle-of-rights* (Meinzen-Dick, R. and Mwangi, E., 2008; Alchain and Demsetz, 1973). They can also be described as real property functions (Ekbäck, 2000, pp. 31–32)⁹, executed by the real property owner. The term is hereafter used throughout this paper.

⁶ Transaction cost are not described in detail in this paper, but see Kalbro and Lindgren (2010, pp. 19–65), Ekbäck (2000, pp. 29–45), Ogus (1994), Alchain and Demsetz (1973), Demsetz, 1967 and Coase (1960).

⁷ Externalities can be described as “an unintended and uncompensated side effect of one person’s or firm’s activities on another” (Sterner, 2003, p. 23). See also Kalbro and Lindgren (2010, pp. 19–65), Sterner, 2003, Ekbäck (2000, pp. 29–45), Ogus (1994), Pearce and Turner (1990), Alchain and Demsetz (1973), Demsetz (1964, 1967) and Coase (1960).

⁸ See e.g. Meinzen-Dick and Mwangi (2008), Freyfogle (2007), Mattsson (2004), Henssen (1995), Honoré (1987), Alchain and Demsetz (1973), Snare (1972), Bergström (1956) and Hohfeld (1913; 1917).

⁹ The author’s translation of the Swedish term *fastighetsfunktioner*.

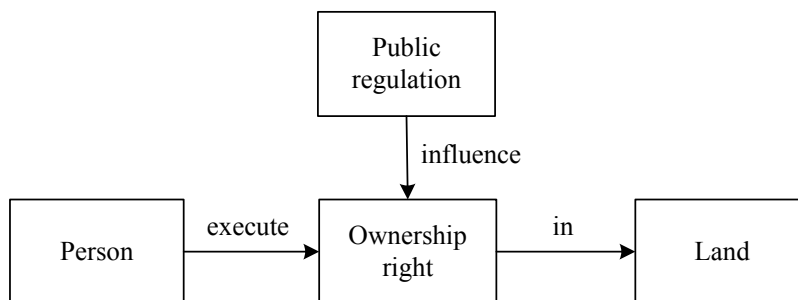


Figure 1. Public regulation influencing the ownership right relation between person and land. Based on Mattsson (2004) and Henssen (1995).

Real property ownership is generally *negatively* defined, meaning that everything which is not prohibited is allowed.¹⁰ Ownership of real property is therefore “flexible”, which means that it is “reduced” by public regulations or private agreements, and “expands” back when the regulation is removed (Bergström, 1956). Ownership of real property does therefore in reality not mean that the owner can execute any so-called *absolute* ownership right on the property. Absolute ownership is when the owner is in full control of all real property rights (Ekbäck, 2000; Bergström, 1956).¹¹ If so, he would be able to e.g. build a nuclear power plant on his property without seeking any permission. Organised society does however not function like this today. Ownership may therefore be described as the greatest possible interest in a thing which a mature system of law recognizes (Honoré, 1987; Snare, 1972). The owner’s *effective* ownership right may therefore be rather limited depending on the number and/or nature of publicly imposed regulations and valid at a specific time (Ekbäck, 2005, p. 195). The regulations do not delete the owner’s real property functions completely, but they lie latent and are “restored” when the regulation is removed or reduced. The ownership right “expands” back towards absolute ownership when the public regulation is removed or reduced.

3 The Structure of Public Regulations

3.1 Public Regulation Functions

Apart from legal restrictions, the outer limits of a negatively defined ownership are only circumscribed by economic and social factors.¹² As a support and illustration of the influence of public regulations the graphical model of real property ownership in figure 2 below is used. The model is built on the previously mentioned concept of a negatively defined ownership, where the property owner can utilize a number of real property functions (abscissa) to various extents (ordinate).

¹⁰ The author is not aware of any society applying a positive principle of ownership, i.e. everything which is not allowed, is prohibited. However, such societies may exist.

¹¹ See Honoré (1987, pp. 189–190) for a discussion of ownership in general and the use of the term absolute ownership.

¹² See Bucht (2006) and Ekbäck (2000) for an overview of economic and social factors in regard to land use.

Different types of public regulations (white area) prohibit or restrict the owner's utilization of certain real property functions. The functions not restricted constitute the remaining effective ownership functions (shaded area).¹³

Starting on the right hand side of figure 2, some functions may not be utilized to any extent at all. This may be exemplified with the restriction that erections of new buildings require a building permit [*bygglov*] (Planning and Building Act [*Plan- och bygglag*], ch. 9).¹⁴ This restriction – or prohibition to construct buildings or conduct (major) changes on existing buildings without permission for each planned building project – is general and applies to all areas in Sweden.¹⁵

The granting of a building permit would, as a result, restore (parts of) the owner's now latent absolute ownership right to use this specific property and be a benefit compared to the initial situation. Such a restoration of ownership functions is illustrated with a cross hatched area on the right side in figure 2.

The possibilities to erect new buildings can also be determined by municipal development plans [*detaljplaner*] (Planning and Building Act, ch. 4).¹⁶ In a development plan, different areas may be designated for specific purposes such as housing, industry, offices or public spaces (e.g. roads, parks or nature areas). The plans are legally binding. If a real property is subject for e.g. detached or semidetached houses the owner is guaranteed the right to build according to the plan, which expands his right to use his property, compared with the initial situation. If a plan, on the other hand, dictates a public space on a property, the owner has no right to build at all. This means that any application for a building permit always will be denied.

Another public regulation, with quite an opposite effect, is the obligation to maintain and manage productive forests, if present on the owner's property. These forest management obligations [*skogsvårdsåtgärder*] are described in a forest management plan [*skogbruksplan*] with instructions for reforestation and maintenance, according to the Forest Management Act [*Skogsvårdslag*].¹⁷ These regulations contain obligations for the owner to perform certain activities, which then becomes a contrary to the previous mentioned prohibition. The forest management obligations are general and apply to all areas containing productive forests in Sweden. The obligation to utilize certain functions is illustrated with a vertically patterned area in figure 2.

In the centre of figure 2 the real property functions can be utilized to a certain extent, but not in excess of that. An example is the right to build so-called

¹³ A public regulation may affect the entire real property or only a part of it.

¹⁴ Approx. 25,000–30,000 building permits are adopted each year according to Statistics Sweden's website [*Statistiska Centralbyrån*], www.scb.se, 2012-05-15.

¹⁵ Special exceptions may apply under certain conditions. It is e.g. possible to build small garden sheds (cabins), barns and other buildings for farming purposes without permission.

¹⁶ Approx 2,000 municipal development plans are created each year according to Swedish National Board of Housing, Building and Planning's website [*Boverket*], www.boverket.se, 2012-05-15.

¹⁷ Approx. 400,000 Swedish real properties are required to establish forest management plans, according to e-mail communication with Lantmäteriet, the Swedish mapping, cadastral and land registration authority, 2012-01-26.

supplementary buildings [*komplementbyggnader*], such as detached garages, sheds and other smaller buildings on properties with already existing dwellings (Planning and Building Act, ch. 9). They are – as their name indicates – a supplement to the existing building(s) on the property, and there are certain limitations regarding their size and height. Erection of these supplementary buildings does not require a building permit, as long as the dimension limitations are not exceeded.

Finally, on the left hand side of figure 2 the owner has access to all real property functions. The functions not affected by any regulation are here summarised to functions not affecting society or land use in a significantly negative way, e.g. the owner’s right to reside on his property or in buildings (Ekbäck, 2000, p. 33).

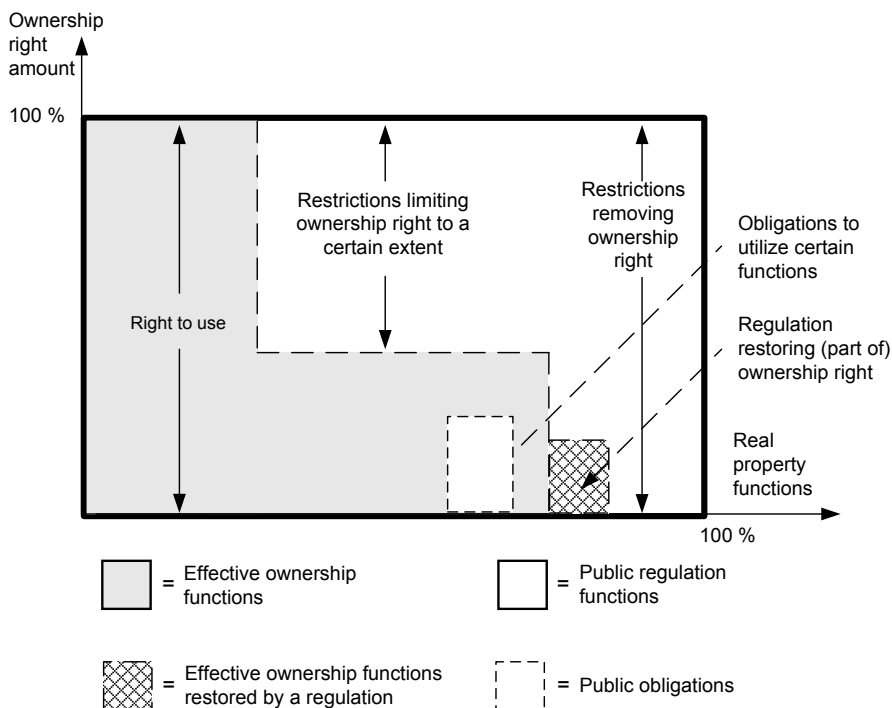


Figure 2. Public regulations influencing property right ownership. Based on Ekbäck (2000).

3.2 Classification of Public Regulation Functions

Any attempt to formulate a comprehensive list of public interest goals which may be used to justify regulation would be futile since what constitutes the public interest will “vary according to time, place, and the specific values held by a particular society” (Ogus, 1994, p. 29). These goals are affected by the higher level of norms regulating society.

However, the analysis of real property functions and public regulation property functions in the previous sections have revealed that the public interest in land can be classified into three groups according to the functions they execute:

- Public regulations creating a *prohibition* for the real property owner to perform certain activities on his real property.
- Public regulations creating an *obligation* for the real property owner to perform certain mandatory activities on his real property.
- Public regulations creating an *advantage* (i.e. a permission /dispensation/ concession), allowing the real property owner to (i.e. voluntarily) conduct certain activities on his property. Any permission is an interaction with a prohibition or obligation. There would be no need for any permission without one of these limiting regulations.

The three groups above can further be sub-divided into:

- *General regulations*, i.e. regulations affecting a certain type¹⁸ of real property, i.e. being general in nature.
- *Specific regulations*, i.e. regulations created by a specific decision for a limited and defined set of real properties.¹⁹

We can now establish the following categories for classifying public regulations: *General prohibitions* and *general obligations*, *specific prohibitions* and *specific obligations*, and *specific advantages*. It seems even conceptually possible to identify advantages affecting a certain type of real property on a general level as *general advantages*. The regulations are described and exemplified below.

General prohibitions are regulations prohibiting activities on certain types of real property, at a general level. Each type of real property is affected to a certain extent as specified in the regulation. Examples are:

- 1) The general requirement of a building permit for building activities. This was previously mentioned in section 4.1.
- 2) Coastal protection regulations [*strandskydd*] along the Swedish coast, lakes and streams. The content of the regulations are e.g. to prohibit the construction and alteration of buildings and other facilities located within 100 meters from the shoreline (shore protection area). The purpose of the restriction is to provide access to water for the general public and avoid over-establishment of e.g. leisure homes (Environmental Code [*Miljöbalk*], ch. 7).
- 3) Prohibition of environmentally hazardous activities [*förbud mot miljöfarlig verksamhet*] (Environmental Code, ch. 11). The purpose of the restriction is to prohibit or control activities harming the environment, such as pollution, by a requirement of a permit for such activities.
- 4) The protection of ancient remains [*skydd för fasta fornminnen*] (Heritage Conservation Act [*Lag om kulturminnen m.m.*], ch. 2). The purpose of the regulation is to protect ancient remains of historical and cultural value, and involves a prohibition to remove, disturb, cover, alter, damage etc. any ancient monuments or remains without permission. The regulation

¹⁸ By “type” this author does not mean any specific ownership construction or legal construction of real property, but the function of the property, e.g. being subject for industrial forestry, properties within urban areas or properties containing cultural monuments.

¹⁹ A public regulation may affect an entire real property or part of it.

applies to all real properties, even those containing previously unknown ancient remains.

- 5) Non-building zone within 12 meters from public roads (Road Act, 47 § [Väglag]). The purpose of the restriction is to prohibit the construction of new buildings near public roads.
- 6) The prospecting for and exploitation of minerals in Sweden are prohibited without permission. Exploration permits [*undersökningstillstånd*] for prospecting for minerals and exploitation concessions [*bearbetningskoncession*] are required. The mandatory requirement for permissions is here seen as prohibitions since they normally are granted to others than the real property owner. They thereby limit the use of real property and also prohibit the owner from excluding the permission holders (Minerals Act [*Minerallag*]; Johnsson, 2010, pp. 53–54).²⁰
- 7) Public access to public and private land for recreation purposes [*allemansrätt*]. The land owner cannot deny public access to his (rural) land for recreation purposes. It is e.g. allowed for the public to collect berries and to camp in the forests (Sandell and Svenning, 2011).²¹

General obligations are regulations demanding activities to be performed on certain types of real property, at a general level. Each type of real property is affected to a certain extent as specified in the regulation. Examples are:

- 1) The obligation to maintain and manage productive forests. This was previously mentioned in section 4.1.
- 2) The general duty of maintenance of dams and other water structures [*underhållsansvar*]. The purpose of the obligation is to avoid damage and secure public and private interests in water areas (Environmental Code, ch. 11).
- 3) Maintenance of production on agricultural land, which may not be withdrawn from agricultural production without prior notification/permission (Environmental Code, ch. 12). The purpose is to protect national food supply and the cultural landscape of the countryside.

Specific prohibitions are restrictions prohibiting certain activities, based on specific decisions for each prohibition for a limited and defined set of properties. Each real property is affected to a certain extent as specified in the regulation. Examples are:

- 1) A municipal development plan may e.g. involve a prohibition to erect new buildings on certain properties within the plan area. This was previously mentioned in section 3.1.

²⁰ The exploitation and extraction of minerals are here defined as prohibitions limiting the owner's right to use his property. However, permissions may even be seen as a general obligation for the owner not to restrict the access of other on his property, depending on the view of the classifier. The right of exploitation and extraction may theoretically even be granted to the real property owner, thereby becoming an advantage for him, reclaiming parts of his latent real property functions.

²¹ Public access is here described as a general prohibition not to exclude the public. It may however be argued that the owners' requirement may be classified as an obligation for the owner to allow public access on his property.

- 2) It is also possible to perceive a rejected or denied application for a building permit, in a single case, to fit the class of specific prohibitions. When the decision comes into legal force, the potentials for building activities according to the application are completely extinguished.
- 3) There are several types of area protections with different objectives, stipulated in the Environmental Code (ch. 7). These can be established for a defined area by single decisions, and may include nature reserve [*naturreservat*], culture reserve [*kulturresevat*], water protection area [*vattenskyddsområde*], or environment protection area [*miljöskyddsområde*], to mention a few. Within each established zone, specific restrictions regarding land use are stated in the decision.
- 4) Extension of the shore protection area, above the general 100 meters previously mentioned (in the group of general prohibitions). By decision, the shore protection area may be extended up to 300 meters in certain locations, e.g. with very high values for outdoor life and recreation.

Specific obligations are regulations demanding activities to be performed by the owner on specific (sets of) real properties and based on specific decisions. Each real property is affected to a certain extent as specified in the regulation. Examples are:

- 1) A municipal development plan may contain regulations specifying certain mandatory measures to be undertaken, in order for a property to be developed. Such measures could involve water and sewage solutions, establishment or alteration of private roads connected to the public roads network.
- 2) Buildings classified as a cultural or architectural heritage building [*byggnadsminne*], according to the Heritage Conservation Act [*Lag om kulturminnen m.m.*], ch. 3). The purpose of the protection is to maintain and preserve the nation's heritage, and the decision to protect a building usually stipulates specific maintenance obligations.

Specific advantages are permissions, dispensations and commissions allowing the real property owner to conduct activities otherwise restricted on a real property. An advantage is an admission for the owner to "reclaim" parts of his latent real property functions limited by the restriction, i.e. creating an *advantage* in relation to other owners affected by regulations, but not having obtained any permission. Examples are:

- 1) A municipal development plan can establish a guaranteed right to undertake building activities, according to the plan's regulations. This was previously mentioned in section 4.1.
- 2) The actual decision to grant a building permit can, consequently, also be classified as a specific advantage.
- 3) Permission to conduct environmentally hazardous activities within a specific area (Environmental Code, ch. 9). The permission allows the real property owner to perform certain activities otherwise prohibited by public regulations (in the class of general prohibitions).
- 4) Permission to erect buildings or perform other activities within different types of nature or cultural protection areas, like nature reserves or

shore protection zones, which are prohibited without permission (Environmental code, ch. 7). The permission allows the real property owner to perform certain activities otherwise prohibited by general prohibitions or specific area prohibitions.

Conceptually, advantages can also be affecting certain types of real property on a general level. They are here called *general advantages*.

General advantages are not general permits valid for specific types of property as such, but the result of changes in legislation restoring parts of the owners' original real property functions for a certain type of property.

An example is a change in the previous Swedish Planning and Building Act of 1987, ch. 8, on January 1st 2008 to allow real property owners to construct a garden shed or cabin [*friggebod*] measuring up to 15 square meters without applying for a building permit instead of the previous limitation of 10 square meters. The change in the act expanded the owners' right to use real property, i.e. to build a larger shed than before.

A change in regulation can of course also further reduce the owners' real property functions if adding or strengthening a general prohibition or obligation. However, this group of public regulations has already been accounted for.

4 A public Regulation Model

The previous section has shown that public regulations can be divided into a small number of categories based on how they influence real property ownership and whether they are general or specific regulations.

The model developed in this section is based on the Person – Ownership right – Land relation illustrated in figure 1 and the classification developed in the previous section. The model is shown in figure 3.

One of the challenges of classifying objects is taxonomy, the naming of things. (English) legal and other literature contain a huge number of terms which might be used to name and describe the public regulation functions.²² The terms *general*, *specific*, *advantage*, *restriction*, *prohibition*, *obligation* and *permission* are by this author considered to be a first “best fit” for describing the functions of public regulations in regard to land use.

The model is based on the concept that public regulations can be divided into restrictions and advantages, being limiting or beneficial to real property ownership. The main classes influencing ownership are in the model called *Public restriction* and *Public advantage*.

The *Public restriction* class can be subdivided into a *Public general restriction* and a *Public specific restriction* class.

The *Public general restriction* class can be divided into two subclasses based on that general restrictions can either be prohibiting certain activities or mandating certain activities to be performed on the real property. The classes are here called *Public general prohibition* and *Public general obligation*.

²² See e.g. Hohfeld (1913; 1917).

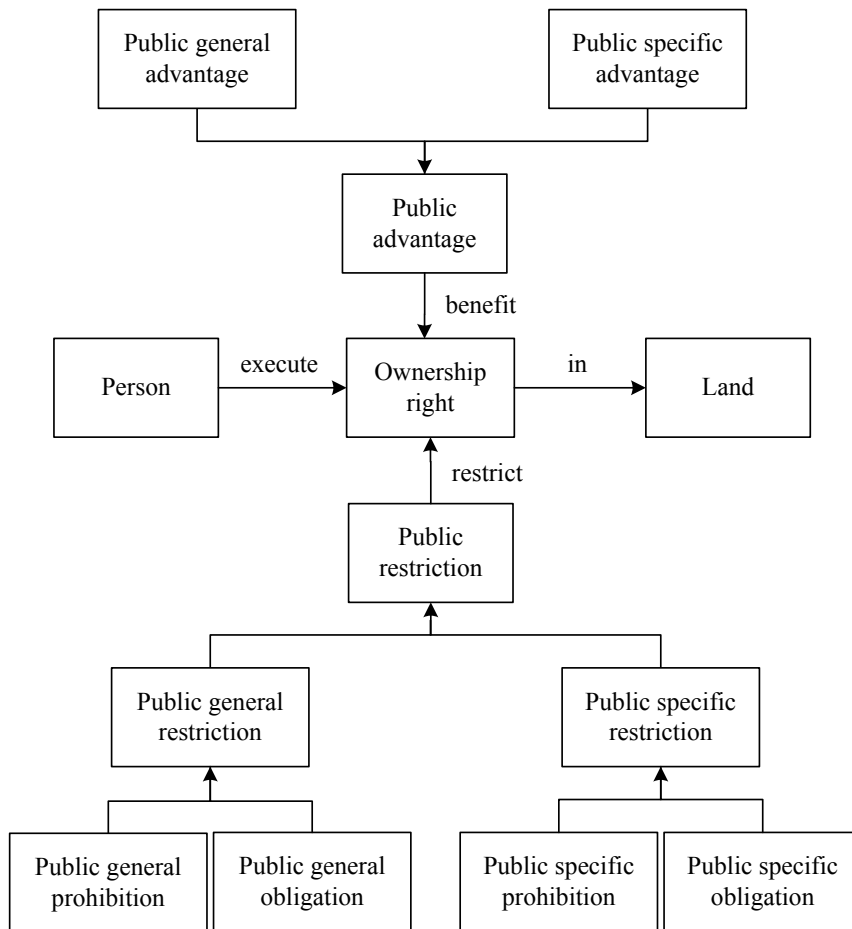


Figure 3. A classification of public regulations.

The *Public specific restriction* class is also divided into a prohibiting and a mandating class, here called *Public specific prohibition* and *Public specific obligation* classes.

The *Public advantage* class is divided into subclasses based on whether the advantage is the result of a general advantage or an advantage resulting from a specific decision.

The classes are here called *Public general advantage* and *Public specific advantage* classes. The proposed definitions for all classes in the model are listed in appendix 1.

5 Conclusions and Further Research

5.1 Conclusions

Public regulations are the result of political processes in each country. Consequently, a standardized model which classifies public regulations on an international scale may at first not seem possible. However, this paper has shown that it seems to be

possible to categorize the otherwise wide concept of public regulations regulating land, water and air into rather few categories as illustrated in figure 3 in section 4.

Being a theoretical product, case-studies in national public regulations are needed to verify, further develop or falsify the proposed classification.

5.2 Future Research

The proposed model may also be an input to future research regarding the development of the Land Administration Domain Model, LADM, e.g. by providing a specialisation of the LADM's "right", "restriction" and "responsibility" classes.

It is notable that the shown Swedish examples also influence use rights granted by the real property owner to somebody else, e.g. a lessee. The lessee is executing a granted use right on the real property and may in some regards have rights and commitments almost equal to ownership depending on the conditions in the lease. His use right is therefore also affected by the public regulations since he cannot do what he wants on the real property. The influence of these use rights may also be subject for future research.

Another area of research is how the classification of a regulation can change through an application process. An example is an exploitation concession for the extraction of minerals. The mandatory requirement for a concession is classified as a general prohibition according to the model developed here, i.e. the owner cannot exploit the minerals. If a concession is granted to a non-owner of the property it will become a specific restriction for the owner not to exploit the mineral within a specific area. The prohibition may also be classified as an obligation, since the real property owner is not allowed to exclude the right holder from entering the property. If the commission however is granted to the owner of the real property, the commission becomes a specific advantage by restoring (parts of) the owners original ownership rights. A study of the processes and institutions involved in changing the classification of a regulation would further the development of the model.

The Swedish examples also showed that a number of public regulations are not limited to executing a single function. They may contain e.g. restrictions, obligations and/or advantages in the same regulation, placing the same regulation in different parts of the model. The nature of these multiple-to-one relations are also a subject for future research. That it is not possible to establish a one-to-one relation between a regulation and a class in the model is by this author not seen as a problem as such, but must be taken into consideration if the model is used for registration purposes in e.g. national land management systems.

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Appendix 1

The definitions are arranged according to as they appear in the model in figure 3, in section 4, describing the public advantage classes, the Person – Ownership – Land relation classes and the public restriction classes.

Definitions of the classes in the public regulation model in section 5.

Class name	Definition
<i>Classes beneficial to real property ownership</i>	
Public general advantage	Change in a public regulation beneficial for certain types of real property at a general level, e.g. properties within urban areas, properties being subject for industrial forestry or properties containing cultural monuments. Beneficial to real property ownership.
Public specific advantage	Publicly granted permission to perform activities for a limited and defined set of real properties, otherwise regulated by a <i>public specific obligation</i> or <i>public specific prohibition</i> , thereby restoring parts of the owners' use right.
Public advantage	Publicly imposed action which is beneficial to ownership and use of real property (Paasch 2008, p. 127).
Class name	Definition
<i>Person – ownership right – land relations</i>	
Person	Human or legal person, state, municipality or other private or governmental authority who owns real property according to legislation (Paasch, 2008, p. 123).
Ownership right	Right to own real property according to legislation (Paasch, 2011, p. 105).
Land	Surface of Earth which is regulated through ownership. Land is the surface of the Earth and the materials beneath. <i>Note:</i> Water and the air are also considered land in some legislation (Paasch 2008, p. 124).
Class name	Definition
<i>Classes restrictive to real property ownership</i>	
Public restriction	Publicly imposed restriction prohibiting or mandating certain activities on real property. Limiting to real property ownership.
Public general restriction	Publicly imposed restriction prohibiting or mandating certain activities on certain types of real property at a general level, e.g. properties within urban areas, properties being subject for industrial forestry or properties containing cultural monuments. Limiting to real property ownership.
Public specific restriction	Publicly imposed restriction on doing certain activities or demanding certain obligations for a limited and defined set of real properties, based on specific regulation. Limiting to real property ownership.

Public general prohibition	Publicly imposed prohibition affecting certain types of real property at a general level, e.g. properties within urban areas, properties being subject for industrial forestry or properties containing cultural monuments. Limiting to real property ownership.
Public general obligation	Publicly imposed restriction demanding certain activities on certain types of real property at a general level, e.g. properties within urban areas, properties being subject for industrial forestry or properties containing cultural monuments. Limiting to real property ownership.
Public specific prohibition	Publicly imposed restriction prohibiting certain activities for a limited and defined set of real properties, not to be performed by the real property owner. Limiting to real property ownership.
Public specific obligation	Publicly imposed restriction demanding certain activities from the real property owner, for a limited and defined set of real properties, based on specific regulation. Limiting to real property ownership.