A Property Rights Approach to Externality Problems: Planning Based on Compensation Rules

Erwin van der Krabben

Abstract

Most European countries have implemented some kind of land use planning based on exclusionary zoning principles to achieve spatial goals. This paper argues that, to reduce externality problems, regulatory planning is not always the best planning solution. Therefore, an alternative planning approach, which makes use of compensation rules, is suggested in this paper. This compensatory planning approach is based on property rights theory and refers to recent applications of this theory to planning practice. To illustrate the usefulness of such an approach, it is applied to the planning of out-of-town retail development in The Netherlands. The paper aims to demonstrate how deficiencies in the property rights regime can be repaired to deal with externality problems, achieving a more socially acceptable outcome of out-of-town retail development. The paper concludes with a discussion of the value of spontaneous order solutions for planning practice, by introducing four pragmatic rules on how to choose between different types of government interventions.

1. Introduction

In many countries, governments traditionally make use of regulatory land use planning (zoning), restricting the use of land in certain locations, to achieve spatial goals. By putting restrictions on land use, the property rights of the owner of the land are affected: it restricts the ways in which people may use their property rights (Needham, 2006, p. 4). Obviously, there are very good reasons for doing this. For instance, we do not want polluting industries in residential areas, we prefer transport companies in locations near motorways instead of in town centres and, because we want to maintain attractive town centres, we do not allow the unbridled development of out-of-town retail locations. However, in many situations, this type of intervention is not without problems.

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Further to the argument that it might be considered unfair that the property rights of one landowner are restricted while the other landowner’s property rights are not, many situations also exist in which regulatory planning causes unwanted side-effects. For instance, in the early 1990s, the Dutch government decided to restrict residential developments throughout the country to a number of selected greenfield locations which lie close to the major cities (VROM, 1993). Based on this national plan, the municipalities involved have all developed land use plans for residential development in those locations. However, although it is expected that the goals of this policy will ultimately be achieved (VROM, 2007), undesired side-effects of the national plan and its implementation via local land use plans have seen delays in the development process, shortages in housing production and an enormous increase in housing prices, making it almost impossible now for first-time buyers to enter the housing market (Needham and Verhage, 1998; Boelhouwer, 2005; Korthals Altes, 2006). Retail planning in The Netherlands has, for a long time, been very restrictive with regard to peripheral retail development. This restrictive policy has enabled the prevention of both the development of undesirable off-centre retail developments in rural areas and the serious negative effects on existing retail areas, while sufficient retail space has been developed in out-of-town locations for retail segments that are not suitable for inner-city retail areas (Evers, 2002; van der Krabben, 2009). Nevertheless, the Ministry of Economic Affairs argued that negative effects of this restrictive planning policy also occurred (EZ, 2000). It was felt that this policy was mainly directed at preventing certain developments from taking place, while instruments were lacking to stimulate desired developments. Moreover, it prevented competition in the supermarket industry to the detriment of customers (Webster and Lai, 2003, p. 39).

For those reasons, it was decided in 2004 to change national retail regulations (VROM, 2004).

Some have argued that land use planning is to blame for reducing efficiency (Ellickson, 1973; Fischel, 1978, 1985; Pennington, 1999). Those authors claim that the ‘market’ is more efficient in co-ordinating land use decision-making. The ‘market versus government’ debate in land use planning has been an ongoing argument for decades (Alexander, 1992, 2001; Buitelaar, 2003; Needham, 2006). Webster and Lai state that this argument can be related to the question of co-ordination by top–down, hierarchical planning or by a bottom–up and more spontaneous approach that relies upon symbiotic exchange (Webster and Lai, 2003, p. 1).

However, they add that the issue is not one of planning versus markets, since top–down organisation happens within firms and within groups of firms in markets. The issue is one of imposed and centralised co-ordination via organisations, versus spontaneous and decentralised co-ordination. The former happens in governments, firms and families. The latter happens in systems of voluntary exchange such as bartering and modern markets (Webster and Lai, 2003, p. 1).

In this debate about spontaneous versus planned urban order, Webster and Lai (2003) make use of property rights and transaction costs theory (Coase, 1960; Barzel, 1997) to choose between different types of order. Applying property rights theory to the field of spatial planning suggests that land use planning must focus on improving efficiency, by changing the property rights regime. While traditional regulatory planning systems restricted certain developments in certain locations because of the negative external effects, land use planning based on property rights theory would assign property...
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rights over the negative external effects that are now left in the public domain. When property rights over negative effects are well defined, we can leave it—in principle—to the market spontaneously to solve the issue: the developments will only take place, if the owner of the property rights over the negative external effects is able to reduce such effects or to compensate those that are affected by them. In some cases, however, it will be more efficient to opt for planned order instead of spontaneous order, because the transaction costs of the planned order approach are less than the transaction costs of the spontaneous order approach.

This paper applies property rights theory to land use planning. By doing this, ‘the market’ is given the central place in the study of land use planning not only because the majority of decisions about land and buildings are made through the market, but also because it is almost impossible that market interactions could be excluded, even if that were desired (Needham, 2006, p. 143).

The aim of this paper is to operationalise Webster and Lai’s (2003) theoretical concept of ‘managing spontaneous cities’ for planning practice and, subsequently, to evaluate under which conditions spontaneous order solutions are feasible. Two issues will be discussed. First, starting from the assumption that land-use planning affects the way that people use property rights and therefore affects the efficiency with which economic resources are used (Needham, 2006, p. 4) the question will be addressed how property rights regimes for land and property markets can be changed to improve efficiency. Secondly, the paper will discuss the choice between spontaneous versus planned order solutions. In other words, what is the best type of government intervention to change the property rights regime? Should this be achieved by regulatory planning (zoning) or by structuring the market in rights in land (i.e. creating rights over land by implementing new laws) so that the goals for land use are achieved? To illustrate how this may work in planning practice, the usefulness of an alternative planning approach to the development of out-of-town retail locations—creating property rights over the externality problems caused by out-of-town retail development for town centres—will be analysed.

The structure of the paper is as follows. First, section 2 presents the basic thoughts underlying property rights theory and its application to land use planning and urban management issues. Sections 3 and 4 then present a case study of a property rights approach to Dutch retail planning. It will be argued that the retail market is characterised by several efficiency problems. Property rights theory will be applied to analyse, in more detail, the nature of these efficiency problems. Subsequently, the feasibility of alternative solutions to these efficiency problems, by changing property rights regimes, will be analysed. Section 5 puts the results of the Dutch retail planning case study in a broader perspective by discussing the different conditions for successful spontaneous and planned order solutions. Finally, section 6 reflects on the usefulness of property rights theory for improving planning practice.

2. A Property Rights Approach to Land Use Planning

The property rights approach is based on the basic thoughts of property rights theory, originally introduced in the work of Coase on social cost (Coase, 1960). As Coase explained in the renowned Coase theorem: when rights are well defined and the cost of transacting is zero, resource allocation is efficient and independent of the pattern of ownership (Coase, 1960). This implies that, in the absence
of transaction costs, all initial allocations of property rights are equally efficient, because the interested parties will negotiate to correct eventual externalities (compensation rule). However, in real life, transaction costs are almost never zero. In his article, Coase is fully aware of this. In fact, what Coase wanted to show is the reverse of the Coase theorem: “when transaction costs are positive it does matter how we have defined and attributed our property rights” (Buitelaar, 2007, p. 22).

The relevance of the Coase theorem for land use planning, as it will be argued in this section, lies in the recognition of, on the one hand, the impact of the way property rights over land are defined on resource allocation and, on the other hand, the existence of transaction costs. Land use planning affects both the initial assignment of property rights and the size of transaction costs. To achieve certain planning goals, either transactions should be reduced or interventions in the initial assignment of property rights are necessary (see later).

The Coase theorem is the foundation of the study of property rights (and transaction costs) in relation to land use planning and the functioning of land and property markets: how should property rights be delineated and assigned to improve market efficiency—i.e. to reduce externalities? In recent years, the property rights approach has increasingly been applied to the analysis of land use planning in relation to the way land and property markets operate (see Alexander, 2001; Bromley, 1991; Buitelaar, 2003; Fischel, 1985; Lai, 1998; Needham, 2006; Renard, 2007; van der Krabben and Buitelaar, 2007; Webster, 2007; Webster and Lai, 2003).

The present paper makes particular use of Webster and Lai’s (2003) property rights approach to urban management. Webster and Lai pay specific attention to what they call public domain problems such as externalities and public goods; two examples of market failures that are often at the heart of planning practice. This section relates property rights theory to land use planning. First, some of the key terms in property rights theory will be defined. Then, a property rights approach to externalities will be discussed, including a discussion of the meaning of transaction costs. This section concludes with normative efficiency rules regarding the assignment and delineation of property rights, as proposed by Webster and Lai (2003).

Key Terms in Property Rights Theory

Property rights can be divided into economic (property) rights and legal (property) rights. Economic property rights (the ability to derive direct or indirect income or welfare from a resource or attribute of a resource) are the end-result, whereas legal rights are the means to achieve the end. The actor that owns the property rights of a resource is called the residual claimant. As the owner of the property rights, he holds a residual claim on the benefits created by this resource.

A resource very often holds more than one residual claimant, since a resource may consist of a bundle of property rights.

Institutions are defined as systems of rules and sanctions—i.e. to protect private property or the rights of third parties (those that are affected by but not party to a private transaction). The degree to which ownership is established over a commodity’s separate attributes depends on the cost of creating and policing contracts that establish that ownership—that is, transaction costs. Transaction costs can be defined as the costs associated with the transfer, capture and protection of rights. Attributes to which rights are not assigned by formal or informal contract—or: resources with unclear property rights—are said to be in the public domain.

How to Deal with Externalities?

Economic theory has dealt for a long time with the questions of when policy measures and/or government interventions in the
market are necessary and what types of intervention are most appropriate. Neo-classical economics argued that, if the conditions for optimal allocative efficiency are not met, market failures will appear (Pigou, 1932). The state should then correct those market failures, in order to improve the allocative efficiency. There are five distinct categories for possible market failures: monopolies, imperfect information, public goods, co-ordination failures and external effects. Government interventions to repair market failures include taxes, subsidies, restraints, state production or state co-ordination. Many have applied the neo-classical treatment of market failures to land use planning (for example, Pigou, 1932; Harrison, 1977; Heikkila, 2000). The foregoing statement, with respect to market failures and government interventions, is a rather simplified reproduction of the insights of neo-classical economic theory, yet it is beyond the scope of this paper to discuss this in more detail. Furthermore, I choose not to go into the debate between neo-classical and institutional economic theory (including property rights theory). Instead, the present paper will continue to focus mainly on one type of market failure—namely, externalities.

Let us now take a closer look at the way externalities should be treated in land use planning. In the neo-classical tradition, externalities are treated as problems of market failure. Government intervention is necessary to solve this problem—for instance, by limiting the supply of land for certain developments (i.e. by zoning) or by taxing the actor that is responsible for the externality. Coase refers to externalities as ‘social costs’. Regarding the way externalities should be treated, he states

The question is commonly thought of as one in which A inflicts harm on B and what has to be decided is, How should we restrain A? But this is wrong. We are dealing with a problem of a reciprocal nature. To avoid the harm to B would be to inflict harm on A. The real question that has to be decided is, Should A be allowed to harm B or should B be allowed to harm A? (Coase, 1960; quoted in Needham, 2006, pp. 57–58).

Needham explains this by referring to the example of a ‘smoking factory chimney’

Suppose the ‘initial delimitation’ is that the factory has the right to produce filthy smoke: but that it is prepared to produce less, or none, if compensated by the residents who want clean air. Now suppose instead that the ‘initial delimitation’ is that the residents have the right to clean air: but that they are prepared to accept polluted air if compensated by the factory which finds it profitable to emit filthy smoke. Coase says that if the transaction costs are zero, the outcome of the negotiations, in the sense of the final allocation of resources, will be the same in both cases. And, moreover, that that outcome will maximise total wealth (Needham, 2006, p. 60).

However, since transaction costs in this case do matter—i.e. the factory has to find out who should be compensated and residents need to ‘organise’ themselves to be able to negotiate with the factory—the initial allocation of property rights affects what happens in both cases with respect to externalities. Needham (2006, p. 58) provides a further example to explain the differences between traditional land use planning and planning based on the principles of property rights theory in the treatment of externalities

Party A (a fish-and-chip shop) wants to locate next to party B (residents in a quiet street) but that would harm B, so planning permission is refused. Is Coase recommending something else? Yes! “It is all a question of weighing up the gains that accrue from eliminating these harmful effects against the gains that accrue from allowing them to continue”. So perhaps the fish-and-chip shop should be allowed to trade in that street, and if the residents do not like it, they can always move (Coase, 1960; in Needham, 2006, p. 131).
This example tells us that property rights should be assigned over the external effects, if we want to eliminate or reduce them. To whom they should be assigned and the way they must be delineated should be based on a comparison of the welfare effects of different property rights regimes. Webster and Lai (2003, p. 103) argue that externalities can be internalised when “private negotiations … can establish a compensatory contract over a contended resource” and, additionally, they state that

If information is incomplete or is not perfectly distributed and transaction costs are therefore not zero, then the outcome for any externality problem will depend on the distribution of property rights (Webster and Lai, 2003, p. 104; original emphasis).

In property rights theory, externalities are considered to be problems of undeveloped markets/institutions

They arise when resources have a value, but are ill-defined in terms of property rights and as a result of proprietary ambiguity, remain unpriced and inefficiently allocated (Webster and Lai, 2003, p. 99).

Webster and Lai conclude that

The solution to an externality problem is to assign property rights, and the efficiency of any particular solution depends on the externality costs saved less the cost of creating institutions that create the property rights (Webster and Lai, 2003, p. 104).

For instance, it may be more efficient to assign property rights to the inconvenience caused by an airport and leave the solution to negotiations between the airport and its neighbours, than to regulate this by some kind of government intervention. In the case of well-assigned property rights to such nuisance, the airport can negotiate with its neighbours about, for example, financial compensation and the reduction of nuisance or, in an extreme situation, it can decide to move to another location if the size of the financial compensation would be insurmountable. If the negotiations do not lead to an agreement, the parties involved can go to court. The question remains then: who should be the residual claimant of the property rights assigned to the nuisance—the airport or the neighbours? The answer to this question follows from the subsidiarity rule (which will be explained later). The airport should have the residual claim, because only the airport has the ability to influence the value of the contract or the outcome of collective action. The residual claim will give the airport “the incentive to deploy their resources efficiently in the attainment of the contract of collective action goal” (Webster and Lai, 2003, p. 150).

Efficient solutions, however, are often held back by transaction costs. In the airport example, the most efficient solution may be, from a total welfare perspective—without taking the transaction costs into account—financial compensation of those that are harmed by the airport. However, when the airport fears that it will take years to negotiate with all neighbours, it might be better to choose an alternative strategy. This shows that transaction costs do matter for land use planning. Planning interventions may increase transaction costs as well, which may in turn reduce efficient market solutions.

Tools for Evaluating Land and Property Markets

Webster and Lai provide an answer to the question of how any particular assignment of property rights may be judged as being less or more efficient

The technical answer to the question is founded on common sense: rights to a resource should be assigned to those in the strongest position to influence the resource’s contribution to the desired outcome (Webster and Lai, 2003, p. 8).
Assigning property rights over a resource makes the resource owner a residual claimant of benefit (use and income) generated by that resource and encourages efficiency—increased efficiency means private gains (Webster and Lai, 2003, p. 9).

For instance, in the case of a polluting factory in a residential area, it is probably more efficient to assign property rights over the pollution to the polluting factory and not to the residents, because the factory will be in the position to influence the level of pollution. By making the factory the residual claimant of the benefits of pollution reduction (i.e. less compensation to the residents), it will be encouraged to implement innovative techniques to reduce pollution or to relocate the industrial activities to another area.

Concerning the efficiency of urban development processes, Webster and Lai (2003, pp. 11–12) have developed four propositions about the evolution of property rights and the efficient division of ownership in pursuit of some collective goal:

- The sub-division rule: if the value of a resource rises, or the cost of assigning property rights to a valued resource falls (due to technological or institutional innovation), then there will be a demand for a reassignment of property rights. For example, technological innovations have improved the possibilities for pricing the use of road infrastructure; this makes it possible to define property rights over the access to road infrastructure.

- The combination rule: property rights will be combined if the transaction costs of co-ordinating resource use via organisation and planning are less than the costs of co-ordination via market transactions. Residents in an apartment block who benefit from joint maintenance of their property have two options to organise maintenance activities: they can all agree to save a sum of money each year for maintenance, to be used when necessary, or they can agree to hand over part of the property rights of their apartment to an association of apartment block residents (to which they agree to pay a contribution) that will take responsibility for maintenance.

- The public domain rule: a resource will be left in the public domain if the costs of assigning property rights over it exceed the value thus created. Nature areas for recreational use are often left in the public domain, because it would be very complicated (and perhaps unwanted, but this is another issue) to assign property rights to the owner of the area that would allow him to charge all visitors; the costs of regulating this (including ticket offices, fences, etc.) will often exceed the income of ticket sales.

- The subsidiarity rule: the total value of a contract or of any collective action is maximised when agents with an ability to influence the value of the contract or the outcome of collective action bear the full effects of their actions. This will be achieved when agents have a residual claim on the benefits created by the resources that they influence. The polluting factory example, and that of the airport that causes a nuisance to its neighbours, show the subsidiarity rule principle.

Accepting Webster and Lai’s propositions as normative rules means that, when the institutional order (as the system of rules and sanctions) in a specific market situation enables the (re-)delineation and (re-)assignment of property rights—in response either to changing values of goods or to changing costs of assigning property rights—more accurately than it does in another market situation, the new institutional order is more efficient than the old.
What are the implications of all this for land use planning? The Coase theorem makes it clear that there are more ways to treat externalities, in addition to the strategy that seems most common to planners—namely, to restrict the rights of the actor that causes the harm (i.e. by imposing a land use plan). Based on property rights theory, the strategy should be directed at the internalisation of the externalities. The actors involved will then be allowed to negotiate the outcome, either leading to the elimination or reduction of the externalities or to the compensation of those that are harmed. The choice for the intervention depends on the total welfare effect. The efficiency rules can be helpful to select the best alternative. If we are able to internalise external effects by assigning property rights over them, spontaneous order solutions may be able to treat the externality more efficiently than planned order solutions would do.

Moreover, the line of argument in this section shows that transaction costs matter. Land use planning should include strategies to reduce transaction costs, thus perhaps offering new opportunities for spontaneous order solutions. Does it mean that traditional land use planning should be replaced by a market-led system? No, not at all. In many cases, restrictive planning is believed to offer the best outcome. However, in certain situations alternative strategies should be considered as well (see section 5).

3. Dutch Retail Planning Policy: How to Deal with Efficiency Problems

Changes in Dutch Retail Planning

This and the following section apply the above theoretical approach to land use planning to Dutch retail planning policy. While other Western nations have, at one time or another, allowed retailers to construct large-scale hypermarkets and shopping malls outside or at the edges of major cities, the Dutch planning system has consistently frustrated, blocked and redirected this development (Evers, 2002, p. 107).

The main (conservative) rationale for Dutch national retail planning policy has thus been a constant consideration of, on the one hand, the preservation of the existing retail structure and, on the other hand, the careful expansion of parts of this retail structure.

Although the main goal of national retail planning policy has remained unchanged, the Dutch national government nevertheless recently decided to change radically the existing retail planning model and to ‘withdraw’ from the retail market. Based on the new national memorandum on planning (VROM, 2004), it is now up to the 12 provinces to develop location policy for retail developments. The shift in retail planning policy is from one stand-point the result of a more general decentralisation trend in land use planning in The Netherlands (WRR, 1998) and from another based on retail market-related arguments (EZ, 2000). According to the Ministry of Economic Affairs, the experiences with the national government’s previous restrictive policy for peripheral retail developments were not in all respects satisfactory. Apart from the fact that this policy caused confusion concerning the definition of the retail segments that were allowed on peripheral locations, it was also argued that the adaptation of retail developments to the particular regional circumstances did not take place at all. Moreover, it was felt that former restrictive retail policy had mainly been directed at retailing. Different from most other western European countries, Dutch retail policy has always strongly protected the existing retail structure.
preventing certain developments from taking place, while instruments to stimulate desired developments were lacking.

Efficiency Problems

In general, retail planning aims to reduce or prevent economic efficiency problems (Guy, 1998; Jackson and Watkins, 2005). Economic efficiency refers to situations in which resources are allocated optimally. Efficiency problems occur when the allocation of resources is not optimal and can still be improved. Typical efficiency problems that occur in retail land and property markets include

(A1) externality problems (mainly negative trade impact of new retail locations in existing retail locations);
(A2) the inability of the market, particularly in historical town centres, to produce sufficient retail units of the right size, in the right place, at the right time; and
(A3) accessibility and parking problems in town centres (see also Guy, 1998, p. 965).

Restrictive planning regulations are usually implemented to deal with efficiency problems. This paper argues, however, that quite often those planning regulations may cause additional efficiency problems. In the Dutch case, those ‘government failures’ (Heikkila, 2000) include

(B1) the inability of the planning system to provide sufficient land for (out-of-town) retail development in the appropriate location, at the right time;
(B2) obstacles to the implementation of innovative retail concepts; and
(B3) problems of obsolescence on existing peripheral retail locations.

A. Efficiency Problems Typical for Retail Land and Property Markets

A.1. The retail market deals almost by definition with substantial externality problems (compared with other segments of the property market), because new retail locations usually take trade away from existing retail locations (Guy, 1998). At an urban scale, the development of new (peripheral) retail locations may eventually lead to the reduction of the attractiveness of other retail locations (i.e. town centres or neighbourhood shopping centres) and the depreciation of large urban areas. The strong increase of plans for out-of-town retail developments in The Netherlands in recent years is expected to increase externality problems (van der Krabben, 2009).

A.2. The ‘market’ is not always able to develop the right size of retail units, particularly in historical town centres. A study by Jones Lang Lasalle (2005) of the Dutch retail market shows that retailers increasingly look for large-size retail units (>500 square metres), while only 2 per cent of the retail space in Dutch town centres belongs to this segment. Current town centre redevelopment plans focus therefore on the development of large-size retail units (VGM, 2006). The historical character of most of the town centres, however, prevents ‘easy’ solutions in this respect.

A.3. The appeal of many town centres for retailing has been reduced by parking and accessibility problems. One of the ‘consequences’ is that vacancy rates in Dutch town centre retail locations are a serious concern for many towns (Jones Lang Lasalle, 2005).

B. Efficiency Problems as a Result of ‘Government Failure’

B.1. Efficiency problems occur with respect to the allocation of land for retailing: the amount of land that is available for retailing does not perfectly match with retailers’ location requirements. In The Netherlands, municipalities are primarily responsible for taking decisions about the development of new retail locations and/or the extension of existing retail locations, based on local
and/or regional impact studies. The planning regime shift has caused a (temporary) policy vacuum in which many market initiatives have been developed and the enforcement of the ‘old’ rules for peripheral retailing was neglected in some municipalities (van der Krabben, 2009). The result of all this is that decision-making processes about the allocation of land are time-consuming and cause uncertainties about development opportunities (see also Guy, 2007).

B.2. Obstacles occur with respect to the implementation of innovative retail concepts (i.e. thematic retail parks and regional shopping centres), because regulation does not allow it (RPB, 2005). When property developers come up with plans for thematic peripheral retail parks (for instance, sports and outdoor, multimedia, discount) or regional shopping centres, provinces respond differently to these proposals, based on different criteria (van der Krabben, 2009). Guy and Bennison (2007) and Guy (2007) describe similar problems with regulation for large-store development in the UK.

B.3. Some of the existing peripheral retail locations that were developed in the 1980s and 1990s now face problems of obsolescence. Land use plans for these locations hold sector restrictions and only allow retailers that sell bulky goods. This situation not only restricts the growth ambitions of retailers located in these locations, but also prevents new retailers from other sectors from renting space. The result is that retailers in some of the retail parks now face declining trade flows (van der Krabben, 2009).

4. Understanding the Nature of Efficiency Problems: A Property Rights Approach

The efficiency problems in the Dutch retail market are, to a large extent, typical for retail planning and retail development in many European countries (see for example, Davies, 1995; Guy, 1998). The analysis here of the nature of these problems differs, however, from most other retail studies, because it relates the efficiency problems in the retail market to the ‘deficiencies’ in the property rights regime.

A Property Rights Approach to Efficiency Problems

Table 1 gives explanations for the efficiency problems, based on Webster and Lai’s efficiency rules.

A.1. Externality problems of peripheral retailing are typically left in the public domain. Retail planning usually ‘deals with’ this issue by limiting the amount of land allocated for peripheral retailing. This might be for good reasons: the public domain rule proposes that a resource will be left in the public domain if the costs of assigning property rights over it exceed the value thus created. We do not know, however, whether this is true, because at present retail regulation does not allow the reverse mechanism—a resource will be taken out of the public domain if the value thus created exceeds the costs of assigning property rights—to take place.

A.2. The inability of the market to develop sufficient large-size retail units can be ‘explained’ by combination rule inadequacies. To develop sufficient large-size retail units, the fragmented property rights over town centre properties should be combined (to enable redevelopment processes). On the other hand, in principle, there are no private market obstacles to combining property rights over town centre properties, which might suggest that transaction costs of coordinating resource use (either via organisation and planning or via market transaction) prevent this.
Table 1. Evaluation of the efficiency problems in the Dutch retail market, based on Webster and Lai’s efficiency rules

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A. Efficiency problems typical for retail development

A.1 Externality problems, peripheral retailing

Property rights over negative effects of peripheral retailing left in public domain

A.2 Inability of the market to develop right-size retail units

Fragmented ownership of property rights over town centre retail units; property rights can not be combined for redevelopment purpose

A.3 Parking and accessibility problems in town centres

Property rights over parking and accessibility problems left in public domain

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### Efficiency rules

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### B. Efficiency problems due to 'government failures'

**B.1 Allocation of land for retailing**
- Allocation of land by municipalities takes place at wrong governance level

**B.2 Obstacles to the implementation of innovative retail concepts**
- Restrictions to retail sectors reduce opportunities for innovative developments (residual claimant problem)

**B.3 Problems of obsolescence, existing retail parks**
- Restrictions to peripheral retailing (sector limitations) prevent redevelopment processes that would include restricted (innovative) retail sectors

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**Table 1 Continued**
A.3. Property rights over parking and accessibility problems in town centres are also left in the public domain. Although it may be expected that town centre retailers are willing to contribute (to a certain extent) to investments in extra parking space, the development of parking space in town centres is nevertheless, generally speaking, the responsibility of the local government. A property rights solution should be the reassignment of property rights over parking space, shifting it to the private domain.

B.1. According to the subsidiarity rule, the allocation of land for retailing should be at the governance level that is also primarily responsible for achieving the retail policy goals. Webster and Lai state that

In the case of choice of governance model, the same principle [subsidarity rule] suggests assigning governance functions to levels of organisation and governance most able to deliver those functions in pursuit of accepted goals' (Webster and Lai 2003, p. 9).

In the Dutch case, retail planning and the responsibility for achieving policy goals have been decentralised from the national level to the provincial level. The arguments for this decision brought forward by the Ministry of Economic Affairs (EZ, 2000) seem to be in line with this rule.

B.2. According to the subsidiarity rule, the agents with an ability to influence the value of the contract should bear the full effects of their actions (residual claimant). Present regulation with respect to peripheral retailing is not based on this principle. The subsidiarity rule suggests that the developer of a new (thematic) retail park should be ‘free’ to select retailers, as long as he bears the full effects—potential negative trade effects for other retail locations—of this development. Present regulation, however, reduces the developer’s ‘freedom’, by putting restrictions on the retailer sectors that are allowed to locate here, while present regulations do not require the developer to bear the full effects.

B.3. The sub-division rule suggests that, if the value of a resource rises, then there will be a demand for a reassignment of property rights. In the case of existing retail parks in The Netherlands, the regulation on sector limitations (only sectors in which voluminous goods are sold) prevents the functioning of this market mechanism. The problems of obsolescence in some retail parks (reduced attractiveness of the present retail mix) could be solved by extending the retail segments to be allowed in those retail parks (which can be understood as a redelineation of property rights). The potential effect will be that the value of the properties in the retail parks will rise, because the demand for retail space will increase. Increasing property values may attract private developers to acquire the property rights over a retail park for redevelopment purposes.

What can be done to improve efficiency in the retail market? The answer can be found in trying to ‘repair’ the deficiencies in the present property rights regime, in such way that the efficiency rules can be met. The suggested interventions in this paper are aimed at structuring the market; while spatial planning interventions are meant to regulate the market. Needham (2006, p. 13) explains the difference between the two mechanisms

This gives two different ways in which society can try to achieve a desired land use. It can create and structure rights in land in such a way that the desired land use is achieved by people working freely within that structure. Or it can influence, or steer, actions in the market in rights in land so that the outcome of people acting in that market is the desired one. And society can, of course, do both at the same time, so that the one complements the other (Needham, 2006, p. 13).
Table 4.2 compares possible interventions in the property rights regime for the Dutch retail market.

**Different Ways to Reduce Externalities**

Now it shall be demonstrated how this may work in practice. The focus will be on how to deal with externality problems, because this is usually one of the main elements of retail planning policy. The main externality problem in the retail market relates to the negative trade impact of peripheral retail development in existing retail locations. Webster and Lai’s *public domain rule* suggests that goods can be

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taken out of the public domain by assigning property rights to them: the externalities should be internalised. Property rights should be assigned to the developers of out-of-town retail locations, making them the residual claimants. In the case of peripheral retail development, internalising externalities would imply that property rights should be assigned to the (potential) negative trade effects for retailers in existing retail locations. Figure 1 demonstrates three different types of government action and their expected economic impact (trade effect). It shows a hypothetical situation in which a property developer submits a plan for an out-of-town retail location of 100 retail units. It is assumed that there will be negative trade effects equal to the reduction of 70 retail units for the town centre. The result may be that some retailers will disappear and/or that retailers will lose trade. The municipality decides that a reduction of (the equivalent of) 70 retail units for the town centre is unacceptable, but that a more limited reduction of 35 retail units should be tolerated (because innovative retail developments must get a chance as well). Furthermore, it is assumed that a reduced out-of-town retail development of 50 units will result in the loss of 35 town centre units. Model A presents a situation without any form of (restrictive) regulation with respect to peripheral retail development. When 100 units of peripheral retail space are developed, there will be a negative trade effect for the town centre of 70 units. Model B represents the traditional retail planning model. Government intervention is directed towards the reduction of the size of the new peripheral retail location to 50 units, because only the reduced negative trade effect of 35 units is acceptable. In this case, the development of the peripheral retail location does not meet market demand (either in quantitative or in qualitative terms, or a combination of both), based on the assumption that the private developer has correctly estimated the retailers’ demand for this location. It is possible that the size of the location may be below a certain critical mass that is necessary to attract sufficient trade. Model C refers to government intervention based on a property rights approach. Because a negative trade effect is expected, retail planning regulation obliges the developer of the peripheral retail location to compensate retailers in the town centre for negative trade effects. As long as the developer is able to compensate the town centre retailers, he is in principle free to develop as much peripheral retail space as he wants to. The extent to which compensation must take place depends on the size of the trade effect. In this situation, the optimal size of the peripheral retail location will be a result of market dynamics, since the private developer will only develop more peripheral retail space if he can afford the compensation for the negative trade effects.

Implementation of the compensation-based planning approach faces two serious problems. First, it is difficult to define the exact size of the negative trade effects. For example, which existing locations will suffer from the trade effects (only the town centre or neighbourhood shopping centres as well); which retailers and/or retail sectors will lose trade; what will be the time-period that must be considered for trade effects (structural or only temporary); to what extent should negative trade effects be considered as acceptable increased competition; how should we deal with trade effects in the opposite direction (town centres take trade away from out-of-town locations as well)? The second main problem concerns the way the compensation process should be organised. Who should be compensated (the retailer or the owner of the retail space) and who is responsible for the compensation (the developer, the out-of-town retailer or the future owner/investor)? Moreover, both for the developer (or out-of-town retailers, or investor) and for the town centre retailers
Figure 1. Retail planning models: restrictions to peripheral retail planning and economic impact for town centres

No government intervention

1. Amount of retail space added to stock on peripheral retail location
2. Economic impact of peripheral retail development for town centre

Traditional government intervention

1. Reduced amount of retail space added to stock on peripheral retail location
2. Reduced economic impact of peripheral retail development for town centre

Property rights approach

1. Some kind of compensation by the developer of the peripheral location to the retailers in the town centre
(or owners of retail space) possible high transaction costs will be involved in the negotiation process regarding the size of the compensation. If we were to ‘leave this to the market’, without any ‘structural’ (as distinguished from regulatory) interventions in the property rights regime, we must fear a chaotic situation with possibly many cases in court, serious delays in planning processes and increased uncertainty for all actors involved.

Does it mean that it is impossible to implement compensation-based retail policy? No! Structural interventions in the property rights regime may be considered to find solutions for these problems. The most obvious spontaneous order solution would be to introduce compensation rules, defining who should be compensated and by how much. The compensation does not necessarily have to be financial. Alternative compensation methods can be considered as well. One might still argue then that it will be very problematic to define compensation rules, due to the problems mentioned earlier. This is true, but we must bear in mind that town planners, when deciding on regulatory planning interventions restricting out-of-town retailing, face exactly the same problems. Their decisions are also based on estimations of the possible trade impact of out-of-town locations (based on often disputed local and regional impact studies). Therefore, in both situations, (transaction) costs of the decision-making process will be substantial. However, in the end, the introduction of compensation rules may turn out to be more efficient, because it is a once-only decision, while regulatory planning requires continual decision-making for every location.

5. Planning Order versus Spontaneous Order Solutions

The previous sections have demonstrated that government interventions that are aimed at structuring the market can offer alternative solutions to deal with efficiency problems. In this section, I aim to take the argument one step further. Webster and Lai’s efficiency rules provide us with tools to improve the property rights regime to encourage the spontaneous management of cities. However, we may assume that in many situations planned order solutions can still do a better job. It would be very appealing to have some general rules to be able to choose between alternative government interventions to deal with externalities because it will provide policy-makers with directions on how to choose. However, we must be very careful with adopting such rules. Needham warns against normative rules.

Some writers prescribe how rights in land should be chosen—namely, in such a way that economic efficiency is maximized. Then they deduce which rights in land will best achieve economic efficiency, and propose those. This we call the normative version of law and economics. I do not adopt it, for I think that rights in land should be chosen for a number of reasons, not just economic efficiency (Needham, 2006, p. 77).

Webster and Lai refer to the Coase theorem, arguing that the choice of government interventions should depend on the level of transaction costs.

Society will demand planning (including land use planning, other forms of sectoral planning and spatial planning) in situations where the transaction costs of using the market are greater than using commands (Webster and Lai 2003, p. 183).

Needham, in contrast, argues that it would be very attractive to base government interventions in rights in land on the reduction of transaction costs, but that it is not a very convincing rule.

However the burden of proof is on the proponents of the theories. They illustrate their
statements with empirical examples, but that is not a rigorous empirical testing (Needham, 2006, p. 88). 10

Instead of normative rules, Needham suggests in turn a pragmatic way to compare different types of government intervention

We compare the rules according to their effectiveness in achieving the goals of land use planning, according to their effects on economic efficiency, and according to their distributional effects (Needham, 2006, p. 77).

I agree on the necessity of those tests, but aim to combine them with a number of rules to choose between types of government interventions to deal with externalities. Taking seriously the arguments against using only efficiency rules for this selection, I take a broader perspective. However, it must first be clear which type of government intervention can be chosen. Although different divisions are possible, I choose to stay close to the spontaneous versus planned order type of intervention. Spontaneous order solutions are all based on the assumption that ‘the market’ will solve the problem by creating property rights over external effects. In this case, government interventions are usually necessary to remove institutional obstacles that prevent this from happening. Planned order solutions make use of legally binding (local) plans that restrict the use of land. To choose between these two main types of government intervention we can make use of four pragmatic rules, referring to: the level of information that is available; the ability of the actors that cause the externalities to reduce them; the market situation; and, the balance in power and social relevance. These rules are not based on certain ideological or theoretical assumptions, neither are they based on strong empirical evidence. In fact, they are merely based on a common understanding of policy in practice and the effects of policy interventions. A number of questions can help to identify the most likely type of government intervention to solve a certain externality problem.

First, if insufficient information is available with respect to the size and the source of the externality and/or the group of people that are harmed, planned order interventions will probably be more effective than spontaneous order interventions.

– Is it possible to define the size of the externality problem? If this is difficult, or only possible against high transaction costs (for example, the negative effects of a new motorway for the environment), it is unlikely that a spontaneous order solution, by creating property rights over the externalities, will work out well. A better solution would be to restrict infrastructure development in certain areas, according to certain environmental guidelines. If it is possible to calculate the size of the externality (for example, the negative impact of a greenfield industrial development on real estate values in adjacent locations), it may be useful to find a spontaneous order solution. The owners of the adjacent locations can ask the owner of the industrial estate to compensate them, based on some kind of plan damage regulation.

– Is it clear which actors cause the externality? If it is possible to determine who causes the externality (the noise caused by airport traffic), spontaneous order solutions may be efficient. Those that are harmed by the externality will be able to require compensation or noise reduction from the airport (or the airlines). If not (the environmental effects of economic growth), it is probably better to look for planning interventions, for instance directed at reducing economic growth in environmentally vulnerable areas.

– Is it possible to define which actors suffer from the externality? If possible
Secondly, if the actors that cause the externalities have the possibility to make use of techniques to reduce the externalities, spontaneous order solutions may be more efficient than planned order interventions.

- Do the actors that cause the externality have the possibility of reducing it? In many cases, technological innovations have made it possible now to reduce environmental externalities, like traffic noise, CO₂ emissions and waste production. Often, economic externalities can be reduced by decreasing the size or type of the economic activities (although this may lead to reduced efficiency).

Thirdly, in a dynamic market situation, resulting in constant changes in the size of the external effects, spontaneous order solutions may turn out to be more effective than planned order interventions.

- Is it likely that the size of the externality will constantly change over time? This may happen in markets in which the size of the externality depends on the demand level, while the size of demand strongly fluctuates over time. Local office markets, for instance, are often very dynamic markets, with substantial changes in the demand for office space in a relatively short period of time. Spatial planning may be too inflexible to respond in time to these changes, which may either result in a temporary shortage of locations for office development or in undeveloped locations. A more flexible system to allocate land for office development may offer a better solution. The local government defines general rules for office development, but does not allocate land for office development. If the property developer aims to develop a certain location that fits with the rules, he will receive planning permission.

Fourthly, if the balance in power between the actors that cause the externality and the actors that are harmed is not equal and cannot easily be changed by some kind of government intervention, planned order interventions must be preferred above spontaneous order solutions.

- Are there any obstacles for those that suffer from an externality to require compensation? When high costs prevent people that suffer from airport noise from going to court for compensation, the government can decide to subsidise those costs. In that case, a spontaneous order solution is still possible. However, when this is financially unfeasible, spatial planning restrictions may be the best solution.

6. Concluding Remarks

This paper has argued, following new trends in planning theory, that traditional planning interventions—by regulating the market—do not always provide the best solution to efficiency problems. Moreover, restrictive land use planning may cause additional efficiency problems. For that reason, it is worthwhile to consider alternative strategies for improving efficiency and reducing negative effects of land and property development. Particularly with respect to externalities, government intervention can also be directed at assigning property rights over those negative effects (i.e. by implementing compensation rules). Spontaneous order may then be able to solve the problem.
The argument for an alternative approach to spatial planning must not be confused with a claim for ‘more market, less government’ and/or a liberalisation of spatial planning. The government goals remain unaltered: the aim still is to reduce negative external effects. Sometimes, the best solution will be to restrict land and property development. In other situations, a compensation mechanism may be preferred.

I have suggested that two sets of rules can be used in combination to consider different approaches to externality problems. First, a set of rules has been proposed to choose between planned and spontaneous order solutions. Secondly, when spontaneous order solutions are being considered, Webster and Lai’s efficiency rules can be used to support decisions on how to reassign and/or redelineate the property rights regime. The use of (normative) rules suggests that a situation can exist in which property rights are optimally delineated and assigned and in which property rights are constantly redelineated and reassigned to achieve optimal efficiency. This may be an attractive thought, but it is not the right way to think. I do not deny the concept of optimal efficiency, but it is hard (or impossible) to find it. To explain this, I refer to Williamson’s argument (cited in Needham, 2006, p. 64) that efficiency should be “judged not in absolute but in remediableness terms.” Needham argues that

When considering a policy question, it is not sensible to compare the existing situation with the optimal situation, but with feasible alternative ways of pursuing the same policy goals (Needham, 2006, p. 64).

In this perspective, I believe that the two sets of rules can be helpful to select the best type of government intervention. However, the final choice should always be supported by the empirical testing of the effectiveness of the intervention, the impact on economic efficiency and the distributional effects.

Notes
2. Barzel defines the principle of residual claimancy as follows

   The residual claimant to, say, an apartment house is its economic owner in that he is able to gain (here by exchange) from an increase in the value of the building, whereas he loses from a reduction in that value. Being its owner, he is motivated to take any action that will, net of its cost, increase the value of the property (Barzel, 1997, p. 3).

3. In most of these types of pollution cases, we might think it fair that the ‘polluter’ should compensate or invest in new production, methods to reduce pollution, rather than the residents compensating the factory. However, this is not a matter-of-course: it depends on the initial allocation of property rights. If the factory has the initial right to pollute, then the factory should be financially compensated for its costs to reduce pollution. Only state interventions can change this situation. If society believes this is not right (from a moral point of view), the state may consider new legislation that will change the property rights regime, in order to make the polluter pay.

4. Webster and Lai’s normative approach to property rights elaborates on the work of Barzel (1997). Note that this normative approach to what is judged to be efficient is not necessarily the right answer to efficiency questions. However, in the case study sections, it will nevertheless be taken as a starting-point for evaluating efficiency in the Dutch retail land and property market. In section 5, a more critical position will be taken with respect to the use of normative efficiency rules.

5. This section discusses mainly out-of-town retailing, since the changes in retail policy primarily concern out-of-town retailing (although with substantial externalities for the existing inner-city locations, as we will see in section 4).

7. The list of efficiency problems and ‘government failures’ in retail development is not necessarily complete, neither is it based on extensive research. However, the efficiency problems that are listed here will be used in the present and following sections as examples to demonstrate how they can be solved by interventions in the property rights regime.

8. Planning obligations in Great Britain based on Section 106 of the Town and Country Planning Act 1990, can be considered as a (financial) compensation tool as well. However, they differ from the compensation rules that are suggested in this paper. Planning obligations are based on the principle that if you receive something (planning permission) it is fair to ask something in return. The compensation rules suggested here are meant to structure the market and intend to create rights over externalities. Compensation is based on the principle that if you cause negative external effects, you have to compensate those that are harmed.

9. Pronk (2008) has investigated how municipalities, property developers and retailers would respond to different types of compensation method, including ‘direct financial compensations to retailers,’ ‘town centre investment obligations’ for property developers, ‘infrastructure and public transport investment obligations’ and ‘financial contributions to a town centre investment fund’. This study shows that the majority of the respondents hesitate to accept these kinds of compensation rules at first sight, but do not reject them.

10. We can add that only a few examples of empirical studies of transaction costs exist (for example, Needham and de Kam, 2004; Buitelaar, 2007) and they demonstrate above all that it is very complicated to calculate differences in transaction cost between planning regimes.

11. Williamson has developed this alternative as a response to the operational problems with finding the Pareto optimum and evaluating improvements as Pareitian improvements. Pareto (2006) argued “that a change would be an improvement if, as a result of the change, at least one person became better off without anyone becoming worse off” (quoted in Needham, 2006, p. 64). In practice, it is often very difficult to find this out.

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