REAL ESTATE DEVELOPMENT STRATEGIES AND THEIR IMPACT ON THE RISK PROFILE OF A PROJECT

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This paper presents a real estate development framework that enables us to describe the complexity of the real estate development process realistically. The framework is fundamentally different from current theories on real estate development and is developed making use of empirical analysis of development projects and investment decision making processes in three Dutch real estate development companies. By making use of the framework five development strategies are distinguished as to how a project is delivered to the market. In addition this paper explores the relevance of the framework from a risk management perspective. The main risks in real estate development are categorised according to seven development aspects founding the framework and insight is given into the relative sensitivity of the development strategies to these risk categories. The real estate development framework provides a new starting point for further research on risks and opportunities - acting as an intermediary between management of risks on portfolio and operational level -, and can be of significant importance for determining real estate development companies' business strategies in practice.

KEYWORDS: real estate development; development strategies; risk management.

INTRODUCTION

Risk management is essential in order to manage real estate development projects successfully. In risk management literature a division can be made between risk management applied to a project (APM, 2004, ICE, 2005, IRM, 2002, PMI, 2000, RICS, 2003) and (financial) risk management applied to a firm or portfolio (Brealey and Myers, 1988). While project risk management focuses on implementing risk mitigation strategies that are directed at reducing the individual risks, financial risk management aims to spread and secure risks. However, little attention is paid to the strategic choices made at the start of a real estate development project, which determine to a large extent the risk profile of a project. In fact, there is a gap between the operational management of risks and the management of risks on portfolio level of a project-driven real estate development company.

To gain insight in what risks are involved in a real estate development process and how strategic decisions regarding the development process affect the risk profile of a project, it is necessary to develop a framework that enables us to describe the complexity of the real estate development process realistically. This paper presents such a framework, which is based on an analysis of projects and decision making processes of three Dutch real estate development companies (Gehner, 2008). Subsequently, by means of this framework different development strategies, which can be found in the current real estate development practice in the

Netherlands, and the risks in real estate development are described. Finally, a qualitative analysis is made on the relative sensitivity of the development strategies for the main risks in real estate development.

In the discussion the relevance of the framework, and the idea of development strategies as a means to strategically manage project risks, is further explored in terms of further research as well as implications for practice.

LITERATURE REVIEW ON REAL ESTATE DEVELOPMENT

Real estate development is the transformation of an idea for newly built space into a real property (Miles et al., 2000, Peiser and Frej, 2003, Nozeman, 2008) in order to contribute to a company's objectives, like making profit, establishing good relationships with clients, and winning awards. Transforming an idea into a real property may take several years. To manage such a project, the real estate development process is divided into development phases. In the literature, the development process is usually modelled as a series of sequential phases, such as 'evaluation, preparation, implementation, and disposal' (Cadman and Austin-Crowe, 1983: 3), 'evaluation, acquisition, procurement, and disposal' (Birrell and Bin, 1997), 'inception of an idea, refinement of the idea, feasibility, contract negotiation, formal commitment, construction, completion and formal opening, and property, asset and portfolio management' (Miles et al., 2000: 6), or 'planning and initiation, feasibility, commitment, construction, and management and operation' (Peiser and Frej, 2003: 20-21).

Many activities take place in each phase. All activities in a phase are aimed at reaching a certain end result. For example, in the feasibility phase a developer 'conducts or commissions a formal market study to estimate market absorption and capture rates, conducts or commissions a feasibility study comparing estimated value of project with cost, processes plan through government agencies' to demonstrate 'legal, physical, and financial feasibility' (Miles et al., 2000: 6). In the construction phase a developer seeks 'to keep all costs within budget' and 'resolves construction disputes, signs checks, keeps work on schedule' (ibidem) to deliver the building within budget and schedule".

The different activities in each development phase are not carried out in a sequential order, but they have a simultaneous character: the activities interact and in some cases are time dependent. Interaction means that 'a single activity can span several stages in the development process and several different activities will be ongoing in any particular stage. Second, the process is interactive in the sense that values of certain variables in the process are conditioned by the values of certain other variables' (Miles and Wurtzebach, 1977: 332); in other words the outcome of an activity influences another. Time dependency implies that one activity must be completed before another can start. For example, construction can only start when public authorities have given the building approval and financing is arranged. Moreover, various authors note that the development process is 'hardly straightforward' (Miles et al., 2000) and that 'development is an iterative process in which the developer obtains more and more precise information in each iteration' (Peiser and Frej, 2003: 19).

A REAL ESTATE DEVELOPMENT FRAMEWORK

This section presents a real estate development framework (see Figure 1) that explicitly makes a distinction between *development phases* – a time related division of a process – and groups of activities or *development aspects* (Gehner, 2008). In the framework the names of the phases are similar to these in the reviewed literature: initiation, feasibility, commitment,

construction, and management. The activities are grouped into the following development aspects:

- land development: all activities concerning the preparation and control of the acquisition of land and making it ready for building, including site selection, investigation of land ownership and soil, land purchase, and site preparation;
- design: all activities concerning the preparation and control of the conceptualization/realization of a design, including idea inception, first spatial concept, physical feasibility study, selection of architect, selection of other consultants (engineers, landscape architect), management of the design process;
- entitlement: all activities concerning the granting of all building permits;
- financing: all activities concerning the raising of funds under the investments;
- construction: all activities concerning the physical realisation of the project, tendering and contracting, supervision of construction, and controlling planning and costs;
- leasing: all activities concerning the rental of the real estate project, including a market analysis, feasibility studies, promotional activities and closing rental agreements;
- sales: all activities concerning the sale of the real estate project, including a market analysis, appraisal, promotional activities, closing a sales contract and property management.

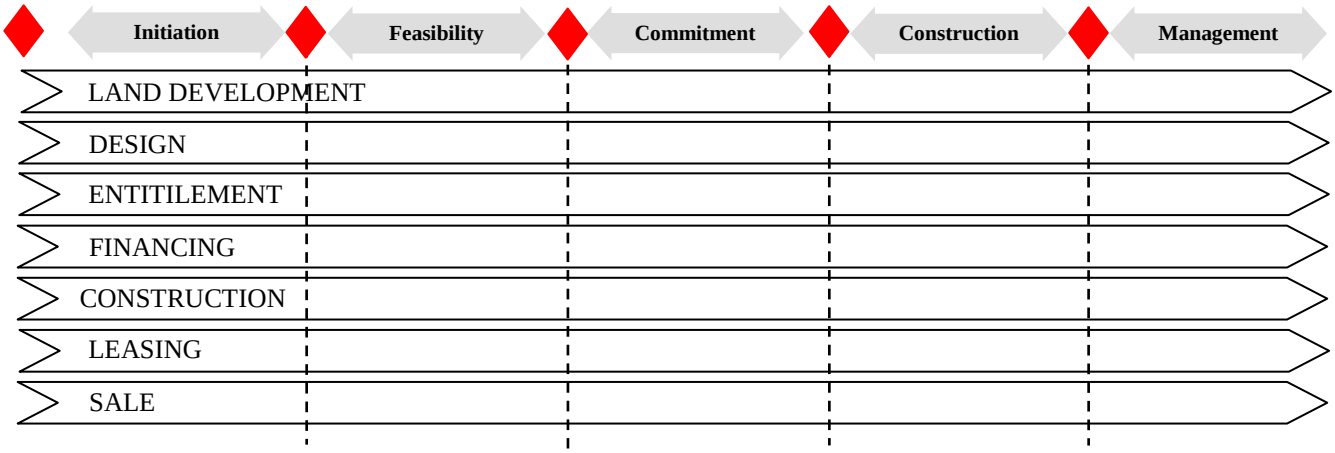

Figure 1: The real estate development framework consisting of development phases and development aspects

The addition of development aspects is fundamentally different from current theories on real estate development as it enables us to describe the interrelatedness of activities and the iterative character of the real estate development process. Like in other theories, the *development phases* divide the process in controllable timeframes. Unlike other theories, this framework focuses on the gates between two phases are so-called investment decision moments. Each investment decision moment is a 'project review point where continuation or termination decisions are made' (Schmidt and Calantone, 2002). In other words, at the end of each phase a project is integrally assessed to decide whether or not to allocate budget to a project and make further investments. The *development aspects* are the items to be evaluated in their mutual relationships at each investment decision moment.

More importantly, the framework enables us to give more insight into the variations in the order of the activities over the development phases. A real estate development project does not necessarily start with the acquisition of land; nor does a developer always start

construction only if 60% of the project is rented out. In practice, many different development strategies can be observed over the real estate development companies. A *development strategy* can be defined as the sequence in which the activities related to land development, planning application, financing, design and construction, leasing and sale of a project, are carried out over the development phases. Although some activities are time dependent, development strategies can be developed with different sequences of activities over the development phases. In the following section five different development strategies are described. Subsequently, these development strategies are analysed as for the impact on the risk profile of a project.

FIVE DEVELOPMENT STRATEGIES

At the start of a real estate development project three questions rise: what product is going to be developed? Where is the location to develop the project? And how are the development activities are going to be executed? In practice a lot of market analysis is carried out to determine *what* and *where* should be developed. However, little attention is given *how* to design the development process, although the starting point and the sequence of activities determine to a large extent in what way 1) costs can be extended and kept low, 2) revenues may be secured early and maximised, and 3) flexibility can be retained to adapt to market circumstances. In other words a development strategy determines how value is created during the process and secondly how sensitive the development process is to the main risks in a project.

In the literature only two strategies to start a project are described, being ‘site looking for a use’ and ‘use looking for a site’ (Peiser and Frej, 2003). The first means that the development is driven by supply, the latter that a project is driven by demand. For both of these strategies no differentiation is made regarding the sequence of activities during the development process. Analysing current development practice in the Netherlands, we distinguish five different development strategies by the moments when the following essential commitments are made: land purchase, conceptual design choice, application for building permit, closing majority of leasing contracts, and closing sales contract. The moments when commitments are made related to the remaining development aspects, being start construction and closing financial deal, do not differ over the development strategies. The five development strategies are described in terms of its starting point, the sequence of activities and its historical background.

A. Supply driven strategy: site looking for a use

The starting point of this strategy is to obtain a development position by purchasing land. This may vary from a ‘cold’ site, when a current zoning plan is not according to the preferred development, or ‘warmish’, when a municipality has intention of changing the zoning plan form agricultural into land destined for building. When the political and economic climate look favourable, a conceptual design is made that meets the future demand in order to start the procedure to change a zoning plan or apply for a building permit. These procedures may take several years before the final design can be made and it is feasible to start renting out the building. A pre-rental percentage is nowadays a condition to obtain financing, which is necessary to be able to pay the constructor. During construction or even after completion the project is fully rented out and sold to an investor.

The strategy to start a project by first obtaining land is the traditional way of developing a project in the Netherlands and is most common in residential projects. Nowadays, this strategy has become less common because this asset becomes scarcer and thus precious and

there is a shift from greenfield development projects to redevelopment of brownfields. Still, there are some substantial development companies in the Netherlands that own a lot of land, such as ASR and AM. In the 1990s this strategy culminated, when the government singled out large extension areas for greenfield housing development to be developed within ten years. In reaction many development companies speculatively purchased land despite the large claim on capital and the risks involved.

B. Demand driven strategy: user looking for a site and idea

This development strategy is the extreme example of a demand driven development. The development starts with a rental agreement with a user in answer to a housing need of a tenant. Initially a pre-rental agreement is signed. Usually, this agreement is conditional upon the ability to purchase the preferred site and the assignment of the zoning plan. Simultaneously, both parties agree upon the program of requirements and a first conceptual design. When the development agreement is signed, the design phase is followed by the financing, the construction and sale of the project.

This demand driven development strategy has been coming on in the Netherlands since the 2000s and is most common in the offices development sector. OVG made this development strategy its core business by developing projects for multinationals looking for a new headquarter, e.g. Unit 4 Agresso and ABB, but other companies also picked it up. ING Real Estate Development for example developed a new headquarter for Ernst & Young at the South-axis in Amsterdam.

C. Concept driven strategy: idea looking for a site and user

A conceptual development strategy starts with a concept or an idea that fulfils a market need. A concept is both about the functional program, the spatial image, public support and financial feasibility (Vos, 2005). Two types of concepts can be distinguished: location-product combinations (LPCs) and market-product combinations (MPCs). In a LPC the concept is derived from the characteristics of a known location. In a MPC the concept is developed on the basis of a certain market need; this type of concepts can be realised multiple times at different locations. Initial investments are made to develop a concept including internal costs and an architect fee (if not in-house); these investments are relatively low, and decrease the more a concept is used. This development strategy can be followed by either strategy A or B.

In the Netherlands development companies like Multi Corporation and TCN Property Projects can be characterized as conceptual developers. Multi and its in-house design group T+T Design develop LPCs for large shopping centres, and TCN PP develops MPCs, such as Trends & Trade, Brandboxx and Truck City. Their distinguishing core competence is creativity. This strategy is most common in the retail and B2B sector. In the USA many projects are developed based on concepts, such as resorts, retail parks, and outlet centers.

D. Development competition: planning problem looking for an idea and use

Entering a development competition is the fourth development strategy. In contrast with the other strategies, the initiative lies with a land owner or municipality. In fact the starting point is a planning problem on a particular site looking for a new idea and use. A municipality solicits private developers for solutions by a development competition. The deliverables in such a competition usually include a functional program, an urban or conceptual design and a price bid for the site. The winner of the competition closes a development agreement with the municipality. From that moment the planning application procedure, to which the municipality has committed oneself by writing out the competition, the design process and the leasing activities take place simultaneously. The moment the land is transferred from the

municipality (or land owner) to the developer is agreed upon in the development agreement: most beneficial for the developer is to make the site purchase and the start of construction conditional upon a granted building permit and a fixed pre-rental percentage. Just before construction financing is arranged, and during construction a project is fully rented out and sold, similar to development strategy A.

In the Netherlands municipalities use development competitions to execute their land policy. Especially in the case of complex urban redevelopment projects or prestige objects, like a town hall, public library or theatre, development competitions are applied. Large development companies, like ING RED, MAB, and Multi, enter these competitions often in combination with smaller developers and/or contractors. It is government policy to further explore these cooperation strategies in PPP-formats.

E. Investment driven strategy: capital looking for a site, idea and use

This development strategy starts with an investor or an investment fund who is interested in new real estate assets to add to their portfolio for its capital and cash return. The involvement of an investor is either in the form of participating in a development company, like Morgan Stanley in Multi Corporation, or by participating in a single project as large investors and housing corporations often do. The investment strategy sets directions for the development company and guarantees the sales to the own investor. In the case an investor participates in a project, the commitment can take multiple forms. For example, sales conditions can be set at the start of a project in a pre-sales agreement or an investor can finance a strategic site acquisition and grants a developer the development once the zoning plan is changed. Apart from sales activities being brought to the fore of the development process the sequence of activities could be in line with any of the other development strategies.

All five strategies are in a different way sensitive to risks. Before indicating the risk profile of each development strategy, the risks in a real estate development process are identified.

RISKS IN REAL ESTATE DEVELOPMENT

There is no universally accepted definition of risk (Asselt, 2000, Chapman, 2006, Vlek, 1990, Atkinson et al., 2006, Aven and Kristensen, 2005). This paper acknowledges that ‘risk is a kind of attribute ascribed to the unknown future: the real dangers and hazards are only known afterwards’ (Asselt, 2000: 151). As the future is uncertain, some events can affect the expected outcome of a real estate development project. Events can both have a positive and a negative impact. According to managerial perspectives on risk, events with a positive impact are regarded as opportunities and events with a negative impact are regarded as risks (Akintoye and MacLeod, 1997, March and Shapira, 1987, MacCrimmon and Wehrung, 1986).

In a real estate development project many risks may occur varying over the uniqueness of projects. It is impossible to list all these possible risks. To give insight into the risks, and to structure the risk identification, several risk classifications are made. Various authors (Love et al., 2002, Miller and Lessard, 2000, Bing et al., 2005, Ng and Loosemore, 2007, Risman Instituut, 2005) use risk categories as technical, financial, legal, political, physical, social, and organisational. Risks can also be categorised as organisational, project-related and environmental (Have and Nauta, 2004) or macro level (exogenous), meso level (endogenous), and micro level (stakeholder relationships) (Bing et al., 2005, Baloi and Price, 2003, Mbachu and Vinasithamby, 2005). Others assign risk to the parties in the process (Rahman and Kumaraswamy, 2002, Kumaraswamy, 1997). In this paper the development aspects, as described in the previous section, are used to classify the risks:

- Land development risks: e.g. land cannot be purchased – land price/purchasing conditions is disproportionately high considering land conditions and current zoning plan;
- Design risks: e.g. program of requirements cannot be realised on the site – design is not kept within budget – delay of design process due to necessary changes on behalf of market fit or planning application;
- Entitlement risks: e.g. no approval of zoning plan or building permit – delay of planning procedure;
- Financing risks: e.g. financing cannot be arranged;
- Construction risks: e.g. at tender construction costs exceed budget – delay of construction process;
- Leasing risks: e.g. time to market lags behind schedule – design does not meet demand of space market (decrease in rental prices) due to economic fluctuations or innovativeness of product;
- Sale risks: e.g. wrong estimation of yield development on sale.

RISK PROFILES OF REAL ESTATE DEVELOPMENT STRATEGIES

This section gives insight into the relative sensitivity of the five development strategies for the main risks in real estate development. As each of the five development strategies has its own risk profile, the choice for a certain strategy can be seen as a strategic choice with regard to managing project risks and influencing the overall portfolio risk of the development organisation.

A. Supply driven strategy: site looking for a use

The main risk in this development strategy is the risk of delay due to the planning application procedure. The effects of delay are high: the financing costs of the land increase, adjustments to the design may be necessary resulting in extra architect fees, and it is not possible to control the time to market increasing the uncertainty about construction, rental and sales prices. Once construction is started, most risks are eliminated; even the leasing risk is nowadays reduced by applying a pre-rental percentage before starting construction. The remaining sales risk is dependent on the leasing speed, leasing prices and the demand on the asset market.

B. Demand driven strategy: user looking for a site and idea

The risk profile strongly differs from the previous strategy, because the leasing risk is eliminated at the start of the process by making it the starting point of the development process. Due to the conditions under the pre-rental agreement, the land development risk and the planning risk are shared with the tenant. When the development agreement is definite, the developer takes the design, financing, construction and sales risk, which become more stringent as the date of completion is fixed as well as the budget. Time and financial resources are constrained to obtain control, while the tenant will try to influence the design process which means flexibility is reduced as well. The sales risk is relatively low, because there is certainty about the rental of the project at an early stage in the development process.

C. Concept driven strategy: idea looking for a site and user

The risk profile largely depends on the development strategy that is combined with the conceptual development. Nevertheless, some risks are relatively lower. Because of the

repetitive character of conceptual development, information and knowledge have been gained on the spatial and functional aspects in this kind of projects. This means that risks regarding the design and construction activities are reduced. Moreover, a conceptual strategy positively affects the leasing and sales speed and price, as when users and investors are familiar with a product, they are more willing to invest in this product.

D. Development competition: planning problem looking for an idea and use

In this development strategy, the division of risks between the municipality and the developer depends on the conditions in the development agreement. Logically, the risk of acquiring the land is transferred to the municipality, as land can be expropriated by the council, and the municipality commits oneself to be cooperative in the planning application procedure, which reduces the entitlement risks. As the land price is relatively high, because developers make a bid in competition, the effect of delay is high. This can be reduced by postponing (part of) the financial transfer to the start of the construction process and in case of a large area by purchasing the site parcel by parcel according to the phasing of the construction process. The developer usually bears the market risks (leasing and sales risks): these risks are relatively higher than in other development strategies, because the municipality imposes a program of requirements (on urban scale) and thus flexibility is low to adjust to the market need. Sometimes a municipality even demands a date of completion of the project. Preferably, the latter risk is avoided and market risks are reduced by making the start of construction conditional upon a fixed pre-rental percentage.

E. Investment driven strategy: capital looking for a site, idea and use

The risk profile of this development strategy is reduced relative to strategy A or B as the sales risk is eliminated or reduced depending on the condition in the sales contract. An investor can also be advantageous when he is willing to finance the land purchase or part of the construction costs. The risk profile is relatively higher regarding the design and leasing risks as result of additional requirements imposed on the product by the investor, which reduces flexibility in the design process and specific tenant demands may less easily be fulfilled.

DISCUSSION

This paper presents a real estate development framework that is different from other descriptive theories on real estate development as it introduces development *aspects* next to development *phases*. The introduction of development aspects provides insight in the interrelatedness of activities in the development phases and allows describing different development strategies. Moreover, the risks in a real estate development project can be categorised by these aspects.

In this paper the development strategies presented are described as ‘ideal types’ or most pure examples of different starting points and sequences of activities in real estate development processes. You will not find them as such in the real world, but they indicate the spectrum of strategic choices that can be made in a project. Further variations on these strategies can be made, for example by combining them with operational risk mitigation measures.

Development strategies are of vital importance for managing the total risk profile of a project and as such can be regarded as a form of strategic project risk management. Although the impact of the development strategies on the risk profile as described in this paper remains indicative, the importance of a conscious choice of a development strategy becomes quite clear. Further research attention is needed in the form of a quantitative analysis of the sensitivity of development strategies to risks to further substantiate the relevance of the

development strategies as a strategic project risk management approach. In addition, the development strategies should also be seen as the way a real estate development company tries to make the most of the opportunities in a project. In order to increase the practical relevance more attention should be paid to opportunity management and to those activities that ensure an increase in value, such as the design, or the change of a zoning plan in order to get a clearer view on assessing the balance between risks and opportunities. For example, the application of real option theory provides new ways to value flexibility versus securing certain outcomes in the real estate development process, e.g. (Ford et al., 2002).

In practice, the development strategies can be used both at the start of a development project and during the development process at the investment decision moments. At the investment decision moments the development strategy is the basis for assessing a project. A development strategy can be translated into decision criteria for each investment decision moment in a development process. While in practice usually one set of criteria is used for each project, from this research can be concluded that each development strategy asks for its own set of decision criteria. These criteria are to be applied next to criteria regarding profit.

At the start of a project a company has to assess whether or not a project fits into a portfolio strategy. In large companies risks can be spread to apply multiple development strategies, just like a portfolio is composed of projects in different regions and market segments. Another portfolio strategy is to focus merely on one development strategy and develop specialist knowledge and competences in order to fully profit from the opportunities and manage the risks in that particular development strategy. This can lead to a new classification of real estate development companies based on their development strategies, and thus their risk profile and the competences to manage these risks and opportunities. In the end real estate development companies are professional entrepreneurs trying to profit from opportunities, meaning they have to take risks to keep in business.

The framework of real estate development and subsequent development strategies provide a series of challenges for academia and practice working towards an understanding of the real estate development business that is much more in touch with the entrepreneurial core of its profession – developing opportunities and in that process taking risks knowingly – than present literature rooted on disciplinary and sequential definitions.

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