Risk Allocation in Joint Ventures

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The method of risk allocation within joint-ventures differs from project to project. In a joint-venture the division of responsibilities and risks is not always clear for the participating parties. At this moment there is no model which can lead the risk allocation to good results within a joint-venture. This study has been developed by conducting a literature study and a case study in order to find a suitable model for risk allocation in joint ventures.

Using this model, the parties are more aware of risk allocation and it can serve as a guideline the process of risk allocation, as a result of which the participating actors will be able to get a handle on the process.

KEYWORDS: PPP (Public Private Partnership), Joint-Venture, Risk allocation, Process

INTRODUCTION

Not all joint-ventures in construction have not been successful in the last ten years (Zeegers, Ysbrandy en van Ophem, 2004). The manner of risk allocation within the joint-ventures differs from project to project (Zeegers, van Ophem en van Overmeeren, 2007). Research points out that in a joint-venture the division of responsibilities and risks is not very clear for the participating parties and that it is a difficult task to allocate the risks in balance (kenniscentrum PPS, 2004-b).

The methods of risk management show how the risks can be analyzed and monitored. However, these methods do not show how risks must be allocated between the cooperating parties. At this moment there is no model which can lead the risk allocation to good results within a joint-venture.

The aim of this research is to develop a model for risk allocation within a joint-venture. This model can be used as a means for allocation of the risks during the initiative- and feasibility phase and can lead the risk allocation to good results. Using this model, the actors are more aware with risk allocation and the actors can be guided in the process of risk allocation.
METHODOLOGY

Four research questions have been used to achieve the aim. These questions are:

- Which aspects must be used for risk allocation within a joint-venture?
- What are the characteristics of the contracting process in a joint-venture?
- Which aspects of risk allocation are used in practice?
- Which aspects from the practice and the theory can be used in the model?

This research has been developed in four main steps:

1. The first part of the research is the literature survey. It is an exploring qualitative survey, concentrated on four main subjects. The research questions have been answered in this part. By means of the literature study a model for risk allocation has been developed.

2. The second part is the case study. By means of the theoretical framework that has been developed in the literature study, the case studies are carried out. For the case studies, the contracts are studied.

3. The third part is the cross-case-analysis. On the basis of a cross-case-analysis, the three different cases are compared with each other. This comparison gives a clear image of risk allocation in practice.

4. The last part is the design part. The comparison between the results from the practice and the theory must lead to a definite model for risk allocation.

Aspects for risk allocation

In the literature survey, three main aspects have been found, which are relevant for risk allocation within the joint-ventures. These are:

Controllability
- What is the originator of the risk? (Risman, 1999);
- Which actor is best at bearing the risk? (Risman, 1999; Wildenberg, 2003; de Greef, 2006);
- Which actor is best at influencing the risk? (de Greef, 2006; Risman, 2001);
- Which actor makes the most profits or disadvantages? (Risman, 2001; de Greef, 2006);
- How can the risks be shared in proportion? (Risman, 2001; Versteegen en Staal-Ong, 2004).

Foreseeability
- Which actor is best at foreseeing the risk? (Jones, 1996; de Greef, 2006);
- Which measures can be taken for unforeseen risks?

Managing stability:
- Which actor can best communicate with different actors within and outside a project? (kenniscentrum PPS, 2004-a; Lahaije, 2004)
Besides these aspects the actors must give a certain input, in order to allow the negotiation of risk allocation to run smoothly (Alexander, 1995). These are: reliability (Risman, 2001), commitment (Aken, 1996; Risman, 2001), flexibility, acceptance and respect (Alexander, 1995). Without this input, the actors will keep too much focused on their own interests and too little to combined interests (which will disturb the risk allocation process).

The characteristics of the contracting process within a joint-venture

Figure 1 shows the process at the start of a joint-ventures project. Risk analysis will be carried out during the actor analysis stage and during stage when a vision of how to cooperate will be developed. Activities within risk analysis are: to identify, to categorize, to assess and to prioritize the risks.

When the initiator decides how to cooperate in the project, the risk allocation will also be determined how (kenniscentrum PPS, 2004-a; kenniscentrum PPS, 2004-c; de Koning an Sproncken, 2001). This will obviously be done after having conducted the risk analysis.

The aspects used in practice

Using the knowledge from the literature, the contracts of three state development joint-ventures have been analyzed. The analysis has been focused on three major tasks that all three joint ventures had to accomplish. These were:

1) acquire land
2) clear land for building
3) distribute the lots

The agreements that the joint ventures had made on risk allocation in these tasks, has been taken into account. This has not been done for all the risks, but for six particular risks only. These risks were:

   a) Participants are not able to finance the project
   b) Conflicts of interests between the participants
   c) No clear agreements between the participants on the three major tasks
   d) One of the participants refuses to share risks
   e) Changes in the scope of the project
   f) No political or public support for the project

Ad a: In all three cases, the municipality has financed the project. In two cases, this has been done by a loan of the Dutch Municipality Bank. In the third case, it is not clear where the loan comes from.

Ad b: In all three cases, after some time, an independent director has been appointed. Next to that, other independent officials have been appointed for steering committees and decision making. Next to that, agreements have been made in the contracts for unsolved disputes.

Ad c: In two cases, an independent chairman has been appointed to make sure that the agreements that have been made in the project meetings are properly written down. In the third case, the steering committee looks after the proper downwriting of the agreements.

Ad d: In two cases, the project will be stopped if one of the parties can not or does not want to fulfil his job and take the agreed risks. In the third case, nothing has been directly agreed on this topic in the contract. The project can be stopped by a judgment of a arbitrator.

Ad e: The change of the scope if a project that is disadvantuous for the parties, will have to be paid by the party that wants to change the scope in all three cases.

Ad f: In all three cases, the municipality is responsible for the permits and approvals.

Model for risk allocation

The results from the literature study and the case study have led to a model for risk allocation within the joint-ventures. Figure 2 shows this model for risk allocation, which is the result of this research.
In the first step, the actor analysis and the cooperation vision are carried out. Within these two analyses, a risk analysis is carried out. A thorough risk analysis takes place during the Intention agreement (Determining the initial risk allocation).

Aspects with rules:
* Controllability:
* Foreseeability:
* Managing stability:
* Authority of actor

Intention agreement
(Determining the initial risk allocation)

Aspects with rules + Input
The same aspects with rules as in step 2
Input: Reliability, Commitment, Flexibility, Acceptance and respect

Cooperation agreement
(Definite risk allocation in actual PPP-contract)

Figure 2: The model for risk allocation
first step, through which the risks of the project are being identified, quantified and measurements to manage these risks are determined.

- In the second step, the aspects below have been considered: Controllability, Foreseeability, Authority of actor, and Managing stability. After this step the actors will develop an initial risk allocation.

- In the third step initial risk allocation is determined and an intention agreement is signed.

- In the fourth step, there is interaction between the participating actors. Once again the aspects are being looked at: Controllability, Foreseeability, Authority of actor, and Managing stability. During the negotiation concerning risk allocation are commitment, flexibility, reliability, acceptance and respect the input of the actors.

- In the fifth step the cooperation agreement is signed. In this agreement definite risk allocation is determined.

**DISCUSSION**

The result of this research is the model (figure 2), which can be used for allocating the risks within a joint-venture. This model can lead risk allocation within a joint-venture to a good result. Using this model, the actors are more aware with risk allocation. This model gives also an accompaniment in the process of risk allocation, as a result of which the actors can be guided in the process of risk allocation.

This research has been concentrated on the aspects for risk allocation, not on the process of risk allocation. It is important to examine the process of risk allocation in practice. Thus the process within the developed model must still be validated.

During the case study, three joint-ventures have been analyzed which have no final results yet. The projects are still in development. Therefore the ‘success’ of the projects could not be measured in terms of quality, time and money. A link between success and the manner of risk allocation was not possible.

The analyzed joint-ventures have 50/50 risk allocation between public and private actors. It is important to examine the applicability of the aspects in other risk allocations.

**CONCLUSION**

This research has given a clear answer on the research questions. In this research a model for risk allocation has been developed. Using this model the actors can handle more aware with risk allocation.

The objective of the model for risk allocation within joint-ventures is to decrease the total costs of risks in a project. By allocating the risks through the model, it is determined which actor can bear the risk against the lowest price by using the aspects Controllability, Foreseeability, Authority of actor, and Managing stability. With the actor, which can bear the risk for the lowest price, the risk should be allocated. By allocating every risk through the
model, the total costs of risks in a project should be decreased. The decrease in total costs of a risk is also the consequence of a thorough analysis of the possible risks during the initiative and feasibility phase of a project. The added value of the model is to give guidance in the risk allocation process. By reproducing the risk allocation conveniently and transparently, the effectiveness of the project can be increased.

This research provides an important value to the other researches concerning Public Private Partnership (PPP), risk management, and risk allocation.

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