Identifying and Dealing with the Complexity in Decision-making processes concerning Risk management of Organizational relationships

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Abstract

The energy market has undergone many changes due to the liberalization. Energy companies need to create competitive advantage and cope with threats that decline the revenue stream derived from core commodities. Energy companies expand their business through downstream customer interfacing businesses to create competitive advantage. To source the required resources to commercialize energy-related products and services successfully, organizational relationships are formed. It is of strategic importance to design appropriate organizational governance structures for organizational relationships since value creation and appropriation are not secured by definition. Designing appropriate organizational governance structures is a complex process. This research focuses on the design of a framework that tackles and deals with this complexity. The final result is a decision framework that is based on findings derived from the research fields regarding organizational management and decision-making processes in multi-actor setting. The framework grasps the complexity and simplifies the decision in order to guide decision-makers from the identification of relevant aspects that need to be considered till the translation of these aspects into appropriate organizational governance structures.

Keywords: Control mechanism; Decision-making process; Energy-related market; Framework design; Organizational governance structure; Risk; Trust

1. Introduction

The liberalization of the energy market in the late 1990’s has changed the energy market to a dynamic and competitive market (EurActive, 2009; Jamasb, 2005) As a result energy companies are forced to create competitive advantages to safeguard their market position. Energy companies broaden their product portfolio to create competitive advantages and better customer relationships.

To broaden the product portfolio energy companies invest in downstream customer interfacing business in energy-related markets. Energy companies lack certain resources that are required to commercialize the energy-related products and services successfully (Ireland, 2002). These required resources can be sourced through organizational relationships (Madhak, 2002).

There is no guaranteed success for entering into organizational relationships. Therefore, it is strategically significant to control and manage organizational relationships through appropriate organizational governance structures.

An organizational governance structure is defined as a structure through which organizational relationships are managed and controlled (Nooteboom, 2004; Williamson, 1979). The purpose of an organizational governance structure is to guarantee the strategic value creation and appropriation by mitigating the risks that are faced by the organizational relationships.
Organizational governance structures can foster innovation and enhance competitiveness, but can also hamper success or overstretch the limited resources of the company (Hutzsenreuter, 2011). Therefore, it is vital to design appropriate organizational governance structures.

Designing an appropriate organizational governance structure is challenging due the complexity related to decision-making processes concerning organizational governance structures. The focus of this research is to design a decision framework that supports decision-maker in designing organizational governance structures. A framework is chosen as support tool because “Frameworks identify the elements and general relationships among these elements “(Ostrom, 2011).

The central research question is: Which aspects should be considered in a framework for the support of decision-making processes concerning organizational governance structures for downstream customer interfacing businesses in energy-related markets?

Section 2 gives an overview of the methods and methodologies that are used to design the framework. Section 3 elaborates on the complexity within decision-making processes concerning organizational governance structures. The designed decision framework that grasps the complexity is discussed in section 4. Section 5 describes the application of the framework. Section 6 and 7 describe the concluding remarks, the theoretical discussion on the research and framework, and provide practical as well as scientific recommendations.

2. Methods and methodologies

Various methods and methodologies are used to analyze the complexity within decision-making processes concerning organizational governance structures and to design a decision framework that grasps this complexity. The main methods and methodologies are: a case study analysis, the META-model combined with the design approach of Peffer (2007), a workshop, and a survey.

Case study analysis

Two cases from an energy company are analyzed to gain practical insights in organizational governance structures for downstream customer interfacing businesses in energy-related markets.

Case 1 concerns an organizational relationship between the energy company and an IT start-up. Through this organizational relationship a home energy management system is provided to customers. Home energy management systems are systems that provide information to the customers regarding their energy consumption.

Case 2 concerns an organizational relationship between the energy company and a subsidiary through which heat and ventilation applications are provided to customers.

The data is collected through various sources to triangulate data and safeguard the construct validity of the case study analysis. For internal validity a theoretical logic model is designed, that is discussed below. For external validity two cases are analyzed. A case study protocol and database are used to safeguard the reliability of the research data.

Theoretical lens

The cases are analyzed through the theoretical lens of Transaction cost economics (TCE) and the extended version of the Resource based view (RBV).

TCE has been chosen as the primary theory since it has been the dominant theory to analyze the choice for a particular organizational governance structure (Das & Teng, 2000; Leiblein, 2003). TCE analyzes organizational governance structure from a cost-efficient perspective. However, organizational governance structures should not only secure cost-efficiency but also
create value in order to create competitive advantages. TCE is therefore extended with the RBV. RBV concentrates on the resources that are present in organizations (Barney, 1990; Dunne, 2009). To strengthen the prescriptive nature of RBV, RBV is extended with the reasoning of the Resource dependency theory (RDT) (Hillman, 2009). RBV and RDT together provide valuable insights regarding the management and control of organizational relationships from a resource perspective.

The interview questions are prepared based on theoretical constructs derived from TCE and RBV such as asset specificity, environmental uncertainty, behavioral uncertainty, and resource dependency. Prior to constructing the questionnaires these theoretical constructs are operationalized, see appendix A.

**Design approach**

The combination of the Meta-model (Herder, 2004) and design approach of Peffer (2007) is used to define the steps through which the framework is designed. Together these design approaches provide structure to the design of the framework. In addition to the structured design approach, a workshop is held were experts provide input for the decision framework and a survey among several experts is taken to evaluate the content and logic of the framework.

3. **Determinants of the complexity**

To support the decision-making process concerning organizational governance structure, it is necessary to frame the complexity in this decision-making process.

This research identified five main reasons that explain the complexity in decision-making processes concerning organizational governance structures:

First, due to the wide variety in organizational governance structures there are various organizational governance structures that can be implemented to manage and control organizational relationships that are embedded in a certain context. There is not one specific organizational governance structure that is appropriate for a specific organizational relationship embedded in a certain risk context.

The variety in organizational governance structure is due to the variety in elements that underpin organizational governance structures and the possible combinations between these elements. This research focuses on the combination of a financial structure with different control mechanisms, and type of trust that form the organizational governance structure.

The financial structures are categorized along the market-hierarchy continuum in four categories: Merger and acquisition, equity alliance, non-equity alliance, and buyer-supplier contract. In Table 1 the control characteristics of the financial structure is explained.

Control mechanisms are categorized as: output-, process-, and social control mechanisms. Output control mechanisms specify the outputs that need to be realized and monitor the achievements of the targets through performance indicators. Process control mechanisms specify how the organizations should act and monitor the behavior of organizations in order to determine whether the behavior of the organizations comply with the pre-specified collaboration agreements (T. K. Das, Teng, B.S., 2001; Dekker, 2004). Social control mechanisms are soft mechanisms through which goal and preference incongruence can be reduced. The purpose of social control is to create shared norms, values, and beliefs (T. K. Das, Teng, B.S., 2001).
Trust is defined as follows: “Trust may concern a partner’s ability to perform according to the intentions and expectations of a relationship or his or her intentions not to defect” (Nooteboom, 1997). It is categorized in goodwill and competence trust. Competence trust implies trusting the partner in his or hers competence and capability to accomplish the given tasks. Goodwill trust implies trusting the partner cooperates in good faith rather than behave opportunistically (T. K. Das, Theng, B.S., 2001).

<table>
<thead>
<tr>
<th>Financial structure</th>
<th>Hierarchical</th>
<th>Hybrid</th>
<th>Market</th>
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<tbody>
<tr>
<td>Merger and acquisition</td>
<td>Equity alliance such as: Joint venture</td>
<td>Non-equity alliance such as: Franchising Licensing Long-term contracting</td>
<td>Arm-length contract: Buyer-Supplier contract</td>
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</table>

Control is exercised through the authority. Orders are given and based on performances subordinates are evaluated. Information asymmetry can be prevented but downside is over bureaucratization and inefficiency because there are no market forces. Hybrid financial structures exercises control through equity. The higher the equity shares of the focal company in the partner, the greater the focal company can exercise control on the partner because equity gives financiers voting powers, access to information and rights of control. Control is minor compared to hierarchical and hybrid. Control is rather driven by market forces than through authority and equity.

<table>
<thead>
<tr>
<th>Control mechanism</th>
<th>Output control: Volume targets or Return on investment</th>
<th>Process control: Procedure targets or Training</th>
<th>Social control: Participatory decision-making processes</th>
</tr>
</thead>
</table>

Source: (Das & Teng, 2000; Dekker, 2004; Hendrikse, 2001; Smith, 2008; van de Vrande, 2009)

<table>
<thead>
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<th>Table 2 factor characteristics</th>
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<td>Market</td>
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<td>Market maturity</td>
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<td>Market complexity</td>
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<td>Degree of competition</td>
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<td>Product demand developments</td>
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Source: (Barney, 1990; De Vita, 2010; Fernandez-Olmos, 2010; Lockett, 2009; Lohtia, 1994; Melvor, 2009; Nietsen, 2011; Nooteboom, 2004; van de Vrande, 2009)

<sup>1</sup> The resources are categorized as technical, commercial, financial and social resources. Technical resources are the technologies and the ability to come up with new technologies, e.g. technical knowledge (Dunne, 2009). Commercial resources are the resources that support the marketing and sales of the product and service. Social resources represent the connections the company has with other companies.
Second, there are many aspects that need to be considered in order to design appropriate organizational governance structures. Based on the case study analysis the characteristics of four factor categories are identified as important aspects to consider. The four factor categories are: market, product, actors, and resources. Table 2 gives some examples of market, product, actor, and resource characteristics that matter in decision-making processes concerning organizational governance structures. The variety in aspects and the relations between the aspects contribute to the complexity.

Third, decision-making processes concerning organizational governance structures take place in multi-actor setting. The involved actors are the organizations that consider the organizational relationship and various departments within these organizations. Due to the divergent goals and interests of the involved actors, that are not always easy to align, the process is thus a complex joint decision making process (de Bruijn, 2008).

Fourth, the design of organizational governance structures is not taken at a certain moment in time. The underlying reason is the need for adjustment or even a complete redesign over time in order to cope with changes in the environmental and organizational context in which the organizational relationship is embedded. If organizational governance structures are not adjusted over time they lack to mitigate changes in risks that organizational relationships face. Thus, decision-making processes concerning organizational governance structures are rather dynamic than static which increases the complexity.

Fifth, the decision-making process consists of various decision arenas. The topics of decision arenas differ and they are not taken along a chronological sequence. The iterations between the decision arenas and the impact they have on one another increases the complexity in the decision-making processes.

This complexity in the decision-making process concerning organizational governance structures makes it hard for decision-makers to design appropriate organizational governance structures. The decision framework needs to grasp this complexity in a simplified matter in order to make it easy for decision-makers to grasp the relevant aspects for the decision-making process concerning organizational governance structure.

4. Decision framework

The complexity of the decision-making process concerning organizational governance structures influences the design of the decision framework.

The purpose of the decision framework is to provide guidance. The decision framework does not prescribe a single organizational governance structure that can be implemented for a certain organizational relationship embedded in a certain risk context, because of the wide variety of characteristics of the four factor categories and the wide variety in risks.

This wide variety in factor characteristics and risks make each case unique. Therefore, it is impossible to design a generic as well as a specific framework that prescribes a certain organizational governance structure for all possible organizational relationships. In addition, the negotiation process is not considered in the framework which influences the choice for a particular organizational governance structure as well.

Thus, the framework focuses mainly on how to translate the factor characteristics into appropriated organizational governance structures by identifying steps and logics that guide decision-makers.
As shown in figure 1 the designed decision framework consists of three layers:

- Outer layer: Factor characteristics
- Middle layer: Risk
- Inner layer: Organizational governance structure

The following three steps support decision-makers to design the organizational governance structure based on factor characteristics. The steps are:

1. Identify factors characteristics of the four factor categories
2. Identify risks and categorize the risks in output and process risks
3. Design the organizational governance structure by choosing a financial structure, different control mechanisms, and type of trust.

Risks are categorized as output or process risks. Output risk concerns the prospect of achieving strategic goals. It is defined as the probability and consequence that output targets are not met even though the collaboration is satisfying. Process risk concerns the behavior of the involved actors and is defined as the probability and consequence of not having a smooth collaboration among actors because of opportunistic behavior.

The theoretical constructs of TCE and RBV are used to translate the factor characteristics into two categories of risks.

For example, the maturity characteristic of the products provides indications regarding product technological uncertainties. The more mature the product, the lower the product technological uncertainty. Lower technological uncertainties imply lower output risk.

Figure 1 Decision framework
A risk matrix is designed to support the decision framework. As shown in figure 2, the risk matrix consists of two axes: output and process risk, and out of four corners. Each corner shows the preferred combination of a financial structure, different control mechanisms, and type of trust based on the level of risks. The main conclusions of the risk matrix are:

- When both risks are high an acquisition in combination with social mechanisms and all types of trust is preferred. In high risk circumstances control is desired but at the same time trust. Innovations require trust and trust has a positive effect on innovation performances. Acquisitions provide the most control compared to the other financial structures and for that reason an acquisition is preferred. Trust on the other hand reduces when the organizational governance structure is only control-based. To simulate the development of trust, social control mechanisms should be implemented. However if the process and output risks are really high, it is better to question whether the desire to provide the product and service to market is appropriate. If the product and service have the potentials to increase organization’s strategic value proposition, it is recommended to gain knowledge prior the organizational relationship.

- When the output risk is the main concern a non-equity alliance in combination with process control and competence trust is preferred. It is important to have flexibility to end organizational relationships when environmental uncertainties, such as uncertainties
regarding technological developments, are high. The process control mechanisms and competence trusts are the mechanisms to steer the partner in the right direction.

- When the process risk is the main concern an equity alliance in combination with output control and goodwill trust is preferred. Through equity, mutual hostage is created which reduces behavioral uncertainties. Furthermore, equity alliances give access to control which is needed to control the behavior of the partner. With goodwill trust behavioral uncertainties can be further reduced. While equity alliance and goodwill trust mainly cope with the behavioral uncertainties, it remains important to control the output and for that reason output control mechanisms are also preferred in this context.

- When both risks are low a buyer-supplier relationship in combination with process and output control mechanisms is preferred. Trust is not needed since the organizational relationship can be fully controlled by the control mechanisms. The control mechanisms can be defined precisely since the risks are low, and the knowledge regarding the risks is available.

As discussed decision-making processes concerning organizational governance structures are rather dynamic than static. The dynamics is taken into consideration in the matrix along the degree of risk.

The degree of risk is influenced by the changes in the factor characteristics. For example new innovative product develops and can become mature and standard over time. This product development changes the output risk perception. The degree of risk also depends on the risk perception of the decision-maker. The risk perception of the decision-makers is influenced by the knowledge decision-makers have in-house or the capability they have to retrieve knowledge from external resources. And finally, the degree of trust that evolves between the actors also reduces the risk perception. The higher the goodwill trust, the lower the process risk is perceived. The higher the competence trust, the lower the output risk.

5. Application of the framework

The framework can function as a support tool during decision-making processes concerning organizational governance structures. The decision framework can support decision makers in two ways:

- To design organizational governance structures
- To evaluate organizational governance structures

It is important to acknowledge the limitations of the framework when using the framework. An important limitation of the framework is that it prefers one particular organizational governance structure for one of the four risk contexts considered in the risk matrix. It lacks to illustrate that various organizational governance structure can be implemented as long as the risk are mitigated in an acceptable way. Another limitation of the framework is that it does not consider the determination of the strategic value proposition, finance, and customer segment that are also valuable to get complete overview of the business expand possibilities through downstream customer interfacing businesses in energy related markets. Therefore, when using the framework to design appropriate organizational governance structures decision-makers should define the strategic value proposition prior to designing organizational governance structures. By defining the strategic value proposition prior the scope of analysis can
be narrowed. When the framework is used for evaluating purposes, the output and/or process performance indicators should be measured prior in order to narrow the scope of the analysis.

The activities designing and evaluating organizational governance structures can be executed in an iterative process and strengthen each other.

6. Conclusions and practical recommendations

Decision-making processes concerning organizational governance structures are complex. This complexity is caused by the variety in organizational governance structures, the amount of aspects that need to be considered, the fact that a joint decision should be taken, the dynamic within the decisions, and finally the various decision arenas that do not have a chronological order, that interaction with one another, and influence each other.

In this research a decision framework is designed that grasps the complexity and provides structure. With this structure the complexity is simplified.

In addition to the design of the decision framework and risk matrix that together provide structure to the decision, there are other key remarks regarding the management and control of organizational relationships. These key remarks are based on the findings derived during the desk research, case study analysis, and workshop:

- Even though a throughout statistical analysis has not been conducted in this research, the factor characteristic ‘product maturity’ has shown an apparent relation with the choice for a particular financial structure. The more mature the product is, the less hierarchical the financial structure.
- Organizational relationships are accompanied with resource dependency. Within the two organizational relationships that are analyzed in depth, the energy company is mostly depended on the technical resources of the partner. The partner, on the other hand, is dependent on the commercial resources of the energy company. In some cases, they are mutually dependent but the dependency can also be disproportionate. The dependency of the energy company is greater compared to the partner, especially when the technical resources of the partner are strategic. This resource dependency can lead to a lock-in effect, which can be intensified by the organizational governance structure.
- The case study analysis has shown that the design of organizational governance structures is subject to path dependency. It is impossible to neglect previous organizational governance structures and start from a blanket sheet. In particular were the systems are heavily integrated. Path dependencies make it impossible to redesign organizational governance structures completely from scratch. It can even intensify the lock-in effect further.
- The adjustments or even new agreements that are designed during the operation phase are not always directly documented. These undocumented adjustments and agreements can get lost which is not desirable, especially not when there is an intention and opportunity to act opportunist by one of the actors. Without documented agreements, actors that misbehave cannot be punished. And finally, undocumented agreements are also not desirable when one of the actors decides to change partners because if they are not
documented, it can be possible that crucial agreements that provide success get lost, and as a consequence that decision-makers should design new agreements which can be time consuming and costly.

Practical recommendations

Due to the complexity in the decision-making processes and the strategic importance of organizational governance structures, it is recommended to use the framework to support decision-making processes in designing and/or evaluating organizational governance structures.

As mentioned does the framework not consider that various organizational governance structures can be implemented to manage and control an organizational relationship. In other words, it is possible to deviate from the organizational governance structure that is given as the preferred structure in the risk matrix. When deviation is considered, it is vital to acknowledge that a certain organizational governance structure can handle a certain degree of output and process risks. If decision-makers decide to deviate from the advised organizational governance structure, an analysis must be performed to determine if the deviation between the level of risks, and the level of risks that are managed and controlled by the chosen organizational governance structure, is acceptable. Extra costs for later adjustments in the organizational governance structure or financial losses might be prevented by this analysis. Or decision-makers should analyze if the deviation is possible due to the implementation of some measures, such as process standardization that may reduces process risks.

Furthermore, it is recommended that organizational governance structures are evaluated frequently, and that undocumented adjustments and agreements that are designed during the operation phase are documented during the evaluation process.

To prevent lock-in effect that is partly caused by resource dependency and path dependency it is vital that decision-makers design organizational governance structures in such a way that exit options, without great financial losses or other hurdles, are created.

And finally, to gain more benefits of the knowledge in-house regarding the management and control of organizational relationships, it is recommended that energy companies use the framework to create a common procedure and language among employees. Having a common language can stimulate information sharing and learning within the company which valuable to the decision.

7. Discussion and further research recommendations

The complexity in decision-making processes concerning organizational governance structures is analyzed through two research fields: organizational management and decision-making processes in multi-actor setting. The gap between these research fields has not yet been researched neither combined in order to design a framework that supports decision-makers during the decision-making process.

Based on academic calls, TCE and RBV are integrated to get insights in the management and control of organizational relationships. To gain more insights from a resource perspective, RBV is extended with RDT reasoning.

TCE and RBV are compatible when it comes to the management and control of organizational relationships, which is explainable with Williamsons’ four layer model of institutions. The first layer of the model refers to the informal
institutions such as traditions, norms, and values. The second layer refers to the formal institutions such as law and regulations. The third layer refers to the institutional arrangements such as contracts and governance structures and the fourth layer is dedicated to the actors (Groenewegen, 2007; Kunneke, 2007). With the four layer model of institutions, on the one hand, and TCE, on the other hand, it becomes apparent that TCE is applicable to analyze the third layer. RBV, on the other hand, is more concentrated on the company’s resources, its characteristics, and the allocation of these resources in order to gain competitive advantage, and thus applicable to analyze the fourth layer (Kunneke, 2007).

This observation, TCE supporting the analysis of the third layer and RBV the fourth layer, is retrievable in the decision framework. The outer layer of the decision framework is based on TCE and RBV and the closer you get to the inner layer, the more dominant TCE’s reasoning gets.

TCE and RBV are economic theories that lack to consider the characteristics of decision-making processes and for that reason the second research field is considered. Due to the fact that the characteristics of the decision-making process are analyzed, trust is considered next to the economic theories because organizational relationships are embedded in a social system. Trust plays an important role in the middle and inner layer of the decision framework. In the middle layer the degree of trust causes partly the dynamic in decisions concerning organizational governance structures. In the inner layer the type of trust plays a vital through its complementary effect. In addition to trust, process elements are added to the research. Process elements provide better understanding of the complexity and how the decision framework can support the decision-making process.

The combination of the research fields provides insights in the decision-making process from an internal versus external, as well as, economic versus social perspective. In addition, insight regarding the dynamic in these decisions is provided.

Summarized, the theoretical contribution of this research is the verification of the usefulness of the integration of TCE and RBV, with the extension of RDT, for the analysis of organizational governance structures. These theories are further extended with trust for the design of the decision framework in order to take a social aspect and its effect on these decisions into account. And finally, process elements are also taken into account to gain a better understanding regarding the support capability of the framework.

To conclude, the link between the research fields organizational management and decision-making processes in multi-actor setting are linked and provides valuable insights. Based on these insights a new framework is designed which is supported by a risk matrix. The decision framework and the risk matrix, that together integrate the mentioned research fields, contribute to theoretical discussions regarding decision-making processes concerning organizational governance structures. They integrate the complexity of the two research fields in a simplified matter.

Further research recommendations

To integrate the complexity of the two research fields further, it is recommended to execute an in-depth analysis regarding the interests of the departments and their impact on the decisions. This research is focused on the inter-organizational level, where the relation between two organizations is analyzed, and intra-organizational level, where the relation between the parent company and subsidiary is analyzed. This research did not focus on the departments
and business units that also play a vital role in the decision-making process.

Nor does this research focuses on internal organizational structures that structure the formal and informal cooperation paths among departments. To gain more in-depth knowledge regarding internal organizational structures between departments, Mintzberg’s research concerning organizational structures is recommended. Further research should analyze whether these organizational structures impact decision-making processes concerning organizational governance structures that manage and control organizational relationships.

Further, this research focuses only on bilateral organizational relationships and does not consider organizational networks. Bilateral organizational relationships are often established in an organizational network. Therefore, further research that considers network theories, such as the Social network theory, is recommended to strengthen the framework and make it useful for organizational networks.

And finally, a statistical analysis on multiple cases can also strengthen the framework. The statistical analysis is recommended to analyze whether the relation between the factor characteristics and the organizational governance structure lead to a successful organizational relationship in practice. Multiple organizational governance structures should be analyzed on the conformity of the organizational relationships with the logic of the designed framework and on their performance. A statistical analysis can also be valuable to analyze whether there is a ranking among the factor characteristics relative to organizational governance structures.


### Appendix A Theoretical constructs

#### Asset specificity

For the operationalization of asset specificity, it is crucial to analyze whether the investments are specific for that particular organizational relationship. Either investments in employees to execute the activity that the organization contributes to the organizational relationship or investments in equipments to provide customized products for the partner are specific investments.

#### Uncertainties

*Environmental uncertainty* is measured through the environmental uncertainties van de Vran de (2009) defines; environmental turbulence and technological newness. Environmental turbulence concerns the market, and technological newness concerns the product developments.

*Behavioral uncertainty* is measured through opportunistic behavior. Nooteboom (2004) divides opportunistic behavior in the opportunity to act opportunistic and the intention to act opportunistic. When
the opportunity is there and the intentions are high, it is most likely that opportunistic behavior is present. The operationalization of opportunistic behavior is based on Nooteboom’s (2004) reasoning.

Resource dependency

Resource dependency is measured through the resource richness and presence of strategic resources. To measure the resource richness the financial, commercial, technical and social resources are measured. Strategic resources are measured with the four resource attributes defined by Barney (1990).

Table 3 shows measurable constructs through which the theoretical constructs are measured in this research.

<table>
<thead>
<tr>
<th>Theoretical construct</th>
<th>Measurement criteria</th>
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<tbody>
<tr>
<td>Asset specificity</td>
<td>Physical</td>
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<td></td>
<td>Degree of product customization</td>
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<tr>
<td></td>
<td>Human</td>
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<td></td>
<td>Investments in human capital in order to execute the activities for which it is responsible</td>
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<td></td>
<td>Tacit knowledge</td>
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<td></td>
<td>Brand-name capital</td>
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<td></td>
<td>Brand-name reputation of both organizations</td>
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<td></td>
<td>Customer interface</td>
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<tr>
<td>Site</td>
<td>Local coverage through amount of branches</td>
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<td>Temporal</td>
<td>Maintenance management complexity</td>
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<tr>
<td>Dedicated</td>
<td>Specific investments for the organizational relationship</td>
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<td>Uncertainties</td>
<td>Environmental</td>
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<td>Market maturity</td>
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<td>Degree of competition</td>
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<td>Product maturity</td>
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<td>Technology characteristics of the product</td>
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<td>Market complexity</td>
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<td>Behavioral</td>
<td>Company size of both organizations</td>
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<td>Product complexity</td>
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<td></td>
<td>Strategy overlap among organizations</td>
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<td>Resource dependency</td>
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<td>Resource dependency</td>
<td>Resource richness</td>
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<td>Technical resources</td>
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<td>Strategic resource</td>
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