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Portfolio of Business Relations: The Darmstadt Collaboration Diamond

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Abstract

This paper develops a tool to assess the rent-earning potential of relationships in order to enable both firms and suppliers/service providers to derive strategic actions. The "Darmstadt Collaboration Diamond" integrates the market-based, resource-based and relational-based view of strategy to derive the collaborative requirements and the collaborative competence within the relationship. On that basis we show examples for strategic actions with examples from supply chain management.

1 Introduction

The management of relationships has been receiving the attention of managers and researchers for several years.¹ There are examples that especially within the supply chain management approach the management of relationships is seen as a way for companies not only to achieve cost reductions or profit improvements on the expense of their network partners but rather make the network as a whole more competitive.²

In most cases it is very unlikely in the modern economy focusing on the division of labour that one company can fulfil all requirements on its own. There will be a need of other parties which supply parts or services in order to fulfil the market requirements. Therefore businesses can no longer afford not to partner where it makes sense and they cannot afford to partner poorly. Firms that recognize the value-creating potential of their relationships can seize opportunities that others will miss. In markets of intensifying cost pressure and accelerating innovation cycles the stakes are already too high for substandard partnering initiatives. The businesses of the future will only be able to survive in using the potential of interconnected development with their partners. Consequently supply chain leaders will need to take into account not only their own companies' core competencies but also those of current and potential supply chain partners. They must be able to look beyond investments in their own facilities, infrastructure and resources to include those of their key partners.

To provide managers with a methodological framework for relationship evaluation and design respectively for the reconfiguration of relationships according to their potential of creating relational rents we will develop a portfolio approach leading to the "Darmstadt Collaboration Diamond" (DACODI). This structured analysis answers the following main questions we want to deal with:

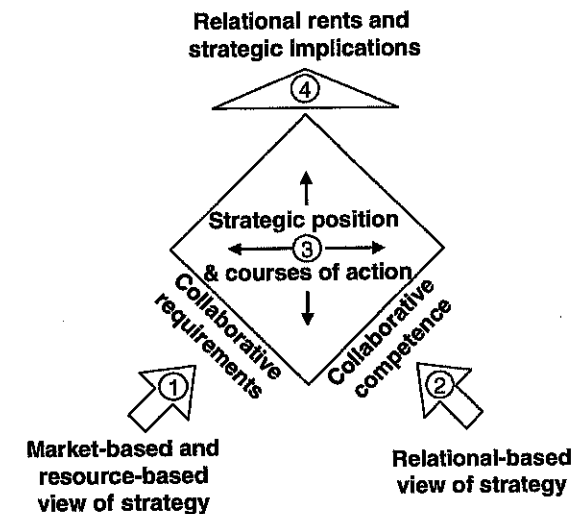
- (1) How can the rent-earning potential of relationships be assessed?
- (2) Which actions can be taken in order to realize these rent-earning potentials?

To achieve this, this paper is structured as shown in figure 1.

¹ BURNES/NEW (1996); DYER/SINGH (1998); CROOM/ROMANO/GIANNAKIS (2000); JAP (2001).

² PFOHL (2000); PFOHL/BUSE (2000); ROMANO (2003), p. 119.

Figure 1: Structure of Argumentation



First we will derive the Collaborative Requirements from the identification of resource gaps (1). This is based on a strategic management approach taking into account both the market-based and resource-based view of strategy. Through adding the Collaborative Competence derived from the relational-based view of strategy as a second dimension we will develop a method to characterize the relations between firms as a source of relational rents (2). These two dimensions are combined in the DACODI. By positioning the relationship in the DACODI it is possible to derive strategic implications for the involved companies (3). The explanations will be illustrated with examples from supply chain management especially focussing on the relationships between companies and their suppliers and logistics service providers (4).

2 Collaborative Requirements

In this chapter the identification of resource gaps and the assessment of the collaborative requirements will be presented. The identification of resource gaps is based on a strategic management approach taking into account the market-based and resource-based view of strategy.

2.1 Market-based and Resource-based View of Strategy

The market-based view (MBV) uses the *Structure-Conduct-Performance-paradigm* (SCP-paradigm) stating that the market structure (e.g. number of buyers and sellers, product differentiation, vertical integration) influences the conduct of the firms in the market.³ In this outside-in perspective companies adapt their pricing, R&D, advertising, production, choice of technology, etc. to the industry structure. Finally this influences the performance both of the firms and the market, measured as profits, production efficiency, product quality, technical progress etc. One of the major frameworks for the industry analysis based on the SCP-paradigm is Porter's five forces model.⁴ In this model the competitive advantage is derived from the fit of a firm's strategy with the external economic environment, i.e. "market positioning".⁵

The resource-based view (RBV) or *Resource-Conduct-Performance-paradigm* (RCP-paradigm) uses an insight-out perspective. Following the RBV competitive advantages derives from unique and inimitable resources and competencies which result in a superior customer benefit. The general objective is therefore the development and utilisation of these core competencies with an emphasis on a long-term planning horizon.⁶

Rents in the Market-based and Resource-based View of Strategy

To assess the competitive advantage in the market-based and the resource-based view the rent earning potential can be used. There are two basic types of rents related to the market-based and the resource-based view:

- *Monopoly rents*: If a firm is able to establish a monopoly due to intra-industry mobility barriers like for example spatial concentration or product differentiation it can maximize its profits and thus realize monopoly rents. The source of this type of rents is the conscious restriction of output relative to competitive levels.⁷ The monopoly can be secured by state intervention or other market entry barriers. The higher the entry barriers the higher is the likelihood of collusive behaviour of the firms.⁸

³ MASON (1939); BAIN (1968).

⁴ PORTER (1980).

⁵ PORTER (1981), p. 616; HARRIGAN (1986); CAVES/GHEMAWAT (1992).

⁶ WERNERFELT (1984); CONNER (1991); BARNEY (1991); MAHONEY/PANDIAN (1992); AMIT/SHOEMAKER (1993).

⁷ PETERAF (1993), p. 182.

⁸ BAIN (1968).

- *Ricardian rents*: If a firm controls superior productive factors which are scarce and cannot be easily expanded this firm can realize super-normal profits through lower costs which are called Ricardian rents.⁹ The source of this type of rents is an inherent scarcity of resource supply. The model of the Ricardian rents is usually applied to resources which are strictly fixed. But it can also be thought of with respect to quasi-fixed resources which may be limited in the short run, but can be renewed and expanded incrementally while the firm uses them, as for example the knowledge-base of the firm.

Sustainable Competitive Advantage

Thus to reach sustainable competitive advantage it is necessary to assess both the market position and the rent-earning potential of the resources. Sustainable competitive advantage can only be reached with a combination of both. To decide whether the market position is of strategic value and can be seen as a "success position" we need to answer three questions:

- (1) Where are strategically relevant positions within the market environment? This tells us something about the attractiveness of the market.
- (2) Can we reach this position? This refers to market entry barriers.
- (3) Is the position sustainable? Here we refer to mobility barriers within the market and the possibility of differentiation from competitors.

The answers to these questions lead to sustainable competitive advantage only in combination with the following three questions derived from the resource based view ("success potentials"):

- (1) What is the potential of market? This refers to relevance, heterogeneity and shortage of resources.
- (2) Can we realize the market potential? We need to assess property-rights, our negotiation position and the level of involvement.
- (3) Is this potential sustainable? Here we need to consider the durability, transparency, transferability and replicability of resources.¹⁰

With this we can now use a combination of the market-based and the resource-based view to identify resource gaps.

⁹ RICARDO (1817); PETERAF (1993), p. 180.

¹⁰ GRANT (1991), p. 124.

2.2 Identification of Resource Gaps

There are some approaches to integrate the market based and the resource-based view in order to find a fit between the competitive forces of the market and the firm's resources and capabilities.¹¹ Following GRANT it can be stated that through the appraisal of industry key success factors or market requirements and the organisational resources and capabilities it is possible to derive strategic implications with the aim to gain competitive advantage.¹² This is accomplished by identifying gaps between market requirements and the firm's resources and capabilities. These can then for example be filled by collaborating with other companies, which leads us to the question of collaborative requirements.

Market requirements can be identified using models to analyse the industry environment. There are for example industry analysis models like PORTER's five forces or approaches using game theory models. When approaching the question of market requirements there are also some "straightforward and commonsense" approaches like the identification of key success factors.¹³ This is based on two questions:

- *Market-based view:* What do our customers want?
- *Resource-based view:* What does the firm need to do to survive competition?

In order to answer the first question we need to identify the customers and their needs. It is necessary to find out, on what basis they select the offerings of one company in preference to those of others. From this starting point it is possible to derive the key drivers to influence those factors. The second question needs to be answered by an in-depth analysis of the competition. This includes the drivers and the main dimensions of competition as well as its intensity.

The second step is the analysis of the resources and capabilities of the firm. Following the resource-based view of strategy the internal factors are a secure foundation for long-term strategy.¹⁴ In order to assess the firm's resources they can be classified into tangible and intangible resources. The first include financial and physical resources and are described for example by key indicators like debt to equity ratio, credit rating, age of capital equipment or resale value of fixed as-

¹¹ BARNETT/BURGELMAN (1996).

¹² GRANT (1998), p. 111.

¹³ GRANT (1998), p. 76.

¹⁴ GRANT (1998), p. 108.

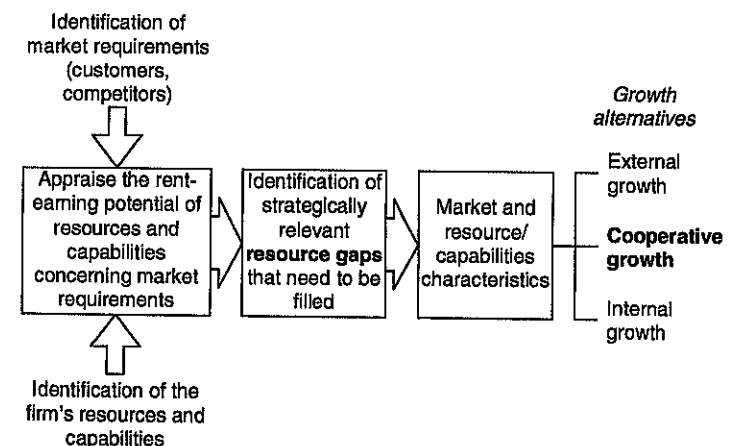
sets.¹⁵ Intangible resources are technological and human resources and reputation of the firm which can also be described by certain key indicators.

By appraising the rent-earning potential of these resources and capabilities concerning the market requirements we are able to identify resource gaps which need to be filled in order to achieve sustainable competitive advantage.

Depending on the characteristics of the market and the resources and capabilities there are three ways to achieve this. In mature markets with existing knowledge and other firms already having the needed resources and capabilities there is a tendency to close the resource gap by merging or acquiring another firm which we call "external growth". Another possibility is to develop the resources from within the firm. If there is not enough time or knowledge to base this "internal growth" on, the third alternative is "cooperative growth". This is usually also the case in highly innovative markets, with short product life cycles and knowledge that is not easy to imitate. Firms are then able to close the resource gap by cooperating with others. This also needs to be taken into consideration when acquisition is not possible or desirable such as in cross-border situations or when there are financial limitations.

Figure 2 shows the necessary steps for identifying the resource gaps.

Figure 2: Identification of Resource Gaps



¹⁵ GRANT (1998), p. 114.

In order to apply this in the DACODI we use a portfolio approach to assess the collaborative requirements.

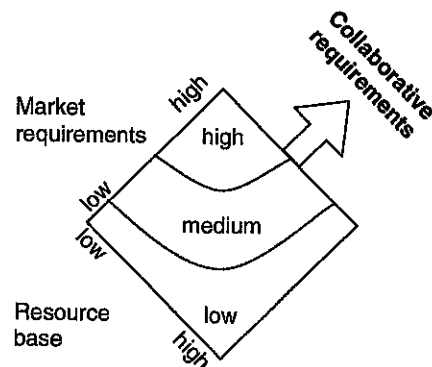
2.3 Identification of Collaborative Requirements

By using a portfolio approach, shown in figure 3, it is possible to indicate the resource gap and by that derive the extent of the collaborative requirements.

From the analysis of the market requirements and the firm's resource basis we can classify them as high, medium or low. If the market requirements are ranked as low, the collaborative requirements are also always ranked as low, because in this case they can be easily fulfilled by any partner on a transactional basis or even by the firm itself. If the resource base of the firm is classified as high the collaborative requirements are also always ranked as low, because in this case the firm can fulfil these requirements on its own, i.e. the resource gap is small to non-existent.

Only in the case that the market requirements are ranked as high and the resource base of the firm as low then do we classify the collaborative requirements as high. An example is that the market (the companies customer) requires a special transport of the products, e.g. in a closed-looped-cooled supply chain with specific needs concerning the documentation. In the case that the producer of the goods does not have the resources to organize such a transport his resource base concerning this service would be ranked as low, while the market requirements are high, thus leading to high collaborative requirements.

Figure 3: Collaborative Requirements



3 Collaborative Competence

In this chapter the relational-based view of strategy will be presented as a basis for the assessment of the collaborative competence of a (current or potential) partner.

3.1 The Relational-based View of Strategy

The relational-based view of strategy (RelBV) can be seen as a "complementary extension" of the resource-based view.¹⁶ The recognition of the fact that a firm's valuable resources may extend beyond a firm's boundaries leads to the question, how these interfirm linkages can be analysed. The key assumption is that a pair or network of companies can realize relational rents (*Relationship-Conduct-Performance*). Relational rents are actually quasi-rents which are defined as "...returns that exceed a factor's short run opportunity cost ...<and> are an excess over the returns to a factor in its next best use".¹⁷ A special form of relational rent is the *Coleman-Rent*. It is based on the stability and quality of relations between the partners, but still having the option of referring to new partners in case of problems that cannot be solved jointly.¹⁸ Networks which generate Coleman-rents are thus characterised by "the flexibility to explore new relationships and opportunities, but within a relatively closed clique that supports long-term trust among members".¹⁹

The links between the firms are a possible source of competitive advantage. Therefore the primary object of analysis is no longer the firm but the network. Additionally the generation, maintenance and modification of the competitive advantage and/or the potential of value generation are firmly embedded in the network.²⁰ This relational view has been developed by DYER/SINGH in order to examine how relational rents are earned and preserved. As a result the relational view offers firm-level strategies that may contradict the prescriptions offered by the RBV and the MBV.

Within the relational view there are four potential sources of interorganisational competitive advantage which arise due to cooperative relations between compa-

¹⁶ DUSCHEK (2004), p. 61.

¹⁷ PETERAF (1994), p. 155.

¹⁸ KOGUT (2000), p. 414.

¹⁹ Ibid.

²⁰ DUSCHEK (2004), p. 66.

nies. Additionally to the intraorganisational isolation mechanisms known from the RBV there are also typical interorganisational barriers of imitation.²¹

Sources of relational rents

Relational rents are characterized as supernormal profits, which only exist in exchange relationships that cannot be generated by any of the involved companies on its own. The relational rents are created through the joint idiosyncratic contributions of the alliance partners. The main sources of relational rents are the combination, exchange or investment in (1) interfirm relation-specific assets, (2) interfirm knowledge-sharing routines and (3) complementary resource endowments. Additionally the employment of (4) effective governance to lower transaction costs or to permit the realization of rents through a synergistic combination of assets, knowledge or resources is seen as a possible source of relational rents.²²

(1) *Interorganizational relation-specific assets*: The specialization of assets is a prerequisite for the realization of relational rents. According to WILLIAMSON three types of asset specificity can be distinguished: site specificity, physical specificity and human-asset specificity.²³ Through investments in these fields it is possible to generate interorganizational competitive advantages:

- Site specificity can be applied in the case of successive production stages which are located close to one another. In comparison with other firms or networks there is a potential to create specific procedural differences leading to "economies of scope". Long-term relationships with high transaction volumes are suited best for the realization of site specificity.
- Physical specificity refers to transaction-specific capital investments in order to tailor processes to the partner's requirements. This applies e.g. to special transportation equipment or packaging material which can be used only for a specific partner.
- Human-asset specificity is connected to relationship-specific know-how. It is accumulated in long term relationships and is increased through the experience of the people working together and learning about the partner's idiosyncratic systems and procedures. By establishing common language, knowledge and routines etc. the number of communication er-

²¹ DYER/SINGH (1998), p. 661.

²² DYER/SINGH (1998), p. 662.

²³ WILLIAMSON (1985).

rors is reduced and communication is becoming more effective and efficient, which can be used for quality enhancement and a faster time to market.

- (2) *Interfirm knowledge-sharing routines*: To achieve relational competitive advantage it is necessary to develop the sustainable learning- or problem solving-capacities of the cooperating firms. This can be achieved by focusing on interorganisational capabilities of innovation which reside in specific and institutionalised patterns and mechanisms of knowledge transfer, (re-) combination and/or creation of specialized knowledge. Network partners can represent an important source of product and process innovations.²⁴ The ability to exploit outside sources of knowledge is supported by a partner-specific absorptive capacity. COHEN/LEVINTHAL define absorptive capacity as „the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends”,²⁵ which is a function of the extent of the overlapping of the knowledge base of the involved parties and the frequency and intensity of sociotechnical interactions.²⁶ By developing interfirm knowledge-sharing routines that influence these aspects the partners can increase the partner-specific absorptive capacity.
- (3) *Complementary resource endowments*: Complementary resources and capabilities are a basic requirement of resource interconnection within network partnerships.²⁷ Complementary resource endowments are defined as distinctive network resources which create rents through joint, synergetic cooperation between the network partners that are larger than the rents which would have been achieved by the individual endowment of each partner.²⁸ This relation specific generation of competitive advantage is achieved by the combination of already present resources which results in an increase of the degree to which the resources are valuable, rare, and difficult to imitate. One of the major challenges in order to be able to generate relational rents with complementary resources is to find the concerning partner and recognize the potential value of a resource combination. These points are mainly influenced by prior alliance experience, differences in internal search and evaluation capacity and differences in the function or position in the network in or-

²⁴ RAGATZ/HANDFIELD/SCANELL (1997); FRITSCH/LUKAS (2001).

²⁵ COHEN/LEVINTHAL (1990), p. 128.

²⁶ DYER/SINGH (1998), p. 665.

²⁷ KALE et al. (2000), p. 224.

²⁸ DYER/SINGH (1998), p. 666.

der to acquire information about potential partners.²⁹ In addition to the compatibility of resources there also needs to be a minimum organisational and cultural fit between the partners. This is especially necessary regarding decision-making processes and information and control systems.³⁰

- (4) *Effective governance*: When partnering, the involved firms have to find the suitable governance structure for their relationship. The objectives are to lower transaction costs³¹ and to influence the readiness of the network partners to engage in interorganisational value adding processes.³² The two possible ways of governance are third-party enforcement of agreements and self-enforcing agreements. Examples for the first would be instruments that favour legal settlements in case of conflicts or even refer to out-of-court, amicable settlements which are directed at the maintenance and continuity of network relations. To prevent the danger of opportunism in the context of achieving relational profits it is necessary to utilise self-enforcement governance mechanisms, and informal self-enforcement governance structures with the aim of building trust among the partners.³³

An overview of the determinants of relational rents and the sub processes facilitating them is given in figure 4.

Imitation barriers

To protect the relational competitive advantage against imitation and substitution the firm can make use of so-called imitation barriers. The ones identified as being applicable in the relational view are (1) interorganisational asset interconnectedness, (2) partner scarcity, (3) resource indivisibility and (4) institutional environment.³⁴ These can be complemented by the concepts of causal ambiguity and time compression diseconomies originally discussed in the RBV.³⁵

- (1) *Interorganisational asset interconnectedness* is based on the accumulation of interorganisational resource stocks. An increasing co-specialisation of network resources often takes place during the course of cooperative inter-firm relations. Initial relation-specific investments generate resources (endow-

²⁹ EISENHARDT/SCHOONHOVEN (1996), p. 137; DYER/SINGH (1998), p. 667; GULATI (1999), p. 413; CHUNG/SINGH/LEE (2000), p. 5.

³⁰ DUSCHEK (2004), p. 64.

³¹ NORTH (1990); SYDOW (1992); WILLIAMSON (1985).

³² ZAJAC/OLSEN (1993); DYER (1997).

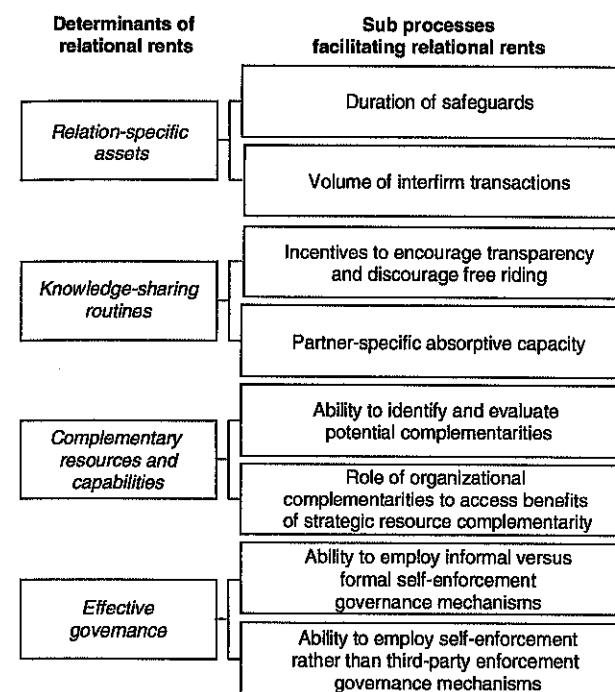
³³ DUSCHEK (2004), p. 64.

³⁴ DYER/SINGH (1998), p. 671.

³⁵ DIERICKX/COOL (1989); REED/DEFillippi (1990); BARNEY (1991).

ments) which enable and/or necessitate further investments,³⁶ which, in turn, enable/require further co-specialisation.

Figure 4: Sources of Relational Rents



Source: DYER/SINGH (1998), p. 663.

- (2) Another contingency for the creation of relational rents is *partner scarcity* which is described by the difficulty to find a partner with complementary strategic resources and the relational capabilities needed. Because of that there are strong first mover advantages to build an alliance with those partners possessing complementary strategic resources and/or relational capability.³⁷
- (3) *Resource indivisibility* is achieved by the combination and/or the mutual creation of resources to such an extent that the separation of relation-specific resources without destroying resource advantage becomes impossible. Typi-

³⁶ ZENG/HENNART (2001).

³⁷ DYER/SINGH (1998), pp. 672-673.

cal examples of this are the immaterial resources generated in the context of knowledge intensive networks.³⁸ An imitation of these resources seems almost impossible because of network-path dependencies. Despite these advantages there is also the limitation that these joint resources are difficult to control or use for each individual firm thus limiting the flexibility of the embedded firms. Therefore network relations are both, source of opportunities and limitations.³⁹

- (4) The fourth imitation barrier is the *institutional environment*. This refers especially to country-specific or regional characteristics or behavioural norms. One of the typical examples is Japan where goodwill trust and cooperation are ranked very high in business settings thus lowering transaction costs.⁴⁰ These mechanisms limiting opportunistic behaviour are called "extra hybrid institutions".⁴¹ In order to make use of the associated benefits it may be necessary for a firm to locate its operations in a particular institutional environment.

Thus it can be stated that relational profits are based not only on (complementary) intraorganisational resources, but also on resources which have their source exclusively in the network structure.⁴² The dissolution of networks with relational rents would therefore always lead to the destruction of important advantage generating resources.⁴³

By using the relational-based-view we can now derive the collaborative competence of the partner.

3.2 Identification of Collaborative Competence

The second dimension of the DACoDI contains the partner's competence to collaborate. It is evaluated in a portfolio which consists of the dimensions "relational willingness" and "relational capability". The later is a sufficient condition but the willingness is indispensable in order to achieve a high "Collaborative Competence". Both dimensions have to be evaluated in the specific situation taking into consideration the respective partner. Here again a portfolio approach can be used to visualize the analysis as shown in figure 5.

³⁸ DYER/WATCH (2004), p. 57.

³⁹ UZZI (1997); GULATI et al. (2000), p. 204.

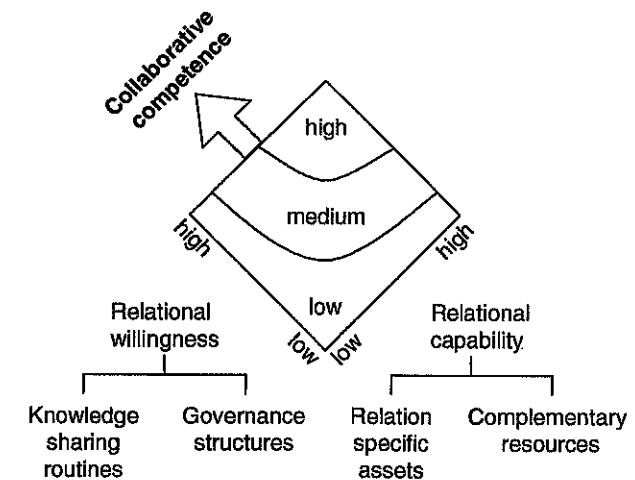
⁴⁰ DYER/SINGH (1998), p. 673.

⁴¹ BORYS/JEMISON (1989).

⁴² GULATI et al. (2000), p. 212.

⁴³ DUSCHEK (2004), p. 67.

Figure 5: Collaborative Competence



Based on the relational view the *relational willingness* of the partner is influenced by the aspects of knowledge sharing routines and the governance structures. When discussing the willingness to collaborate it is essential to consider the partner specific absorptive capacity. If the organizational structures and the individuals working in these structures are set on the recognition and assimilation of valuable outside knowledge they need to be willing to collaborate. This can be supported by the alignment of incentives which aims at the increase of knowledge sharing but by that also increases the willingness to collaborate in order to acquire additional knowledge. When looking at the governance structures it is possible to generate rents either by lowering transaction costs or by providing incentives to engage in value-creation initiatives, i.e. investment in relation-specific assets, sharing knowledge or combining complementary strategic resources. Therefore the willingness of a firm to collaborate depends on the structures which will assure the partner that through the combination of complementary strategic resources there is no risk that there will be future competition by duplicating these resources from the partner. The willingness is also influenced by individual, firm and country specific aspects which refer to the imitation barrier of the institutional environment. It is for example possible that in a culture of trust the ability to use self-enforcing mechanisms of governance is more effective and therefore it is easier to generate relational rents through the minimization of

transaction costs and the maximization of value-creating initiatives.⁴⁴ This is interpreted here as a higher willingness to cooperate.

The *relational capability* is based on relation-specific assets and the availability of complementary resources. The relation-specific assets are site and physical asset specificity as well as human asset specificity. This can for example refer to transaction-specific IT systems which can be customized to the specific processes of the particular exchange partner. But also the qualification and ability of the workforce to adapt to the idiosyncratic know-how of the relationship (systems, procedures, language etc.) is relevant for the relational capability. Through these relation specific assets it is possible to lower the total supply chain cost, easier differentiate the products, have fewer defects and faster product development cycles. This is supported by the ability to combine complementary resources. The higher the experience of a firm in alliance management, the higher the ability to search and evaluate complementary resources and the better the position to acquire knowledge about potential partners the higher is the relational capability of a firm. Additionally this refers to a firm's capability to adapt to organizational processes and cultures in order to find a fit respectively a high degree of organizational compatibility to add to the complementary strategic resources.

Willingness and capability are substitutable to a certain extent depending on the specific situation. There can for example at the beginning of a relationship be some deficits in the relational capability due to lacking relation-specific assets which can be compensated by a higher willingness. In the development of the relationship the capability has to be developed in order to achieve a higher level of collaborative competence respectively substitute willingness by capability.

If either willingness or capability is low the overall collaborative competence can also only be ranked as low. Only high willingness and high capability lead to the classification of high collaborative competence.

4 The Darmstadt Collaboration Diamond

Based on the resource gaps and the implications of the relational-based view the question is, what the strategic implications are for the realisation of relational rents. In order to derive possible strategic actions for the realisation of relational rents the instrument of the DACODI is developed. Through the appraisal of the

⁴⁴ DYER/SINGH (1998), p. 670.

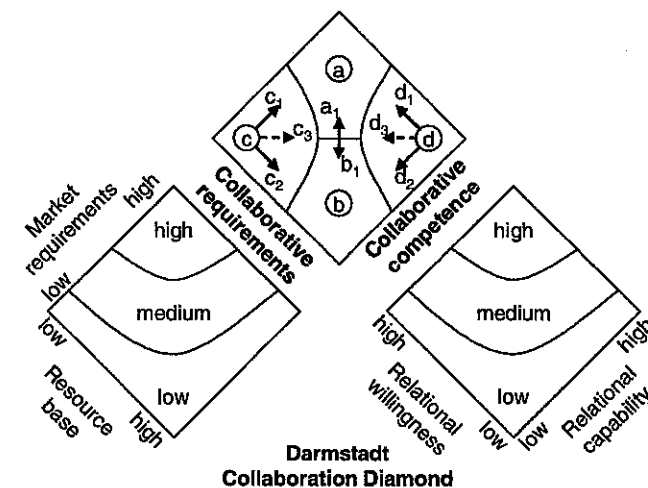
"collaborative requirements" based on the identification of resource gaps and the "collaborative competence" based on the relational view it is possible to

- (1) determine the strategic position within the partnership regarding the possibility to realise relational rents,
- (2) derive strategic options in order to change this position and enhance the potential for relational rents for one or both partners.

4.1 Integration in the Portfolio

The two portfolio dimensions representing the collaborative requirements and the collaborative competence are integrated in the DACODI as shown in figure 6. The ranking as high/medium/low can be assigned directly into the main portfolio. This leads to the possibility to analyse the possible positions within the portfolio and following that to derive actions for repositioning the relationship in the portfolio.

Figure 6: Integration of the Dimensions in the Darmstadt Collaboration Diamond



4.2 Strategic Positions and Courses of Action

After we have shown the integration of the dimensions in the DaCoDi it is now possible to assess the position of an existing or planned relationship. From the

positions we can derive generic courses of action which are possible in order to move to a "better" position in the portfolio as shown in figure 6. Examples for these courses of action will be given in chapter 4.

Position a: "Relational advantage"

The position "relational advantage" is characterized by a match of high collaborative requirements and high collaborative competence. The potential for relational rents in this position is the highest within the portfolio. The company is depending on the competence of the partner who is able and willing to supply the needed competence. This can also be referred to as a "strategic partnership". In such a strategic partnership the focus is on a much more comprehensive integration. An agreement on the position helps to negotiate the details of a strategic partnership and also makes it easier to uncover divergent viewpoints and their reasons. According to the relational-based view the focus should be on the sources of relational rents and the imitation barriers in order to maintain the competitive advantage in this position. The dissolution of networks with relational rents always leads to the destruction of important advantage generating resources.⁴⁵

Position b: "Transactional advantage"

In the case of low requirements and low competence of the partner there is only a low potential for the realisation of relational rents. This position leads to the conclusion that this relation should be transaction-based. Therefore it should be focused on more effective and efficient transactions rather than trying to integrate and partner.

If the partners are stuck in the middle between positions (a) and (b) there are two possible developments in order to increase the potential for relational rents (a_1):

One can be seen as outsourcing. The firm's resources are reduced and thus the collaborative requirements are increasing. Also the dependence on the partner is growing and there is a potential for each partner to concentrate on his core competence.

The other possibility is that the market requirements are increasing and cannot be matched by the firm. This is leading to a growing resource gap and therefore higher collaborative requirements. In both alternatives the partner needs to be able to develop his collaborative competence in order to maintain the match between requirements and competence.

⁴⁵ DUSCHEK (2004), p. 67.

A development in the direction of b_1 can for example be triggered by the development of own resources which lowers the collaborative requirements.

Position c: "Disadvantage"

Position (c) is a disadvantageous position for the firm. Though the collaborative requirements are high, the partner does not match these requirements. This may be due to a lack of willingness or capability or both. In this position the firm is not able to realize relational rents, respectively is losing possible relational rents because the market requirements are not matched either by the firm's resource base or the partner's competence.

In this position there are two possible actions. The first possibility c_1 is to develop the partner's competence. This can be achieved by the methods and instruments known from e.g. the supplier development, which we will elaborate on in chapter 5. They have to take into account both the willingness and the capability of the partner.

The second possible action c_2 is to reduce the collaborative requirements through the development of the firm's own resources. By this the collaborative requirements can be decreased and the requirements and the competence can be matched ("relational advantage"). This is only possible under the condition that the development of the needed resources can be accomplished by the firm. If the resources are not to be developed through internal growth the possibilities to merge with or acquire another company have to be checked.

A mixture of both actions would lead to a movement to the middle of the portfolio in the direction of c_3 .

Position d: "Ambiguity"

Position (d) is an ambiguous position for the firm. If the market requirements and the resource base are low leading to low collaborative requirements the position is neutral for the firm but disadvantageous for the partner. This is because the partner is able and willing to provide more service than is required by the market and therefore doesn't realize possible relational rents.

If the market requirements are high but also the firm's own resource endowment is high, again leading to low collaborative requirements, both partners lose potential relational rents, because they have overlapping resources.

Here again there are two possible strategic choices. The first possible action d_1 is differentiation. There is a potential to offer better service in collaboration with

the partner to the market and by that generate higher prices and margins through the realisation of relational rents.

The second possible action d_2 is cost cutting, meaning that the firm requires the service provider to provide his service for a lower price. There are some restrictions concerning the practicability because in most cases the service provider will not be willing to change his service and lower the price, if the concerning service is representing his standard procedure.

A mixture of both actions would again lead to a movement to the middle of the portfolio (d_3).

5 Relational Rents and Strategic Implications: Insights from Supply Chain Management

To properly assess the right form of relationship between a customer and a supplier or service provider it is necessary to evaluate both perspectives. Therefore there are two possible ways of applying the presented frame-work. The service provider/supplier has to understand the market requirements and the resource endowment of his customer in order to offer him services which generate relational rents. The firm on the other hand knows the requirements and has to look for a suitable service provider/supplier. It would be ideal if both sides could meet to work out the placements in the portfolio. The resulting framework then becomes an ideal discussion document. Agreement over the degree of overall alignment of the supplier and buyer viewpoints can help select the right relationship framework. Indeed the very act of sitting together with the other party to work through the framework bolsters the relationship.

(1) "Relational advantage"

One of the positions to have a closer look at is the "relational advantage". The higher the possible relational rents are the more important are the imitation barriers. In order to realize this potential and in order to utilize the competitive advantage firms need to concentrate on the implementation of these barriers. One major example is the Toyota network with its suppliers which stresses the *interorganisational asset interconnectedness*.⁴⁶ It highlights how a dynamic learning capability is created. This allows for unique competitive advantage but also requires specific reciprocal network embedding to create and maintain this capability. The cumulative reciprocal links are effective in stabilising the relationship and by that exclude companies which are not involved in the network relation-

⁴⁶ DYER/NOBEOKA (2000), p. 365; DYER/WATCH (2004).

ship. This also prevents an imitation by other parties. Therefore it can be stated that networking firms should specifically try to establish bundles of relation-specific resources in order to specifically utilize the general rent-earning potential of their relations.⁴⁷

(2) "Transactional advantage"

If a supplier or service provider is located in the position "transactional advantage" this usually applies for services or materials with low market requirements. Therefore all actions should be focussed on process efficiency. If both parties agree on this position there is no need for integration of processes or special involvement in terms of supply chain relationship management. There needs to be a clear distinction between transaction-based and collaborative relations.⁴⁸ Increased process efficiency in transactions can be reached by the use of suitable information technology to support the transactions e.g. in purchasing and procurement. Another possibility is to centralize procurement for these services and materials.

(3) "Disadvantage"

As pointed out before there especially is a need for the firm to take action in a "disadvantage" position because the partner is not capable or willing to fulfil the collaborative requirements. There are three basic approaches to cope with this challenge⁴⁹:

- (1) Acquisition of the supplier ("*In-sourcing*"): This alternative would mean for the firm to develop the needed capabilities in-house, thus lowering the collaborative requirements and moving towards a "transactional advantage" position in the portfolio. This approach bears risks as it is time consuming and costly to either integrate the supplier in the own organisation or develop the necessary capabilities in-house. This is even more relevant if the required capabilities are not core competences of the firm.
- (2) Changing the supplier ("*Re-sourcing*"): This alternative has to take into consideration which capabilities are required and if there are other suppliers who are able to offer them. This especially refers to the implementation barrier of partner scarcity. Additionally there has to be an analysis of the costs incurred by changing the supplier compared to the costs for developing the existing supplier as described in alternative 3.

⁴⁷ DUSCHEK (2004), p. 65.

⁴⁸ BVL (2003); BOWERSOX/CLOSS/STANK (2003), p. 18.

⁴⁹ WAGNER/BOUTELLIER (2003), p. 53.

(3) Developing the supplier ("*Source development*"): If the services or products offered by the supplier are strategically relevant and/or there is already a tight integration with this partner it is possible to improve the collaborative competence by using the methods and instruments of supplier development. This would lead to a movement in the DACODI towards a strategic partnership in a "relational advantage" position. Supplier development is characterized as "any effort of a buying firm with its supplier to increase the performance and/or capabilities of the supplier and meet the buying firm's supply needs".⁵⁰ There are two possible ways of supplier development.

- In "direct"⁵¹ or "internalized supplier development"⁵² the firm is involved with its own resources and investments. The firm and the supplier share assets, technology and even employees and the suppliers work-force is trained by the firm. This direct supplier development is aiming especially at developing the capabilities of the supplier.
- In „indirect“⁵³ or „externalized supplier development“⁵⁴ the firm only shows deficits and improvement opportunities to the supplier without investing into shared assets. By increasing the competitive pressure or by offering incentives for performance increase the firm wants to influence the supplier and drive him to higher performance. These indirect measures are focusing more on the willingness of the supplier. The point of view is that he needs pressure or incentives to develop or utilize the existing capabilities and is able to do that.

Examples for direct supplier development from supply chain management could be to influence the site specificity or the development of complementary resources:

- For example it is possible to create *site specificity* in a "supplier park". This concept has especially evolved in the automotive industry.⁵⁵ The suppliers locate their delivery warehouse next to the plant of an OEM. The investment is made with participation of the partners and the local authorities. Through this investment it is possible to reduce inventory and transportation costs and coordination costs.

⁵⁰ KRAUSE/ELLRAM (1997), p. 21.

⁵¹ MONCZKA/TRENT/CALLAHAN (1993).

⁵² KRAUSE/SCANNELL/CALANTONE (2000).

⁵³ MONCZKA/TRENT/CALLAHAN (1993).

⁵⁴ KRAUSE/SCANNELL/CALANTONE (2000).

⁵⁵ GAREIS (2002).

- The aspects of *complementary resources* are usually also discussed in the question of outsourcing. The concepts of third-party logistics providers (3PL) which are discussed in supply chain management also relate to specialization concepts in order to utilize complementary resources and avoid overlapping resources and competences.

The case of indirect supplier development can be exemplified as follows:

- By developing *interfirm knowledge-sharing routines* that influence these aspects the partners can increase the partner-specific absorptive capacity. In supply chain management this concept has to be taken into consideration when applying SCM-software. The existing software solutions have to be customized to the specific partner's processes and needs in order to utilize the full scale of information sharing potential support and by that increase the willingness of the partner to share information.
- Logistics audits which are performed by the partners themselves can be seen as an example for *self-enforcing governance mechanisms*. They even lay the foundation for the sharing of knowledge and learning from the partner if they are applied in an atmosphere of trust. It is also possible to see the concept of the fourth-party logistics provider (4PL) as a possibility to implement effective governance structures for the supply chain. The 4PL acts as an independent institution for the whole supply chain thus forming the network identity and decreasing the potential for opportunistic behaviour.

(4) "Ambiguity"

In the "ambiguity" position the firm needs to decide which kind of rents it wants to aim at. This can be relational as well as other rents, e.g. the monopoly or Ricardian rents mentioned in chapter 1. If the firm wants to focus on relational rents it has to consider the dilemma of flexibility vs. dependence. By partnering the firm also grows dependent on the partner's capabilities and willingness. The decision depends on the industry and its life cycle. In industries with high uncertainties due to volatile markets there is a tendency to collaborate in order to deal with this uncertainty. In mature markets there is a tendency of concentration (mergers & acquisitions) because of lower uncertainty and the need to increase efficiency through economies of scale.

6 Conclusion

In conclusion we have seen that it is not possible to decide on the strategic actions only with the market-based, the resource-based or the relational-based

view. In order to consider the possible action we have to take into account and integrate insights from all these sources. For the relationship and the decisions connected to it we need the relational-based view. But for each individual partner we still depend on the market-based and the resource-based view to decide where sustainable competitive advantages are possible. The resource-based view looks at the relationship as a resource while the relational-based view is taking the perspective from within the partnership. The market-based view provides us with the outside-in perspective in order to decide about the market potential.

With the Darmstadt Collaboration Diamond (DACoDi) we have developed a tool which allows us to assess the strategic position by integrating these views and by that derive strategic options for the firm. Additionally the framework can be used either by a firm looking for a supplier or service provider or by a service provider or supplier looking for potential customers.

For further research we need to operationalise the framework and combine it with tools from strategic management to assess the different dimensions. Additionally we could look into possibilities to complement the framework with a quantitative model and develop a software-based application tool.

7 References

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