

Success Factors of Strategic Networks of SME

Robert Knop

Paper prepared for the International Conference on Economics and Management of Networks (**EMNet**), Rotterdam, 28 – 30 June, 2007

Abstract

The purpose of this paper is to demonstrate the relevance of co-operation for small and medium enterprises (SME), to introduce a holistic model for structuring success factors and to discuss the key parameters that determine the success of a strategic network of SME. The paper is an extract of the dissertation currently handed in by the author at the University of Klagenfurt, Austria.

1. Introduction

Small and medium enterprises (SME) are the cornerstone of the economy. 99.8% or 19.3 million companies in Europe-19 (EU-15 plus Liechtenstein, Iceland, Norway, Switzerland) are considered as SME. These enterprises with less than 250 employees account for approximately 70% of the employment and roughly 57% of the turnover in the private sector (KMU in Europa 2003). In comparison to large enterprises, SME are characterized as more flexible, agile, customer-oriented and creative.

However, trends such as globalization, deregulation, and technological advancements confront companies with an ever increasing competitive environment. Previously as safe considered market niches have become under attack. Since SME are often very limited by restricted resources, a wrong business strategy or its poor implementation may result a severe crisis or even bankruptcy.

An increasing popular strategy for SME to face market challenges is to combine their resources with one another. Co-operation is defined as "... a relationship between independent or partners that combine their efforts and resources in a value creation process." (KMU und Kooperationen 2003). The metaphor network is used when at least three companies are engaged in the same activity. A special form of inter-firm network and focus of this paper is a strategic network. The goal of a strategic network is to collaborate in a long-term relationship under strategic leadership in order to increase the competitiveness of all participating SMEs (Sydow 1992; Liebhart 2002).

The purpose of this paper is to demonstrate the relevance of co-operation for SME, to introduce a holistic model for structuring success factors and to discuss the key parameters that determine the success of a strategic network of SME.

2. Co-operation as an opportunity for SME

Up until 2003, empirical data on co-operation had been very rare. In 2003 the Observatory of European SMEs published a detailed study of SMEs and co-operation, which is based on research undertaken by the European Network for SME Research (ENSR) and Intomart. The empirical data is based on 7.745 interviews of SME in Europe-19 and allows for a confidence interval greater than 95%. The main findings of the study in context of this paper are (KMU und Kooperationen 2003):

(1) Co-operation is a very common phenomenon: Already half of European SMEs are co-operating with each other. However, there is still more potential as the other half of SMEs are not involved in co-operation.

(2) Strategic networks are quite frequent: Although the study does not contain data on co-operation types it can be concluded that quite many strategic networks do exist, since many co-operations fulfill their criteria. The study shows that a) 25% of 19.27 million SME in EU-19 are involved in formal co-operations, b) 65% of the co-operating SME have more than two partners, and c) 80% of SME partnerships exist more than three years. By combining these percentages - which is of course a great oversimplification - it can be calculated that (maximally) 13% or 2.5 million SME are part of strategic networks. The actual number might be considerably lower, however it can be derived that strategic networks play a significant role in today's business environment.

(3) Reasons for co-operations are mainly market driven: "Access to new and larger markets" and "broader supply of products" are the two most frequent reasons for co-operation. Criteria related to efficiency and production capability such as "access to know-how and technology", "additional production capacity" and "reduced costs" are mentioned less frequent. Motives related to labor and financial resources are ranked last.

(4) SMEs are afraid of their independency: The wish to maintain independence is the by far the most important barrier to co-operation. Also many SME are afraid to disclose sensitive information. As a result, SMEs seek to maintain internal control of core competences essential to their business model.

(5) Co-operation is very lucrative: The study concludes that cooperating SMEs are more successful than those that do not cooperate. The research shows that companies that were engaged in partnerships had reported revenue growth of approximately 2% in the years 2001 and 2002 while companies without engagement in co-operations reported a revenue loss of 0.3%. Furthermore, 82% of the co-cooperating companies admit that the partnerships increased their competitive strength.

The author believes that in particular "good" SMEs - or companies which assume a middle position on the success scale - should consider the option of a strategic network, because they seem, from the viewpoint of others, as attractive partners and at the same time may have a high potential in strengthening their competitiveness through a close collaboration with other (strong) partners. An already excellent SME or "Hidden Champion" (Simon 1997) on the other hand may assess the strategy and know-how dilution as too risky and time consuming. Finally, a "weak" or financially stricken SME will hardly be able to allocate the additional network resources. Access to the network may not be granted to such a company in the first place, especially if it is transparent that it would resemble the weakest link in the chain. After all, co-operating SMEs must emphasize to work with healthy partners.

3. Challenges of the research and research design

The research of success factors of strategic networks is quite complex. Strategic networks are entities that may be encountered in numerous forms. Networks differ from each other considerably in terms of size, regional expansion, industry sector, orientation and its objectives. (KMU und Kooperationen 2003; Rautenstrauch et al. 2003; Liebhart 2002; Sydow 1992). The challenges when dealing with success factors

are among others that many factors may influence success, the effectiveness of the factors differ, functional dependencies among the factors exist and factors are subject to change (Daschmann 1994). Thus it is no surprise, that contributions to the research on success factors are viewed critically. The criticism ranges from oversimplification to over-complication and lack of suitability for practical application (Nicolai/Kieser 2002; Krüger/Schwarz 1997). As a result of these complications, this research like many others can only provide indications and guidelines of how to create and manage a network successfully.

Although not many studies exist on strategic networks of SME, there are numerous studies on success factors on co-operations such as bilateral co-operations and virtual organizations. These studies also allow for a comprehensive overview on potential success factors of SME-networks and were thus used as a basis for a comprehensive empirical research. The author investigated eleven strategic SME networks of different types and industries and interviewed two network experts. In summary, approximately 25 personal and 15 telephone interviews were conducted and 23 case studies were produced.

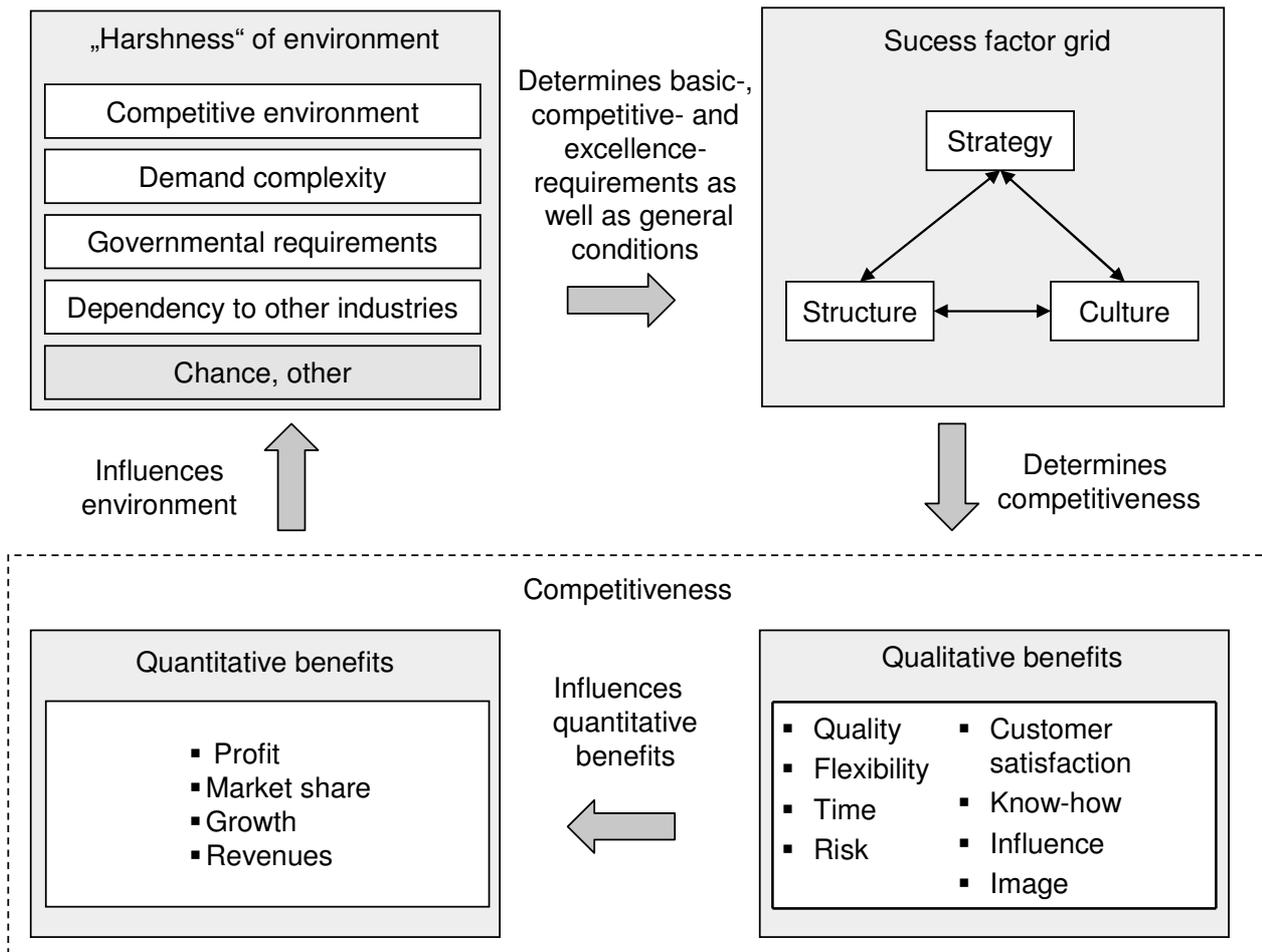
4. A holistic model for handling success factors

One major goal of the research was to develop a holistic model of the success factors. The role of the model is to better structure the success factors, to substantiate them, and to relate them to one another and to their environment. The model is based on proven concepts by Ansoff (strategic fit), Porter (diamond model, five-forces-model), Peters and Waterman (7-S model), Pümpin („Strategische Erfolgspositionen“, SEP), and Kano (Kano-model) (Ansoff/Declerk/Hayes 1976; Porter 1999, Peters/Waterman 1984; Pümpin 2003; Sauerwein 2000).

The following assumptions regarding the development of the interaction model were made: (1) the success of a network is at all times dependent upon the environment it operates in. The harsher the environment (competition, government restrictions etc.), the higher the demands the partners have to fulfill in order to be successful. (2) The success of a network depends on a series of strategic, structural and cultural factors. The more effective and efficient the network is able to fulfill these requirements, the better it can meet the challenges the environment poses and thus the higher the success probability. (3) In order to exploit the full potential of a success factor, several requirements that result from the respective environment must be met. These requirements may be prioritized, e.g. in basic, competitive and excellence requirements. (4) The degree of fulfillment of the success factors may be quantified. (5) A network may only be assessed as successful if the partners have increased their individual competitiveness. (6) A highly competitive network is able to substantially influence its relevant environment.

Figure 1 shows the derived success factor model. In honor of the philosopher Heraklit the author chose to name the composed model „Ephesos-Interaction-Model“.

Figure 1: Ephesos-Interaction-Model



The first quadrant contains the indicators of the harshness of the environment. It determines the level of requirements or challenges posed on the network. The underlying models are the diamond model and the five-forces-model of Porter.

The second quadrant represents the “success factor grid”, which is the core of the model. It is composed of strategic, structural and cultural success factors and concrete requirements for their fulfillment. The design contains insights from the research on success factors and from concepts of Ansoff, Peters and Waterman, Pümpin and Kano. The interactive research of the author finally disclosed fourteen distinctive success factors of strategic networks of SME as depicted in figure 2.

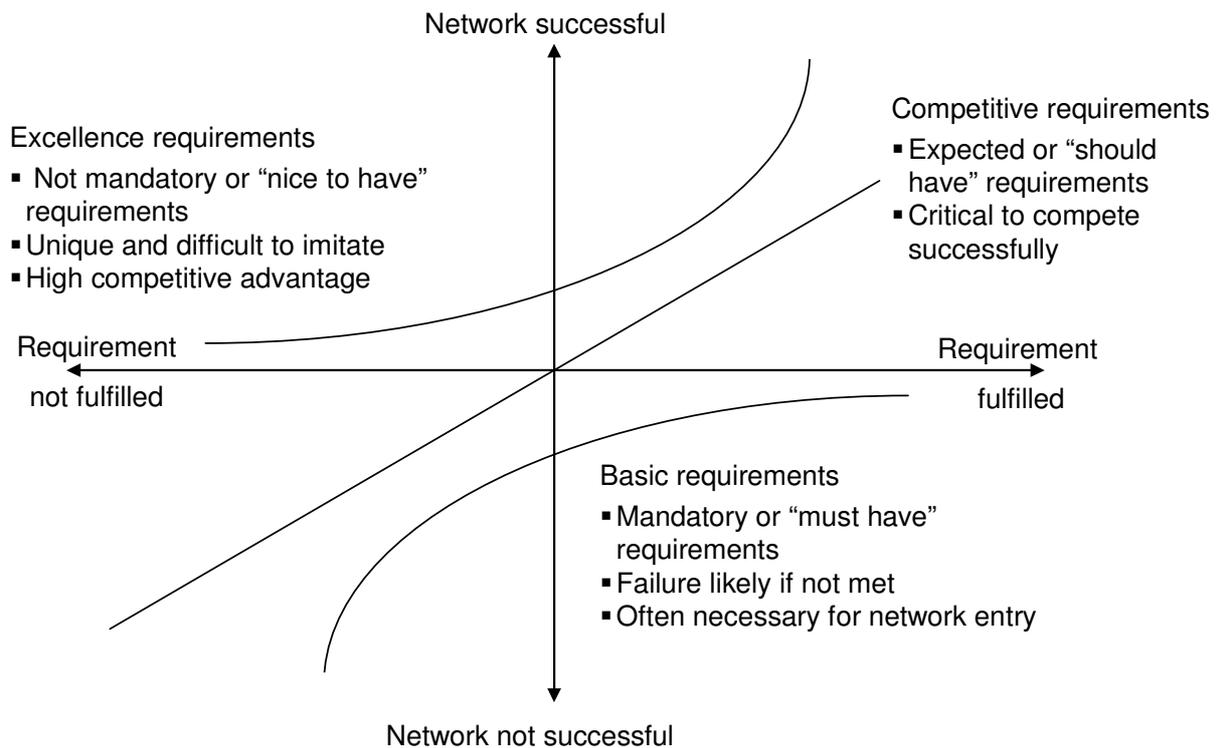
Figure 2: The success factor grid

Category and factor	Basic requirements	Competitive requirements	Excellence requirements
<u>Strategic success factors</u>	„must have“	„should have“	„nice to have“
Collective goals			
Strategic fit			
Network strategy			
Win-win situation			
<u>Structural success factors</u>			
Structural fit			
Rules and legal form			
Organization and leadership			
Interconnectivity			
Information technology			
<u>Cultural success factors</u>			
Cultural fit			
Trust and sense of responsibility			
Communication and conflict resolution			
Learning and knowledge management			
Change management			

Of all the models used, it is probably the Kano model that needs some explication. Kano’s model is based on the motivational research originally conducted by Herzberg. Kano distinguishes three needs to fulfill customer satisfaction: basic needs, performance needs and excitement needs. A customer will feel satisfied if (1) his basic needs are not disappointed (2) the product or service can excel in comparison to the competition on his performance needs and (3) optionally the customer receives extra value that he has not anticipated (excitement needs) (Sauerwein 2000).

In this context, the model has been adapted to categorize the requirements that have to be met in order to fulfill a success factor. The success factor grid differentiates three requirement types for each success factor in order to utilize its full potential. The basic requirements subsume minimum requirements that must be realized to simply avoid network failure (“must have”). Competitive requirements are demands that should be met in order to successfully beat the competition (“should have”). With the aid of the excellence requirements the network may differentiate itself from the competition. While meeting these requirements is not mandatory, it would contribute significantly to the network’s success („nice to have“). The expression “excellence-requirements” has been derived from the 7-S model by Peters and Waterman and their bestseller “In Search for Excellence” (Peters/Waterman 1984). Figure 3 demonstrates the impact of the requirements on the network.

Figure 3: Adapted Kano-model for networks (source: adapted from Sauerwein 2000)



The third quadrant of the Ephesos-Interaction-Model serves to determine the competitiveness and answers the question, whether the participation in the network has contributed to an increase of the partners' competitiveness. The author assumes that when the success factors are fulfilled to a high degree, it will have a positive impact on qualitative values (i.e. higher customer satisfaction), which can be converted into quantitative benefits (i.e. more revenue). For measuring the increase in competitiveness both quantitative and qualitative criteria have been chosen as indicators.

The dynamic character of the model is symbolized through the arrows. The friendliness of the environment determines the level of requirements the network should fulfill. Networks which operate in a harsh environment must show more effort to be victorious. If the requirements are met satisfactorily, the competitiveness of the partners rises and thus their influence on the environment, e.g. by means of pooling the purchasing power or exert pressure on government authorities and the social environment. Thus, effective networks are able to better shape their environment and make it friendlier.

5. The success factor grid

The core statement of the Ephesos-Interaction-Model is that the success of a strategic SME-network depends essentially on the level and balance of the fourteen factors contained in the grid. A moderately qualified team with collaborative "chemistry" and respectful communication may hardly achieve sustainable success without a convincing business idea and without an adequate strategy that brings about significant value for the players (selected references for the following factors: Balling 1997, Bleicher 1992; Bronder/Pritzl 1992;

Fontanari 1996; Kanter 1995; Killich/Luczak 2003; Liebhart 2002; Moss Kanter 1995; Rautenstrauch et. al 2003; Reiß 2003; Blecker 1999; Schöne 2000)

The strategic success factors mainly serve to increase the effectiveness of the network. In order to safeguard the strategic strengths of a network group, four main requirements must be fulfilled: (1) The partners agree on *collective goals*. Without a clear, collectively taken mandate the partners will hardly succeed in channeling the potential and energy of the network on to the market and the customers. (2) The markets, customers, products and corporate identity of the partners harmonize with and complement each other. The more partners fit together strategically, i.e. the higher the *strategic fit*, the better the partners will succeed in realizing synergy potentials. (3) All participants follow a clear signpost to achieve the objectives of the network. An effective *network strategy* promotes the conclusive market positioning and enables the network to play to its strengths. (4) The business model brings about a significant increase in competitiveness and a *win-win situation* for every participant. A high, persistent value for all participants is the most important motive for the partners' lasting interest in a confiding collaboration.

The structural success factors determine the efficiency of the network to a high degree. They indicate, whether the partners are able to coordinate the collective resources efficiently. In this context the term structure comprises both organizational and procedural aspects. In order to meet the structural requirements five success factors need to be fulfilled: (5) The partners should fit together in terms of their structures. A high *structural fit* indicates that the network disposes of the right number and size of partners and that the collective resources harmonize with and complement each other. (6) Adequate rules and legal framework conditions should form the basis of any collaboration. A distinctive success factor "*regulations and legal form*" promotes the partners' acting in an entrepreneurial way, since success is distributed evenly and the liability risk is reduced to a reasonable degree. (7) The network should have a lean and business focused organization that is directed by at least one acknowledged leader. A low degree of the factor "*organization and leadership*" will lead to waste of resources and personal energy. (8) The cooperation should be characterized by a high degree of *interconnectivity*. The efficiency of the co-operation is dependent on how the partners divide the collective resources (segmentation) and connect them for the network purpose (actual interconnection). A systematic business process management is necessary to execute the collective processes efficiently. (9) The partners should make use of the possibilities of the *modern information technology* in order to automate the collective business processes. Centralization of the IT might lead to additional cost savings.

The cultural or „soft“ success factors are the connecting link between the strategic and the structural factors. Even if the strategic and the structural requirements are fulfilled sufficiently, the success of the cooperation will depend on the players meeting the interpersonal or social requirements: (10) The cooperation should demonstrate a high *cultural fit*. This includes that key member work together in a partnership-like and professional manner. Furthermore the corporate cultures of the partner enterprises should be compatible. In case of cross-border networks respectful communication with other societal cultures needs to be safeguarded. (11) Cooperation is a matter of trust. A high degree of *trust and sense of responsibility* is necessary, since regulations and contracts in a cooperation of equals may be only partly effective and trust as a coordinating

mechanism may reduce the complexity of the collective production noticeably. (12) The development of the network and the coordination of the processes as part of day-to-day business require high communicative and conflict-solving abilities. In addition to an objective communication the ability to solve current, network immanent conflicts in a precautionary objective way is required. (13) Throughout the cooperation know-how and knowledge potential grow. The success factor “*learning and know-how*” indicates whether the partners improve and utilize collective know-how efficiently. (14) Long-term success ultimately requires a high degree of *change management* abilities, since the internal situation and the environmental conditions are subject to continuous change.

6. The value of the model

The purpose of the research on success factors is to support management in the decision-making process on how to allocate the limited resources in a most effective way. The success factor grid can help to describe the success factors in a comprehensive way, to disclose dependencies, to outline typical pitfalls and to provide guidelines of how to set priorities.

For example, to describe the success factor “collective goals” ten requirements can be stated using the logic of the Kano-model. The identified basic requirements are: (1) The partners agree on collective goals that (presumably) correspond with their true interests. (2) The individual goals are not in conflict with the network goals. (3) The partners are aware of the feasibility of the goals (goal level, amount of cooperation tasks) and (4) The partners have both the potential and the mandate to contribute resources.

The discovered competitive requirements are: (5) The partners are very committed and actively convinced of the network-idea (6) The network goals are stated in writing, unambiguous and all parties are familiar with them. (7) The network goals are clearly defined and achievable. All the partners know which resources and time frames are necessary to attain the goals. (8) The network goals are ambitious and utilize the potential of the network.

Finally, two excellence requirements have been observed from very competitive networks: (9) The partners recognize the need for co-operation at an early stage and can thus profit from early-mover benefits (i.e. reclamation of the best partners in the industry). (10) The network goals are put to the test periodically and adapted to new developments. The goal level is continuously raised so that the “point of no return” is reached.

Case studies may additionally help to reveal best-practice processes and typical pitfalls. Figure 4 shows exemplarily one case study concerning collective goals.

Figure 4: Case study on collective goals (source: personal interview with Dr. Kohl)

Case study: goal finding process

Network expert: Kohl & Partner Tourismusberatung

SMEs that are interested in co-operations have to go through a rigid goal finding process if they consult Kohl & Partner, a consultancy that is specialized on tourism and that has so far accompanied more than 20 hotel networks. The partners need to carefully consider all strategic alternatives, their requirements and consequences. The formation of a network should only be considered if the partners can agree on a clear and binding mandate. In the following example the partners should take three possible goals into consideration. The first goal should be to successfully establish a co-operation to share services.

Illustrative

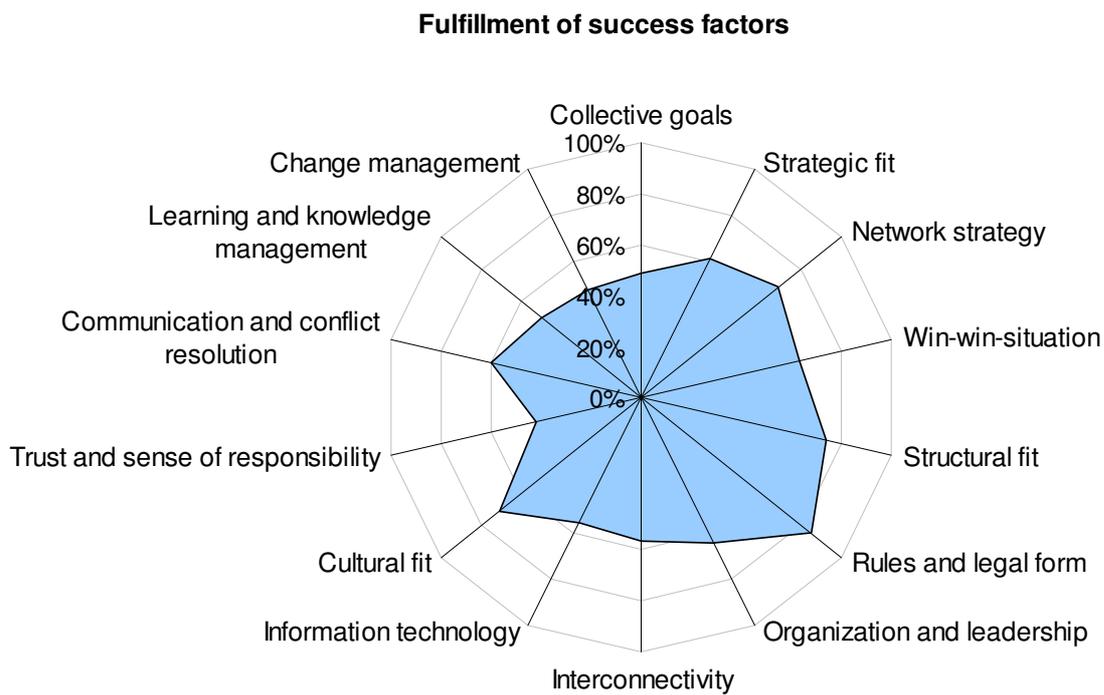
Goal	Requirements of the hotel co-operation	Break-even	Complexity	Consent
1 Service-co-operation	<ul style="list-style-type: none"> ▪ Regional adjacency ▪ Similar size ▪ ... 	> 1 year	medium	9 partner (all)
2 Marketing-co-operation	<ul style="list-style-type: none"> ▪ Comparable level of prices ▪ Specialization on distinct customers groups ▪ ... 	> 2 years	high	7 partner
3 Service-/marketing-co-operation	<ul style="list-style-type: none"> ▪ All requirements of the service- and marketing co-operation ▪ Fast and flexible decisions ▪ ... 	> 3 years	very high	6 partner
Cost-cutting-co-operation	<ul style="list-style-type: none"> ▪ Regional adjacency • Shared norms and standards • ... 	> 2 years	medium	3 partner
Know-how-co-operation	<ul style="list-style-type: none"> • Complementary knowledge • Trust-based relationships • ... 	> 1 year	low	1 partner

According to Dr. Kohl one of the most common mistakes is to neglect the consequences of the agreed upon goals. As a result, partners are tempted to commit themselves on very ambitious or euphoric goals in the early stage of the relationship. The price of those unrealistic expectations is often an early failure of the partnership.

In total, the author has formulated and described 135 requirements on how to fulfill the fourteen success factors. The network management has been given concrete guidelines on how to set priorities on investments. In general, the first priority is on basic requirements followed by competitive requirements. Once the network has reached a stable state, management should spend time and resources to differentiate the network from the competition (excellence requirements).

The level of fulfillment of the requirements can also be quantified (i.e. using the categories “not at all”, “partially”, “half”, “predominantly”, “completely”), which allows for a systematic analysis of the strengths and weaknesses of a strategic network. Figure 5 shows sample data of a network using the spider diagram.

Figure 5: Fulfillment of success factors



Overall, the sample network reaches a fulfillment level of 60%. While it is quite good at meeting structural requirements (67%) its relative weakness lies in the cultural factors (56%). One recommendation would be to invest in measures that help to improve the factors trust and sense of responsibility (43%) and change management (43%).

7. Conclusion

Strategic networks are a favorable strategy for good SMEs to improve their competitiveness. While there is no best way to achieve success, fourteen factors have been identified that greatly influence its probability. The key seems to be that successful networks maintain a careful balance between strategic, structural and cultural variables. While excellent networks show no downright weakness, they are able to differentiate themselves from the competition in certain key areas.

8 References

- Ansoff, I./Declerk, R./Hayes, R.: From Strategic Planning to Strategic Management: In: Ansoff, I./Declerk, R./Hayes, R. (Hrsg.): From Strategic Planning to Strategic Management, London, 1976, p. 39 ff.
- Balling, R.: Kooperation – strategische Allianzen, Netzwerke, Joint Ventures und andere Organisationsformen zwischenbetrieblicher Zusammenarbeit in Theorie und Praxis, Frankfurt am Main, 1997
- Blecker, T.: Unternehmung ohne Grenzen: Konzepte, Strategien und Gestaltungsempfehlungen für das Strategische Management, Wiesbaden, 1999
- Bleicher, K.: Der Strategie-, Struktur- und Kulturfaktor Strategischer Allianzen als Erfolgsfaktor. In: Bronder, Chr./Pritzl, R. (Hrsg.): Wegweiser für strategische Allianzen: Meilen- und Stolpersteine bei Kooperationen, Frankfurt am Main, 1992, p. 265–292
- Bronder, Chr./Pritzl, R.: Ein konzeptioneller Ansatz zur Gestaltung und Entwicklung Strategischer Allianzen, in: Bronder, Chr./Pritzl, R. (Hrsg.): Wegweiser für strategische Allianzen: Meilen- und Stolpersteine bei Kooperationen, Frankfurt am Main, 1992, p. 343–355
- Daschmann, H.A.: Erfolgsfaktoren mittelständischer Unternehmen – ein Beitrag zur Erfolgsfaktorenforschung, Stuttgart, 1994
- Fontanari, M.: Kooperationsgestaltungsprozesse in Theorie und Praxis, Berlin, 1996
- Kanter, R. M.: Unternehmenspartnerschaften: Langsam zueinander finden, in Harvard Business Manager, 2/1995, p. 33–43
- Killich, S./Luczak, H.: Unternehmenskooperation für kleine und mittelständische Unternehmen. Lösungen für die Praxis, Berlin, 2003
- KMU in Europa. Beobachtungsnetz der europäischen KMU in Zusammenarbeit mit European Network for SME Research (ESNR) und Intromart, URL: http://ec.europa.eu/enterprise/enterprise_policy/analysis/doc/smes_observatory_2003_report7_de.pdf, Nr. 7, 2003
- KMU und Kooperationen, Beobachtungsnetz der europäischen KMU in Zusammenarbeit mit European Network for SME Research (ESNR) und Intromart, URL: http://ec.europa.eu/enterprise/enterprise_policy/analysis/doc/smes_observatory_2003_report5_de.pdf, Nr.5, 2003
- Krüger, W./Schwarz, G.: Strategische Stimmigkeit von Erfolgsfaktoren und Erfolgspotentialen. In: Hahn, Dieter/Taylor, Bernard (Hrsg.): Strategische Unternehmensplanung – Strategische Unternehmensführung – Stand und Entwicklungstendenzen, 7. Edition Heidelberg, 1997, p. 75–104
- Liebhart, U.: Strategische Kooperationsnetzwerke – Entwicklung, Gestaltung und Steuerung, Wiesbaden, 2002
- Moss Kanter, R.: Unternehmenspartnerschaften – Langsam zueinander finden. In: Harvard Business Manager: Strategische Allianzen, 17. Jg., 2. Quartal, 1995
- Nicolai, A./Kieser, A.: Trotz eklatanter Erfolglosigkeit: Die Erfolgsfaktorenforschung weiter auf Erfolgskurs. In: Die Betriebswirtschaft (DBW). Jg. 62 (2002), Heft 6, p. 579-596.
- Peters, J. T./Waterman, R. H.: Auf der Suche nach Spitzenleistungen – was man von den bestgeführten US-Unternehmen lernen kann, 7. Edition, Landsberg, 1984
- Porter, M.E.: The Competitive Advantage of Nations - Nationale Wettbewerbsvorteile, Frankfurt,

1999

Pümpin, C.: Strategische Erfolgspositionen – Methodik der dynamischen Unternehmensführung, Bern, 1992

Rautenstrauch, T./Generotzky, L./Bigalke, T.: Kooperationen und Netzwerke – Grundlagen und empirische Ergebnisse, Lohmar-Köln, 2003

Reiß, M. (Hrsg.): Netzwerk-Unternehmer: Fallstudien netzwerkintegrierter Spin-offs, Ventures, Start-ups und KMU, München, 2000

Sauerwein, E: Das Kano-Modell der Kundenzufriedenheit – Reliabilität und Validität einer Methode zur Klassifizierung von Produkteigenschaften, Wiesbaden, 2000

Schöne, R. (Hrsg.): Kooperationen von kleinen und mittelständischen Unternehmen. Ein Leitfaden. Chemnitz: technische Universität Chemnitz, 2. Edition, 2000

Simon, H.: The hidden champions. In: Pfohl, H.-C. (Hrsg.): Betriebswirtschaftslehre der Mittel- und Kleinbetriebe – größenspezifische Probleme und Möglichkeiten ihrer Lösung, Berlin, 1997

Sydow, J.: Strategische Netzwerke – Evolution und Organisation, Wiesbaden, 1992