

Matching B2B-Partners in the Sharing Economy

Luca Niederhauser¹, Toni Waeﬂer¹, Sebastian Huber²,
Uta Juettner², Karina von dem Berge², Charles Huber³,
and Simona Burri³

¹University of Applied Sciences and Arts Northwestern Switzerland, School of Applied Psychology, 4600 Olten, Solothurn, Switzerland

²University of Applied Sciences and Arts, School of Business, 6000 Luzern, Luzern, Switzerland

³University of Applied Sciences and Arts Northwestern Switzerland, School of Engineering, 5200 Windisch, Aargau, Switzerland

ABSTRACT

This paper explores the matching of business-to-business (B2B) partners interested in the sharing of resources. Factors for a successful matching were derived from the literature and examined through interviews with representatives of Swiss small and medium-sized enterprises (SMEs). Results showed that relevant success factors cannot be universally defined in advance since sharing transactions differ too much from one another. These insights led to the development of a diagnostic tool that takes the diversity of sharing transactions into account by facilitating the comparison of expectations and objectives of the parties involved. Such compatibilities, or incompatibilities are revealed, which prevents misunderstandings during the sensitive partner matching phase of B2B-sharing transactions.

Keywords: Sharing economy, Business-to-business (B2B), Partner matching, Success factors, Diagnostic tool, Boundary spanning cooperation, Small and medium-sized enterprises (SMEs)

INTRODUCTION

The sharing economy offers great potential for companies to use resources in a more sustainable way through access instead of ownership, to create knowledge synergies and to save costs (Hong et al. 2014). The potential of sharing is particularly attractive to SMEs as it provides access to scarce resources that otherwise are not affordable (Soltysova and Modrak 2020). However, sharing resources between businesses is not yet widespread. Therefore, a research initiative was launched to better understand and promote the sharing between SMEs. In this research tools for supporting different phases of sharing transactions were developed. This paper focuses on the initial phase of a sharing process. In this phase it is necessary for sharing partners to find each other and develop a foundation on which a successful sharing can be built on. The following text outlines the study of relevant actions and tools in the start-up phase and highlights the lessons learned. First, findings from the B2B-sharing literature are described and their validation is

presented. Resulting from this a tool for supporting the B2B-sharing start-up phase was developed and its application is described.

SUCCESS FACTORS FOR B2B-SHARING

A literature review was conducted to identify factors impacting the readiness of companies to participate in B2B-sharing transactions. In the following these factors are called success factors (SF in singular or SFs in plural). The databases Psyn dex, Science Direct, Google Scholar and ResearchGate were screened for the following keywords in German and English: sharing, pre-conditions, prerequisites, requirements, determinants, antecedents, success factors, collaboration, co-competition, competition, B2B, SME, sharing economy, risk factors, cooperation motives and cooperation models. The review revealed a total of 54 literature references. 41 separate SFs were identified and clustered. A summary of the six clusters is presented below.

Clusters of Success Factors

Characteristics of sharing resources: The resources must be sharable, i.e., they should be owned by one party and must be made accessible to at least one other party. In addition to availability, a readiness to share and perceiving the opportunity for sharing are needed (Grondys 2019). Choi et al. (2014) discuss a high price, generally low availability, short usage time and low usage frequency in comparison with durability of products as features in resources that positively affect their suitability for sharing.

Company internal preconditions: SMEs must recognize the benefit of participating in the sharing of resources in comparison to ownership (Gulati et al. 2012). Financial benefits from sharing are a further aspect that influence SMEs' readiness to share (Antikainen et al. 2018). This can materialize in the form of a need to use materials and resources more efficiently (Botsman 2015), cost reduction (Falkenberg and Esselin 2019), increasing one's own productivity (Barni et al. 2018), or monetary rewards from sharing (Cho et al. 2014).

Managerial and individual characteristics: Leadership's attitude towards sharing especially in an SME context where individual executives have greater influence over such strategic decisions are important (Della Corte and Aria 2016; Yazici 2013). De Araujo and Franco (2017) stress the need for personal trust into the capabilities of a potential sharing partner while Brettel et al. (2014) argue a generally trustful attitude towards third parties is required, especially when a potential sharing partner originates from likely competitive industries.

External environment: The degree of interdependence between SMEs is considered a strong driver of sharing (Gnyawali and Ryan Charleton 2018). The more one SME depends on access to a resource of the other and vice versa, the more both parties are likely to enter and sustain a (sharing or cooperative) relationship. Geographic proximity creates favorable conditions towards sharing (Gulati et al. 2012) and thus acts as a mediating aspect onto other preconditions, e.g., the building of trust and information exchange.

Communication on the sharing matter and relationship: SMEs need to openly communicate and exchange information on the matter of sharing (Arnold et al. 2019; Grondys 2019). Kumar et al. (2018) argue that a strategic framework for customer development is needed, while Choi et al. (2014) require SMEs to establish business processes for sharing on the level of their business model. With a focus on the relationship, the open signaling of commitment to sharing and partnership (Dorn et al. 2016; Yazici 2013) is highlighted with Choi et al. (2014) adding consideration of reliability.

Management of sharing transactions: Managerial action affects the success of B2B-sharing in SMEs. Weiber and Lichter (2019) highlight the required capability of coordinating sharing activities in multi-sided market scenarios. Antikainen et al. (2018), indicate various ICT-related organizational capabilities as particularly relevant. Comparable to peer-to-peer sharing, Kumar et al. (2018) attribute a key role to the intermediary of B2B-sharing transactions as (1) coordinator of stakeholders and their activities as well as (2) service enabler. If a platform is used to orchestrate sharing activities between SMEs, directness, and simplicity (Botsman 2015), efficient communication (Brettel et al. 2014), as well as internet-based transactional environments (Arnaut 2018) are considered relevant.

VALIDATION OF SUCCESS FACTORS

To validate the SFs excerpted from the literature review and identify the most important SF, the SFs were operationalized and interviews with representatives from ten Swiss manufacturing SMEs were conducted using a semi-structured interview guide. The interviews were recorded and qualitatively analyzed. The main findings from the interviews are twofold: a) The companies' notions and expectations of which factors influence the success of B2B-sharing vary strongly. b) The actual relevance a company attributes to certain factors is dependent of the specific resource as well as of the specific partner. A SF can be considered important when sharing a specific resource but not when sharing another resource (e.g., depending on how critical a resource is to one's business). And for the same resource a SF can be considered important when sharing with a specific partner but not when sharing with another partner (e.g., depending on how much experience one has with sharing with a particular partner). The following two quotes illustrate the different attitudes concerning the motivation to participate in a B2B-sharing transaction found in the interviews.

Motivation SME 1: "Financial added value through cost optimization."

Motivation SME 2: "The development of a joint network of SMEs". Conclusively, the relevance of SFs cannot be predicted in general. Rather, the relevance is assigned individually and specifically depending on the concrete sharing transaction. Therefore, sharing partners do not necessarily need to agree on all SFs. It is however important for a successful partner matching that there are no incompatibilities regarding mutual expectations. Critical SFs need to be identified in the partner matching phase.

Table 1. Final set of 16 SFs

1) What should be the ownership of the resources to be shared?	2) What role should an intermediary/broker play in the sharing transaction?
3) How intensive should the collaboration between the SMEs be during sharing?	4) How important is the acquisition of new knowledge as part of the added value of sharing?
5) What is the geographic scope of the sharing transaction?	6) To what extent should the value chains of the participating SMEs be integrated through the sharing?
7) What culture of sharing (attitudes toward sharing) is expected from the sharing partner?	8) What should be the main medium of communication during the sharing transaction?
9) How binding should participation in the sharing transaction be?	10) What should be the time horizon of the sharing transaction?
11) How consistent should the cooperation between the sharing partners be?	12) How important are external framework conditions (e.g., legal) for the sharing?
13) To what extent should the sharing be regulated by contract?	14) What should be the conditions for additional SMEs to join an existing sharing cluster?
15) How should sharing affect the business model of either partner?	16) How important is it to promote the “sharing between SMEs in Switzerland” in general?

DIAGNOSTIC TOOL DEVELOPMENT

To implement the SFs into an applicable tool supporting the matching phases in B2B-sharing, their number was reduced. In a first step, the research team used literature references to determine for each SF, if reaching consensus between sharing partners on that SF was considered relevant. A total of 36 SFs were excluded. In a second step, the research team excluded all non-differentiating SFs, i.e., SFs that are not expected to be assessed differently by potential sharing partners. For example, if all SMEs are expected to consider mutual trust a precondition for sharing success, this SF is non-differentiating. In a third step, the representatives of the ten Swiss SMEs involved in the project double-checked whether they considered a consensus on the SFs relevant and certain SF were reintroduced. This led to a final list of 16 SFs (see Table 1). Consensus among potential sharing partners on these 16 SFs is thus considered relevant to the successful implementation of a B2B-sharing transaction.

APPLICATION OF THE DIAGNOSTIC TOOL

In this section, we describe the application of the diagnostic tool in a sharing transaction using a fictitious case in which a company initiates a partner matching phase on an online platform by searching for another company that offers a resource it is looking for. The fictitious company Swiss-Chocolate-Clocks (SCC) needs a specific measuring device to carry out a special order. Because of the limited financial resources, it is not possible for them to

purchase this device. Elizabeth, the project manager of SCC, decides to search for the required measuring tool on an online B2B-sharing platform where SMEs from various industry sectors offer resources. Fortunately, the required device is available. The fictitious company Clear Mountain Energy (CME) has put a bid online for a corresponding equipment since it does not use it most of the year. Elizabeth signals her interest towards CME and schedules a meeting with the CME representative John to assess their mutual compatibility for a B2B-sharing transaction. Before the meeting both parties answer the 16 questions from the diagnostic tool (see Table 1) in relation to the resource to be shared. One of these questions is for example: How consistent should the cooperation between the sharing partners be? (see Table 1, Question 3). On a four-point ordinal scale from “as little contact as possible” to “as intensive of a collaboration as possible”, each party indicates their desired intensiveness of collaboration for this sharing transaction. In this manner, all 16 questions are answered by the company representatives Elizabeth and John in advance. To be able to do so, it is necessary that the persons answering the questions know the companies’ expectations and objectives. At the time of the first get-together, Elizabeth and John now compare their answers to the 16 questions. In this way the compatibility of the companies’ expectations and objectives is assessed. The assessment – and if required a negotiating process with the aim of reaching consensus – may be supported by a third-party facilitator. When comparing the answers, the following consensus or no-consensus constellations may arise:

Consensus on a consensus-relevant SF: Elizabeth and John both indicate on question 1 that the shared measuring device should remain in the ownership of CME. Both parties believe the issue of ownership needs to be viewed equally by both parties to be compatible since SCC is looking for a cost-effective solution and CME wants to maintain the flexibility of use.

Consensus on a consensus-irrelevant SF: Elizabeth and John both indicate on question 15 that they do not care about the impact of the sharing transaction on the partner company’s business model. They agree that this issue is generally not relevant to the sharing since the measuring device has a very limited impact on the company’s operations.

No-consensus on a consensus-irrelevant SF: John indicates on question 5 that the sharing of the measuring device should take place locally in the region of CME while Elizabeth indicates that her company does not care about the geographical scope of the B2B-sharing. Because the measuring device can be shipped easily and inexpensively, the parties agree that their different opinions on this issue are not relevant.

No-consensus on a consensus-relevant SF: John from CME indicates on question 10 that the duration of the sharing partnership should be long-term because the internal overhead for one-time sharing is significant. Elizabeth from SCC on the other hand would like the sharing partnership to be short-term because it is not clear whether there will be another order where a corresponding measuring device is needed. Based on the rationales of both parties an agreement on the time horizon of the sharing relationship is required. Therefore, the partners are incompatible with respect to question 10 and a consensus needs to be reached.

The consensus or no-consensus constellations illustrate how the diagnostic tool supports the matching phase between two or more parties at the beginning of a sharing transaction. By comparing the answers to the 16 most relevant SF questions, the four possible consensus constellations can be identified efficiently. Failure to reach consensus on a consensus-relevant SF is taken as an indication that further action is needed to establish compatibility between the parties before a sharing transaction can be implemented.

DISCUSSION

The potential of B2B-sharing for SMEs often remains untapped. The findings from the literature point to various ways to exploit this potential, but there is a lack of a unifying structure that enables SMEs to exploit it. By creating a framework and translating the findings into a diagnostic tool an attempt is being made to improve exploitability for companies. It is hypothesized that the assessment of mutual expectations and objectives along the 16 SFs from the diagnostic tool (see Table 1) contributes to a more effective partner-matching phase and thus to a higher likelihood of successful B2B-sharing transactions. However, the tool must be placed in the context of sharing transactions. It is limited to the partner-matching phase and does not provide any assistance beyond that phase. It is subject of our current research to transfer the findings from the start-up phase of B2B-sharing into the next phase, in which the resource sharing takes place.

ACKNOWLEDGMENT

This work was funded by Innosuisse, the Swiss Federal Innovation Agency.

REFERENCES

- Antikainen, M., Aminoff, A. & Heikkilä, J. (2018). Business model experimentations in advancing B2B sharing economy research. *ISPIM Innovation Symposium* [online], pp. 1–12. Available from: The International Society for Professional Innovation Management (ISPIM) [accessed 25 January 2022].
- Arnaut, C., Pont, M., Scaria, E., Berghmans, A. & Leconte, S. (2018). Study on data sharing between companies in Europe. *Final Report* [online]. Available from: Publications Office of the European Union [accessed 25 January 2022].
- Arnold, J., Gundolf, K., Kallmünzer, A., Kraus, S., & Gast, J. (2019). Coopetition of small- and medium-sized family enterprises: Insights from an IT business network. *International Journal of Entrepreneurship and Small Business* [online], 38(1/2), pp. 78–101. Available from: Inderscience Online Journals [accessed 25 January 2022].
- Barni, A., Montini, E., Menato, S., Sorlini, M., Anaya, V. & Poler, R. (2018). Integrating agent based simulation in the design of multi-sided platform business model: a methodological approach. *International Conference on Engineering, Technology and Innovation (ICE/ITMC)* [online], pp. 1–9. Available from: SUPSI Instory [accessed 25 January 2022].
- Botsman, R. (2015). Where does loyalty lie in the Collaborative Economy? *Collaborative Consumption*.
- Brettel, M., Friederichsen, N., Keller, M., & Rosenberg, M. (2014). How virtualization, decentralization and network building change the manufacturing landscape: An Industry 4.0 Perspective. *International Information and Communication Engineering* [online], 8(1), pp. 37–44. Available from: World Academy of Science, Engineering and Technology [accessed 25 January 2022].

- Choi, H. R., Cho, M. J., Lee, K., Hong, S. G., & Woo, C. R. (2014). The Business Model for the Sharing Economy between SMEs. *WSEAS Transactions on Business and Economics* [online], 11, pp. 626–634. Available from: WSEAS Transactions on Business and Economics [accessed 25 January 2022].
- Cho, M., Kangbae, L., Hyung Rim, C., Soon Goo, H., Chang-hyun, P. & Hyung-Jong, K. (2014). Introduction Strategy of Inter-Corporate Sharing Economy for Small Businesses Competitiveness Reinforcement. *Proceedings 8th WSEAS International Conference on Business Administration* [online], pp-109-118. Available from: WSEAS [accessed 25 January 2022].
- de Araujo, D. V. B. and Franco, M. (2017). Trust-building mechanisms in a competition relationship: a case study design. *International Journal of Organizational Analysis* [online], 25 (3), pp. 378–394. Available from: Emerald [accessed 25 January 2022].
- Della Corte, V. and Aria, M. (2016). Coopetition and sustainable competitive advantage. The case of tourist destinations. *Tourism Management* [online], 54, pp. 524–540. Available from: Elsevier [accessed 25 January 2022].
- Dorn, S., Schweiger, B. and Albers, S. (2016). Levels, phases and themes of coopetition: A systematic literature review and research agenda. *European Management Journal* [online], 34(5), pp. 484–500. Available from: Elsevier [accessed 25 January 2022].
- Falkenberg, A., and Esselin, C. (2019). *B2B Sharing Platforms. The Next Logical: A qualitative study investigating what drives or hinders the business to business sharing economy*. Available from: <https://www.diva-portal.org/smash/get/diva2:1332924/FULLTEXT01.pdf> [accessed 25 January 2022].
- Gnyawali, D. R. and Ryan Charleton, T. (2018). Nuances in the interplay of competition and cooperation: Towards a theory of coopetition. *Journal of Management* [online], 44(7), pp. 2511–2534. Available from: Sagepub [accessed 25 January 2022].
- Grondys, K. (2019). Implementation of the Sharing Economy in the B2B Sector. *Sustainability* [online], 11(14), pp.3976. Available from: MDPI [accessed 25 January 2022].
- Gulati, R., Wohlgezogen, F. and Zhelyazkov, P. (2012). The two facets of collaboration: Cooperation and coordination in strategic alliances. *Academy of Management Annals* [online], 6(1), pp. 531–583. Available from: Harvard DASH [accessed 25 January 2022].
- Hong, S. G., Kim, H. J., Choi, H. R., Lee, K. & Cho, M. J. (2014). Critical success factors for sharing economy among SMEs. *Mathematical Methods in Engineering and Economics*, pp. 70–74. Available from: Inase [accessed 25. January 2022]
- Kumar, V., Lahiri, A. & Dogan, O. B. (2018). A strategic framework for a profitable business model in the sharing economy. *Industrial Marketing Management* [online], 69, pp. 147–160. Available from: Elsevier [accessed 25 January 2022].
- Soltysova, Z., & Modrak, V. (2020). Challenges of the Sharing Economy for SMEs: A Literature Review. *Sustainability* [online], 12(16). Available from: MDPI [accessed 25 January 2022]
- Weiber, R. & Lichter, D. (2019). *Share Economy: Die "neue" Ökonomie des Teilens* [online]. Wiesbaden. Springer Gabler. Available from: Springer Link [accessed 25 January 2022].
- Yazici, H. J. (2013). Supplier perceptions of knowledge sharing in buyer-supplier relationships: a service example. *International Journal of Logistics Systems and Management* [online], 16(3), pp. 315–339. Available from: Inder Science Online [accessed 25 January 2022].