Managing service triad operations: examining member-to-member exchanges in service design and service provision

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Abstract
We study two operational processes related to innovation in supply networks: the design and provision of service in triads. In this paper we study member-to-member exchanges underlying the formation and functioning of service triads using four illustrative reconfigurations of service triads at Dutch universities. Utilizing insights from service operations management, we find that the design and provision of service triads entails a complex set of members' roles and responsibilities as well as service supply network capabilities. Our study contributes to the literature by examining the process of developing a service and servicing delivery system in buyer-provider-customer service arrangements.

Keywords: Service Networks, Service Innovation, Service Operations

Introduction
In today's business landscape, where both traditional and emergent types of service providers are challenged to efficiently and effectively fulfill customer demands, service triadic outsourced arrangements have become prevalent. For example, in the hospitality industry, traditional hotel brands such as Marriott and Four Seasons are contracted by institutional property owners to efficiently manage the day-to-day operations of its hotels and directly service guests effectively. The service triad, as depicted in Figure 1, configurationally represents the relationships between three parties: a service purchasing firm (i.e., service buyer), a service providing firm (i.e., service provider), and the service buyer's institutional or individual customer (i.e., service end user). The prevailing focus of much of the extant scholarly examination on service triads has been configurational structure-based with nascent advancement in theorization and understanding of the operational working of such outsourced service arrangements (e.g., Li and Choi, 2009; Mena et al., 2013). We assert that the harmonious fulfillment of service demands occurs when all three service triad members engage in mutually productive operational exchanges that result in the design and provision of apt quality service (Golder et al., 2012; Roth and Menor, 2003).

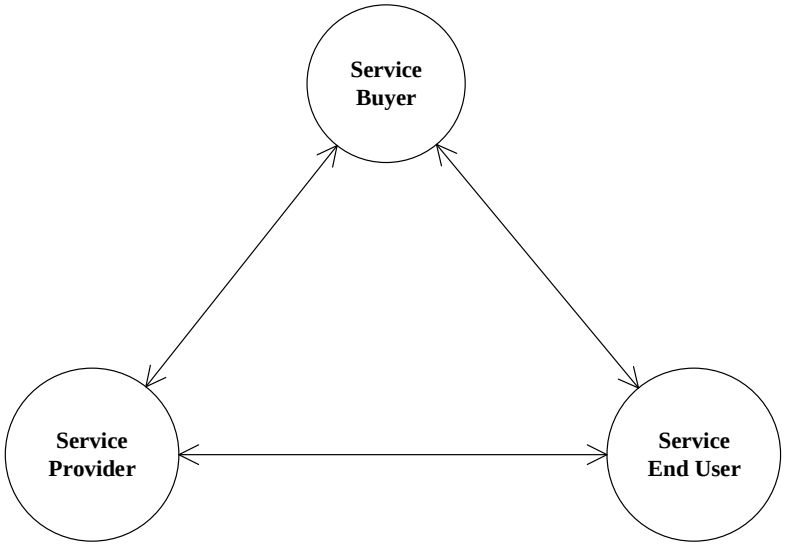

Figure 1: The service triad configuration (adapted from Wynstra et al., 2015)

In order to further advance scholarly theorization and managerial understanding, two prevalent scholarly perspectives on service triads need to be re-envisioned. First, scholarly inquiry would benefit from moving beyond its overarching focus on configurational or structural considerations in order to also operationally examine the *evolving* nature of the formation and functioning of the service triad (cf. Wynstra et al., 2015). What do the bi-directional arrows in Figure 1 reflect? While those arrows diagrammatically depict inter-relationships (Andersson-Cederholm and Gyimóthy, 2010; Carson et al., 1997; Madhavan et al., 2004), they also operationally characterize productive exchanges for decision-making or action-taking. Second, scholarly inquiry would benefit from adopting the outsourced service supply network itself as the preferred unit of analysis rather than be focused on examining a single member of the service triad and its dyadic workings with others. Previous supply chain management-based service triad examinations predominantly revolved around advancing insights from the managerial perspective of the buying firm (Kreye, 2017; e.g., Tate and Ellram, 2012; van Iwaarden and van der Valk, 2013).

Overall, our exploratory multiple-case study examination of design and provision, i.e., innovation and operation, of four illustrative service triads provides several noteworthy substantive, analytical, and theorization contributions. We categorize, quantify, and visualize service triad operations to highlight the evolving nature of service triads and their management. We examine the roles, responsibilities, and capabilities involved in managing design and provision in service triads. And finally, we show how action and decision-making interactions between the members of a triad arise both to enact and adapt the emerging service triadic network structure.

Literature review

We rely on service operations management (SOM) insights (Roth and Menor, 2003; Victorino et al., 2018) to develop an exchange-based understanding of the inner workings of service triadic arrangements with specific emphasis on service design and service provision (e.g., Menor, 2015). The operational focus of service design is the orchestration of service strategy choices (Roth and Menor, 2003) that align the provider's servicing requirements with customers' services demands. Service provision, on the other hand, revolves around the realized functioning of the service delivery system. The capabilities of this realized service delivery system, mostly reflected in the interactive encounters that

make up the customer's service consumption journey (Tax et al., 2013), are the basis for transforming servicing inputs—both those provided by the provider and the customer—into demand fulfilling service outputs (Sampson and Spring, 2012). In this paper we study how these two service operational management stages are manifested in the triadic outsourced service context.

Furthermore, given our emphasis on operational exchanges and its relation to the structure of the triad, we leverage tenets of (strong) structuration theory as sensitizing concepts in this research. In particular, consistent with structuration understanding, we posit that the structure of relationships in a service triad (see Figure 1) is both formed by and enacted through member-to-member exchanges, or inter-*actions*, happening over time (Giddens, 1984; Stones, 2005). Indeed, those members are 'generic actors' rather than 'a supplier' or 'a customer' per se, and are continuously engaging in bilateral (service-for-service) exchanges (Ekman et al., 2016; cf. Håkansson and Snehota, 1995) with other members of the triad.

Analyzing the substance and sequence of these exchanges allows us to decompose the currently prevalent structural view of service triads—as all-connected triad relationships (see Figure 1)—into its constitutive service design and service provision exchanges. On this bases, we develop an appreciative understanding of managing service triads as an operational process of members engaging in interaction to form and act upon relations in a network, i.e., in an outsourced service arrangement.

Methods

We conduct a multiple-case study of four exemplary service triads, which have recently been innovated and/or reconfigured ,which allows us to study both service design and service provision. Furthermore, the cases all relate to similar types of services and settings, i.e., facility services at universities, which are buyer-initiated service triads (cf. Wynstra et al., 2015). Given the importance of exploring how service triads are managed, we can derive a compelling theorizing narrative arc (Shepherd and Suddaby, 2016) based on this limited set of cases that can subsequently serve as input to both similar exploratory studies in other settings and to studies aiming at statistical generalization of the emerging theorizing propositions. Our empirically-based theorizing offers a novel perspective of the interesting facts of empirical reality as well as a first attempt at abstraction to a theoretical level (Shepherd and Suddaby, 2016), which is by no means conclusive, exhaustive, or intended as statistically generalizable, but instead grounded in the authors' understanding of the case-based data (Ketokivi and Choi, 2014).

We chose public universities in The Netherlands to select cases. Dutch universities engage frequently in arrangements with external service providers for a wide range of auxiliary and facility services, including food, print, insurance, maintenance, and cleaning. Therefore, cases are selected in which a university acts as a service buyer with respect to some focal service, which has recently been redesigned and/or contracted anew. Cases were selected in cooperation and discussion with purchasing executives and managers. In particular, theoretical sampling was applied to maximize variation in the cases, hence, both newly outsourced services and re-contracted services, both existing and new supply structures, and more and less relevance of the focal service in the overall servicing context, i.e., education.

Data collection

Each case was studied using a variety of data sources and primarily using interviews with key informants. The first author interviewed multiple informants for each case during an on-site visit, often starting with the respective purchasing manager involved with the case

and furthermore with the respective contract manager (from another university department) or other responsible staff member. Subsequently, interview(s) were also conducted on the service provider side, with key informants such as sales/account managers or operational managers. Interviews were semi-structured and open-ended with one or two key informants. Informants were asked to recall events, such as exchanges, and processes, such as supplier selection, to provide actual examples, and, if needed, to consult case documents or notes before answering the questions. For the four illustrative cases, a total of eleven interviews were conducted for this study, the formal part of which lasted, on average, 50 minutes. Interviews were tape-recorded and subsequently transcribed verbatim. These transcripts, along with interview notes, form the main source of data for this study. Additional data was gathered from documents and other case material directly. Table 1 provides an overview of the cases and some of their defining characteristics. More details in full paper.

Data analysis

To analyze the case data, we followed a grounded theoretical approach (Charmaz, 2014; Eisenhardt and Graebner, 2007). Based on the available case materials, each case was studied leading to an initial case write-up. Given our interest in understanding how design and provision of service are managed in the context of service triads, we first examined "What is going on here?" (Tsoukas, 2009, p. 298). From the interview transcripts and notes, we were able to reconstruct member-to-member exchanges as they occurred during the formation of the service triad and as they continue to occur and support the current functioning of the service triad. For each interaction, we can identify a) the actors involved, b) the direction (sender-receiver) of the exchange, c) the stage (formation or functioning), and d) the purpose. We then analyzed the four cases with respect to these exchanges and generated visual representations to capture those exchanges and serve further analysis. We provide the detailed results of one of the cases—Alpha—to illustrate this analytical method.

Table 1: Summary of cases

Case	Service Offering	Provider	Pursued value type	Pursued value focal member	Service innovation
Alpha	Print	New BU/ existing provider	Economic	Service Buyer	Delivery system
Beta	Food & Beverage	New provider	Functional / Experiential	Service End User(s)	Delivery system and outputs
Gamma	Event Catering	New provider	Economic / Experiential	Service Buyer	Delivery system and outputs
Delta	Insurance	Existing provider	Functional	Service End User(s)	Outputs

Results – Case Alpha

To iterate, the structure of a service triad is enacted through and formed by a sequence of various and multiple exchanges between its actors (Ekman et al., 2016; Giddens, 1984; Stones, 2005). For present purposes, an exchange is an interaction in which one member provides service to another (Ekman et al., 2016; building on: Sampson, 2000; Vargo and Lusch, 2004), i.e., any act of deciding or doing based upon, for example, swapping ideas,

sharing information, expending efforts, achieving agreement, sharing (financial) resources, or resolving conflict.

At this university, the print related services that were traditionally provided through an in-house on-campus print shop, are currently outsourced to an external provider in order to reduce operational costs and improve resource productivity. The current provider of printing equipment was asked to take over the print shop operations (exchange A1) and a separate business unit of the provider responded with a proposal for a combination of on- and off-campus printing to improve efficiency (A2). Service users were informed about the new arrangement and its service delivery system jointly by the service buyer and service provider (B) using leaflets, workshops, and trainings. After substantial efforts to specify the required service quality in detailed workflows and several months of negotiations between legal departments, the contract was signed after servicing had already started (C). We illustrate the exchanges underlying the formation of the service triad in Figure 2; the Table on the left indicates the order in which these functioning exchanges occurred.

A1	SB ↔ SP	Discussion of outsourcing
A2	SP → SB	Proposed new ops system
B	SB+SP → SEU	Joint notification and training of end users
C	SB ↔ SP	Contracting

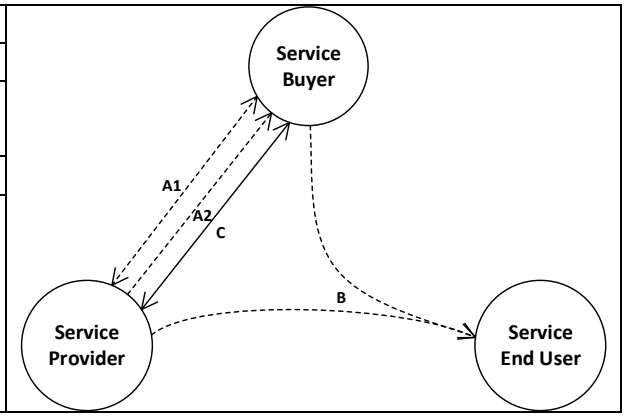

Figure 2: Alpha formation exchanges.
Note: Dashed lines indicate informal information-sharing exchanges. Solid lines indicate formal/written exchanges.

We now discuss the functioning of the service triad by proceeding in a similar manner. Note that in contrast to the formation-focused exchanges, the functioning-focused exchanges are recurring and on-going. Under the new arrangement, most print jobs are ordered through an online portal, printed at a (provider) off-site production facility and subsequently delivered at home (D). Students pay the provider directly for each transaction from their student card accounts or online banking (E). Some printing related services, such as graphic design, would still be offered through the on-campus shop (also D), which also allows for direct customer-provider interaction for difficult print jobs or customer feedback (F). Furthermore, the university compensates the service provider for the staff costs (man-hours) that are not directly related to transactions (G), in particular for staffing the on-campus print shop and for some services that these employees provide to university departments rather than its students, such as graphic design for marketing and communication material. The service provider produces management reports for the service buyer, including usage and production data (Z_T). We illustrate the exchanges underlying the functioning of the service triad Alpha in Figure 3.

D	SP ↔ SEU	Print order and delivery	

E	SEU → SP	Order payment
F	SEU ↔ SP	Complaints and resolution
G	SB → SP	Financial compensation
Z_T	SP → SB	Usage/production report

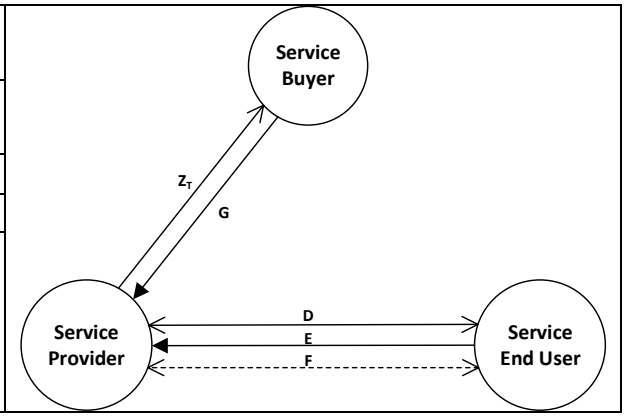

Figure 3: Alpha functioning exchanges.
See note of Figure 2 for details.

For the remaining cases, analysis proceeded in a similar fashion to Alpha. Hence, we distilled the member-to-member exchanges and their sequence similar to Figures 2 and 3. For cases Beta, Gamma, and Delta, these are provided in the Appendix.

Observations

First, we recognize that the formation of the studied service triads is buyer-initiated. In the formation of the service triads, there are almost no direct exchanges between service providers and service end users, but instead, all exchanges in the formation stage are somehow connected to the service buyer. This is curious and can perhaps be explained by analysing the role of the buyer in the formation more explicitly, as well as how an agent's internal structure then informs its decision making regarding the enactment of extant structure.

Second, in our service triads, the prime responsibility for carrying out the servicing of the end users is delegated to the service provider, but all three members of the triad engage in productive exchanges to ensure apt fulfilment of customer demands. In the context of service triads, the customer inputs to be processed by the service provider into desirable outcomes come from two sets of customers, from the provider's perspective: the end users and the buyer. In conclusion, we observe that all three members of the triad play an important role in the functioning of the service triad, including the service buyer.

Third and finally, multiple financial exchanges are present in each case. As the service provider renders service to end users on the buyer's behalf, one could expect that the service buyer has to compensate the provider for this servicing. But that is not what we typically observe, except in case Alpha where the end user also pays the provider directly. Instead, in Beta and Gamma, the service provider has to pay the service buyer for the right to render (and sell) services to the buyer's community of end users. In Delta, the service buyer plays only an administrative part in the financial arrangements of the triad by forwarding the invoiced insurance premium to the service provider. The exchange relations between triadic members become more connected with multiple financial exchanges (Cook and Emerson, 1984). Potentially, multiple financial exchanges, in particular also between service buyer and service provider, prevent the processes of bridge decay and bridge transfer to emerge in our cases (Li and Choi, 2009). In conclusion, multiple financial exchanges contribute to reciprocity and interconnectedness in service triadic arrangements.

Discussion

In this paper, we study several critical operations management considerations underlying the harmonious fulfilment of service demands, which in the service triad context entails members' participation through formation and functioning exchanges. By using a novel methodological approach for analysing qualitative multiple-case data, we created a lexicon for formation and functioning exchanges, a quantification of members' exchange participation, and a visual display of exchanges. We next discuss our theorizing findings in light of the approach described above and the observations emanating from it and offer associated propositions to delineate more nuanced understanding of managing service triads.

Most importantly, our analysis of the cases reveals that the way we commonly depict service triads – as a closed triangle with bidirectional arrows, as in Figure 1 – does not accurately depict the processual character of service triad operations and the exchange-based operations of the triad (Andersson-Cederholm and Gyimóthy, 2010). We observe that these structural relations between members of the service triad are enacted through the participation of members in exchanges for the harmonious provision of service, which subsequently enforces those relationship. In other words, member-to-member exchanges in the design and provision of service both enact existing relationships and form those relations simultaneously (Giddens, 1984; Stones, 2005). Relatedly, we should re-envision service triads – and potentially any service supply network or outsourced service arrangement – as an operating entity for the productive management of service quality, rather than as a static configuration or structure (Carson et al., 1997; Li and Choi, 2009; van der Valk and van Iwaarden, 2011).

In the full version of the paper, we discuss the findings from our cases in light of the relevant literature. Specifically, we focus our discussion around the process of improving value creation and the role of the various triad members and around the process of operating a service triad and the participation of the various triad members. Next, we discuss how a sequence of responsibilities have to be carried out by the triad members in order to decide on and implement new services and new servicing choices. Finally, we study how capabilities are leveraged by triad members in the ongoing operation of the service triad as well as in the change episodes between outsourced service arrangements.

In this, shorter, version, we briefly introduce some of this discussion to present a descriptive operational model underlying the management of service triads, see Figure 4. This model accumulates the emerging understanding and theorizing as developed in detail in the full paper into a visual model by way of summarizing. Figure 4 depicts, from left to right, how an initial arrangement (whether triadic or not) is innovated through service design into a new functioning triadic outsourcing arrangement. Note that this initial arrangement may or may not be of triadic form, meaning the provider and buyer or end-user may not be connected through exchanges in this initial stage. First, new services and servicing choices are triggered by a concern for (lack of) sufficient value creation by at least one of the members. Second, those choices are informed by specific formation-focused exchanges between the service buyer (in our cases) and the other two members. Third, new choices lead to a new service delivery system, based on functioning exchanges, that transforms inputs into (desirable) outputs and assigns responsibilities for design and delivery among the members. Finally, diagnosis of the service and servicing outputs can lead to the improvement of the service (triad) through choices, and more so when the service buyer leverages a dual-purpose dynamic and operational capability (Helfat and Winter, 2011; Loasby, 1998) by participating in exchanges for service diagnosis.

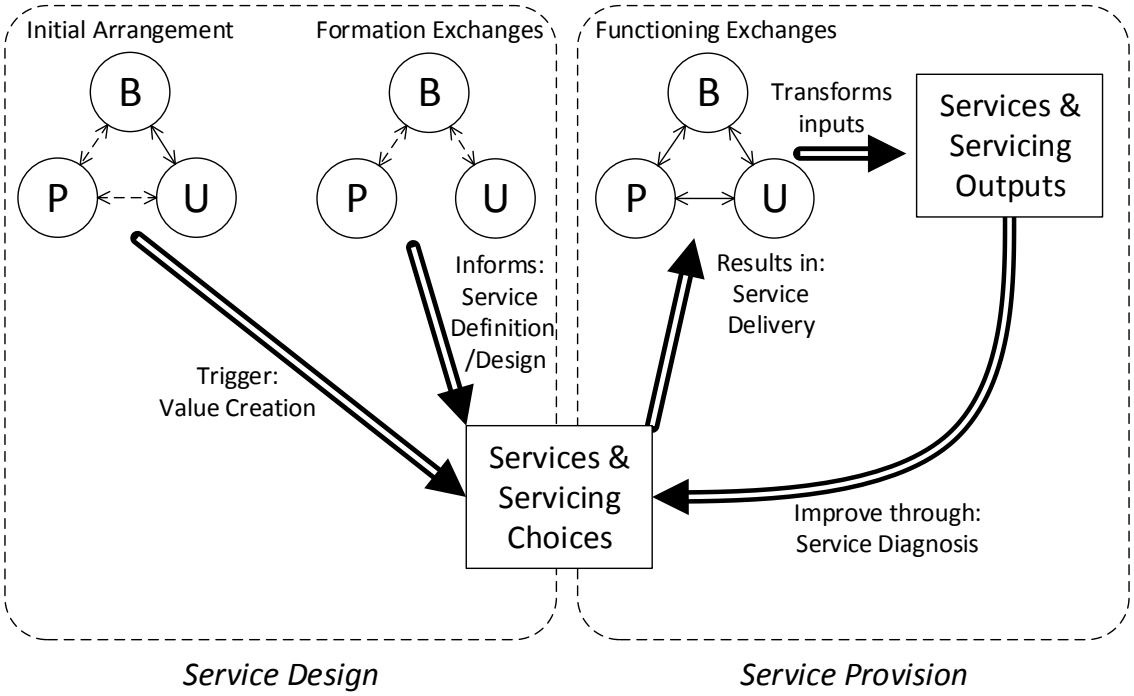

Figure 4: Descriptive operational model of triadic outsourced service arrangements

As depicted in Figure 4, managing service triad design and provision is conceptually straightforward, except for the numerous operational complexities related to formation and functioning exchanges discussed previously. The model furthermore visualizes how service triad structure and members' agency interact, i.e., structuration (Giddens, 1984; Stones, 2005), as member-to-member exchanges both enact as well as establish the service triad structure, as (temporarily) finalized in the functioning arrangement. These iterations between emerging structures of the service triads across the various phases of the formation and functioning, and members acting upon those emerging structure in subsequent phases, can be perceived as the process of structuration, in particular as the relation between external structural clusters, i.e., the service triad, and the interactional sequence, i.e., the exchanges (see Stones, 2005, p. 126).

Conclusion

While configurational depictions and structural considerations of service triads are well documented in the extant literature, our exploratory study contributes to the advancement of scholarly theorization on managing service design and service provision for the triadic outsourced arrangement when viewed as an operating entity. First, our categorization, quantification, and visualization of service triad operations highlights the evolving nature of service triads and their management—despite their structural likeness across cases. Second, examining service triads in this way allows us to advance understanding of the roles, responsibilities, and capabilities involved in managing design and provision in service triads. Third and finally, we show how action and decision-making interactions between members of the service triad arise both to enact and adapt the emerging service triadic network structure. In combination, the contributions offered in this paper allow the field to move forward with a re-envisioned understanding of managing service triads and to delineate some of their defining characteristics.

References

Andersson-Cederholm, E., Gyimóthy, S., 2010. The service triad: modelling dialectic tensions in service encounters. The Service Industries Journal 30, 265–280.

Carson, P.R., Carson, K.D., Knouse, S.B., Roe, C.W., 1997. Balance theory applied to service quality: A focus on the organization, provider, and consumer triad. Journal of Business and Psychology 12, 99–120.

Charmaz, K., 2014. Constructing grounded theory.

Cook, K., Emerson, 1984. Exchange networks and the analysis of complex organizations, Vol. 3, Iss. 4. ed. Emerald Group.

Eisenhardt, K.M., Graebner, M.E., 2007. Theory building from cases: opportunities and challenges. Academy of Management Journal 50, 25–32.

Ekman, P., Raggio, R.D., Thompson, S.M., 2016. Service network value co-creation: Defining the roles of the generic actor. Industrial Marketing Management 56, 51–62.

Giddens, A., 1984. The constitution of society. University of California Press, Berkely and Los Angeles.

Golder, P.N., Mitra, D., Moorman, C., 2012. What Is Quality? An Integrative Framework of Processes and States. Journal of Marketing 76, 1–23.

Håkansson, H., Snehota, I., 1995. Developing Relationships in Business Networks. London: Routledge.

Helfat, C.E., Winter, S.G., 2011. Untangling Dynamic and Operational Capabilities: Strategy for the (N)ever-Changing World. Strategic Management Journal 32, 1243–1250.

Ketokivi, M., Choi, T., 2014. Renaissance of case research as a scientific method. Journal of Operations Management 32, 232–240.

Kreye, M.E., 2017. Can you put too much on your plate? Uncertainty exposure in servitized triads. International Journal of Operations & Production Management 37, 1722–1740.

Li, M.E.I., Choi, T.Y., 2009. Triads in Services Outsourcing: Bridge, Bridge Decay and Bridge Transfer. Journal of Supply Chain Management 45, 27–39.

Loasby, B.J., 1998. The organisation of capabilities. Journal of Economic Behavior & Organization 35, 139–160.

Madhavan, R., Gnyawali, D.R., He, J., 2004. Two's a company, three's a crowd? Triads in cooperative-competitive networks. Academy of Management Journal 47, 918–927.

Mena, C., Humphries, A., Choi, T.Y., 2013. Toward a theory of multi-tier supply chain management. Journal of Supply Chain Management 49, 58–77.

Menor, L.J., 2015. Illuminating the Service Provider's Strategic Mandate on Realizing Apt Quality and Value Through Service Innovation. In: The Handbook of Service Innovation. Springer London, London, pp. 523–543.

Roth, A. V., Menor, L.J., 2003. Insights into service operations management: a research agenda. Production & Operations Management 12, 145–164.

Sampson, S.E., 2000. Customer-supplier duality and bidirectional supply chains in service organizations. International Journal of Service Industry Management 11, 348–364.

Sampson, S.E., Spring, M., 2012. Customer Roles in Service Supply Chains and Opportunities for Innovation. Journal of Supply Chain Management 48, 30–50.

Shepherd, D.A., Suddaby, R., 2016. Theory Building: A Review and Integration. Journal of Management 43, 0149206316647102.

Stones, R., 2005. Structuration Theory. Macmillan Education UK, London.

Tate, W.L., Ellram, L.M., 2012. Service Supply Management Structure in Offshore Outsourcing. Journal of Supply Chain Management 48, 8–29.

Tax, S.S., Mccutcheon, D., Wilkinson, I.F., 2013. The service delivery network (SDN) a customer-centric perspective of the customer journey. Journal of Service Research 16, 454–470.

Tsoukas, H., 2009. Craving for generality and small-N studies : a Wittgensteinian approach towards the epistemology of the particular in organization and management studies. In: Buchanan, D.A., Bryman, A. (Eds.), The SAGE Handbook of Organizational Research Methods. SAGE, Los Angeles; London, pp. 285–301.

van der Valk, W., van Iwaarden, J., 2011. Monitoring in service triads consisting of buyers, subcontractors and end customers. Journal of Purchasing and Supply Management 17, 198–206.

van Iwaarden, J., van der Valk, W., 2013. Controlling outsourced service delivery: managing service quality in business service triads. Total Quality Management & Business Excellence 24, 1046–1061.

Vargo, S.L., Lusch, R.F., 2004. Evolving to a New Dominant Logic for Marketing. Journal of Marketing 68, 1–17.

Victorino, L., Field, J.M., Buell, R.W., Dixon, M.J., Goldstein, S.M., Menor, L.J., Pullman, M.E., Roth, A. V., Secchi, E., Zhang, J.J., 2018. Service operations: what have we learned? Journal of Service Management 29, 39–54.

Wynstra, F., Spring, M., Schoenherr, T., 2015. Service triads: A research agenda for buyer–supplier–customer triads in business services. Journal of Operations Management 35, 1–20.

Appendix

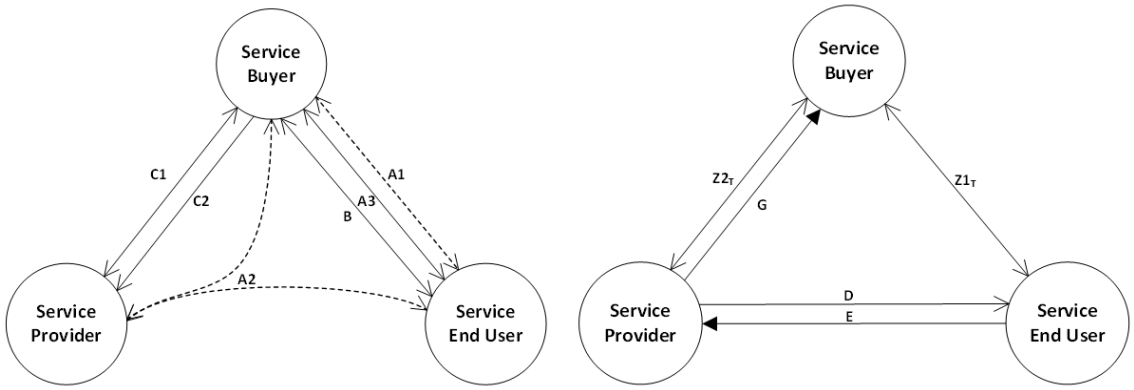

Figure A-1: Beta formation (left) and functioning exchanges (right). Note: Dashed lines indicate informal information-sharing exchanges. Solid lines indicate formal/written exchanges. Solid arrowheads indicate financial exchanges.

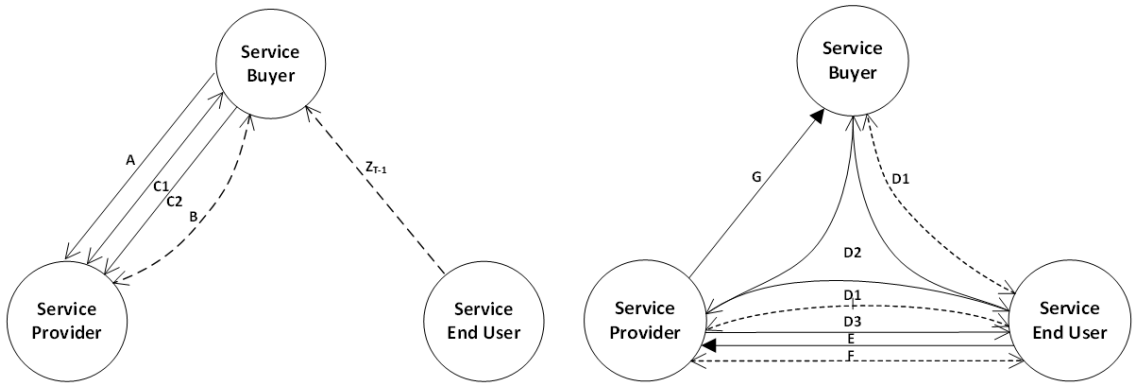

Figure A-2: Gamma formation (left) and functioning exchanges (right). In the panel to the right, D1 and D2 are exchanges that involve all three parties. For D1, the customer searching either the buyer or the provider, and both respond. For D2, the triad acts as a functioning entity to set-up, schedule, and design an event.

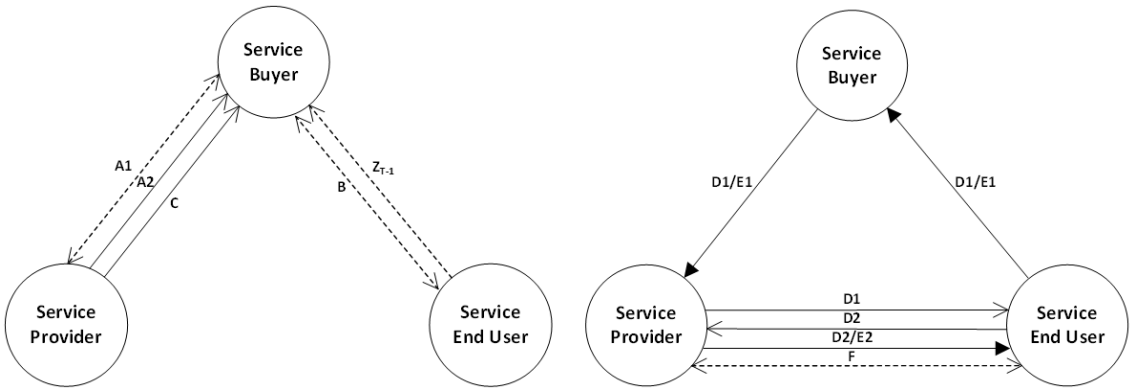

Figure A-3: Delta formation (left) and functioning exchanges (right). In the panel to the right, exchanges D1/E1 and D2/E2 are a single functioning exchange including both registration and payment, or claim handling and payment, respectively.