Enabling Strategic Technological Innovations in IS Outsourcing Relationships: Towards an Innovation-molding Framework

Short Paper

Marfri-Jay Gambal
Aston Business School
Aston Triangle, Birmingham B4 7ET
United Kingdom
gambalm@aston.ac.uk

Julia Kotlarsky
The University of Auckland
12 Grafton Road, Auckland 1010,
New Zealand
j.kotlarsky@auckland.ac.nz

Aleksandre Asatiani
Aston Business School
Aston Triangle, Birmingham B4 7ET
United Kingdom
a.asatiani@aston.ac.uk

Abstract

Outsourcing service providers are progressively being seen not just as efficient partners to handle peripheral tasks, but also as potential sources of impactful innovations. However, as clients reset the bar from cost efficiencies to mutual strategic value creation, the outcomes far too often fail to live up to such ambitious goals. This increasingly prevalent issue takes center stage in our conceptual paper, wherein we investigate the dynamics and effects of (mis)aligned strategic goals at the client- and service provider-side during the joint innovation formation process. By integrating goal-framing theory as the underlying theoretical perspective and drawing on relevant IS outsourcing and distributed innovation literature, we introduce the innovation-molding framework to shed light on the influence of strategic goals on collaborative activities at each phase of the development process in innovation-focused outsourcing engagements. We contribute to IS outsourcing literature and offer some directions for future research related to the emerging innovation through outsourcing stream.

Keywords: technological innovation, outsourcing, goal-framing theory

Introduction

"Innovate or die." The adage often associated with Peter Drucker is nowadays more relevant than ever (Ignatius 2014). The global research and development report in the latest R&D Magazine (2018) shows that already tight research and development budgets are being squeezed to the very last cent, and a range of creative ideas is expected to emerge in the twinkling of an eye. In order to face these present-day concerns effectively, firms need to find ways to innovate quickly. An immense amount of untapped potential is available in outsourcing arrangements, where the client and service provider engage in innovation projects through what we term an "innovation-molding" process, with the mutually cultivated innovation being beneficial for both partners. Clients tend to pursue innovations that may significantly transform internal processes (e.g., Su *et al.* (2015) mention the development of an award-winning customer relationship management system by one of the providers of a Global Bank), and/or innovate their product/service

offerings to their customers (e.g., a social-media-based marketing platform that Infosys developed for Diageo, a global premium drinks company, mentioned in Oshri *et al.'s* (2015) study). Service providers, on the other hand, see collaborations with their top strategic clients as an opportunity to learn from industry leaders and expand their offering of outsourced services (Alcacer and Oxley 2014).

The conventional preconception of outsourcing as associated exclusively with operational matters like cost reduction is slowly being replaced with a new perspective: outsourcing is now seen to provide a viable alternative for not only achieving operational objectives, but increasingly also strategic goals. This modern ideology suggests that the client firm can reach beyond its own boundaries to enhance its offerings and/or improve internal processes by tapping into external knowledge, thus presenting a worthwhile alternative to developing strategic innovations in-house (Weeks and Feeny 2008). As applied by global industry powerhouses such as Apple with increasingly integrated contract manufacturer Foxconn (Marion and Friar 2012), IBM with TelecomCorp (Kotlarsky et al. 2016), or public organizations like the Korean government (Moon et al. 2010), realizing the full potential of outsourcing relationships can be an appropriate approach to satisfying a firm's appetite for more innovation. However, the road to such innovation-enabling outsourcing projects is rocky, as it challenges firms to mutually manage the contrasting combination of creativity-based technological innovation development and cost-related motives for outsourcing (Aubert et al. 2015). Previous studies report several failed cases where the outcome of such high-performing outsourcing arrangements has been disappointment due to unfulfilled or mismatched goals and expectations (Su et al. 2015; Weeks and Feeny 2008).

Even though the number of IS outsourcing studies that concentrate on these increasingly prevalent innovation-focused engagements has risen recently, the body of research is still in its infancy and trails behind rapidly progressing industry practice (Kotlarsky et al. 2015). Specifically, there is a shortage of information systems (IS) studies that tie together insights from strategic outsourcing with related innovation literature to draw a more comprehensive picture of these evolved arrangements. Thus, we aim to contribute to this as yet largely uncharted but growing research field by focusing on the salient issue of misaligned strategic goals (based on the goal-framing theory adapted to the business context (Birkinshaw et al. 2014)), and their effects on the innovation formation process and consequent outcomes.

Accordingly, guided by our interest in understanding how strategic innovations are developed in ongoing IS outsourcing relationships between clients and service providers, we aim to investigate *the dynamics and effects of (mis)aligned strategic goals at the client- and service provider-side during the joint innovation formation process*. Specifically, we focus on: (1) understanding interactions between the client and provider aiming to achieve strategic innovations in product, service or business processes; and (2) conceptualizing the process through which the client and provider jointly "mold" innovation, and how they set and adjust their goals throughout this process.

Our contribution is twofold. First, we build a theoretical basis for the conceptualized "innovation-molding" framework by tying together relevant IS outsourcing and distributed innovation literature. Second, we adopt goal-framing theory to identify how clients and providers pursuing innovations can construct mutually beneficial outsourcing relationships.

Literature Review

Innovations through IS Outsourcing Relationships

Innovation through IS outsourcing relationships is an emerging stream in the literature that highlights strategic aspects of the IS outsourcing domain. It primarily builds on the modern perception of outsourcing, which is progressively unshackling itself from its outdated role as a mere efficiency enhancing tool and moving towards being regarded as a vital corporate strategy (Kakabadse and Kakabadse 2005). Notably, the stream must not be confused with R&D outsourcing research, which promulgates a pay-for-innovations business model and investigates the associated transfer of developmental activities to specialized institutions (e.g. Quinn 2000). Research on tactical outsourcing engagements and the R&D outsourcing notion draws a clear line between the client and service provider. The research on innovation within strategic IS outsourcing engagements suggests more fluid boundaries, where the client can enhance its offerings and/or improve internal processes by tapping into the external provider's capabilities (Lacity et al. 2016; Weeks and Feeny 2008). Consequently, a rich and complex collaborative culture is nurtured, characterized by a redefinition of the relationship status from a contract-focused client-provider arrangement to a long-term quality-focused "win-win" partnership between equal business partners, and

by a mutual, proactive pursuit of strategic value creation (Lacity and Willcocks 2013; Levina and Ross 2003; Lin et al. 2016). As the relationship is deepened, the firm benefits from the opportunity to map out their partner's business in detail, which consequently facilitates the development of innovations that have the potential to exceed operational utility (Hoecht and Trott 2006; Oshri et al. 2015).

Contemporary studies investigating innovations through outsourcing proliferate in different research directions, and, based on their core focus, can be broadly categorized, as illustrated in Figure 1, into those concentrating more on: (1) the consequences of focusing on innovation in outsourcing, and including topics such as the drivers/expected benefits and requirements/challenges; (2) the outsourcing relationship, and primarily investigating the governance of such high-performing strategic outsourcing relationships; and (3) a holistic focus discussing how outsourcing affects joint innovation development.

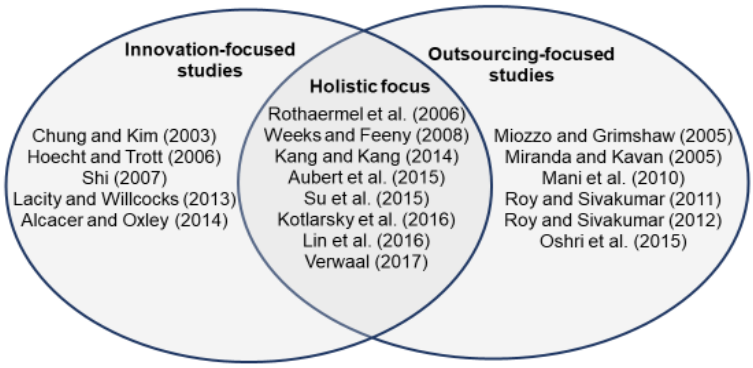

Figure 1. Selected Key Studies

Research in the first category has largely explored the positive and negative effects of shifting from a cost-focused to an innovation-focused engagement. Advocates commonly highlight the additional breadth and depth of capabilities the service provider can bring to the table (Chung and Kim 2003; Levina and Ross 2003), including complementary cutting-edge expertise, as well as reduced innovation development time and costs, and improved market adaptability through exchanging current market and technological information (Chung and Kim 2003; Takeishi 2002). In return, the service provider can experience improved task specialization by continuously repeating and refining tasks in their task domain (Miozzo and Grimshaw 2005), capitalize on the increased exposure to frontier technologies across a range of industries due to broad client portfolios, and steadily move up the value curve, as well as improve their market position and reputation to win over new clients (Alcacer and Oxley 2014). However, even though these benefits are widely acknowledged, other studies have introduced equally convincing arguments for not engaging in innovation-focused outsourcing, or at least engaging with due care. Key risks include a greater chance of information leakage and provider "lock-in" on the client side, the degradation of leading-edge expertise to mere industry standard on the provider side, incompatible paces of technological change, or the surfacing of unbridgeable cultural differences as the deepened cooperation commences (Hoecht and Trott 2006; Shi 2007).

In traditional outsourcing engagements, formal contractual mechanisms usually stand in the foreground to ensure smooth execution of the project (Aubert et al. 2015). A strategic outsourcing engagement, however, adds important relationship-focused elements to the collaboration as service providers are deeply integrated into vital activities along with servicing peripheral IT tasks (Weeks and Feeny 2008). As a consequence, the contract and associated formal mechanisms are only effective to a limited extent, since not all innovation-related project outcomes are tangible or predictable and can therefore not be appropriately formulated (Hoecht and Trott 2006). Thus, the formal instruments employed need to be reconciled with relational governance efforts to optimally facilitate the generation of innovations through the outsourcing engagement (Oshri et al. 2015). Relational mechanisms such as high levels of trust, relational flexibility and cultural compatibility contribute to a successful strategic outsourcing project (Hoecht and Trott 2006; Miranda and Kavan 2005; Oshri et al. 2015; Roy and Sivakumar 2012).

The emerging notion of achieving innovations as a potential outcome of strategic outsourcing engagements is both revered and reviled among scholars as there is no unanimity regarding the significantly increased risk-reward trade-off. In this regard, relevant key quantitative studies have identified a curvilinear, inverted U-shaped relationship between innovation and outsourcing, which implies that clients can benefit from innovations through strategic outsourcing, but only up to a point, after which additional investment in the collaboration can become detrimental due to trusted partners turning into opportunistic providers, and reduced internal learning opportunities as they "hollow out" their capabilities (Rothaermel et al. 2006; Weigelt and Sarkar 2012). Similarly, qualitative studies with a holistic view have discussed this dilemma, describing the paradox inherent in these arrangements, where conventional outsourcing guidelines including tight contracts and limited flexibility for improved efficiency contradict the dynamic characteristics of innovative activities, and offer practical suggestions to redress potential imbalances between the two (Aubert et al. 2015; Kotlarsky et al. 2016). Utilizing the affordance theory lens, Kotlarsky et al. (2016), for instance, found that strategic innovation-support practices at IBM were actually employed to realize multiple different affordances rather than an affordance originally identified as paradoxical.

Overall, while some studies have already started to investigate the successful formation of innovations through outsourcing, relevant IS research from a bird's eye perspective is still in its early stages. As our understanding continues to extend into different directions, it remains of interest to see exactly *how* innovations, particularly strategic technological innovations rather than incremental optimizations, emerge in outsourcing relationships. Intrigued by the currently fragmented findings, we turn to literature from the innovation discipline that may shed light on innovation from external sources.

Innovation from External Sources

We turn to recent open innovation in particular to find insights related to the as yet underexplored innovation formation process in outsourcing engagements. By synthesizing integrated and open models of innovation, West and Bogers (2014) introduce the four-phase model for leveraging external sources of innovation, as visualized in Figure 2. From a client perspective, this model conceptualizes a sequential process from the creation of external innovation to its delivery to the customer, and involving three major steps and a reciprocal interaction mechanism.

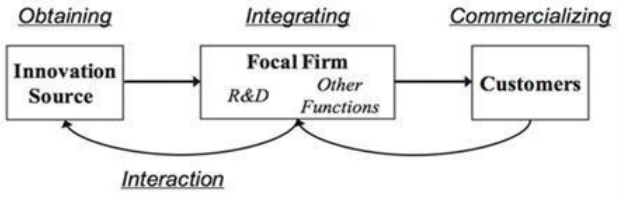

Figure 2. Four-phase Process Model for Leveraging External Sources of Innovation (adapted from West and Bogers, 2014)

The *obtainment* of innovations from external sources is the first step and includes activities related to the identification and acquisition of innovations. Studies in IS and innovation particularly identify suppliers as a significant source of external innovation, and as being able to facilitate the generation of incremental and radical innovations on a micro, firm-level or macro, industry-level (Bogers and West 2012; Kotlarsky et al. 2016; Oshri et al. 2015; Su et al. 2015). Yet, the supplier's knowledge base can be enormous. Acquisition of the complete knowledge stream can overstrain the client's ability to handle the influx of this vast amount of new knowledge, effectively, resulting in a disastrous information overload (Mani et al. 2010). Innovation scholars describe this issue as an inverted U-shaped relationship between external knowledge transfer and innovative performance, similar to the one identified by IS scholars mentioned above (Hsu and Lim 2014). Therefore, carefully filtering useful external innovations is key to optimally complementing the client's internal knowledge (West and Bogers 2014).

The *integration* of identified and acquired innovations from external sources is the second step. West and Bogers (2014) emphasize culture compatibility and technical capability as important to properly utilizing external innovations. Regarding the former, the "not-invented-here" syndrome (Katz and Allen 1982) represents a substantial cultural barrier to the strategic intent of integrating external innovations

(Hussinger and Wastyn 2016; West and Bogers 2014). Specifically, the client must reduce potential internal resistance to external innovations caused by a perceived threat to the organization's identity. This can be achieved, for instance, by clearly communicating how a lack of competencies can be compensated for by integrating the supplier's knowledge, or by restructuring inappropriate incentive schemes (Hussinger and Wastyn 2016). Regarding the latter, absorptive capacity (Cohen and Levinthal 1990) determines the successful utilization of external innovations. In the outsourcing literature, this concept is linked to both the client and supplier and describes their ability to scan, acquire, assimilate, and exploit valuable knowledge.

The *commercialization* of integrated external innovations is the third and last linear step of the process model. The alignment of innovation and commercialization strategies to the client's business model represents the quintessence of successfully leveraging external sources of innovation. Another focus in this phase is to measure the impact of the created and captured value. However, due to the creative nature underlying the generation of incremental and especially radical innovations, measuring the quality of output in progress has proven to be quite difficult and can, at best, only be done after full development (Roy and Sivakumar 2012).

The overarching *interaction* mechanism includes feedback loops and reciprocal interactions with suppliers, networks and communities, thereby affecting each of the three previous steps to different extents. A significant aspect is the learning effect, which the existing IS outsourcing literature has researched from various angles. Studies on innovations in outsourcing relationships describe a learning curve that drives innovation performance and is enabled by variables like client technology skills, measurement specificity, or the number of generations of outsourcing a firm has gone through (Weeks and Feeny 2008).

Overall, West and Bogers's (2014) process model (see Figure 2) represents a comprehensive conceptualization of leveraging external knowledge that encompasses a variety of step-specific and overarching innovation topics of importance. However, as these topics are segregated and categorized into distinctive phases, it becomes clear that the open innovation body of literature lacks a dynamic perspective of how exactly the innovation is transferred from one party (the external innovation source) to another party (the focal firm) after its identification. The arrows connecting each box represent this issue visually. Accordingly, it is within the scope of our study to: (i) investigate the implications of the loop representing the transfer of innovation from the "obtaining" to the "integrating" stage (i.e., the first arrow), under consideration of an influencing "interaction" mechanism (i.e., reverse arrow, from "focal firm" to the "innovation source"); and (ii) contextualize this within an ongoing outsourcing relationship.

While innovation literature that focuses on leveraging external sources of innovation highlights the importance of interactions between the focal firm and an innovation source, the motivation of the participating parties that drives such interactions in pursuit of innovation is unclear. Specifically, in the outsourcing context we recognized a potential for conflicting motivations since each party – client and service provider – has multiple goals: (i) those associated with contractually agreed service level agreements (SLAs); and (ii) their own strategic business objectives (which are different for client and service provider firms). This notion of multiple goals triggered our interest in exploring the suitability of goal-framing theory in our attempt to investigate the dynamics and effects of (mis)aligned strategic goals at the client- and service provider-side during the joint innovation formation process.

Adopting a goal-framing theory lens to the firm-level

Originally, goal-framing theory was conceptualized from an individual's perspective to understand the way people process information and act upon it in any given situation (Lindenberg 2001; Lindenberg and Steg 2007), but has recently been extended to the business environment adopting an employee perspective (Foss and Lindenberg 2013; Lindenberg and Foss 2011) and firm perspective (Birkinshaw et al. 2014). In essence, the theory combines cognitive and motivational dimensions and their interaction in the dynamics of three distinct overarching goals that govern large sets of subgoals at any moment (Foss and Lindenberg 2013; Lindenberg 2001; Lindenberg and Steg 2007). The three overarching goals encompass: (i) the short-term *hedonic goal* that activates subgoals that improve the way one feels right now; (ii) the middle- or long-term *gain goal*, where individuals guard or improve their resources; and (iii) the *normative goal*, where individuals act appropriately in a social environment (Foss and Lindenberg 2013; Lindenberg 2001; Lindenberg and Steg 2007). These strategic goals can be activated (they are "focal") intentionally or unintentionally as an automatic reaction to situational cues (Lindenberg 2001; Lindenberg and Steg 2007).

Accordingly, a "goal-frame" indicates that the activated goal creates a frame which influences behavior and selected actions to satisfy the focal goal (Foss and Lindenberg 2013; Lindenberg 2008).

When one of the three goals is focal, then it is more strongly activated than the other two, and pushes them into the background (Foss and Lindenberg 2013). Linked to this, goal-framing theory is defined by two underlying notions: (i) the goal-frame can support or be in conflict with background goals; and (ii) goal frames follow an order, with hedonic goals being the strongest, followed by gain goals, with normative goals being the weakest (Lindenberg 2001; Lindenberg and Foss 2011; Lindenberg and Steg 2007). The underlying reason is that hedonic goals and gain goals have a default priority, since basic needs are expressed by hedonic goals and caring for one's own resources is vital for individual adaptive advantages gained through cooperating in groups (Foss and Lindenberg 2013; Lindenberg and Foss 2011). Hence, a normative goal is the most precarious and can be easily displaced by the other two types of goal without appropriate arrangements. This results in a potential *goal-framing dynamic*, where focal normative goals can, over time, be pushed into the background without appropriate governance support, or may even never become active due to a dominant hedonic or gain goal (Lindenberg and Foss 2011). Thus, the active and less active goal-frames need to be constantly balanced with one another (Birkinshaw et al. 2014).

Goal-framing theory suggests that normative goals are the most conducive to value creation because they promote a genuine motivation to engage in collaborative activities (Foss and Lindenberg 2013). The formation of innovations in these normative goal frames is particularly facilitated by involvement in a joint endeavor, which encourages prosocial behavior like the spontaneous sharing of knowledge and discourages opportunism since all individual efforts are geared towards the achievement of collective goals (Foss and Lindenberg 2013; Lindenberg and Foss 2011). This notion of common goals as facilitators of innovations is also reflected in relevant IS literature, where a substantial redesign of initially tight formal mechanisms and application of pertinent relationship enablers geared towards the achievement of joint goals is suggested to foster strategic value creation (Oshri et al. 2015; Weeks and Feeny 2008). In practice, however, mismatching egocentric goals driven by financial concerns are widespread in outsourcing, since win-win visions and associated risk-sharing mechanisms are unlikely to have existed at the early stages of the outsourcing arrangement (Weeks and Feeny 2008). Thus, the client and service provider should focus on accomplishing the displacement of initially focal gain goals through the introduction and continuous preservation of a normative win-win goal as the focal overarching goal when strategic innovations are sought through the arrangement (Lacity and Willcocks 2013; Weeks and Feeny 2008).

An Integrated Innovation-molding Framework

Based on the reviewed literature, we set out a framework visualized in Figure 3 for the analysis of how strategic technological innovations can be jointly "molded" for the client in ongoing outsourcing engagements after the service provider's extensive pool of innovations and/or innovation resources is tapped into. By acknowledging the paramount link between the firm's strategic goals and expanding on the open innovation development process as proposed by West and Bogers (2014), our conceptualized innovation-molding framework is designed to answer questions about how initially diverging client and service provider-specific strategic goals can be aligned with the commencement of the innovation-focused outsourcing engagement, how and why such aligned strategic goals may derail during the innovation formation process, and how such aligned or misaligned strategic goals affect the interactions in each phase and across multiple phases of the open innovation development process. With the integration of goal-framing theory, we can delve deeper into the distinct types of strategic goals, which then allows us to compare and contrast the effectiveness of matching or diverging goal constellations from both partner perspectives throughout the innovation formation process; for instance in the ideal case, where the client and provider equally adopt a normative goal-frame throughout the engagement and genuinely work towards a win-win outcome, or, alternatively, when one or even both partners act according to hedonic/gain goal-frames.

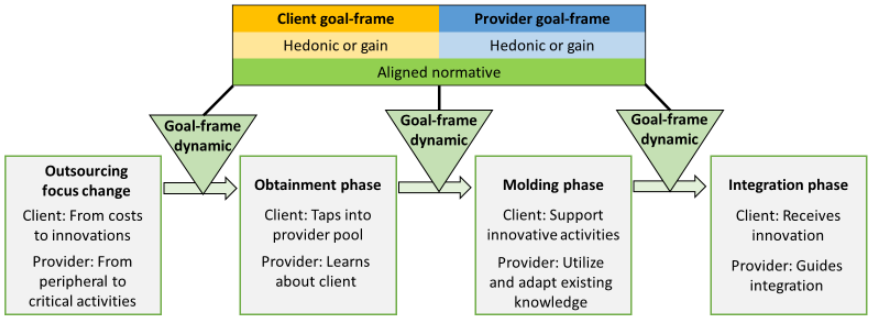

Figure 3. Innovation-molding Framework

In ongoing outsourcing relationships, the pursuit of strategic technological innovations usually starts once outsourcing services are up and running (Weeks and Feeny, 2008; Kotlarsky et al. 2016). Our framework's point of departure is therefore not at the start of an outsourcing engagement, but rather the critical point during an ongoing project when the client's focus shifts from costs to innovations and the provider is tasked with value creating activities in addition to peripheral outsourced services. This focus shift thus triggers a significant change in formalized strategic goals on both sides and may ideally result in the adoption of a normative win-win goal by both partners (Foss and Lindenberg 2013). The broadened project scope and subsequent closer involvement of the service provider then enables the client to tap into the provider's extensive pool of accumulated innovations, while the provider can gain a clearer picture of the client's business problems, challenges and future intentions, which facilitates a head-start when it comes to extending their service provision offerings. In line with the goal-framing theory notion that goal-frames are dynamic as the focal goal continuously shifts between the three overarching goal types (Lindenberg and Foss 2011), we expect some mutual adjustment in the shaping of the strategic client's and provider's goals and business objectives, with the newly obtained information possibly reinforcing or displacing the prior goal-frame. Service providers who are continuously working on a pool of innovations (technological and new services) are then able to see whether any of these innovations can be extended, adjusted and/or integrated into what clients will see as innovative solutions for their current and future business problems, while clients need set internal wheels in motion for the deepened collaboration (Kotlarsky et al. 2016). Similarly to the earlier phase transitions, we again expect possible goal-frame dynamics, for better or worse. The framework's endpoint is set at the integration phase, since the subsequent commercialization of the innovation presupposes an already successful completion of the innovation formation process, and is associated with different challenges such as value appropriation or contract renewal/termination. In this last stage, the client prepares the introduction of the jointly developed innovation and may face challenges such as internal resistance (Shi 2007), while the provider guides the client during the innovation's integration.

Conclusion and Potential Contributions

The growing displacement of a financial by a strategic rationale to outsource, and consequent redefinition of the client-provider relationship from contract-focused arrangements to long-term quality-focused win-win partnerships between trusted, equal business partners, is a trend which Kakabadse and Kakabadse (2005) anticipate as having the potential to become the future outsourcing norm. Nevertheless, the journey to such innovation-enabling outsourcing projects is not smooth, as it challenges firms to mutually manage the contrasting combination of creativity-based technological innovation development and cost-related motives for outsourcing IS (Aubert et al. 2015). Several previous studies have reported failure and disappointment in such high-performing outsourcing arrangements due to unfulfilled goals or unmet expectations (Su et al. 2015; Weeks and Feeny 2008). With our innovation molding framework, we track this issue back to its roots, namely when the strategic goals of the client and service provider first shift from a cost to an innovation focus, and follow the goal dynamics during the collaborative innovation formation process within the boundaries of the engaged in outsourcing project. From a theoretical standpoint we attempt to utilize goal-framing theory as a new approach to analyzing the complex interactions in contemporary strategic outsourcing engagements, and also to contribute to the emerging innovation

through outsourcing research stream by uncovering and connecting the strategic goal-innovation process interrelationship. We also expect to provide managerial insights for both the client and service provider, who are attempting to transition from traditional to strategic outsourcing relationships and facing difficulties in bringing together each other's knowledge and utilizing the resulting extended knowledge base. Finally, we encourage further investigation of two closely linked research directions that may advance our framework and enrich our as yet limited understanding of complex innovation-focused IS outsourcing engagements. Firstly, by applying the framework to outsourcing control mechanism research, the effective/ineffective application of formal and relational mechanisms can not only be explored across the entire innovation formation process, but also in specific process phases. This may ultimately contribute vital insights in designing and maintaining a more precise balance between formal and relational mechanisms throughout the dynamic development process. Lastly, we also view the boundaries defined in our framework from the angle of research opportunity. In the commercialization stage in particular, it may be worthwhile exploring whether successful outcomes trigger a significant focal goal shift, for instance from altruistic goals during the collaborative innovation molding phase to opportunistic goals as firms attempt to maximize the value they can capture.

References

Alcacer, J., and Oxley, J. 2014. "Learning by Supplying," *Strategic Management Journal* (35:2), pp. 204–223.

Aubert, B. A., Kishore, R., and Iriyama, A. 2015. "Exploring and Managing the 'Innovation through Outsourcing' Paradox," *Journal of Strategic Information Systems* (24:4), pp. 255–269.

Birkinshaw, J., Foss, N. J., and Lindenberg, S. 2014. "Combining Purpose With Profits," *MIT Sloan Management Review* (55:3), pp. 49–56.

Bogers, M., and West, J. 2012. "Managing Distributed Innovation: Strategic Utilization of Open and User Innovation," *Creativity and Innovation Management* (21:1), pp. 61–75.

Chung, S., and Kim, G. M. 2003. "Performance Effects of Partnership between Manufacturers and Suppliers for New Product Development: The Supplier's Standpoint," *Research Policy* (32:4), pp. 587–603.

Cohen, W. M., and Levinthal, D. A. 1990. "Absorptive Capacity: A New Perspective on Learning and Innovation," *Administrative Science Quarterly* (35:1), pp. 128–152.

Foss, N. J., and Lindenberg, S. 2013. "Microfoundations for Strategy: A Goal-Framing Perspective on the Drivers of Value Creation," *Academy of Management Perspectives* (27:2), pp. 85–102.

Hoecht, A., and Trott, P. 2006. "Innovation Risks of Strategic Outsourcing," *Technovation* (26:5–6), pp. 672–681.

Hsu, D. H., and Lim, K. 2014. "Knowledge Brokering and Organizational Innovation: Founder Imprinting Effects," *Organization Science* (25:4), pp. 1134–1153.

Hussinger, K., and Wastyn, A. 2016. "In Search for the Not-Invented-Here Syndrome: The Role of Knowledge Sources and Firm Success," *R&D Management* (46:S3), pp. 945–957.

Ignatius, A. 2014. "Innovation on the Fly," *Harvard Business Review* (92:12), p. 16.

Kakabadse, A., and Kakabadse, N. 2005. "Outsourcing: Current and Future Trends," *Thunderbird International Business Review* (47:2), pp. 183–204.

Kang, K. H., and Kang, J. 2014. "Do External Knowledge Sourcing Modes Matter for Service Innovation? Empirical Evidence from South Korean Service Firms," *Journal of Product Innovation Management* (31:1), pp. 176–191.

Katz, R., and Allen, T. J. 1982. "Investigating the Not-Invented-Here (NIH)-Syndrome. A Look at Performance, Tenure and Communication Patterns of 50 R&D Groups," *R&D Management* (12:1), pp. 7–19.

Kotlarsky, J., Oshri, I., Lee, J.-N., and Jarvenpaa, S. 2015. "Editorial: Understanding Strategic Innovation in IT and Business Process Outsourcing," *The Journal of Strategic Information Systems* (24:4), pp. 251–254.

Kotlarsky, J., Rivard, S., and Oshri, I. 2016. "On a Supplier's Paradoxical Practices: The Case of Technological Innovations in Outsourcing Engagements," in *37th International Conference on Information Systems, Dublin*, Dublin, pp. 1–19.

Lacity, M. C., Khan, S. A., and Yan, A. 2016. "Review of the Empirical Business Services Sourcing Literature: An Update and Future Directions," *Journal of Information Technology* (31:3), pp. 269–328.

Lacity, M. C., and Willcocks, L. P. 2013. "Outsourcing Business Processes for Innovation," *MIT Sloan Management Review* (53:3), pp. 63–69.

Levina, N., and Ross, J. J. W. 2003. "From the Vendor's Perspective: Exploring the Value Proposition in Information Technology Outsourcing," *MIS Quarterly* (27:3), pp. 331–364.

Lin, N., Devinney, T. M., and Holcomb, T. R. 2016. "Examining Managerial Preferences and Choices: The Role of Value Creation and Value Appropriation Drivers in Strategic Outsourcing," *Long Range Planning* (49:6), pp. 706–722.

Lindenberg, S. 2001. "Intrinsic Motivation in a New Light," *Kyklos* (54), pp. 317–342.

Lindenberg, S. 2008. "Social Rationality, Semi-Modularity and Goal-Framing: What Is It All About?," *Analyse & Kritik* (30), pp. 669–687.

Lindenberg, S., and Foss, N. J. 2011. "Managing Joint Production Motivation: The Role of Goal Framing and Governance Mechansism," *Academy of Management Review* (36:3), pp. 500–525.

Lindenberg, S., and Steg, L. 2007. "Normative, Gain and Hedonic Goal Frames Guiding Environmental Behavior," *Journal of Social Issues* (63:1), pp. 117–138.

Mani, D., Barua, A., and Whinston, A. 2010. "An Empirical Analysis Of The Impact Of Information Capabilities Design On Business Process Outsourcing Performance," *MIS Quarterly* (34:1), pp. 39–62.

Marion, T. J., and Friar, J. H. 2012. "Managing Global Outsourcing to Enhance Lean Innovation," *Research-Technology Management* (55:5), pp. 44–50.

Miozzo, M., and Grimshaw, D. 2005. "Modularity and Innovation in Knowledge-Intensive Business Services: IT Outsourcing in Germany and the UK," *Research Policy* (34:9), pp. 1419–1439.

Miranda, S. M., and Kavan, C. B. 2005. "Moments of Governance in IS Outsourcing: Conceptualizing Effects of Contracts on Value Capture and Creation," *Journal of Information Technology* (20:3), pp. 152–169.

Moon, J., Swar, B., Choe, Y. C., Chung, M., and Jung, G. H. 2010. "Innovation in IT Outsourcing Relationships: Where Is the Best Practice of IT Outsourcing in the Public Sector?," *Innovation: Management, Policy & Practice* (12:2), pp. 217–226.

Oshri, I., Kotlarsky, J., and Gerbasi, A. 2015. "Strategic Innovation through Outsourcing: The Role of Relational and Contractual Governance," *Journal of Strategic Information Systems* (24:3), pp. 203–216.

Quinn, J. B. 2000. "Outsourcing Innovation: The New Engine of Growth," *Sloan Management Review* (41:4), pp. 13–28.

R&D Magazine. 2018. "2018 Global R&D Funding Forecast." (http://digital.rdmag.com/researchanddevelopment/2018_global_r_d_funding_forecast?pg=1#pg1).

Rothaermel, F. T., Hitt, M. A., and Jobe, L. A. 2006. "Balancing Vertical Integration and Strategic Outsourcing: Effects on Product Portfolio, Product Success, and Firm Performance," *Strategic Management Journal* (27:11), pp. 1033–1056.

Roy, S., and Sivakumar, K. 2012. "Global Outsourcing Relationships and Innovation: A Conceptual Framework and Research Propositions," *Journal of Product Innovation Management* (29:4), pp. 513–530.

Shi, Y. 2007. "Today's Solution and Tomorrow's Problem: The Business Process Outsourcing Risk Management Puzzle," *California Management Review* (49:3), pp. 27–44.

Su, N., Levina, N., and Ross, J. W. 2015. "The Long-Tail Strategy for IT Outsourcing," *MIT Sloan Management Review* (57:2), pp. 81–89.

Takeishi, A. 2002. "Knowledge Partitioning in the Interfirm Division of Labor: The Case of Automotive Product Development," *Organization Science* (13:3), pp. 321–338.

Verwaal, E. 2017. "Global Outsourcing, Explorative Innovation and Firm Financial Performance: A Knowledge-Exchange Based Perspective," *Journal of World Business* (52:1), pp. 17–27.

Weeks, M. R., and Feeny, D. 2008. "Outsourcing: From Cost Management to Innovation and Business Value," *California Management Review* (50:4), pp. 127–146.

Weigelt, C., and Sarkar, M. 2012. "Performance Implications of Outsourcing for Technological Innovations: Managing the Efficiency and Adaptability Trade-Off," *Strategic Management Journal* (33:2), pp. 189–216.

West, J., and Bogers, M. 2014. "Leveraging External Sources of Innovation: A Review of Research on Open Innovation," *Journal of Product Innovation Management* (31:4), pp. 814–831.