Taking Stock: Capability Development in Interorganizational Projects**

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Abstract

We examine how capabilities emerge in repeated interorganizational projects and how they affect project development. A multifaceted understanding of project capabilities in interorganizational projects is important, because project management research emphasizes capabilities' contribution to project performance, but has also stressed their tendency to grow rigid. We review the literature on interorganizational project collaboration to identify the foundations and drivers of project capabilities in project networks and to outline their potentially ambiguous consequences. Our systematic overview of these studies provides a basis for further empirical research and project management practice.

JEL-Classification: M

Keywords: Project capabilities; Interorganizational projects; Economies of Repetition; Project Networks; Exploration/Exploitation; Capability Monitoring; Path Dependence

FINAL DRAFT

Forthcoming in sbr – Schmalenbach Business Review

** We thank two anonymous reviewers, Rene Bakker, Cristina Boari, Christian Goeke, Candace Jones, Federico Riboldazzi, Stoyan Sgourev, Rick Vogel, and Kim Wikström, as well as additional participants of the 2011 WK ORG workshop in Berlin, of the “Creative Industries” subtheme at the 25th EGOS Colloquium in Barcelona, and the IRNOP IX Research Conference in Berlin, for their helpful comments on earlier drafts of this paper.

1 Introduction

Projects have become an increasingly important form of value creation, both in established industries and in inherently project-based industries such as construction, consulting, or film production (e.g., Kenis, Janowicz-Panjaitan and Chambré (2009); Whitley (2006); Lundin and Hartmann (2000)). Presented as a temporary, relatively short-lived phenomenon (e.g., Lundin and Söderholm (1995); Goodman and Goodman (1976)), projects are associated with a high level of innovation, transformative potential, exploration, and flexible resource allocation (e.g., Daskalaki (2010); Keegan and Turner (2002); Hobday (2000)). At the same time, researchers ask how learning and knowledge exploitation is possible when participants disperse after each project (e.g., Bakker, Knoben, de Vries and Oerlemans (2011); Söderlund (2005); Ibert (2004)). Brady and Davies (2004) develop a model for intraorganizational project learning in which they argue that many project ventures are actually conducted repeatedly so that project capabilities can be established within an organization over time.

Similarly, recent empirical research on interorganizational projects shows that they are not as ephemeral as it may seem, as they are embedded in more permanent structures such as institutions, organizational fields, or project networks (e.g., Manning (2008); Grabher (2002)). Bakker and colleagues (2011: 783) define interorganizational projects as "temporary interorganizational systems of legally autonomous but functionally interdependent firms that interact to coordinate their efforts for the accomplishment of a joint service or product in a limited amount of time". However, to reduce uncertainty, increase flexibility, and allow for project-based learning, project partners often establish long-term ties (Ebbers and Wijenberg (2009); Maurer (2010)). These project networks (Windeler and Sydow (2001); Hellgren and Stjernberg (1995)) or latent organizations (Starkey, Barnatt and Tempest (2000)) form the basis for the development of intertemporal structures such as norms, power relations, collaborative practices, trust (e.g., Sydow and Staber (2002)), or project capabilities (Brady and Davies (2004); Manning and Sydow (2011)).

In this paper, we build on these studies to develop an understanding of how project capabilities can be developed and managed in interorganizational projects. Project capabilities are those activities needed to engage in pre-project bidding; to prepare and present proposals to partners and customers; and to manage the project lifecycle, including project implementation, handing results to customers, and ongoing support (cf. Brady

and Davies (2004)). Davies and Brady (2000) distinguish between project capabilities and strategic or functional capabilities in organizations and show that such capabilities are based on routines and learning processes related to the execution of similar types of projects over time. These capabilities make it possible for firms to conduct projects more effectively and at lower costs. Thus, they are needed in project networks as much as in project-based organizations. However, knowledge transfer by formal organizational or technological mechanisms is difficult in interorganizational projects (Maurer, Bartsch and Ebers (2011); Ekstedt, Lundin, Söderholm and Wirdenius (1999)), so we know little about how project capabilities are established from project to project. Furthermore, embedding projects within long-established network ties makes interorganizational projects prone to path dependence and rigidity (Sydow (2009); Sydow, Schreyögg and Koch (2009)), an aspect not yet tied to the debate on project capabilities.

Hence, we discuss the potential rigidities that result from a one-sided exploitation of learning routines in interorganizational projects before exploring potential avenues of how interorganizational project capabilities can be managed. Thus, we make two contributions to project management research in particular and management research more generally. First, we systematically review empirical studies on interorganizational projects with respect to capability building. Second, we discuss the ambivalence of project capability exploitation in the context of interorganizational projects and note the implications of this ambivalence for project management research and practice. We not only integrate general management concepts into project management research (Söderlund (2004)), but also make recent insights from project management research more accessible to management scholars.

The paper is structured as follows. In Section 2 we review Brady and Davies' (2004) "Project Capability Building Model", using it as a starting point for our analysis of interorganizational project capabilities. Further, we discuss the specific context conditions of interorganizational project learning, compare them to the intraorganizational context, and underscore the ambiguity of one-sided capability exploitation in project networks. In Section 3 we outline mechanisms of capability building and routinization in interorganizational projects by using the Project Capability Building Model as a structuring framework. Section 4 concludes with a discussion of the project managerial implications of capability building in interorganizational projects before section 5 summarizes the argument of our paper.

2 Learning in Intra- and Interorganizational Projects

In intraorganizational projects, learning and capability building are possible when a firm conducts similar projects repeatedly with more or less the same actor constellations (Brady and Davies (2004)). Firms have formal learning mechanisms to transfer knowledge from the project to the organizational level so that the organization establishes capabilities in managing certain types of projects. Brady and Davies (2004) differentiate between exploration and exploitation to elaborate on how project-based organizations can build competitive advantage by guiding projects towards routinization in three phases: the exploratory vanguard phase of learning, during which a firm builds entirely new knowledge through conducting new projects; the project-to-project phase, in which managers transfer the lessons learned from one project to the next by, for instance, keeping core teams, distilling lessons learnt, and developing guidelines; and the project-to-organization phase, in which managers transfer learning to the organizational level by establishing new organizational structures based on project experiences.

Thus, the learning process in intraorganizational projects is embedded into formal organizational structures and primarily builds on formal knowledge transfer mechanisms such as guidelines and project audits. Such formal elements are typically missing in interorganizational projects. Although interorganizational projects also establish long-term relations (network ties) that transcend the temporary system, interorganizational project networks differ from project-based organizations in (at least) two important ways (Bakker et al. (2011)): they lack a traditional hierarchical structure between collaborating actors (Manning (2008)), and coordination across organizational boundaries is based mainly on trust and the management of opportunism (Maurer (2010)). Thus, mechanisms of knowledge transfer and control in project networks reside on an informal level, are embedded in the latent ties (Windeler and Sydow (2001)) among agents, and are exerted only when network relations are enacted (Dahlgren and Söderlund (2001); Manning and Sydow (2007)). *Figure 1* illustrates the logic of the Project Capability Building Model, adapted for our purposes to the interorganizational context. Rather than placing capability exploitation in the project-to-organization learning phase, we conceptualize a project-to-network learning phase. Accordingly, the knowledge base of interorganizational projects is rooted in network ties rather than in individual organizations.

<< INSERT FIGURE 1 ABOUT HERE >>

Different from the formal learning mechanisms outlined by Brady and Davies (2004), project capabilities in interorganizational projects are inscribed in relationships and routines that are established between actors (Bouncken (2005); Schwab and Miner (2008)). For example, for learning and capability emergence, network relations substitute organizational memory (cf. Jones and Liechtenstein (2008)). Instead of clearly spelled out contracts or neatly defined processes (e.g., Bettencourt, Ostrom, Brown and Roundtree (2002)), trust-based ties serve as repositories of knowledge, because shared norms of coordination and power relations are embedded in them (e.g., Sydow, Lindkvist and DeFillippi (2004)). There is no formal authority that can steer the overall project network (Hellgren and Stjernberg (1995)), even though there may be informally leading project entrepreneurs (Manning (2010)). Furthermore, there are no clear criteria that define the boundaries of a project network. The capability base of a project network may evolve dynamically over time despite the large amount of continuity described above (Hellgren and Stjernberg (1995)). These differences, summarized in Table 1, make the deliberate management of such capabilities more complex than it is in organizations, even though they may be project-based.

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Based on these insights, research on interorganizational projects argues that rigidities and path dependence may result from the emergence of strong ties in project networks, both on a project and a project network level (see, e.g., Wessel, Gersch and Goeke (2010); Gersch, Goeke and Wessel (2009); Sydow (2009); Lavie and Rosenkopf (2006); Manning and Sydow (2011)). Hence, any understanding of capability building and exploitation in interorganizational projects must take into account these potentially detrimental side effects, which have already been recognized in the intraorganizational literature (e.g., Gilbert (2005)). For example, Sorenson and Waguespack (2006) study how the social relations built over repeated collaboration in the U.S. film industry helped project entrepreneurs to reduce uncertainty and circumvent incomplete contracts. But, based on these relations, distributors developed quite rigid allocation practices,

tending to allocate more marketing and production budgets to films produced by partners they had worked with before. Controlling for the effect of these allocating practices on film performance, Sorenson and Waguespack find that these films performed worse than other productions.

On a strategic level, in their study of film production networks Manning and Sydow (2011) find that long-established project network relations decreased the capabilities of one project network to use resources in a novel and explorative way, thereby reducing the strategic flexibility of the project network. Thus, the social embeddedness of interorganizational projects is a potential driver of core rigidities (Leonard-Barton (1992)) or competency traps (Levinthal and March (1993); Levitt and March (1988)) in project networks, but at the same time constitutes the main basis for learning and capability building.

3 Mechanisms of Capability Development in Interorganizational Projects

We base our discussion on unpacking the mechanisms of capability development in interorganizational projects on a review of articles dealing with concepts such as project networks, project collaboration, project ecologies, interorganizational projects, and project capabilities. These articles have appeared in the major organization and management journals, mainly in *Organization Studies, Scandinavian Journal of Management, Human Relations,* and the *International Journal of Project Management.* Some articles also appeared in economic geography journals such as *Regional Studies.* Where suitable, we include literature on interorganizational networks, but, due to the vastness of the literature and contexts available in this field of research, we do so in an anecdotal rather than in a systematic way.

3.1 Capability building in vanguard projects

Uncertainty is usually described as a major feature of highly innovative projects, i.e., those we would group as potential vanguard projects. With vanguard projects, firms either enter into a new market (cf. Brady and Davies (2004)), or supply highly individualized services to large (first time) business-to-business customers (Bettencourt et al. (2002)). Reviewing empirical studies on projects of this type reveals two factors that provide the basis for project capability emergence in the absence of repetitive projects: the importance of field-level information, and the managerial efforts to establish commonly shared frames of reference. In his study of the movie industry, Schwab (2009)

shows that actors are recruited for films mainly on the basis of whether they had participated in other films before and whether their participation was made public by displays on screen credits. Hence, exploration in the vanguard phase of interorganizational projects is not without precedent, but is informed by field-level information and past practices. In fact, partner choices might even depend on this information, because it legitimizes certain actors. Thus, field-level structures and practices give agents a broad, abstract idea of who to cooperate with and how, even when exploration is the primary learning mode.

Actors must then interpret these ideas *in situ* and act upon their interpretation (cf. Lounsbury and Crumley (2007)). When we consider actual collaboration in vanguard projects, Alderman, Ivory, McLoughlin and Vaughan (2005) study of the Pendolino tilting train project points to the coordination problems that arise from different interpretations of reality in exploratory projects. In the beginning of this complex engineering project, the various stakeholders' divergent interests inhibited project progress at a very early stage. It was not until the senior project management engaged in negotiations and other arbitration activities that stakeholders could slowly agree on the claims made by all the parties involved. Communication, negotiation, and mediation are clearly important practices for capability building. Negotiation fosters trust, and learning about how other organizations manage projects helps to slowly level incompatible interpretations of reality (Jones, Hesterly, Fladmoe-Lindquist and Borgatti (1998)). Constructively solved conflicts may thus form the foundation for emerging capabilities based on common frames of reference (Larson and Wikström (2007)). The basis for project capability development is thus embedded in field-level structures and in ties among project participants. Hence, interorganizational project learning resides on two different levels, the level of current project participants, and the field level on which past experiences are stored as collective memory or institutionalized practices. In the early stages of collaboration, intense communication and sharing information across different actors is the primary mechanism of capability development.

3.2 Drivers of project-to-project learning

Project-to-project learning in interorganizational projects occurs when project partners interact repeatedly and build on the shared frames of reference and collaborative experiences established in vanguard projects. Managers again draw on field-level structures in this phase and these structures are reinforced and refined.

One important driver of repeated projects is the customer who tends to shape output intensively in project businesses. For example, in knowledge-intensive service projects, client co-production is frequent (e.g., Bettencourt et al. (2002)) and customers often press for standardizing practices from one project to the next (Gilson, Mathieu, Shalley and Ruddy (2005); Jensen, Poulfelt and Kraus (2010)). They do so by repeatedly demanding to work with the same teams of the provider organizations to not only reduce uncertainty, but also to allow for efficient project conduct. Consequently, customer demand can direct team composition towards continuity and is an important driver of project capability development. As project-to-project learning increases through continuity, exploration and the generation of new knowledge tend to decline.

Suppliers also opt for repeated staffing. McComb, Green and Compton (2007) analyze for-profit and non-profit organizations and find that interorganizational projects generate notable profits only if the project staff is mostly kept constant over repeated interorganizational projects. A study by Jones et al. (1998) on complex projects in service industries indicates in more detail how staffing impacts learning. Jones et al. argue that actors generate shared interpretations of the task at hand through repeated collaboration, which ease coordination and allow for efficient communication even in highly complex projects. In her extensive studies of the German new media services industry Bouncken (2005, 2007) shows that agents seek stable role distributions in project networks and tend to select friends as cooperation partners. Lead organizations repeatedly conduct projects in identical partner constellations, thus smoothing coordination and exploiting partner-specific knowledge in the network. Maurer (2010) supports these arguments by emphasizing that repeated staffing in interorganizational projects yields trust and that trust is the basis for exploiting the knowledge of project partners.

Poppo, Zhou and Ryu (2008) offer a broad conceptual frame that enables them to capture the gist of all the arguments reviewed in the preceding paragraph. Based on a study of interfirm relations among manufacturers and suppliers in the electronics business, these authors argue that repeated collaborations in the same constellations evoke shadows of both the past and the future. These shadows reduce uncertainty because agents know how others have behaved in the past and thereby predict how they will behave in the future. Such learning results strongly relate to staffing. Inkpen and Tsang (2005) indicate that variations in interfirm team staffing might block off all interfirm learning.

The main mechanisms of capability building in the project-to-project phase can thus be summarized as repeated staffing and trust.

However, the related exploitation of project capabilities may not always be beneficial from both the supplier and the customer perspective. As Manning and Sydow (2011) show, a German film production network grew increasingly dependent on its customer, a public broadcaster, for whom it was producing a detective series. Given the nature of a publicly owned firm, staying within the budget was critical, which led to the emergence of very specific project routines. As a consequence, roles and ties among the participants grew strong and the project network became locked in to the point that it failed to reach out to private broadcasters. Hence, the project network was not able to move into new business fields and was trapped on a path of exploitation. The increased efficiency from the customer's perspective through exploitation can be countered by a reduction in creativity and innovation. For example, Grabher (2004) presents an interesting case of practitioners who were seemingly well aware of this effect. To maintain a high level of exploration a London advertising agency deliberately exchanged team members from project to project.

Therefore, any argument made about project capabilities must consider important boundary conditions. Interorganizational projects, like any temporary organization, can differ along four dimensions: time, team, task, and context (Bakker et al. (2011)). Some projects might have just a brief duration, so that no personal relationships or shared knowledge base can develop. Or tasks may be one-off or repetitive; capability-building is more likely in the latter type. When we consider context, we find that interorganizational projects may either be embedded in a history of collaboration, or not yet built on latent ties. These projects are formed in different industry contexts in which some stress innovation more than do others. Further, they may take place in a project-based industry with industry-level experience and well-developed standards for collaboration rather than in an industry that is just venturing into more project-based work.

When tasks are stable, there are previous ties between actors and norms have developed. Economies of repetition (cf. Brady and Davies (2004); Davies and Brady (2000)) and capability-building are likely, as are path dependence and rigidity. Bakker et al. (2011) have recently analyzed empirically that such strongly embedded, repeatedly conducted projects form the majority of interorganizational projects. In such cases, project manag-

ers may also be able to develop more formal knowledge management mechanisms in interorganizational projects (cf. Prencipe and Tell (2001)).

3.3 Consequences of project-to-network learning

Similar to intraorganizational projects, the benefits associated with interorganizational project capabilities are potentially conflicting or incompatible. Efficiency gains are highest when the learning mode has shifted to full exploitation and routines have become internalized and are no longer reflected upon. Venturing into new business opportunities and radical innovation is, however, only possible when some level of exploration is maintained.

Although a firm may deliberately choose repeated collaboration to build up capabilities in the project-to-project phase, firms often make partner choices on a routine basis in the project-to-network phase. They do so at the expense of exploration and, potentially, performance. In their study of 88 network managers in the software and IT industry, for instance, Patzelt and Shepherd (2008) find that project performance is actually less important to managers than decreased coordination costs when deciding who to work with. In his study of strategic alliances, de Rond (2003) finds that unsuccessful alliances are often continued when project partners like each other; a similar effect occurs when they depend on each other (Duysters and Lemmers (2004)). Li and Rowley (2002) find that in the context of banking, routine-based partnering choices do not reflect an examination of the market environment for best-suited partners. Reinforcing this tendency, project failures may actually be ascribed to external forces rather than leading to a re-evaluation of the search mechanism for partners (Genus and Jha (2011)).

Firms should evaluate project capabilities according to the different targets of interorganizational projects. Although project participants, both from the customer and the supplier side, want to reduce uncertainty and coordination costs, doing so may come at the cost of leaving new business opportunities unexplored or of reducing radical innovation. Brady and Davies (2004) assume that new project business opportunities will arise with new technologies or other changes, but research on interorganizational projects indicates that such shifts may not be as easy when project capabilities are deeply embedded in a project network based on latent ties. Since there is no legitimate authority in charge of managing whole project networks and because there are no formal knowledge management mechanisms, the question arises as to how the project managerial targets

of efficient and effective project management can be balanced with a longer-term, strategic management of interorganizational relations that lies beyond the actual collaboration and leaves room for exploration.

4 Project Managerial Implications

Because project capability management is a new subject in research on interorganizational projects, we draw on the broader management literature and literature on interorganizational networks to outline potential avenues for balancing exploration and exploitation when developing project capabilities in project networks.

One possibility for project managers, but also for clients of interorganizational projects, lies in balancing capability exploitation and exploration across domains. In their study of alliance formation, Lavie and Rosenkopf (2006) identify three dimensions of exploitation: functional, when an alliance is formed to market an existing product; structural, when alliances are formed with partners with whom there are previous ties; and attributional, when alliances are formed with companies with similar attributes. The first two aspects are especially prone to one-sided exploitation in project networks. Managers reuse project organization structures, implicit dominance structures remain in place, project teams are restaffed, and the types of projects that are conducted remain stable. Lavie and Rosenkopf (2006) suggest that a balance between exploration and exploitation can be maintained across these domains. For example, functional exploitation may be met with deliberate structural exploration and vice versa, something both supplier and clients can intentionally aim for in interorganizational projects.

Furthermore, as Grabher's (2004) study of advertising agencies in London shows, exploration can become part of a dominant industry or regional practice. The advertising agencies in Grabher's case might possibly have developed a capability in exploration that they continuously exploit by switching team members around to increase the likelihood of radical innovation in each new project. In this way field-level structures might help the balancing of exploration and exploitation by providing norms that reach beyond the efficient and effective conduct of projects. Such norms can be developed either through formal education (Jones and Walsh (1997); Uzzi (1997)), through policy (Lutz and Sydow (2002)), or through a change in practices over time (Giddens (1984)). These studies show that exploration is not only the responsibility of individual project managers, but that it also needs to be built into the project network as an overall perspective.

This perspective can entail the development of guidelines, not only for forming interorganizational relationships, but also for dissolving them. It can also require bottom-up changes through routines enacted and slightly adapted *in situ* so that those routines that provide stability can also be an important source of flexibility and change (Feldman and Pentland (2003)).

A new management concept developed from an intraorganizational perspective is the notion of capability monitoring. This idea is presented as one part of a dual process model in which routinization and a systematic reflection of routines are two sides of the same coin (Schreyögg and Kliesch-Eberl (2007)). Reflection in the form of project capability monitoring implies that project network members systematically question emerging practices, tendencies towards routinization, and the impact of a growing social embeddedness on project conduct. Hence, a central element of project capability monitoring is a widespread approach to reflection so that effective monitoring does not depend on a special department or managerial position (Schreyögg and Kliesch-Eberl (2007)). In analogy, all individuals or organizations involved in a project network can monitor potential rigidities and question tendencies of stabilization. The implementation of such a systematic reflection mechanism requires creating a climate in which actors can openly question processes of ongoing exploitation. Such openness demands not only that a share of time in projects be devoted to openly criticizing emerging routines, especially those related to the types of projects that are conducted, to staffing practices, and to the evolving structure of roles and relationships. It also demands that the project team create and present a spare budget for constructive criticism, for instance, by staging workshops including a "devil's advocate". Project capability monitoring may come at a price, but is one way of managing the tradeoff between economies of repetition and the weakness of strong ties (Granovetter (1973); also, e.g., Lazer and Friedman (2007); Perry-Smith and Shalley (2003); Tiwana (2008)) as a complement to more flexible meta-level project network standards and practices outlined above.

We note that both rigidity *and* flexibility-enhancing capabilities are possible trajectories of interorganizational project ventures. Hence, while some researchers emphasize the inertial qualities of capabilities and the according drivers we described above (cf. Genus and Jha (2011); Manning and Sydow (2011); Sydow (2009)), others stress their contribution to innovation and flexibility (cf. Maurer (2010); Poppo et al. (2008); McComb et al. (2007)). As in teams (Gersick and Hackman (1990)), interorganizational projects

open up many avenues for routine-breaking such as experiencing a failure, reaching a milestone, or changing the group structures. Ties may also be cut when a network's identity becomes threatened due to negative affect and tensions (Daskalaki (2010)). Nonetheless, although rigidities are a young research theme in project-related studies, their performance implications should not be underestimated (cf. Genus and Jha (2011)). Therefore, rigidities are not only pivotal for project managerial practice, but also present an important, and as yet understudied, phenomenon for future research on interorganizational projects.

5 Conclusion

Although interorganizational projects are mostly considered a flexible, innovative way of organizing, managers of such projects face the dilemma of building capabilities to allow their exploitation while maintaining an adequate level of exploration to avoid rigidity and lock-in. On the one hand, although each project is unique in some aspects, so-called project networks are frequently formed to overcome what Antcliff, Saundry and Stuart (2007) call the "weakness of weak ties". Project networks provide the continuity necessary to establish collaborative project capabilities, but also open the way for rigidity and path dependence. In our discussion of several project managerial implications, we find that not only project managers, but also each member of a project network as well as field- or network-level institutions and practices, should be involved in balancing exploitation and exploration in project networks.

In reviewing the literature on interorganizational project collaboration and interfirm relations with an eye towards mechanisms of project capability building, we find that continuity in interorganizational projects based on projects that are repeated with similar teams and structures are the most important way to establish and exploit the capabilities that enable efficient and effective project acquisition and conduct. Initially intense communication, repeated staffing, and emerging trust are the main mechanisms of capability building in interorganizational projects over time. However, these mechanisms can also bind a project network to a particular path of exploitation, thereby locking out options to venture into new business areas and possibly to radical innovation. Although innovation may not be required from a client perspective, for suppliers it is pivotal to balance high innovative capacity with routinization and exploitation of certain project managerial tasks. This is especially true since interorganizational projects are dominant

mostly in knowledge- and innovation-intensive creative industries or science-based industries.

We offer two core contributions to project management research. First, we elaborate the notion of project capabilities in the context of interorganizational projects. Although interorganizational projects are certainly not a new subject to project management research, a systematic overview of studies relating to capability exploitation in projects among firms has been missing. Our review acknowledges how important project capabilities are for the competitiveness of project networks and addresses important project managerial issues. Because project capabilities may also render project networks rigid, our second contribution is to show how project capabilities can turn into project- and network-based rigidities over time. Rigidity has recently been presented as a subject in the emerging debate on project networks, but our review highlights the idea that project capabilities carefully need to be balanced against one-sided exploitation also in interorganizational projects.

Our review of the current body of research on trust, staffing, and learning in projects and our elaboration on the specific mechanisms that underlie capabilities and rigidities in interorganizational projects provides a basis for further empirical research. A central implication of our literature overview is that capability drivers unfold their inertial qualities over time. Against this backdrop, we hope to incite future project management research towards process-based studies, a still somewhat rare approach in project management research.

In line with this thinking, future empirical work could especially develop the interactions of the drivers we outlined, and also examine capability-related phenomena on different levels of analysis such as projects, firms, project networks and teams. Furthermore, it would be worthwhile to expand the notion of interorganizational collaborative paths (Manning and Sydow (2011)). Doing so would identify a larger set of routinized practices prone to exploitation than what is currently known. Finally, mechanisms of rigidity monitoring and the possibilities of switching from structural exploitation to functional exploration to manage capabilities in project networks should be empirically explored. Our literature review provides a valuable basis for further empirical research and a vivid discussion of interorganizational projects in the context of broader management research.

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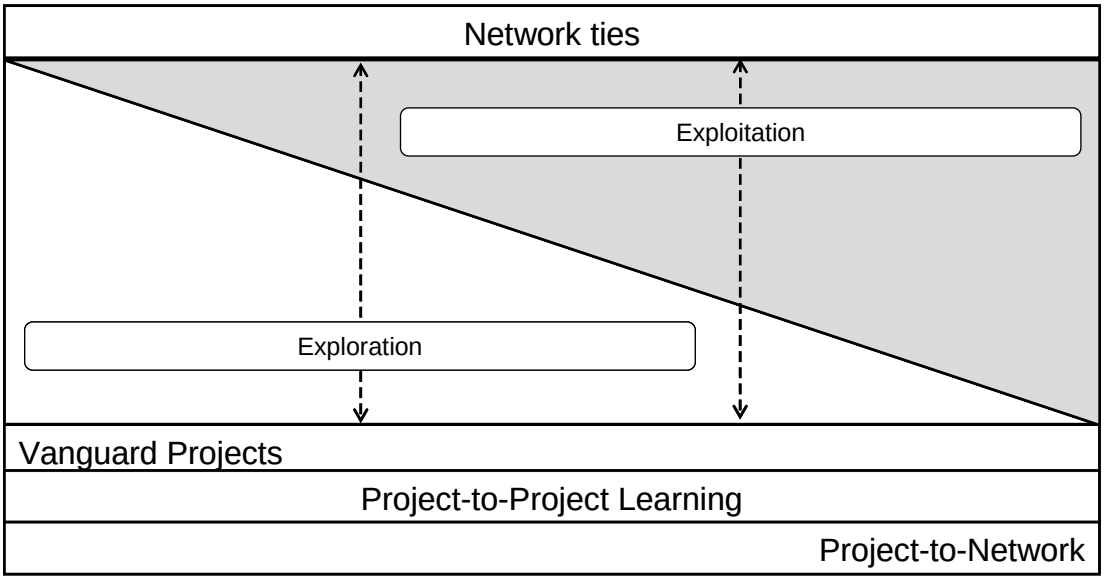
Figure 1: The Interorganizational Project Capability-Building Model



Adapted from Brady and Davies (2004: 1606)

Table 1: The learning contexts of intra- and interorganizational projects

	Intraorganizational projects	**Interorganizational projects**
Embedding structure	Organizations, in particular project-based organizations	Project network, organizations, organizational field
Levels of learning	Project-to-project, project-to-organization	Project-to-project, project-to-network
Coordination mechanisms	Hierarchy, authority	Trust, network-based control (Manning/Sydow (2007))
Learning mechanisms	Formal knowledge management	Proximity of individuals (Maurer (2010)), fields as repositories of knowledge (Grabher (2004))
Management	Corporate executives	Project entrepreneurs (Manning (2010))