From the Editors
Isomorphism: A Challenge for the Project-Based Organization

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Projects as Temporary Organizations—How Well do They Adapt to Differing Task Demands?

Organizational design is a vivid topic among project-based organization scholars (Manning, 2008; Bakker, 2010; DeFillippi & Sydow, 2016; Miterev, Mancini, & Turner, 2017; Aubry & Lavoie-Tremblay, forthcoming 2018; Gemünden, Lehner, & Kock, forthcoming 2018). Because projects are temporary organizations, organizing for the delivery of multiple competing projects is a continuous organizational challenge. So it is not surprising that organizational design is becoming an emerging stream of research in the project management field, with the attempt to bring some cohesion among the different terms currently used—such as the project-based and project-oriented organization—and the different levels it addresses in an organization.

An important contribution to this discussion emphasizes the importance of context when considering organizational design (Engwall, 2003, Manning, 2008; Bakker, 2010; DeFillippi & Sydow, 2016). In this regard, Engwall (2003) showed how context should be taken into consideration in the structuring of a project. Others have also shown a diversity of project-based organizations (e.g., Whitley, 2006). This supposes the existence of some sort of rational processes of evaluation and decision-making regarding the best organizational design to support the temporary organization’s “projects” and the project-based organization(s) setting up projects. A typical assumption is that the organizational design of a project should fit the task demands and that a rational choice from a set of well-fitting equi-functional solutions should be made—one size does not fit all (Shenhar, 2001).

This view has been challenged. Kiesen (1997) argues that rhetoric and myth play big roles in decisions about organizational design. He observed that management concepts, particularly in organization design, come and go like fashion trends and do so with increasing speed and peaks. This process is driven by an arena of stakeholders creating a new trend; in other words, authors of best-selling management books, seminar organizers, business school professors, and consultants selling the new designs. The principles propagated by these stakeholders “prove useful in restructuring projects within organizations. They simplify the process of initiation and conceptualization as well as the coordination between parallel restructuring projects in a restructuring program. They are useful tools in political maneuvers during the implementation process and they help in making the organization appear rational after the completion of the restructuring process.” (Kiesen, 1997, p. 49) We also observe such trends in the world of project organizing; for example, the word “agile” has become a buzzword for a more recent management trend. Thus, there is some evidence, that design choices are not only based on best fit of task demands and design characteristics but on other goals, such as achieving and sustaining powerful positions, and that the choices are not always well reflected.

DiMaggio and Powell (1983) also challenge the assumption that organizational designs are chosen in rational processes. Based on an institutional theory, they describe three isomorphic processes—coercive, mimetic, and normative—which make organizations in an emerging organization field become more and more similar when rational actors try to change their organizations. In the first article in this issue Miterev, Engwall, and Jerbrant (2017) apply the framework of DiMaggio and Powell (1983) to the design choice of projects as temporary organizations. In their in-depth ethnography-inspired case study of a pharmaceutical firm, they find overwhelming evidence for
all three isomorphic processes. Their findings are very clear and raise the challenging question: How are choices about the organizational design of projects made? Do the decision makers really consider differing task demands? What they find is extremely challenging for the field of project management. It puts into question the contingency approach highly supported in our field (i.e., Shenhar, 2001; Shenhar & Dvir, 2007; Hanisch & Wald, 2012; Morris, 2013).

Paradoxical Situation: Standardization versus Reflexivity

In recent years, we have observed the development and professionalization of the project management field as a strong and ongoing trend (Schopper, Gemünden, & Nguyen, 2016). For example, in Germany, the work time spent on projects was estimated at 34.7% in 2013 (Wald, Schneider, Spanuth, & Schopper, 2015). In the same vein, Flyvbjerg (2017) indicated a significant raise in investment in megaprojects and he does not see an end to this trend. Flyvbjerg estimated the megaproject market at US$6 to US$9 trillion per year, which is 8% of the world’s total gross domestic product. Indeed, it is not surprising to observe more interest in governance frameworks for megaprojects coming from scholars (Klakegg, Williams, & Magnussen, 2008; Brunet & Aubry, 2016). Increases in the number of certifications in project management and project management training programs confirm this tendency (Bredillet, Ruiz, & Yatim, 2008). Project management will naturally continue to be recognized as a profession and more individuals will become professionals in this field; thus, more organizations will be adopting standards. So, to say the professionalism, and with it standardization, is on its way. In this context, isomorphism appears to be coherent with the standardization of the field, particularly in the normative mechanism. It may also have an economic advantage in lowering transaction costs to concentrate on a small set of typical organizational design alternatives, allowing for a mass customization of organizational designs.

On the other hand, however, if isomorphism reflects how organizational design is done in project-based organizations, it raises crucial challenges for the whole field and undermines the advances made recently in a contingency approach. Moreover, it puts into question the capabilities of organizations to deliver projects with important innovation; for example, Shenhar and Dvir (2007) suggested a multi-dimensional model to adjust the project organization to the degree of technology uncertainty and the degree of system scope in order to reach business growth and innovation.

Some recent research is reviewing the pure contingency theory of one best “fit” by bringing in social and dynamic aspects in the organizational design (i.e., Van de Ven, Ganco, & Hinings, 2013). This approach might be fruitful in overcoming discussion about one or the other, and welcome complementarity between both views on organizational design (one and the other). In other words, to recognize on one hand the need for standardization, which may be coherent with some isomorphisms and, on the other hand, to be attentive to sense-making activities or other reflexive approaches that take place in organizations. This perspective on organizational tensions and paradoxes has been highlighted by Gerald (2008), who found the existence of such paradoxes in terms of a balance between order and chaos in project-based organizations.

Overall, we need to be more aware of the fact that there are powerful mechanisms that restrict the motivation and capabilities to adapt the organizational design of projects to their task demands. Decision makers are probably less autonomous than we have assumed, and the flexibility of permanent project-based or project-oriented organizations to make design choices is lower than assumed. On the other hand, this does not mean that contingency theories have no influence and that organizations are not influenced by task-demands—but this does not happen automatically. For example, in their multi-level study on the usage of effectuation practices in projects, Kock, Gemünden, Nguyen, and Killen (2017) showed that the two portfolio governance variables—business case control and intensity of portfolio monitoring—significantly reduced the intensity of effectuation practices, which confirms the impact of coercive mechanisms found by Miterev, Engwall, and Jerbrant (2017). However, with increasing innovativeness of a project, the effectuation practices were applied significantly more often. Thus, despite the fact that there are significant isomorphic practices, there is also an influence of important task characteristics, which creates more variance. Miterev, Engwall, and Jerbrant (2017) analyzed a pharmaceutical firm. The drug development of pharmaceutical firms is highly regulated, which supports isomorphism. Nevertheless, when I (Hans Georg Gemünden) gave a presentation to project managers at a major pharmaceutical firm, they provided me with clear evidence that the ramp-up stage of expected blockbusters is organized very differently from normal drug developments, in order to launch and diffuse the more profitable blockbusters much quicker. Although there were strong isomorphic processes in this firm, at the same time there was also a rational choice to organize expected, more impactful new product development processes in a different way. In a similar vein, we observe that innovative firms create specific strategic buckets for highly innovative projects (Hutchison-Krupat & Kavadjias, 2015; Salomo, Talke, & Strecker, 2008). The projects are assigned to different buckets and assessed based on their degree of innovativeness. Resource competition occurs within the strategic buckets. The projects are assessed according to bucket-specific criteria and are also managed according to bucket-specific principles. Isomorphism, thus, does not exclude rational design choices, but it restricts the solution space and increases the time and cost needed to implement systematically differentiated organizational designs.
We may view the isomorphism paradigm, the fashion paradigm, and other theories as good arguments as to why and how projects may share a similar design. These theories may be called centripetal theories. However, there are also other theories, which explain variations, new forms of organizing, and more reflective choices. Let us take a closer look at such centrifugal theories in future research.

Let us also take the first article in this issue from Miterev, Engwall, and Jerbrant (2017) as a starting point for more research on isomorphism in project organizing. It might be that there is a lower variance within a project-based organization or a more major part of it than we have expected, but we may also discover that there are also major differences between different organizations—even within the same industry (e.g., Aubry & Lavoie-Tremblay, 2018). This would trigger further research into why such differences exist and how they developed.

Recent research from Abowd, McKinney, and Zhao (2017) on salaries in the United States showed that over two-thirds of the increase in earnings inequality between 1981 and 2013 can be attributed to the rising variance of earnings between firms. Inter-firm wage inequality has become greater and more persistent as firms increasingly sort themselves into a small number of knowledge-intensive companies and a larger pool of relatively labor-intensive firms. This finding may also have implications for project management, as managing projects at a high-wage, knowledge-intensive firm like Alphabet might be different from managing projects in the construction industry where, on average, lower wages are paid for project managers and workers.

In addition to these editorial remarks, we recommend you read the articles in this issue, for example, the article from Miterev, Engwall, and Jerbrant (2017), which also raises the issue of taking a new look at inter-project learning, and organizational renewal. Do we create barriers against learning and change by following isomorphic processes? Or the article from Oeij, Dhondt, Gaspersz, and Van Vuuren (2017) in this issue, which acknowledges that we know much about the resilience of individuals, but what do we know about the resilience of project teams?

The Articles in this Issue

The first article from Maxim Miterev, Mats Engwall, and Anna Jerbrant: “Mechanisms of Isomorphism in Project-Based Organizations” challenges the dominant assumption of goal rationality behind temporary organizations’ design in project-based organizations (PBOs). While extant literature posits that organizations strive to select the most appropriate project arrangements to fit the particular task requirements at hand, findings from an in-depth ethnography-inspired case study suggest that projects in PBOs tend to imitate each other’s structures, strategies, and practices with little consideration to the potential effects on performance. Building on the new institutionalism, the article conceptualizes the PBO as an organizational field of temporary and permanent organizations embedded in wider organizational and institutional fields and explicates isomorphic processes among temporary organizations in PBOs. The conference version of this article was awarded the joint best project management paper prize from the International Project Management Association (IPMA) and Project Management Institute (PMI) at the European Academy of Management (EURAM) conference in Glasgow, Scotland, in 2017. We are honored and pleased to publish it in this issue of Project Management Journal®.

China has become the world’s largest carbon dioxide emitter and its carbon emissions are greater than the combined outputs of the United States and the European Union. Since public projects are a large contributor to carbon dioxide emissions—both in their construction and operations—improving the environmental performance of these projects will be essential to avoiding the consequences of rising production greenhouse gases and disruptive climate change. In their study of public projects in China with the title “Endogenous Factor Analysis: The Carbon Performance of Public Projects in China,” Ziran Tang, Lin Li, Shasha Zhu, and Zhenyu Huang surveyed 151 managers and public servants involved in a variety of public projects to determine the factors that improved the carbon performance of these projects. Using a structural equation model, they show that funding dedicated to reducing carbon emissions and the availability of low carbon inputs have significant positive impacts on carbon performance. Importantly, for the project management community, management processes and practices also play positive roles, which implies that the project management profession will have a greater role in the future of carbon performance in public projects, as the pressure to reduce greenhouse gasses grows.

Resilience is a very important characteristic of stakeholders in projects, particularly in highly innovative and complex ones. We know a lot about individual resilience, but very little about the resilience of project teams. The third article in this issue addresses this research gap and provides an excellent integration of previous work and presents a very rich longitudinal multi-case analysis to develop a new scale of team resilience behavior. The conference version of this article was awarded the joint best PhD student prize from IPMA and PMI at the EURAM conference in Paris, France, in 2016. We are very pleased to publish this article in Project Management Journal®. The qualitative study from Peter R. A. Oeij, Steven Dhondt, Jeff B. R. Gaspersz, and Tinka van Vuuren: “Innovation Resilience Behavior and Critical Incidents: Validating the Innovation Resilience Behavior Scale with Qualitative Data” addresses the following research issues: (1) To validate the innovation resilience behavior-scale, which was used for a quantitative survey (Oeij, 2017) in a qualitative study of innovation teams based on in-depth, qualitative interview data; and (2) to investigate how innovation teams deal with critical incidents. Critical incidents are events that can cause a project to significantly deviate from the original
plan and even fail. Innovation resilience behavior in teams is derived from theories applied in crisis management and safety science. Team IRB is the capacity of a team to withstand and overcome critical incidents in a manner that enables sustained activity toward the goals of the innovation project by critical recoveries that safeguard team cohesiveness and performance (Oeij, 2017). This concept was derived from Weick and Sutcliffe (2007), who defined a set of five HRO principles: (1) preoccupation with failure (a focus on weak signals of lapses), (2) reluctance to simplify (seeking validated information), (3) sensitivity to operations (connecting operations and the relationships between events to the big picture), (4) commitment to resilience (keeping errors small and improvising to keep the system working), and (5) deference to expertise (if need be, migrating the authority to decide to experts, regardless of rank). These HRO principles overlap with a generic construct of team resilience developed by Alliger, Cerasoli, Tannenbaum, and Vessey (2015), which is used in the current study. Oeij et al. show activities belonging to the three groups developed by Alliger et al. (2015): minimizing problems before they occur, managing them during their occurrence, and mending them afterwards—activities typically performed more often by resilient innovation teams.

The temporary nature of projects poses a problem in project-based organizations in terms of learning from one project to the next, as emphasized by Flyvbjerg (2014), with the “uniqueness bias” of a project manager. This uniqueness bias entails a behavior of not learning from other projects. In the fourth article in this issue, Shirley Thompson and Elaine Cox address the theme “How Coaching is Used and Understood by Project Managers in Organizations.” Cox and Thompson argue that coaching has the potential to overcome the challenges of learning in the context of project management. Through a qualitative approach, they explore how coaching is used and understood in the context of project management. Coaching is defined in broad terms as “the process of challenging and supporting a person or a team to develop ways of thinking, ways of being, and ways of learning.” While the literature suggests the high potential of coaching, the results of this qualitative research are very instructive because they show the multi-dimensions in the perception of coaching and the existence of reluctance to engage in coaching in certain organizational cultures. The authors suggest that formalization of coaching may play a role in encouraging project managers to engage in receiving and providing coaching.

The fifth article by Giorgio Locatelli, Miljan Mikic, Milos Kovacevic, Naomi Brookes, and Nenad Ivanisevic on “The Successful Delivery of Megaprojects: A Novel Research Method” considers why megap柔eck are associated with poor performance and outcomes. Rather than rely on proprietary databases as many previous studies have done in the past, the novelty of this research is that the authors provide a rigorous quantitative analysis of 44 megaprojects in the European Union using the Fisher’s Exact Test and Machine Learning techniques to identify the key independent variables—“project characteristics”—that are correlated with successful megaproject outcomes. The work has enormous practical relevance because it shows how stakeholders can use the knowledge of project characteristics and success indicators to select the best approach for managing a specific megaproject in different industries and shows that this task will also be demanding for project managers.

In their article “Predicting the Impact of Multiple Risks on Project Performance: A Scenario-Based Approach,” Victor A. Bañuls, Cristina López, Murray Turoff, and Fernando Tejedor analyze risk scenarios to reveal the interdependencies of risks in any project. By applying the two techniques of interpretive modeling and cross-impact analysis, they demonstrate how to reveal complexities that may remain hidden in a typical risk analysis process. Many risk tools have been proposed, but they often ignore many of the actual complexities faced in practice or they present complex techniques that are limited by narrow applicability and operational feasibility. The authors apply advice in the literature and match it with common practice to identify the six desired traits of risk modeling techniques. These essentials include representing connections between risks, including uncertainties; allowing for cycles of risk through the project; eliminating assumptions about risk patterns; working with scarce information; and developing the common concerns of risk severity and probability. With these essentials being the goal for any methodology, the authors demonstrate how common methods can be applied to assist in the risk management process. Significant in their development is verification of operational feasibility through case applications, but also a unique demonstration of finding risk insights not derived through many techniques adopted in practice or they present complex techniques that are limited by narrow applicability and operational feasibility. The authors should examine this article for one good approach to advocating for a new tool or technique. Project managers hoping to implement a more structured approach to risk management that provides insight and better data for control purposes should look seriously at the methods and the suggestions for better methodologies in general.

The last article in this issue, “Achieving Sustainability in Railway Projects: Major Stakeholder Concerns” is from Hongping Yuan. Given the complexity of infrastructure projects, the successful management of sustainability-related targets requires joint efforts from the major stakeholders involved—including project clients, contractors, suppliers, and the general public. Nonetheless, the stakeholders often have conflicting concerns about achieving project sustainability. We know little about how major stakeholders perceive infrastructure sustainability and how their concerns differ over these three dimensions of
project sustainability: economic, environmental, and social sustainability. This study thus investigated major concerns of major stakeholders toward achieving sustainability in railway projects. A triangulated methodology was adopted, including literature review, a questionnaire survey, and interviews, to gather data from project stakeholders. There was a significant divergence of views among stakeholder groups, and conflicts arose when there was a mismatch between stakeholders’ perceptions. A list of major concerns from each individual stakeholder group was ranked and discussed and measures to promote consensus among different stakeholder groups were also provided.

References


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