ORGANIZATIONAL ENABLERS FOR PROJECT GOVERNANCE

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Executive Summary

After decades of investigations into the improvement of project results, the awareness has grown that the way projects are steered from their parent organizations has a major impact on their performance. In line with that, recent years have seen an awakening interest in governance in the realm of projects. The present study continues, expands upon, and contributes with new perspectives and insights on this subject, and provides new alleys for further investigation.

Governance is often defined as the way organizations are directed, and managers are held accountable for conduct and performance. This applies to all levels in organizational hierarchies and networks, including the corporate level, and therein, also projects and groups of projects, such as programs or portfolios of projects. However, looking at governance alone is like looking at a computer system solely in terms of its hardware. Just as a computer only becomes a useful tool when its hardware is complemented by software, so too does governance only become useful when it is complemented by its "soft side," which is termed *governmentality*. Governmentality is the way the governing part of an organization presents itself to those who are governed. It shows the attitude governors have toward the people they govern, and it sets the "tone" for the interaction between them. Moreover, this soft side, or the "art of governance," as Foucault calls it, links the different levels of governance from the project level to the program and even corporate level. Research in governance in the realm of projects has, so far, mainly addressed the different forms of governance found in different types of projects, but has not yet looked into the different governance and governmentality approaches at different levels in the organizational hierarchy. Therefore, we differentiate between the governance of projects and project governance. Project governance is the governance of an individual project, whereas the governance of projects is the governance of a group of projects, such as a portfolio, program, or network of projects. We have addressed the following research questions:

> *RQ1: What are the practices for governance and governmentality in the realm of projects in organizations of different sizes and in different geographies?*

RQ2: What are the organizational enablers for governance and governmentality in the realm of projects in these organizations?

RQ3: How does governance and governmentality in the realm of projects evolve in these organizations?

To answer these questions, we conducted four studies:

1. A two-part systematic literature review, with the first part defining the concept of an organizational enabler. This concept was subsequently applied in the second part on organizational enablers in the project management–related literature
2. A qualitative study using six case studies in Sweden and China, with organizations of different industries and sizes, to identify governance practices and underlying enablers
3. A quantitative study to: (1) identify best practices at the levels of project governance, governance of groups of projects, and governmentality; and (2) identify organization-wide enablers of governance and governmentality
4. A longitudinal study with the same six case companies to investigate how governance evolves over time and reacts to contextual changes, such as changes in markets, company size, or management

This approach provided for an initial identification of a large variety of possible organizational enablers, which was successively refined over the course of the four studies down to those enablers who have the greatest impact on the success of the project-based part of an organization.

Early on, we encountered differences between governance at the individual project level (i.e., project governance) and governance of groups of projects (i.e., governance of projects). Therefore, we split our analyses into three levels: (1) project governance (for individual projects), (2) governance of projects (such as programs or portfolios), and (3) governmentality (the link between these levels).

After 48 interviews in the six case companies and a worldwide, web-based questionnaire with 208 responses, we derived the following answers to our research questions:

For RQ1, we identified the following best practices:

- For project governance practices, the use of steering groups and methodologies is almost paramount, whereas the flexibility to

adjust organizational and governance structures to the needs of projects is less developed. Support for projects from top management, as well as clearly defined roles and responsibilities for governance supported by a project management office (PMO) are important for successful project governance.

- Practices in the governance of projects include the alignment of projects and business, the use of company-wide project management methodologies, flexible organization structures, standardization of project selection, reporting, and reviews, as well as the provision of appropriate media and technological infrastructure.
- Practices in governmentality include granting appropriate levels of autonomy to project managers and developing them to be self-responsible managers who understand the implications of doing business through projects while perceiving their organization as an open system with a variety of skills, opportunities, and external interfaces.

No statistically significant differences were found by country, industry, and project size, which would indicate that there is large variety in governance in these strata. The interviews indicated that process had a stronger role in governance in China, whereas the individual had a stronger role in governance in Sweden.

For RQ2, we identified the following organizational enablers for the above-mentioned practices:

- At the level of project governance, the organizational enablers include a mental infrastructure that allows for the widest possible sphere of action for the project manager, starting from the project, via the project's parent organization, and beyond the organization. The enablers also include the provision of ongoing communication opportunities with managers from other projects, line managers, and external managers for the coordination of the project.
- At the level of governance of projects, we found that in successful organizations, governance is initially established through strong leadership, is well established over time and continuously developed, and has clearly defined roles and responsibilities.
- Governmentality in the most successful organizations has a culture that prioritizes teamwork and collaborative

accomplishments over individual heroism and provides for a supportive environment for project management, in which project managers are encouraged to develop project management in the organization and feel important, empowered, and coached. At the same time, they are encouraged to get certified and engage with professional organizations.

After this "layered" perspective of governance, we took an organization-wide perspective. We refined the concept of organizational enabler further into its constituent parts. These parts are factors (that cause the enabling) and mechanisms (that support the enabling), and we applied this to the entire organization, irrespective of the level of governance. Using factor analysis, we identified five factors: (1) leadership, (2) mental infrastructure, (3) governmentality, (4) flexibility in project governance, and (5) flexibility in the governance of projects. These are supported by six mechanisms: (1) a stakeholder orientation to governance; (2) periodic reviews of projects, programs, and portfolios; (3) the institutionalization of governance in terms of reporting systems, methodologies, institutions for project selection, and coordination; (4) continuous improvement in professionalism; (5) periodic governance-related meetings; and (6) remuneration systems that are aligned between line managers and project managers.

Through regression analyses, we found that the following three organizational enabler factors were directly correlated to the success of the project-based part of the organization:

- Leadership—the extent that governance is established by a strong leader and is maintained and further developed over time
- Governmentality—the mental predisposition of the governors toward those who are governed; this is shown through, for example, the level of empowerment, team culture, and so forth
- Mental infrastructure—the mental sphere of action of project managers, that is, the extent to which an organization allows information exchange within projects, across projects, and within the organization and beyond, and the authority of project managers in exchanging information

These three enablers, together, account for 20% of the variance in success with the project-based part of organizations.

We then applied the same three factors to a different measure of success—this time, success in establishing a governance structure that is accepted and perceived as helpful by the project management community. The three above-mentioned factors account for 40% of this success, whereby the mechanism "meetings" (i.e., the way meetings are scheduled, set up, and held) slightly controls the impact of governmentality on governance success. This shows the importance of holding periodic meetings to establish and maintain good governance structures.

Among the three main enabling factors, leadership is approximately twice as important as each of the other two (governmentality and infrastructure). Accordingly, leadership can be seen as the ultimate enabler for governance and governmentality in the realm of projects.

For RQ3, the evolvement of governance and governmentality, we found the following:

- Contextual changes, such as changes in markets or market share, do not lead to predictable changes in governance. However, changes initiated through CEO decisions often lead to changes in the governance of projects. As shown above, leadership is the main driver for the evolvement.
- Changes in company size appear to have a major impact on governance and governmentality. Project governance is well established and accepted in small organizations (fewer than 250 employees) and large organizations (more than 30,000 employees), but is less developed in medium-sized organizations. Organizations with 251 to 1,000 employees especially tend to subordinate projects and their governance to the production process, thus unbundling the project in its tasks and feeding those into the production process, dispersed over the different parts of the organization, with little or no management and governance at the project level. Looking across all sizes of organizations, we see that leadership and infrastructure grow in line with the growth of the company.
- Maturity-driven evolvement shows that success in governance and governmentality grows in a linear fashion with improvements in leadership, definition of roles and responsibilities, mental infrastructure, collaborativeness, and project manager support. Leadership is the dimension that shows the largest improvement when we compare less successful with

more successful organizations, which again points to the importance of leadership for governance and governmentality.

From this, we derive the following suggestions for managers:

- Develop strong leaders to establish and maintain project management and governance as a way of doing business. These leaders need to be at or have direct access to top management in order to receive the authority to change the organization's way of working and its value system.
- Establish a broad mental sphere of activity for project managers. This includes allowing and encouraging project managers to engage with professional organizations, work in standardizing committees, participate in conferences, and collaborate with academic institutions, benchmarking companies, and standards-developing bodies.
- Establish appropriate governmentality. Governmentality sets the "tone" between the governance institutions and those they govern, as well as within the governed society. Most successful organizations control their project managers by the extent to which they meet established outcome objectives, as opposed to controlling them for methodology compliance, while at the same time taking a stakeholder orientation in governance. That means establishing a culture of: (1) mutual trust between the developers of the governance system and the project managers, (2) collaboration and team work, and (3) taking care of the professional development of project managers.

This study represents the first research to tie together project governance, governance of projects, and governmentality. The results show a high level of integration among these three subjects in everyday governance. The research distills the three main organizational enablers from the myriad of possible influences that an organization can have on projects and their governance. Last, not least, it provides suggestions for academics to develop the related theory further, as well as suggestions for managers to develop their governance and governmentality.

CHAPTER 1

Introduction

On governance in the 21st century:
Looking at governance as the general exercise of authority, it seems that over the long run there has been a clear reduction in the absolute or unconstrained power of those in positions of power. This has been a marked trend both at the macropolitical level, where the state attempts to effect society-wide governance, and at the micro level, where firms and families have experienced important changes in the exercise of authority. (OECD, 2001, p. 9)

On governmentality:
. . . the good governor does not have to have a sting—that is to say, a weapon of killing, a sword—in order to exercise his power; he must have patience rather than wrath, and it is not the right to kill, to employ force, that forms the essence of the figure of the governor. And what positive content accompanies this absence of a sting? Wisdom and diligence. Wisdom, understood no longer in the traditional sense as knowledge of divine and human laws, of justice and equality, but rather as the knowledge of things, of the objectives that can and should be attained, and the disposition of things required to reach them; as it is this knowledge that is to constitute the wisdom of the sovereign. As for his diligence, this is the principle that a governor should only govern in such a way that he thinks and acts as though he were in the service of those who are governed. (Foucault, 1978/1991, p. 96)

Governance is often defined as the means by which organizations (including temporary organizations, such as projects) are directed and its managers are held accountable for conduct and performance (OECD, 2001). But how does governance emerge in contemporary organizations, say, in the context of diminishing authority and position power, as shown in the citations above? In this research report, we address this question.

This book reports on a research study on the organizational enablers of governance and governmentality in the realm of projects. Governance in the realm of projects,

> coexists within the corporate governance framework. It comprises of the value system, responsibilities, processes and policies that allow projects to achieve organizational objectives and foster implementation that is in the best interests of all the stakeholders, internal and external, and the corporation itself. (Müller, 2009, p. 4)

Governance is about governing things (Foucault, 1991) such as projects. However, there is no one-size-fits-all when it comes to governance. Each organization defines its own particular approach. For example, one organization wants to be very strict in its approach to controlling employees, while another gives its employees a lot of autonomy.

The implementation of a particular approach to governance is referred to as governmentality (Clegg, Pitsis, Rura-Polley, & Marosszeky, 2002). Governmentality addresses the human side of governance and is, therefore, often referred to as "the art" of governance, which complements the governance of things, which is termed the "the science" of governance (Foucault, 1991). The term *governmentality* was coined in 1957 by Roland Barthes (2013), a French semiologist, to describe an ideological mechanism that presents governors (i.e., political leaders) as the origin of social relations (Lemke, 2007). The concept became popular about 20 years later when the French philosopher Michel Foucault used it for his studies on power, albeit in a very narrow sense compared with the original scope of the term.

In its original meaning, the word *governmentality* denotes the way governors present themselves through media or otherwise to those they govern and thereby "set the tone" between themselves and the governed. In other words, governmentality shapes the nature of social interaction within organizations (Lemke, 2007). The complementary concept—governance—on the other hand, shapes, but does not determine, the actions of individuals (Clegg et al., 2002). Thus, the two terms denote the "how" and "what" in governing, respectively. In this study, we use the concept of governmentality in its original sense, the way Roland Barthes described it.

Study Background

Interest in governance in the realm of projects has grown rapidly in recent years. After some initial mentions in academic journals in the late 1970s, governance became a more permanent topic in the late 1990s, and from 2005 onward, the number of journal articles increased exponentially (Biesenthal & Wilden, 2014). Books specific to the subject started to come out in 2007 and the number of books on the topic has increased since then. Simultaneously, professional organizations for project management started to get interested in governance and have included (at least) definitions of the term in their publications.

Along with this development, awareness has grown among academics and professionals that context plays an important role in the success of projects and their management. One important parameter for this is the governance of projects (see, e.g., Crawford et al., 2008). However, governance pervades the entire organization. The most recent literature on governance in the realm of projects, therefore, emphasizes the differences in levels of governance (e.g., Biesenthal & Wilden, 2014; Müller, 2009; Müller, Pemsel, & Shao, 2014; Turner, 2009).

At the lowest level is *project governance*, which is concerned with the governance of individual projects. It addresses questions such as which methodology shall be used, the scope and frequency of reporting, reviews, and so forth. Project governance is mainly executed by the steering committee in its work with the project manager.

This level of governance is different from the *governance of projects*, which is concerned with governance of groups of projects, such as programs or portfolios of projects. Here, the focus is on the standardization of governance across projects, such as the number and type of project management methodologies used in an organization, the transparency of project work and results, resource sharing, project prioritization, and so on. This is mainly executed by higher management.

A third level is *board-level governance of projects*, conducted by the board of directors. It addresses questions such as the extent to which companies use projects as building blocks for their business—their level of "projectification" (i.e., how much project thinking pervades the organization [Midler, 1995])—as well as the establishment of project management offices (PMOs) or the balance in permanent versus temporary hiring of project managers.

Finally, there is *governance of project management*, which does not directly target projects, but rather the scope and quality with which project

management is done within an organization. It is concerned with questions such as the mandates of PMOs, the number and mix of (junior/senior/certified/noncertified) project managers in the organization, and their education, career path, and professionalism, including their membership and engagement in professional organizations for project management.

This variety in our understanding of governance within the realm of projects comes at a time of reduced authority and changing roles of governors (i.e., those in governance roles, such as members of a steering committee). The quotations at the beginning of this chapter illustrate this. As the Organisation for Economic Co-operation and Development (OECD) report on governance in the 21st century indicates, authority as a governance mechanism is declining. Expert and relevant situational knowledge is replacing formal position power, given the increasing complexity of projects, which brings with it a need for more shared leadership approaches (Pearce & Conger, 2003). With this change comes a change in profile of those who serve as governors. As indicated by Foucault (1991), the particular wisdom and diligence that is relevant for the attainment of specific goals, such as those of projects, mark the profile of today's governors.

The trend in the literature shows that our understanding about the nature and types of governance approaches is growing. However, the particular aspects that enable these approaches to be effective in different organizations have not yet been researched. The breadth of possible organizational enablers and their impact on governance structures are not known to organizations; nor are the types of enablers that fit their particularities and the ways to adjust governance over time to adapt to organizational changes. Similarly, organizations do not know yet which particular organizational characteristics they can change to allow for a particular governance approach to be implemented when needed.

Research Questions

Given the degree of diversity in governance and its implementation, that is, governmentality, it is time for a study that sheds some light on the governance approaches of organizations and how these approaches emerge from the idiosyncrasies of their parent organizations. We specifically address the following research questions:

RQ1: What are the practices for governance and governmentality in the realm of projects in organizations of different sizes and in different geographies?

RQ2: What are the organizational enablers for governance and governmentality in the realm of projects in these organizations?

RQ3: How do governance and governmentality in the realm of projects evolve in these organizations?

The unit of analysis is the organizational enabler. To that end, this study assesses the nature of enablers and practices and uses both established and newly developed theory, together with qualitative and quantitative evidence, to identify the nature of these enablers.

Scope and Objectives of the Study

The objective of this study is to develop a framework for project governance and organizational enablers in organizations of different sizes and sectors and in different geographies. This framework will contain the specific organizational characteristics that enable different approaches to project governance, governance of projects, and governmentality in small, medium, and large organizations in varying industry sectors and geographies. The related governance structures, their practical expression, and the underlying organizational enablers will be shown. Moreover, we will identify the timely development and change of organizational enablers. The results of the research will illustrate how organizations develop toward low, medium, and high levels of governance and governmentality over time and how this relates to enablers and practices of governance.

The results will allow practitioners to develop new or adapt existing organizational enablers and their contingent governance practices to improve the effectiveness and efficiency of their organizations. Details about organizational size, sector, geography, and level of projectification will allow organizations to identify those enablers and practices that are most relevant for them. The results will also allow the expansion of the existing PMI standards by adding organizational enablers for best practices in project governance.

We take an organization-wide perspective for understanding organizational enablers and how they shape governance and governmentality. The results of the study suggest that organizational enablers are combinations of regulative, normative, and cultural-cognitive elements, which are part of the social structures of organizations. However, the sheer presence of organizational enablers is not sufficient to enable governance. It is the willingness,

trust, and ability to execute them at the different management levels—thus, leadership—that brings them to bear (Müller, Pemsel, & Shao, 2015).

The context of the study is project-based organizations (PBOs). PBOs are often categorized by their extent of projectification. They range from organizations that organize most, if not all, of their internal and external activities as projects, to those that are the project-based part of an otherwise process-oriented organization (Hobday, 2000; Lindkvist, 2004). Results of the study should be of special interest to organizations that use projects as building blocks of their business.

Institutional Theory

The nature of organizational enablers and their relation to governance and governmentality led us to choose organization theory as a suitable perspective for understanding the phenomenon. More specifically, we decided to use institutional theory as a theoretical lens, because it allows for an understanding of the processes by which social structures, including both normative and behavioral systems, are established, become stable, and undergo changes over time.

We chose Scott's (2012) version of institutional theory as a point of departure, because its regulative, normative, and cultural-cognitive elements serve as a means to understand stability and meaning in the social life in organizations (Scott, 2004). This choice was inspired, among others, by the work of Henisz, Levitt, and Scott (2012), who took the same theoretical perspective toward project governance in addressing the social structures in multilevel governance settings and showed this theory's eligibility for grasping the complexities of governance in project settings. Following Scott (2012) and Henisz et al. (2012), we adopt the three pillars of institutional theory—(1) regulative, (2) normative, and (3) cultural-cognitive— to understand organizational enablers and governance practices in PBOs.

Regulative elements of institutional theory include the formal regulations, laws, and property rights that are often externally imposed upon organizations. Normative elements include the informal norms, values, standards, and roles, such as those defined in the practice standards of professional institutions for project management. Cultural-cognitive elements comprise "shared conceptions that constitute the nature of social reality and create the frames through which meaning is made" (Scott, 2014, p. 67), together with shared beliefs, symbols, identities,

and logics of action (Misangyi, Weaver, & Elms, 2008; Orr & Scott, 2008; Scott, 2012).

The study will show that the three pillars provide an appropriate lens for understanding governance through the more institutional pillars—namely, regulative and normative—whereas governmentality lends itself naturally to the more cognitive perspective of the cultural-cognitive pillar. Taken together, they allow us to develop theories for governance and governmentality at both the project and program level.

The Management Process

To accomplish the above-mentioned goals, we conducted four studies using a sequential mixed-methods approach. The first study was a systematic literature review to define the concept of organizational enablers and then apply this concept to the literature on governance and governmentality in projects. This led to a number of propositions, which were then tested and refined in a first qualitative study through six case studies in Sweden and China. The results of this study then led to a set of hypotheses that were tested in the third study through a worldwide, web-based questionnaire. The fourth and final study was of a longitudinal nature. It looked at changes in enablers and practices over a period of one year and compared them with the changes in the environment of the respective organizations. The results of both the qualitative and quantitative studies converged into an emerging theory of organizational enablers and their dynamics, which is described in the remainder of this monograph. The details of the research process are outlined in the methodology chapter.

The core team of the study consisted of three researchers:

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Throughout the 24 months of this study, the researchers kept in contact through regular Skype meetings, email, and four physical meetings in the form of workshops, which were held in Malmö, Sweden; Beijing, China; Copenhagen, Denmark; and Oslo, Norway. The project was regularly reported on to the PMI research project liaison and the PMI project coordinator.

Milestones and Deliverables

The study commenced in January 2013 and lasted for 24 months. Activities during the first year focused on the systematic literature review and its evidence-based propositions for organizational enablers of project governance and its practices, the development of the case study protocol, the case studies in China and Sweden with their initial interviews, plus the workshop for interview analysis and questionnaire development. In the second year, we focused on the development of the online survey, data collection through a worldwide, web-based questionnaire, a workshop for analysis of questionnaire data, and development of interview questions for the second round of interviews, plus the interviews for the longitudinal study in the case companies, followed by a workshop for final analysis and subsequent monograph writing. Details are listed in Table 1.1.

The results of the study were continuously communicated to the community of project management researchers and practitioners, and feedback was sought on the relevance of the study, the validity of the approach, and the credibility of the results. Public presentations included the following:

- PMI Research & Education Conference, July 2014, Portland, Oregon, United States
- Baltic PM Days, May 2014, Vilnius, Lithuania
- Happy Projects Conference, May 2014, Vienna, Austria

Table 1.1: Project Milestones.

Milestone	Completion Date
Literature review	June 2013
Case studies and initial interviews	November 2013
Narrative writing, workshop for interview analysis, and questionnaire development	January 2014
Worldwide, web-based questionnaire	June 2014
Workshop for analysis of questionnaire data and development of interview questions for second round of interviews	July 2014
Second round of interviews and case studies	September 2014
Workshop for final analysis	October 2014
Monograph writing	December 2014

The following publications were accepted and published during the period of the study:

Müller, R., Pemsel, S., & Shao, J. (2014). Organizational enablers for governance and governmentality of projects: A literature review. *International Journal of Project Management*, *32*(8), 1309–1320.

Müller, R., Pemsel, S., & Shao, J. (2015). Organizational enablers for project governance and governmentality in project-based organizations. *International Journal of Project Management*. doi:10.1016/j.ijproman.2014.07.008

Pemsel, S., Müller, R., & Shao, J. (2014, July). Organizational enablers in project-based organizations: The case of project governance and governmentality. In *Proceedings of the PMI Research & Education Conference, July 28–29, 2014, Portland, Oregon*. Newtown Square, PA: Project Management Institute.

Supporting Organizations

The study was supported by (1) the PMI Research Program, which initiated the study and provided overall guidance and financial support; (2) the researchers' home organizations—namely, BI Norwegian Business School, the Chinese Academy of Social Sciences, and

Copenhagen Business School, which provided facilities and technology to conduct the study; and (3) the case study companies, which provided in-kind support in the form of their employees' working time, insight into their practices and documents, and collaborative interaction.

This chapter provided an introduction to and context for the study, together with the research questions and theoretical perspective. The next chapter will present the systematic literature review with its propositions. This is followed by a chapter on methodology, after which we present the case companies and the related narratives. In Chapter 5, we analyze the conceptual and qualitative data, and in Chapter 6, the quantitative data. Chapter 7 discusses the results and in Chapter 8, we draw the conclusions from the findings. This is followed by the references and the appendices.

CHAPTER 2

Theoretical Perspective and Literature Review

In this chapter, we describe our theoretical perspective toward the research and review the relevant literature. In doing so, we identify the knowledge gap, that is, those particular parts of the research questions that cannot be answered through the existing literature. We start by outlining institutional theory as the underlying theoretical perspective for our four studies. Then, we review the literature on governance and governmentality in the realm of projects, organizational enablers, and projectification.

A review like this can only cover a subset of the literature written on a subject (Hart, 1998). Therefore, we undertook this review with the aim of identifying, in each subject area, the major theories, models, and findings relevant for our research questions.

Institutional Theory

Institutions are taken-for-granted patterns of organizing that shape, constrain, and give meaning to the behavior of their members (Phillips, Lawrence, & Hardy, 2000; Zilber, 2002). Examples include formal institutions, such as steering committees or project management offices (PMOs), but also informal institutions, like a project management community of interest in an organization. In every institution, actions of a certain type are supposed to be carried out by certain actors in certain situations. Institutions, thus, provide social control over our behaviors and actions and come to life when humans play different roles within them and participate in the social world (Alvesson & Skjöldberg, 2009; Berger & Luckmann, 1966). Institutions thereby determine which actions (habits and routines) are appropriate for whom. They also guide when

and in what situations certain actions are considered appropriate within the particular institutional setting.

Institutional theory attempts to understand social structures by investigating similarities and differences in social settings, the relationship between structure and behavior, the role of symbols in social life, the relations between ideas and interests, and the tensions between freedom and order. Levels of analysis in institutional theory range from the broader societal and institutional level, to the organizational and interpersonal relational level (Scott, 2004, 2012). Institutional theory also addresses the processes by which social structures, including both normative and behavioral systems, are established, how they become stabilized, and how they undergo changes over time (Scott, 2012). Even if the essence of institutions is permanence and stability (Kraatz & Moore, 2002), institutions inhere a dynamic duality between stabilizing structuration processes, as well as changing processes of established structures, practices (Goodrick & Salnick, 1996; Greenwood & Hinings, 1996; Kraatz & Moore, 2002; Phillips et al., 2000), and meanings (Phillips et al., 2000; Zilber, 2002). That is why we, at any given time, find some meanings and practices in societies and communities that are taken for granted, some that actors disagree upon, and others that are blurred, unclear, and ambiguous (Goodrick & Salnick, 1996; Zilber, 2002). Institutionalization of practices and thinking is an ongoing process; new habits and routines are constantly shaped (or constructed) and reshaped over time (Alvesson & Skjöldberg, 2009; Berger & Luckmann, 1966). Changes in institutions have, for example, been found to be strongly impacted by contextual changes, as well as by other political actors within organizations (Greenwood & Hinings, 1996; Kraatz & Moore, 2002).

Analyzing Institutions in Organizational Life

One established framework for analyzing institutions in organizations is Scott's three pillars framework. According to this framework, institutions may be classified as resting on three elements, called pillars: regulative, normative, and cultural-cognitive (Scott, 2004).

Regulative elements comprise formal regulations, laws, and property rights (Henisz et al., 2012; Scott, 2004) that are often externally imposed upon the organization. Regulative elements materialize through relational contracts, public–private partnerships, adjustment to environmental laws, and so on.

Normative elements involve informal norms, values, standards, and formal and informal roles. In PBOs, this relates to, for example, standards provided by professional associations or project management methodologies that organizations develop internally. Normative elements further involve internal peer pressures to align behaviors through formal mentoring, training, and informal interactions. Normative elements address such questions as: "Given this situation and my role in it, what is the appropriate behavior for me to carry out?" (Scott, 2014, p. 65).

Cultural-cognitive elements are "shared conceptions that constitute the nature of social reality and create the frames through which meaning is made" (Scott, 2014, p. 67), as well as shared beliefs, symbols, identities, and logics of action (Misangyi, Weaver, & Elms, 2008; Orr & Scott, 2008; Scott, 2012). These might include, for example, construction of meaning (Scott, 2014); identification with a certain occupation, professional or personal network, or organization (Grabher, 2004); and belief in practices through association with quality of craft (Thornton, Ocasio, & Lounsbury, 2012).

In combination, the three pillars serve as mechanisms for different aspects of institutional stability or even growth within their context. The regulatory elements often provide returns for their managers, whereas the normative elements provide a basis for shared commitments among the parties and the identity construction of their members. The cultural-cognitive elements allow the institution's claims to be perceived as valid and self-evident within a particular context (Scott, 2014). When appropriately aligned, the combined forces of the three pillars can be formidable. However, when misaligned, they provide for conditions that different actors may use for different ends, potentially causing confusion and change (Scott, 2014).

This report takes on the well-known framework of Scott's institutional pillars as a means to improve our understanding of what organizational enablers are in the context of governance in the realm of projects.

Governance

Governance is a broad concept and its definition varies considerably depending on theoretical perspectives and layers of the corporate hierarchy. Generally speaking, it is the means by which organizations are directed and its managers are held accountable for conduct and performance (OECD, 2001). It does this by providing a framework for managerial action based on transparency, accountability, and defined

roles (Müller, 2009). However, governance varies widely, both within as well as across organizational layers. For example, at the level of corporate governance, the perspective varies from narrow views that focus only on shareholder return on investment (RoI) to broader views that balance a number of internal and external requirements from a multitude of stakeholders (Davis, Schoorman, & Donaldson, 1997; Jensen & Meckling, 1976). Similarly, definitions of corporate governance vary. For example, we might define it as:

- *a system of controls* (Cadbury, 1992) or a collection of mechanisms (Larcker & Tayan, 2011) for directing and controlling organizations, and balancing their economic and social objectives, as well as their individual and communal objectives;
- *a process* through which corporations are made responsive to the rights and wishes of stakeholders (Demb & Neubauer, 1992), as well as a process (and related procedures) according to which organizations are directed and controlled (OECD, 2001); or
- *a set of relationships* among various participants internal and external to the firm (Monks & Minow, 1995), together with the distribution of rights and responsibilities among different participants in the organization, their relationship with, for example, external auditors, regulators, and legitimate stakeholders (OECD, 2001).

Governance provides structures for setting the objectives of an organization, and also provides the means to achieve these objectives and control progress (OECD, 2004). These three components of governance are addressed at every layer of management or network node in an organization. Though broadest in scope at the top of the corporate hierarchy, the scope is subsequently broken down to the different management functions, horizontally and vertically along the corporate hierarchy, or in organizational networks. Thus, the need for governance emerges at every level of a management hierarchy or network, from the board of directors down to the groups of projects, and further on to the project managers.

In line with the three dimensions listed above, governance theory typically refers to controls and processes as being set by institutions in order to shape the context within which actors' behavior occurs. Relationships provide a theoretical lens for understanding the particular behavior of actors. Both dimensions act within the governance system

and collectively can regulate or counter-regulate the system. Thus, governance is a form of regulation where the regulator is part of the system under regulation (Stoker, 1998).

Researchers have used a variety of perspectives to understand governance. Most popular is the shareholder versus stakeholder perspective of the organization. Clarke (1998) modeled these two perspectives, shareholder and stakeholder, as being the opposite endpoints on a continuum of corporate governance orientations. Shareholder-oriented governance is based on the assumption that corporations exist in order to maximize profits for their owners, such as shareholders (Friedman, 1970). Stakeholder-oriented governance, on the other hand, assumes that there are many different stakeholders, such as shareholders, customers, employees, suppliers, and the local community, whose interests must be served for the company to stay in the market or even maintain the market's existence (Davis et al., 1997). The shareholder versus stakeholder orientation in governance is hereby an expression of corporations' understanding of their raison d'être in the market place and their respective framework for decision making within the corporation.

This study takes this shareholder–stakeholder continuum as a primary theoretical perspective for understanding the relative strengths of the shareholder or stakeholder orientation in the organization for the governance of projects.

Governance Theories

Even though our main theoretical perspective is institutional theory, we will have to refer to some of the most popular governance theories during our analysis. Therefore, we give a short overview of these theories, aiming to provide the reader with basic explanations of these theories and offer references for possible deeper study. This overview is not intended to be an in-depth description of these theories.

Most governance studies adapt an underlying assumption of shareholder-oriented governance of the corporation, which is expressed in the popularity of agency theory (Jensen & Meckling, 1976) and transaction costs economics (TCE) (Williamson, 1975, 1985) in project governance studies (Müller, 2011). Rare, however, are studies with an underlying stakeholder-oriented perspective of governance, which is exemplified through the use of stewardship theory (Davis et al., 1997), such as in Franck and Jungwirth's (2003) study on the governance of

open source development projects. Shareholder and stakeholder theory explain the governance approach of the firm, whereas agency theory and stewardship theory explain the respective behavior of individuals within these governance structures.

Shareholder-oriented governance assumes that the corporation exists in order to maximize profits and thereby the wealth of its owners, the shareholders (Friedman, 1970). Jensen and Meckling (1976) identified some of the problems that arise between managers and owners in shareholder-oriented governance and described it in their agency theory, which assumes individuals to be self-centered and utility-maximizing. Agency theory addresses the relationship between one or more principal(s) and one or more agent(s). From a governance perspective, it relates to the shareholder orientation of a firm, as it describes the relationship between the owners (shareholders) and managers of a firm (Davis et al., 1997). Examples from the realm of projects include the project owner as governor (or principal) being in conflict with the project manager (agent) about possible short-term gains of the agent, resulting from an information imbalance between the two parties, because the agent is better informed about the project status than the principal and can use this knowledge to his or her advantage. Mitigating this conflict through increased control structures or contracts that align the objectives of both parties adds to undesired administrative costs on projects (Turner & Müller, 2004).

TCE also addresses administrative costs in, for example, projects as transactions, but it does so from the perspective of the overall costs for negotiating and possibly renegotiating contracts, as well as controlling and enforcing their execution. TCE takes a contract view toward transactions, such as projects. Similar to agency theory, it aims to avoid deviation from agreed-upon contract terms, but focuses on the economic adjustment of governance efforts to the characteristics of a transaction, such as a project (Williamson, 1985).

Agency theory and TCE explain some dimensions of organizational complexities, but are limited by their economic perspectives: "Additional theory is needed to explain relationships based on other non-economic assumptions" (Davis et al., 1997, p. 20). Stewardship theory, which assumes a stakeholder orientation in governance, does this.

Stakeholder-oriented governance assumes that there are many different stakeholders, including shareholders, customers, employees, suppliers, and the local community. The multitude of stakeholders,

together with the growing importance of a corporation's social responsibility, leads to a rising popularity of stewardship theory (Aras & Crowther, 2010). Stewardship theory draws from psychology and sociology and proposes the behavior of individuals in organizations is pro-organizational and collectivistic, instead of individualistic and self-serving as in TCE and agency theory. It explains individuals' behavior in principal–steward relationships as being steered by high levels of identification with the organization, leading to the prioritization of collectivistic goals over individual goals. Davis et al. (1997) relate the psychological underpinnings of stewardship theory to the higher levels of Maslow's (1970) hierarchy of needs, whereas agency theory relates more directly to the lower levels. More recent work explains the psychology of stewardship behavior from the perspective of individuals' need to control their own behavior and the meaning derived from this behavior. Here, a "stewardship governance approach facilitates a sense of psychological ownership rather than material ownership" of the benefits derived from the behavior and for the organization (Hernandez, 2012, p. 182). Several authors perceive agency theory and stewardship theory as the opposite endpoints of a swinging pendulum, where any state between pure agency and stewardship behavior can be achieved (Clarke, 2004; Hernandez, 2012), depending on whether the organizational members define themselves as individualistic, relational, or collectivistic (from agency to stewardship, respectively) (Hernandez, 2012).

Governance in the Realm of Projects

Governance in the realm of projects transcends the concept of governance into the world of projects. Hence, it builds a framework for managerial actions, based on transparency, accountability, and defined roles. Governance defines the objectives of project(s), provides the means to achieve them, and controls progress (Müller, 2009).

As outlined in Chapter 1, governance in the realm of projects differs between *governance of projects*—that is, the governance of groups of projects—and *project governance*, which is the governance of individual projects. We address these two layers of governance in the sections below.

Too and Weaver (2013) were among the few scholars who developed governance models to integrate governance of projects and project governance. They model governance as a set of nested governance and management functions. At the center of the model are the governance approaches

for individual projects and their deliverables, which are nested within the governance of groups of projects (governance of projects), which, in turn, forms the interface to the board of directors–level of project-related governance. They distinguish governance from management:

> The governance system defines the structures used by the organization, allocates rights and responsibilities within those structures and requires assurance that management is operating effectively and properly within the defined structures. The role of management is to manage the organization within the framework defined by the governance system; this applies particularly to the governance and management of projects. (Too & Weaver, 2013, p. 4)

Most of the published studies on governance in the realm of projects have addressed the governance of particular project types, such as Olympics projects (Clegg et al., 2002), large capital investment projects (Miller & Hobbs, 2005), NASA projects (Shenhar et al., 2005), construction projects (Pryke, 2005), development projects (Renz, 2007), or public projects (Klakegg, Williams, Magnussen, & Glasspool, 2008). The present study complements these perspectives by looking into the organizational (not project-type specific) enablers that allow different governance approaches to emerge. Thus, the focus of this study is the organization that governs projects and its organizational idiosyncrasies—not the project type.

Governance of Projects

Research on governance of projects is fragmented by the many different views taken on by the institutions that design, set up, and maintain governance structures for groups of projects. This research includes studies on the overall scope for the project business defined by the board of directors (Turner & Keegan, 1999); the governance functions in terms of support, counseling, training, and auditing provided at the organizational level by PMOs (Hobbs, Aubry, & Thuillier, 2008); the support and governance roles of steering committees (Crawford et al., 2008); or the scope of project management as a role in the organization (Müller, 2009).

The CONCEPT research program sponsored by the Norwegian Ministry of Finance is a long-term research program on the governance

of large-scale investment projects. It is organized as a series of investigations into the front end of and decision making in projects. The program has brought up a wide series of dimensions for decision making, giving a glimpse of the complexity associated with it, such as:

> the need for alignment between organizational strategy and the project concept; dealing with complexity, in particular the systemicity and interrelatedness within project decisions; consideration of the ambiguity implicit in all major projects; taking into account psychological and political biases within estimation of benefits and costs; consideration of the social geography and politics within decision-making groups; and preparation for the turbulence within the project environment, including the maintenance of strategic alignment. (Williams & Samset, 2010, p. 38)

These efforts led to one of the first frameworks for governance of public projects. It compares the governance practices of large public projects in Norway and the United Kingdom and identifies that:

> On the surface, the governance principles show some distinctive features. The Norwegian framework shows mandatory control points measures in a robust, simple structure, while the MoD [Ministry of Defense] (UK) framework reveals a mandatory complete quality system for the defense acquisition process. The OGC [Office of Government Commerce] (UK) is a complex system working by the force of influential recommendations by senior experts. Below these apparent main features, all the frameworks include similar principles about how to do business. These are closely connected to Western economic thinking. (Klakegg et al., 2008, p. 2)

This study showed the variety in philosophies that underlie the governance of these projects and the possible friction this may create in international collaborations.

Parallel to these academic efforts, practitioner-developed guidelines emerged for project governance, which can be classified as (1) values-based, top-down-oriented approaches, that is, from the board of directors to the individual projects (Association of Project

Management, 2004); and (2) process-based, bottom-up-oriented approaches that extend project-level methodologies into the organizational level (Office of Government Commerce, 2008). Here, the former approaches address merely the governance of projects, whereas the latter are mainly concerned with project governance.

A governance categorization system that links different approaches to the governance of projects to organizational success was empirically developed by Blomquist and Müller (2006). They use a two-by-two matrix to distinguish four categories of governance approaches, depending on whether the goals and the resources are shared or not across projects: (1) multiproject governance, where projects have nothing in common—neither resources nor goals; (2) program-oriented governance, where goals, but not necessarily resources, are shared across projects; (3) portfolio-oriented governance, where resources are shared across projects, but not necessarily goals; and (4) hybrid governance structure, where both goals and resources are shared across projects. Blomquist and Müller's (2006) research identified significantly higher organizational success in organizations that are governed through a hybrid approach—thus, the simultaneous application of program management principles to achieve efficiency, and portfolio management principles to achieve effectiveness of the organization. In a Darwinian sense, they showed that friction between program and portfolio orientation leads to the selection and execution of the best projects for an organization.

In 2009, the concept of governance paradigms for groups of projects was introduced (Müller, 2009). It uses the corporation's governance orientation, from shareholder to stakeholder (in line with Clarke, 2004, and Hernandez, 2012), as described above, and overlays it with the control focus of the organization that is sponsoring a project. This links corporate governance orientation with management practices. The approach follows Brown and Eisenhardt (1997), Ouchi and Price (1978), and Ouchi (1980) by distinguishing between outcome control— that is, control that merely focuses on goal accomplishment (e.g., reaching set objectives), and behavior control—that is, control that merely focuses on compliance in employees' behavior (e.g., following a process, such as a project management methodology). This identifies four governance paradigms for projects, as shown in Figure 2.1.

Flexible economist paradigm: This refers to a shareholder-oriented organization with a focus on outcome control. Projects in this paradigm

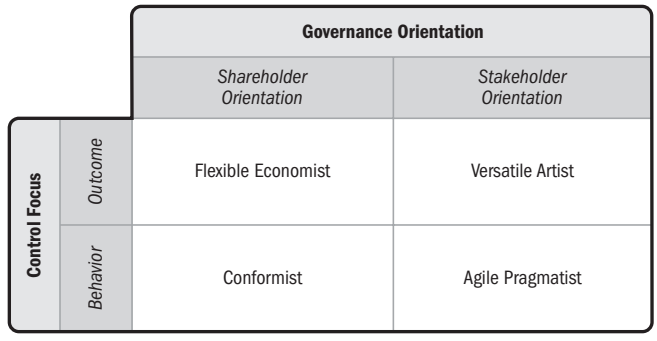

Figure 2.1: Four governance paradigms (after Müller, 2009).

aim for the highest possible return on investment for the organization's shareholders. This is done by flexibly applying the most effective project management methods, tools, and techniques and management approaches in order to reduce costs and thereby maximize shareholder return. These projects are often supported by PMOs, which provide relevant training and support for project managers to best use accepted tools and techniques.

Conformist paradigm: This is a shareholder orientation with a focus on behavior control. The emphasis in this paradigm is on the project manager's compliance with existing methodologies and processes. An underlying assumption is that process conformance increases efficiency. This paradigm is especially interesting for organizations with noncomplex projects and a homogeneous set of project types.

Versatile artist paradigm: This stakeholder orientation focuses on outcome control. Organizations that take this orientation juggle a diverse set of often conflicting requirements from different stakeholder groups, like end users, environmental organizations, and shareholders and suppliers, to name a few. Versatile artist organizations frequently employ the most senior and experienced project managers, who are often guided by a strategic PMO that defines the organization's portfolio of project management practices and trainings.

Agile pragmatist paradigm: This is a stakeholder orientation with a behavioral control focus. Organizations using this paradigm govern projects through a focus on process compliance, such as in agile or agile/Scrum methods in project management. This paradigm supports the incremental delivery of project products and frequently changing requirements from a diverse set of project stakeholders.

The four paradigms are mutually exclusive at the project level; thus, a project can only be governed in line with one paradigm. However, the paradigms are not mutually exclusive at the organizational level, so different paradigms may be exercised in different organizational entities, depending on the particular contribution of individual organizational entities to the overall corporate strategy. Examples include having a stakeholder orientation for the governance of projects in R&D departments and using a shareholder orientation for governance of projects in maintenance departments. Hence, different governance paradigms coexist within larger organizations.

This conceptual model was operationalized and validated by Müller and Lecoeuvre (2014) using a worldwide, questionnaire-based study with 478 responses. Their results conform with some findings in corporate governance research, such as a tendency for English-speaking countries and individualistic cultures (in the sense of Hofstede, 1980), such as the United States, to prefer shareholder-oriented governance paradigms. Collectivist countries (Hofstede, 1980), such as China with its tradition of "guanxi" (Chen, Chen, & Xin, 2004), on the other hand, tend to prefer more stakeholder-oriented governance paradigms. This model is used in the quantitative study in this research.

Project Governance

Project governance addresses the governance of individual projects; thus, it is limited in scope by its related governance of projects, which, in turn, is limited by corporate governance. Project governance is closest to the management of a project, interacts with it, and is typically exercised by steering groups, owners, PMOs, or combinations thereof (Müller, 2011).

Different researchers have developed different models to explain project governance. These models are conceptual and differ by the theoretical and epistemological perspectives they take. Accordingly, they emphasize different aspects of governance, such as the roles and/or process of governance or the elements that make up a governance regime.

Turner's (2009) model describes roles and processes for the governance of a project. He identifies four roles:

- *The sponsor* is the one who identifies and justifies the need for the project's outcome, defines the goals of the project, and approves the requirements.

- *The steward* is a senior manager from a technical department who helps define the project output and benefits that it can bring.
- *The project manager* defines and manages the process for project delivery and its control mechanisms. He or she will ensure that the project output fits its purposes.
- *The owner or business change manager* ensures that the project's output (a new product or service) is used and gains the intended benefits (i.e., the outcome). This role starts after the project has delivered its output and is either fulfilled by the owner him- or herself, or is delegated to a business change manager.

Turner's governance model is a three-process, concentric model with definition of objectives and means, and monitoring progress at the center. This is governed by a process at the next outer layer, which defines and controls for client needs, desired outcome, desired output, required process, delivered output, and delivered outcome. This layer is, in turn, governed by the next outer layer of governance roles, which are the client manager, sponsor, steward, project manager, and owner—the typical members of a steering group.

The model lays the foundation for high levels of transparency and clarity of goals through start-to-end control and communication of the management and governance institutions.

The model designed by Walker, Segon, and Rowlinson (2008) distinguishes between hard and soft aspects in project governance. Here, structural and regulatory elements, such as organizational design, policies, and legal requirements, relate to the hard aspects of governance and the ways responsibilities are discharged to deliver approved and signed-off project objectives, as well as to enshrine systematic accountability. This is complemented by the soft aspects of governance, that is, by the ways people interact with the governance structure in light of their responsibilities and accountabilities. This includes the interpretation and enforcement of regulatory frameworks, and the impact of relationships on the behaviors of individuals. Central to the model is equilibrium of trust and control as the mechanism to balance the hard and soft elements for governance.

Generic project governance models developed by professional organizations, such as Managing Successful Projects (MSP) by the Office of Government Commerce (2008) in the United Kingdom or the Tasmanian Government Project Management Guidelines (2011), suggest the roles,

responsibilities, and processes in governance, including stage-gate reviews and benefits management.

Governance Institutions

Governance functions in both project governance and governance of projects are executed by a number of organizational units or institutions whose presence and mandate varies widely across organizations. We discuss the most popular ones below, which are the board of directors, steering groups, and PMOs, as well as program and portfolio management. For a more detailed discussion on this subject, see Müller (2009, 2011).

Board of directors: Governance of projects starts with the board of directors by defining the objectives of the business and the role of projects in achieving those objectives. These decisions imply and determine the strategic value of project management for the organization. Following these decisions, the need for and establishment of steering groups and PMOs as governance institutions needs to be worked out, as does the possible need for formal program and portfolio management as a means to manage ongoing projects simultaneously in an organization.

Sponsors and steering groups: The particular governance infrastructure in terms of institutions governing a project is typically set up by the project sponsor. This includes the processes, means to control the project, the roles and responsibilities, and approval requirements. Together with the steering group or committee (or its functional equivalent), the sponsor typically governs the project and its manager toward completion. In many projects—for example, in R&D projects within a company—the sponsor chairs the steering group. However, in some cases, sponsor and steering group are two very different entities, as in large aid projects, where the World Bank sponsors a project for a country and the local government steers its implementation.

Steering groups are responsible for achieving the project's business case—the goals set in terms of the use of the project's outcome. Steering groups are ultimately responsible for the project's success and they represent the governance institution that is closest to project execution. The steering group executes two different functions—governance and support of the project (Crawford et al., 2008):

- In its governance role, it appoints the project manager; sets the project's constraints in terms of budget, time, and success

criteria; and defines the goals to be achieved within these limits. Governance is executed by providing resources, controlling the project (typically through the use of plans), setting of milestones, definition of deliverables and change control processes, and accepting project end. Advice and guidance is given to the project manager on an ad hoc basis when needed.
- In their support function, steering groups prepare the project's parent organization for the use of the project's deliverables, remove obstacles, help the project team obtain required approvals from the parent organization, and manage some of the stakeholders in the project.

Steering group members are, at minimum, the project sponsor. For most projects, however, PRINCE2 suggests to have representatives from the users of the project's outcome, executive management of the project's parent organization, major suppliers, as well as others on demand. The project manager reports to the steering group (Office of Government Commerce, 2005).

Steering groups determine the project objectives in terms of deliverables, time frames, and budgets, often in cooperation with the project manager.

Projects, or phases of projects, are executed upon provision of resources by the steering group. Control of progress, the third governance function, is done mainly at steering group meetings and gateway (a.k.a. stage-gate, tollgate) meetings. At these events, the project status, performance, outlook, and context are all assessed and decisions are made to continue the project, change it, or suspend it (Crawford et al., 2008).

PMOs: PMOs and their variations come with many different names and the relative positioning of project offices (POs), project support offices (PSOs), and project management offices (PMOs) against one another remains confusing. However, there is some indication that the majority of publications refer to POs as support organizations for one single project. POs and PSOs are mainly chartered with administrative tasks, which allow this type of work to be offloaded from the project team so as to increase its productivity.

PMOs, on the other hand, are typically staffed with experts in project management—often, the top-level project managers in the organization. Charters of PMOs differ widely. Some focus on the improvement of project results through guidance of project managers in the application

of project management methodologies, techniques, or tools. These PMOs aim for organization-wide compliance with good project management practices; hence, they exercise behavior control as outlined above. Other PMOs collect project performance data and accumulate them for middle and upper management, thus practice outcome control as described above. The PMOs' closeness to projects at the operational level and to the management of the organization constitutes a shortcut from management to operations, which increases the quality and timeliness of information provided to management for decision making.

In an examination of 500 PMOs, Hobbs and Aubry (2007) found a large variety of mandates and structures, which included the following:

- *Short-term organizations with few members*: In the survey, about half of the PMOs were created less than two years ago and were staffed with two to seven members. This relatively short life may be related to the perceived legitimacy of PMOs. About half of the PMOs surveyed were questioned as to their value for money.
- *Project managers included or excluded from the PMO*: About 40% of the surveyed PMOs held 75% of their organization's project managers, while 46% had less than 25% of the project managers in their structure. This indicates an either/or approach to the staffing of PMOs. Designers of PMOs either include or exclude almost all of the project managers in the PMO.

The functions of the PMO can be grouped into the following categories (Hobbs & Aubry, 2007):

- Monitoring and controlling project performance
- Development of project management competencies
- Development and implementation of standard methodologies
- Multiproject management
- Strategic management
- Organizational learning
- Execution of specialized tasks for project managers—for example, preparation of schedules
- Management of customer interfaces
- Recruit, select, evaluate, and determine salaries for project managers

Of these functions, *monitoring and controlling performance* was reported by the largest proportion of PMOs as being the most important component of their mandates, whereas *recruit, select, evaluate, and determine salaries for project managers* was the least important on average.

Further investigations into PMOs showed that their mandates change frequently, often triggered by changes in external circumstances, top management, as well as by the idiosyncratic problems that organizations need to address in their project selection and execution (Aubry, Hobbs, Müller, & Blomquist, 2010). Research shows that most PMOs are successful in achieving their tasks. Simultaneously, 50% of PMOs are closed down or experience significant changes in their mandate within two years. This indicates that changes in the PMO are the result of changes in the environment and not necessarily because of PMO performance (Aubry, Hobbs, & Müller, 2010).

Despite this frequent change in PMO mandates, there is a continuous increase in PMOs as governance institutions in organizations, leading to the formation of networks of PMOs in larger firms. These networks face challenges in finding ways to define the roles and responsibilities of the individual PMO organizations and avoid overlap and redundancy in tasks and charters. Clear governance structures, driven by well-developed mission statements, responsibilities, and associated policies, constitute the formal requirements for these networks, while the PMO members' willingness to help and work "across borders" constitutes the informal complement of equal importance for success (Aubry, Müller, & Glückler, 2011, 2012).

PMOs are often seen as the point of reference in terms of project management practices. However, research on knowledge flows within and between PMOs and their related community of project managers shows that PMO members are not among the most popular people to ask when searching for help in project management. A social network analysis in a large pharmaceutical organization showed that PMO members provide the structure for knowledge exchange by building communication clusters around each PMO member, but most of the exchange occurs between the most senior project managers and the rest of the cluster. Moreover, the majority of information exchanges happen between project managers who have worked together before; thus, experience and trust are important factors in knowledge dissemination in organizations (Müller, Glückler, Aubry, & Shao, 2013b). In terms of the

research questions listed in Chapter 1, this means PMOs can be viewed as institutions for the provision of governance structures within which managers act in their daily work. This supports Too and Weaver's (2014) positioning of governance and management.

Program and portfolio management: Programs are groupings of interrelated projects trying to achieve a common objective. Programs and their processes and structures set the context for the governance of individual projects. The program manager acts as the owner or sponsor of the projects in a program. He or she, therefore, takes on the roles of sponsor and steering group as described above.

Project portfolios are groupings of projects by resources or skills needs. The projects in a portfolio may be not related to one another, but they require resources from a common resource pool. To effectively manage the group of simultaneous projects, portfolio managers decide on which projects to accept into the portfolio, the priority of individual projects within the portfolio, and the allocation of resources to these projects. They further analyze existing or upcoming bottlenecks in resources and skills needs. They also work on remedies and mitigation strategies for risks and issues in projects. Through these tasks, portfolio managers govern the relative priority and associated staffing and visibility of projects. They indirectly impact time and cost planning, milestone setting and achievement, as well as delivery of project outcomes (Blomquist & Müller, 2006).

This section has examined the principal roles of some of the most important governance institutions. The board of directors defines the role of projects and project management in an organization. Portfolio and program management implement this strategy by setting the business context for governance of projects. Steering groups and owners execute the governance function in direct interaction with the projects. Finally, PMOs support project managers in applying the organizations' elements of governance, such as project management methodologies, specific management techniques, or reporting schedules. Simultaneously, PMOs collect and aggregate project performance data for portfolio-level decision making (Müller, 2014).

Questions that remain unanswered by the above research center on the presence and mandate of governance institutions, as well as their combination in organizations, and the organizational particularities that give rise to them. These topics will be addressed in the empirical part of this study, that is, from Chapter 4 onwards.

Governmentality

Governance defines the formal setup of structures, policies, processes, roles, and responsibilities. In a way, it provides the hardware for governing. However, it says little about the way the task of governance—governing—is designed and implemented in the daily work of an organization, or the software of governing. For example, while governance provides a particular project management methodology for an organization, governmentality regulates how this methodology is enforced. This enforcement can range, for example, from very liberal approaches, such as appealing to project managers to use it on a voluntary basis via rational approaches that outline the methodology's benefits (including possible incentives for the project manager), to more authoritative approaches that penalize project managers for not using the methodology, all the way to neoliberal approaches that enforce usage through soft "cultural" values that the members of an organization share and respect and do not intend to bend (Clegg et al., 2002; Dean, 2010; Foucault, 1991).

The term *governmentality* merges the words *governance* and *mentality* (a characteristic way of thinking). It conceptualizes the different approaches (mentalities) that governors have for executing the governance task. The concept of governmentality was developed by French semiologist Roland Barthes in 1957 to describe the ways political governments present themselves to the public and the inferences the public draws from that. By taking the example of a government's appearance in the media, Barthes showed how symbolism and signals impact the interpretations and inferences the public draws and, thereby, form the relationship between government and public, as well as the social relationship within the public (Barthes, 2013). This perspective identifies governmentality as the discourses by which governors control and manage relations with the rest of the world (Grieve, 2014). Governmentality, in Barthes's sense, is a broad concept that can be applied to a wide array of situations, and we use Barthes's concept in the present study.

Although Barthes was the one to coin the term in 1957, the concept of governmentality became famous about 20 years later through Michel Foucault's lectures at the Collège de France. Foucault defined governance as a layered concept of, for example, individual, family, and state, where governmentality represents the link between the layers (Foucault, 1991). The analogy with the present study is that governance applies to the levels of the individual project and groups of projects,

whereas governmentality applies to the link between these levels. Hence, governance should always be discussed together with its associated governmentality, as only this complementarity provides for an integrated view of the governance task.

Foucault used the concept of governmentality for studies on power, but reduced the scope of the original concept, because of his interest in and focus on neoliberalism. In his work, he mainly focused on the "active consent and subjugation of subjects, rather than their oppression, domination or external control" (Clegg et al., 2002, p. 317), whereas Barthes's conceptualization of governmentality would include all these dimensions.

Differences in approaches to governmentality are visible, among others, through the ways organizations control the work of their members. Stricter approaches would aim, for example, to achieve strict process compliance, using detailed surveillance and control methods to capture and record people's behavior and punish them for any misbehavior. These kinds of approaches are often found in high-risk industries, where trust is given to the process in an attempt to reduce possible errors on the side of the "human factor." Examples include civil airline pilots, who must adhere to clearly defined processes and go through a number of checklists before they can even start their airplane. Enforcing process compliance is a form of behavior control (a governance approach) whose strictness is an expression of its related governmentality.

More liberal forms of governmentality would emphasize the benefits that emerge from a certain behavior or the accomplishment of an objective. These objectives may include better organizational results, incentives, or other benefits. Liberal approaches appeal to the rationality of those people being governed and suggest, but do not enforce, certain behaviors. Examples include processes in new product development teams, which are proven and recommended, but can be circumvented when doing so in the best interest of the new product and the sponsoring organization. These kinds of governance approaches often control the results of people's work, such as task outcomes. The discourse they use to make people follow their suggestions reflects their governmentality.

Neoliberal forms of governmentality correct and control behavior by seeking to influence the self-regulation and self-reflection of individuals (Villadsen, 2010), by referring to a set of values and beliefs that the members of an organization or society share. Miller and Rose (1990)

describe the development toward neoliberal governmentality as a turn in focus toward the individual and discourse as a strategy for control:

> The 'autonomous' subjectivity of the productive individual has become a central economic resource; such programmes promise to turn autonomy into an ally of economic success and not an obstacle to be controlled and disciplined. The self-regulating capacities of individuals are to be aligned with economic objectives through the kinds of loose and indirect mechanisms that we have described earlier: the capacities of language to translate between rationalities, programmes, technologies and self-regulatory techniques, and the particular persuasive role of expertise. (p. 26)

Practicing neoliberal governmentality reduces the need for direct observation and personal contact, because:

> contemporary 'governmentality' accords a crucial role to 'action at a distance,' that is to say, to mechanisms which promise to shape the economic or social conduct of diverse and institutionally distinct persons and agencies without shattering their formally distinct or 'autonomous' character. (pp. 14–15)

Neo-liberal approaches shift the control dimension of governance from being an imposed external force toward internal self-control of the individual (Clegg et al., 2002). These approaches aspire to include the collective interests of the actors within a group or organization, whose consent leads them to voluntarily obey to contextual frameworks, set through the governance system, which shapes, but does not necessarily determine, the actions of individuals (Clegg, 1994; Clegg et al., 2002).

Project governance approaches and their associated governmentality vary widely across organizations. Examples include the following:

- Strictly process-oriented governmentality approaches, together with clearly defined, but flexible governance structures and institutions, such as in major public investment projects (Klakegg & Haavaldsen, 2011; Miller & Hobbs, 2005)

- Liberal outcome-oriented governmentality approaches, together with clearly defined, but flexible governance structures, as in customer delivery projects (Dinsmore & Rocha, 2012)
- Liberal outcome-oriented governmentality approaches, together with a range of governance structures, depending on the nature and level of innovation in new product development projects (Bowen, Cheung, & Rohde, 2007; Dinsmore & Rocha, 2012)
- Neo-liberal governmentality approaches that build on and use the values and ideologies of the project members by applying only rudimentary governance structures. Examples include community-governed open source development projects. In these kinds of projects, no salaries are paid, but shared values and ideologies serve as motivators and control mechanisms for the individual contributors (Franck & Jungwirth, 2003)

So far, we have outlined the need to understand governance in the realm of projects as a layered concept of individual projects and groups of projects, each requiring a distinct governance approach. We presented some of the governance institutions and their roles. We argued for the reconciliation of governmentality and governance; only through the combination of the "what" (governance) and the "how" (governmentality) does a holistic picture of the practices involved in governing emerge. The literature review has shown that related research in governance is mainly project-type specific, diverse, exploratory, and descriptive; thus, it does not give a generalizable answer to the research questions being examined in this study. Governmentality has rarely been addressed in the project management literature to date, but it is a key concept for the implementation of governance. Existing publications contribute very little to answering our research questions. Therefore, we continue to address governance in the realm of projects as the combination of project governance, governance of projects, and governmentality as we aim to answer the research questions.

Organizational Enablers

What is an organizational enabler? The existing literature does not provide a comprehensive picture of what organizational enablers are and

in what circumstances they enable something. Organizational enablers have mainly been discussed in the fields of knowledge management (Anatatmula, & Kanungo, 2010; Bierly & Chakrabarti, 1996; Gold, Malhotra, & Segars, 2001; Kamhawi, 2012; Kannabiran, & Pandyan, 2009; Magnier-Watanabe, 2011; von Krogh, Ichijo & Nonaka, 2000; Yang & Chen, 2007; Zheng, Yang, & MacLean, 2010), total quality management (Colurico, 2009; Robson, Prabhu, & Mitchell, 2002), human resources management (Peris-Ortiz, 2009), organizational structures (Bhatt, Emdad, Roberts, & Grover, 2010; Joyce & McGee, 1997; Lee & Choi, 2003), adoption of agile methods (Srinivasan & Lundqvist, 2009), buying behavior and decision making (Webster & Wind, 1972), and business re-engineering (Ahadi, 2004). However, most often, these studies do not refer to organizational enablers per se, but enablers in general, or in the case of knowledge management, approaches to knowledge enablers or knowledge management enablers. Frequently, the term *organizational enabler* is used, but is not defined. Moreover, many publications use the term *organizational enablers* in their title, but do not focus on what these enablers are in the text of the report. There are, however, a few exceptions.

In the context of healthcare, an enabler is defined as "one who gives power, strength, or competency sufficient for the purpose; one who renders efficient or capable," suggesting that enablers not only permit behaviors, but also encourage and perpetuate them (Kjorlie & Ventres, 1981, p. 506). Fairly aligned with this notion, is the treatment of knowledge enablers in the knowledge management field. Here, knowledge enabling is defined as the overall set of organizational activities that positively affect the creation of knowledge. Knowledge enabling includes facilitating relationships and conversations, as well as sharing local knowledge across an organization or beyond geographic and cultural borders (von Krogh et al., 2000). More specifically in this domain, technical knowledge capabilities, structural knowledge capabilities, and human knowledge capabilities have been suggested to be enablers (Yang & Chen, 2007). But what allows capabilities to be built and under what conditions do they enable? According to von Krogh et al. (2000), it appears that enablers are highly connected to an individual or a group of people with the power to influence by triggering and coordinating knowledge-creation processes and appropriate environments through the implementation of norms, processes, and activities. Thus, triggers may be distinguished from enablers.

Maitlis and Lawrence (2007) investigated conditions that trigger and enable sense giving in organizations. In their analysis, they suggest that enablers involve two parts:

1. Process facilitators, which are the particular combinations of routines, practices, structures, and policies that allow results to emerge. Examples include the extent to which these combinations support an organization's critical success factors (CSFs), that is, those particular features that, when employed, are associated with higher chances of reaching organizational objectives.
2. Discursive abilities of organizational actors, which are the actors' abilities to construct and articulate persuasive accounts of the world, using their expertise, legitimacy, and opportunity. These abilities provide for sensemaking in organizations through social interaction and ideologies, as well as the actors' ability to shape one another's interpretation of reality.

Clark, Gioia, Ketchen, and Thomas (2010) further investigated enablers of identity change and identified three cognitive and behavioral features underpinning the enablers. These are (1) projected future identity, (2) sense giving via image management, and (3) collective identification. Connecting these features to Maitlis and Lawrence's (2007) two suggested parts, we suggest that the projected future relates to discursive abilities and both image management and collective identification relate to process facilitators.

Both discursive abilities and process facilitators are highly dependent upon the context and institutional settings that they act within, because different contexts and settings will influence the elements underpinning enablers in different ways (Mesquita & Brush, 2008). The relationship between the elements that underpin the enablers is, thereby, not simple in organizational settings. What may be an enabler in one context may not be one in other contexts (Seddon, Calvert, & Yang, 2011) or at other points in time (Gulati, Sytch, & Tatarynowicz, 2012).

Müller, Pemsel, and Shao (2014) proposed that organizational enablers represent the coexistence and interplay of structural and mental elements that jointly carry forward a phenomenon like governance

within a social structure. By advancing Maitlis and Lawrence's (2007) work, they uncovered that organizational enablers consist of:

- organizational mechanisms and organizational factors present in the structure of the organization, with the factors being supported or amplified through the mechanisms; and
- discursive abilities of the organizational actors and process facilitators that coexist within the social structure of an organization.

Hence, each of the two enabler elements (process facilitator and discursive ability) consists of two parts: factors and mechanisms, as shown in Figure 2.2. The empty spaces are filled through this study with the respective content, which depends on the governance layer (i.e., project governance or governance of projects).

Process facilitator factors involve touchable characteristics, conditions, and variables that directly impact the effectiveness, efficiency, and viability of governance.

Process facilitator mechanisms trigger or accumulate actions in order to increase the likelihood of a certain outcome, such as structures or rules.

Discursive abilities factors involve communicative and interactional characteristics that impact the mentality and attitudes of people.

Related *discursive abilities mechanisms* are, for example, structures that support discourse, such as synchronized communication structures, dedicated network structures, and so forth.

This model of organizational enablers will be used in our first study to investigate the literature on governance in the realm of projects.

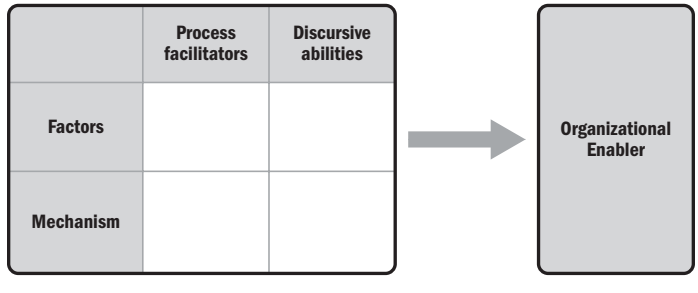

Figure 2.2: Elements of organizational enablers.

Connecting Organizational Enablers to Institutional Theory

As Scott (2012) advocates, the three pillars of institutional theory coexist in the social structure, and we argue that the discursive abilities and process facilitators of organizational enablers are interwoven with the three institutional pillars. For example, regulations and policies (as process facilitator factors) fall into the category of the regulative pillar. Shared beliefs, on the other hand, are discursive abilities mechanisms and belong to the cultural-cognitive pillar. Study 1 (Chapter 5) will provide more insights.

Moreover, because institutions are under constant negotiations, enablers may change over time, too, and may have inherent elements of flexibility. This flexibility is needed for adjusting to new circumstances in order to retain the enablers' power and enabling effect. This would imply that, just as institutions have a duality between stabilizing structuration processes and changing processes of established structures, practices, and meanings, so do enablers. The nature of the interplay between discursive abilities and process facilitator may change and be materialized differently at different points of time.

Projectification

The term *projectification* was first introduced by Christophe Midler (1995) in his seminal work where he described the transition process of Renault from a typical functional organization toward being more and more projectified. This work had a great impact on later research in rethinking project management (Maylor, Brady, Cooke-Davies & Hodgson, 2006; Söderlund & Lenfle, 2013; Svejvig & Andersen, 2014) in terms of taking project management out of the positivist paradigm, which mainly focuses on optimization and searches for success factors. In his work, Midler (1995) reviewed the 30-year transitional process of projectification at Renault as occurring in four phases, from the 1960s to 1993:

- Functional organization and informal project coordination in the 1960s
- Centralized project coordination from 1970 to 1988
- Empowerment and autonomy of the project management structure in 1989
- Transforming the permanent processes of the firm from 1989 onward

The major characteristic of the first phase is that the CEO was the only person who coordinated all the projects in the firm. This approach was suitable when the number of projects is small, and mass production is still the mainstream of manufacturing. However, this has no longer been the case since 1970. The rapidly changing and increasingly uncertain market environment called for quick and effective response through projects in the firm. Relying on the CEO alone did not address these issues, which took Renault into the second phase of projectification. In this phase, project coordinators were appointed to collect information so that project committees could make decisions. Project committees were made up of top management, as well as the heads of various operational divisions within the firm. The project coordinators had no power in decision making and resource allocation. However, the inertia from the powerful bureaucratic structure made the decision process much slower than was required for survival in the marketplace. Renault failed to achieve its ambitions in terms of time, quality, and cost control. This led to the idea of assigning more power to the project coordinators so that they could respond to the external requirements much faster and more effectively. Thus, Renault stepped into the third phase of its projectification. In this phase, project managers were given formal positions with strong status and the power to have equally matched dialogue with top management and departmental heads. This change was essentially a political move and it had many implications for the firm. For example, it became the responsibility of the project managers to ensure the global success of projects, no matter what kind of process or methodology was adopted. This meant they were given more autonomy in making their decisions within the project, and they could act more like an entrepreneur for their projects. Additionally, communication methods also changed. More horizontal communication within the project team and across professionals was realized, instead of the previous vertical communications within departments and horizontal communication across the heads of departments. This not only saved a lot of time, but was also more effective. Midler (1995) observed that the project autonomy resulted in great success for Renault:

> The Twingo project was a spectacular experiment to demonstrate how such autonomy could be used to create the organizational context that could drive all energies and concerns to the very key problems of a specific project. (p. 6)

Because of its great success, Renault initiated the fourth phase of its projectification. In this phase, the organization started to transform its permanent process and structure into a balanced state between project identities and departmental identities by setting up a complementary relationship between the two. This transformation brought a lot of new thinking and new methods in organizational management—for example, a new tool to assess the departmental performance, new career paths within permanent structures, the relative status of different functions, that is, project and line functions, and so on.

Throughout the four phases of Renault's projectification, we found that projectification was not just a change in the organizational structure and management process, but a fundamental organizational transformation (Aubry, Müller & Glückler, 2012). Project management is no longer just a tool or method to implement organizational strategies; rather, it slowly becomes part of the organization's strategies, taking on more long-term or organizational aspects of the firm.

Generally speaking, this may have triggered the development of new organizational forms, for example, of programs and portfolios, which shaped Maylor et al.'s (2006) idea of "programmification" as the next generation of projectification. In line with the status change of projects, the commonly accepted definition of the "project" also slowly changed from "an endeavor" (PMI, 2004) to "a temporary organization" (Lundin & Söderholm, 1995; Turner & Müller, 2003). Along this line, projectification might also be seen as a process to grant entrepreneurship to project management entities (Kuura, Blackburn & Lundin, 2014; van Donk & Molloy, 2008).

Because we define projects as temporary organizations, they should fall within the classical organization theories, like Mintzberg's theories on organizational structures and contingencies. Based on that, van Donk and Molloy (2008) developed a typology of project structures, which include five basic structures for projects: (1) simple structure, (2) machine bureaucracy, (3) professional bureaucracy, (4) divisionalized form, and (5) adhocracy. While designing the project structures, contingency factors such as age and size, technical system, environment, and power should be taken into account to make the structure more adaptive to its context. We see projectification as a transitional process to change project management from an implementation vehicle to a governed entity. van Donk and Molloy's (2008) idea supports our thoughts by outlining the possible structures of the entity and the associated contextual factors.

When we view projects as temporary organizations, what is the relationship between the temporary organization and the permanent organization—for example, in terms of line functions? This is the major concern of projectification (Midler, 1995; Winch, 2014). Arvidsson (2009) explored the tensions in projectified matrix organizations, where resources are held in functional departments managed by line managers, but used for productive purposes in (temporary) projects managed by project managers. He found that tensions are primarily created by the coexistence and codependence of inherently different structures and processes in line functions versus projects and their competition for limited organizational resources. Tensions surfaced in several ways. For example, having different organizational logic or principles in terms of planning horizon is the most often referred to tension between projects and line functions. The reason for this is that line functions are managed on an annualized basis, whereas projects are managed within a temporary time frame.

To sum up, projectification creates temporary organizations within a permanent organization, which are governed through certain governance institutions (Pitsis, Sankaran, Gudergan, & Clegg, 2014). The tensions that arise from the intrinsic difference between the temporary organization and permanent organization can be mitigated through a kind of coalition. On the one hand, projects should fit in with the organizational context in terms of strategy, principles, routines, and so on, which should be taken into account as project structures are designed. On the other hand, permanent organizations should enable projects for better performance by providing the appropriate mechanisms and required factors discussed earlier as organizational enablers. Therefore, when we talk about projectification, the project governance institution and its surrounding organizational context should both be taken into consideration. In other words, projectification manifests itself as the combination of project governance and organizational enablers in a firm.

The above literature review has illustrated that our research questions for this study are not examined or are only partly covered in the existing literature. Although knowledge of governance practices in different types of projects exists, there has been no global investigation that outlines the common denominators in governance, nor have there been studies on organizational enablers or the role of governmentality as the interface between levels of governance. The rest of this research will address this knowledge gap.

This chapter has reviewed the relevant literature in terms of the two levels of governance and governmentality. It also addressed the concept of organizational enablers and developed a model for understanding organizational enablers and their elements. Finally, we have examined changes in governance over time in Renault, as the organization moved from productification to projectification. The next chapter presents our chosen methodology for this research.

CHAPTER 3

Research Design and Methodology

In this chapter, we describe the study's research design and methodology. We start by taking a broad perspective, which comprises all four studies and how they fit together. Then, we describe the particular methodology of each individual study.

We conducted this research to identify organizational enablers for project governance, governance of projects, and governmentality in organizations, with the ultimate aim of developing a framework to help organizations of different sizes, sectors, geographies, and levels of projectification design their governance structures in support of their strategy. To accomplish this, we developed three research questions, which we partly addressed in the literature review in Chapter 2. These are:

RQ1:	*What are the practices for governance and governmentality in the realm of projects in organizations of different sizes and in different geographies?*
RQ2:	*What are the organizational enablers for governance and governmentality in the realm of projects in these organizations?*
RQ3:	*How does governance and governmentality in the realm of projects evolve in these organizations?*

The literature review showed (1) a very fragmented picture of governance practices; (2) that there is no commonly agreed-upon definition of organizational enablers, leading us to develop our own concept for it; and (3) that no literature has addressed the timely evolution of governance in

the realm of projects in organizations. Therefore, our research design had to be robust enough to investigate several factors involved in governance: the "what" (governance practice), the "how" (the way governance is done), the "why" (what the enablers are), and the "when" (in the timely development) in the realm of projects. No single research method is suitable to answer all these types of questions, so we used a mixed-methods strategy.

A mixed-methods design is a combination of often complementary methods, which jointly allow us to leverage the particular strengths of each individual research method while simultaneously balancing its weaknesses through the use of the other, complementary methods. Operationally speaking, this allows us to combine the results of conceptual studies (which develop new perspectives) with quantitative methods studies (which aim for averages and generalizations) and with qualitative methods studies (which aim for context-specific results). This combination helps us build a comprehensive understanding of the phenomenon under study (Runkel & McGrath, 1972; Teddlie & Tashakkori, 2009).

Research Design

The process for designing this study's methodology followed the suggestions of Saunders, Lewis, and Thornhill (2007), who outlined the research design process as a set of decisions that need to be taken. They start with a decision on the underlying philosophy, a perspective supported by many researchers, for example, Alvesson and Sköldberg (2009). This is followed by decisions on the approaches—such as inductive, deductive, or abductive—and subsequent decisions on research strategies (e.g., surveys, case studies). These decisions are followed next by choices on methods (such as mono-, multi-, or mixed-method), time horizons (cross-sectional or longitudinal), and data collection and analysis (Saunders, Lewis, & Thornhill, 2007). In line with this perspective, we outline our research design below.

Underlying Philosophy

The philosophical perspective identifies the type of knowledge that the study is aiming for. It takes into account how individuals make sense of the world and analyze the nature of things and relations (i.e., ontology—what is real?). A number of different ontological stances exist, each of which has its own particular approach toward creating credible knowledge (i.e., epistemology—what is true?) (Kilduff, Mehra, & Dunn, 2011).

A philosophical stance, made up of a particular combination of ontology and epistemology, impacts the choice of research process. Different philosophical stances, along with their particular research processes, give answers to different types of research questions. Biedenbach and Müller (2011) showed the importance of outlining underlying philosophies and paradigms in research reports. They showed how research results (which become available at the end of a study) can only be interpreted when the study's underlying philosophy (which is determined at the beginning of the study) is known. For example, is the result obtained at the end of a study valid for one individual in a particular context, or is it an average for a group of individuals, independent of context?

The present study takes a Critical Realism perspective (Archer, Bhaskar, Collier, Lawson, & Norrie, 1998; Bhaskar, 1975). This philosophical stance assumes that people's perceptions of reality are underpinned by an objective and empirically measurable world of causal effects; however, people's interpretation of these effects is subjective. Realist researchers, therefore, look into the relationships of unobservable effects that are "on top" of an objective and observable ground (Bechara & Van de Ven, 2011). Underlying this is Bhaskar's (1975) three-tier model with an observable, objective reality, called *mechanics*, at the bottom, which gives rise to *events* that mark the borderline between objectivism and subjectivism. These events then give rise to the subjective *experiences* of individuals.

The link between this philosophical stance and the research methodology elaborated below is described by Healy and Perry (2000), who ascribe interviewing, case study research, and surveying as legitimate research methods that cover the wide spectrum from theory building with its emphasis on meaning (the subjective levels of reality in realism) to theory testing and its emphasis on measurement (the objective levels of reality in realism). To that end, Study 1 (described in Chapter 5) provides the current understanding of the phenomenon of organizational enablers, while Studies 2 and 4 (described in Chapter 5) investigate the subjective levels of realism, using interviews and case studies, and Study 3 (described in Chapter 6) investigates the objective level through a worldwide questionnaire.

Research Approach

Abduction was chosen as our approach for knowledge development. Abduction alternates between inductive and deductive theory development and testing by reflecting on phenomena using existing theory and

results from empirical studies and linking these with the researchers' own perspectives and experiences in order to understand the researched phenomenon (Alvesson & Sköldberg, 2009).

Research Strategy

The nature of the research questions, together with relative newness of the research subject, suggests a mainly exploratory study (Eisenhardt, 1989), which aims for understanding the phenomenon of governance in the realm of projects in its particular context. In the present research, this is done through a combination of different studies: a conceptual study, two qualitative studies, and one quantitative study.

1. The initial conceptual study, Study 1, uses a systematic literature review to develop the concept of organizational enablers and applies this to the project management literature. This addresses RQ1 and results in a series of propositions. Systematic literature reviews are, especially, suggested for developing evidence-based, context-dependent taxonomies of phenomena (Pawson, 2006). Through their particular methodology, systematic literature reviews overcome some of the weaknesses of traditional literature reviews, such as ontological and epistemological mix-up (Petticrew, 2001) and weaknesses in the thoroughness (Tranfield, Denyer, & Smart, 2003) and quality assessment of the chosen material (Harden et al., 2004). This study has been published in Müller, Pemsel, and Shao (2014).
2. The propositions developed in Study 1 are deductively tested in Study 2, a qualitative study. Here, we look at six case companies in Sweden and China to test our propositions empirically and to inductively and abductively develop a theory on the role of project-related governance in organizations. This empirically derived theory leads to a set of hypotheses, which address RQ1 and RQ2. This type of holistic multicase design with a single unit of analysis is a suggested research strategy for answering *how* and *why* types of research questions about contemporary phenomena in a real-life context (Eisenhardt, 1989; Flyvbjerg, 2006; Yin, 2009). This study is published in Müller, Pemsel, and Shao (2015).
3. The hypotheses from Study 2 are deductively tested in Study 3 through the use of a worldwide questionnaire. Questionnaires

are the premier method for collecting quantitative data to develop generalizable research results (Saunders et al., 2007). In addition to testing hypotheses, the questionnaire study collected data on organizational enablers and governance practices in organizations, thus allowing for an exploratory investigation of the link between enablers and practices. This addresses RQ2.

4. Study 4 looks at the changes in governance that the six case companies went through over the period of one year. This inductive, longitudinal study allows us to draw together the results of all three earlier studies in order to identify patterns of development in governance and their relationship with patterns in the change in organizational context. This addresses RQ3. Longitudinal studies allow for the understanding of timely changes in phenomena by developing a "movie" of the phenomenon under study; thus, they are good for answering research questions that ask *how* (Churchill, 1999).

Research Choices and Time Horizons

We chose a mixed-methods approach in order to find appropriate data and credible results for the different types of research questions we were asking. As outlined above, the qualitative studies were mainly used to answer the context-related RQ2 using a cross-sectional approach and the timely development-related RQ3 using a longitudinal approach. The quantitative study, on the other hand, aimed to answer the less context-dependent research question (i.e., RQ1) using another cross-sectional approach. Data collection and analysis techniques of the four studies are described in the respective sections in this chapter.

Case Narratives

Case narratives take on a central role in the two qualitative studies. They provide detailed accounts of the individual case companies and the idiosyncratic implementation of governance in each. While the implementation is investigated in Study 2, the timely development, and its related process, is investigated in Study 4.

Narratives are used to "construct detailed stories from raw data," and are the dominant method in context-sensitive research, such as in

strategy, ethnography, and culture (Langley, 1999, p. 695). Narrative research acknowledges the social construction of knowledge and takes into account the situated, partial, contextual, and contradictory nature of the stories told by interviewees. Narratives distinguish themselves from other forms of discourse because they allow for the selection of events, organizing and connecting them, and also evaluating them in a way that is meaningful for a particular audience. They address how and why events are storied (Hendry, 2007) and provide a basis for understanding processes in organizations (Langley, 1999).

The narratives in the present study are co-created by the researchers. This joint approach was chosen to derive the most objective possible understanding of governance in each case company. The narratives are based on the interviews, an approach that follows Brown (1998), who also reconstructed narratives from interviews and described the legibility of narratives for textual analysis—for example, through the use of analysis methods such as those suggested by Miles and Huberman (1994). In a similar way, Andrews and Tamboukou (2013) emphasized the use of co-created narratives for researchers investigating social patterns or cultures, and how the researchers' stories vary depending on their particular background.

The case narratives were initially jointly developed by the researchers after finishing the interviews in the case companies of Study 2. Study 4 was launched one year later, and the narratives were updated accordingly, using the same process. Hence, the narratives in the next chapter will provide the basis for both Study 2 and Study 4.

Validity and Reliability

The validity and reliability of the data in the individual studies is described in the respective chapters. Each of the studies achieved its related targets in validity and reliability.

From the overarching perspective of all four studies together, our research meets the six "comprehensive criteria to judge validity and reliability" for studies conducted in the realist paradigm, as outlined by Healy and Perry (2000):

- Ontological validity:
  - Ontological appropriateness (i.e., the research problem deals with complex social science phenomena involving reflective people): Investigation of *how* and *why* problems is done using case studies.

    - Contingent validity (open "fuzzy boundary" systems involving generative mechanisms rather than direct cause and effect): Using in-depth questions and case context descriptions, ensuring internal validity in each case study; there is credibility in the process, data, and analysis (Silverman, 2005).
- Epistemological validity:
    - Multiple perceptions of participants and of peer researchers (these are neither value-free nor value-laden, but rather value-aware). There are multiple sources of evidence, such as multiple interviews, surveys, peer reviews, peer discussions, and so forth.
- Methodological validity:
    - Methodological trustworthiness (the research can be audited): It uses case study protocol and database, reporting relevant quotations and matrices that summarize data, and the description of procedures, such as case selection and interview procedures.
    - Analytic generalization (identification of research issues before data collection to formulate an interview protocol that will provide data for confirming or disconfirming theory): Propositions and hypotheses are developed and subsequently tested.
    - Construct validity (e.g., use of prior theory, case study database, triangulation): Construct validity is assessed in the qualitative and quantitative studies and meets the requirements.

In the following sections, we present the individual methodologies we used in each of the four studies.

Study 1 Methodology: Systematic Literature Review

Recent developments in research methodologies underscore the importance of more evidence-based approaches and their relevance for research in project management (Rousseau, 2012). A systematic literature review supports this by using an explicit review methodology, as outlined below. It develops specific research questions for the literature review and processes research literature as input (evidence), analyzing it as would be done with interview or questionnaire data in empirical studies (Harden &

Thomas, 2010). This provides for context-specific results, which can easily be used by practitioners. Thus, it also serves the quest for more translational research (Drouin, Müller, & Sankaran, 2013).

Pawson et al.'s (2005) five-step process for systematic literature reviews was applied:

Step 1: *Clarifying the scope*: Our review of literature on governance in the realm of projects was guided by the question: "What are the different approaches for embedding project governance, governance of projects, and governmentality in organizations, and what are the organizational enablers and their underlying factors and mechanisms?" By initially including some of the general management literature on governance and governmentality, we were able to narrow the topic to that of RQ1 and RQ2. Keywords used to search the literature included *governance*, *projects*, *programs*, *portfolio*, *organizational project management*, and combinations thereof.

We started with journals from the *Financial Times*' FT 45 ranking list, and the three- and four-star journals in the United Kingdom's Association of Business Schools' *Academic Journal Quality Guide* (Harvey, Kelly, Morris, & Rowlinson, 2010). Based on the references in these articles, we expanded into other journals.

Step 2: *Searching for evidence*: We found 91 papers on governance, of which 42 were relevant to the literature review question. Corporate governance, and governance in general, were addressed in 18 of these papers, project-related governance in another 18, and IT and construction project governance in another six of the papers.

Step 3: *Appraising primary studies and extracting data*: In this step, we populated the categorization system with evidence extracted from the publications we reviewed. The categorization system is outlined in Chapter 2 and consists of process facilitators and discursive abilities, and their factors and mechanisms.

Step 4: *Synthesizing evidence and drawing conclusions*: Here, the findings from Step 3 were refined and structured by context. This analysis followed Miles and Huberman's (1994) analysis process to develop propositions for organizational enablers for project governance, governance of projects, and governmentality.

Step 5: *Disseminating, implementing, and evaluating*: The findings from the prior step were tested through discussions with colleagues and practitioners, conference presentations, and the subsequent, qualitative study with six case companies, which was then published in a research journal (Müller, Pemsel, & Shao, 2015).

The results of this systematic literature review are presented in Chapter 5.

Study 2 Methodology: Qualitative Cross-Sectional Study

An appropriate research design for assessing new phenomena was found with a multiple case study with replication logic to identify results common across all cases versus those that are valid for individual cases only (Chia, 2013; Yin, 2009). A realist philosophical perspective, as described above, was taken. To explore how governance exists in the realm of projects, we used a robust, deductive approach to assess the objective basis of underling observable "mechanics" by testing the propositions from Study 1. An abductive approach, as described by Alvesson and Sköldberg (2009), was used for the more subjective and phenomenological levels of "situation" and "experience" in realism. The abductive approach let us alternate between deduction and induction, including existing theories, the researchers' existing frameworks, and the empirical data, in order to understand the informants' particular life-world through sensemaking of their context-specific meaning and reasoning.

We used a two-stage process to do this. Stage 1 used template analysis (King, 2004) for the deductive test of the propositions from Study 1. This allowed us to develop an inventory of governance elements, structured by project governance, governance of projects, and governmentality. Template analysis tests deductively for the presence of theoretically derived patterns in a given text. At the same time, it allows us to complement, expand upon, or integrate new patterns as they are found. Narratives of the case companies, developed from the interviews in these companies, served as input text for coding and testing and the development of a more detailed understanding of governance elements (Clandinin & Connelly, 2000). This was used as the input for the second stage, which is theory development.

Stage 2 used a nontraditional, reflexive method, known as *mystery construction*, as described by Alvesson and Kärreman (2007). This method integrates the socially constructed empirical data from

interviews with existing theoretical frameworks of researchers, along with their pre-understandings and vocabularies. The method is especially appropriate for the development of theory on phenomena that are not well explained by the existing literature. The method consists of two steps. Step 1 identifies the mystery (i.e., the unexplained empirical phenomenon) and then uses an existing theoretical perspective to reflect on it, together with the researcher's existing background knowledge and experience. Step 2 tries to solve the mystery through reflexive reasoning. Reflexion is, hereby, the combination of (1) a first reflection of each individual researcher on the mystery in light of existing theoretical frameworks, and (2) a joint reflection of all researchers on the individual first reflections (Alvesson & Kärreman, 2007; Alvesson & Sköldberg, 2009). In this method, subjectivity is a desired characteristic, because it "should be reflexively and self-critically cultivated and mobilized, reinforcing the ability to discover interesting research issues" (Alvesson & Kärreman, 2007, p. 1268). The collaboration of multiple researchers in this process provides for a new, jointly developed theory (Alvesson & Kärreman, 2007). This collaborative process follows Foucault's (1972) four milestones for discourses: (1) statements about emerging pattern (positivity), (2) verification of the statements for knowledge development (epistemologization), (3) assessing the knowledge for scientific validity (scientificity), and (4) formulation of a theory (formalization). Results from this stage constitute the final model in this paper.

This method has been applied before to project management research (Jacobsson & Söderholm, 2011) and project governance phenomena (Müller et al., 2013a).

The multiple case study design consisted of six organizations. Three organizations of different sizes (small, medium, and large) were selected in both Sweden and China, with the same industry for each size. The categorization into small, medium, and large followed the European Union's Commission Recommendation (European Union [EU], 2003), where companies with fewer than 50 employees are categorized as small and those with fewer than 250 employees are considered medium in size. Following this, we categorized companies with more than 250 employees as large.

We used maximum variety sampling to identify a wide range of organizational enablers (Teddlie & Yu, 2007). This was done through maximizing geographical/cultural differences by focusing on countries with large differences in national culture, such as Sweden and China, but also by aiming for comparability among similar organizations and

industries across countries in the three size categories. In both countries, we sampled the following:

- A small project management consulting company with fewer than 50 employees
- A medium-sized engineering company with 50 to 250 employees
- A large pharmaceutical company with more than 250 employees

The characteristics of the six case companies are shown in Table 3.1.

A case study protocol in the sense of Yin (2009) was developed upfront (see Appendix A1), which served as a guideline for the research team in the selection and invitation of companies, in the invitation of interviewees, and in providing the interview questions. The interview questions were developed from the findings in the systematic literature review in Study 1 and centered around (1) the interviewees' background and the company, (2) the degree of projectification in the organization, (3) project governance, and (4) organizational enablers for governance in the realm of projects. The interview questions are listed in Appendix A1.

Data were collected through 31 semi-structured interviews, and from inspection of documents and other materials, such as templates, reports, and process descriptions. A further rich source of information was a book on organizational transformation from process orientation to project orientation, written by the PMO members of one of the case companies. The interviewees were project managers and their direct managers (including the CEOs in the small companies, and directors in medium and large organizations). Interviews were recorded. Except

Table 3.1: Main characteristics of the case companies.

	Case A	Case B	Case C	Case D	Case E	Case F
	Sweden Small	Sweden Medium	Sweden Large	China Small	China Medium	China Large
Number of employees	10	50	51,700 (of which 5,800 in Sweden)	15	150	30,000
Sector	Consulting	Engineering	Pharmaceutical	Consulting and publisher of a web magazine	Engineering R&D	Pharmaceutical
Operating globally or nationally	Nationally	Globally	Globally	Nationally	Globally	Globally

Table 3.2: Interviews.

	Case A	Case B	Case C	Case D	Case E	Case F
	Sweden Small	Sweden Medium	Sweden Large	China Small	China Medium	China Large
Number of interviews	5	6	5	5	5	5
Duration of interviews	60–90 minutes	60–90 minutes	45–90 minutes	40–90 minutes	50–90 minutes	60–90 minutes
Role of persons interviewed	CEO, project management consultants	CEO, head of PMO, project managers	Portfolio manager, former head of PMO, IT project director, project coordinator	CEO, sales director, service director, project managers	President, assistant of president, chief scientist, director of R&D department, vice president	Directors of PMO and president's office, quality assurance, quality control, production, industrialization

for two interviews that were conducted via Skype, all interviews were done face-to-face by a team of two researchers. One researcher took notes while the other communicated with the interviewee. Theoretical sampling continued until saturation was reached. Table 3.2 shows the details of the interviews.

The semi-structured interviews followed Silverman (2010) as being "part of the process through which a narrative is collectively assembled" (p. 47). After the interviews, the researchers developed an agreed-upon narrative for each case company, which was used as an input text for the analyses. The narratives are found in the next chapter.

Analysis was done by the researchers in two analysis workshops, doing both within-case and across-case analyses (Yin, 2009), which helped distinguish more general and context-specific observations. Subsequently, Alvesson and colleagues' two-step approach, as described above, was applied to make sense of the variety of phenomena identified from the analyses.

Validity and Reliability

We followed Yin's (2009) suggestions for multicase studies and addressed construct validity through multiple sources of evidence, identification, and selection of the best informants, plus the development of an agreed-upon narrative for each case company. Internal validity was addressed by using pattern-matching techniques through template analysis. External validity was addressed through the replication logic across the multiple cases. Reliability was addressed by upfront development of a case study

protocol, which was subsequently used by all researchers in all interviews, and by cross-case validation of analysis findings.

We followed the process for ethical approval by the government of the country of the leading organization in this research. Ethical approval was obtained for all stages. We obtained the interviewees' informed consent by carefully introducing them into the study by explaining our aims and processes, their rights as interviewees, and the ways in which personal data were handled throughout the study.

Study 3 Methodology: The Quantitative Study

The quantitative study was done to validate the findings from Studies 1 and 2 and to collect data for the development of the governance framework outlined in Chapter 1.

Research Design

This study took a postpositivist perspective in the sense of Teddlie and Tashakkori (2009) to investigate the underlying mechanics, which represent the lowest level in the realist model of mechanics, events, and experiences, as outlined at the beginning of this chapter. Postpositivism is assumed to be "currently the predominant philosophy for QUAN [quantitative] research in the human sciences" (Teddlie & Tashakkori, 2009, p. 69). This philosophical stance "assumes that the world is mainly driven by generalizable (natural) laws, but their application and results are often situational dependent. Postpositivist researchers identify trends, that is, theories which hold in certain situations, but cannot be generalized" (Biedenbach & Müller, 2011, p. 87). Teddlie and Tashakkori (2009) suggest that "postpositivists prefer using either quantitatively oriented experimental or survey research to assess relationships among variables and to explain those relationships statistically" (p. 87). To that end, postpositivism covers the objective side in this otherwise realism-oriented study.

The approach we chose was both explanatory, for deductively testing the hypotheses developed in Study 2, and exploratory, for identifying the patterns of governance and the context in which particular patterns emerge.

Questionnaire Design

The questionnaire was structured along the categories for governance that were identified in Study 2: institutionalization, infrastructure,

communication and decision making, organization structure, governance paradigm, flexibility, values, and leadership. Where possible, these categories were subdivided into project governance, governance of projects, and governmentality. To identify the most successful practices in governance, we added a success construct, as well as demographics. The cross-reference of structures, questions, and their scales can be found in Appendix A2. Respondents were asked to answer all questions with a focus on their last finished project. The questions for each of the categories for governance are described next.

Institutionalization of governance: Questions at the project governance level started with an assessment of the main areas to which governance contributes in a project in the form of support, management, or control. Multiple answers were possible in order to identify the most frequently found contributions. This set of questions continued by asking for the number of project management methodologies that the respondent could choose from in his or her last project, the frequency of reporting the project, and the time spent with different governance institutions. Questions on the governance of projects were assessed on a five-point Likert scale that ranged from never to always regarding the commonalities in governance across projects, such as the reporting system, methodology, portfolio selection, and coordination between projects. This set of questions followed the findings by Müller, Martinsuo, and Blomquist (2008), who identified these dimensions as being associated with more successful governance approaches. Questions on governmentality were also assessed on a five-point Likert scale, ranging from strongly disagree to strongly agree when it came to how the respondents' companies presented themselves in supporting the project manager in his or her profession—for example, encouraging them to get professionally certified and supporting membership or voluntary work in professional organizations—but also to what extent the project managers' and line managers' remuneration was impacted by successful project delivery. These questions were developed from our findings in Studies 1 and 2. We distinguished by assessment levels for project governance. For naming the variables in the quantitative study, we used the following abbreviations: project governance (PG), governance of projects (GoP), and governmentality (Gvty) for the naming of the concepts derived from the qualitative study.

PG infrastructure: This set of questions assessed, on a five-point Likert scale from not at all to very much, the level of authority that the respondents' governance system granted them for communicating at the

project level (project governance), across projects (governance of projects), and with professional organizations (governmentality).

PG communication: This set of questions assessed the meeting schedule provided by the respondents' governance structure. These questions used a five-point Likert scale that ranged from never to always, to assess project governance–level meetings with other project managers, internal line managers, and external managers. The frequency of project, program, and portfolio reviews at the governance of projects level was assessed using a five-point Likert scale from never to weekly. This was complemented by a question to identify the respondents' institutions for portfolio decisions, as well as a four-point Likert scale question about decision-making style (consensus, one manager, experts, other).

Organization structure: This set of questions was built on McPhee and Poole (2000) and referred to the governance of projects level by using a five-point Likert scale that ranged from strongly disagree to strongly agree to analyze the clearness of the hierarchical structure, matrix structure, defined roles and responsibilities, formalized decision making, and centralized decision making.

Governance paradigms: This set of questions assessed four governance paradigms (as described in the literature review chapter) by using Müller and Lecoeuvre's (2014) operationalization of the shareholder–stakeholder governance orientation (named "values" in Appendices 2 and 4 to 10) and behavior–outcome control orientation. This set of questions on governmentality used five-point Likert semantic differential scales.

Flexibility: This dimension, identified in Study 1 and Study 2 (as well as by Lindkvist, 2004), used five-point semantic differential scales (from inflexible to flexible) to assess, at the project governance level, the flexibility in meeting types and schedules, formal versus informal meeting structures, and flexibility in assigned roles. At the governance of projects level, it assessed the flexibility of PMOs, organizational structures, leadership, and governance structures.

Leadership: This set of questions derived from Study 2 and addressed the governance of projects level by using five-point Likert scales that ranged from strongly disagree to strongly agree to identify the extent to which project governance was initially established by a strong leader, is established in the organization through roles, responsibilities, policies, and so forth, and is continuously further developed in the organization.

Success: This set of questions used five-point Likert scales, from strongly disagree to strongly agree, to identify how successful governance

was implemented and how successful the organization was with it. Questions on successful governance asked for the extent to which governance helped project managers in doing their work and reaching their objectives, and how much it was used by the project managers. Questions on the success of the organization's use of their governance approach assessed, at the project level, the extent to which projects were successful in terms of reaching time, cost, and quality objectives; business objectives; and customer satisfaction. It also assessed, at the governance of projects level, the extent to which the project-based part of the organization was successful in reaching the previous year's annual plan and customer and employee satisfaction objectives.

Demographics: This set of questions asked about the role of the respondent, as well as his or her years of experience, the country he or she was working in, the industry, company size, and size of their last projects.

Data Collection

A worldwide, web-based questionnaire was used as a research strategy in order to get the overall global picture, from which later studies can drill down to more focused studies. The questionnaire was tested with nine senior project managers. The feedback showed that the only corrections needed were minor typos. The responses of the pilot participants were, therefore, included in the larger sample. A snowball sampling approach was used to distribute the questionnaire via email with an associated weblink to the survey to chapters of professional organizations in project management, such as the Project Management Institute (PMI), the International Project Management Association (IPMA), and others. In addition to that, we sent the questionnaire to our personal networks, including participants from earlier studies in project management-related research. This snowball approach does not allow a traditional response rate to be calculated. The questionnaire was open from 9 April 2014 to 30 May 2014. Reminders were sent every second week. A total of 216 responses were obtained, of which eight were empty questionnaires, thus reducing the sample to 208 usable responses.

Sample Demographics

Table 3.3 shows the roles of the respondents. Seventy percent (146 respondents) were project managers, 6% (13 responses) were line managers, 4% (8 responses) were project team members, 3% (7 responses) were program and portfolio managers, 6% (13 responses) were in governance roles,

Table 3.3: Sample demographics—Roles of respondents.

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Project manager	146	70.2	70.2	74.0
	Line/functional manager	13	6.3	6.3	95.7
	PMO	12	5.8	5.8	82.7
	Project team member	8	3.8	3.8	3.8
	Program manager	7	3.4	3.4	86.1
	Portfolio manager	7	3.4	3.4	89.4
	Consultant/analyst	5	2.4	2.4	98.1
	Steering committee member/sponsor/owner	3	1.4	1.4	75.5
	Manager of project managers	3	1.4	1.4	76.9
	Other	4	1.9	1.9	100.0
	Total	208	100.0	100.0	

such as in PMOs, 1% (3 responses) were steering committee members and managers of project managers), 2% (5 responses) were consultants or analysts, and "others" were 2% (4 responses). No significant differences were found in the answers of these different groups.

Table 3.4 shows the years of experience of the respondents. The largest category (38%; 78 responses) had 11 to 20 years of experience, followed by 27% (57 responses) with more than 20 years of experience. Twenty-three percent (47 responses) had six to ten years, 8% (16 responses had one to five years, and 0.5% (one response) had less than one year of experience. Four percent did not answer this question.

Table 3.5 shows the countries in which the respondents were working. Of these, 38% (78 responses) were from European countries, while

Table 3.4: Sample demographics—Years of experience.

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Less than 1 year	1	.5	.5	.5
	1 to 5 years	16	7.7	8.0	8.5
	6 to 10 years	47	22.6	23.6	32.2
	11 to 20 years	78	37.5	39.2	71.4
	More than 20 years	57	27.4	28.6	100.0
	Total	199	95.7	100.0	
Missing	System	9	4.3		
Total		208	100.0		

Table 3.5: Sample demographics—Countries.

		Frequency	Percent	Valid percent	Cumulative percent
Valid	USA	41	19.7	20.8	20.8
	Netherlands	19	9.1	9.6	37.6
	Canada	14	6.7	7.1	27.9
	Norway	10	4.8	5.1	46.2
	Denmark	10	4.8	5.1	55.3
	Sweden	8	3.8	4.1	50.3
	Germany	7	3.4	3.6	41.1
	Switzerland	7	3.4	3.6	61.9
	Portugal	7	3.4	3.6	67.5
	UK	6	2.9	3.0	58.4
	Italy	4	1.9	2.0	64.0
	Other	64	30.8	32.5	100.0
	Total	197	94.7	100.0	
Missing	System	11	5.3		
Total		208	100.0		

26% (55 responses) were from North America. Countries with fewer than four responses were categorized under "other" (33%, or 64 responses). Within Europe, the largest subgroup was the Scandinavian countries (Norway, Denmark, and Sweden) with 14% (28 responses). The United States dominated in North America, with 20% (41 responses), over Canada with 7% (14 responses). Five percent of respondents did not provide the country in which they were working.

Table 3.6 shows the industries from which the respondents came. IT/telecom is most strongly represented, with 27% (56 responses), followed by the financial and the utilities/energy industries, with 9% (19 and 18 responses, respectively). Six percent of respondents came from engineering/manufacturing (13 responses) and government and education/academia (12 responses each). Five percent (11 responses each) came from transport/logistics and healthcare. Consulting, construction, insurance, and other industries made up the rest of the sample. Five percent of the respondents did not answer the question.

Table 3.7 shows the respondents' company size in terms of the number of employees, with 26% (53 responses) of companies having more than 30,000 employees represent the largest subgroup, followed by 22% (46 responses) each from small- and medium-sized companies

Table 3.6: Sample demographics—Industries.

		Frequency	Percent	Valid percent	Cumulative percent
Valid	IT/telecom	56	26.9	28.3	39.9
	Finance	19	9.1	9.6	59.6
	Utilities/energy	18	8.7	9.1	68.7
	Engineering/manufacturing	13	6.3	6.6	6.6
	Government	12	5.8	6.1	50.0
	Education/academia	12	5.8	6.1	85.9
	Transport/logistics	11	5.3	5.6	74.2
	Healthcare	11	5.3	5.6	79.8
	Construction	10	4.8	5.1	11.6
	Consulting	8	3.8	4.0	43.9
	Insurance	5	2.4	2.5	88.4
	Other	23	11.1	11.6	100.0
	Total	198	95.2	100.0	
Missing	System	10	4.8		
Total		208	100.0		

with up to 250 employees, and 22% (45 responses) of companies with between 1,001 to 10,000 employees. Sixteen percent (34 responses) of respondents worked for companies with 251 to 1,000 employees, and 9% (19 responses) came from companies with 10,001 to 30,000 employees. Five percent of respondents did not answer this question.

Table 3.8 shows the respondents' project budgets in Euros. The largest category is made up of projects that cost between €1 and €5 million, with 26% (55 responses). This is followed by the category of €0.1 to €1 million,

Table 3.7: Sample demographics—Company size in employees.

		Frequency	Percent	Valid percent	Cumulative percent
Valid	1 to 250	46	22.1	23.4	23.4
	251 to 1,000	34	16.3	17.3	40.6
	1,001 to 10,000	45	21.6	22.8	63.5
	10,001 to 30,000	19	9.1	9.6	73.1
	More than 30,000	53	25.5	26.9	100.0
	Total	197	94.7	100.0	
Missing	System	11	5.3		
Total		208	100.0		

Table 3.8: Sample demographics—Project size in euros.

Project size		Frequency	Percent	Valid percent	Cumulative percent
Valid	Less than 0.1 million	32	15.4	16.4	16.4
	0.1 to 1 million	50	24.0	25.6	42.1
	1 to 5 million	55	26.4	28.2	70.3
	5 to 10 million	22	10.6	11.3	81.5
	More than 10 million	36	17.3	18.5	100.0
	Total	195	93.8	100.0	
Missing	System	13	6.3		
Total		208	100.0		

with 24% (50 responses). Large projects budgeted at more than €10 million are represented by 17% (36 responses), while small projects of less than €1 million make up 15% (32 responses) of the sample. The smallest category includes projects with a budget between €5 and €10 million, with 11% (22 responses). Six percent of respondents did not answer this question.

Data Analysis

Before conducting our analysis, we examined the data for missing values, normality, outliers, and so on to test their eligibility for the analysis techniques we used. This step was followed by an unrotated factor analysis on the multi-item measurement constructs to test for their internal consistency.

To answer RQ1 (What are the practices for governance and governmentality in the realm of projects in organizations of different sizes and in different geographies?), we used the following:

- ANOVA (Analysis of Variance) tests were done to identify demographic differences in responses to the measurement constructs described above, such as people, organizations, geographies, or industries.
- Factor analyses were done to reduce the number of variables and calculate multi-item measurement constructs.
- ANOVA analyses were used to identify the different practices profiles at the levels of project governance, governance of projects, and governmentality. We preferred ANOVA analysis over regression analysis because of the differences in measurement levels between independent and dependent

variables that might have occurred in a regression analysis. This is because the success measures were measured at the organizational level, whereas governance and governmentality were measured distinctly at the project level, as well as at the group level of projects and the level of governmentality. ANOVA analyses provide for a clearer identification of best practices in governance and governmentality.

The second part of the quantitative study took an organization-wide perspective to address RQ2 (What are the organizational enablers for governance and governmentality in the realm of projects in these organizations?) and to lay the foundation for Study 4 (the longitudinal study) by identifying the relationship between governance practices and organizational enablers. This was then further assessed in terms of its timely development in a qualitative approach in Study 4:

- Regression analyses were done to test the correlations between organizational enablers as hypothesized in Study 2 and their related governance practices.
- Under the premise that organizational enablers may mediate the impact of governance practices on governance and organizational success, we did a set of regression analyses to test for this mediating effect.

Validity and Reliability

Validity tests whether the measurement constructs actually measure what they are supposed to measure. We checked for validity by using tested measurement constructs where possible, as we did for the governance paradigms, and by carefully developing new constructs from the existing literature and results from previous studies (Studies 1 and 2). Item-to-item and item-to-total correlations were used as quantitative validity tests and the respective thresholds of 0.3 and 0.5 were met. This supplemented the more qualitative test for face validity during piloting. Piloting was done through senior project managers. Reliability was tested using Cronbach alpha with a threshold value of 0.7 (Hair, Black, Babin, & Tatham, 2006).

The questionnaire collected answers to independent and dependent variables from the same respondent. Some researchers, such as

Podsakoff, MacKenzie, Lee, and Podsakoff (2003), fear that this might lead to common methods bias (i.e., a systematic and measurement error variance), while others seriously question the evidence for such a possible error (Conway & Lance, 2010). We tested for common methods variance using the popular Harman test, as suggested by Podsakoff and Organ (1986) to address these issues.

Study 4 Methodology: The Longitudinal Study

Study 4 addresses RQ3 (How does governance and governmentality in the realm of projects evolve in these organizations?). Hence, it investigates the timely development of governance and governmentality in different contexts.

This study takes a longitudinal approach by extending Study 2 through a second round of interviews, held one year after the initial round. We applied the same philosophical perspective, inductive approach, and data collection technique as we used in Study 2.

There were two aims:

1. To find out any developments in governance, governmentality, and their enablers within the case companies since the last round of interviews and assess these changes against the companies' context, in order to identify patterns in context changes and governance/governmentality changes
2. To test the theory we developed in Study 2

The interview questions are shown in Appendix A3. They addressed four areas:

- Changes in the company and its context, such as market or business, as well as changes in the role of the interviewee
- Changes in level of projectification, reasons thereof, and possible drivers for such changes
- Changes in project governance and governmentality, reasons for these changes, and possible drivers thereof
- Changes in organizational enablers for governance and governmentality in the realm of projects, reasons for them and drivers thereof, as well as the stability and flexibility of enablers and the relationship between them

Table 3.9: Number of interviews in Studies 2 and 4.

	Case A	Case B	Case C	Case D	Case E	Case F	Total
	Sweden Small	Sweden Medium	Sweden Large	China Small	China Medium	China Large	
Number of interviews in first round	5	6	5	5	5	5	31
Number of interviews in second round	3	2	2	3	3	4	17
Total number of interviews	8	8	7	8	8	9	48

Data were collected through 17 semi-structured interviews (adding up to a total of 48 interviews in Studies 2 and 4). The same interviewees from the first round were approached. However, some of them were no longer available because they had left the organization. In Case B (medium, Sweden), for example, most of the interviewees, as well as the CEO had left during the one-year period, and only one of the interviewees from the first round of interviews was still available to be interviewed again. As a result of these changes, a new interviewee had to be taken in. Table 3.9 summarizes the interviews according to case company. The number of interviews was further guided by theoretical sampling and continued until theoretical saturation was reached.

Before beginning our analysis, the researchers updated the narratives written for each case, to reflect the findings from the second round of interviews. The narratives can be found in the next chapter. The analysis of the data followed the approach described for Study 2 above. However, in this study, the abductive approach and the researchers' reflections had to take into account the findings from Study 3 (the global quantitative study) as further empirical evidence, in addition to the theoretical framework, Study 2 results, and our own experience.

This approach allowed us to identify changes in governance and governmentality over time, as well as in the relationships between these changes and company context.

Validity and reliability were addressed in a way similar to what was done for Study 2, as described above.

In this chapter, we have first described the overall methodological approach of the entire research, and then the specific methodologies of the four individual studies. The next chapter provides the narratives of the case companies.

CHAPTER 4

Case Companies and Narratives

In this chapter, we present the case study companies and the related narratives of their governance and governmentality. The narratives were jointly written and agreed upon by the researchers and they serve as input data for the qualitative analysis process. We start by summarizing the information about the case companies and then we present each company and its associated narrative.

The six case companies represent organizations of three different sizes (small, medium, and large). Each size category contains organizations in the same industry (small: consulting, medium: engineering, large: pharma) across two different countries (Sweden and China). The sampling approach is described in the methodology Chapter 3. Table 4.1 shows the main characteristics of the companies.

In the following sections, we present the companies and their related narratives.

Company A: Small, Sweden

Brief Introduction to the Company

Company A was founded in 2001 and is a strongly project-based organization with 13 employees. The company is fully owned by its employees. It provides training and consultancy services within project management. The company's core activities are managing projects by offering experienced project managers, educating project managers in courses, and improving project management processes through management consultants.

Table 4.1: Summary of the core characteristics of the six case companies.

	Company A	Company B	Company C	Company D	Company E	Company F
Country	Sweden			China		
Size	Small	Medium	Large	Small	Medium	Large
Market	Consultancy	Engineering	Pharma	Consultancy	Engineering	Pharma
Number of employees	13	50	51,700	15	150	30,000, of which 1,000 in the business unit interviewed
Type of projects	External customer projects, internal improvement projects	Product development projects	Drug development projects and internal business improvement projects	External customer projects, internal improvement projects	Product development projects	Drug development projects and internal business improvement projects
Level of projectification	High	Low	High	Low	Low	High

History of Governance Development

The company was founded by three creative entrepreneurs in 2001, which has colored the development of governance in the company. In the beginning, people were mainly governed by intrinsic motivation and the employees' degree of freedom was high, but they were also driven by a strong passion for democratic voting when it came to decision making in the company. Decision making was, and mainly still is, done through regular face-to-face meetings at which people present their propositions, argue, and lobby for them, followed by democratic voting.

Over time, as the company grew, the founders realized that they needed more formal support and expertise concerning governance, finance, and top management support, so they employed a formal CEO in 2011. The governance system was developed as issues emerged—for instance, the use of deadlines and milestones for internal projects and assignments has become more structured over the years, as have the one-by-one weekly or biweekly meetings with the CEO. Other things that have been added over the years to the governance system include newsletters and a more common database that acts as an intranet.

Despite the hiring of a CEO, the company is, to a large extent, governed by its four company values—trust, well-being, transparency, and participation. Of these, well-being, and, to some extent, participation seem to be the

strongest. They appear to lay the foundation for governance—for example, by impacting the employees' willingness to engage in meetings and take responsibility for decisions, and making them happy to identify themselves with the company. Their leadership style is highly consensus-driven, based on a high level of transparency and interpersonal "chemistry."

Today's Governance and Governmentality

Governance is materialized through the CEO's activities, the company's values, weekly meetings, the company's contractual form of being co-owners, and monthly steering group and education meetings. During the monthly meetings, the employees use a Kanban board to strategically analyze their activities and where they are heading. The company's steering activities are divided into ten streams. Three of these (sales, leadership, and marketing) are outsourced to three employees to create a circle around the CEO, ensuring that the company keeps acting according to its core values, no matter who the CEO is.

The CEO also sends out a monthly, three-page document to the employees concerning the company's financial status and strategic goal achievement. The company uses a Dropbox server as a means to share documents, such as contracts, procedures, and process descriptions.

The hiring process is a strong governance mechanism in the company. It involves two interviews, meeting everyone in the company, references, and second opinions and discussions to determine if the candidate has the right mindset and personality. Hiring people with the right mindset is explained as a necessity for governance. The CEO explains that the governance structure is enabled by his employees' mindset; without this mindset, the governance system/structure would not have been possible. Having the right mindset involves buying into the four core company values—performing exceptionally well, being willing to actively discuss and give feedback (both positive and negative) at company meetings, and being honest, open, and trustful, so as to build strong relationships with other employees.

The company's governmentality is strongly neoliberal. Individuals control themselves by reflecting their work/contribution in light of their peers' and their own self-set goals and strategies. They take on responsibility for themselves and the growth of the firm. They feel that they are "entrepreneurs" for the company; thus, they are mindful of the organization as they make decisions.

Findings from the Longitudinal Study (Changes Over a 12-Month Period)

Two more persons were hired over the course of the one-year study and some small changes were made to the governance system. The changes involved: (1) a change in nomenclature in the company so that the company became even more projectified in its way of talking, (2) the introduction of a new internal employee survey, (3) recruiting a salesperson to the company because the urgency of the sales role increased during the past year, and (4) a more structured way for the CEO to control the employees. Overall, the control through neo-liberal means has increased, in the sense that it is less acceptable for employees to start things without finishing them, and if someone cannot attend a meeting or seminar, he or she is now expected to announce it more proactively in advance. Prior to the changes, these kinds of behaviors would have been more readily tolerated, which indicates that the control by management through neo-liberal means and the expectation of commitment is greater now than in the past.

Summary Table

Appendix A4 summarizes the governance practices, organizational enablers, and changes we found in the level of projectification of the small Swedish company.

Company B: Medium, Sweden

Brief Introduction to the Company

Company B was founded in 2009 and is a subsidiary of a larger corporation; the overall corporation was founded in 1986. Company B is in the engineering sector and focuses on finding innovative technical solutions for customers in the fields of industrial automation, electronic and system development, telematics, and environmental and energy technical development.

The company operates in Sweden, Canada, Brazil, and Norway. The part of the company on which we focus involves 50 employees; the entire corporation has 200 employees. Even though the company is part of a larger corporation, the subsidiaries do not share project templates or processes with one another; thus, each acts rather independently.

History of Governance Development

From the beginning, the company was a development company; it focused only on development projects. Over the years, however, the company has started to develop an understanding for the complete project process, including planning, development, deployment, and final delivery to the customer. When the company first began, it had no common way to address projects. Project managers acted independently from one another until they recognized the need to work more collaboratively.

Each year, the company runs approximately eight to 10 large projects, as well as a number of small ones. Projects are selected in support of the company's focus areas. Exceptions from these areas are sometimes made if a project is especially interesting to the company—for instance, if it involves testing a new hardware or solution. Fifty percent of the company's revenue comes from projects. The company does not work with scorecards, corporate objectives, or benchmarking. However, it does follow up on and analyze each project's budget and time plan, and it evaluates the working hours of employees. This decision was taken by the company's board. The company does not have any budget for the training or education of project managers.

Many of the project-related initiatives are driven by the employees. For instance, the use of Scrum methodology was a suggestion of the developers. The company adopted Scrum for the development of software modules in 2009. The relationship between the developers and the project managers are as follows: What is needed for a project is ordered through the Scrum backlog, and deployment resources are ordered from the deployment manager. That means the project manager is interfering with the project backlog, which is owned by the development manager, who is also the product and project owner. The project managers thereby send all requests to the development manager and sit in priority granting meetings with him. Project managers often feel a lack of empowerment in their own projects, as they have no authority and no resources when it comes to managing projects.

Three years prior to starting this study, the company introduced steering committees for large projects; small projects, however, still do not have any formal steering groups.

Today's Governance and Governmentality

As in the beginning of the study, the project process is governed through a series of meetings because of the Scrum methodology. Project reviews

focus on outcomes: time, cost, and quality using tollgate meetings. New employees learn by doing. If needed, the project manager can consult colleagues to see how they are doing things.

The governance structure is underpinned by shared values, which the project managers know, but these values are only fully respected by the less experienced project managers. Senior project managers base their decisions on a mix of corporate values and their own experiences. The structure involves a large number of meetings at different levels, such as: (1) steering committee meetings for projects (but not for each individual project) attended by department managers, project managers, and finance, combined with (2) monthly meetings of department managers, (3) group meetings at line departments (attended by project managers), (4) daily Scrum meetings (an important communication channel for project managers), and (5) sprint achievement meetings (held every 3 weeks—i.e., milestone meetings), as well as weekly and biweekly meetings with customers and with department managers.

Managers and project managers are free to decide on the ways they achieve their objectives. The company is driven by the principle of "freedom as long as the figures are black." This attitude is complemented by the senior project manager with the notion that all is fine "as long as the approach leads to sustainability and customer satisfaction."

Findings from the Longitudinal Study (Changes Over a One-Year Period)

The company implemented a PMO two years before the start of the study and took it away during the last year. Last year, the current CEO had his office in San Diego, but the board and owner of the company wanted the CEO in the head office in Sweden, so the CEO quit, leaving the owner to serve as CEO. This centralization trend is also visible in the fact that the project manager, who was based in Brazil last year, now works at the head office in Sweden, too.

The company has increased its revenue from projects, but has become less projectified. The new trend in the company is to become more productified and to decrease the variety of products offered to customers. This has resulted in a decreased focus on project-related governance, and an increased focus on the governance of the operations part of the organization.

Summary Table

Appendix A5 summarizes the governance practices, organizational enablers, and changes in the level of projectification in the medium Swedish company.

Company C: Large, Sweden

Brief Introduction to the Company

Company C is a large, global, innovative pharmaceutical company operating in more than 100 countries. The current company is the result of a merger, done in 1999. Both of the companies that merged had a long history leading back to the 1910s to 1920s.

History of Governance Development

The company has had a number of changes in its governance system and governmentality—for example, after the merger and after each new CEO was hired. The company's approach to governance varies significantly between what is done for drug development projects and for internal improvement projects. Governance of drug development projects is more comprehensive and wider in scope and stakeholder involvement, ranging from internal boards to industry reference groups and European Union (EU) and other regulations. Internal improvement projects, on the other hand, are governed more in the traditional sense through steering committees and up-front developed requirements. However, both types of projects do show similarities. These are seen mainly in the development of governance structures. Governance development was initiated by project managers and sponsors because of dissatisfaction with existing project results. In all these cases, project managers (who were unhappy with project results) and their supervisors (who wished to improve efficiency in the organization) joined forces to set up governance institutions to develop and deploy project governance processes, which were then followed by the institutionalization of some of the process-related roles as governance institutions. The company started a PMO some years ago to develop a project management methodology for internal improvement projects, including processes, roles, and responsibilities. These included traditional steering committees made up of project owners and key stakeholders, that is, along the lines of governance

recommendations as outlined in PRINCE2 and other process-driven approaches to governance. For drug development projects, the process also grew from the middle level up through the organization, but then developed to be broader in scope, and to align with the regulatory settings of the pharmaceutical market.

Today's Governance and Governmentality

The governance paradigm for drug development projects is one of flexible economist; thus, it is shareholder-oriented and outcome-controlled. Internal improvement projects are seen as more stakeholder-oriented—thus, they utilize a versatile artist paradigm. The top of the organizational hierarchy appears to be more shareholder-oriented than the lower parts of the hierarchy.

Drug Development Projects

Projects in drug development center on molecules. A molecule is a project. The goal is to reduce the number of projects/molecules in the portfolio over time, to such a degree that only a small number of molecules (those with the highest chance to be successful on the market) will become final products. This strategy typically leads to two new drugs a year. Thus, this can be viewed as a funnel approach to portfolio management.

Governance Institutions for Drug Development Projects

The portfolio is subject to two annual reviews. The portfolio management team provides a risk register and a probability of possible success levels of the portfolio's components. These data are complemented by scientific and compound information provided by a technical committee, and commercial information (e.g., FDA information, policies, competitor information, and safety information) in order to prioritize the projects for the optimization of efficiency within given budget constraints.

Projects take approximately 10–15 years from finding a molecule to the launch of a new drug and may exceed €100 million in investments. The portfolio is strictly divided into the following components:

- An early project portfolio—that is, the exploratory stages of finding a new molecule, often in longer-term collaboration with universities

- A late project portfolio—that is, the development of a marketable drug; partnerships here are solely project-driven

Further governance institutions include the pregovernance board and the central governance board (CGB), which are linked through a governance megaprocess comprising nine milestones and five tollgates, where milestone five and tollgate two, respectively mark the transition from the early project portfolio (discovery stage) to the late portfolio (development stage). Clear decision matrices exist, which outline the roles and responsibilities of a number of boards involved in reviewing and decision making at the various tollgates, and the transition of governance responsibilities over time from early phase boards to late phase boards.

The pregovernance board sets the strategic direction for all projects and approves small-scale ideas. Larger projects are approved by the CEO and the CGB.

The CGB is chaired by the president of R&D. It is made up of people from sales, marketing, health, economy, and so on. Together, they initiate and control projects. A number of boards are involved in the various aspects of governance, in addition to the regulative bodies (EU and worldwide). These include:

- an external science board with recognized scientific panel members for benchmarking ideas, like a reference group; and
- EU-level collaborations with the industry for safety testing, clinical tests, and so forth.

Governance bodies evolved in the reactive way described above. Each of these institutions is made up of approximately 15 individuals. Members of the governance institutions grew into their roles because of their particular mix of professional/scientific knowledge and management/business skills. Top management fosters a rigorous process for terminating projects.

A PMO exists in the form of a Center of Excellence, for skills, tools, and techniques, but not as an institution to oversee projects. It develops the methodology, deploys project management, and develops professionals and tools. All of this is done in order to improve project results through better project management.

This formal structure leads to a lot of preparation work for projects and interaction with governance bodies, which impacts project duration.

However, it also provides a good overview for the CGB. This board has high power and authority, which creates a need for political approaches, such as lobbying by members of the different stakeholder groups in order to influence approval. This structure typically works fine, as long as the governance institutions do not try to micromanage at the detailed level, which can cause project delays.

One of the project managers we interviewed presented the governance schedule as follows: There are weekly team meetings, monthly governance board meetings, plus an additional quarterly summit meeting in cases of alliances or joint developments with other companies.

Managers are controlled by outcome; they are free to find their own way to achieve their objectives within the constraints of corporate governance and the regulatory framework of the industry.

Company Internal Improvement Projects, Such as IT

The IT director delivers program and project change solutions concerning IT, such as different IT applications.

New IT projects are often initiated when customers actively ask for a new function or service. The IT project follows a process that focuses on costs and scope in relation to changes. Projects have sponsoring groups, steering committees, and consulting groups.

IT projects have a company-specific project management framework that is based on PMI's *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, but is tailored for the company by a consultancy firm. At first, the company delivered projects in multiple ways, but when a need emerged to streamline the way projects were conducted, the initiative came from one of the operation managers.

The governance structure is rather organic for IT projects, in the sense that someone comes up with an idea and then pushes it through the organization to someone who has the budget and the resources.

Findings from the Longitudinal Study (Changes Over a One-Year Period)

During the observed one-year period, a new CEO was hired. This new CEO wants a flatter organization and the drug projects, are more strictly controlled through more tollgates, which one of the managers we interviewed thinks is dangerous, as more control has a tendency to hamper, and even kill, innovation.

The company has also acquired more external cooperation partners; as a result, it is facing several challenges regarding how to integrate them into the company's way of governing projects. The company has become more product-oriented and accountability has moved from project to line. In that sense, the company has started to become less entrepreneurial.

The PMO was shut down during the year of observation, as the new CEO wanted more direct control. Output control has increased, as well as the control from the external governance institutions mentioned above.

Summary Table

Appendix A6 summarizes the governance practices, organizational enablers, and changes in the level of projectification of the large Swedish company.

Company D: Small, China

Brief Introduction to the Company

Company D is a small company with 15 employees who work in the field of project management training and consulting, and also operate a project management–related website. The company's business is divided into the following two categories:

- A web platform—one of the most famous websites in the project management discipline in China, it is used for project management experience sharing, conference announcements, and other informational services. This part of the company contributes about 10% to revenue, but binds approximately 50% of the resources.
- Training and consulting services, including those for certification of young project managers, like the Project Management Professional (PMP)® and Program Management Professional (PgMP)® certifications. This segment contributes about 90% to the company revenue and binds approximately 50% of the resources.

The CEO distinguishes between operations and project work. The former includes maintenance work on the web platform and delivery of

standard/open courses. Project work includes consulting engagements and company onsite courses.

History of Governance Development

The project process is emphasized in the company, which is self-developed and phase-based. The main steps (or milestones) in a project must be embedded in the process. Kickoff meetings are held for each project to support the project manager and the project team.

Larger project meetings are held during project execution with the aim to, for example, respecify requirements, solve problems, or reassign resources. In this way, project team members may work across several projects and may be dynamically assigned to projects by the CEO. Meetings are held mainly to structure the work (resources and assignments), and less for controlling progress. The CEO describes the governance paradigm as agile pragmatist (behavior control + stakeholder-oriented).

Management principles include the fact that the platform business is not profit-driven; rather, it is driven by a vision of advancing the profession in China. However, the consulting and training business is driven by profit maximization. Decisions on whether consulting engagements are accepted are based on resource availability and customers' payment records. Training engagements are perceived as low-risk undertakings and are usually accepted when they arise. The underlying principle is survival through expansion of the product range.

The CEO says there are two organizational divisions within the company. One is the sales division, whose work is described as relatively unplanned and unstructured. The other is the service unit, which develops annual plans and works along these plans.

Internal monitoring of employees is done through weekly reporting using a table that shows the role definitions for each employee. The employee reports the work he or she has done in a week as related to all the company's defined roles for him or her. In addition to these reports, the CEO holds weekly half-hour meetings with each employee to obtain informal information about who does what.

The CEO explains the mechanisms of governance by saying, "After 10 years of development, I found that managing employees myself is the most effective." Note that the CEO is both the founder and the executive manager of the company; therefore, he is the absolute authority of the company. Face-to-face communication with him, and an absence

of middle management, prevails in the company. According to the CEO, this system is beneficial for projects because they receive management attention and support. The downside is that the CEO may become the bottleneck in terms of availability, which may lead to loss of management attention for some other projects.

The organization structure is flat. All employees report directly to the CEO, and the CEO decides on almost everything. However, the CEO said that if the business demands otherwise, he would be open to changes in the structure.

Today's Governance and Governmentality

Project governance is mostly done by the CEO through the weekly meeting and table reporting. The governance of projects relies mainly on process compliance and formal/informal feedback to the CEO. Governance of projects is done through selection (based on the principles stated above), kickoff meetings, and changes in resource assignments across projects. Portfolio-level information accumulates with the CEO, based on formal/informal reporting and exchange, because of colocation of employees. Process compliance and goal achievement are governable principles for projects and services. Less strict governance prevails in sales. Governmentality is top-down hierarchical, with decision and control authority at the level of the CEO.

Findings from the Longitudinal Study (Changes Over a One-Year Period)

Not much change happened during the time of study in terms of governance and governmentality.

Summary Table

Appendix A7 summarizes the governance practices, organizational enablers, and changes in the level of projectification of the small Chinese company.

Company E: Medium, China

Brief Introduction to the Company

Company E is a mid-sized engineering and R&D company with 150 employees in the industrial communication industry. The company

is about eight years old. Its products mainly include standardized electronic components, such as integrated circuits (ICs), marketed in business to business (B2B) markets. However, business to consumer (B2C) marketing was planned to start in 2015.

History of Governance Development

Historically, the company was founded for one large project. This developed into a task management culture, with task-responsible employees supervising design and other stages in collaboration with four other departments. Employees are seen as technical leaders who have the knowledge to control possible difficulties, but who have no authority to assign resources. Resource assignments are done together with the department managers of the other departments.

Because the company has a military background, it has maintained a strong process culture. Project-type thinking mainly prevails at the management level (as opposed to with the employees), and here, especially, in R&D. A chief scientist is in charge of all big projects and coordinates resources across these projects. Smaller projects are run and coordinated within the functional organizations/departments.

The president of the company explains that the characteristics of the project business are determined by industry standards, which have to be followed. These include the National Standards for Military Products, ISO 9000, HR guidelines, and so forth. Project management derived from these standards.

Today's Governance and Governmentality

The overall process is controlled by a strategic committee and follows the flow in this way: Marketing finds appropriate markets; after that, economic analyses and technical and marketing feasibility studies are done. These accumulate and then a milestone decision is made about whether or not to launch a project. In the case of a launch, a project manager is assigned by the president or chief scientist, depending on project size.

The company's particular form—organizing the business mainly with a process perspective and only using project management thinking at the management level—has benefits in terms of lower costs, especially for a business of this particular size (this benefit was mentioned by both the president of the company and his assistant). When it comes to the

utilization of resources and facilities, process thinking is beneficial because neither resources nor facilities can be assigned solely to projects. Thus, this form of governance is seen as most effective.

Understandings of the governance paradigm vary. The president sees the projects as being governed from a conformist perspective (behavior control + shareholder-oriented), with a move toward agile pragmatist (behavior control + stakeholder-oriented) in the future. The chief scientist believes the normal projects in the company are process-oriented, while the critical projects are outcome-oriented, and no matter what type of projects they are, they all strive for a balance between shareholders' and stakeholders' interest. The director of R&D categorized the projects within his control as falling into a conformist paradigm (all noncritical projects are directed by him). The president's assistant indicates a versatile artist (outcome control + stakeholder-oriented) governance paradigm, which is quite different from the answers given by others in the company. The reason for this is that they are talking about different things. While the president was referring to typical R&D projects in the organization, the assistant was talking about one particularly large project, which was run outside the normal structure for projects in the company. To that end, the usual projects seem to be governed by a conformist paradigm, the critical projects shift more to the outcome-oriented end, and exceptionally large projects use a versatile artist paradigm.

Across these paradigms, the interviewees all indicated that governance focuses on following the process, even if some of the process elements have to be done after the project is finished (as was done in the large project to which the assistant was referring). Roles and processes are thoroughly documented in the company.

The management principles underlying decision making are quality and time.

The governance process for projects includes stage reviews during the development of a prototype. A larger review is held at the end of the project, before the project's product is handed over to production.

Project managers report on their projects to the planning department, where working times are recorded and issues are assessed against the feasibility studies. Based on this information, the planning department suggests a portfolio decision (like continuation, suspension, or changes to the project) to the institution governing the project (see list below). In meetings with governing institutions, Gantt charts are used

as the primary communication vehicle. Decisions to close out a project require documentation to be completed. Stage-gate reviews are held for larger projects and are attended by the chief scientist, top management, and customer responsible (typically a sales person, responsible for customer relations).

Communication schedules include the following:

Weekly meetings:

- Department managers meet to discuss financials and schedule, as well as the status and future of the project.
- Emergency meetings are held when needed.

Small/medium projects:

- The project manager reports to the R&D director, who consolidates the information of projects and reports to a strategic committee.
- The directors of related departments are invited to meetings.

Large projects:

- Project managers report to the CEO and chief scientist.
- The strategic committee serves as a steering committee.

Task and project managers do not share or receive information about other tasks or projects. Project information is considered confidential and is usually limited to the work group. Information sharing—if there is any—is very limited at the technical level.

This governance structure can be changed when the need arises. One example might be a time-critical production project, where the entire governance was adjusted to the needs of the project. Instead of using the strategic committee (i.e., steering committee), two teams were created: one for managing the project and one for monitoring the project management team. The former consisted of three managers (at the top management level), and the latter of two employees from logistics and another department, a concept similar to a participatory governance model. The project was decoupled from the usual processes and authorized to work autonomously. The teams met on a daily basis. This structure allowed

for meeting aggressive time goals, yet at very high costs. Management developed the structure to simplify the governance process, but continued to maintain standards compliance. The teams were held free from bureaucratic burdens for the duration of the project. However, they were required to produce the necessary internal documents after the project was finished.

The remuneration system for project management work consists of three parts. The first part is project results and performance in the project-related work. It takes up about 60–70% of the final variable salary, and project managers provide input for this information. The second part stems from the evaluation of functional work performance, which takes up about 20–30%; functional department directors take responsibility for this aspect of the evaluation. The last 10% is used for any necessary adjustment on the final bonus and is handled by top management.

The generic governance structure was set up as a blending of the president's prior industry experience and his learning about marketing. The key enabler for the governance structure is the president and his individual personality. He boldly implemented the structure and then stepped into the background, reducing his own importance in the governance process. The benefit of this approach is the governance structure's reduction of dependency on one particular person after the structure has been created, so that the president can focus on other, more strategic tasks.

Findings from the Longitudinal Study (Changes Over a One-Year Period)

One vice president, who was against the above-described way of doing business through projects, left the company during the year of observation. The R&D director, who was in charge of all the small projects in the company (especially their technical aspects), got promoted because of his talent in business and management. He now takes charge of the business side of all projects, including cost, purchase, quote, bidding, and so on. The chief scientist is now in charge of the technical aspects of all projects because of his expertise in technology. In a word, instead of the chief scientist taking care of all big projects, and the R&D director taking care of all small projects as was done before, now the company has changed to a system where the chief scientist handles the technical issues of all projects, and the R&D director is in charge of all business issues of all projects.

The project managers are more empowered than before. Previously, the project managers in this company could, at best, be called technical leaders; they did not have the authority to assign resources and make decisions on planning and so forth. The authority used to reside in different departments, like the planning department, purchasing department, and so on. The project managers were only responsible for organizing some technicians to overcome the technical issues of the products. During the year of observation, things have changed. Project managers have been given more authority, especially in terms of decision making on business issues. For example, they can now do planning and purchasing for their own projects, instead of issuing their requests to the related departments and having those departments handle those things centrally. The power structure has changed from being very centralized to being more dispersed, according to the needs of projects.

The top management advocates that the technicians should know more about business, and that administrators should know more about techniques. They want people to become generalists, so that all parties can better understand one another. They want the project managers to change from the original technical leaders to real business leaders. Likewise, the administrative people who work at departments now understand more about projects and their management.

These changes have been welcomed by project managers, but not middle managers, especially the department directors, because they felt that their power was weakened. However, the top management and the project managers have been very much in favor of the changes.

Summary Table

Appendix A8 summarizes the governance practices, organizational enablers, and changes in the level of projectification for the medium Chinese company.

Company F: Large, China

Brief Introduction to the Company

Company F is the pharmaceutical branch of a large Chinese healthcare enterprise. This pharmaceutical business unit employs about 1,000 people.

It develops and manufactures a variety of different drugs. The types of projects mentioned during the interviews included drug development, internal improvement, and capital investment projects.

History of Governance Development

About a decade ago, Company F transitioned from a process orientation to a project orientation. Since then, it has increased its revenue significantly while keeping the number of employees constant.

The company is IPMA level 3 certified. At the center of all project management activities is the PMO, a virtual organization, whose members are managers and directors from several departments. They report to a PMO director, who reports to the president of the pharma business unit.

The PMO, together with a former CEO, established project management in the organization. Today, the PMO has the role of project governor. It selects projects, reviews project results, develops project management methodologies, certifies project managers, and so forth. It has gradually become a very powerful organizational unit within the company.

Even though it is powerful, this PMO is a virtual unit in the company. It consists of two teams, an expert team and an information coordinator team. The experts are mainly directors from different departments. This mechanism, to some extent, softens the barriers that projects may face in typical matrix organizations.

Today's Governance and Governmentality

Projects are suggested, either through the company strategy using the board of directors as their vehicle, or through recommendations from employees and departments. Suggestions for projects are handed over to the PMO in November of each year to be executed in the following year. The first selection is done by the PMO based on the following three criteria:

1. Fit to key management areas
2. Process innovation
3. Strategic importance (e.g., five quality improvement and three management process improvement projects per year)

Selected projects are categorized as follows:

- A = company-wide projects, often of a strategic nature
- B = cross-departmental projects, including some level of cross-departmental activity
- C = functional or departmental projects, executed within a line function, such as a department

The PMO organizes the project selection. It functions as the steering committee for projects, and develops and delivers the project management methodology, the reporting system, the overall management process, training and project management certification, and also hands out annual awards for the best projects and project managers. In addition, the PMO manages the community of interest of project managers (the virtual group of all those working or interested in project management in the company). Examples include workshops on specific subjects, an internal magazine, as well as a series of videos that show project managers at work. They are shown to various audiences, which then rate how much they liked the movie. Furthermore, the PMO manages the portfolio of projects, of which there are currently approximately 70 per year, and reports about them on a weekly basis to the CEO, using the popular red, yellow, green indicator system for various levels of project risk.

Long-term development projects are formally linked to company or departmental key performance indicators (KPIs). KPIs may be used in the selection of these projects. Projects' contribution to KPI achievement is assessed through reviews and reporting.

Category A, and some Category B, projects are formally reviewed by management (top management, department managers, plus the PMO) before being accepted. Category C projects are selected by the PMO, which involves representatives from related functions. These projects are accepted (or not) at first review, whereas other projects may go through several reviews before acceptance.

Once they are accepted, Category A and B projects are reviewed by top management and the PMO again about one month before planned finish. About halfway through the project, there is a further review by the respective project owner, where top management and the PMO are not involved. Category C projects are reviewed on an as-needed basis in the functional units, typically twice a year. Project managers are reviewed

on their projects by their respective department managers on a monthly basis, in addition to the monthly written project report. There are three review types:

- For Category A (very large and important projects): There are weekly meetings of the team, meetings between the owner and the project manager, plus monthly meetings of top management, owner, and team.
- For Category B (important projects): Project managers meet with their supervisor once a month. These meetings are used to identify and solve problems, and to coach the project manager if needed. Project managers work part-time on projects and they are often line managers in parallel. In line management meetings, they interact with other project managers about their projects. Project team meetings are scheduled on an as-needed basis.
- For other projects (especially for Category C type projects): Meetings are held on an as-needed basis. Main communication is done through the PMO's electronic communication platform for project managers and their management (a subset of the corporate intranet) and monthly reports.

The governance paradigm depends on the type of project. Category A projects are often governed from a flexible economist (outcome control + shareholder-oriented) perspective, whereas Category B projects (R&D projects) are governed from a versatile artist (outcome control + stakeholder-oriented) perspective. Category C projects (change projects) are mainly governed from an agile pragmatist (behavior control + stakeholder-oriented) perspective.

Monthly reporting is done through the PMO's communication platform and includes meeting minutes, progress and milestone reports, and the final reports on finished projects. The details of reporting differ between Category A, B, and C types of projects.

The underlying principles for management decisions are quality and customer orientation. Overall guidance is given through the National Quality Standard for Medicine. Internal, company-developed processes and procedures must be in accordance with this standard and be obeyed by the projects.

Perceived Enablers

The initial trigger for moving the company from a process to a project orientation came from a former CEO, who introduced project management as a new way of doing business in the company. This was based on his experience and military background. By merging the established command and control structure (one leader, all others followers—as it is done at Apple) with the creativity needed for the project-oriented type of business, project thinking emerged. It turned out to be appropriate for a fast-growing company that has to react quickly to changes and markets. Group-level management (above the business unit) supported the idea and showed interest, for example, by attending review meetings. That led to a culture where nonconformance with project thinking reflected badly on individuals. Over the years, top management's thinking developed in accordance with the project management idea.

This former CEO, an IPMA-certified project manager, became a role model for the use of project management principles in the company. His leadership style has been described as giving a good deal of freedom to the people, but demanding solutions from them—thus, his leadership is focused on outcome control.

The PMO was important for the deployment of a project culture. It built the bridge between the upper and lower levels of the corporate hierarchy by building a system to run projects within the organization. Here, again, a strong leader, supported by management, is seen by the interviewees as a major enabler for project management in the organization. This includes the formal institutional setup with methods, steering committees, and so forth, and also motivational factors, such as certifications and awards. The PMO sees training as one of the enablers. Today, the first training new employees receive is in project management, delivered by the PMO.

The present CEO of Company F is said to have similar characteristics, including trust in people, attention to detail (in the form of chat groups with employees), and weekly meetings with the PMO manager.

Findings from the Longitudinal Study (Changes Over a One-Year Period)

One of the biggest changes in this company during the observation period was that it had acquired some small pharmaceutical companies, which extended the scope of projectification by spreading project

thinking and the company's way of doing business to these newly acquired companies. The PMO also organizes training programs for key people in these companies, and tries to build a project culture there.

The other big change is that the PMO has turned into a permanent organization; it is now called the Project Management Center. It is equipped with a few full-time employees. This means that people are no longer working for the PMO as volunteers; instead, they now have a clear duty and responsibility to make sure projects are running well within the company. The organizational structure changed from a weak matrix to a balanced matrix. The old director of the PMO was promoted to the headquarters of the conglomerate of companies that her former company belongs to, in order to run the General Management Office, of which the PMO became a part. She now has more power to advance the PMO and project management development in the company.

Summary Table

Appendix A9 summarizes the governance practices, organizational enablers, and changes in the level of projectification of the large Chinese company.

This chapter presented the narratives of the case study companies. The next chapter will start analyzing these companies.

CHAPTER 5

Conceptual and Qualitative Studies: Analysis and Results

In this chapter, we describe the analysis and results of the conceptual and qualitative studies. We start with the systematic literature review (Study 1) published in Müller, Pemsel, and Shao (2014), whose results, in terms of propositions, became the input for the qualitative study (Study 2) published in Müller, Pemsel, and Shao (2015) which, in turn, provided the input for the quantitative study (Study 3—described in the next chapter), and the basis for the qualitative longitudinal study (Study 4) described in the present chapter.

Results from Study 1: Systematic Literature Review

This study used the conceptual basis of organizational enablers as described in Chapter 2. Organizational enablers were defined as consisting of process facilitators and discursive abilities, each with its own specific factors and underlying mechanisms. The purpose of the systematic literature review was to develop the theoretical foundation for answering the question: *What are the organizational enablers for governance and governmentality in the realm of projects?*

We organized the related literature by project governance, governance of projects, and governmentality. In each of these three streams of literature, we categorized the existing literature, as was shown in Figure 2.2, in order to identify the organizational enablers and their constituent elements. We followed the five-step process outlined in Chapter 3.

The literature on governance in the realm of projects is diversified in general and specific themes in governance (e.g., governance by project type, size, industry, and so forth). For the purpose of categorization, we interpreted the specific literature as a particular contribution to a more general understanding of the phenomenon of governance. Overall, we found a major difference between the literature on for-profit projects, with its emphasis on governance, and the literature on open source development projects, with its emphasis on governmentality (see Tables 5.1 and 5.3).

Organizational Enablers for Project Governance

Table 5.1 shows the categorization for the literature on project governance, which forms the basis for our analysis process. For this process,

Table 5.1: Literature on organizational enablers for project governance (adapted from Müller, Pemsel, & Shao, 2014).

	Process facilitators	Discursive abilities
Factors	• Presence of governance structures, including policies and institutions, and the authority to execute them (Miller & Hobbs, 2005) • Presence of a governance frameworks consisting of: development process (the story), governance principles (values), structure of the framework (contents), and governance elements (adaptable to project) (Klakegg & Haavaldsen, 2011; Klakegg, Williams, & Magnussen, 2009) • Decoupling of projects from operations (Turner & Keegan, 1999)	• Alignment of project sponsor and project manager objectives (Turner & Müller, 2004) • Alignment of strategy and project objectives (Morris & Jamieson, 2005)
Mechanisms	• Flexible governance structures that can be adapted to projects and their environment (Miller & Hobbs, 2005; Turner & Keegan, 1999) • Flexible governance frameworks that allow for top-down and bottom-up approaches (Klakegg & Haavaldsen, 2011; Klakegg et al., 2009) • Organizational structures aligned with size of projects and size of clients (Turner & Keegan, 2001) • In nonprofit projects: governance through management of the six dimensions of system, mission, integrity, stakeholders, audits, and risks (Renz, 2007) • In open source software development projects: governance configurations based on ownership of assets, community management, software development process, conflict resolution and rule changing, and use of information and tools (Markus, 2007) • Turbulence arises in the project process when one (or more) of the three dimensions of transaction costs economics (TCE) changes—these are asset specificity, uncertainty, and frequency of the transaction (Winch, 2001)	• Steering committee and other governance meetings (Crawford et al., 2008) • Workshops and gathering of people for ideating and planning (Lehtonen & Martinsuo, 2008)

we selected only peer-reviewed material. This excluded practitioner literature, such as standards, guidelines, and handbooks by the Project Management Institute (PMI), the Association of Project Management (APM), and the Office of Government Commerce (OGC), because these publications are not peer-reviewed and/or based on academic research. However, it did not exclude academic research publications from these institutions, such as the reports from PMI's funded research projects.

The literature in Table 5.1 indicates that the presence of a governance infrastructure enables project governance in organizations. This infrastructure includes the appropriate governance structures and frameworks for projects and their organizational context. To do so, the institutions using this infrastructure must be empowered with the authority for executing the elements of the infrastructure. We propose the following for project governance:

> *Proposition P1: Organizational enablers for project governance include the authority to procure, implement, and execute governance frameworks and policies, and the presence of specialized project governance roles (which can be executed by institutions for project governance, such as sponsors, steering groups, or PMOs).*

The process facilitators for project governance include factors such as the presence of defined governance structures in line with the wider organization and its particular needs, as well as the presence of governance frameworks suitable for the organization's projects. Related supporting mechanisms include the flexibility of the governance structures and frameworks in terms of their adaptability to the idiosyncratic needs of the organization's projects (references are in Table 5.1).

The related discursive abilities include factors for aligning the objectives of the project, project manager, and sponsor, and the alignment of these objectives with the organization's strategy. Related mechanisms are communication schedules (meetings, etc.) for doing these alignments and executing project governance—for example, through goal setting, provision of resources, and controlling of progress (references are shown in Table 5.1).

Examples for the four elements of the organizational enablers for project governance are shown in Table 5.2.

Table 5.2: Examples of elements of organizational enablers for project governance.

	Process facilitators	Discursive abilities
Factors	Presence of a governance infrastructure, such as governance roles in the organization and governance frameworks, together with the authority to implement them	Aligned objectives across the organization from strategy to projects
Mechanisms	Built-in flexibility in governance structures and frameworks, as well as idiosyncratic organization structures that align business requirements (e.g., those stemming from the number and size of clients) with project needs (e.g., project size) in an organization	Communication mechanisms, such as steering committee meetings, milestone meetings, joint planning sessions, and so on

Organizational Enablers for Governance of Projects

Table 5.3 shows the categorization of the literature on governance of projects.

Common across the literature is an emphasis on the need for flexibility in governance structures across the organization. This is rooted in the uniqueness of projects, the idiosyncrasies of their outputs, and the importance of managing the diversity of stakeholders and their various requirements (for references, see Table 5.2). We propose the following for governance of projects:

> *Proposition P2: Organizational enablers for governance of projects include flexibility in structures and interactions, which allow for effectiveness in project selection and efficiency in project execution.*

The related process facilitators include factors such as flexibility in organization structures in order to adjust them to the varying needs of a diverse set of projects. Furthermore, process-facilitators factors include the provision of governance frameworks to adjust governance to the organization's variety of projects while keeping up with its shared values and synchronized routines. An additional factor is the support provided by governance institutions and middle management in coordinating projects and solving issues. Related mechanisms are found in the flexibility of organization-wide governance structures and frameworks. Examples include governance institutions with flexible and changeable mandates, such as those for PMOs or steering committees, driven by the acute issues of the group of projects (for references, see Table 5.3).

Related discursive abilities in these organizational enablers include cognitive aspects such as awareness of the concept of organizational

Table 5.3: Literature on organizational enablers for governance of projects (adapted from Müller et al., 2014).

	Process facilitators	Discursive abilities
Factors	• Versatile governance structures (Turner & Keegan, 1999) • PMOs (Aubry, Hobbs, & Müller, 2010) • Presence of standards for project management (Aubry, Sicotte, Drouin, Vidot-Delerue, & Besner, 2012) • Middle managers' involvement to contribute to program and portfolio management for the governance of projects (Blomquist & Müller, 2006) • Presence of a governance framework, consisting of: development process (the story), governance principles (values), structure of the framework (contents), and governance elements (adaptable to project) (Klakegg & Haavaldsen, 2011; Klakegg et al., 2009)	• Awareness of organizational project management and its related governance institutions such as PMOs, steering committees, and so on (Aubry et al., 2012; Müller, 2009) • Established knowledge governance routines and goals (Pemsel & Müller, 2012) • Communicated and accessible policies for governance of projects (Aubry et al., 2012)
Mechanisms	• Roles of governance institutions (e.g., project audits by PMOs, etc., depending on the level of projectification) (Müller, 2009) • Fostering adaptive capabilities for short-term success and absorptive capabilities for long-term success (Biedenbach & Müller, 2012) • Hybrid structures (in terms of TCE) for project-based organizations (Foss, 2012) • Flexible mandates and roles for PMOs (Aubry et al., 2010; Aubry, Müller, & Glückler, 2011) • Standardization of project management across the organization (Aubry et al., 2012) • Middle managers in project-based organizations in their coordinating roles and efficiency and effectiveness improvement roles for program and portfolio management for the governance of projects (Blomquist & Müller, 2006) • Flexible governance frameworks that allow for top-down and bottom-up approaches (Klakegg & Haavaldsen, 2011; Klakegg et al., 2009) • Organizational structures adapted to the number of projects and number of clients (Turner & Keegan, 2001)	• Events for knowledge exchange among and between project managers, PMOs, and others (Aubry et al., 2012; Müller et al., 2013b) • PMO networks, along with the corporate hierarchy (Aubry et al., 2012) • Structures that allow for information scouting, ambassadorial activities, and boundary shaping activities (Lehtonen & Martinsuo, 2009)

project management and how it is practiced, its roles and institutions, and the related governance policies and goals. Supporting mechanisms are mainly communication events for synchronization across projects, dynamic creation of new roles for the benefit of projects, PMOs, or networks thereof (for references, see Table 5.3).

Table 5.4 shows examples of elements of the organizational enablers for governance of projects.

Table 5.4: Examples of elements of organizational enablers for governance of projects.

	Process facilitators	Discursive abilities
Factors	The versatility of the organization and its deployment of governance institutions	Awareness of organizational project management, the presence and communication of governance policies, and governance goals
Mechanisms	Flexible organization structures, flexible mandates and roles, willingness to collaborate across organizational boundaries, and standardized, but flexible project management across the organization	Program- and portfolio-level meetings for synchronization of governance across projects, the flexible adjustment of mandates, and roles of governance institutions and individuals to achieve the goals of the organization through projects

Organizational Enablers for Governmentality

Table 5.5 shows the result of the categorization of the literature on governmentality.

Three dimensions of governmentality surface from the literature:

- *People's mindfulness of the wider organization* in their decision making: This includes the awareness and deliberation of, for example, building corporations to maximize the organization's results and not just that of a single project, or adapting existing structures to new, upcoming opportunities.
- *People's self-responsibility*: This includes their willingness to accept responsibility for the benefit of the organization, including responsibility for results and the associated efforts or projects.
- *People's self-organization within limits*: This refers to the ability to self-organize their work within and across projects. This includes the acceptance of empowerment and a willingness to self-organize work within and across projects.

Several publications indicate the need to complement these mental predispositions with a general "underspecification" of existing organization structures, and autonomy of projects and their teams, together with decentralized work practices, in order to be able to dynamically (re)organize or change teams, roles, and structures (for references, see Table 5.5). We propose:

Proposition P3: Organizational enablers for governmentality provide for the development of individuals who are mindful of the organization, self-responsible, and self-organizing to a degree that matches the goals of the corporation.

Table 5.5: Literature on organizational enablers for governmentality (adapted from Müller et al., 2014).

	Process facilitators	Discursive abilities
Factors	• Decentralization and autonomy, distributed work practices (Bresnen, Goussevskaia, & Swan, 2004) • Combination of governance and support tasks of steering groups (Crawford et al., 2008) • Presence of a governance structure (Müller et al., 2013a) • Provision of financial and human resources, top management support (Lehtonen & Martinsuo, 2008)	• Awareness about temporality of projects, emphasis on short-term performance (Bresnen et al., 2004) • Culture of open and fruitful discussions (Lehtonen & Martinsuo, 2008) • Strong ideological superstructure in open source development projects (Franck & Jungwirth, 2003) • Responsible individuals (Lindkvist, 2004) • Alignment of project governance and corporate governance through discourse on governance paradigm (Müller, 2009)
Mechanisms	• Flat organizational structure as context for projects as a prerequisite for people being mindful and self-organizing (Lindkvist, 2004) • Combination of formal and informal roles of steering groups (Crawford et al., 2008) • Mutual trust between governance system designer and project managers (Müller et al., 2013a) • Self-organization achieved by "underspecification" of structure, a "mindful" system, emphasis on competence (Lindkvist, 2004) • Community-managed open source projects: independence of sponsors, pluralism in approaches, representation of members in decision making, decentralized decision making, and autonomous participation of individuals (O'Mahony, 2007; O'Mahony & Ferraro, 2007)	• Reporting practices synchronized with other projects, other reporting mechanisms, and across the organization (Bresnen et al., 2004) • Networks of people as knowledge containers (Lindkvist, 2004) • Shared communicative events, such as in-house project management conferences, synchronized project management, and governance training across hierarchical levels, shared servers with policies, methodologies, and tools for project management and governance (Müller et al., 2013b)

The process facilitators for governmentality include factors such as organizational design and provision of resources and autonomy, which needs to be granted by upper management. Related mechanisms include flat organizational structures, people's willingness to execute formal and informal roles simultaneously, and a general trust between the people and their governance structure.

The discursive abilities for governmentality include factors such as the central ideology of the organization, which provides a vehicle for communicating the organization's values, supported by a communication culture, and people's general awareness about the temporality of their work and the associated performance measures. Supportive mechanisms include networking structures among people, synchronization of reporting and communication structures, and the support of knowledge-exchange events.

Table 5.6: Examples of elements of organizational enablers for governmentality.

	Process facilitators	Discursive abilities
Factors	Organizational design factors, such as autonomy, decentralization, flatness of organizational structures	A culture of open discussions, ideologies that are clearly communicated, and a general emphasis on the temporality of the undertakings and success measures
Mechanisms	Individuals' flexibility in adapting formal and informal roles, trust between individuals and the governance structure, and a general "underspecification" of structures	Synchronized reporting and communication structures across projects and the organization, creation and maintenance of knowledge network structures (instead or parallel to departmental structures)

Table 5.6 shows examples of elements of the organizational enablers for governmentality.

This systematic review has shown that the literature on governance in the realm of projects can clearly be categorized by project governance, governance of projects, and governmentality. Creating further categories, such as those by project type or level of projectification, would be possible, but this would go beyond the research question, RQ2, involved in this study.

The theoretically derived organizational enablers listed above can be summarized for:

- project governance: *presence* of governance structures and institutions (e.g., methodological frameworks, steering committees) and the *authority* granted by higher management for its execution;
- governance of projects: *flexibility* of structures and interactions for integration, adaptation, and standardization of different governance approaches at a higher organizational level; and
- governmentality: *development* of people who are mindful of the wider organization, and willing and capable of accepting responsibility for the governance of the project-related parts of the organization.

A few further observations surface when we integrate governance and governmentality into a hierarchy with project governance as the lowest level, governance of projects as the next highest organizational level, and governmentality as the organizational culture and, thereby, the highest level. When we do this, we see that (1) the higher the level, the more

important the people dimension is (see Table 5.6); (2) the lower the governance level, the more important the structures are (i.e., policies, guidelines, methodologies) (see Table 5.4); and that (3) according to the literature, flexibility is the key characteristic of good governance, but the nature of flexibility changes over the hierarchy: Lower levels require flexibility in methodologies and processes to address the particularities of their projects; governance of projects requires flexibility in organizational structures and people's willingness to adapt to changing tasks, objectives, and time frames that stem from the diversity of projects; and higher levels need flexibility in people's mindsets and attitude toward their work (see Propositions P1 to P3), as well as flexibility from management in adapting governmentality to the requirements of the organization, such as when a shift from strict control structures to more neo-liberal governmentality is needed.

The three propositions have contributed to a preliminary answer to research question RQ2. In Study 2, we test these propositions empirically.

Results from Study 2: The Qualitative Study

This study used a multiple-case-study design with six firms in Sweden and China to test the proposition from Study 1 and identify governance practices and their enablers in the case companies. Institutional theory served as the theoretical perspective.

Within-Case Analyses Results

We followed Silverman (2010) by using the narratives of the case companies as input for coding the practices found in the companies into project governance, governance of projects, and governmentality. We tested the three propositions by comparing the codes we identified through template analysis with each proposition. We followed Cameron and Sankaran (2013) and Silverman (2010) by doing quantitative analysis of the qualitative interview data. We did this because we were looking for the diversity of governance practices, and not their intensity.

The codes were generated through template analysis. For that, we used the practices identified in the literature review in Study 1 to generate an initial set of codes. This was then compared with the narratives from the case companies. Table 5.7 shows the validated codes, structured by the three pillars of institutional theory.

Table 5.7: Mapping the practices against the three pillars of institutional theory (adapted from Müller et al., 2015).

	Regulative	Normative	Cultural-cognitive
Project governance	Steering groups Flat and flexible organizational structures PMO*	Project management methodologies Clearly defined roles*	Meeting schedules Top management support
Governance of projects	Flexible organizational structures Standardization Media and infrastructure	Company-wide methodologies	Alignment of projects and business
Governmentality	Autonomy of project managers	Self-responsibility	Project thinking Open system thinking

Note: * = Large companies only

We found a large overlap between the practices described in the case narrative and the proposed organizational enabler P1 for project governance (including its constituent elements). This was evident through the frequent use of terms, such as flexible organizational structures, use of methodologies, and transparent meeting schedules by the interviewees in all case companies. Proposition P1 is supported in all cases.

The test for Proposition P2—the practices for governance of projects—showed a more diverse picture. Codes from the narratives from Companies A, B, C, and F largely overlapped with the organizational enablers proposed in P2, such as standardization in reporting across projects or the use of company-wide methodologies. The codes from Companies D and E, on the other hand, showed more of a moderate fit with the organizational enabler P2 and its elements. This was because Companies D and E had somewhat-limited communication across projects, which is in conflict with our findings in Study 1, which emphasized the alignment of governance across projects through communication. However, some cross-project communication did exist in Companies D and E. Therefore, we concluded that Proposition P2 is only weakly supported.

In testing Proposition P3, we found that the codes generated from the narratives of Companies A, B, C, and F largely overlapped with those proposed in P3, the organizational enabler for governmentality and its constituent elements. Overlaps were found, for example, in autonomy

and self-responsibility of project managers, their projects, and their system thinking (see Table 5.7). However, the codes from the narratives of Companies D and E poorly overlapped with P3. The difference arose from P3's emphasis on a project-thinking culture, open discourse, and autonomy of project managers. The directive management style in Company D and the lack of a project-thinking culture in Company E indicated less liberal and more rigid approaches to governmentality than we proposed in P3. From this, we decided that P3 is only partially supported. The case data indicate a possible context-contingency of governmentality, which ranges from rigid via liberal to neo-liberal approaches, which is not articulated in the existing literature.

From the above test, we concluded that the practices shown in Table 5.7 are used to execute project governance, governance of projects, and governmentality, but with the limitations stated above.

Cross-Case Analysis Results

Our analysis across the six cases followed the same principle as above. For project governance, we found the following codes (see Table 5.7) and frequencies: methodology, meetings, steering committee (in all cases), flexible organizational structure (in five cases), top management support (in four cases), as well as project management office (PMO) and clearly defined roles (two times, respectively, both only in the large companies). Comparison of these codes with the three pillars of institutional theory showed that the organizational practices for project governance predominantly reflect the regulative and normative pillars of institutional theory. The pattern emerging from this indicates the following:

> *Organizational practices for project governance include the existence of methodologies, meetings, steering committees, flexible organizational structures, and top management support. Particular for large companies are PMOs and clearly defined roles.*

The analysis for governance of projects across the six cases followed the same process of comparing theoretically derived codes with those from the case narratives (see Table 5.7). Codes such as company-wide methodology (five times); flexibility in structure, standards, and communication media (either meetings or IT infrastructure); and alignment of projects with business needs (four times, respectively) appeared frequently. Comparison of these codes with the three pillars of institutional

theory showed that they mainly fall into the categories of regulative and normative pillars. The following pattern for governance of projects emerged:

> *Organizational practices for governance of projects include the existence of company-wide methodologies; flexibility in structures, standards, and communication media; and alignment of projects with business needs.*

Our analysis of the codes on governmentality was conducted in a similar manner. Validated codes (see Table 5.7) included open system, project autonomy, and taking responsibility (four times), and project thinking (two times in Companies A and F, which are the two companies with the strongest project culture among the case companies). Comparing these codes with the three pillars of institutional theory, we found them to be mainly related to the cultural-cognitive pillar. An example can be seen in the reference to open-system thinking that reflects the cognitive aspects of good understanding of the entire organization. The emerging pattern for governmentality is as follows:

> *Organizational practices for governmentality include people's perception of the organization as an open system, as well as project autonomy and taking responsibility. Project thinking among employees is particular for companies with a strong project culture.*

By analyzing the commonalities of organizational practices across all levels, we found people's willingness and motivation to engage in sensemaking activities to be of paramount importance. This underscores the importance of both governmentality theory and the cultural-cognitive pillar of institutional theory.

Table 5.7 summarizes the relationship between these patterns and the three pillars of the institutional theory.

The theoretically derived enablers are supported by the data from the qualitative study. Hence, enablers and practices overlap and validate one another. This shows a general presence of enablers as underlying practices, but does not show the strength of the expression of enablers in successful implementations of governance and governmentality. Thus, the results, so far, do not indicate best practices. The results from the

conceptual and qualitative studies imply and indicate a generally positive relationship with success, meaning that higher expressions of enablers in an organization lead to higher success in terms of implementation of governance and governmentality, as well as the overall results of the project-based part of the organization. To test for this and identify best practices, we developed the following hypotheses:

H1a: There is a positive relationship between enablers of project governance and successful implementation of governance.

H1b: There is a positive relationship between enablers of project governance and success of the project-based part of the organization.

H2a: There is a positive relationship between enablers of governance of projects and successful implementation of governance.

H2b: There is a positive relationship between enablers of governance of projects and success of the project-based part of the organization.

H3a: There is a positive relationship between enablers of governmentality and successful implementation of governance.

H2b: There is a positive relationship between enablers of governmentality and success of the project-based part of the organization.

These hypotheses will be tested in the quantitative study, which is described in Chapter 5.

Results from Study 4: The Longitudinal Study

The qualitative, comparative case studies include six case companies, three from Sweden and three from China. We start this results section with a brief presentation of the six companies' governance paradigm. A more thorough description (case narratives) is provided in Chapter 4. A summary table (Table 4.1) is found at the end of each case presentation.

Governance Paradigms

In order to grasp the companies' governance characteristics, we start by mapping the companies' governance practices against the four governance paradigms (see Figure 5.1).

The small- and medium-sized companies are the most different in terms of their governance paradigms.

Small Companies' Governance Paradigms

The small Swedish company (Company A) and the small Chinese company (Company D) are almost each other's opposites. Company A allows people to manage their projects as they find suitable and mainly control the outcome, instead of forcing a system of process compliance. Company D, on the other hand, controls its employees very thoroughly in their use of templates, meetings, and so on—that is, behavior control.

Medium-Sized Companies' Governance Paradigms

Both of the medium-sized companies we studied were highly shareholder-oriented in their governance in the realm of projects. Company B, however, is more outcome-focused, while Company E wants to control the process.

Large Companies' Governance Paradigms

The large companies, Companies C and F, are both stakeholder-oriented and value contributions to the society at large, and both imply that their drugs contribute to the improvement of human health. They are

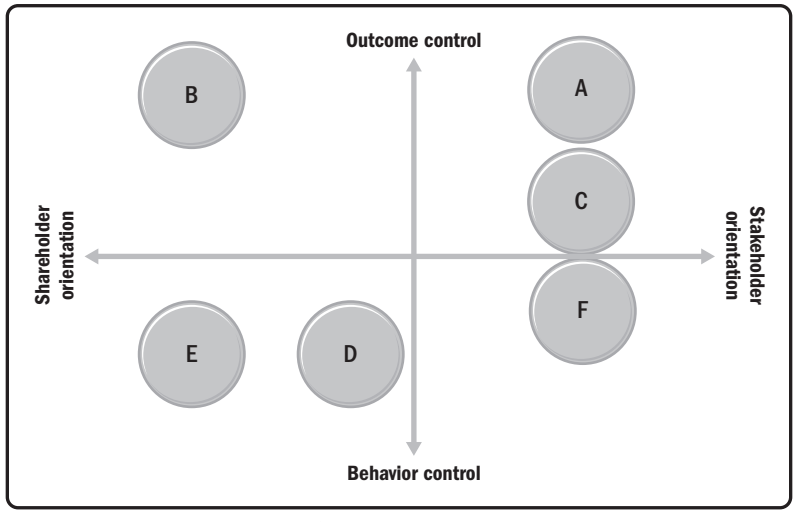

Figure 5.1: Case companies' governance paradigm.

both outcome- and process-focused in terms of the governance of their projects, a fact caused by the many different perspectives that are assessed through internal and external governance bodies, rehearsals of safety, animal testing, and so forth.

Figure 5.1 maps the six case companies into the governance paradigm framework. It shows the diversity with which the small companies (A and D) govern their projects, whereas the medium-sized companies (B and E) prefer shareholder orientation, and the large companies (C and F) have a stakeholder orientation for the governance of their projects. Furthermore, it shows that the Swedish companies prefer to control by outcome and the Chinese companies control behavior.

Materialization of Governance and Governmentality

The above has provided an overview of the companies' characteristics and governance paradigms. But how does their governance materialize in practice? Our cases demonstrate similarities and differences in how project governance, governance of projects, and governmentality materialized in the companies (see Table 5.8).

One trend we observed is that the smallest companies are the most diversified when it comes to governance in the realm of projects. Both small companies want to grow, but whereas Company A dynamically adapts its governance system to the business opportunities (as reported by the employees), Company D is more stable, as the external changes are faced and filtered by the CEO, who translates this information into directions to the employees. The medium-sized companies (Companies B and E) have the lowest level of projectification and are facing severe tensions over whether they intend to be mainly a project-oriented or a product-based company. This results in a rather weak governance system and unsophisticated governmentality in the realm of projects. The largest companies (Companies C and F) have the most advanced and sophisticated governance systems, and both have high degrees of projectification. In the following section, we will elaborate further on the companies' commonalities and differences in practice concerning governance issues.

In summary, when it comes to project maturity at different levels of the organizations, we see the following pattern: Small companies tend to be started and centered on their projects, but are rather immature when it comes to formal normative governance structures. As the organization grows to medium size, governance in the realm of projects becomes low

in priority, as projects are not at the heart of the organization's business. As companies grow into large organizations, the need for advanced governance approaches increases, together with general project thinking within the organization.

Project Governance

Small Companies

Both small companies have a rather flexible organizational structure, follow project methodologies, have strong meeting cultures, are project-centered, and have CEOs in a strong and influential position. However, the way the CEO manifests his or her leadership style differs strongly between the small companies.

In Company A, the CEO has a less controlling and dominating role than in Company D. The CEO in Company D (small, China) is the owner of the company; thus, he is the authority in the company, his knowledge and experience is of great value, and all decisions are made by him. He explained this as follows:

> As we are a small company, there is no need to set up mid-management in the company. I found it much more efficient and quick to make a decision myself. (CEO, Company D)

In Company A (small, Sweden), on the other hand, the CEO takes more of a consultative, supporting role, and most decisions are made jointly with his team. Thus, in Company D, employees are dependent on the CEO, while in Company A, they are more independent. Company A's CEO has a rather humble view of his leadership role, as shown by this statement:

> My employees are extremely knowledgeable leaders and project managers and I would be naïve to think that I could steer them in a way better than they can steer themselves. So, I focus on having strong relationships with every employee, and I try to empower them to do what they can in order to take us toward our vision by following our strategy. So, I try to ensure we are more or less aligned and that people can make use of each other, so more being the glue between all parts than steering them. (CEO, Company A)

Medium-Sized Companies

Both of the medium-sized companies are process-driven; the project managers have no authority to assign resources for their projects and they have some infrastructure in terms of methods, business principles, and so on. They have cross-department meetings and functional operations are prioritized over project work. "Our company is all about product development, not projects per se" (PMO manager, Company B). The organizations are driven by efficiency thinking and support from top management at every level.

The differences between Companies B and E is that Company B initially had a PMO (but it was closed down during the time of the longitudinal study), while Company E never had one; however, Company E did have a chief scientist to supervise all the critical projects and the director of R&D department takes care of all noncritical projects. Knowledge sharing flows freely, horizontally, between project managers in Company B. Because the projects in Company E are for the defense industry, on the other hand, they are confidential and cannot be shared between project managers, which results in vertical knowledge sharing. Company B has lots of meetings because of the adoption of Scrum in the product development phase of the project, while Company E has a few event-driven meetings. Company E has an incentive system in place for project managers; Company B does not.

Large Companies

The large companies have extensive and advanced infrastructure for governance, including different frameworks for different projects and a number of governance bodies, both internal and external, for controlling and steering the projects. They also have a strong industry-related value of doing good in the world through their projects.

The difference between the large companies is that Company F has an incentive system and strong communities of practices where knowledge is shared. These elements are lacking in Company C, where knowledge is shared instead through formal or informal cross-organizational meetings, as well as through industry-level meetings with, for example, research centers and universities. Another difference between the two large companies is in the role of the PMO, which is not involved in day-to-day business in Company C, but is very involved in Company F.

Governance of Projects

Small Companies

Both of the small companies studied have CEO-driven portfolio management. The differences are that the employees in Company A have the opportunity to influence project selection by showing which projects they find interesting and intriguing. Employees in Company D do not have this opportunity.

Employees' reporting is done through monthly project reports in Company A, while employees in Company D report weekly on their contribution to their annual objectives. Relationships between project managers and customers are strong and well developed in Company A, while they are weak in Company D. The latter is because new initiatives originate with the CEO, whereas in Company A, new initiatives can originate anywhere in the organization. Company A is driven by values such as being the best in the market. Its employees are certified as professionals to increase their credibility in the market.

Medium-Sized Companies

Similarities among the medium-sized companies related to the governance of projects is a lack of formal authority for project managers, priority of operational processes over projects, and a general perception that projects as an organizational form are too expensive and should be avoided if possible. This attitude hampers the development of a strong project culture in both companies.

We found that Company B tries to integrate knowledge and resources across projects, while Company D avoids doing this. The project managers in Company B lobby for resources with the line manager and the CEO, but in Company E, they have a chief scientist who does all resource allocations. The CEO in Company B is mainly interested in financial aspects of the projects, while the CEO in Company E uses the projects to plan the company's reputation, that is, he is interested in retaining a good reputation and, therefore, ensures that projects live up to their reputation and quality of deliveries.

Large Companies

Companies C and F are both heavily driven by regulatory requirements, emphasize interactive work with external bodies, and strive for a reputation as a company that cares about what is best for the health of

customers and society. Top management does project selection and the companies are pervaded by project thinking.

Portfolio management in Company F is executed by the PMO, while this is done at the department level in Company C. Company F selects new projects in accordance with its strategy and the recommendations of employees, whereas Company C selects new projects through a long chain of formal decisions, which includes extensive lobbying by various stakeholder groups. Company C has an internal focus on building competent project managers, while Company F strives for excellence through external certifications for project managers.

Governmentality

Small Companies

Governmentality is materialized in the small companies through a mentality of always striving for excellence in performance and flexibility in terms of roles and mandates. The ways these companies encourage their employees to do this differs substantially. Company A uses common business values and trust in its employees' abilities to perform their jobs, while Company D relies on business principles and enforces process compliance. These differences go hand-in-hand with the CEOs' styles: the democratic style in Company A, and the autocratic style in Company D.

Medium-Sized Companies

Governmentality in the medium companies demonstrates their low levels of projectification. Both companies are pervaded by a strong process and operations culture. Project management is done at a superficial and high management level in the organizations. The most evidential difference can be seen in the way sensemaking is done in the organizations. In Company B, sensemaking is done through many meetings and improvements of attitudes concerning project work. In Company E, on the other hand, sensemaking of governance-related matters goes through top-down information and flows from management.

Large Companies

The large companies' governmentality is characterized by a mentality of professionalism and the highest level of freedom for project

managers to do their jobs and strive for excellence in project management. Project managers appear to be mindful of the wider organization, the regulatory standards, and the public in their project work. Information sharing is a key element of the process and the attitudes of project managers. Sensemaking happens in the organizations through synchronized reporting, but also through a number of meetings with a mix of participants. The formal content of the meetings, however, differs between the companies.

Company C focuses on milestone achievements and internal stakeholder contributions, while Company F focuses on process and professionalism in project management in its meetings.

Appendix A9 summarizes the commonalities and differences.

Enabling Governance

What enables the governance systems in these companies? Why is it that even though the companies are rather similar in what they are doing, for companies of different sizes, the enabling forces for how this is accomplished differ significantly? Table 5.8 illustrates the strongest enabling forces for each company's governance systems.

Table 5.8: The most revealing enabling forces of each company's governance system.

	Company A	Company B	Company C	Company D	Company E	Company F
Project governance	Contract steers projects	Company's megaprocess steers projects	Project methodological processes steer individual projects	Project work is directed by CEO	Strictly follows process	For type A and B projects, process steers For type C projects, they are liberal in their view of how to steer projects
Governance of projects	Project portfolio work is governed by common values	Project portfolio work is governed by a common relationship	Project portfolio work is governed by governance institutions	Project portfolio work is directed by the CEO	Project portfolio work is governed by the chief scientist and R&D director	Project portfolio is governed by the PMO
Governmentality	Project managers have freedom in business	Project managers have freedom in technical solutions	Project managers have freedom in innovation	Project managers have no freedom	Project managers have freedom in technical solutions	Project managers have freedom in task implementation

Table 5.9: Materialization of enablers in the companies.

Company	Small		Medium		Large	
	Sweden	China	Sweden	China	Sweden	China
Infrastructure	All high	Only exchange information to CEO, not peers	Project management-Scrum people Informed through management, project meetings; no professional exchange externally	Only between chief scientists/R&D director and project managers, not among peers	Internal, more vertical information External meetings and governance bodies, less with professional organizations	Networking, PMO, and project managers vertical and horizontal
Decision-making style	Consensus	One manager (CEO)	Consensus	(Experts)	(Experts)	(Experts)
Organizational structure	Flat organic	Centralized, hierarchical (flat)	Weak matrix	Weak matrix	High in all	High in all
Flexibility	Liberal flexible	Liberal flexible	Less flexible, process-driven	Less flexible, process-driven	Flexible between milestones	Strict in project categories A/B, flexible in C
Values	Teamwork	Teamwork	Teamwork	Teamwork	Some heroism	A lot of heroism
Role as project manager	Extremely high	Extremely low	Low	Low	High, but going down	Extremely high
Main drivers for decision making	Employee well-being, stakeholder interest, competiveness	Competiveness, customer satisfaction	Competiveness, customer satisfaction	Regulatory requirements, customer satisfaction	Competiveness, customer satisfaction, regulative requirements	Stakeholder interest, customer satisfaction
Leadership	Group of leaders: three starters of the company and CEO, strong in all	Only strong leader	Weak	Strong leader and institution	Strong in all	Strong in all

By scrutinizing these enabling forces more thoroughly through rounds of coding, categorization, pattern searches, and reflections, we discovered that the enablers in the companies were materialized through their: infrastructure, decision-making style, organizational structure, flexibility, values, role as a project manager, and main drivers for decision making and leadership (see Table 5.9).

Table 5.10 visualizes the classification of the enablers and maps enablers to reported governance practices in the case companies. From this mapping exercise, it may be concluded that the process-facilitating mechanism of flexibility, and combined the discursive-ability factor of leadership, are the most influential enablers for the governance practices,

Table 5.10: Mapping enablers against practices.

Enablers / Practices	Infrastructure (PF-Mechanism)	Decision-making style (DA- Mechanism)	Organizational structure (PF- Mechanism and Factor)	Flexibility (PF-Mechanism)	Values (DA-Factor)	Role as project manager (DA-Factor)	Drivers for decision making (DA-Mechanism)	Leadership (DA-Factor)
Communication/ reporting	X		X	X				X
Report system in use	X		X	X				X
Project selection		X		X	X		X	
Common method	X			X	X	X		X
Project coordination				X	X		X	X
Project manager support						X		X
Incentives					X	X		X
Meetings/reviews	X			X				
Portfolio decision making		X		X	X		X	X
Governance orientation					X		X	
Governance control			X	X		X		X
External control							X	

PF= process facilitator, DA = discursive ability

followed by the discursive ability factor of values. This may be further explained by contextualizing it through our case companies.

In small companies, advanced formal governance infrastructures are, to some degree, replaced by well-articulated cultural values, logics of actions, and governmentalities that guide decision making and integrate process and discursive abilities. As explained by the CEO of Company A: "We have a process description for each process, but at the same time, we try to keep the structure at a minimum. There is some kind of coexistence between structure and culture and if you maximize one, it tries to strain the other one. We know that our culture is what is making us great . . . therefore, we don't want too much structure." It is obvious to all employees in Company A that the joint decision making and the core values of trust, well-being, transparency, and participation, inspires employees and guides the day-to-day operations. "No one tells you how you must do it, but [they] discuss different risks and opportunities with you concerning your project status and how to reach set targets" (Project management consultant, Company A). In Company D, on the other hand, the employees are comfortable with letting the CEO guide them at a micro level. In the medium companies, tensions between the line and the project impact the authority given to the project

managers in their projects. Governmentality in the medium companies is not focused upon projects. This impacts the integration of the factors and mechanisms that underpin the discursive abilities and those that underpin the process facilitators. This suggests that project governance and governance of projects appear to be the least expressed in the medium-sized companies. The most advanced and well-functioning governance was found in large companies.

In summary, organizations with well-functioning governance of projects and project governance are often underpinned by a governmentality that is centered on projects. Small and large organizations are more likely to demonstrate governmentality centered on projects than medium-sized organizations; thus, they are more likely to establish well-functioning governance of projects and project governance, as the PMO director at Company F said:

> The culture of our projectized way of organizing work is shaped gradually, but steadily in our company. From top management to bottom operational stuff, all people think in the same direction, so projectification is relatively harmonious in our company. That could be one of the reasons for our great project results.

In small organizations, governance may function well despite a lack of advanced formal governance infrastructure if it is replaced by well-articulated and integrative social structures and governmentality of projects driven by collective values and logics of actions.

Development of Governance Over Time

We collected empirical data at two points in time: once during 2013 and once 12 months later in 2014. Between these two interview cycles, we saw some developments and changes in the six case companies. We will present these changes case by case.

> *The Swedish small case company:* Company A became even more projectified during the year of our study. It developed a strong vocabulary regarding how projects were discussed in the company, becoming even stricter concerning the use of PRINCE2 terminology, and so, increased project thinking in the organization even more. The company grew in terms of its number of

employees, hiring three new employees. As the company grows, the need arises for more clearly defined roles. To complement the hiring process, the company has started a mentor program for new employees. It also matured in its portfolio decision-making processes so that ad hoc actions were reduced over the course of the year.

The company is still struggling with a tension of not losing their culture by implementing too much structure.

The Swedish medium-sized case company: Company B's biggest change was to become even less projectified. Even though the company has obtained more projects and more revenue from them, and every project manager is loaded with more projects per person, the degree of productification, and not projectification, has increased in the company.

The company is currently in a crisis. The former CEO left because he did not want to move to the head office in Sweden, and the owner of the company stepped in as temporary CEO. The new CEO wants more direct control over the project business. He closed down the PMO and brought the project managers operating in other countries "home" to the main office in Sweden. A few project managers left the company because they were not given enough of an introduction in understanding the company's project processes and felt burned out and uninspired. No investments have been made to improve project-related activities. The company has become even more product-oriented and strives to continue this trend.

The Swedish large case company: Company C has hired a new CEO who wants to make the organization flatter and have more direct communication with project-related workers. The new management team sees more uncertainty in the market concerning revenues, patents, and so on, and thereby, has started to micromanage projects. This may impact the company's innovativeness, as explained by one project director from Company C:

> The pharma industry is based on innovation; we do new things. We find new drugs; we come up with new treatment paradigms. In such an environment, new ideas are

> generated. We need to have a good atmosphere in the culture that makes these highly educated scientists feel creative, but at the same time, ensures productivity. In the pharma industry, what is interesting is that they do very risky things; we get reimbursement of these products that are on the market, but it is really risky. So, the project management framework that you put on the organization must maintain the culture of innovation. If you criticize the project for its deliverables, it is a hostile governance situation. If there are elements of micromanagement of what is going on in the projects, it may influence the working conditions and the atmosphere and culture for the scientists in a negative manner. You must be very careful about what kind of control and reward system you put in place so they still enjoy coming to work. And we encourage them to be curious and be motivated to find these ideas. . . . I think it is starting to create an atmosphere that is not optimal for the development of drugs. I think this is happening at the governance level. With an increased level of requirements and details in reporting, and so on; the level of trust may not really be there.

Also, external governance bodies have started to control internal governance institutions even more, but these controls are not seen as something negative. The project teams mainly get constructive feedback on what they are doing and sometimes good new input for how to proceed.

Another change in the company is that the company has acquired a number of small companies. A great challenge exists in integrating the new companies into the corporate culture and governance system.

> *The Chinese small case company:* Company D is the only company that has remained with the status quo. There have been no changes at any level—neither internal nor external.

> *The Chinese medium-sized case company:* At Company E, the level of projectification has increased. This is seen in the fact that project managers have gained more authority and taken over responsibilities from the functional departments—for example, planning and purchasing. The R&D director, who used to be in charge of all the small projects (especially in technical aspects), was promoted because of his talent in business

and management. He now handles the business side of all the projects—cost, purchasing, quotes, bidding, and so forth. As the assistant to the CEO explained:

> What we called "project manager" before was, in fact, "project coordinator," who did not have authority to assign resources and make business decisions. Now we want to grant them more autonomy in order to make them more like a real 'manager' with business thinking in their mind.

The Chinese large case company: Company F became even more projectified during the course of the year. The virtual PMO has become a permanent Project Management Center, and the PMO has become even more powerful within the company. Company F has acquired a number of small companies and faces similar challenges to Company C in integrating these into the company's project culture and governmentality. The company invites people from the acquired companies to visit their company and Project Management Center, to get a feel for the project culture of the company and to achieve a common sense of how project management is done. After that, Company F initiated training programs and certifications for the acquired companies to help them build up their own project management infrastructures. So far, the PMO director thought those acquired companies have been relatively "engaged in transforming their companies into becoming more project-oriented."

This chapter has provided an analysis of the conceptual and qualitative studies. The next chapter reports on the results of the quantitative study.

CHAPTER 6

Quantitative Study: Analysis and Results

In this chapter, we describe the analysis and results of the quantitative study in two parts. The first part tests the hypotheses we stated at the end of the qualitative study. The second part models project governance and governmentality along its correlation with success.

The purpose of the quantitative study is to test the hypotheses and validate the results from Study 2. Moreover, the quantitative study is intended to expand our findings from the case studies on a global basis to answer RQ1 (What are the practices for governance and governmentality in the realm of projects in organizations of different sizes and in different geographies?) and RQ2 (What are the organizational enablers for governance and governmentality in the realm of projects in these organizations?) in order to build a framework for governance and its enablers.

Two distinct approaches (horizontal and vertical) were used for the analysis:

1. **Part 1:** We performed our analysis *by* each of the levels of project governance, governance of projects, and governmentality, in order to identify the patterns in each of them, as well as to identify best practices by comparing enablers and practices at four different levels of organizational and governance success. This approach tests the hypotheses derived from the qualitative study and are outlined below. The results provide for the three frameworks (for project governance, governance of projects, and governmentality), which we describe below.
2. **Part 2:** We conducted an analysis *across* the levels of project governance, governance of projects, and governmentality, in

> order to identify organization-wide patterns. This incudes modeling organization-wide project governance to identify correlations between governance and governmentality practices and an organization's success, and their possible mediation by organizational enablers.

The structure of the questionnaire derived from our findings in Study 2. For that, we used the Propositions P1 to P3, plus their associated elements (Tables 5.2, 5.4, and 5.6), as input to a coding and categorization process, following Miles and Huberman (1994). This resulted in eight distinct categories for governance and governmentality, as shown in Table 6.1. The operationalization of these categories is described in Chapter 3 and summarized in Table 6.1.

Data Preparation and Descriptive Statistics

After collecting the data, we tested them for eligibility for the analysis methods we anticipated using. We identified no issues with the data. Missing values were under 4% and one outlier was detected, which led to an unacceptable kurtosis of 6.4 for one of the questionnaire items. An ANOVA comparison of the outlier data of the respondent's other responses with the rest of the sample showed a series of significant differences in answers. The respondent was, therefore, deemed not representative of the sample and was excluded from the analysis. This normalized the data set to acceptable skewness and kurtosis values of ± 2 and ± 3, respectively (Hair, Babin, Money, & Samouel, 2003).

We collected data for independent and dependent variables from the same respondent. Doing this can lead to a particular bias, known as common method variance (CMV). This variance creates a false internal consistency in the form of possible correlations between variables generated by a common source: the respondents to the questionnaire (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Podsakoff & Organ, 1986). To protect from, and subsequently test for, possible CMV, we took a number of measures. We followed the framework suggested by Chang, van Witteloostuijn, and Eden (2010), which suggests ex-ante procedural measures, such as confirming the anonymity of the respondent, ensuring that there are no right or wrong answers, and also defining ambiguous terms, keeping questions simple, and avoiding double-barreled questions and complicated syntax. Related ex-post measures include the use of complex model specifications to identify relationships and using Harman's single factor test (Chang et al., 2010; Podsakoff & Organ, 1986).

The Harman single factor test was done through unrotated factor analysis with an Eigenvalue of 1.0. This test "loads all items from each

Table 6.1: Coding and categorization for questionnaire structure.

Category	Code
Institutionalization	• Authority to procure, implement, and execute governance frameworks and policies • Governance roles in the organization and governance frameworks, together with the authority to implement them • Standardized, but flexible project management across the organization • Trust between individuals and the governance structure
Infrastructure	• Presence of a governance infrastructure • Presence and communication of governance policies and governance goals
Communication and decision making	• Communication mechanisms, such as steering committee meetings, milestone meetings, joint planning sessions, and so forth • Willingness to collaborate across organizational boundaries • Awareness of organizational project management • Program- and portfolio-level meetings for synchronization of governance across projects • A culture of open discussions, ideologies that are clearly communicated, and a general emphasis on the temporality of the undertakings and their success measures • Synchronized reporting and communication structures across the projects and organization
Organization structure	• Specialized project governance roles (which can be executed by institutions for project governance, such as sponsors, steering groups, or PMOs) • Flexible organization structures • Autonomy, decentralization, flatness of organization structures • A general "underspecification" of structures • Creation and maintenance of knowledge network structures (instead or parallel to existing departmental organizational structures)
Governance paradigm	• Aligned business requirements (e.g., those stemming from the number and size of clients) with project needs (e.g., project size) in an organization
Flexibility	• Built-in flexibility in governance structures and frameworks • Versatility of the organization and its deployment of governance institutions • Flexible mandates and roles • Flexible adjustment of mandates and roles of governance institutions and individuals • Individuals' flexibility in adapting to formal and informal roles
Leadership	• Aligned objectives across the organization from strategy to projects • Development of individuals who are mindful of the organization, self-responsible, and self-organizing
Success	• Effectiveness in project selection and efficiency in project execution • Achieve the goals of the organization through projects • Develop individuals to a degree that matches the goals of the corporation

of the constructs into an exploratory factor analysis to see whether one general factor does account for a majority of the covariance between the measures" (Chang et al., 2010, p. 180). The test extracted 22 factors. No indication was given of a single factor accounting for the majority of the covariance. Thus, CMV was not assumed to be an issue.

Part 1: Analyses at the Level of Project Governance, Governance of Projects, and Governmentality

Unrotated factor analysis was also done to test for internal consistency of each proposed measurement construct (Table 6.1). The measurement items loaded in their majority on their respective factor. Of these measurement items, the one on the governance paradigm was measured using two constructs, one for shareholder versus stakeholder orientation and one for behavior versus outcome control. Each questionnaire item loaded on its respective factor, but the factors had to be combined to represent the two dimensions of the construct. Three constructs loaded on more than one factor: (1) institutionalization of governmentality was split into project manager–related governmentality (certification, support of membership in professional organizations) and salary-related governmentality (managers' income being impacted by project results); (2) the construct for organizational structure was split into one role and form-related factor, and another on hierarchy and central decision making, of which the latter was not reliable enough to be used in further analyses; and (3) the success measure was split into two factors, with the first one measuring success in implementing the governance system and the second one measuring the organization's business success. The factors were saved (the multifactor solutions as Varimax rotated factors) for use in the subsequent analyses. Table 6.2 shows the factors, their names, and their contents. Appendix A2 shows the detailed cross reference of the factors (abbreviated CFXX) and the questionnaire items and their scales. Appendix A11 shows the descriptive statistics of the factors.

In the following two sections, we present the differences in responses by demographic factors, as well as by organizations with different levels of success in implementing governance and organizations with different levels of success with their projects and project-based parts of the organization. Details of the statistics, such as significance values and so forth, can be found in Appendix A12 and Appendix A13.

Table 6.2: Validated measurement constructs for governance by level of analysis.

Governance category and factor name	Questionnaire items (*see Appendix A2 for question-item abbreviations*)
Project governance	
PG—Infrastructure (**CF4:** Infrastructure for information exchange)	Extent of information exchange within the project, across projects, and with professional organizations
PG—Communication (**CF5:** Scope of communication in meetings)	Communication with different managers for the coordination of the project
PG—Flexibility (**CF9:** Flexibility in PG)	Flexibility in meeting types, structures, and roles
Governance of projects	
GoP—Institutionalization (**CF1:** Institutionalization of governance)	Use of similar reporting systems, methodology, project selection, and coordination
GoP—Roles and responsibilities (**CF6:** Organizational roles)	Clearly defined roles and responsibilities, formalized and central decision making
GoP—Flexibility (**CF10:** Flexibility in GoP)	Flexibility in governance institutions, organizational structure, leadership, and governance approach
GoP—GovOrientation (**CF11:** Governance orientation)	Shareholder versus stakeholder orientation
GoP—Leadership (**CF13:** Leadership)	Governance is/was established by a strong leader, is further developed and well established
Governmentality	
Gvty—PM (**CF2:** Institutionalization of governmentality of project managers)	Project managers encouraged to get certified and engage with professional organizations
Gvty—Managers (**CF3:** Institutionalization of governmentality of all managers)	Project managers', as well as line managers', remuneration is impacted by project results
Gvty—Control (**CF8:** Governance control philosophy)	Behavior versus outcome control
Gvty—PMsupport (**CF12:** Support of PM)	Project managers are encouraged to develop project management in the organization; they feel important, empowered, and coached
Governance success (**CF14**)	Governance helps in reaching project and corporate objectives and is used by the project managers
Corporate success (**CF15**)	Projects and the project-based part of the organization are successful

Note: PG = Project governance; GoP = Governance of projects; Gvty = Governmentality; CF= Factor name

Demographic Differences

We used ANOVA with post-hoc Scheffe tests to assess the differences in the factors by demographics (see Appendix A12). No statistically significant difference was found by country or industry.

Project size makes a difference in behavior versus outcome control. Projects with a value under €100,000 are significantly more outcome-controlled than projects with a value over €10 million. Thus, larger projects apply more behavior control than outcome control.

Company size makes a difference for governmentality. Companies with more than 10,000 employees show a significantly higher support for project managers to engage in professional organizations than do small companies with up to 250 employees. Project managers in the smallest companies (up to 250 employees) and the largest companies (more than 30,000 employees) have significantly more communication with other managers for planning and coordination than those in companies that have between 251 and 1,000 employees. This is in line with the case study results, which also showed that medium-sized companies limit the scope of the project management task in terms of interaction and coordination. Flexibility in the governance of projects is significantly higher in the smallest organizations than in companies with 1,001–10,000 employees, 10,001–30,000 employees, and more than 30,000 employees. The decreasing p values, shown in Appendix A12, indicate a decline in flexibility with increasing company size. Flexibility is measured in an organization's roles and the functions of governance institutions, adjustment of organization structures to project needs, stable versus situational dependent leadership from management, and stable versus situational dependent governance.

The leadership role in establishing and maintaining governance in the organization is significantly more expressed in the largest organizations (more than 30,000 employees) than in medium-sized companies with 250–1,000 employees. Interestingly, the success of governance, in terms of helping managers and organizations reach their objectives and in terms of being used and accepted by project managers, is significantly higher in the smallest organizations (up to 250 employees) than in organizations with 10,001 to 30,000 employees. Conversely, the largest organizations (more than 30,000 employees) are significantly more successful than medium-sized organizations that have between 1,001 and 10,000 employees in terms of achieving organizational success through projects.

Differences by the respondents' years of experience showed that those respondents with more than 20 years of business experience work in significantly more stable environments when it comes to the use of methodologies, reporting systems, project selection methods, and resource coordination approaches at the governance of projects level. Governmentality at the project level is significantly higher for respondents with more than 10 years of experience in terms of being encouraged to engage with professional institutions and in receiving support for this from the organization.

Hypothesis Testing

Six hypotheses were derived from the qualitative study in Chapter 5.

H1a: There is a positive relationship between enablers of project governance and successful implementation of governance.
H1b: There is a positive relationship between enablers of project governance and success of the project-based part of the organization.
H2a: There is a positive relationship between enablers of governance of projects and successful implementation of governance.
H2b: There is a positive relationship between enablers of governance of projects and success of the project-based part of the organization.
H3a: There is a positive relationship between enablers of governmentality and successful implementation of governance.
H3b: There is a positive relationship between enablers of governmentality and success of the project-based part of the organization.

We used ANOVA analyses to test for significant differences between the more and less successful organizations, in terms of governance and governmentality implementation and overall success with their project business. This resulted in particular profiles of governance and governmentality of the organizations with the lowest (very poor), low (just below average), higher (just above average), and highest (best) levels of success in the implementation of governance and the project-based part of their organizations.

We assessed the differences in governance approaches by *Governance Success* and *Organizational Success*, as explained in Chapter 3. For both success dimensions, we calculated the four quartiles of success. The first quartile represented the lowest 25% in success; the second quartile, the next higher 25%; the third, the following 25%; and the fourth quartile

included the top 25% in success. Then, we used ANOVA analyses to identify significant differences in the implementation of project governance, governance of projects, and governmentality at different levels of success. Details of the statistics can be found in Appendix A13 and the questionnaire in Appendix A2.

Appendix A12 shows the differences in demographics and Appendix A13 summarizes the details of the differences in practices by showing the governance and governmentality dimensions that differ significantly between companies at the four levels of success. We added a one-item question from the questionnaire, which asked on a five-point scale whether the governmentality in the organization supported individual heroism (0) or teamwork and group success (4).

Table 6.3 shows the results of the hypothesis testing. The plus sign indicates a positive correlation between the strength in expression of a governance dimension and the respective type of success. The asterisks indicate the level of significance. The more successful organizations scored significantly higher than the less successful organizations on the majority of dimensions. The underlying details can be found in Appendix A13.

Table 6.3: Hypotheses tests.

	Governance success	Corporate success
Project governance	Hypothesis H1a	Hypothesis H1b
CF4: PG—Infrastructure	+****	+****
CF5: PG—Communication	+****	+****
CF9: PG—Flexibility		
Governance of projects	Hypothesis H2a	Hypothesis H2b
CF6: GoP—Roles and responsibilities	+***	+****
CF11: GoP—GovOrientation	+*	
CF13: GoP—Leadership	+****	+****
CF1: GoP—Institutionalization		+****
CF10: GoP—Flexibility		
Governmentality	Hypothesis H3a	Hypothesis H3b
CF12: Gvty—PMsupport	+****	+****
CF2: Gvty—PM		+****
CF3: Gvty—Managers	+****	
CF8: Gvty—Control		
Gvty—Collaborativeness	+***	+***

Note: * = $p \leq 0.05$; ** = $p \leq 0.01$; *** = $p \leq 0.005$; **** = $p \leq 0.001$

All of our hypotheses are partly supported. However, clear patterns are visible at the different levels (see Table 6.3).

At the project governance level, the strength of enablers in infrastructure and communication varies significantly between levels of success in both governance and business. Higher expressions of the enablers are found in the more successful organizations. However, flexibility at this level does not differ among the organizations with varying levels of success. This partly supports Hypotheses H1a and H1b.

At the level of governance of projects, successful organizations in governance have stronger enablers in terms of clearly defined roles, responsibilities, and decision-making processes; clear leadership in the implementation and maintenance of their governance system; and are more stakeholder-oriented in their governance. Institutionalization and flexibility do not differ significantly among the organizations. This gives partial support for Hypothesis H2a. For success with the project-based part of the business, the more successful organizations have clearly defined roles, responsibilities, and decision-making processes, as well as leadership for their governance system. They are also stronger in the institutionalization of their governance approaches. Governance orientation (shareholder versus stakeholder) and flexibility do not differ significantly across success levels. This gives partial support for Hypothesis H2b.

At the level of governmentality, organizations that are successful with their governance system support their project managers significantly more than those in less successful organizations in terms of encouragement for development of project management in the organization, and in making them feel important, empowered, and coached. They also align the remuneration system of line and project managers by connecting the income of both types of managers to project results. Furthermore, the successful implementation of governance takes place in a context of a culture that values collaboration in terms of teamwork and joint accomplishments over individual heroism. Control orientation (behavior versus outcome control) and support of project managers in terms of encouragement to get certified and engagement with professional organizations does not differ across organizations with different levels of governance success. This gives partial support for Hypothesis H3a.

Similarly, organizations that are successful with the project-based part of their organization score significantly higher on governmentality support (i.e., encouraging project managers to further develop

their project management skills) and collaboration. This is complemented by an incentive system that aligns project results with project managers' remuneration. The control orientation and the alignment of managers' remuneration systems do not differ across success levels. This partly supports Hypothesis H3b.

Profiling Governance and Governmentality

In the next step, we visualize the particular governance and governmentality profiles of organizations at different levels of success in governance implementation and with the project-based parts of the organization. Figures 6.1 and 6.2 show the governance and governmentality profiles of the four levels of either governance success (Figure 6.1) or success of the project-based part of the business (Figure 6.2). The associated data are shown in Appendix A14. Project governance dimensions are shown at the top right of Figures 6.1 and 6.2, governance of projects dimensions at the lower right, and governmentality dimensions on the left. The data are normalized; that means the average across all measures per dimension is zero. The lines indicate the deviation from zero at different levels of success.

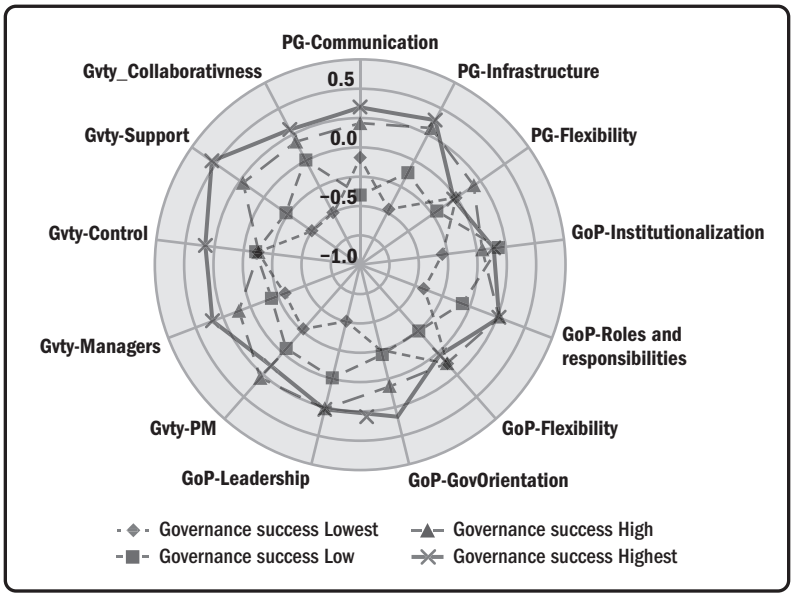

Figure 6.1: Profiles of governance and governmentality at different levels of governance success.

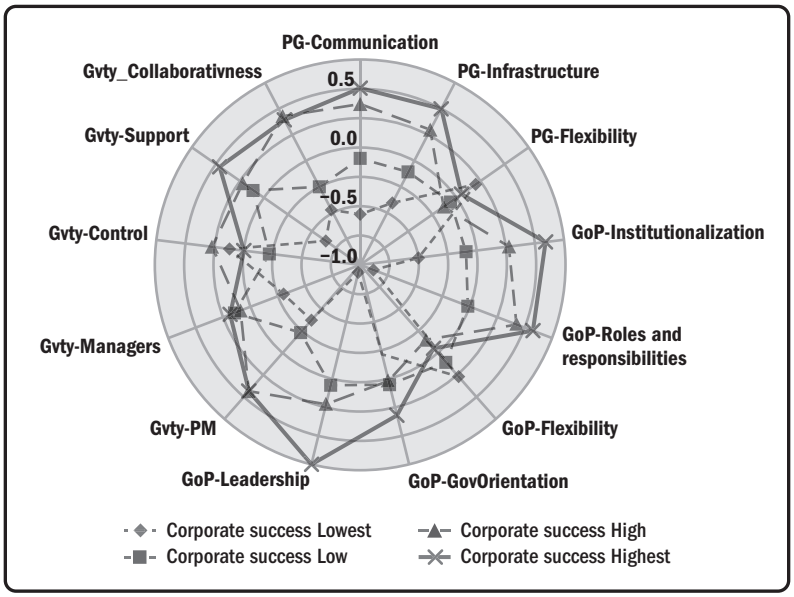

Figure 6.2: Profiles of governance and governmentality at different levels of corporate success with projects.

Success in governance: Organizations with the lowest levels of success in governance score relatively low in all dimensions except flexibility in governance of projects, where they score highest among all organizations. Their lowest scores are in project governance infrastructure; definition of roles and responsibilities (GoP); and the governmentality dimensions of leadership, support, and collaborativeness.

Organizations that have a better (but still below-average) level of governance success see an increase in the governmentality dimensions, as well as in the definition of roles and responsibilities across projects. However, they decrease in communication at the project governance level and in flexibility at both governance levels.

Organizations at the next-higher level of governance success (above average) increase substantially in their governmentality measures and, to a smaller extent, in project governance and governance of projects. Their governance of projects increases toward a stakeholder orientation, while their project governance increases in all dimensions.

The most successful organizations emphasize the governmentality dimensions, especially alignment of remuneration systems, outcome control, and support in the professional development of their project managers.

The governance orientation shifts clearly toward stakeholder-oriented governance.

The largest nominal differences across success levels are found in all governmentality dimensions, leadership and definition of roles and responsibilities at the level of governance of projects, and infrastructure at the project governance level. The data indicate, along the level of increasing success, a growing awareness of the importance of the more psychological dimensions of governmentality and leadership, and to a smaller extent, the provision of formal governance infrastructure and role definitions.

Figure 6.2 shows the governance and governmentality profiles at the four levels of success of the project-based part of the organization. The associated data are shown in Appendix A14.

The profiles show that the organizations with the lowest level of success with their projects have the highest level of flexibility in both project governance and governance of projects. Conversely, they score lowest in the governance of projects dimensions of leadership and definition of roles and responsibilities, as well as the project governance dimension of communication, followed by all governmentality dimensions. This profile indicates that these organizations lack overall leadership in project management, while, at the same time, show little formal structure in work execution.

Organizations at the next-higher level of business success (but still below average) increase on all dimensions, except flexibility and control. The largest improvements are in leadership and definition of roles and responsibilities, as well as support for project managers in their professional development. These organizations appear to have a leader in place, one who fosters and stabilizes the minimum requirements for governance.

Organizations that are just above average follow the same trend. They make their largest improvements in governmentality by encouraging project managers to get certified and work with professional organizations, and by instilling a culture of collaborative work. This is followed by increases in infrastructure and communication at the project levels, combined with a formalization of roles and responsibilities and further institutionalization at the governance of projects level. This profile indicates a growing awareness of the need for professional development for project managers, complemented by increased formalization and institutionalization of the project manager's roles.

Organizations that are most successful with their project-based parts improve slightly in most dimensions, but very strongly in leadership. This is complemented by an increased stakeholder orientation,

institutionalization, and further clarification of roles in the governance of projects, as well as an increase in supporting project managers in further developing project management within the organization. Control shifts toward behavior control, which indicates process maturity. This profile indicates that most successful organizations build on strong leadership for governance, formalization of roles and institutions, and the further development of their own capabilities.

The largest developments from the lowest to highest levels of corporate success with projects happens in the leadership dimension, which spans from extremely low to extremely high, followed by the governmentality dimensions. The exception here is control, which moves from outcome toward behavior once a certain level of success is achieved. The development toward corporate success with projects occurs in parallel with a growing awareness of the importance of soft factors, such as leadership and project manager support, but also together with improved governance infrastructure and communication at the project level and formalization at the governance of projects level.

In the following section, we summarize our findings from the questionnaire analysis and structure these findings according to frameworks for project governance, governance of projects, and governmentality.

The Practices Framework for Project Governance

The respondents perceived the *raison d'etre* of project governance as being mainly to support, plan, and make tollgate decisions and to control progress (see Table 6.4; multiple answers were possible). To a smaller extent, it was also perceived as helping to manage the project toward performance.

Table 6.4: Purpose of project governance.

Project governance helps to . . .	Number of times mentioned
Support planning and execution	138
Make tollgate decisions	138
Control progress	137
Manage the project	110
Support project performance	101
Control project management performance	96
Other	20

Methods at disposal: Fifty percent of the project managers had only one methodology to choose from when they started their last project, whereas 27% could chose between two methods, 14% from among three, and 6% from a pool of seven or more methods. We found no differences by demographic parameters or success levels.

Frequency of reporting: Most of the project managers (39%) reported on a weekly or monthly (32%) basis (see Table 6.5). Monthly reporting constituted the minimum frequency in reporting across all responses. No differences were found by demographic or success categories, except for project size. Projects with a value between €3 and €5 million report significantly more often (on average, weekly) than those with a value below €100,000 (on average, monthly) (ANOVA $p = 0.011$, Scheffe $p = 0.023$).

Time spent with governance institutions: Respondents prioritized spending their governance-related time with the project sponsors (43%), followed by line managers (18%), PMOs (16%), and the rest with others.

Overall, there were no statistically significant demographic differences. However, this may be because of large variances among the practices in the demographic strata. A visualization of the nominal values is shown in Figure 6.3, which shows the nominal differences in project governance enablers by country. The data are normalized with an overall mean of zero. The figure shows that Italy, the United Kingdom, and Switzerland scored highest, while Germany and Norway scored lowest in flexibility. Germany, followed by the United States and others, scored highest in communication and meetings, while Italy, Switzerland, Portugal, and Canada clearly scored below the average in this respect. Governance

Table 6.5: Reporting in project governance.

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Weekly	81	38.9	39.1	97.6
	Monthly	66	31.7	31.9	45.4
	Biweekly	27	13.0	13.0	58.5
	At milestone completions	21	10.1	10.1	13.5
	At project end	5	2.4	2.4	3.4
	Daily	5	2.4	2.4	100.0
	Not at all	2	1.0	1.0	1.0
	Total	207	99.5	100.0	
Missing	System	1	.5		
Total		208	100.0		

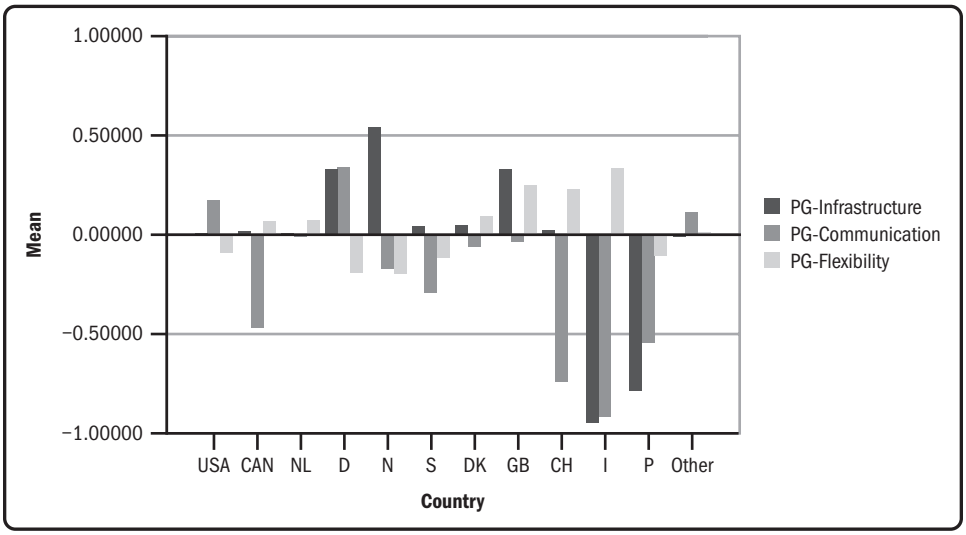

Figure 6.3: Nominal differences in project governance by country.

infrastructures are well provided in Norway, Germany, and the United Kingdom, while little infrastructure prevailed in Italy and Portugal.

Figure 6.4 shows the nominal results by industry. Consulting and insurance scored highest in flexibility, whereas construction, transport/logistics, education, and government scored lowest. Healthcare and

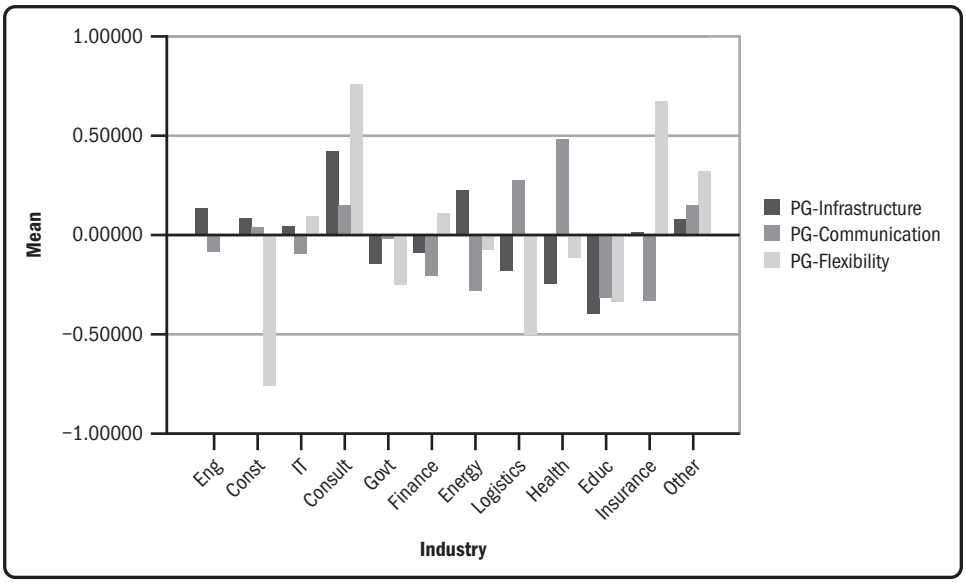

Figure 6.4: Differences in project governance by industry.

transport/logistics scored highest in communication, while education, insurance, and energy scored lowest.

IT and energy provided the strongest governance infrastructures, whereas education and healthcare provided the weakest.

Similarly, we show the nominal differences by company size in Figure 6.5 below. The smallest companies scored highest in all governance dimensions at the project level. The next larger category scored lowest in communication and infrastructure, and second lowest in flexibility. Companies with 10,000 to 30,000 employees were the least flexible. Communication improved with company size after a threshold of about 250 employees.

The nominal differences by project size are shown in Figure 6.6. Flexibility was highest in small projects and steadily declined with increasing project size. Communication was relatively higher in large projects of over €5 million. Infrastructure was strongly developed in projects below €0.1 million and between €5 and €10 million.

Appendix A13 shows the results of the analysis of differences between levels of success. On average, project managers indicated that their project governance infrastructure allowed them to *often*

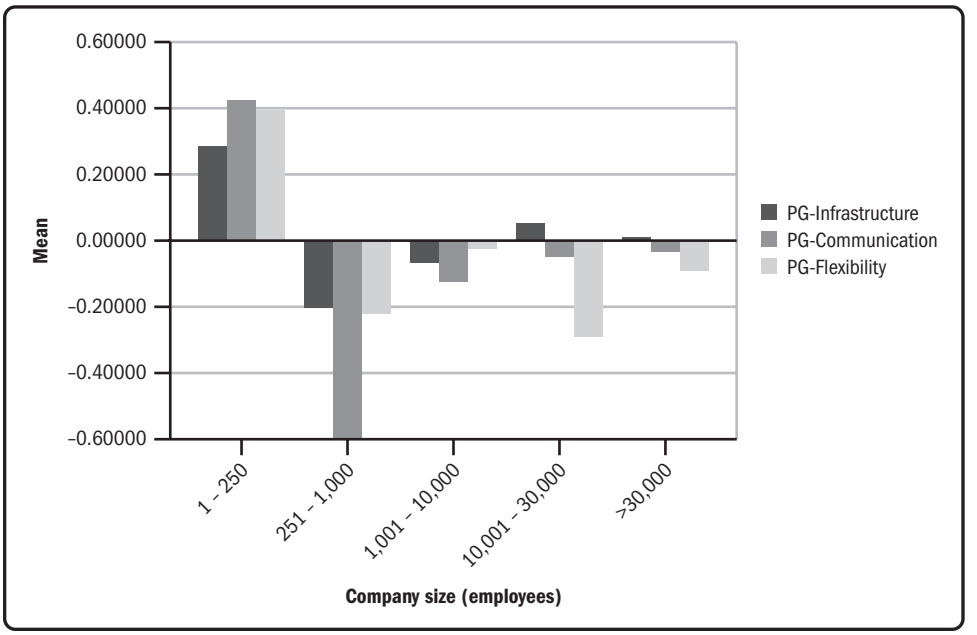

Figure 6.5: Differences in project governance by company size.

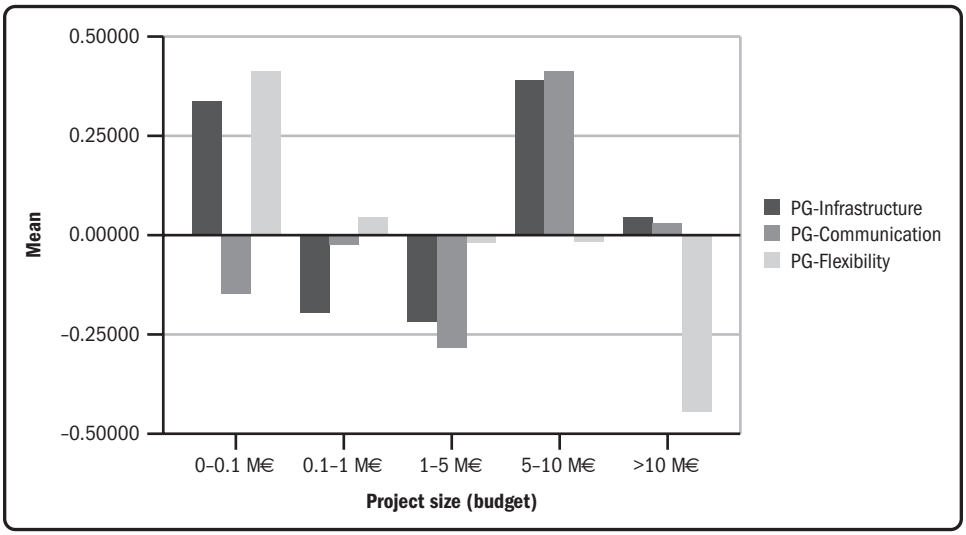

Figure 6.6: Differences in project governance by project size.

meet managers to set priorities and coordinate resources, but only *sometimes* to meet other project managers or managers external to their organization. However, this differs by success in governance implementation. Project managers in the third and fourth quartile of successful governance implementation met significantly more often than those in the second quartile (ANOVA p = 0.000, Scheffe p = 0.013, 0.001, respectively). Similarly, project managers in organizations in the third and fourth quartile of success with the project-based part of their organization met significantly more often than those in the first and second quartile (ANOVA p = 0.000, Scheffe p = 0.000, 0.004, respectively).

In organizations that are successful in both measures of success, project managers exchange project-related information with their teams significantly more often than in those of lesser levels of success. Organizations in the lowest success quartile in organizational success score significantly lower than all other categories in their intraproject communication (ANOVA p = 0.000, Scheffe p for categories 2 to 4: 0.014, 0.000, 0.008, respectively). Similarly, organizations in the lowest quartile of governance success score significantly lower than those in quartiles 3 and 4 (ANOVA p = 0.000, Scheffe p for categories 3 and 4: 0.011 and 0.001, respectively) on the same variable.

Governance in successful organizations fosters more communication among managers. However, the related meetings are, on average, only *occasionally* adapted to different project types or changing company needs, and even more rarely are formal structures changed. Overall, the average infrastructure allows for the exchange of information within the project team to a *large* extent, but only to *some* extent with neighborhood projects and project managers, and only to a *little* extent with professional organizations.

The Practices Framework for Governance of Projects

Statistical details can be found in Appendix A13. Very strong differences between more and less successful organizations are found in terms of leadership. On average, the organizations score between 3 and 4 on a five-point scale in having a strong leader, continuously improving their governance, and having clearly defined roles, responsibilities, policies, and so on. However, organizations in each higher quartile are significantly more developed in their leadership than those in the next lower quartile. This means that the more successful the corporations are, the more likely they are to have strong leadership that favors and establishes project management and governance, continuously develop project management and governance, and establish governance well with roles, responsibilities, policies, and so forth.

Organizations with above-average successful governance implementation have a significantly more established institutionalization of governance than those with the lowest level of success. This indicates an established institutional infrastructure of unified reporting systems across projects, portfolio of methodologies, and defined institutions for project selection (such as portfolio managers), and shows that projects are coordinated in terms of resources and planning through the same institution. Related differences among levels of corporate success are insignificant.

In terms of both success measures, there are significant differences in the definition of roles and responsibilities. Organizations with the lowest level of success in implementing governance score significantly lower in this measure than those that are above average. The differences by organizational success are even clearer; above-average organizations score significantly higher than those that are below average.

Similarly, organizations with successful governance and project business have significantly more clearly defined roles and responsibilities, formalized decision-making processes, and centralized decision making.

In terms of flexibility at the governance of projects level, there are no differences between more or less successful organizations. On average, these data indicate stability in governance institutions (such as PMOs) functions, mandates, and clearly defined roles. However, flexibility is shown in adjusting organizational structures to the needs of projects, and most flexibility is shown in leadership and its situational adaptation.

The governance orientation—that is, the shareholder versus stakeholder orientation—makes a difference. The most successful organizations are significantly more stakeholder-oriented than those that are below average. The corresponding control dimension of the governance paradigm scores slightly more on the outcome (versus behavior) control side for the more successful organizations. This indicates that the majority of projects in successful organizations are governed by a versatile artist paradigm—that is, they are stakeholder-oriented and outcome-controlled.

Figure 6.7 shows the relative score of the governance of project factors by country. The United Kingdom scores highest in leadership and flexibility at the governance of projects level, followed by Denmark. Germany scores high in stakeholder orientation and the definition of organizational roles. Switzerland, Italy, and the United States score high on shareholder orientation. Italy, Canada, Sweden, and Norway score low in terms of flexibility in governing their groups of projects.

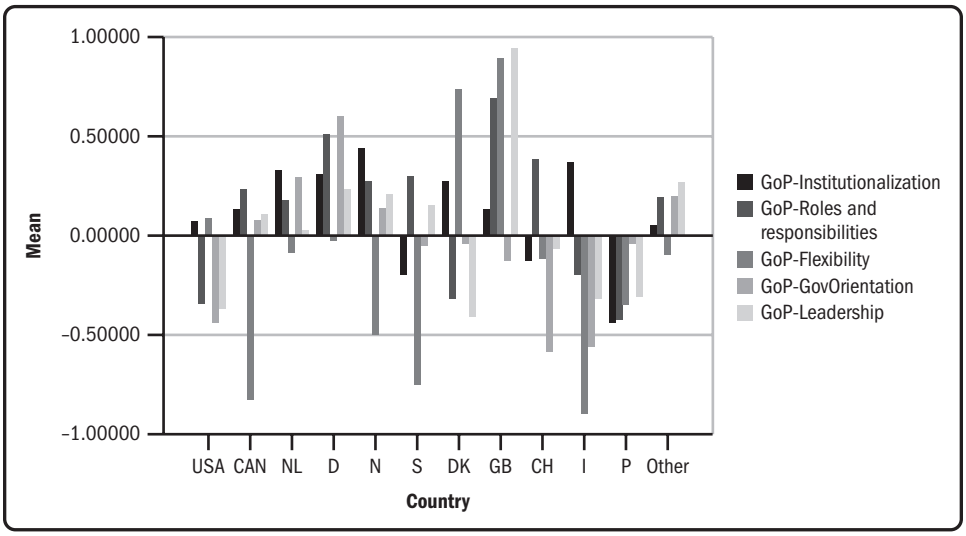

Figure 6.7: Governance of projects scores by country.

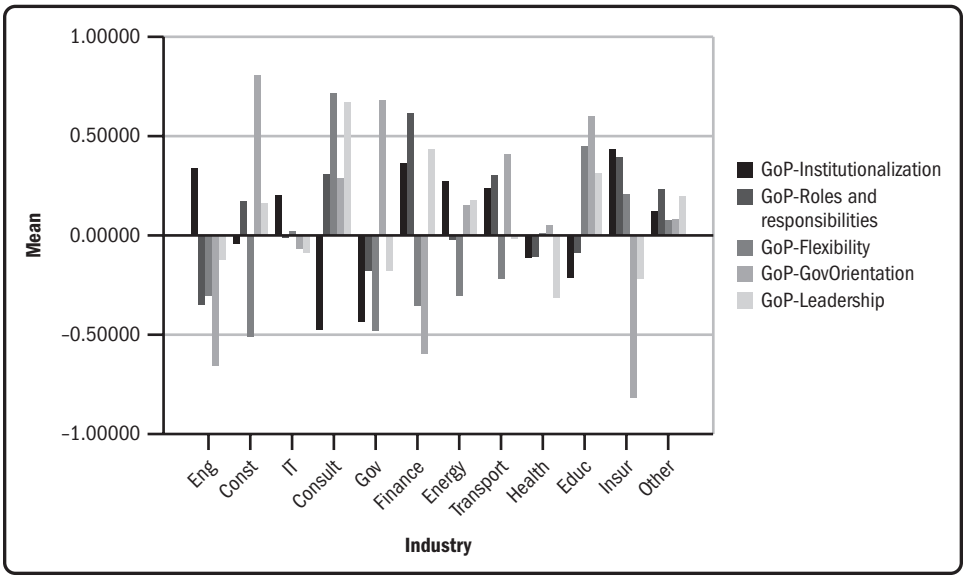

Figure 6.8: Governance of projects scores by industry.

Figure 6.8 shows the relative sores by industry. Construction, government, education, and transport/logistics show strong stakeholder orientation, as opposed to insurance, engineering, and finance, which show a strong shareholder orientation. Flexibility is highly expressed in consulting and education, which is contrary to the relative inflexibility of construction, finance, energy, government, and transport/logistics. Formalization of roles and responsibilities are most strongly developed in finance, insurance, and transport/logistics, and lowest in engineering.

Variation across company size is shown in Figure 6.9. Small firms with up to 250 employees score highest in flexibility, while those with 10,000 to 30,000 employees score lowest. Definition of roles and responsibilities, as well as leadership, increases with company size starting at about 250 employees. Institutionalization increases with company size.

The variation across project size in terms of budget is shown in Figure 6.10. The smallest and the largest projects appear to be more stakeholder-oriented, while those in between show more of a shareholder orientation. Leadership increases with project size, but meets saturation in the larger projects. Projects with a budget value of more than €1 million increase in flexibility, but are still strongly below the average flexibility of all projects, while organizational roles are defined

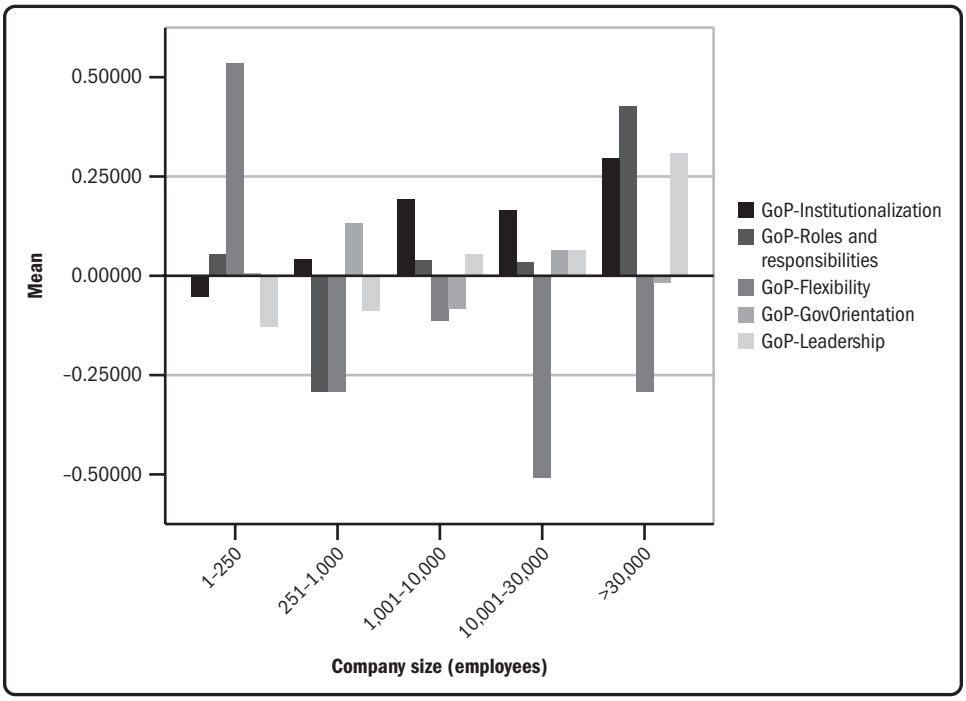

Figure 6.9: Governance of project scores by company size.

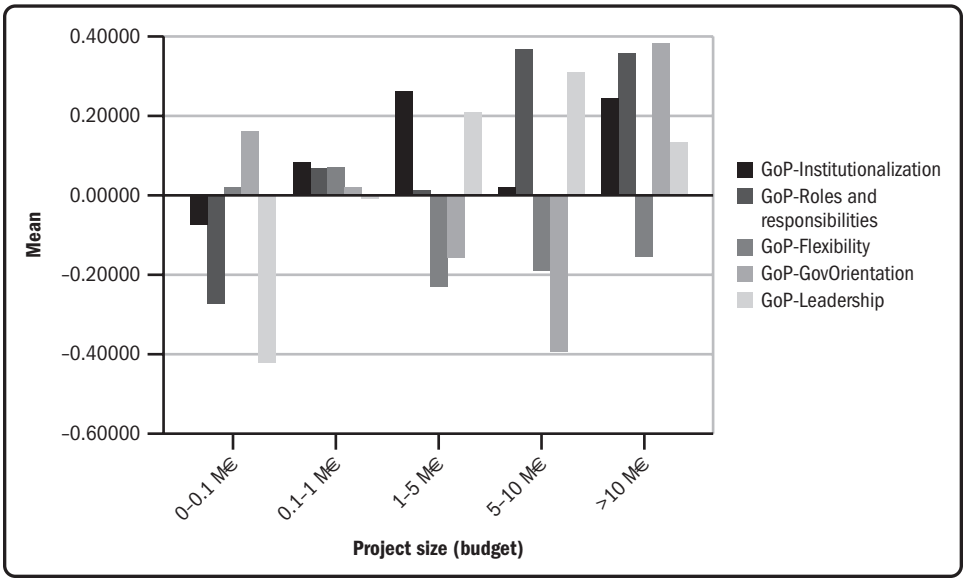

Figure 6.10: Governance of project scores by project size.

more clearly in these projects. The institutionalization of governance of projects is strongest in projects between €1 and €5 million and those beyond the €10-million threshold.

In summary, we can say that leadership, together with institutionalization and formalization, surface as being most strongly developed for organizational success, whereas higher levels of governmentality across the various dimensions surface as salient characteristics for successful governance implementation.

The Practices Framework for Governmentality

For the details of this section's quantitative analysis, see Appendix A13 unless noted otherwise.

In terms of governmentality for project managers, the average organization encourages its project managers to pursue professional certification and work in professional organizations. However, support for membership in these organizations in terms of payment of fees, time for community of interest activities, and so on is less often found. This is also where we find differences between more and less successful corporations. Organizations with below-average success in their project-based business score significantly lower than those that are above average. Similar results show the alignment of managers' remuneration systems (Gvty—Managers). On average, line managers' and project managers' income is influenced by the results of their projects to some extent, but this is significantly more common in those organizations with successful governance systems.

Project managers score, on average, high to very high on the level of importance they associate with their role in the organization, the encouragement they get to participate in the further development of their skills, and their level of empowerment. To a slightly lesser extent, they feel that they are coached by their organizations, but we found very strong differences between the different levels of success. Organizations with higher-than-average levels of governance success score significantly higher on coaching than those with below-average success.

A culture that values teamwork and group success over individual heroism seems to support both governance success and success for the project-based part of the corporation. Significant differences were found between the top performers and those that were below average in performance on success measures. Top performers scored significantly higher on the culture of teamwork and group success.

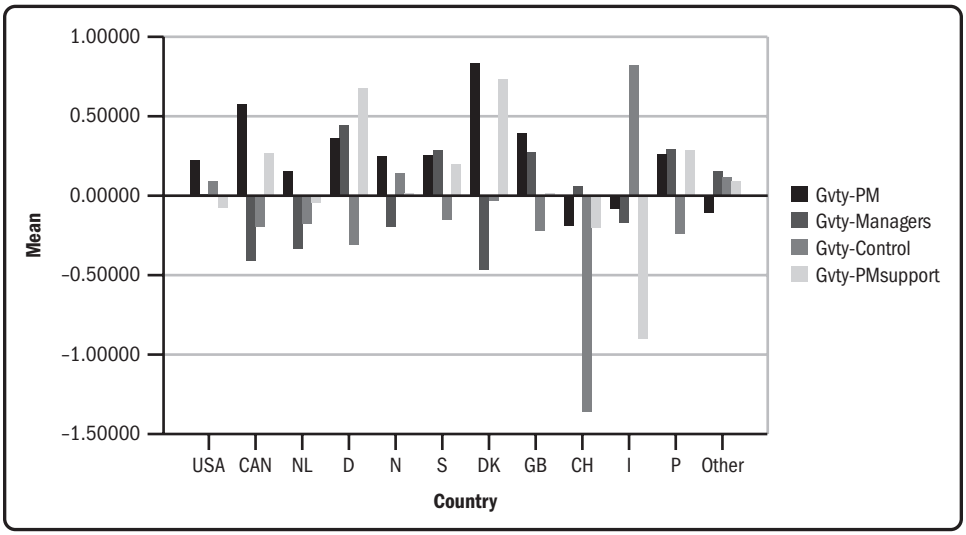

Figure 6.11: Governmentality by country.

The following descriptive statistics list the nominal differences by demographics. Figure 6.11 shows the relative scores of governmentality factors by country. The institutionalization of governmentality at the project manager level is expressed most strongly in Denmark, followed by Canada, Germany, and the United Kingdom. Little alignment appears to be in place in the institutionalization of governmentality of line managers and project managers. Countries like Germany, United Kingdom, and Portugal align these systems, while other countries use contrary approaches. This indicates a weaker integration of line and project management objectives in the latter countries. Switzerland stands out with strong behavior control in its governmentality. Italy balances this with strong outcome control, while at the same time, providing the least amount of governmentality in the form of encouraging project managers to develop their skills further within the organization. The latter is seen most strongly in Denmark, Germany, Portugal, and Canada.

Figure 6.12 shows the relative score of governmentality factors by industry. The relative rankings identify the construction industry as the least encouraging for project managers in getting certified and in supporting their engagement with professional organizations. This is counterbalanced by the IT and engineering industries, which encourage

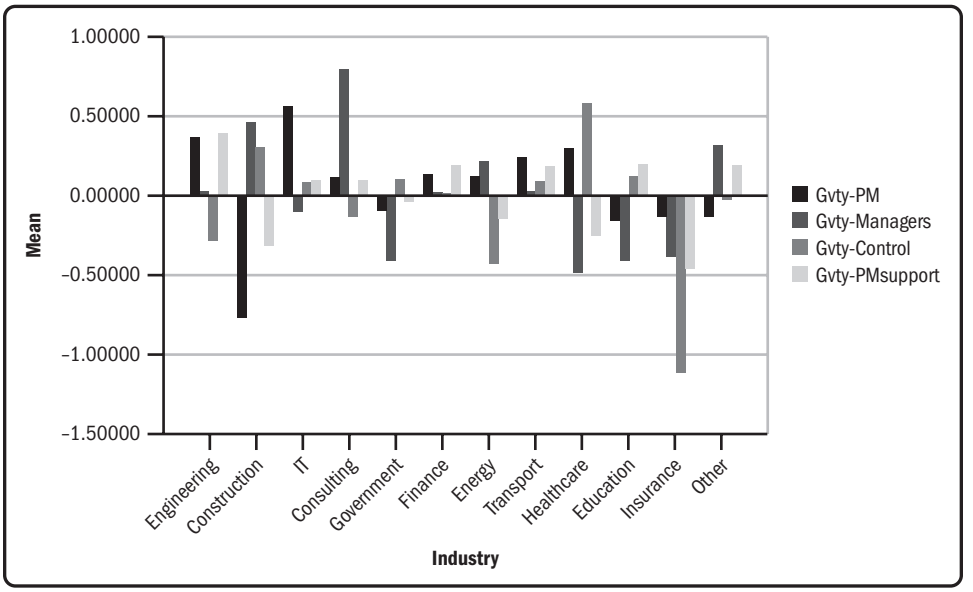

Figure 6.12: Governmentality by industry.

their project managers to join professional organizations. Alignment in the governmentality of project and line management is only indicated in the energy sector. Big differences prevail in all other industries, especially construction, IT, and healthcare. Behavior control of project managers prevails in the insurance, energy, and engineering sectors, whereas outcome control is most strongly expressed in the healthcare and construction industries. Development of project management capabilities is most strongly supported in the engineering industry, but is least expressed in the insurance, construction, and healthcare industries.

Figure 6.13 shows the relative score of governmentality factors by company size. Generally speaking, the governmentality of organizations with between 251 and 1,000 employees differs strongly from all other categories, showing the least governmentality in all measured factors. Institutionalizing governmentality for project managers is strongest in the smallest companies and weakest in the next higher group, with 251–1,000 employees. Line and project management's governmentality appears to be aligned in companies with up to 1,000 employees. Larger organizations show less integration, especially those that have between 10,000 and 30,000 employees. Behavior control is indicated

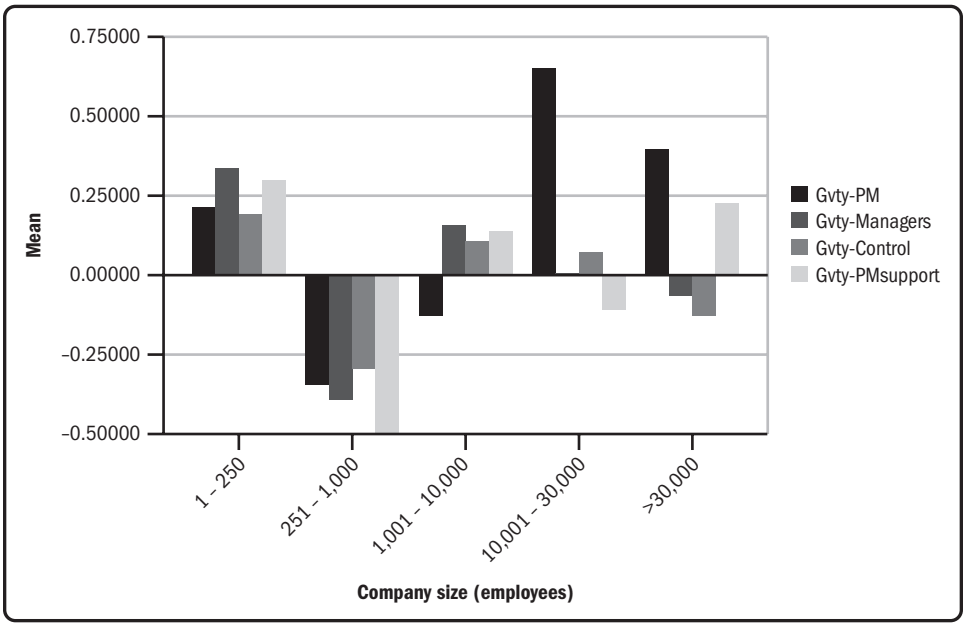

Figure 6.13: Governmentality by company size.

as dominating in organizations with between 251 and 1,000 employees, as well as those that have more than 30,000 employees. The highest expression of outcome control is found in the smallest organizations. Further developing project management is most strongly supported in the smaller and the largest organizations, and is least supported in organizations that have between 251 and 1,000 employees.

Figure 6.14 shows the relative score of governmentality factors by project size in terms of budget. Institutionalization of governmentality at the project level in the form of encouragement for certification and support for engagement in professional organizations is strongest in projects between €5 and €10 million. Alignment of remuneration systems for project and line managers is done in the smallest and largest projects, but it differs substantially in projects of €0.1 and €1 million, with a steady decline of the difference with increasing project size. Outcome control prevails in projects up to €1 million, whereas behavior control dominates in projects between €1 and €5 million and above €10 million. Further development of project management in the organization is least expressed in the smallest projects, contrary to projects of all other sizes.

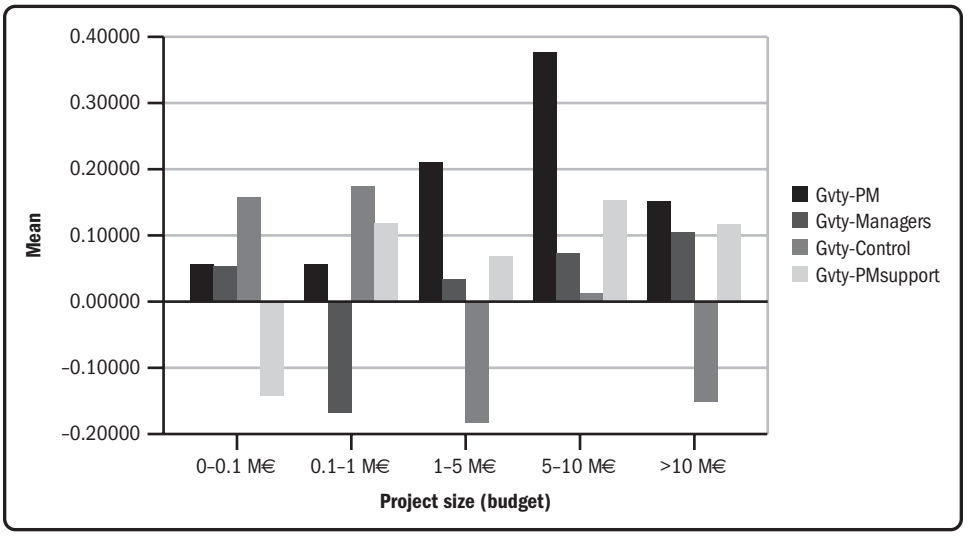

Figure 6.14: Governmentality by project size.

This framework for governmentality showed the importance of governmentality dimensions for the successful implementation of governance. Successful organizations (in both measures of success) create a culture of collaborative work and group thinking, and encourage their project managers to develop their skills further within their organizations. Organizations with successful project businesses also encourage their project managers to get certified and support them in working with professional organizations. Those organizations with success in governance implementation align the remuneration system of project and line managers.

Part 1 of the quantitative analysis has looked at the three levels of governance and governmentality. It started by testing our hypotheses about organizational enablers for governance and governmentality in the realm of projects. This has contributed to answering RQ2. It then continued by providing an overview of the governance and governmentality practices by country, industry, company size, and project size. This has contributed to answering RQ1.

Part 2 will take an organization-wide perspective and analyze the combined patterns of the three governance and governmentality levels with the aim of modeling possible mediation effects that stem from the enablers of governance and governmentality.

Part 2: Mediation Analyses

In this section, we present our quantitative data analysis results from an organization-wide view of governance and governmentality. We first use exploratory factor analysis to identify the measurement constructs for the concepts of organizational enablers (divided into their constituent parts: factors and mechanisms) and success. Then, we use mediation analysis to test the relationship among these three variables. The reason for using mediation analysis is because it provides a way to understand the mechanism through which the initial variable affects the outcome (Baron & Kenny, 1986), and thus, how organizational enabler factors are supported by mechanisms to affect project success.

To derive at the distinction between organizational enabler factors and their associated mechanisms and success, we categorized the questionnaire items as shown in Table 6.6. Factors were regarded as mental states or attitudes that pervade the organization and precede the occurrence of related mechanisms. Examples of factors include the value system, leadership, or the infrastructure construct (which is the measure for the mental scope of the communication horizon). Mechanisms were regarded as organizational governance practices that support factors,

Table 6.6: Categorization of questionnaire items into factors, mechanisms, and success measures.

Mechanisms			Factors		
Questionnaire item	**Sub-item**	**Question**	**Questionnaire item**	**Sub-item**	**Question**
6	1	Reporting system used	9		Infrastructure
6	2	Common method	13		Decision-making style
6	3	Project selection	14		Organization structure
6	4	Project coordination	21–27		Flexibility
8	1–3	Project manager support	28		Values
8	4–5	Incentives	34		Role as project manager
10–11		Meetings/reviews	35		Main drivers for decision making*
12		Portfolio decisions*	36	1–3	Leadership
20		External control			
15–19		Governance paradigm—control	***Success***		
29–33		Governance paradigm—orientation	36	4–6	Governance success
			36	7–9	Project success
			36	10–12	Corporate success

Note: * = not used in factor and regression analyses

such as the reporting system to be used, the meeting schedules, and the incentive systems.

At the outset, we followed the suggestion from Chang et al. (2014) and applied a Harman test by doing unrotated factor analysis across all variables (including all the independent, dependent, and mediator variables) to identify whether one factor accounts for the majority of variance (which would show a CMV threat). We found no such factor and, therefore, excluded CMV issues.

Constructs for Factors, Mechanisms, and Success

Exploratory factor analysis (EFA) was used on the questionnaire items for factors, mechanisms, and success (Table 6.6) because of a lack of guidance from existing theory at the organizational level (as opposed to the distinct levels used in Part 1 for each of the three governance levels). EFA searches for unknown underlying structures in the data. We conducted descriptive data analyses to check the normality of the data through skewness and kurtosis. The data satisfied the underlying assumptions of the multivariate techniques we used. Questionnaire items 12 (i.e., portfolio decisions) and 35 (i.e., drivers for decision making), shown in Table 6.6, were excluded from these analyses, because the scale (i.e., selection of items using multiple mentioning) did not allow for normality of the data.

Enabling Mechanisms

The Kaiser-Meyer-Olkin (KMO) value of 0.698 (with significance $p < .001$, which is well above the minimum of 0.60 for exploratory factor analysis) showed the data's adequacy for factor analysis (Field, 2009). We performed principle component analysis with Varimax rotation, with minimum Eigenvalue of 1.0 for factor acceptance (Field, 2009). Factor loadings at or above .45 were considered significant for a sample size of 150 to 200 (Hair, Anderson, Tatham, & Black, 1998). Iterative factor analyses were performed. The final model with six factors explained 54% of the variance and was interpretable (see Table 6.7).

We named the factors Governance Orientation, Review, Institutionalization, Professionalism, Meetings, and Incentives. Factor scores were saved and replaced the original data in further analyses. Table 6.7 also shows the scale reliability being higher than the threshold of 0.60 (Field, 2009). Item-to-item correlations and item-to-total correlations were also examined for each factor. The thresholds of 0.30 and 0.50,

Table 6.7: Final enabling mechanisms factor model and reliability measures.

Final factor name	Governance orientation	Review	Institutionalization	Professionalism	Meetings	Incentives
Eigenvalue	4.844	3.011	2.006	1.848	1.593	1.469
% variance explained	11.078	10.069	9.370	8.465	8.287	6.889
Accumulative %	11.078	21.147	30.517	38.982	47.269	54.158
Scale reliability (alpha)	0.730	0.845	0.758	0.696	0.656	0.740
Long-term objectives	0.807					
Profit	0.803					
Stakeholder satisfaction	0.690					
Decision making	0.655					
Remuneration	0.562					
Program review		0.879				
Project review		0.796				
Portfolio review		0.760				
Coordination			0.809			
Methodology			0.742			
Institution and role			0.701			
Reporting			0.617			
Support				0.701		
Certification				0.636		
External standard				0.617		
Professional organization				0.607		
Meetings with project managers					0.763	
Meetings with management					0.762	
Meetings with external					0.610	
Line managers' salaries						0.813
Project managers' salaries						0.804

respectively, were all met. Therefore, we conclude that the final factor analysis model for governance practices was reliable.

The six enabling mechanisms dimensions imply the following:

- *Governance orientation* represents the shareholder versus stakeholder orientation in the overall governance of the organization.

- *Review* measures the frequency with which projects, programs, and portfolios are reviewed within an organization.
- *Institutionalization* measures the extent to which project governance practices are institutionalized, such as through the use of reporting systems, methodologies, institutions for project selection and coordination, and so forth.
- *Professionalism* measures the degree of professionalism of project governance—for example, whether project managers are encouraged to get professional certifications, work with professional organizations, and so on.
- *Meetings* represents what kind of meetings are involved in project governance—for example, meetings with project managers, with management in the organization, or with external organizations for coordination or other issues.
- *Incentives* measures to what extent the income of project managers and line managers is impacted by project results.

Enabling Factors

We applied the same procedure of factor analysis to identify the constructs for enabling factors. A KMO of 0.795 with significance $p < 0.001$ shows adequacy to perform factor analysis. The final model with seven factors explained 62% of the total variance (see Table 6.8).

Cronbach alpha values for the last two factors (0.319 for Bureaucracy and 0.318 for Flexibility in Table 6.8) were too low to meet the threshold of acceptable reliability (that is, a minimum of 0.60, according to Field, 2009). Thus, we excluded these two factors from further analyses. The explanatory power after excluding these two factors changed to 50.44%, which is still higher that the acceptance threshold of 50%, as suggested by Field (2009).

The resulting five-factor model for organizational enablers consists of the following:

- *Infrastructure:* This represents the extent to which an organization allows information exchange within projects, across projects, and within the organization and beyond—thus, it refers to the authority of project managers in terms of exchanging information.
- *Leadership:* This is the extent to which governance is established by a strong leader and is maintained and further developed over time.

Table 6.8: Factor model and reliability measures of enabling factors.

Final factor name	Infrastructure	Leadership	Governmentality	PG—Flexibility	GoP—Flexibility	Bureaucracy	Flexibility
Eigenvalue	5.858	2.918	1.710	1.523	1.314	1.204	1.038
% variance explained	12.295	10.990	10.847	8.360	7.946	6.431	5.392
Accumulative %	12.295	23.285	34.132	42.492	50.438	56.868	62.260
Scale reliability (alpha)	0.800	0.780	0.765	0.664	0.586	0.319	0.318
Information exchange within company	0.843						
Information exchange with external organizations	0.792						
Information exchange across projects	0.789						
Information exchange within projects	0.570						
PMO alike		0.764					
Leader		0.714					
Project governance roles and responsibility		0.650					
Organizational roles and responsibility		0.517					
Ties with external			0.703				
Empowerment			0.702				
Encouragement			0.692				
Matrix organizational structure			0.518				
Coach			0.494				
Collaborative and team culture			0.484				
Project structure				0.783			
Project roles				0.748			
Meetings				0.676			
Leadership flexibility					0.734		
Governance flexibility					0.651		
Hierarchical structure						0.755	
Central decision making						0.645	
Organizational flexibility							0.747
Function flexibility							0.562

- *Governmentality:* This represents the mental predisposition of the governors toward those who are governed. Examples include the level of empowerment, team culture, and so on.
- *PG—Flexibility:* This represents the flexibility at the project level, that is, to what extent the project can adapt its structure, roles, meeting schedules, and so on to the emergent needs.
- *GoP-Flexibility:* This represents the flexibility at the level of groups of projects, that is, to what extent the institution's functions, leadership styles, and so forth are adjusted to the situation.

Success

The same procedure of factor analysis was applied to identify the constructs for success. The KMO value is 0.862 with significance $p < 0.001$; thus, it is adequate to perform factor analysis. The final model with seven factors explained 67% of the total variance (see Table 6.9). In this model, two factors of success were identified:

- *Organizational success* measures the success for both the temporary organization, like the projects (in terms of output, outcome, and customer satisfaction) and the permanent organization, like the company (in terms of meeting annual plans, customers' satisfaction, and employees' satisfaction).

Table 6.9: Final success factor model and reliability measures.

Final factor name	Organizational success	Governance success
Eigenvalue	4.730	1.277
% variance explained	38.061	28.677
Accumulative %	38.061	66.737
Scale reliability (alpha)	0.870	0.822
Customer satisfaction on company	0.848	
Customer satisfaction on project	0.797	
Outcome achieved	0.746	
Plan achieved	0.723	
Employees' satisfaction	0.664	
Achievement of time, cost, quality objectives	0.627	
Project governance helpfulness for project managers		0.886
Project governance helpfulness in achieving organizational objectives		0.875
Project governance used		0.708

- *Governance success* measures the success of the intermediate level of project governance between the project and the company in terms of its helpfulness and usefulness.

The Relationship Between Organizational Enablers and Success

As we discussed in Chapter 2, organizational enablers are made up of factors and their mechanisms, for both process facilitators and discursive abilities. We mapped the factors from the above factor analysis against this framework. Table 6.10 shows our results.

To model the relationship between organizational enablers and success, we followed the predominant logic that factors influence practices in an organization. For example, leadership (as a factor) impacts the working practices (mechanisms) within an organization. These practices, in turn, influence success. For instance, when a project sponsor takes an agency perspective toward the project manager (a factor), it leads to increased control structures (a mechanism) because of a lack of trust. Practicing this mechanism impacts the overall project results because of the additional agency costs (Müller & Turner, 2005; Turner & Müller, 2004). Through this theoretical perspective, we derived the following supposition:

Organizational enabler factors impact or create organizational enabler mechanisms, which impact success at both the governance and organizational level.

This is shown in the research model in Figure 6.15. The supposition implies that organizational enabler mechanisms mediate the relationship between organizational enabler factors and success according to Baron and Kenny's (1986) explanation of mediation.

Table 6.10: Mapping of enablers.

	Process facilitators	Discursive abilities
Factors	Infrastructure	Leadership
	PG—Flexibility	Governmentality
	GoP—Flexibility	
Mechanisms	Review	Governance orientation
	Institutionalization	Meetings
	Professionalism	Incentives

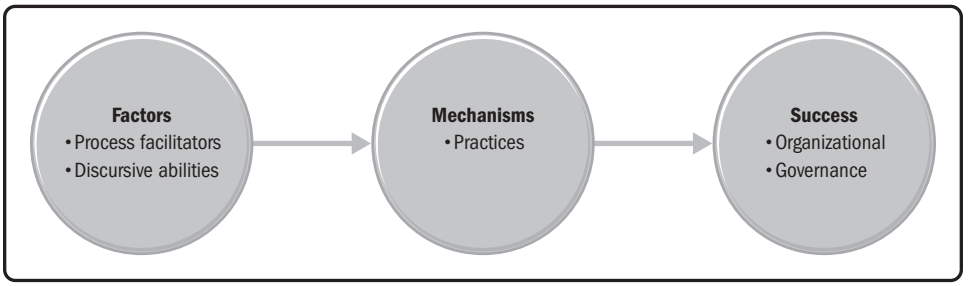

Figure 6.15: Research model for mediation of organizational enablers.

The causality described above is decisive for the analysis technique chosen. A causality between factors and mechanisms (i.e., between leadership as a factor impacting the frequency and contents of meetings as a mechanism) leads to a mediation model and the associated regression analyses. This causality rules out moderating models.

We took Baron and Kenny's (1986) four-step approach to test the mediation effect of organizational mechanisms on the relationship between organizational factors and success. These four steps are as follows:

- *Step 1:* Show that the initial variable *Factor* is correlated with the outcome variable *Success*. This step establishes that there is an effect that may be mediated.
- *Step 2:* Show that the initial variable *Factor* is correlated with the mediator variable *Mechanism*. This step involves treating the mediator as if it were an outcome variable.
- *Step 3:* Show that the mediator variable *Mechanism* affects the outcome variable *Success* with the initial variable *Factor* being controlled. The mediator variable and the outcome variable may be correlated because they are both caused by the initial variable, thus the initial variable must be controlled in establishing the effect of the mediator variable.
- *Step 4:* To establish that the mediator variable completely mediates the relationship between the initial variable and the outcome variable, the effect of the initial variable on the outcome variable controlling for the mediator variable should

be zero. Steps 3 and 4 can be realized in the same regression step.

The mediation regressions for organizational success are shown in Table 6.11, and those for governance success in Table 6.12. In addition to the results from Steps 1, 2, and 3 and 4 together, we calculated the variance accounted for (VAF) = Indirect effect/Total effect. Therein,

$$\begin{aligned}\text{Indirect effect} &= \text{Coefficient}_{\text{Independent variable-mediator variable}} \\ &\quad \times \\ &\quad \text{Coefficient}_{\text{Mediator variable-dependent variable}} \\ \text{Direct effect} &= \text{Coefficient}_{\text{Independent variable-dependent variable}} \\ \text{Total effect} &= \text{Indirect effect} + \text{Direct effect}\end{aligned}$$

We interpreted the results following Baron and Kenny's (1986), Kenny's (2009), and Hair, Hult, Ringle, and Sarstedt's (2014) suggestions.

For organizational success, we found the following:

- The enabling factors of Infrastructure, Leadership, and Governmentality have a moderate impact on organizational success.
- No mediating variable causes the impact of the enabling factor on organizational success to become zero. Thus, there is no full mediation in the sense of Baron and Kenny (1986) and Kenny (2009). Moreover, none of the models show a VAF higher than 80%. This means there is also no full mediation in the sense of Hair et al. (2014).
- The mediator variables affect the dependent variable. That means there are partial mediation effects (Kenny, 2009). We interpreted the strength of this effect by using the recommendation of Hair et al. (2014) of a minimum impact (VAF) of 20%. Thus, the mediation variable should account for at least 20% of the total effect in order to call it a partial mediation. Using this criterion, no mediating variable has a partial effect. However, Models 6 and 7 are close to the threshold, with a VAF of 18% and 19%, respectively. So, we see a borderline mediation of both governance orientation and professionalism on the relationship between governmentality and organizational success.

Table 6.11: Mediation results for organizational success.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Independent variable (IV)	*Infrastructure*	*Infrastructure*	*Leadership*	*Leadership*	*Leadership*	*Governmentality*	*Governmentality*	*Governmentality*	*Governmentality*
Mediating variable (MV)	*Professionalism*	*Meetings*	*Institutionalization*	*Professionalism*	*Meetings*	*Governance Orientation*	*Professionalism*	*Meetings*	*Incentives*
Dependent variable (DV)	*Org Success*	*Org Success*	*Org Success*	*Org Success*	*Org Success*	*Org Success*	*Org Success*	*Org Success*	*Org Success*
Step 1	0.242 ***	0.242 ***	0.345 ****	0.345 ****	0.345 ****	0.238 ****	0.238 ****	0.238 ****	0.238 ****
Step 2	0.235 *	0.354 ****	0.297 **	0.265 *	0.246 *	0.251 *	0.345 ***	0.291 *	0.266 *
IV-DV:	0.332 ****	0.344 ****	0.405 ****	0.371 ****	0.385 ****	0.246 *	0.243 *	0.263 *	0.282 *
MV-DV:	0.156	0.067	0.003	0.133	0.088	0.211 *	0.163	0.117	0.056
Step 4									
Indirect effect	0.037	0.024	0.001	0.035	0.022	0.053	0.056	0.034	0.015
Total effect	0.369	0.368	0.406	0.406	0.407	0.299	0.299	0.297	0.297
VAF	10%	6%	0%	9%	5%	18%	19%	11%	5%

Note: * = $p \leq 0.05$; ** = $p \leq 0.01$; *** = $p \leq 0.005$; **** = $p \leq 0.001$

Table 6.12: Mediation results for governance success.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Independent variable (IV)	*Infrastructure*	*Infrastructure*	*Leadership*	*Leadership*	*Leadership*	*Governmentality*	*Governmentality*	*Governmentality*	*Governmentality*
Mediating variable (MV)	*Professionalism*	*Meetings*	*Institutionalization*	*Professionalism*	*Meetings*	*Governance Orientation*	*Professionalism*	*Meetings*	*Incentives*
Dependent variable (DV)	*Gov Success*	*Gov Success*	*Gov Success*	*Gov Success*	*Gov Success*	*Gov Success*	*Gov Success*	*Gov Success*	*Gov Success*
Step 1	0.257 ***	0.257 ***	0.523 ****	0.523 ****	0.523 ****	0.379 ****	0.379 ****	0.379 ****	0.379 ****
Step 2	0.235 *	0.354 ****	0.297 **	0.265 *	0.246	0.251 *	0.345 ***	0.291 *	0.266 *
IV-DV:	0.270 *	0.344 ****	0.495 ****	0.542 ****	0.512 ****	0.234 *	0.237 *	0.207	0.298 *
MV-DV:	0.113	0.067	0.19 *	0.033	0.158	0.160	0.108	0.228 *	0.09
Step 4									
Indirect effect	0.027	0.024	0.056	0.009	0.039	0.040	0.037	0.066	0.024
Total effect	0.297	0.368	0.551	0.551	0.551	0.274	0.274	0.273	0.322
VAF	9%	6%	10%	2%	7%	15%	14%	24%	7%

Note: * = $p \leq 0.05$; ** = $p \leq 0.01$; *** = $p \leq 0.005$; **** = $p \leq 0.001$

We applied the same interpretation rule to the models for governance success:

- The enabling factors of Infrastructure, Leadership, and Governmentality have a moderate impact on governance success.
- No full mediation was found.
- Partial mediation was found with Meetings partially mediating the relationship between governmentality and governance success. Model 8 in Table 6.12 shows that 24% of the effect of governmentality on governance success is absorbed through the meeting practices.
- Governance orientation and professionalism have an even weaker impact on governance success than on organizational success and are further away from the threshold for partial mediation (Models 6 and 7).

These findings allow for model building. Below, we combine the findings on independent and mediator variables for the two separate success measures, organizational success and governance success. For acceptance of mediator variables, we use the more stringent threshold values of 20% suggested by Hair et al. (2014). Figure 6.16 shows the model for organizational success (i.e., the success of the project-based part of the business) as a function of Governmentality, Leadership, and Infrastructure. The mediator variables for Professionalism and Governance Orientation were just below the threshold of 20% and are, therefore, not included.

A multivariate regression of the model resulted in a highly significant model ($p = 0.000$) with an Adjusted R-square of 0.219 and the coefficients shown in Table 6.13. Multicolinearity is not an issue with a variance inflation factor (VIF) smaller than 1.03 being clearly below the threshold of 5. Thus, 22% of the success of the project-based part of the business can be traced back to governance and governmentality factors.

Figure 6.17 shows the model for governance success, with Governmentality, Leadership, and Infrastructure as the independent variables, and Meetings mediating the impact of Governmentality on Governance Success.

A multivariate regression of the model for governance success resulted in a highly significant model ($p = 0.000$) with an Adjusted R-square of 0.356 (VIF < 1.3) and the model coefficients shown in Table 6.14. It shows that 36% of governance success can be traced back

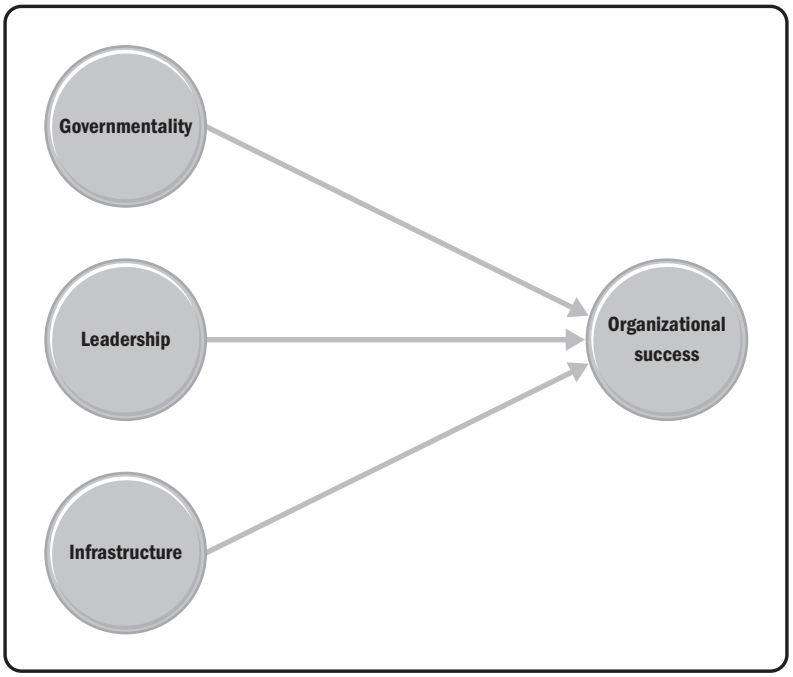

Figure 6.16: The model for organizational success.

to Governmentality as an enabling factor and its mediator mechanism Meetings, as well as the factors for Leadership and Infrastructure. Note that the significance of individual variables is not a criterion in the mediated part of the model because here, the coefficient is key for interpretation (i.e., a reduction in the coefficient between an independent and a dependent variable in the presence of a mediating variable is indicative of the level of mediation [Baron & Kenny, 1986]).

Table 6.13: Regression model for organizational success.

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	−.053	.069		−.765	.445
	Governmentality	.170	.079	.163	2.161	.032
	Leadership	.332	.071	.350	4.653	.000
	Infrastructure Information Exchange	.239	.069	.258	3.445	.001

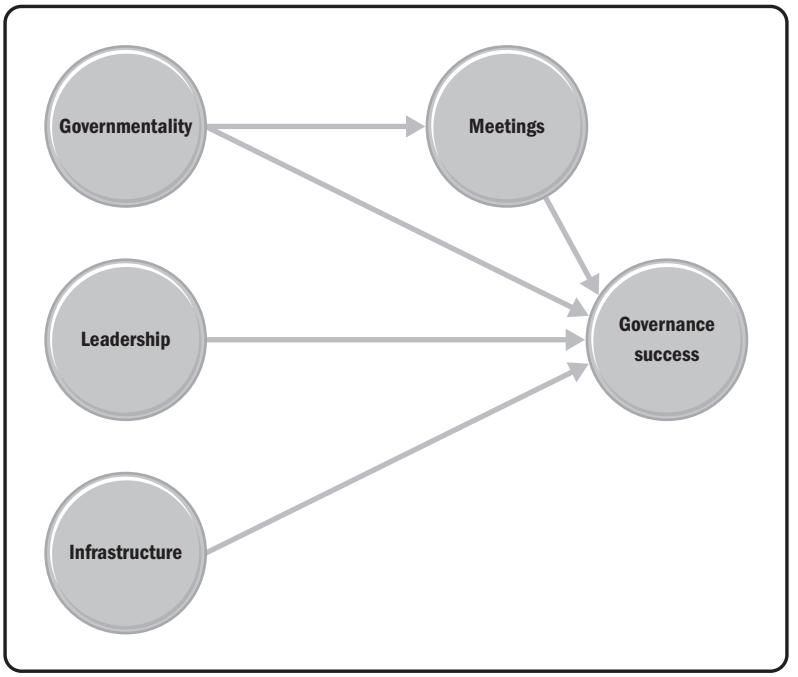

Figure 6.17: The model for governance success.

A regression of the same model without the mediator resulted in a significant model ($p = 0.000$) with an Adjusted R-square of 0.399 (VIF < 1.02) (see Table 6.15). Thus, 40% of governance success is explained by Governmentality, Leadership, and Infrastructure, with Leadership being approximately twice as important as both Governmentality and Infrastructure.

Table 6.14: Regression model for governance success.

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.057	.082		.693	.490
	Governmentality	.132	.099	.120	1.334	.186
	Leadership	.500	.090	.500	5.579	.000
	Infrastructure	.218	.094	.214	2.328	.022
	Meetings	.062	.093	.065	.672	.504

Table 6.15: Regression results for unmediated model for governance success.

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.009	.064		.144	.886
	Governmentality	.287	.073	.260	3.930	.000
	Leadership	.497	.066	.494	7.494	.000
	Infrastructure Information Exchange	.251	.065	.254	3.880	.000

In summary, the analysis done in Part 2 of the quantitative study showed that the enabling factors Infrastructure, Leadership, and Governmentality have a moderate impact on both Organizational and Governance Success (Tables 6.10 and 6.11).

The enabling mechanism Meetings has a partial mediating effect on the impact of Governmentality on Governance Success. The enabling mechanisms Governance Orientation and Professionalism have a weak partial mediating effect on the impact of Governmentality on Organizational Success.

This chapter has provided the results from our analysis of a global questionnaire. It showed the differences in layered and integrated perspectives of governance and governmentality. The next chapter discusses the results from all studies described in this report.

CHAPTER 7

Discussion

In this chapter, we discuss our findings and integrate the results of the four different studies.

This research used a successive approach to develop a framework for governance and governmentality in the realm of projects. It started by developing a theoretical base to define and classify organizational enablers and their constituent parts, which are factors and mechanisms for both process facilitators and discursive abilities. This categorization tool was then used in the qualitative studies to identify possible enablers and interpret them through institutional theory, and in the quantitative study to identify the most influential enablers, as well as to investigate the complex nature of the interaction of factors and mechanisms. In parallel, the research looked at the timely development of governance and governmentality in companies of different sizes, geographies, and with changing contexts. This approach allowed us to do the following:

- Gradually reduce the number of potential organizational enablers to those with the largest impact
- Assess the phenomenon of governance and governmentality in the realm of projects from two distinct perspectives:
  - A horizontal perspective that distinguishes between the layers of project governance, governance of projects, and governmentality
  - A vertical perspective that looks at an organization in its entirety
- Identify contextual factors that impact the governance and governmentality in organizations over time
- Interpret the findings in light of one of the most stable organizational theories, that of institutional theory (Scott, 2014)

In the following sections, we first discuss our theoretical point of departure, which is the concept of organizational enablers and their constituent parts. Then, we discuss the findings of the qualitative and quantitative studies, followed by the most salient demographic and contextual factors. Finally, we relate the findings to our theoretical perspective of institutional theory.

Organizational Enablers

The concept of organizational enablers was developed in this study through a systematic literature review, which identified process facilitators and discursive abilities as the two elements of organizational enablers. Moreover, each of these elements is made up of *factors* and *mechanisms*. Factors for process facilitators are the characteristics, conditions, and variables that directly impact the effectiveness, efficiency, and viability of governance. For discursive abilities, the factors are the communicative and interactional characteristics that impact the mentality and attitudes of people. Mechanisms support the factors by increasing the likelihood of certain outcomes. Over the course of the research project, we learned that factors relate to the mental predispositions, attitudes, and approaches of managers or institutions in the way they want governance and governmentality to function in their organizations. Mechanisms relate to the organizations' practices, which possibly stem from the implementation of factors by their respective managers. However, practices/mechanisms must not be supportive of all factors simultaneously and there are likely interaction effects among mechanisms, which impact the efficiency and effectiveness of governance and governmentality.

Through a systematic literature review and six qualitative case studies, we identified patterns of organizational practices for the layers of project governance, governance of projects, and governmentality:

- Organizational practices for project governance center on steering committees, methodologies, and PMOs.
- Organizational practices for governance of projects include company-wide methodologies, standardization, and appropriate media and infrastructure.
- Organizational enablers for governmentality include project autonomy, willingness to take responsibility, and mechanisms such as people's perception of the organization as an open system.

We tested and found support for these findings in a subsequent quantitative study by comparing the governance and governmentality practices in organizations experiencing different levels of success with their governance and their project-based part of the organization. This showed the following:

- Organizations that are most successful in the project-based part of their business have much more strongly developed leadership, institutionalization of governance, and formalization of the related organizational roles. All of these are governance of projects factors (see Figure 6.2).
- Organizations that are most successful in implementing their governance system stand out by governing their projects through outcome control, support their project managers in their professional development, and align the remuneration system of their managers. All of these are governmentality factors (see Figure 6.1).

These two findings support the positioning of governmentality as the link between the different layers of governance (see Chapter 1). Governmentality links and aligns the governance approaches at both the project and group of projects levels. This alignment reduces friction between the layers and guides project managers toward a shared understanding of the way governance is done in the organization. Building on this shared understanding, the institutionalization of governance sets in by clearly defining practices, roles, and responsibilities, which are typically found in the most successful organizations. However, all this does not happen automatically. Behind both governance and governmentality, is strong leadership, in the form of establishing both in the first place and then ensuring continuous maintenance and development. Leadership was found to be most influential in all of the qualitative and quantitative studies in this research. Therefore, leadership can be assumed to be the most basic, but also the most important, driver for enabling governance in organizations.

Two other factors stood out throughout the different studies: governmentality and infrastructure. The former refers to mental cognition and emotional attachment of project managers in doing their work, whereas the latter refers to the authority granted to project managers in terms of interaction for information exchange, from as small as within the project, to across projects in an organization, or beyond organizational boundaries. The term *infrastructure* was chosen for this, as this factor

describes the mental infrastructure for project managers' actions, and thus, their mental sphere of action.

A contradiction lies between our qualitative and the quantitative findings when it comes to the importance of flexibility, both at the project and organizational levels. The literature and qualitative study findings feature flexibility as a major mechanism for governance, while the quantitative study did not identify a significant impact or role for it. This may stem from the questionnaire design, which did not distinguish between different forms of flexibility, such as ad hoc flexibility as a result of a lack of organizing or the need for improvisation (Leybourne & Sadler-Smith, 2006), and controlled flexibility within well-structured organizations in order to achieve the best fit between the organization and project (Shao, Müller, & Turner, 2012). In light of this, we appreciate the importance of flexibility, but we do not have statistically sound support for it in the present study.

In the last stage of successively reducing the potential organizational enablers (Part 2 of the quantitative study), the three factors of Leadership, Governmentality, and Infrastructure stood out as being correlated with organizational and governance success. These factors are supported by a number of mechanisms, of which Professionalism and Meetings turned out to mediate (albeit at varying levels) the relationship among the three factors and the two success measures. Figure 7.1 shows the mediating effects of Professionalism and Meetings on the relationships that

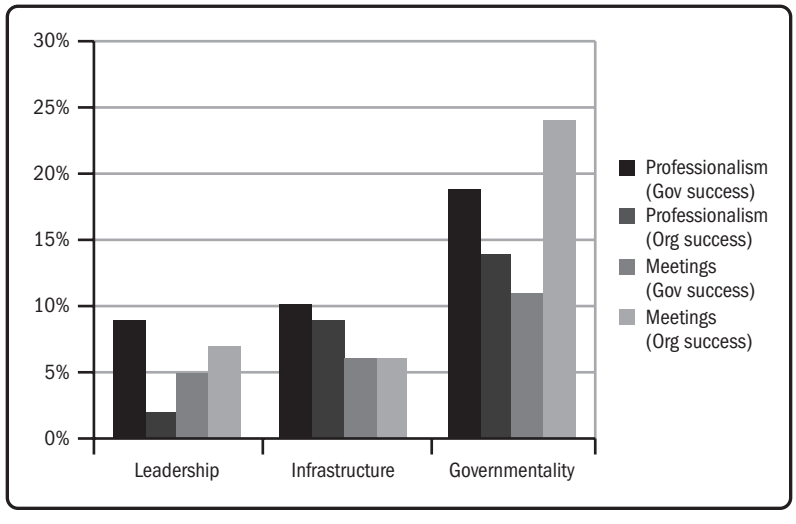

Figure 7.1: Mediating effects across factors.

Table 7.1: Most influential organizational enabler factors and their generic and specific mechanisms.

	Process facilitators	Discursive abilities	
Factors	Infrastructure	Leadership	Governmentality
Generic mechanisms	Professionalism Meetings		
Specific mechanisms		Institutionalization	Governance orientation Incentives

Leadership, Infrastructure, and Governmentality have with both organizational and governance success. Even though most of the effects are below the suggested threshold of 20% for partial mediation (Hair et al., 2014), a small, but continuous, mediation across all the main factors is visible. We infer from this that Professionalism and Meetings are generic mechanisms, which means they are not limited to serving as a mechanism for one single factor; instead, they support several factors simultaneously.

Complementary to this are mechanisms that support one single factor alone. These are Governance Orientation (18% and 15% mediation effect for organizational success and governance success, respectively) and Incentives (5% and 7%) for Governmentality, as well as Institutionalization (0% and 10%) for Leadership.

From this, we conclude that organizational enablers consist of factors, generic mechanisms, and specific mechanisms. These results are shown in Table 7.1.

Table 7.1 shows the most important factors and mechanisms. Their relative importance can be seen from the standardized coefficients in Tables 6.13 and 6.14. Priority in determining organizational success lies with Leadership (0.350), followed by Infrastructure (0.258) and Governmentality (0.163). Thus, the relative weight of Leadership is about twice as high as that for Governmentality. Priority for determining Governance Success lies also with Leadership (0.494), followed by Governmentality (0.260) and Infrastructure (0.254). Here, the weight of Leadership is about twice that of each of the other two factors. This identifies leadership as the most crucial factor for enabling governance in organizations.

Contextual Influences

Company size emerged as a distinguishing factor throughout the qualitative and quantitative studies. Small companies (up to 250 employees) showed

the widest variance in their approaches to governance and governmentality, and large companies (more than 1,000 employees) showed an increasing maturity in their approaches. However, medium-sized companies of 251 to 1,000 employees were found to be least prepared for governance and governmentality of their projects. These companies predominantly subordinated the project-related activities to their production process, thus making project tasks a part of their daily operations. Reasons given for this were the additional (higher) costs of project-based organizing. These companies did not possess the critical mass of employees to balance their utilization over the projects they were doing. That led to idle times for some resources. Once these companies grew their business to the extent that they needed more than approximately 1,000 employees, they reached the critical mass of resources and projects that allowed them to balance their resource pool and project resource requirements to work efficiently.

Other contextual and demographic factors did not show importance. The differences by countries, industries, and project size were statistically insignificant, but showed up in the qualitative studies with the Chinese organizations being more process-oriented, while Swedish organizations were more people-oriented in their governance approaches.

In Chapter 5, we presented the frameworks for project governance, governance of projects, and governmentality. This shows the nominal differences (as opposed to the significant differences) across countries, industries, and size of company and projects. To that end, it is informative in nature, but we do not mean to draw statistically robust conclusions from it.

The impact of contextual changes on projectification and related governance can be seen in Table 7.2. Equal changes do not cause similar reactions in projectification and governance. Instead, changes in projectification and governance appear to be triggered by the CEOs. Similar findings were made in the studies on changes in PMOs (a governance institution), which also showed that top managers are the ultimate source for changes in PMO mandates (Aubry, Hobbs, Müller, & Blomquist, 2011; Aubry et al., 2012).

An Institutional Theory Perspective

In Chapter 4, we did a first categorization of enablers into the three pillars of institutional theory, which are regulative (i.e., formal regulations), normative (i.e., informal norms, values, standards, and roles), as well as cultural-cognitive (i.e., shared conceptions and frames for sensemaking).

The three main factors we identified for enabling governance fit well into these pillars and thereby support, or are supported by, institutional theory.

Table 7.2: Influence of changes on governance.

Small Swedish	Medium Swedish	Large Swedish	Small Chinese	Medium Chinese	Large Chinese
Change in context					
No change Stable management team, expanding market share	More projects, more revenue from projects, consolidation and centralization, new CEO	New CEO Acquiring new companies	No change	Middle manager resistant to project management left the company	Acquiring new companies
Change in projectification					
From high to very high 	Low to very low, but increasingly big projects 	High to medium 	No change, from low to low 	From low to medium 	From high to very high 
Change in governance					
Foster professionalism	Subordinate projects even more to operations	Flatter structures, consolidation of institutions, and more communication	None	Project manager responsibility increased, more business orientation, role division between project contents and project business responsible managers, project management thinking moves from top to the bottom, bypassing middle management	Instill project management culture in acquired companies; PMO migrates from a virtual to a permanent organization

The *regulative* pillar is represented in the findings by the (mental) Infrastructure factor. This factor sets the formal boundaries within which project managers can act and interact. Organizations that restrict the mental infrastructure to project levels score among the lowest in terms of success in governance and with their project-based business. Contrarily, organizations that have the widest scope of interaction for project managers (i.e., within projects, within the organization, and external to the organization) score highest in terms of organizational and governance success. Reasons for limitations are found in a perceived competitiveness of projects, an unwillingness to share knowledge with business partners, or the perceived confidentiality of the project's contents. In such circumstances, a limitation of interaction at the cost of failing organizational and governance success should be reconsidered.

The *normative* pillar is represented by the leadership factor. Leadership, as outlined in this study, sets the norms and values for governance and governmentality to be established and for its development over time. Leadership is contingent upon interaction and communication. Therefore, meeting schedules, contents, and scope are important mechanisms for implementing governance through leadership. Leadership not only featured as the most important factor throughout all of our studies; it also showed the widest difference in terms of organizations with the lowest levels of success and organizations with the highest levels of success in their project-based parts (see Figure 6.2).

The *cultural-cognitive* pillar is represented by the governmentality factor. Governmentality is the way the governance organization presents itself to those who are governed, thereby expressing the attitude toward those who are governed and setting the tone for social interactions. In this study, it is measured predominantly along the lines of empowerment, encouragement, coaching, collaboration, team culture, and matrix organizing. Organizations with very high levels of success with their governance system score especially high in the alignment of remuneration systems across line and project managers, and in their support for the professional development of project managers and the trust they place in project managers, as shown by outcome control in projects.

Organizational Enablers: An Institutional Reflection

Institutional theory most commonly studies how institutions undergo processes of isomorphism and change over time at a field or

organizational level. The identified characteristics of organizational enablers help the organization manage the diverse institutional pressures under which it operates. Flexibility and alignment allow organizations to cope with institutional changes and stability, and alignment allows for the organization to drift along institutional isomorphism processes. The unit of analysis in this study is the organization rather than the field; consequently, the focus is on the organizational level. Nevertheless, in our study, we observe both how institutional field pressures impact the development of the governance systems as well as how internal organizational processes develop governance.

From our longitudinal study, we observed that external institutional field pressures are most evident in the large companies through the reported trend of increased external monitoring of the companies in their drug development processes. Another institutionalized trend appears to be the tendency of large companies to acquire small ones in order to remain competitive and dominant in the market. Altogether, this may suggest an ongoing field-level standardization and homogenization of the pharmaceutical field. The companies make money by being innovative, but the field-level trends appear to be counter-productive as new start-up companies are bought and institutionalized into the big companies' ways of thinking. The increased number of formal rehearsals and reviews of the project process are both opportunities and potential threats to innovation. They may enable knowledge sharing across companies and universities, but they may also limit the number of ideas accepted. The companies appear to be governed by multiple orders of worth (i.e., the order of innovation and scientific freedom versus the order of strict controls, micromanagement, and standardizations, or put differently, order of producing knowledge-friendly environments versus producing cost-effective, streamlined environments [see Table 7.3]) (Boltanski & Thévenot, 2006; Stark, 2009). This creates challenges and tensions in the companies about the legitimacy of different behaviors.

As we continue our discussion to look at the medium-sized companies from this perspective, we may infer that their institutional tensions appear through pressures stemming from diverging orders of worth. The two most prominent orders of worth create a crossroads of internal tensions between being either a productified or a projectified company. Governance systems in the realm of projects are, therefore, constantly under negotiation and are sometimes eliminated and undermined (the Swedish medium-sized case company in this research provides a strong

Table 7.3: Dominating institutional pressures stemming from diverging orders of worth.

	Large companies	Medium companies	Small companies
Dominating tensions among orders of worth	Scientific freedom and innovation versus Efficiency and strict controls and standardization	Productified company versus Projectified company	Preserving existing governmentality versus Growth
Resulting situation due to competing orders	Swedish: Conflicts are arising Chinese: Acceptance of tensions	Swedish: Strong internal conflicts Chinese: Acceptance or ignorance of tensions	Swedish: Acceptance of tensions Chinese: Intentional ignorance or shielding

example of the latter). Governmentality appears to be rather fragmented and weak until the companies find their way and decide which order to follow. In the medium-sized Chinese company, the direction of how to grow and which path to choose was clearer than in the Swedish case and had consequently developed stronger governmentality.

The small companies chose two very different approaches for dealing with institutional pressures: They showed tendencies to act by either shielding from or opening to the environment. The Chinese small company used strict governmentality and tended to be a bit insensitive, meaning they shield themselves from institutional pressure. The internal culture and style of knowledge sharing leaves, to generalize harshly, only one door that opens to external pressures: the door to the CEO. The CEO and his authority and competence thereby play a very critical role in the organization's ability to be flexible, aligned, and stable. The small Swedish company, like the Chinese company, appears to be shielding itself from institutional pressures in the sense that it maintains its existing governmentality and culture of project thinking (i.e., only employing people with similar mindsets). At the same time, the Swedish small company is sensitive to employees' ideas through a consensus decision-making style. Consequently, through this employee sensitivity, the organization becomes more open to its institutional setting though input from every employee and attempts to proactively drift with and adapt to market pressures. The small companies are not demonstrating identity crises, as the medium-sized companies are doing. The dominant orders of worth in these small companies, rather, are about how to preserve existing governmentality while growing. The cultures in the two companies are very different, but both are very strong.

The two companies' ways of doing business are institutionalized, but this is potentially threatened as the companies grow.

These diverging orders of worth in the companies result in either: (1) situations of conflicts—for example, in the Swedish medium-sized company when the project people are constantly fighting for their role to exist or in the Swedish large company where the drug development people appear more and more skeptical to the current trend of the company's development; or (2) acceptance of the institutional tensions, through stable compromises—for example, in the Swedish small company, which wants both to be shielded and open, and so, tries to find a middle way as it grows. Companies gradually and continuously need to find compromises between freedom and control, and keeping their values and adjusting them to emergent needs, without losing the core of their culture and governmentality among employees. There is one other possible result: (3) intentional ignorance by obeying the dominant order of worth and ignoring others—for example, as in the small Chinese company, whose governance and governmentality appear to be rather unaffected by its surroundings (see Table 7.3).

Even though our study suggests that the three factors (i.e., infrastructure, leadership, and governmentality) need to be in place to generate effective organizational enablers, leadership emerges as the most important one. This is because of the multiple orders of worth that coexist in companies relying on projects as a major part of their business activities. Leadership is vital for setting the vision, giving direction, and establishing the related ground rules to achieve objectives. Leadership, as an enabler for governance in the realm of projects in our companies, may be related to the interdisciplinary, and sometimes interorganizational, nature of projects, where the project actors become carriers of different institutions (Scott, 2012). The actors then will be exposed to multiple, sometimes conflicting, institutional demands. Each institutional demand includes specific regulatory regimes, normative orders, and cultural-cognitive logics (Pache & Santos, 2010; Scott, 2012), which must be aligned through a common vision and direction, given through leadership.

The pressures put on actors who operate under multiple institutional demands, limited time, and limited resources may raise institutional exceptions in projects (Orr & Scott, 2008) as means to manage the multiple pressures and demands. These exceptions may be costly for the company if the project actors try to reinvent the wheel or invent new wheels that do not fit the company's overall strategy. But the exceptions

may also be intentional and may serve as vanguard projects, breaking free from current institutional norms and leading to innovation. For example, the large companies appear to be holding back from allowing for vanguard, innovative projects, perhaps because of previous costly experiences. This, however, occurs at the expense of losing their innovativeness. The company, as a holder of multiple projects, thereby faces the paradoxical situation of finding equilibrium where projects and their actors are, on the one hand, allowed to perform their specific missions under specific institutional demands and might even be allowed to create institutional exceptions that slightly drift away from the company's dominating institutional order, while, on the other hand, they are expected to align project and business objectives.

Companies that perform a lot of projects are complex entities involving multiple institutional orders and operating under multiple institutional demands at various levels. For example, the regulative elements (laws, formal regulations, and so on) in a pharmaceutical company differ between drug development projects and business improvement projects; the former are exposed to more external, as well as internal, control and regulations. This, in turn, impacts the normative elements (standards, roles, conventions, practices, and so forth) that are appropriate for each project type, and so, affect the nature and importance of different cultural-cognitive elements (shared beliefs, identities, logics of actions, etc.). Moreover, the medium and large companies in our study are global actors. This puts additional institutional pressures upon the project actors through new sets of institutional demands and also places additional pressures on the company's governance system.

Organizational enablers in our companies are characterized by ongoing negotiations among Infrastructure, Leadership, and Governmentality concerning process facilitators and discursive abilities that jointly allow the governance and governmentality of projects to prosper.

This chapter has summarized and positioned the findings of the four studies and reflected on these results in light of the theoretical perspective of institutional theory. The next chapter will draw conclusions from this research and answer our research questions.

CHAPTER 8

Conclusions

In this chapter, we answer the research questions, reflect on the study, and draw conclusions about the managerial and theoretical implications of this research. Finally, we suggest further research and summarize the study's contribution to knowledge on organizational enablers in the realm of projects.

This research addresses the nature and types of organizational enablers for governance and governmentality in the realm of projects. We conducted four studies to answer our research questions. First, we performed a systematic literature review on the concept of organizational enablers and their application to the project management–related literature. This resulted in the following:

1. A distinction between *project governance*, which relates to the governance of individual projects; *governance of projects*, which relates to the governance of groups of projects, such as portfolios or programs of projects; and *governmentality*, which relates to the way governance institutions present themselves and express their attitude toward those they govern, which influences the nature of social interactions
2. A model of *organizational enablers*, comprising the two elements of process facilitators and discursive abilities, each with its particular enabling factors and mechanisms

This model was applied in subsequent studies, including the six case studies in China and Sweden, in which we identified underlying enablers in companies of different sizes, industries, and geographies. This was followed by a longitudinal study of the six cases which allowed us to identify contextual influences, their impact, and the development of governance and governmentality over time in these organizations.

Finally, a questionnaire-based quantitative study tested and validated the findings from the qualitative studies and used quantitative methods to explore possible patterns in, and strengths of, organizational enablers.

We can now answer our research questions.

Research Question 1—Governance Practices

RQ1: What are the practices for governance and governmentality in the realm of projects in organizations of different sizes and in different geographies?

We identified and proposed distinct patterns for practices in project governance, governance of projects, and governmentality through the systematic literature review and subsequently tested these in the six case studies. These patterns were supported by our quantitative results.

Practices for project governance include the use of the following:

- *Project management methodologies*: This ensures a tested and proven approach to the management of a project. Ninety-nine percent of the respondents to our questionnaire said that they have a methodology for managing their project. The interviews showed that all companies emphasized the use of methodologies and had decided on at least one preferred methodology.
- *Steering groups*: This is a widely used governance institution; 97% of all project managers said that they report to a steering group. In smaller companies, this is the CEO; in medium-sized companies, it is the CEO or someone delegated the responsibility by the CEO, such as the head of project management. Large organizations have to juggle a large number of steering groups, both internal and external to the organization.
- *Flat and flexible organizational structures*: Flexibility in the form of adapting organizational structures to the needs of projects was frequently mentioned in the interviews, but it did not feature in the quantitative study as being different between organizations with lower and higher levels of success. To that end, it appears to be a hygiene factor: Flexibility alone is a necessity, but it is not a sufficient factor for successful governance.

- *Meeting schedules that meet information and coordination requirements*: The minimum frequency of project reviews is once per month, with the majority of projects being reviewed twice per month. Coordination meetings with other managers are frequently held within the more successful organizations. Here, consensus finding is the dominant decision-making style (35%), followed by decisions made by one manager only (34%) or by experts (12%).
- *Top management support*: Success in implementing project governance is strongly influenced by leadership and management's attitude toward project governance. It features as the single most important organizational enabler for project governance.
- For large organizations in particular:
  - *Clearly defined roles and responsibilities*: This requires a critical mass of projects and resources, often found in organizations with more than 1,000 employees. This practice is frequently used in firms that are successful with the project-based part of their organization.
  - *PMOs*: PMOs are popular, but vary considerably in their mandates, because they address the idiosyncratic issues of an organization. The quantitative study showed a slight preference for having PMOs to ensure compliance with the organization's project management methodology.

Practices for governance of projects include the use of the following:

- *Company-wide project management methodologies*: Seventy-six percent of the respondents use the same methodology often to always.
- *Flexible organizational structures*: This flexibility is intended to align the parent organization and project needs. As a practice, it did not feature in the quantitative study as being different between organizations with lower and higher levels of success. To that end, it appears to be a hygiene factor; flexibility alone is a necessity, but it is not sufficient for successful governance.
- *Standardization of project selection, reporting, and review*: This refers to the standardization and institutionalization

of governance. The vast majority of organizations have standardized in such a way that they often to always use the same reporting system (71) and use the same institutions to select projects (64).

- *Appropriate media and technological infrastructure*: This is another hygiene factor, which was mentioned frequently in interviews, but did not feature in the quantitative study.
- *Alignment of projects and business*: This practice was frequently mentioned in the interviews and is well described in other research studies as a prerequisite for successful project governance (e.g., in Müller, Martinsuo, & Blomquist, 2008). The present study added the dimension of aligning the remuneration systems for project managers and line managers as a critical aspect of this practice.

Practices for governmentality include the following:

- *Autonomy of project managers*: The span of autonomy is wide. The greatest amount of autonomy is found in the smallest and the largest organizations. Medium-sized organizations (especially those with between 250 and 1,000 employees) grant the least amount of authority to their project managers by subordinating and governing project management to the operational production processes. Empowerment featured as another dimension with significant differences between organizations with above- and below-average success in their project business. The more successful organizations empower their project managers to a much larger extent than those with lower levels of success.
- *Self-responsibility*: The need to develop self-responsible project managers was strongly supported by the literature. However, the empirical investigations showed a wide span of practices. As in the point above, the medium-sized organizations showed, on average, little emphasis on developing self-responsible project managers. Process compliance is dominating the governance practices here.
- *Project thinking*: This is another practice that differs significantly between medium-sized organizations and others. Process thinking dominates governance in medium organizations.

At times, management thinks and talks in projects, while employees perceive their work as following the operational processes. Small and large organizations have pronounced project thinking and projectification.

- *Open system thinking*: This relates to project managers' perception of the organization as an open system, with both internal and external interfaces. The quantitative study identified the external orientation of project managers as one of the key practices (see Infrastructure below) that need to be enabled by the organization and implemented through the governance structure. Organizations that practice a culture of open systems thinking are significantly more successful in the governance of their projects.

We found no significant difference in governance practices between countries, industries, project size, and the level of project manager experience. This indicates a wide variety of governance approaches in all of these strata. However, differences were found in company size (and these are discussed in the above bulleted list). However, our interviews indicated a stronger role of process in governance in China versus a stronger role of individuals in governance in Sweden.

A more detailed description of the nominal differences by country, industries, company size, and project size can be found in the frameworks for project governance, governance of projects, and governmentality in Chapter 6.

Research Question 2—Organizational Enablers

RQ2: What are the organizational enablers for governance and governmentality in the realm of projects in these organizations?

This question was addressed from two perspectives. First, it was addressed from the perspective of the three levels of governance: project governance, governance of projects, and governmentality—thus, a "horizontal" or layered view of the organization (e.g., Part 1 in Chapter 6). Second, it was addressed vertically by looking at the entire organization as an integrated entity where the three layers are interwoven and organization-wide patterns are identified (e.g., Part 2 in Chapter 6).

We first answer RQ2 from the perspective of the layered approach.

The propositions developed through the conceptual study and tested in the qualitative study were:

- *P1: Organizational enablers for project governance include the authority to procure, implement, and execute governance frameworks and policies, and the presence of specialized project governance roles (which can be executed by institutions for project governance, such as sponsors, steering groups, or PMOs).*
- *P2: Organizational enablers for governance of projects include flexibility in structures and interactions, which allow for effectiveness in project selection and efficiency in project execution.*
- *P3: Organizational enablers for governmentality provide for the development of individuals who are mindful of the organization, self-responsible, and self-organizing to a degree that matches the goals of the corporation.*

Propositions P1 and P2 were supported by our qualitative study findings. Proposition P3 was partly supported. The case studies showed that governmentality spans much wider than has been described in the project management–related literature. Existing research emphasizes the need for mindful, self-responsible, and self-organizing employees in project-based settings. However, the empirical results of the case studies (and later, the questionnaire as well) showed that governmentality is also exercised using stringent and authoritative approaches to govern projects. To that end, governmentality spans from very strict authoritative approaches via rational/economic approaches to neoliberal approaches in the sense of Dean (2010). Although neoliberalism appears to be preferred in the organizational literature, corporate reality shows that many organizations actually use strict or rational approaches.

Through the qualitative study, we developed six hypotheses and subsequently tested them in the worldwide, web-based questionnaire:

H1a: There is a positive relationship between enablers of project governance and successful implementation of governance.

H1b: There is a positive relationship between enablers of project governance and success of the project-based part of the organization.

H2a: There is a positive relationship between enablers of governance of projects and successful implementation of governance.

H2b: There is a positive relationship between enablers of governance of projects and success of the project-based part of the organization.

H3a: There is a positive relationship between enablers of governmentality and successful implementation of governance.

H2b: There is a positive relationship between enablers of governmentality and success of the project-based part of the organization.

The quantitative analysis showed partial support for all six hypotheses. We tested the hypotheses by comparing governance and governmentality practices of organizations with different levels of success in implementing governance and with the project-based part of their organization. Results are shown in Table 6.3.

Organizational Enablers by Level

At the project governance level, the following patterns of enablers were identified with organizations that are significantly more successful than those below average in implementing governance and with the project-based parts of their organization:

- A mental *Infrastructure* allowing for the widest possible sphere of action for the project manager, starting from the project, via the project's parent organization, and beyond the organization
- Provision of ongoing *Communication* with managers from other projects, line managers, and external managers for the coordination of the project

At the level of governance of projects, the following patterns were identified with organizations that are significantly more successful than those with below-average levels of success in implementing governance and with their project-based part of their organization:

- Governance is established by strong *leadership* and is continuously further developed

- *Clearly defined roles and responsibilities*, along with formalized and central decision making

Specific for the achievement of governance success is a *governance orientation* that emphasizes stakeholder orientation over shareholder orientation. Specific for organizational success is the *institutionalization* of governance, which is the use of similar reporting systems, methodologies, project selection and coordination institutions.

At the level of governmentality, the following patterns were identified with organizations that are significantly more successful than those with below-average levels of success in implementing governance and with the project-based parts of their organization:

- A *supportive environment* for project management, where project managers are encouraged to develop their project management skills within the organization and feel important, empowered, and coached
- A culture that prioritizes *teamwork and collaborative* accomplishments over individual heroism

Specific for the success in governance is the *alignment of remuneration systems*, such that project managers', as well as line managers', remuneration is connected to project results. Specific for success with the project-based part of the organization is the *professional development* of the project management community by encouraging managers to get certified and to engage with professional organizations.

Further patterns that were identified, but did not feature as statistically significant, are described in Part 1 of Chapter 6.

Now, we answer RQ2 from the organization-wide perspective. For that, we repeat the findings from earlier chapters.

We applied the enabler model of factors and mechanisms to the questionnaire items, which identified the following five factors of organizational enablers:

- *Infrastructure:* The mental sphere of action of project managers, that is, the extent to which an organization allows information exchange within projects, across projects, within the organization, and beyond the organization; thus, it is the authority of project managers in exchanging information

- *Leadership:* The extent to which governance is established by a strong leader and maintained and further developed over time
- *Governmentality:* The mental predisposition of the governors toward those who are governed; this is shown through, for example, the level of empowerment, team culture, and so on
- *PG—Flexibility:* The flexibility in project governance, that is, the extent to which the project can adapt its structure, roles, meeting schedules, and so forth to emergent needs
- *GoP—Flexibility:* The flexibility in governance of projects, that is, to what extent the institution's functions, leadership styles, and so on are adjusted to the situation

We also identified these six enabling mechanisms:

- *Governance orientation:* The shareholder versus stakeholder orientation in overall governance of the organization
- *Reviews:* The frequency with which projects, programs, and portfolios are reviewed within an organization
- *Institutionalization:* The extent to which project governance practices, such as the use of similar reporting systems, methodologies, institutions for project selection, coordination, and so on, are institutionalized
- *Professionalism:* The degree of professionalism of project governance—for example, whether project managers are encouraged to get professional certifications, work with professional organizations, and so forth
- *Meetings:* The types of governance-related meetings, such as meetings with project managers, management in the organization, or external organizations for coordination or other issues
- *Incentives:* The extent to which the remuneration of the project managers and line managers is impacted by project results

Two types of success were identified:

- *Organizational success*, the success for the project-based part of the organization
- *Governance success*, the success of the governance system in terms of its usage and acceptance

The mapping of the factors and mechanisms into the enabler model is shown in Table 6.2.

Based on existing theory, we proposed the following:

Organizational enabler factors impact or create organizational enabler mechanisms, which impact success at both governance and organizational level.

This proposition led to a mediation model, which we subsequently tested and found that:

- success with the project-based part of the organization is directly impacted by the factors for *Infrastructure*, *Leadership*, and *Governmentality*, and that mediation through mechanisms is generally below the threshold of 20% for partial mediation (Hair et al., 2014); and
- success in the acceptance and usage of the governance system is also directly impacted by *Infrastructure*, *Leadership*, and *Governmentality*; however, the impact of governmentality on governance success is mediated to 24% by the types of *Meetings* that are held for coordination and governance.

Further investigation of those mechanisms that had an existing, but below-threshold, level of mediating effect showed that two mechanisms mediate all factors. These are Professionalism and Meetings. Three other mechanisms mediate only one factor. These are Institutionalization, which mediates the impact of leadership on success, and the mechanisms of Governance Orientations and Incentives, which mediate the impact of governmentality on success. The resulting model is shown in Table 7.1.

The impact of these factors on success was assessed through regression analyses. These showed that 22% of the success of the project-based part of the organization can be explained through the three enabler factors of *Infrastructure*, *Leadership*, and *Governmentality*. Similarly, 40% of the success in implementing a governance system can be traced back to the same three factors. Assessment of the relative importance of the enabling factors showed that Leadership is approximately twice as important as Infrastructure and Governmentality.

This identifies Leadership (i.e., governance established by a strong leader and maintained and further developed over time) as the strongest

and ultimate organizational enabler for governance and governmentality in organizations. This is followed by Infrastructure (the scope of the mental sphere of activity of the project manager, granted by the governance system) and Governmentality (the mental predisposition of governors).

Research Question 3—Evolution of Governance and Governmentality

RQ3: How does governance and governmentality in the realm of projects evolve in these organizations?

This question was mainly addressed through the longitudinal and quantitative study. There are several perspectives toward evolution. From the data, we identify three different perspectives: context-driven, growth-driven, and maturity-driven. We discuss each of these in the following section.

Context-driven evolution refers to changes in governance and governmentality that can be traced back to variations in external and/or internal circumstances. As shown in Table 7.2, there is little evidence that external changes in terms of number of projects or increasing or decreasing market share impact governance and governmentality in a similar way. However, the data clearly show that most of the changes are caused by the CEO and his or her decisions on the governance of projects. The CEO and his or her *leadership* is, therefore, the main driver for change. This extends our findings on the importance of leadership as an organizational enabler. Leadership does establish, maintain, and change governance and governmentality over time.

Growth-driven evolution refers to changes in governance and governmentality associated with the growth of the organization. As shown in Figures 6.5, 6.9, and 6.13, project governance is well established in small organizations, but falls below average in medium-sized organizations and returns to average levels in the large organizations. Main drivers in this variation are Infrastructure and Communication. In governance of projects, both leadership and institutionalization develop in a linear fashion with the size of the organization, which is contrary to flexibility. Again, medium-sized companies appear to score below average in clarity of roles and organizational flexibility. Governmentality follows the former trends and is well defined in small companies in terms of project managers' professional support and alignment of remuneration

systems across all managers. All of these items fall strongly below average in medium-sized companies with 250 to 1,000 employees before they recover to average values in larger organizations, where companies with more than 10,000 employees show a strong emphasis on certification and engagement in professional organizations.

Maturity-driven evolution refers to changes in governance and governmentality associated with practices at higher levels of success. These are shown in Figure 6.1 for governance success and in Figure 6.2 for success of the project-based part of the organization. Change associated with success in governance is linear with improvements in leadership, definition of roles and responsibilities, infrastructure, collaborativeness, and project manager support. Organizations with above-average levels of success with their governance system reduce flexibility slightly with higher success levels, while applying more stakeholder-oriented governance. The evolution associated with higher levels of organizational success is very strong in leadership. Growth in leadership is very strong across the levels of success. Along with that comes a clearer institutionalization and definition of roles and responsibilities, as well as collaboration.

Having answered our research questions, we now address the managerial and theoretical implications.

Managerial Implications

A number of implications for managers derive from the results of this study. We focus here on the three major enablers that we identified.

The first and foremost implication is the development of strong leaders who establish and maintain project management and its governance as a way of doing business. The research indicated that these people were often hired from outside and had substantial project experience—for example, through work in the military or other, project-oriented industries and organizations. Leadership needs to be at or have direct access to top management in order to have the authority to change the organization's way of working and its value system. The implementation should address the idiosyncratic expression of project management and its governance in an organization, and its adaptation to the organization's needs and skills. Once established, the governance system needs to be continuously maintained and adjusted to the project types, and to any changes in the organization.

The second implication is the establishment of a mental sphere of activity for project managers that is as broad as possible. Collaborative

work in and across projects and organizational borders should be supported and emphasized by the governance structure. The broader the mental scope allowed for the project manager, the more successful the projects will be. This includes project managers' engagement with professional organizations; work with standardizing committees; active participation in conferences (in addition to passive attendance); and collaboration with academic institutions, benchmarking companies, and standards-developing bodies. A requirement for this will be a certain level of education and experience in the field of project management. Hence, training and education, certification, and work in professional organizations should start early on in the career of project managers.

The third implication is the establishment of appropriate governmentality. This may range from authoritative, via rational, to neoliberal approaches, depending on the needs of the organization (skill and education levels, type of work, level of innovation, etc.). Governmentality sets the "tone" between governance institutions and those they govern, as well as among members of the governed society. A careful assessment needs to be made as to which of these approaches is appropriate in an organization. Most successful organizations control their project managers by the extent to which they meet established outcome objectives as opposed to methodology compliance, while at the same time, taking a stakeholder orientation in governance. Thus, in terms of governance, organizations should strive for a versatile artist paradigm which provides a suitable context for project managers to develop their skills and make use of past experiences. That means establishing a culture of (1) mutual trust between the governance system and project managers, (2) collaboration and teamwork, and (3) consensus finding in decision making, while knowing that project results are team accomplishments, not the acts of individual heroes.

Theoretical Implications

The three main organizational enablers resemble the three pillars of institutional theory.

The *regulative* pillar is represented by the Infrastructure factor, which is the mental sphere of activity for project managers. It defines the limits within which the project manager is allowed to act. Regulative elements are most often referred to as laws, contracts, and other externally imposed or agreement-based elements. This study extends this pillar to the psychological elements of mental space and the associated

psychological contracts that are imposed upon project managers. The implication for institutional theory is the awareness that internal, governance-based elements can serve as regulators that are just as strong as contracts or externally imposed limitations. Further development of this in the form of future research is indicated.

The *normative* pillar of institutional theory is represented by Leadership. The leaders and the way they set up the governance system create expectations for what the organization views as "normal" behavior. Institutional theory rarely addresses leadership as a separate subject, but it implies that leadership is done within the organization. The present study showed, in exemplary fashion, how organizations bounce back and forth between "productification" and "projectification," which is clearly visible in medium-sized organizations, in comparison with small and large companies. The ways to establish a change from a process to a project orientation or provide criteria for managers to decide on a focus of "productification" or "projectification" for the organization, will have to be investigated in more depth. More research in this area is needed to understand the phenomenon and to develop theories to help managers in their related decisions. A related subject for future research is the fit of leadership at the project level (as described, for example, in Müller & Turner, 2010) with the different governmentality approaches described in this book. Especially interesting would be how different personalities and leadership styles of project managers interface with the authoritative, rational, and neoliberal approaches to governmentality exercised in organizations.

The *cultural-cognitive* pillar of institutional theory is represented by the Governmentality factor. Organizations that present themselves as supportive of their project managers' professionalism help them further develop their processes, tools, and techniques, and empower and coach them to develop into what the literature refers to as self-organizing, self-responsible employees with the required context for sensemaking within the organization. Governmentality is a very new subject for governance in the realm of projects. Much more research is needed to understand the implications that these soft factors of governance have on people and projects and, thereby, on the entire organization.

Strength and Weaknesses

As in all research, there are strengths and weaknesses in the four studies we have done. On the strengths side is the strong support of institutional theory for the results we have found. The match between the three

pillars and the main organizational enablers we identified gives credit to our findings. Strength lies also in the approach taken in this research, starting with the identification of the widest possible set of practices and organizational enablers and then successively refining them through follow-up interviews and a worldwide, web-based questionnaire.

On the side of weaknesses, is the sample size of 208 observations. Though it is still sufficient for the analysis techniques, we would have hoped for a wider coverage in terms of geographies and industries to ensure stability in our results. Another potential weakness is in the questionnaire and the way the questions on flexibility are phrased, which does not allow the distinction of different forms of flexibility, such as flexibility caused by ad hoc reactions or flexibility caused by deliberate adjustment of existing structures to fit projects into the organizational system. These variables need to be addressed in future research.

Above, we suggested a number of future studies. We can add to these, the need to understand governmentality in much more detail, including the neoliberal approaches. Neoliberalism in project-related governance is a new subject that should be addressed in order to better understand governance. This includes phenomenological, qualitative studies using observations and "sensemaking" to derive new theories.

This research's contribution to knowledge lies in its nature as the first research to tie together governance and governmentality in one study. The results show a high level of integration between these two subjects in everyday governance. Furthermore, it distills the main organizational enablers in the form of factors and their underlying mechanisms from the myriad of possible influences that an organization can have on projects and their governance. Last, not least, the study provides suggestions for academics to further develop related theories and offers suggestions for managers to develop their governance and governmentality. It falls now to practitioners to take these findings into reality and reap the benefits from them.

Appendix

Appendix A1: Case Study Protocol

Project title: Organizational Enablers for Project Governance			
Author(s):	**Ralf Müller** **Jingting Shao** **Sofia Pemsel**	Date of submission:	**February 15, 2013**

Introduction

Research questions

1. What are the project governance practices in organizations of different sizes and in different geographies?
2. What are the organizational enablers for project governance in these organizations?
3. How does project governance evolve in these organizations?

Theoretical framework

Initial literature review shows that the field of organizational enablers (OE) for project governance has not been investigated thoroughly in recent years. PMI defines OEs as structural, cultural, technological, and human-resource practices that can be leveraged to support and sustain the implementation of best practices in project, program, and portfolio management. Depending on industry, sectors, geographical contexts, and organizational size, previous research has shown that organizations implement different approaches to project management. This research project consequently aims to develop a framework for project governance in organizations of different sizes and sectors and in different geographies.

Role of protocol in guiding team

This protocol provides information on the data collection procedure, as well as the data collection instrument.

Data collection procedures

The initial round of interviews aims for approximately 20 interviews at six companies. The purpose is to identify typical organizational enablers for project governance in project-based organizations (PBOs). Targeted interviewees are managers responsible for groups of projects, such as portfolios or programs of projects.

A further aim is to collect information on the feasibility of a longitudinal case study within the companies and the companies' interest in pursuing a case study for assessing one of the organizational enablers identified.

Data collection plan

Longitudinal data collection

- Two rounds of data collection over a period of one year will be done in each case organization to identify process elements, their significance, and their changes over time for enabling and performing project governance.

Type of evidence sought

- The type of evidence sought includes perceived organizational enablers by mid- to high-level management. This includes information about the organization, its projects and governance approach, and the organizational enablers plus their particular context.

Roles of people to be interviewed

- Middle and higher management with responsibility for groups of projects

Documents to be studied

- Organizational structure

Business model

- Governance documents, such as policies, guidelines, procedures, and so on

Expected preparation prior to visit

- Search and review documentation about past project governance practices and degree of projectification of the firms to be interviewed
- Interviews should be held by two researchers, tape recording done when possible, with notes taken manually by one researcher, while the other researcher conducts the interview

Introductory letter

- See attachment A

Invitation to interview and interview questions

- See attachment B

Attachment A to Appendix A1: Introductory Letter

Research on Project Governance
Invitation to Engage

Aims and Objectives

The aim of the study is to develop a framework of project governance approaches for organizations of different sizes, sectors, and in different geographies. This contributes to an improved understanding of the evolution of organizational enablers in terms of the development and change of organizational enablers for successful project governance and the development and change of specific governance structures, their institutions, plus their roles, responsibilities, and governance practices. These results will be structured by organizations of low, medium, and high levels of success with their governance.

The results will allow practitioners to adapt successful enablers and governance practices to improve the effectiveness and efficiency of their organizations, taking into account their organization's size, sector, geography, and level of projectification. Moreover, the results will allow the expansion of existing PMI standards by adding organizational enablers for best practices in project governance.

Background

PMI has commissioned a research team from BI Norwegian Business School, Institute of Industrial Economics at Chinese Academy of Social Sciences, and Copenhagen Business School to undertake a research project on organizational enablers for project governance. Organizational enablers for project governance have not yet been well explored. There is an emergent need to improve the understanding of the specific enablers for successful project governance in small, medium, and large organizations. One goal is to identify the related governance structures, policies, and institutions, plus their roles and responsibilities as well as their practices for these enablers. A further goal is to identify their variation across industry sectors and geographies.

Areas of Investigation

This research addresses the following questions:

1. What are the project governance practices in organizations of different sizes and in different geographies?
2. What are the organizational enablers for project governance in these organizations?
3. How does project governance evolve in these organizations?

Engagement Process:

If you choose to participate in this research, the engagement process is as follows:

- One introductory meeting (or phone call) will be held with a representative of the research team in order to understand your current organization as it relates to projects and their governance. Typically, this meeting will be no more than half an hour in duration, and it will allow for identification and agreement on the people to be interviewed in your organization.
- A longitudinal case study with your company, including an initial round of interviews (to be agreed upon) and some insight into project documents or governance policies, will be conducted, with a repetition in one year's time.

A subsequent worldwide survey will validate the findings of the six case studies done in Europe and China.

The results of the wider study and those for your particular organizations will later be shared in a seminar for your organization.

Confidentiality:

The nature of the engagement is such that no information with respect to any business conducted by any participants will be disclosed, either directly or indirectly.

Attachment B to Appendix A1: Invitation Letter and Interview Questions

Invitation for Interview

PMI has commissioned us to undertake a research project on organizational enablers for project governance. The research aims to improve the understanding of the evolution of organizational enablers in terms of the development and change of organizational enablers for successful project governance and the development and change of specific governance structures and institutions, plus their roles and responsibilities and governance practices. From this improved understanding, we aim to develop a framework for project governance in organizations of different sizes and sectors, and in different geographies. The results will allow practitioners to adapt successful enablers and governance practices to improve the effectiveness and efficiency of their organizations, taking into account their organization's size, sector, geography, and level of projectification.

For that purpose, we will conduct a number of interviews to which we will invite you. The interviews will be between 45 and 60 minutes each and will be semi-structured. We will ask the questions shown on the following pages, but may add new questions or skip over questions when appropriate. We kindly ask you to review the questions before the interview so that we can minimize the amount of time needed to conduct the interviews. As this is an international project with participants from many different countries, the language used in the interviews will be English. For better analysis afterward, we would like to record the interviews, and we ask for your permission to do so.

Participation is, of course, voluntary. Participants can stop the interview at any time. No information with respect to any business conducted by any participants will be disclosed, either directly or indirectly.

The interviews will be conducted in pairs by us, Professor Ralf Müller, BI Norwegian Business School; Dr. Jingting Shao, Institute of Industrial Economics at Chinese Academy of Social Sciences; and Dr. Sofia Pemsel, Copenhagen Business School. We will suggest dates and times for the interviews to our contact persons in your organization and they will coordinate with you.

We look forward seeing you in the coming weeks.

Ralf Müller Jingting Shao Sofia Pemsel

Interview Questions

General:

1. Tell us about your company.
2. Tell us about your role in the organization and in project governance.

Degree of Projectification:

1. To what extent is your business run by projects?
2. How does thinking and working in projects and project management pervade the everyday work in your organization?
3. How stable is the project-based part of your organization?
4. What are the characteristics of the project-based parts of your organization?
5. How can you see that "the project way of doing business" is a major part of your organization?
6. What are the challenges for "the project way of doing business"?
7. What are the costs and benefits of "the project way of doing business"?

Project Governance:

1. Would you see your organization as being more shareholder- or more stakeholder-oriented?
2. What is more expected from project managers in your organization: compliance or delivery?
3. Are managers merely told how they should achieve their objectives, or are they free to find their own best way of achieving their objectives?
4. What are the guiding principles for decisions by management?
5. How does your internal monitoring work?
6. How does your external monitoring work?
7. Can you explain the project governance structure, such as process, institutions, roles, and so forth?

Organizational Enablers:

1. Which mechanisms, roles, individuals, and so on in the organization allow the establishment and maintenance of project governance?
2. For each of these mechanisms, what does it do or enable for project governance?
3. Where in the organization do these enablers emerge and for whom?
4. In what circumstances or situations are these enablers useful?
5. When do these enablers work or not work?
6. Do you have any procedures/guidelines/recommendations for implementing and using these mechanisms?

Appendix A2: Enablers for Project Governance

1) I am a project manager

- ☐ Yes
- ☐ No (please indicate your role): _____

In my last project . . .

2) . . . the governance structure supported the project in terms of . . . (governance structure is the sum of all roles, institutions, and policies that are used for the governance of projects—multiple answers are possible)

- ☐ Planning and execution
- ☐ Achieving project performance
- ☐ Managing the project
- ☐ Controlling progress
- ☐ Controlling project management performance
- ☐ Make milestone/tollgate decisions
- ☐ Other: _____

3) . . . I had this number of project management methodologies to choose from . . .

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7 or more

4) . . . I had to formally report my project (indicate the highest frequency)

- ☐ Not at all
- ☐ At project end
- ☐ At milestone completion
- ☐ Monthly
- ☐ Biweekly
- ☐ Weekly
- ☐ Daily

5) . . . the time spent on governance was distributed approximately . . . (rank order the relevant institutions by clicking 1 for the institution you spent the most time with, 2 for the institution you spent second most time with, etc.)

_____ Project sponsor/owner/steering committee
_____ Project or program management office (PMO)
_____ Line managers from my organization
_____ Customer's governance institutions/roles
_____ External governance institutions
_____ Other

CF1: Institutionalization of governance

6) Commonalities between my project and other projects in my department are. . . .

	Never	Rarely	Sometimes	Often	Always
We use the same reporting system for our projects	☐	☐	☐	☐	☐
We use the same project management methodology	☐	☐	☐	☐	☐
Projects are selected by the same role or institution (e.g., portfolio manager, sponsor, other manager)	☐	☐	☐	☐	☐
Projects are coordinated by the same role or institution (e.g., portfolio manager, sponsor, other manager)	☐	☐	☐	☐	☐

7) Coordination across projects (such as for resources) is mainly done by . . .

- ☐ No single point of coordination
- ☐ A line manager in my organization
- ☐ Sponsor, owner, or steering committee
- ☐ A program or portfolio manager
- ☐ The organization's processes
- ☐ An external institution
- ☐ Other

CF2: Institutionalization of governmentality of project managers

8) In my company . . .

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
. . . project managers are encouraged to get professionally certified (e.g., PMP or IPMA certification)	☐	☐	☐	☐	☐
. . . project managers are encouraged to work in professional organizations (e.g., volunteer work at PMI)	☐	☐	☐	☐	☐
. . . project managers are supported in their membership in professional organizations (e.g., through payment of fees, time for community of interest activities, etc.)	☐	☐	☐	☐	☐

CF3: Institutionalization of governmentality of all managers

9) In my company . . .

. . . project managers' incomes are impacted by the success of their projects	☐	☐	☐	☐	☐
. . . my line manager's income is impacted by my project's results	☐	☐	☐	☐	☐

CF4: Infrastructure for information exchange

10) This set of questions asks about the scope of project management related information exchanged in your organization.

The communication infrastructure in my company allows to . . . (one answer per question)

	No	A little	To some extent	To a large extent	Very much
. . . exchange project-related information within the project team	☐	☐	☐	☐	☐
. . . exchange information with neighborhood projects (such as those in the same program or portfolio)	☐	☐	☐	☐	☐
. . . exchange project management related information with other managers and project managers in the company	☐	☐	☐	☐	☐
. . . exchange professional information with externals (e.g., professional organizations)	☐	☐	☐	☐	☐

CF5: Scope of communication in meetings

11) During the time of my last project, I had meetings with . . .

	Never	Rarely	Sometimes	Often	Always
. . . other project managers to coordinate resources and project work	☐	☐	☐	☐	☐
. . . managers of my organization to set priorities, coordinate resources, work, etc.	☐	☐	☐	☐	☐
. . . managers external to my organization to set priorities, coordinate resources, work, etc.	☐	☐	☐	☐	☐

12) These questions ask about the reviews of the projects, programs, and portfolios in your organization.

	I do not know/not applicable	Never	When the need arises	Annually	Quarterly	Monthly	(Bi) weekly or daily
Projects are reviewed . . .	☐	☐	☐	☐	☐	☐	☐
Programs are reviewed . . .	☐	☐	☐	☐	☐	☐	☐
Project portfolios are reviewed . . .	☐	☐	☐	☐	☐	☐	☐

13) Project portfolio decisions are made by . . . (multiple answers possible)

- ☐ Owners/sponsors/steering committees
- ☐ Project/program management offices (PMOs)
- ☐ Program managers
- ☐ Portfolio managers
- ☐ My line manager
- ☐ Other: _____

14) The decision-making style in the governance of my last project was mainly driven by . . .

- ☐ Consensus finding
- ☐ One particular manager
- ☐ Experts
- ☐ Other

CF7: Organizational structure (not usable)

15) The next set of questions asks about the organizational structure.

The parent organization of my last project has . . .

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
. . . a clear hierarchical structure	☐	☐	☐	☐	☐
. . . a clear matrix structure	☐	☐	☐	☐	☐

CF6: Organizational roles structure

The parent organization of my last project has . . .

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
. . . a clear hierarchical structure	☐	☐	☐	☐	☐
. . . a clear matrix structure	☐	☐	☐	☐	☐
. . . clearly defined roles and responsibilities	☐	☐	☐	☐	☐
. . . formalized decision-making processes	☐	☐	☐	☐	☐
. . . centralized decision making	☐	☐	☐	☐	☐

CF8: Governance control philosophy

16) The management philosophy of my organization favors a strong emphasis on . . .

. . . always getting personnel to follow the formally laid down procedures ☐ ☐ ☐ ☐ ☐ . . . getting things done even if it means disregarding formal procedures

17) The management philosophy of my organization favors . . .

. . . tight formal control of most operations by means of sophisticated control and information systems ☐ ☐ ☐ ☐ ☐ . . . loose, informal control, heavy dependence on informal relationships and the norm of cooperation for getting things done

18) The management philosophy of my organization favors a strong emphasis . . .

. . . on getting personnel to adhere closely to formal job descriptions	☐ ☐ ☐ ☐ ☐	. . . to let the requirements of the situation and the individual's personality define proper on-job behavior

19) The management philosophy of my organization favors that support institutions like a PMO should . . .(skip this question in case there is no PMO in your organization)

. . . ensure compliance with the organization's project management methodology	☐ ☐ ☐ ☐ ☐	. . . collect performance data in order to identify skills and knowledge gaps

20) The management philosophy of my organization favors prioritization of . . .

. . . methodology compliance over people's own experiences in doing their work	☐ ☐ ☐ ☐ ☐	. . . collect performance data in order to identify skills and knowledge gaps

21) In my projects, I have to respect external standards, such as industry or regulatory standards

☐ Strongly disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly agree

CF9: Flexibility in project governance

22) In my project, we . . .

. . . stick to predetermined meeting types and schedules	☐ ☐ ☐ ☐ ☐	. . . adapt meeting types and schedules to project type

23) In my project, we . . .

. . .use formal meeting structures (such as agendas)	☐ ☐ ☐ ☐ ☐	. . .use informal, unstructured meetings

24) In my project, we . . .

. . . stick to assigned roles in projects	☐ ☐ ☐ ☐ ☐	. . . adapt roles to the project needs

CF10: Flexibility in governance of projects

25) In my organization, governance institutions such as PMOs have . . .

. . . clearly defined functions and mandates	☐ ☐ ☐ ☐ ☐	. . . flexible functions and mandates

26) In my organization . . .

. . . projects are fitted into the existing organization structure	☐ ☐ ☐ ☐ ☐	. . . the organizational structure is adjusted to the needs of the projects

27) In my organization, leadership from management . . .

. . . is stable and predictable	☐ ☐ ☐ ☐ ☐	. . . is adapted to the situation

28) In my organization, the governance of projects . . .

. . . is similar across all projects	☐ ☐ ☐ ☐ ☐	. . . is adjusted to the needs of the projects

CF11: Governance orientation

29) In terms of project accomplishments, my organization favors. . .

. . . individual accomplishers (project management heroes)	☐ ☐ ☐ ☐ ☐	. . . team workers and group 2

30) In my organization, decisions are made in the best interest of . . .

. . . the shareholders and owners of the organization and their return on investment (ROI)	☐ ☐ ☐ ☐ ☐	. . . the wider stakeholder community (including shareholders, employees, local communities, etc.)

31) The remuneration system in my organization . . .

. . . includes stock options for employees and similar incentives that foster shareholder ROI thinking	☐ ☐ ☐ ☐ ☐	. . . provides incentives for community, environmental, humanitarian, or other nonprofit activities outside and/or inside the organization

32) In my organization, an image prevails that . . .

. . . profitability determines the legitimacy of actions (including projects)	☐ ☐ ☐ ☐ ☐	. . . wider social and ethical interests determine the legitimacy of actions (including projects)

33) I am sometimes asked to sacrifice . . .

. . . stakeholder satisfaction for the achievement of financial objectives	☐ ☐ ☐ ☐ ☐	. . . the achievement of financial objectives for improvement of stakeholder satisfaction

34) The long term objective of my organization is to . . .

. . . maximize value for the owners of the organization	☐ ☐ ☐ ☐ ☐	. . . maximize value for society

CF12: Support of project managers

35) In my role as project manager . . .

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Not Applicable
I feel encouraged to participate actively in the development of project management in my company	☐	☐	☐	☐	☐	☐
I find it important to build strong, informal relationships with employees, customers, and partners	☐	☐	☐	☐	☐	☐
I feel empowered	☐	☐	☐	☐	☐	☐
I am coached	☐	☐	☐	☐	☐	☐

36) What are the main drivers for governance-related decisions in projects? (Rank order the drivers by clicking 1 for the strongest driver and 7 for the weakest driver.)

_____Stakeholder interest
_____Customer satisfaction
_____My company's well-being
_____Employee well-being
_____Competitiveness in the market
_____Adherence to regulatory requirements
_____Other

CF13: Leadership

37) In my company (or business unit in larger firms), . . .

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
. . . project management and governance is favored and/or established by a strong leader	☐	☐	☐	☐	☐
. . . project management and governance is further developed by a PMO or other dedicated institution	☐	☐	☐	☐	☐
. . . project governance is well-established with roles, responsibilities, policies, etc.	☐	☐	☐	☐	☐

CF14: Governance success

38) In my company (or business unit in larger firms), . . .

. . . project governance helps project managers in doing their work	☐	☐	☐	☐	☐
. . . governance of projects helps reach corporate objectives	☐	☐	☐	☐	☐
. . . the governance structure is used by the managers	☐	☐	☐	☐	☐

CF15: Corporate success

39) In my company (or business unit in larger firms), . . .

. . . projects are successful in terms of time, cost, and quality objectives	☐	☐	☐	☐	☐
. . . projects are successful in terms of their outcomes achieving the intended (business) objectives	☐	☐	☐	☐	☐
. . . projects are successful in terms of customer satisfaction	☐	☐	☐	☐	☐
. . . the project-based part of the organization achieved last year's annual plan	☐	☐	☐	☐	☐
. . . the project-based part achieves customer satisfaction objectives	☐	☐	☐	☐	☐
. . . the project-based part achieves its employee satisfaction objectives	☐	☐	☐	☐	☐

Demographics

40) Which country are you working in?

_____

41) How many years of experience do you have in managing projects?

- ☐ Less than one year
- ☐ 1–5 years
- ☐ 6–10 years
- ☐ 11–20 years
- ☐ More than 20 years

42) What industry or sector are you working in?

_____

43) How many employees does the company/organization you are working for have?

- ☐ 1–250
- ☐ 251–1,000
- ☐ 1,001–10,000
- ☐ 10,001–30,000
- ☐ more than 30,000

44) What was the budget of your last project? (in Euros)

- ☐ under €100,000
- ☐ €100,001–€1 million
- ☐ €1–€5 million
- ☐ €5–€10 million
- ☐ more than €10 million

Appendix A3: Interview Questions—Study 4

General:

1. Has something changed in your company during the past year (business, scope, size, key persons)?
2. Has something changed concerning your role in the company in relation to project governance issues?

Degree of Projectification:

3. Give a brief explanation of projectification (e.g., how much your business is determined by projects, the way of doing projects, etc.).
4. Has the level of projectification changed during the past year in your company?
   a. If so, how?
   b. Why?
   c. What were the driving forces behind the change?

Project Governance and Governmentality:

5. Give a brief explanation of project governance (stakeholder versus shareholder orientation, outcome-economic/behavior, principles for decisions in management, internal/external monitoring).
6. Has something changed during the past year concerning how you govern projects in your company?
   a. If so, how?
   b. Why?
   c. What were the driving forces behind it?

Organizational Enablers:

1. Give a brief explanation of organizational enablers (trigger, support for the existence of project governance in the organization, project thinking culture, processes, structures, etc.).

2. Has something changed in your company during the past year concerning how project governance is enabled?
   a. If so, how?
   b. Why?
   c. What were the driving forces behind it?

3. What enablers are relatively stable?
4. What enablers are more flexible in nature?
5. What do you think is the relationship is between flexible and stable enablers?
   a. Can these enablers be aligned over time (coexist, adjust to one another, align with a strategy/objective)?

Appendix A4: Summary of Governance in the Small Swedish Company

Abbreviations:

PG: project governance; GoP: governance of projects; PM: project manager; TCE: Transaction cost economics; AT: Agency theory; RBV: Resource based view; ST = Stewardship theory

Governance practices		**Organizational enablers**		**Projectification: High**	**Governance practices**		**Change**	**Change in projectification**
PG: Use of method	PRINCE2 (preferred) + adjusting to customers	Infrastructure	All high		PG	Contract		From high to very high 
Communication/ reporting	Report to group and CEO → consensus (discourse)	Decision-making style	Consensus		GoP	Common values		
GoP: Use of report system	Cloud, email, Dropbox Weekly, biweekly, and monthly meetings with CEO and project consultants	Organizational structure	Flat organic		Governmentality	Neoliberal		
						Freedom: freedom in business		
Project selection	CEO and individual consultant	Flexibility	Liberal flexible		**Organizational enablers**			**Change in context**
Common method	Varies	Values	Teamwork		Done through	Values		Stable management team, expanded market share
Project coordination	CEO	Role as PM	Extremely high		Focus	Person and outcome		
Governmentality: Support	Strong support for professional work	Main drivers for decision making	Employee well-being, stakeholder interest, competiveness		Theoretical explanation	TCE/ST/RBV		
Incentives	Bonus for extraordinary things	Leadership	Group of leaders: three starters of the company and CEO, strong in all					
Meetings/reviews	Frequent internal and external meetings							
Portfolio decisions	CEO + management team + consultants							
Governance focus	Outcome							
Governance orientation	Stakeholders							
External control								

Appendix A5: Summary of Governance in the Medium-Sized Swedish Company

Abbreviations:

PG: project governance; GoP: governance of projects; PM: project manager; TCE: Transaction cost economics; AT: Agency theory; RBV: Resource based view; ST = Stewardship theory

Governance practices		Organizational enablers		Projectification: Low	Governance practices		Change	Change in projectification
PG: Use of method	Self-developed	Infrastructure	PM-Scrum people Informed manager, project meetings, no professional exchange externally		PG	Megaprocess		Low to very low, but increasingly big projects
Communication/ reporting	Steering committee and CEO	Decision-making style	Consensus		GoP	Common RIS relationship		
GoP: Use of report system	Many meetings: -Scrum -Management -Sprint -Steering committee -Customer	Organizational structure	Weak matrix defined roles and responsibilities		Governmentality	Liberal		
						Freedom: Freedom in task accomplishment		
Project selection	CEO and steering committee	Flexibility	Less flexible, process-driven		**Organizational enablers**			**Change in context**
Common method	One method	Values	Teamwork		Done through	Process		More projects, more revenue from projects, consolidation and centralization, new CEO
Project coordination	Steering committee	Role as PM	Low		Focus	Task		
Governmentality: Support	No support	Main drivers for decision making	Competiveness, customer satisfaction		Theoretical explanation	TCE/AT		
Incentives	No	Leadership	Weak					
Meetings/reviews	Many internal and external meetings frequent							
Portfolio decisions	Management team							
Governance focus	Outcome							
Governance orientation	Shareholder							
External control								

Appendix A6: Summary of Governance in the Large Swedish Company

Abbreviations:

PG: project governance; GoP: governance of projects; PM: project manager; TCE: Transaction cost economics; AT: Agency theory; RBV: Resource based view; ST = Stewardship theory

Governance practices		Organizational enablers	
PG: Use of method	Self-developed	Infrastructure	Internal more vertical information External meetings and governance bodies, less with professional organizations
Communication/ reporting	Governance bodies internal and external Megaprocesses	Decision-making style	(Experts)
GoP: Use of report system	Tollgate meetings and milestone meetings Portfolio and governance level meetings, steering committee meetings, project-type specific.	Organizational structure	High in all
Project selection	Portfolio process	Flexibility	Flexible between milestones
Common method	Project-type-dependent	Values	Some heroism
Project coordination	Varies among governance bodies/individuals	Role as PM	High, but going down
Governmentality: Support	Some support	Main drivers for decision making	Competiveness, customer satisfaction, regulative requirements
Incentives	No	Leadership	Strong in all
Meetings/reviews	Internal and external meetings, milestone-driven		
Portfolio decisions	Portfolio management		
Governance focus	Balanced between outcome and behavior		
Governance orientation	Stakeholder		
External control			

Projectification: High

Governance practices	
PG	Process
GoP	Governance institution
Governmentality	Liberal, strict
	Freedom: Freedom in innovation
Organizational enablers	
Done through	Outcome
Focus	Product
Theoretical explanation	TCE/AT

Change

Change in projectification
High to medium
Change in context
New CEO, who wants to make the organization flatter and have more direct communication, new management team sees more uncertainty in the market concerning revenues, patents, and so forth Acquire new companies

Appendix A7: Summary of Governance in the Small Chinese Company

Abbreviations:

PG: project governance; GoP: governance of projects; PM: project manager; TCE: Transaction cost economics; AT: Agency theory; RBV: Resource based view; ST = Stewardship theory

Governance practices		Organizational enablers		Projectification: Low	Governance practices		Change	Change in projectification
PG: Use of method	Self-developed	Infrastructure	Only exchange information to CEO, not peers		PG	Directed by CEO		No change, from low to low
Communication/ reporting	CEO directs team (direct)	Decision-making style	One manager (CEO)		GoP	Directed by CEO		
GoP: Use of report system	Face-to-face meetings weekly with CEO Ad hoc meetings Kickoff meetings	Organizational structure	Centralized, hierarchical (flat)		Governmentality	Strict		
						Freedom: None		
Project selection	CEO	Flexibility	Liberal flexible		**Organizational enablers**			**Change in context**
Common method	One method	Values	Teamwork		Done through	Orders		No change
Project coordination	CEO	Role as PM	Extremely Low		Focus	Reputation and profit		
Governmentality: Support	No support	Main drivers for decision making	Competiveness, customer satisfaction		Theoretical explanation	TCE/AT		
Incentives	No	Leadership	Only strong leader					
Meetings/reviews	Internal meetings weekly							
Portfolio decisions	CEO							
Governance focus	Behavior							
Governance orientation	Website: Stakeholder Consulting: Shareholder							
External control								

Appendix A8: Summary of Governance in the Medium-Sized Chinese Company

Abbreviations:

PG: project governance; GoP: governance of projects; PM: project manager; TCE: Transaction cost economics; AT: Agency theory; RBV: Resource based view; ST = Stewardship theory

Governance practices		Organizational enablers	
PG: Use of method	National standards	Infrastructure	Only between chief scientists/R&D director and PM, not among peers
Communication/ reporting	Chief scientists and R&D director	Decision-making style	(Experts)
GoP: Use of report system	Strategic company meetings → schedule to project management department and portfolio decisions	Organizational structure	Weak matrix PMs=coordination
Project selection	Strategic management meetings (chief scientists, R&D director, CEO, top management)	Flexibility	Less flexible, process-driven
Common method	One method	Values	Teamwork
Project coordination	Chief scientist and R&D director	Role as PM	Low
Governmentality: Support	No incentives	Main drivers for decision making	Regulatory requirements, customer satisfaction
Incentives	Income of project team and PM 70% result dependent, rest from departments	Leadership	Strong leader and institution
Meetings/reviews	Weekly internal meetings, no common meetings between project managers		
Portfolio decisions	Strategic committee		
Governance focus			
Governance orientation	Behavior		
External control	Shareholder		

Projectification: Low

Governance practices	
PG	Strictly follow process
GoP	Chief scientist → cross-project coordination, larger projects → R&D director for small projects
Governmentality	Strict/control
	Freedom in technical solutions
Organizational enablers	
Done through	Process
Focus	Quality and time to market
Theoretical explanation	TCE/AT

Change

Change in projectification

From low to medium

PM responsibility increased, more business-oriented role division between chief scientists and R&D director, more generalist, PM thinking moves from top to the bottom, bypass the middle management level

Change in context

Chief scientist takes care of technical aspects for all projects, R&D director got promoted to take care of business aspects for all projects, obstacle in the form of a resistant middle manager left the company.

Appendix A9: Summary of Governance in the Large Chinese Company

Abbreviations:

PG: project governance; GoP: governance of projects; PM: project manager; TCE: Transaction cost economics; AT: Agency theory; RBV: Resource based view; ST = Stewardship theory

Governance practices		Organizational enablers	
PG: Use of method	National standards	Infrastructure	Networking, PMO + PMs vertical and horizontal
Communication/ reporting	PMO	Decision-making style	(Experts)
GoP: Use of report system	Project selection meetings, kickoff meetings, halfway meetings, end meetings	Organizational structure	High in all
Project selection	CEO, department managers, and PMO	Flexibility	Strict in project categories A/B, flexible in C
Common method	One method	Values	Lots of heroism
Project coordination	PMO	Role as PM	Extremely high
Governmentality: Support	Strong support	Main drivers for decision making	Stakeholder interest, customer satisfaction
Incentives	Many	Leadership	Strong in all
Meetings/reviews	Low frequency review, halfway and end review		
Portfolio decisions	PMO and department managers		
Governance focus	Balanced between outcome and behavior		
Governance orientation	Stakeholder		

Projectification: High

Governance practices	
PG	Type A projects = Process Type B projects = Process Type C projects = Liberal
GoP	PMO
Governmentality	Liberal
	Freedom in task implementation
Organizational enablers	
Done through	Process + outcome
Focus	Quality and customer satisfaction
Theoretical explanation	TCE/ST/AT

Change

Change in projectification
From high to very high  Scope of projectification grows in terms of buying new companies and instilling PM culture in these companies, degree of projectification grows in terms of shifting PMO from virtual to permanent, culture sprays
Change in context
Acquire new companies

Appendix A10: Commonalities and Differences Among the Case Companies

	Small	Medium	Large
Project governance			
Similarities	• Given, but flexible organizational structure • Follow methodologies • CEOs have ownership of the projects through weekly meetings • Strong meeting cultures • Project-centered • Leadership style is based on a combination of experience, knowledge, and appropriateness of a given situation	• Process-driven • Project managers have no authority to assign resources for their projects • Infrastructure for methods, business principles, and so forth • Cross-departmental meetings • Functional operations prioritized, not the projects • Projects interfaced to operational processes through a key person (chief scientist or project manager) • The top of the organization must support project governance at every level of the organization • Core value is efficiency	• Extensive and advanced infrastructure for governance • External regulatory bodies steer the companies' activities • Frameworks for different projects • Deliberately project-driven. • Want to do more good for the society than just deliver a project; therefore, they have strong industry-related values
Differences	Knowledge sharing in company: A: Meetings, informal and formal presentations D: CEO who shares his experiences and knowledge Values: A: Centered on reputations and individuals D: Centered on the process Freedom versus order: A: Individuals independent D: Individuals dependent Decision making: A: Joint D: Central Governance "thinking": A: Align different views D: Follow the CEO's views	PMO: B: Yes E: No Knowledge sharing: B: Horizontal E: Vertical Driving force for development: B: Poor business results E: Experiences in defense Meeting structure: B: Many process-driven meetings E: Few event-driven meetings, adjusted to each project Incentive structure for projects: B: No E: Yes Use of internal confidential contracts B: No E: Yes	Incentive system: C: No F: Yes Communities of practice among PMs: C: Weak F: Strong Knowledge sharing: C: Formal or informal cross-organization meetings as well as industry-level meetings F: On the community level Meeting culture: C: Many meetings F: Few meetings Role of PMO: C: Not involved in day-to-day business F: Involved in day-to-day business

	Small	Medium	Large
Governance of projects			
Similarities	• Flat structure, structural, and employee flexibility • CEO-centered portfolio management • Transparency through meetings • Mutual monitoring • External focus for discourse • Desire to expand	• Project manager has no authority • Encourages process focus for efficiency • Projects are regarded as too expensive and are avoided, if possible → prohibit development of a strong project culture and rather encourage the development of a pseudo-project culture that allows projects to mainly work informally, without any formal authority	• Heavily driven by regulatory requirements • Emphasize interactive work with external bodies • Project thinking pervades the organization • Strive for a reputation on the market as "a company that cares for what is best for the customers and society health" • Top management decides what projects to select
Differences	Reporting: A: Along project D: Along role structures Relation to customer: A: Strong D: Weak Driving force: A: Company values, such as being best in the market B: CEO New initiatives top-down versus bottom-up: A: Top-down and bottom-up D: Top-down Micromanagement: A: Avoided D: Embraced	Silo versus integration thinking: B: Integration thinking E: Silo thinking Resource allocation in projects: B: PM lobbies for resources with the line manager and the CEO E: Chief scientist does the resource allocation CEO's control interest in projects: B: Finance E: Plans reputations, quality, etc.	Project management certification: C: Internal focus F: Strives for excellence through certifications of PMs Milestone- versus process-driven: C: Milestone-driven with many milestones F: Process-driven with few milestones The portfolio management in Company F is executed by the PMO, while in Company C, this is department-driven. In Company F, new projects are selected according to strategy and recommendations of employees. In Company C, new projects are selected according to decisions in a large, formal structure after extensive lobbying by the project idea holder.

	Small	Medium	Large
Governmentality			
Similarities	• Flat structures • Flexibility of employees when it comes to roles and mandates • Desire to exchange information through various means • Mentality of excellence in performance • Generally comfortable with existing level of information	• Strong process and operations culture • Projects are an add-on to existing structures • Project management is done at a superficial and high (management) level in the organizations • Company employees are embedded in operational processes • Process thinking prevails and project tasks become part of the operational processes • Inclusion of different parts of the organization in decision meetings	• Mentality of professionalism, highest level of freedom for PMs to do their job, and strive for excellence in project management • PMs being mindful of the wider organization, the regulatory standards, and the public • Empowered PMs within regulatory and process limits use discourse as a central element of their work • Information sharing is a key element of the process and the attitudes of PMs • Sensemaking through synchronized reporting, but also through a number of meetings with a mix of participants; the formal content of the meetings, however, differs between the companies
Differences	Governmentality: A: Using values (including personal goals of empowered employees, such as well-being) and trust in individuals' capabilities to do their job B: Using business principles and enforcing process compliance CEO style: A: Democratic B: Autocratic Sensemaking: A: Through values and autonomies B: Business principles and CEO decisions	Sensemaking: B: Through many meetings and improvement attitudes E: Through information flow from above (top management)	Focus of meetings: C: Milestone achievements and internal stakeholder contribution F: Professionalism in project management Mentality: C: Milestone mentality F: Process mentality

Appendix A11: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis		Factor analysis		
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error	KMO	% variance explained	Alpha
CF1_Institution_GoP	199	−3.557	1.446	0.000	1.000	−0.636	0.172	0.570	0.343	0.648	58	0.76
CF2_Institution_Gty1 _project manager	200	−2.465	2.126	0.000	1.000	−0.303	0.172	−0.031	0.342	0.654	73	0.75
CF3_Institution_Gty2 _line manager	200	−2.251	2.386	0.000	1.000	−0.255	0.172	−0.669	0.342			0.74
CF4_Infrastructure _information exchange	198	−2.419	2.137	0.000	1.000	−0.187	0.173	−0.119	0.344	0.748	63	0.80
CF5_Communication _meeting	201	−2.660	2.081	0.000	1.000	−0.214	0.172	−0.126	0.341	0.634	60	0.66
CF6_Org_Roles	183	−2.732	1.946	0.000	1.000	−0.544	0.180	0.314	0.357	0.552	65	0.65
CF7_Org_Structure*	183	−2.730	2.260	0.000	1.000	−0.102	0.180	−0.116	0.357			0.32
CF8_Paradigm_ctl	144	−4.021	1.571	0.000	1.000	−1.114	0.202	1.861	0.401	0.76	43	0.53
CF11_Paradigm_Orient	193	−2.146	2.762	0.000	1.000	−0.145	0.175	−0.357	0.348			0.73
CF9_Flexibility PG	200	−2.218	2.028	0.000	1.000	−0.185	0.172	−0.581	0.342	0.614	60	0.66
CF10_Flexibility GoP	187	−1.990	2.399	0.000	1.000	−0.177	0.178	−0.598	0.354	0.688	48	0.63
CF12_Value_Gty_pm	186	−3.692	1.402	0.000	1.000	−1.092	0.178	1.460	0.355	0.753	57	0.74
CF13_Leadership	194	−2.561	1.733	0.000	1.000	−0.532	0.175	−0.179	0.347	0.686	66	0.74
CF14_Governance success	186	−2.835	2.442	0.000	1.000	−0.301	0.178	−0.062	0.355	0.862	67	0.85
CF15_Org success	186	−3.392	1.784	0.000	1.000	−1.006	0.178	1.178	0.355			0.82
Valid N (listwise)	102											

* 5 excluded from further analyses

Appendix A12: Demographic Differences

Demographic factor and coding	*Enabler with difference*	*P (ANOVA)*	*Differences*	*P (Scheffe)*
Project size: 0 = <€ 100,000, 1 = € 100,001–1 milion, 2 = € 1–5 million, 3 = € 5–10 million, 4 = >€ 10 million	PG—Flexibility	0.08	0 > 4	0.043
Company size: Employees: 0 = 1–250, 1 = 251–1,000, 2 = 1,001–10,000, 3 = 10, 01–30,000, 4 = >30,000	Gvty—P	0.000	3 > 1 4 > 1	0.006 0.005
	PG—Communication	0.000	0 > 1 4 > 1	0.000 0.025
	GoP—Flexibility	0.001	0 > 2 0 > 3 0 > 4	0.045 0.028 0.018
	GoP—Leadership	0.014	4 > 1	0.044
	Governance success	0.018	0 > 3	0.038
	Corporate success	0.031	4 > 1	0.032
Years of respondent's experience: 0 = <1yr, 1 = 1–5 yrs, 2 = 6–10 yrs, 3 = 11–20 yrs, 4 = >20 yrs	GoP—Institutionalization	0.002	3 > 1 4 > 1	0.031 0.009
	Gvty—PM	0.011	4 > 1	0.045

Appendix A13: Differences by Governance and Corporate Success

Construct with difference	*P (ANOVA)*	*Differences by success categories*	*P (Scheffe)*
Governance success:			
PG—Infrastructure	0.000	3 > 1 4 > 1	0.005 0.000
PG—Communication	0.001	3 > 2 4 > 2	0.035 0.002
GoP—Institutionalization	0.000	3 > 1 4 > 1 4 > 2	0.004 0.000 0.008
GoP—Roles and responsibilities	0.003	3 > 1 4 > 1	0.024 0.010
GoP—GovOrientation	0.014	4 > 1	0.047
GoP—Leadership	0.000	3 > 1 4 > 1	0.005 0.002
Gvty—PMsupport	0.000	3 > 1 4 > 1 4 > 2	0.010 0.000 0.002
Gvty—Managers	0.005	4 > 1	0.014
Gvty—Collaborativeness	0.001	3 > 1 4 > 1	0.011 0.002
Organizational success			
PG—Infrastructure	0.000	3 > 1 4 > 1 4 > 2	0.011 0.001 0.049
PG—Communication	0.000	3 > 1 4 > 1 4 > 2	0.000 0.000 0.023
GoP—Roles and responsibilities	0.000	2 > 1 3 > 1 4 > 1 4 > 2	0.000 0.000 0.000 0.016
GoP—Leadership	0.000	2 > 1 3 > 1 4 > 1 4 > 2 4 > 3	0.000 0.000 0.000 0.001 0.021
GoP—Institutionalization	0.000	3 > 1 4 > 1 4 > 2	0.003 0.000 0.010
GoP—GovOrientation	0.006	4 > 1 4 > 2	0.015 0.043
Gvty—PMsupport	0.000	2 > 1 3 > 1 4 > 1	0.006 0.001 0.000
Gvty—PM	0.000	3 > 1 4 > 1 3 > 2	0.003 0.003 0.018
Gvty—Collaborativeness	0.000	3 > 1 4 > 1 3 > 2 4 > 2	0.000 0.001 0.009 0.033

Success categories: 1 = lowest quartile; 2 = second lowest quartile; 3 = second highest quartile; 4 = highest quartile

Appendix A14: Governance Profiles by Success Type

	Governance success				*Corporate success*			
Dimension	***Lowest***	***Low***	***High***	***Highest***	***Lowest***	***Low***	***High***	***Highest***
PG-Communication	−0.093	−0.411	0.204	0.335	−0.582	−0.131	0.321	0.452
PG-Infrastructure	−0.472	−0.121	0.307	0.390	−0.427	−0.136	0.256	0.448
PG-Flexibility	0.001	−0.200	0.183	−0.022	0.166	−0.093	−0.158	0.022
GoP-Institutionalization	−0.288	0.195	0.058	0.154	−0.515	−0.117	0.237	0.550
GoP-Roles and responsibilities	−0.412	−0.061	0.279	0.274	−0.876	−0.044	0.396	0.532
GoP-Flexibility	0.135	−0.240	0.128	0.035	0.223	0.067	−0.184	−0.082
GoP-GovOrientation	−0.246	−0.206	0.072	0.338	−0.246	0.015	−0.014	0.277
GoP-Leadership	−0.497	−0.006	0.267	0.272	−0.935	0.020	0.183	0.726
Gvty-PM	−0.267	−0.044	0.288	0.155	−0.393	−0.258	0.386	0.383
Gvty-Managers	−0.306	−0.188	0.110	0.350	−0.326	0.112	0.055	0.148
Gvty-Control	−0.119	−0.106	−0.124	0.337	0.088	−0.242	0.233	−0.033
Gvty-Support	−0.499	−0.223	0.219	0.543	−0.656	0.072	0.179	0.406
Gvty-Collaborativness	−0.511	0.003	0.180	0.298	−0.494	−0.273	0.379	0.345

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