EXPLORING CURRENT PRACTICE IN THE FORMATION AND FUNCTIONING OF PROJECT STEERING COMMITTEES

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ABSTRACT: Literature aimed at practitioners recommends dedicated Steering Committees for oversight of a project. However, most scientific research focusses on project governance in general or the role of the single owner. This paper adds to literature by inductively exploring the formation and the functioning of a Project Steering Committees, based on experiences of both members and project managers. Nine project managers and four Steering Committee members were interviewed. Data was analyzed, leading to five aggregate dimensions: on relevance and goals, the formation process, decision-making, roles and responsibilities of the members and ideal characteristics of the members. Findings were triangulated by a qualitative questionnaire. The study shows that dedicated Project Steering Committees are used for oversight of a project. As predicted by literature, the oversight consists of governance and support activities. The Steering Committee structure is primarily based on existing practices in the organization and the needed support from owners and other stakeholders. The project owner, often in consultation with the project manager, selects Steering Committee members based on functional representation. Competences needed for a role in the Steering Committee and interest in the project are generally taken for granted, but not always present. Follow-up research can focus on the roles and responsibilities of the members, characteristics the members should have, and the decision-making process.

Keywords: Steering Committee, Project Board, Governance, Oversight, Project Management

1. Introduction

Projects need oversight by senior management in order to be successful (Biesenthal & Wilden, 2014), often executed by a Steering Committee (Müller, 2009). The oversight can consist of both governance and support activities (Crawford et al., 2008; Loch, Mähring, & Sommer, 2017). The funding organization generally starts by appointing a project owner, who in turn appoints a project manager for the daily management of the project (Fama & Jensen, 1983). Typically, the project owner is accountable for the project success, and the project manager is accountable for the project management success (De Wit, 1988; Kloppenborg, Stubblebine, & Tesch, 2007). The role of the project owner and the relation between owner and project manager has been investigated before. Involvement of owners in the socialization activities of a project positively relates to project success (Andersen, 2012). Individuals who see their role as project owner separate from their line function, are the most focused on benefit management (Breese, Couch, & Turner, 2020).

Literature aimed at practitioners recommends a group of people forming a Steering Committee, which provides oversight towards the project (Axelos, 2017; Müller, 2009). According to Zwikael and Meredith (2018) a *Project Steering Committee* (PSC) is a group that acts at strategic level, and is responsible for achieving the business case as well as ensuring the progress of the project. The project owner (in the meaning of one individual senior manager) typically chairs the PSC, while other members are key stakeholders. However, it is not clear when to use a PSC as opposed to a single person who is the project owner. Project management organization PMI (Project Management Institute, 2016) states that an increase in project complexity leads to the application of more governance resources and processes. The amount of governance needed also depends on risk appetite, culture, and project management maturity. Thus, it suggests a PSC might be preferred for complex projects, without clearly defining “complex.” PSCs can have a vital role in achieving project success (Lechler & Cohen, 2009; Somers & Nelson, 2001), especially in projects which deliver a complex product combined with extensive impact on stakeholders.

The inner workings of PSCs receive little attention in research, as stated by Lechler and Cohen (2009) and Murphy (2016). Indeed, only two case studies were found, on building new vessels for a navy (Karlsen, 2021) and innovation in healthcare (Arnesson & Albinsson, 2014). Murphy (2016) studied PSCs for ERP implementations with the lens of information processing. Still, when a group of people provides oversight, it is unclear how the formation process takes place and what the tasks and responsibilities of the individual members are. Commonly used project methodology Prince2 (Axelos,

2017) provides guidelines on PSCs (referred to as project boards), though no scientific support has been found (McGrath & Whitty, 2020a). Therefore, this paper seeks an answer to the question:

What is the current practice in the formation and functioning of Project Steering Committees?

In literature a steering committee can be viewed as a permanent body, such as Lechler and Cohen (2009) using this term for a portfolio board coordinating multiple projects. The term Steering Committee is also used for a temporary body, like in the case study by Arnesson and Albinsson (2014). McGrath and Whitty (2018b) mix both usages, by referring to both the work of Nolan (1982), who used the term for ICT coordination groups, and Murphy (2016), who does explicitly focus on temporary committees for a project. The formation of temporary project steering committees is tailored to the goals and specifics of the project (Molen, 2015) and the members might have limited experience in supervising a project (Loch et al., 2017). Therefore, the empirical study discussed in this paper focused only on temporary PSCs that are dedicated to a single project or program. Within these PSCs, the study concentrated on committees for projects which needed extensive governance due to their complexity and risk for the organization at failure (Crawford et al., 2008). These projects included ICT, civil engineering, and production enhancement projects, which all had multiple stakeholder groups with partially opposing interests.

This paper will refer to a PSC as a body which can provide both governance and support, following Crawford et al. (2008). It will use *oversight* as the overarching term, in the meaning of "watchful and responsible care" (Merriam-Webster Incorporated, 2020a), which is in line with the use by Loch et al. (2017).

The study was conducted in several steps. First, it looked at literature to explore the field. The outcomes support the suggested gap between perceived importance of PSCs and knowledge about formation and its functioning. Second, interviews were held with nine experienced project managers and four PSC members to explore the oversight of projects in practice. The transcripts of the interviews were used to distill concepts and aggregated dimensions (Gioia, Corley, & Hamilton, 2013) on the practice in PSCs. Based on the concepts found, a qualitative questionnaire was sent to 48 experienced professionals for further exploration of the field from a project manager's perspective, as project managers over the course of their career typically deal with a variety of PSCs. In total, 32 completed questionnaires were received. Results from the interviews and the questionnaire were compared and provided recommendations for further research and guidelines for practice to improve the oversight of projects.

This paper follows the structure of the study, starting with a literature review. Next, the methodology of the empirical study is provided. Results from the interviews and from the questionnaire are presented subsequently. The comparison of the results from interviews, questionnaire and literature is presented in the discussion section, followed by describing validity and implications for literature and practice. Finally, conclusions are drawn.

2. Literature Review

Governance Role of PSCs

To understand the governance role of a PSC, we need to know what governance is in the realm of projects. McGrath and Whitty (2015) concluded that project governance is "the organizational governance of a project = the system by which a project is directed and controlled and held to account" (McGrath & Whitty, 2015). Müller, Shao, and Pemsel (2016) add that the holding to account is both on performance and conduct. McGrath & Whitty also remarked that in the realm of projects "Governance is the confluence point where the competing interests of the temporary project organization and the more permanent parent organization must be resolved." (McGrath & Whitty, 2015), which sheds light on the role of Project Steering Committee as a linking pin between the permanent and temporary organization.

Several theories from the field of corporate governance have been applied to project governance, of which Biesenthal and Wilden (2014) and Müller (2009) provide an overview. One of these is *agency theory* (Eisenhardt, 1989), which assumes self-interested and rational actors. So, the project owner and project manager should each have incentives and be controlled to act in the interest of the shareholders. *Stewardship theory* (Donaldson & Davis, 1991) provides a contrasting view, assuming the actors want to act in the best interest of the organization, and thus points to the importance of trust. The *theory of transaction cost economics* (Williamson, 1979) implies that organizations adapt their governance structure to achieve the lowest possible transaction cost. It states that risks and cost involved in governance should be balanced. For example, an occasional high-risk project might warrant a dedicated PSC consisting of senior management. Whereas a type of project that the funding organization knows well might suffice with governance by a stand-alone project owner or an existing steering committee of projects. The *resource-based view* highlights the importance of effective utilization and access to resources to meet business objectives. It is used to determine the composition of Corporate Boards to obtain members with access to different kinds of vital resources outside the organization (Hillman, Cannella, & Paetzold, 2000). The same might be true for PSCs, to help gain access to resources outside the influence of the project manager. *Shareholder theory* assumes that the main purpose of an organization is to maximize shareholder return on investment, which requires structures (such as contracts, processes and policies) to assure managerial action is always in the best interests of the shareholders (Friedman, 1962). Contrasting, *stakeholder theory* takes the wider social responsibility of organizations into account (Freeman, 1984).

These theories on governance can help to clarify the goals of a PSC but do not suffice to deduct hypotheses on how PSCs operate. Nevertheless, they are useful to interpret results from inductive research (Blaikie, 2009). Letting representatives from major stakeholders participate in decision-making can be undesired from an agency point of view, since these might focus on their personal goals and own departments. But looking from a stewardship perspective, involving these representatives could lead to commitment to follow-up decisions after the 'go live' of a project.

One of the few studies on the effect of a PSC on project success was conducted by Somers and Nelson (2001). They discovered that having a PSC is one of the Critical Success Factors for ERP implementations, since it enables senior management to directly monitor the project team's decision-making by (dis)approving major decisions (Whitten, Bentley, & Dittman, 1997), thus to direct the project. However, their study leaves open why a committee is needed instead of a single person fulfilling the role of project owner. A paper by McGrath and Whitty (2017) on types of stakeholders notes that variations in oversight arrangements can accommodate the differing interests of roles like customer, sponsor, owner and the entity controlling the deliverer (the project team) in case these roles are not united into one person. Lechler and Cohen (2009) point to an advantage of using a committee for oversight: to include perspectives from multiple stakeholders in the decision-making which improves customer satisfaction.

Support Role of PSCs

Most studies describe PSCs as a governance body and therefore with governance functions. The support role, as noticed by Crawford et al. (2008), seems largely ignored. For example, PMI provides a guide "Governance of Portfolios, Programs and Projects" (Project Management Institute, 2016), which mainly focusses on direction and control. McGrath and Whitty (2013) advise to be careful using a PSC if the mandate exceeds that of the members, since it jeopardizes the authority structure at the funding organization; thus they focus on the governance role. However, Olsson et al. (2008) mention that two distinct kinds of project owners can be found. First, a project owner that focusses on the business case (type 1). And second a project owner that supports the project manager and enables project delivery (type 2). Project management methodology Prince2 does take a wider view than just the governance aspect, by using "direction" (instead of governance) as the main theme for the oversight of projects (Axelos, 2009), in which they also include support tasks like resolving user requirements and priority conflicts. The present paper explicitly includes the support role and defines *support* as "to hold up or serve" (Merriam-Webster Incorporated, 2020b) like taking care of impediments and a willingness to partner with the project team (Helm & Remington, 2005).

Composition of a PSC

Practitioner oriented literature provides some insights on the composition of a PSC. First, PMI advises to determine the governance required based on project complexity (Project Management Institute, 2016). That lines up with the theory of transaction cost economics since the risks should justify the hours spent on governance. The members of governing bodies are typically executive level individuals from the organizational groups that have a stake in the project. The PMI guide is not clear on who should be in the lead determining and organizing a project governance structure. PMI points to the importance of senior management support, so they might be involved in the initiation of the project. Second, Prince2 states that the person of project owner (which they refer to as executive) must be appointed by corporate or program management (Axelos, 2009). The project owner is responsible for the structure and the selection of members of the PSC. The criteria to select members are to obtain a "balanced view on behalf of the wider organization" (Axelos, 2009) and to have members who can decide for the groups they represent.

Well-researched roles in the oversight of projects are the *project owner* and *project sponsor*. The naming of owner and sponsor is not used consistently in literature, as found by Zwikael and Meredith (2018). They propose to use project owner as "the senior manager who is held accountable by the funder for realizing the business

case." Thus, they make a distinction in roles and avoid using sponsor by using funder. Zwikael and Meredith (2018) conclude that the owner is a person who might chair the PSC, select the project manager, provide strategic direction, approve the project plan, and monitor the progress. McGrath and Whitty (2020b) add that the person who owns the project outcomes should be the chair. This paper follows the definition of owner made by Zwikael and Meredith (2018). As will be shown in the results section, there can be several persons holding the role of project owner.

Olsson (2018) provides a list of best practices regarding the project owner for project governance. The project owner:

- has full responsibility [*sic*] for the project;
- understands the responsibilities and has the experience to drive decision-making;
- ensures that the project is aligned with organizational strategies;
- has a good relationship with the project manager and they work well together;
- has enough time to dedicate to the role.

Helm and Remington (2005) provide ideal characteristics of the project owner according to project managers in civil engineering infrastructure projects. These are on position in the organization, personal competences, knowledge of the organization, compatibility with other key players and attitude towards the project.

In Prince2, the group that directs the project manager is named a *project board*, "this is the most senior level within the project management team [*sic*]. … The project board is accountable [*sic*] for the success of the project within the boundaries set by corporate or program management" (Axelos, 2009). Note that Prince2 makes the project board part of the project management team, but provides guidelines on both governance and support. Prince2 uses "accountable" (McGrath & Whitty, 2020a) for the group, while Olsson (2018) in his best practices uses the more limited term "responsible". Prince2 explicitly defines three roles in the PSC. First, "The *executive* … is accountable for the project's success and is the key decision-maker … The Executive's role is to ensure that the project is focused throughout its life on achieving its objectives and delivering a product that will achieve the forecasted benefits" (Axelos, 2009). Second, "The *senior user* is responsible for specifying the needs of those who will use the project's products, for user liaison with the project management team and for monitoring that the solution will meet those needs" (Axelos, 2009). Third and last, "The *senior supplier* represents the interests of those designing, developing, facilitating, procuring and implementing the project's products" (Axelos, 2009).

No other literature has been found on roles of members of PSCs. Also, no studies were found on the effect of using the recommendations on roles of Prince2 on achieving project results. Besides, Prince2 is not clear on accountability: the project board (PSC) is accountable but "ultimately" the person who has the role of executive is accountable (McGrath & Whitty, 2018a).

Decision-Making

Governance focusses on transparency and accountability (OECD, 2004), which might be jeopardized if the project owner is not the only decision maker in the PSC. A senior user (as a stakeholder) who can decide, but is not held accountable, can take advantage for his own goals Olsson (2018). This matches the fundamentals of agency theory (Biesenthal & Wilden, 2014). Patel and Robinson (2010) concluded that having accountability clearly vested in a single project owner helps ensure effective governance. Which was supported by Ul Musawir et al. (2017) finding that having a project owner as the single point of accountability predicts project success.

So, how should a steering committee decide if only the single project owner is accountable? McGrath and Whitty (2018b) claim that most PSCs are actually an advisory board towards the project owner. Reimers (2002) poses this should even be the case. In his study on ERP implementations in China, he found that department managers having veto rights in the PSC led to a decline in service level. On the other hand, Hällgren and Lindahl (2017) found that consensus-seeking behavior reduces the need for escalations and thus contributes to timely decision-making. Whether consensus-based decision-making by committee is beneficial for achieving project results is unclear.

Conclusion from Literature

Literature on PSCs has been mainly written by and for practitioners. This indicates the practical need for guidance on how to set up and execute a PSC to help achieve project performance. Underlying scientific research, however, is scarce (Murphy, 2016). It is known that complex projects justify the cost of extensive oversight (Müller, 2009; Williamson, 1979). At this stage, it is not clear when a PSC is needed, and when a stand-alone project owner or permanent steering committee of projects would suffice. Existing research does provide insight on the role of the project owner (Breese et al., 2020) and, to a limited extent, on the relation between governance and project success (Turner, 2020). PSCs can be important for both governance (providing direction and control) and support (to hold up or serve) of the projects (Crawford et al., 2008). The project owner typically establishes and chairs a PSC (Zwikael & Meredith, 2018). Other members are representatives with authority from major stakeholder groups, with roles like senior user and senior supplier (Müller, Drouin, & Sankaran, 2019). Literature provides ideal characteristics for the owner (Helm & Remington, 2005). For the other roles, ideal characteristics like on function in the organization, interest in the project, and personal competences are unclear. This all points to the knowledge gap of how the committee as a whole and its members individually could provide governance and support to benefit project results.

3. Research Methods

Since theory on project oversight is not well enough developed to formulate testable hypotheses, this study used an inductive and explorative approach to understand what is going on. The focus was on multi-actor projects that deliver a product or service. Within these projects, the study considered perspectives from practitioners to gather rich information. Their perspectives can shed light on the reality, according to the epistemological stance of a "cautious realist" (Blaikie, 2009).

To explore the functioning of PSCs, nine experienced project managers and four PSC members were interviewed. They were selected via theoretical sampling from a wide variety of projects from twelve organizations, based on the researcher's network. The projects of the PSC members were at least in the realization phase. The interviews allowed to clarify the context and the meaning given by the interviewees to actions in the PSC. As a second research step, a questionnaire was developed based on the exploratory interviews and sent to 48 experienced professionals for further exploration of the field. Project managers typically must deal with a variety of PSCs, thereby broadening the research's view.

Data Collection and Analysis of the Interviews

For the first step, the total set included participants with a wide range of characteristics:

- experience with projects in civil engineering, ICT custom made, ERP implementation and enhancing production plant capabilities;
- experience with projects in multinational and medium sized organizations;
- for the project managers: employed by the customer organization, hired by the customer organization, or employed at an ICT systems integrator.

Participants were interviewed individually using semi structured interviews. The main topics were project governance, use and goals of PSCs, roles of members of the PSCs, ideal characteristics of the members and the formation process of the committee. Each interview lasted between 90 and 120 minutes and was recorded and transcribed. The participants approved a summary of the interview. Table 1 lists the project managers and the PSC members with their role, the projects discussed and the type of funding organization.

Table 1: Participants in the interviews

Participant	Role participant	Projects discussed	Funding organization
P1	Project manager	*A.* Development and implementation of an E-commerce platform	Truck manufacturer
	Project manager	*B.* Custom software development and implementation	National government, customs department
P2	Project manager	*A.* Car-tunnel renovations	National government, department of public works
	Project manager	*B.* Custom software development and implementation	National government, department of public works
P3	Quality Assurance	*A.* Portfolio of IT projects	High tech company
P4	Project manager	*A.* European ERP implementation for automotive wholesale	Wholesale company
	Project manager	*B.* Implementation Manufacturing Execution System at production plants	Food company
P5	Project manager	*A.* New public transport infrastructure	Local government
P6	Project manager	*A.* Renovation of a gas terminal	Oil & Gas company
	Project manager	*B.* Portfolio management of production plant projects	Food company
P7	Project manager	*A.* Megaproject, new metro line	Local government
	Project manager	*B.* Update of metro safety systems	Local government
P8	Project manager	*A.* New Student Information System including redesign of processes	Vocational education institution
P9	Project manager	*A.* Implementation of and ERP System for a mid-sized organization	Retail company
S1	Senior user	*A.* Implementation of new software (custom made and ERP) for a business process	National government
S2	Senior user	*A.* Upgrading a production plant for new business in process industry	High Tech company
S3	Project owner	*A.* New Student Information System including redesign of processes	Vocational education institution
S4	Process owner	*A.* Implementation of new ERP system including redesign of business processes	High Tech company

Given the inductive character of the research, the method developed by Gioia et al. (2013) was used to systematically analyze the transcripts by categorizing emergent concepts and ideas:

- First, each transcript was analyzed individually in order to extract what the respondents revealed on the current practice of PSCs. All findings were listed, largely in their own wordings, as 1st-order category statements. Their own wording was only adjusted to compensate for slang or company specific jargon and translated to English. This led to 295 1st order category statements. The number of categories is high compared to other research using the method of Gioia *et al.* since various kinds of projects and organizations were analyzed and the researcher wanted to keep the data rich at this stage.
- Next, the 1st order categories for all the interviews were analyzed and compared to each other, considering the context in each transcript, since the meaning can vary among respondents and contexts. This 2nd order analysis led to 138 common themes.
- Finally, the 2nd-order themes were combined into five aggregate dimensions, structured according to the aspects of the workings of PSCs they clarify.

Figure 1 illustrates these steps. On the right side it provides examples of categories, themes, and dimensions.

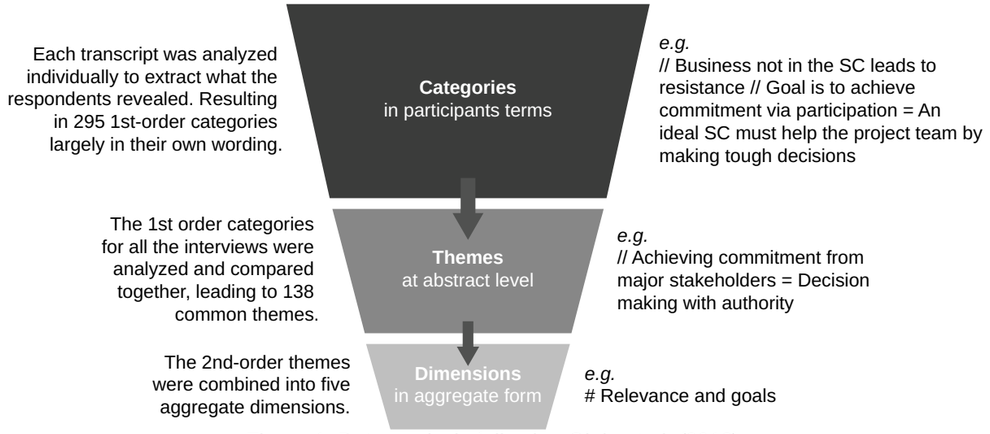

Figure 1: Data analysis following Gioia et al. (2013)

Data Collection and Analysis of the Questionnaire

The exploratory interviews led to insights in the functioning of PSCs. For further exploration of the field, as a second step a questionnaire was developed based on the outcomes of the interviews. This questionnaire was sent to 48 experienced project managers within a project management firm, who work on behalf of various customers. Thus, participants were working in a wide variety of sectors, such as government, education, industry, and wholesale. The questionnaire was completed by 32 participants (67% response rate). They worked in projects in Dutch organizations, in eleven different sectors and 66% had an investment value above €1M. Most of these projects (91%) were ICT related, with exceptions in civil engineering, production plant enhancements and business change programs. Since 30 of these project managers voluntary added their name, the researcher could ask for clarification. In the analysis section of this paper, the insights from interviews and questionnaire will be compared so see whether the interview insights are applicable to a larger group of projects.

4. Results

Condensing the 2nd-order themes from the interviews led to the aggregated dimensions listed in appendix I, of which table 2 provides a summary. This section describes the results of the interviews and the survey and is structured according to these five dimensions. The coding between brackets refers to the participants interviewed, and projects discussed as provided in table 1. In the text about the results from the survey, the scores between brackets represent a Likert scale, ranging from 1 (totally disagree) to 5 (totally agree). Detailed data is available upon request.

Table 2: Aggregated dimensions based on analysis of the interviews

Aggregate dimension	Content
Relevance and goals	What is the overall reason for an oversight structure? What are the goals of the PSC? To which person or committee does the project manager report?
Formation process	Who proposes the oversight structure, based on which criteria? Who decides what the structure will be? What kind of members are needed in a PSC?
Decision-making	What is the decision-making authority of the committee? How does decision-making take place?
Roles and responsibilities of the members	What are the roles, tasks, and responsibilities of the members? To what extent are roles important for project results?
Ideal characteristics of the members	What would an ideal PSC member look like? Based on personal competences, personal values, attitude towards the project, and informal position in the organization.

Relevance and Goals

All project managers interviewed reported to a committee created specifically for the project, none to a stand-alone project owner or a permanent committee. In the survey, most of the projects (78%) reported to a temporary PSC. The other projects reported to a stand-alone project owner (13%), or a permanent portfolio board (9%). In the interviews, one organization used a combined portfolio board for the oversight of smaller projects and a dedicated PSC for each project above €1M (P6B). Three of the civil engineering projects (P5A, P6A, P7A) and one ERP implementation (S4A) had two or three dedicated temporary committees on different decision-making levels.

The names of the committees varied: steering committee (P1A, P1B, P2A, P4A, P5A, P10A, S1A, S4A), direction-group (P8A), project board (S1A), program board (S2A), portfolio board (S4A), management team (P7A), program council (S3A), and decision review board (P6A). Names are not consistent with literature, for example, at an ERP implementation the temporary PSC was called a “portfolio board” (S2A).

According to both project managers and PSC members, the main purpose of a PSC was to help a project reach its project goals, which consists of both the business case and the project management goals. Central theme was that the PSC provided the link between the standing organization(s) and the project organization, by

- making sure the project-goals align to overall organization-goals in a changing environment, the “direction” part of governance;
- making decisions with authority for the project to move forward;
- providing resources;
- providing structure and clarity for the surrounding organization;
- communicating to peers, top management, shareholders, and the project team;
- championing the project;
- providing a platform for the main shareholders to work together by exchanging information, interests, and shared goals.

The project managers were aware that the PSC has a task in directing the project, but seldom mentioned the task of holding the project manager to account on conduct and performance. For example, they never spontaneously mentioned the possibility of the PSC organizing audits to check progress of the project independently of the project manager. They did heavily emphasize the support role of the PSC, “to work as a team to reach the finish line” (P1B) and “to assists the project team” (P6B). The results from the survey were in line with the interviews. Project managers strongly indicated that a PSC controls the project results (84% score 4 or 5). They experienced much less control on their conduct (56% score 1 or 2). There was some support that the PSC challenged the project manager; a third (38%) scored neutral (score 3) and half agreed (50%, score 4 or 5). However, most project managers did not perceive coaching by the PSC or project owner on how to deal with the organizations culture (50% score 1 or 2, 34% neutral with score 3).

When these participants were asked, “Would your project have succeeded without having a PSC?” responses only varied from “very difficult” to “definitely not.” As one of the project managers voiced “There would have been several moments where the whole project would have been at risk of being cancelled. What saved us is that we had a platform where parties felt free to speak to each other and where the directors engaged in the project and gained insight and knowledge.” (P5A). In the survey, when stated “In this project a PSC with several members is necessary to reach the project goals,” 88% agreed (score 4 or 5).

Formation Process

When choosing a structure for oversight, according to the interviews organizations used existing corporate standards on project governance as a starting point. About half of the organizations had clear standards (P2A, P3A, P4B, P6A, P6B, S1A, S2A, S4A). One of the projects discussed was a tunnel renovation, which was a type of project the funding organization had experience with. The existing way of working was used without modification (P2A). Other organizations adapted an existing governance standard to the needs of the project. For example, in a high-tech organization, the corporate rules prescribed a separate project board for each project. However, the project owners decided to form one program board to cluster oversight for all projects which were needed for the upgrade of a production plant (S2A).

In most of the projects discussed in the interviews, the oversight structure was designed specifically for the project from the start. The project owner (in the sense of a person) and the project manager were the key actors in the formation. First, they considered the formally contracted involved parties. This occurred in the civil engineering cases (P5A, P7A) and an ERP implementation case (P9A). For example, if a municipality funded part of the project, a representative from that municipality would become a member of the PSC (P5A). Next, they identified other important stakeholders who would use the product of the project. For example, at an ERP implementation, the director of operations was typically a member of the PSC (P9A). Finally, they determined the managers with access to critical resources. For a custom-made software project at a national government, access to internal ICT specialists was critical, so a senior manager from ICT was invited to the PSC (P1B).

When the project owner had decided what kind of roles they needed in their PSC, potential members were typically determined via their regular function in the organization (P1A, P1B, P2A, P3A, P4A, P5A, P6A, P7A, P9A, S2A, S3A, S4A), such as being a finance director or quality manager. Therefore, specific interests and competences were secondary in the selection process of the PSC members. A person who was asked to participate rarely refused (only at P8A) or sent a replacement to attend the meeting (only at P1A). The results from the survey are in line with those from the interviews, since all project managers indicated that the members of the PSC were chosen based on their function in the standing organization (score 4 or 5). They agreed less on whether the members were chosen based on personal competences; half mostly agreed (score 3 and 4) and half disagreed (score 1 or 2). They also had varying opinions on whether members were selected based on their personal network, this was evenly distributed. About half (56%) indicated that personal interest in the project was not important for selection (score 1 or 2).

Decision-Making

The decision-making process in the PSCs seems to be a continuum from decision-making by the owner only to consensus-based decision-making. None of the committees discussed in the interviews decided based on voting. The clearest case of decision-making by the owner was the use of a *Decision Review Board* at the oil & gas company (P6A). Note that this title is misleading since the board only advised the executive. Even here, the owner sought consensus to avoid resistance, and the committee had members who could formally veto decisions in their area based on their line function. In all other projects, the norm was decision-making as a group, ideally decision-making based on consensus. For example, a project manager in a struggling civil engineering project used joint decision-making involving representatives from contractors, to improve working collectively instead of focusing on their roles (P7A). In the survey the tendency towards consensus-based decision-making (54%) was less strong than in the interviews. In some cases (14%) the PSC did not decide at all.

The study observed some conflicts resulting from shared decision-making. One of the participants mentioned (P1B) “the PSC was one big interest group, the members kept on making demands and the owner had to pay”. Similar conflicts of interest were mentioned on budget and lead-time in two other cases (P5A, P9A). However, both the project managers and PSC members still preferred joint decision-making to achieve commitment from all members and major stakeholders. One PSC member regarded consensus-based decision-making as the means to achieve the best business processes surpassing interests of business units (S4A).

Formally, the decision-making authority of a PSC was equal to the authority of the function in the standing organization of the members (P1B, P2A, P5A, P7A, P8A, P9A, S1A, S2A, S3A). However, in practice if the members worked together, they extended their influence. For the construction of a new mode of public transport, formally the members had limited decision-making power because their parent organizations had to decide on specifications and budget (P5A). Informally, they had considerable power by deciding what would be on the agenda of their parent organizations and by preparing options together with other PSC members and the project team. At a program to upgrade a high-tech production plant, the decision-making authority was limited because each separate project had to be approved by the executive committee. Because the members of the PSC were working as a team and influencing their surroundings, the Project Assurance Department felt they overstepped their authority (S2A), even though the PSC members worked within the formal authorization.

Project managers influenced decision-making by preparing the agenda for the PSC in all projects discussed, having one-on-one meetings with members, and in several cases technically chairing the meetings (P1A, P6A, P9A, S2A). One project manager indicated that the project owner should have been the chairperson, to improve his or her commitment (P1A).

Roles and Responsibilities of the Members

Participants agreed unanimously that focusing on the PSC’s goals and working as a team was more important than focusing on their individual roles. This could be seen in most committees using consensus-based decision-making and allowing discussions in committee meetings (P2A, P5A, P7A, P8A, P9A, S1A, S2A, S3A, S4A). They made statements like, “It’s more important to understand working as collective than pursuing your own role “(P6B) and “We [as committee members] said, let’s focus on what connects us” (P7A). However, the roles had value in the selection of the participants, “to achieve a balance between the disciplines” (P6B).

If the participants used a method for designing roles in the PSC, it was Prince2. Even if no explicit method was used at the formation, the project managers indicated the roles were alike the Prince2 roles of owner, senior user, and senior supplier. All PSCs discussed had at least one project owner. In a production plant enhancement in the process industry, there were two project owners: one director from the country organization and one director from the division organization (S1A). All but one PSC had various senior users, who were responsible for deciding on behalf of an organization, process or department and making sure decisions were implemented there. The exception was an ERP implementation at a vocational training institution, where directors of the business units (faculties) were represented in the project management team, but not in the PSC; the project owner in retrospect would have given one of them a role in the PSC to help business change management (S3A). Most ICT projects (except S3A) and two of the civil engineering projects (P2A, P6A) had senior suppliers, either directly from the contractor or via the ICT manager or a contract manager. Two project managers in civil engineering projects indicated that in retrospect they should have made employees of the main contractors part of the PSC to make them feel part of the team and to improve accountability (P6B, P7A). Last, several projects had an additional non-Prince2 role of quality assurance and/or general advice, such as an information manager (P8A, P9A) or quality manager (P4A, P6A, P8A, S2A). Table 3 provides an overview of the roles for each project discussed, when left empty the role was not explicitly discussed.

Table 3: Prince2 roles in projects discussed

Projects discussed	Executive	Senior User	Senior Supplier	Quality Assurance (non-Prince2)
P1.A. Development and implementation of an E-commerce platform	Y	Y	Y	N
P1.B. Custom software development and implementation	Y	Y	Y	
P2.A. Car-tunnel renovations	Y	Y	Y	
P2.B. Custom software development and implementation	Y	Y	Y	N
P3.A. Portfolio of IT projects	Y	Y	Y	
P4.A. European ERP implementation for automotive wholesale	Y	Y	Y	Y
P4.B. Implementation Manufacturing Execution System	Y	Y	Y	
P5.A. New public transport infrastructure	Y	Y	Y	N
P6.A. Renovation of a gas terminal	Y	Y	Y	Y
P6.B. Portfolio management of capex projects in food industry	Y	Y	N	
P7.A. Megaproject, new metro line	Y	Y	N	N
P7.B. Update of metro safety systems	Y	Y	N	
P8.A. New Student Information System including redesign of processes	Y	Y	Y	Y
P9.A. Implementation of ERP system for a mid-sized organization	Y	Y	Y	Y
S1.A. Implementation of new software (custom made and ERP)	Y	Y	Y	N
S2.A. Upgrading a production plant for new business in process industry	Y	Y	Y	Y
S3.A. New Student Information System including redesign of processes	Y	N	N	Y
S4.A. Implementation of new ERP including redesign of processes	Y	Y	Y	N

The interviewees were asked if the members received training on the oversight of projects. Both project managers and PSC members indicated there was limited focus on training, with some exceptions (P1B, P8A, S4A). The most extensive (one-day) training was at the ERP implementation of the high-tech organization (S4A). However, this training was only introduced after a reorganization of the oversight structure due to limited project progress. Even then, at first only part of the committee members chose to participate. An oil company had an obligatory training for project owners, though not mentioned by the project manager (P6A). Committee members were supposed to understand their role by reading the project plan, being a good manager in the standing organization and having meetings with the project manager. Some PSC members indicated that in hindsight more training or team building could have helped performance (S2A, S4A).

Ideal Characteristics of the Members

Members lacking competences were mentioned during the interviews (P1A, P3A, P8A, P9A). Lack of interest in the project also occurred, leading to uninformed decision making (P9A). One of the participants remarked "The senior users were senior managers and were supposed to have the business change management skills," which they did not always have (P3A). When asked in the survey if the PSC members had enough personal competences for their role, a small majority of project managers agreed (56% score 4 or 5). One participant clearly indicated a lack of competences (score 1) at an ERP implementation.

The ideal characteristics can be personal competences, personal values, attitude towards the project and informal position in the organization. Frequently mentioned characteristics were being action oriented (P1A, P1B, P3A, P4A, P4A, P9A, S2A), having authority (P1A, P4A, P8A, P9A, S1A), acting in the interest of the project (P1B, P4, P5A), understanding characteristics of working with projects (P1A, P6A, P7A), and understanding deliverables for the project (P6A, P8A, S2A). One of the participants summarized several ideal characteristics as "being undisputed in the organization" (P9A).

5. Discussion

The study looked at the current practice regarding PSCs according to experienced project managers and PSC members and thereby contributed to further understanding formation and execution of project steering committees. This section discusses the empirical findings and how they relate to literature.

Relevance and Goals

All interviewed project managers reported to a dedicated committee, not just to a stand-alone project owner or a permanent portfolio board. The questionnaire showed a similar outcome, where most of the projects report to a PSC. This is in line with the findings by Müller et al. (2016), where 97% of all project managers indicated that they report to a PSC. It contradicts a proposition by Karlsen (2021) that a reason for limited research on PSCs is they are mainly used in the Nordics.

For the governance role of an oversight committee, the common use of a PSC can be explained by transaction cost economics (Williamson, 1979), as the complexity of the discussed projects warrants the effort on governance. Looking at the support role, Lechler and Cohen (2009) found committees useful to coordinate multiple stakeholder perspectives. Thus they support a stakeholder orientation in governance, which can help achieve project success (Joslin & Müller, 2016). The current results confirm the importance of the support role; the respondents indicated the projects needed a PSC as vehicle for coordination between senior managers.

The empirical results show the overall goal of a PSC is to achieve project goals, which matches the "type 1" owner as defined by Olsson (2018) and thus indicates that the committee takes the role of project owner (Crawford et al., 2008). PSC's can provide governance and support with governance consisting of directing and holding to account. The "direction" part of governance is indeed clearly visible, and the committee should be able to authorize the implementation of decisions (McGrath & Whitty, 2018b). The "holding to account" part of corporate governance is less clear from the empirical data. The questionnaire data supports that project managers are held to account on results, however in the interviews this was hardly mentioned spontaneously. Maybe PSCs have limited focus on holding the project managers to account, or the respondents take this for granted, as suggested by Olsson (2018). The support role, as highlighted by Crawford et al. (2008), can be clearly seen in several of the goals mentioned in the interviews, like "communicating to other managers, top management, shareholders and the project team".

Formation Process

Results showed that in the formation process experienced project managers helped inexperienced project owners, which is supported in literature (Walker, 2012). The final decision on the oversight structure was made by the project owner. The extensive and growing literature on the governance of projects (Müller et al., 2016) suggests existing governance rules would be the starting point for the owner. However, for most of the PSCs discussed in our interviews, there was no corporate framework on project governance available.

Results from the interviews and the questionnaires indicate that the main selection criterion for members is their function in the standing organization. First, functions to be represented are based on formal contracts, like who funds the project, which is line with shareholder theory. Next, functions representing major stakeholders are selected, which is in line with stakeholder theory. Last, functions providing access to critical resources were selected, in accordance with the resource-based view. So, all these three theories can be used a lens for the formation of a PSC in further research.

Decision-Making

In most of the projects discussed in the interviews and in half of the projects from the questionnaire, the norm was consensus-based decision-making. This is consistent with the findings of Lechler and Cohen (2009), who state that in most committees decisions are made collectively. This poses the question what group decision-making means for accountability. Zwikael, Meredith, and Smyrk (2019) found some CEOs indicated that the project owner is accountable and others that the PSC as a group is accountable. Most literature as well as Prince2 advise decision-making by the project owner only (Olsson, 2018; Patel & Robinson, 2010; Ul Musawir et al., 2017), which contrasts our findings on what happens in practice. Thus, this calls for a deeper understanding of the trade-off between improved commitment and a loss of clear accountability in case of consensus-based decision making in the PSC.

The results showed that the formal decision-making authority of the PSC was equal to the authority of the function in the standing organization of the members. Such a committee McGrath and Whitty (2018b) would refer to as an advisory committee, since in these committees' decisions will not compromise the accountability of existing organizational roles. However, several of the participants in our study feel that the power of the group is larger than that of its members, call it some sort of informal power, which is not included in the research of McGrath & Whitty.

Project managers mentioned that frequently they chaired the PSC meetings, though they would have preferred the project owner did for commitment. This reminds of a remark made by Müller (2009) that senior project managers will tend to manage a PSC if the members have little understanding of modern project management. However, from our data it is unclear why a project owner does not chair. Literature indicates project managers chairing the committee and heavily influencing the agenda will blur the division between the PSC's and project manager's accountability and thus should be avoided (Turner & Keegan, 2001).

Roles and Responsibilities of the Members

The results show that in the formation process, roles are defined to identify functions (mainly in the standing organization) whose holders could fill these roles. The roles can be identified according to Prince2, although several steering groups have a fourth non-Prince2 role of quality assurance and/or general advice. This corresponds with the findings in a case study of an ERP implementation where a quality assurance consultant was part of the PSC (Johnstone & Tate, 2017). Our results also indicated that most of the focus of the members should be on working as a team, challenging other members, and immersing oneself in the interests of other roles. Defining roles though focusing on working as a team is not a contradiction *per se*, the main reason for using roles could be to obtain a wide number of perspectives and to make sure all major stakeholders are represented when working on a common goal. Indeed, Ul Musawir et al. (2017) found that a single point of accountability in the person of the project owner is essential for achieving the benefits, but having clearly defined roles and responsibilities in their study revealed no relation to project investment success. This again leads to questions for further research on the importance of clear accountability for a task vested in one person, versus working as group.

Ideal Characteristics of the Members

Helm and Remington (2005) provide a list of ideal characteristics for project owners, which matches our results on characteristics for PSCs members in general. Characteristics mentioned are personal competences, personal values, attitude towards the project, and informal position in the organization (besides the formal position which was a selection criterion). Findings on availability of competences needed for project results are divers. At least in the ICT projects PSC members seem to lack the competences needed for project oversight. Project managers tried to compensate via one-on-one meetings, while formal training or coaching of PSC members hardly took place. In literature there is scarce information on whether the members have

the required competences (Loch et al., 2017). The case study by Karlsen (2021) however does mention the PSC members receiving training, thus nuancing the current results and providing directions for further research.

6. Validity and Limitations

Project managers as well as steering committee members were interviewed to compare their views. The subsequent questionnaire further added perspectives from the broader project managers' point of view. This provided confirming information but also showed limitations of the interview results, such as consensus-based decision-making being less common than the interviews suggested. Follow up research could be broadened by involving more steering committee members.

The results of both the interviews and the questionnaire show variations in meanings of terms like "steering committee" and "governance" in the views of the respondents. For example, what Prince2 calls the "senior responsible owner" was referred to as the "program manager" by one of the PSC members interviewed (S4). This supports the value of the qualitative research approach by allowing probing and indicates that context is important to interpret the results.

The limited sample size of this exploratory research might lead to missing contingency factors influencing formation and performance of PSCs. Also, the research was limited to The Netherlands - although multinationals were involved – so findings could be biased towards a Dutch corporate culture. Future research could widen the scope by including projects from other countries or projects with multiple owners and sponsors.

7. Implications

The study has several implications. First, in literature, the support role of PSCs must be explicitly taken into account besides the governance role since support is needed in case of irreconcilable constraints between stakeholders or scarcity of resources. Second, research on authorities of committees and its members should take informal influence into account besides formal authorities. Third, papers must be explicit on whether they describe a temporary project steering committee, or more permanent committees where group formation processes have already taken place and membership might be a part of the position in the permanent organization.

Further research is recommended on a number of topics. First, on decision-making in the PSC given the potential tradeoff between holding one person to account for project results and the reasons found for group decision-making (decision quality and commitment). Second, responsibilities and roles of the individual members must be made clear since ambiguity might lead to further limiting accountability and the risk of members not taking action. Third, the study suggests the ideal characteristics of the members are in line with those needed from the project owner. However, these might be dependent on their PSC role and the characteristics of the project, which also justifies further research.

The study also has implications for practice. First, project steering committees can be a worthwhile body for project oversight if a project has high risk for the funding organization at failure or support by a group of senior managers who represent stakeholders or resources-suppliers is needed. Second, in practice senior project managers can heavily influence the formation of the PSC and its agenda. So, they should also help the members to fulfill their "held to account" role or should be limited in this influence. Third, due to members being mainly chosen based on their position in the permanent organization, members should follow trainings and take other mitigating measures if their competences or other characteristics are lacking.

8. Conclusion

Literature aimed at practitioners advises the use of PSCs to oversee complex projects. Most scientific research, however, has been on the role of the project owner or on project governance in general. A PSC has more members than just the project owner and can be vital for supporting the project. Therefore, this study investigated: *What is the current practice in the formation and functioning of Project Steering Committees?* Nine experienced project managers and four PSC members were interviewed on the formation and workings of the PSCs. After preliminary analysis, subsequently a qualitative questionnaire was conducted with 32 project managers for triangulation. The results from the interviews were compared to the results from the questionnaire and to literature.

The study found that a dedicated committee for oversight is widespread practice for complex projects like large civil engineering projects, production plant enhancements and ICT projects leading to new business processes. It should provide oversight consisting of governance and support activities. Such a PSC fulfills the role of project owner (as a group) and is thus accountable for the project goals. The committee is the vital linking pin between the standing organization and the project organization. It provides resources, makes decisions, and offers a platform for involving stakeholders, who share their thoughts to obtain commitment and make high quality decisions. Consensus-based decision-making is common, since resulting commitment from the members seems to outweigh potential ambiguous accountability.

If the organization has standards for either project governance or governance of projects, these will be the starting point for the formation of the PSC. The project owner (the formal chairperson of the PSC) adapts these governance standards or (in absence of standards) sets the oversight, as needed by the project. The project owner selects members for the PSC based on who funds, who represents the major stakeholders, and who has access to vital resources or knowledge. This suggests that shareholder theory, stakeholder theory and the resource-related view all apply. Characteristics of members, like interests and competences, are secondary criteria in the member selection process. This means that the members might not have the right skills/knowledge on oversight to perform well as PSC member. Moreover, the members of the committee are rarely trained.

This study added empirical data to the debate on oversight of projects via steering committees. This data can provide input to strengthen evidence based best practices for PSCs and direct further research.

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Appendix I: Themes and aggregate dimensions

2nd-order theme	Aggregate dimension
- Achieving commitment via shared decision making - Securing oversight - Using a SC is obligatory at the organization - Achieving commitment from major stakeholders - Achieving high quality decision making - Achieving trust to and from suppliers - Avoiding being an interest group - Communicating downwards and sidewards - Communicating sideward and upwards - Communicating sidewards - Decision making with authority - Directing the project by the group as a whole - Finding solutions for escalations raised by the project manager - Having accountability by the group as a whole - Identifying and communication project dependencies - Knowledge building of stakeholders and shareholders - Making sure project results are met - Making timely decisions - Organizing decision making process - Preparing shared advice for decisions by top management - Providing discharge - Providing information to members - Providing resources - Providing structure and clarity - Taking interests from major stakeholders into account - Working together to reach the project goals - Being a champion - Directing the project by the group as a whole - Making timely decisions - Directing the project by the group as a whole - Achieving commitment from major stakeholders	Relevance and goals
- Basing structure on corporate rules - Choosing members based on priority they personally give to the project - Choosing members based on availability - Choosing members based on competences - Choosing members based on line management function - Choosing members based on position power and personal power - Choosing members based on resources needed to achieve project goals - Choosing members from major stakeholders - Clarifying roles, tasks and responsibilities to new members - Designing structure by Owner - Designing structure by project owner and project manager together - Designing structure by project manager - Having governing bodies on several levels - Having inexperienced SC members - Having to admit members without direct contribution to the project - Knowing interests of members - Making vital suppliers member - PM supporting SC members in their role 1 on 1 - Potential members choosing to become a member based on time wanting to spend - Selecting members on knowledge - Setting up induction - Structuring steering committee via process owners - Taking into account existing structures - Having governing bodies on several levels - Designing structure by project manager - Structuring steering committee via process owners - Selecting members on knowledge - Designing structure by project manager - Choosing members based on line management function - Choosing members based on resources needed to achieve project goals	Formation process
- Board outside the SC advising the SC - Chairing by project manager - Chairing by project manager (happens, to be avoided) - Chairing by staff manager - Chairing should be by project owner - Conflicting line and project management hierarchy - Corporate culture influencing steering committee - Decision making by project owner has boundaries - Decision making by consensus - Decision making by steering committee as a whole - Decision making by the project owner - Having imbalance by focus on quality and buy in at the expense of cost and timing due to consensus based decision making - Needing approval from mother organizations members - Project manager having role as moderator - Project manager supporting SC members in their role 1 on 1 - Project manager heavily influencing what is on the table - Providing project manager space to maneuver - SC in itself having no authority, members do - Separate team influencing what is on the table - Decision making by consensus - Project manager heavily influencing what is on the table - Decision making by steering committee as a whole - Decision making by consensus	Decision-making
- Acquiring budget by the project owner - Business Sponsor delegating project ownership - Contract Manager being as proxy for suppliers - Deriving roles from corporate rules - Having a project owner - Having a quality assurance / auditor role - Having external project manager reporting in SC directly - Having senior suppliers - Having senior users - Having several project owners - Knowing SC role and acting to the role - Owner being accountable for the business case - Owner being accountable for the project - Owner being needed for decision making power - Owner chairing the committee - Project managers present at meetings - Providing a clear setting - Relations in standing organization shaping relations in SC - Second shareholder being member of SC - Senior supplier actively managing the change - Senior supplier providing resources - Senior suppliers being accountable for delivery - Senior supplies represented indirectly - Senior users managing compliance - Senior users providing information for controlling business case - Senior users specifying and controlling user needs - Setting up roles based on Prince2 - Some members participating based on agenda - Training & instructing SC members - Working together has preference to focusing on own role - Senior users specifying and controlling user needs	Roles and responsibilities of the members

- Acting in the interest of the project - As a project manager having to deal with members with lack of personal interest or competences for their role in the SC - As an owner being accountable for project results - Assuming members with senior line management function have competences needed for being SC member - Being able to mobilize forces - Being an ambassador - Being honest - Being involved - Being prepared for meetings - Being realistic - Being undisputed in the organization - Daring to implement decisions - Doing what you promise - Focusing on main line of the project and issues - Having a focus on learning in the project - Having access to resources - Having authority - Having communication skills - Having experience in directing projects - Having experience in handling sensitive issues with conflicts of interest - Having perseverance - Knowing the own business - Knowing the SC goals - Knowing their role in the SC and acting to the role - Organizing trusted advisers - Taking action - Taking responsibility - Understanding characteristics of working with projects - Understanding deliverables of the project - Willing to accept help in business change management - Willing to communicate an unpopular decision - Willing to represent groups or users - Having ability to challenge others - Knowing the own business - Having various types of people in the team - Having communication skills	Ideal characteristics of the members

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