

Balancing vertical and horizontal leadership in projects: Empirical studies from Australia, Canada and Scandinavia.

Note: This is a version of the paper that was under revision after a review. Please use the published paper for any referencing.

Abstract

Purpose

The purpose of this paper is twofold: i) to identify how horizontal leaders (within project teams) execute their leadership task in the context of balanced leadership and; ii) to pinpoint scenarios that can occur when horizontal leaders are identified and empowered by the vertical leader (senior or project managers) and a project task is handed over to the horizontal leader to lead. This research is based on the concept of balanced leadership, which conceptualizes leadership as a dynamic, situation-dependent transition of leadership authority from a vertical leader (like a project manager) to a horizontal leader (a project team member) and back again, in order to contribute positively to a project's success. Balanced leadership consists of five events (nomination, identification, empowerment, horizontal leadership and its governance, and transition). This paper focuses on the fourth event, and its specific aspect of leadership distribution between horizontal and vertical leader. This event begins when a team member or the team members as a group accepts the empowerment to assume the role of horizontal leader. This article explicitly links the leadership style of the vertical leader based on Frame's leadership styles (1987) and the nature of decisions taken by both the vertical and horizontal leaders to deliver the project.

Design/Methodology/Approach

The method used for this paper is the qualitative phase of a sequential mixed methods (qualitative-quantitative) study. Data was collected through case studies in three different countries, using a maximum variety sampling approach. Data collection was through interviews of vertical leaders (senior leaders who were often sponsors of projects or members of senior management or project managers) and horizontal leaders (team leaders or members) in a variety of industry sectors. Data analysis was done through initial coding and constant comparison to arrive at themes. Thematic analysis was used to gain knowledge about the split of leadership and decision-making authority between the horizontal and vertical leader(s). Comparison tables from case studies conducted in Canada, Scandinavia and Australia allowed the authors to move from a broad reading of the data toward discovering scenarios to balance leadership in the context of project delivery.

Findings

Our results show that for Canadian and Australian projects, a combination of autocratic and democratic leadership styles were used by vertical leaders. In the case of Scandinavian projects, a democratic leadership style has been observed. Linked to these leadership styles, the horizontal decision-making is predominantly focused on technical decisions and to daily task decisions to deliver the project. Delegation occurs most of the time to one specific team member, but occasionally to several team members simultaneously, for them to work collaboratively on a given issue.

Implications

The paper supports a deeper investigation into a leadership theory, by validating one particular event of the balanced leadership theory, which is based on Archer's Realist Social Theory (1995). The findings from this paper will guide organizations to facilitate an effective approach to balancing the leadership roles between vertical and horizontal leaders in their projects. The findings can also be used to develop horizontal leaders to take up more responsibilities in projects.

Originality and Value

The originality lies in the new leadership theory named balanced leadership, and its empirical validation. It is the first study on the leadership task distribution between vertical and horizontal leadership in projects. Its value is new insights, which allow practitioners to develop practices to find and empower the best possible leader at any given time in the project, and academics to develop a more dynamic and therefore more realistic theory on leadership as it unfolds in projects.

Keywords: Vertical leadership, Horizontal leadership, Balanced leadership, Project leadership, Thematic analysis.

Introduction

Leadership has been the subject of inquiry for decades and different research streams have provided useful knowledge about project managers (as vertical leaders) and project teams and their members (as horizontal leaders) (Müller et al., 2017; Mastrangelo, 2013). As the pace of change affecting organizations increases (Yukl & Mahsud, 2010), the complexity of projects augments (Maylor, Vidgen & Carver, 2008; Baccarini, 1996), and increases the need to adjust leadership styles. Adopting more flexible and adaptive leadership approaches is becoming more important for managers and project managers in these complex and changing environments (Yukl & Mahsud, 2010; Burke & Cooper, 2004). Projects continuously increase in size (Flyvbjerg, 2014) and the project manager cannot be a specialist and the sole decision-maker in all areas from technology to business and strategy. S/he must rely on team members and their specific expertise for appropriate and timely decisions in a competitive market. This is complemented by shortcomings in existing leadership theory, which takes a rather static perspective by either theorizing the leadership of a vertical leader or the leadership in a team, but not both in parallel. However, project reality shows that both types of leadership prevail in projects, but little academic work has been found on this phenomenon from the literature reviewed (Müller, Packendorff & Sankaran, 2017).

Therefore, there is a need to investigate the balance between vertical leadership (of a senior or project manager) and horizontal leadership (of a team leader or team members) and the context in which the balanced leadership occurs to lead to project success. For that we ask the following research question:

How do horizontal leaders execute their leadership task in the context of balanced leadership?

The unit of analysis is the nature of the leadership style when it is split between vertical and horizontal leader, and the nature of the decisions taken by either of the two parties when executing their particular leadership approach.

The study takes a Critical Realism stance in the sense of Bhaskar (2016), which combines the objectivity of natural laws with the subjectivity of human perception to derive at a possible, but not necessarily the only explanation of a phenomenon. Moreover, this stance is in line with the chosen theoretical lens of Social Realist Theory (Archer, 1995), which is derived from the same philosophical underpinning. Critical Realism also provided the basis for the theoretical framework for balanced leadership (Müller et al., 2018) and its subsequent empirical validations (e.g. Müller, Zhu, Sun, Wang, & Yu, 2018) and this present paper takes it further, focusing on leadership styles and decision making when balancing the leadership between vertical and horizontal leadership.

Leadership styles, in the context of this paper, were conceptualized using Frame's model (1987) of leadership styles in projects, that is, laissez-faire, autocratic, democratic, and bureaucratic styles. We address these leadership styles at the level of vertical leader and horizontal leader and identify the nature of the decisions taken by either of the two roles. The paper concludes with scenarios that illustrate how leadership is balanced in projects.

Practitioners will benefit from the paper by identifying the circumstances that call for empowerment of team members to become horizontal leaders for the good of the project. They also learn about the nature and the split of leadership styles across the two leadership levels, which provides for identifying the equilibrium between the levels to find a balance across the two hierarchical levels. Moreover,

they will learn about the types of decisions that are delegated to teams, as well as those that typically remain at the project manager's level.

Academics will benefit from a more dynamic and therefore more realistic theory about leadership in projects, which provides for new opportunities for theorizing. This includes the relative weight of leadership by vertical and horizontal leaders as manifested in their decision-making power, or their accountability as shown by the nature of the decisions they take. To that end the study contributes to both the leadership and the governance literature in project management.

The remaining sections of the paper are structured as follows. The next section provides a brief review of the relevant literature and the theoretical lens chosen. This is followed by sections on methodology, case study descriptions, analysis and discussion of results, before the paper finishes with a conclusion.

Literature Review

Leadership Styles

Leadership style has been recognized as the driver in a project manager's rate of success or failure (Cunningham et al., 2015). According to Ojokuku et al., (2012), the leadership style of a project manager influences the performance of team members as well as the motivation of the team to reach organization goals or project goals. Leadership is a social influence process in which leaders seek the participation of team members to reach specific goals (Bhatti et al., 2012). In a school context, Bhatti et al.'s results (2012) determined that teachers preferred democratic leadership where they felt that they can discuss issues with leaders. Nanjundeswaraswamy and Swamy (2014) determined that a relationship exists between leadership style, work satisfaction and organizational commitment which are essential for project management success. Müller and Turner (2010) determined in their research the need for project managers to be trained not only on technical and management skills but also in the development of leadership competencies. Throughout the literature a variety of leadership styles have been identified. For instance, Hawkins and Page (2011) discuss about leadership team coaching, a combination of individual and mentoring inspired by sports training. Strategic leadership enhances an organization's competitive advantage (Dumais, 2010; Krupp & Howland, 2013). Bureaucratic leadership style is made up of policies and procedures and used by insecure project managers (Hodgkinson, 2009). Based on the management style that is exhibited with the ways in which managers interact with their staff, Frame (1987) proposed three basic leadership styles: autocratic, laissez-faire and democratic. *Autocratic* leadership is associated with the traditional image of the manager being the "boss" (Frame (1987), p.73). Autocratic leaders take on full responsibility for the project (Cunningham et al., 2015). With this particular management style, managers make all decisions and are not interested in feedback from staff. According to Frame (1987) autocratic approaches may be efficient in low-risk projects or when quick decisions need to be made. Autocratic style is associated with highly centralized decision making. *Laissez-faire* lies at the other extreme. Laissez-faire leaders originated from a French phrase meaning "let people do as they choose" (Cunningham et al., 2015 p.33). It might be argued that, when this style is adopted, nobody is in charge, and project members can do whatever they want. However, a laissez-faire approach might be used by project managers to encourage creativity by team members. It would be less efficient when quick decisions are to be made (Frame, 1987). *Democratic* style is a participative approach. Democratic leaders value team members' inputs to be included in decision making processes. Decisions can be

made jointly by managers and project members. Managers using this approach seek input from team members before making decisions. As mentioned by Frame (1987), democratic approach might lead to more efficient decisions because it captures a broad spectrum of viewpoints. In sum, project managers adapt different styles (autocratic, laissez-faire or democratic) based upon the different circumstances they may face. Other authors investigating decision making have also recognized the role of the leader as overseer and coordinator of the project team (Bourgault et al., 2008).

Related leadership studies

Traditionally, leadership studies are either team-centered or person centered. This has left an unexplained gap between the leadership exercised by the formally appointed project manager (aka vertical leadership) and the leadership that occasionally is exercised by team members (aka horizontal leadership). The gap lies in the explanation of the dynamics of the interface between the two types of leadership. Recent studies addressed this under the title of balanced leadership (Müller et al., 2017), which aims for the development of theory about the dynamics of leadership in project reality. There is a shortcoming in existing theory on how leadership switches between vertical and horizontal leaders in temporary organizations (Lundin & Soderholm 1993; Turner & Müller, 2003). The theories developed about teams in permanent organization typically assume a team with little or no fluctuation of team members across a longer period of time. Examples of such theories include Hersey and Blanchard's (1988) model of leadership contingency on team maturity or Tuckman's (1965) model of team development, which assume that a change of team members has a negative impact on the maturity and development of the team. Hence, new team members force the team development and related leadership style to return to its earlier status, which is normally task oriented leadership. However, a frequent change in team members is a reality in today's projects, where, for example in Information Technology (IT) projects, first industry consultants define the requirements and user interfaces, before architecture consultants join for a short period and get replaced by technical specialists and developers, which interact with testers of different aspects of the system and different levels of end-users, as well as temporary visits by quality control and audit teams. Similarly, in construction projects architectural teams come up with a concept for a building, followed by design and engineering teams preparing drawings for construction and the construction teams using these drawings to implement the design. From this perspective, classical leadership theories would suggest that teams and leadership in projects with such fluctuation can never reach maturity?, hence the focus is on task-oriented leadership. This is in stark contrast to studies that show a dominance of people-oriented leadership, such as those by Dulewicz and Higgs (2005) or Müller and Turner (2010) in many projects.

Early studies on leadership in projects focused primarily on the personality and leadership style of project managers. This approach includes studies that categorized project managers by personality in order to optimize their selection for projects. A representative study by Hauschildt, Keim and Medcof (2000) categorized them as Project Star, Promising Newcomer, Creative Expert, Uncreative Decision-maker, and Thick Skinned Pragmatist, of which the majority fell into the latter category. More recent studies looked at leadership styles, where Keegan and Den Hartog (2004) identified a preference of transactional styles among project managers in general. This was supported by Turner and Müller (2006) in their findings for relatively simple projects, but complemented by their findings for complex projects, where transformational leadership seemed to dominate. Other recent studies assumed a

more situational dependent leadership styles and investigated the underlying personality factors, based on emotional, intellectual and managerial (EQ, IQ, MQ) competences in order to identify the range of possible leadership styles by project managers (Dulewicz & Higgs, 2005). Related studies, such as the one by Müller and Turner (2010) identified the EQ, IQ, and MQ leadership profiles of successful project managers, and the one by Shao (Shao, 2018) which investigated the impact of these dimensions on success of program managers. Collectively these studies showed the personality differences between successful project and program managers, supporting the notion of Partington, Pellegrinelli and Young (2005) that both roles require substantially different personalities as leaders.

Recent decades of research indicate an emergent understanding of the more team centered approaches to leadership. Here theories on shared (Pearce & Conger, 2003) and distributed leadership (Bolden, 2011) have improved the understanding of inter-team processes that lead to the nomination of peer level team members as leaders, to use their seniority and maturity for the benefit of the project. Project related studies emerged primarily around the work of Packendorff and colleagues (Crevani, Lindgren, & Packendorff, 2010; Lindgren & Packendorff, 2009) elaborating on the leadership among project team members, together with the contextual influences and processes that enable this type of leadership, giving support to the increasing importance of shared and distributed leadership published in general leadership journals. While this explains a different and important new perspective of leadership, it is, just as in the case of vertical leadership, too endogenous in its perspective to allow for the understanding of the dynamics in projects.

Hence, recently researchers from both streams (leader studies and leadership studies as mentioned above) have converged their findings under the concept of balanced leadership, which describes the dynamics in the interaction of both concepts as it unfolds during project execution and the contextual contingencies that support their timely emergence (Müller et al., 2017).

The emerging concept of balanced leadership as theoretical lens

This new field of leadership studies has so far framed the theory with

- a) the concept of socio-cognitive space as a coordinating mechanism between vertical and horizontal leaders, consisting of the level of empowerment of team members into a horizontal leadership role, their self-management capabilities as perceived by the team, and the shared mental models about the team's understanding of their tasks, their skills and the availability of team members. Collectively these three elements determine the team's and project manager's understanding of who can and will become? a horizontal leader at any point in time (Müller, Vaagaasar, Nikolova, Sankaran, & Drouin, 2015; Drouin et al., 2017).
- b) A theory framework of five events, which describe the dynamics of balanced leadership has been subsequently developed? (Reference). The framework adopts the perspective of Social Realist Theory (Archer, 1995). This theory describes the interaction of individuals in respect of their contextual structures and their individual human agency. Three steps are outlined which show a) the need to *condition* individuals through structures and clear expectations before they can take on a task (such as becoming a horizontal leader), b) allow individuals to execute the task in *interaction* with others, and c) *elaborate* the congruency of ex-ante expectations and achievements during the execution. Depending on the results of the latter step, the parties (such as vertical and horizontal leader) either engage in a morphostatic cycle by

repeating their interaction in similar situations in the future, or engage in a morphogenetic cycle, where they take the learning from earlier iterations of his cycle to continuously change and adapt the structures and/or expectations in future interactions. In a global study with 166 interviews Müller et al. (2018) validated and refined this theory in the realm of projects. This framework is described next.

The framework outlines five events which describe the balanced leadership cycle from nomination of team members, their identification and empowerment to horizontal leadership roles, their execution of horizontal leadership and the subsequent transitioning of the horizontal leader (Müller et al., 2017). The cycle is further elaborated as follows.

- *Nomination*: The nomination of resources to join the project team appears when project members join and leave a project. Project managers may exert their influence on the choice of members to nominate, if allowed to do so.
- *Identification (of possible horizontal leaders)*: Here the project manager either identifies a possible horizontal leader himself or a team member may self-select and put his/her name forward to take on a leadership role. Goals are twofold, a) qualifying candidates for future leadership situations and b) identifying individuals for an optimum “fit” between situational requirements (such as solving a particular technical problem), the project as such, and the person(s) per se. The identification event happens through subtle interactions between the project manager and the potential horizontal leader.
- *Selection (of horizontal leaders)*. At this time, the project manager uses empowerment to select one or several team member(s) on a task basis as horizontal leader(s). This happens as a result of the socio-cognitive space, enabled by a shared cognitive understanding of its three constituting elements (empowerment, self-management and shared mental models) and their interaction (Müller et al. 2017; Drouin et al., 2017).
- *Horizontal leadership and its governance*: This event? is the subject of the present paper, which investigates the nature of horizontal leadership in execution. This event is governed by the vertical leader, who uses the level of trust established at the *identification* to govern the actions of the horizontal leader through either trust or control in order to steer, but not necessarily determine the actions of the horizontal leader.
- *Transition*: This is when the decisions for either morphostasis, that is, no changes in the design and form of the conditions for future engagement of horizontal leaders, or morphogenesis, a new design of it, is made. A number of possible outcomes are possible. Morphogenetic outcomes may include an extension of the horizontal leader’s appointment, while morphostatic outcomes may include finishing the assignment as planned and handing back leadership to the vertical leader or to another horizontal leader.

This theoretical framework has guided further studies on the events in balanced leadership, such as those on identification of horizontal leaders (Müller, Zhu, Sun, Wang, & Yu, 2017), which identified the criteria and process used by both project manager and team member to establish a joint understanding about the eligibility of individual team members to take on horizontal leadership.

Nature of decisions

Every project has decisions that need to be taken which are made at different hierarchical levels, with the responsible actor operating in a certain number of fields of action corresponding to certain decision types. Decisions are commonly characterized in the literature as unstructured or complex. Although the concept of a decision remains ambiguous and ill-defined (Nutt et al, 2010), a decision could be classified under various types (strategic, non-strategic, organizational, operational) or according to its specific nature (whether it involves commercial or economic matters) (see Morris et al., 2010). According to Mintzberg et al. (1976), strategic decisions are seen as large, expensive and precedent setting producing ambiguity about how to find a solution and uncertainty in the solution's outcomes. Nutt et al. (2010, p.4) have identified a list of characteristics attached to strategic decisions. For instance, they are elusive problems that are difficult to define precisely. They require an understanding of the problem to find a viable solution. Questions about trade-offs and priorities often appear in the solutions and strategic decisions have competing interests that prompt key players to use political pressure to ensure that a choice aligns with their preferences. On the other hand Mintzberg (1987) categorizes decisions using five *P*'s. *Plan*: the decision is an intended course of action carried out with a clear purpose; *Ploy* which has a military root, is a set of actions to outwit the competition. *Pattern* meaning that decisions are not taken with a clear planned purpose but exhibit similarities. *Position* so a decision is about to realize a match between the organization and the environment and finally as a *Perspective*, decisions are a reflection of how strategists in an organization perceive the world and their organization.

Once implemented, a strategic decision guides operational decisions that follow. At the project level, strategic decisions are important because they may affect the objectives and the project goals. For the purpose of this paper these strategic decisions, usually taken by a vertical leader (senior and or project managers) are defined as: *Strategic and political* that involved for instance, the budget allowance, management of political issues within the organization; *business management decisions* (decisions that affect the overall logic of the firm's bundle of services and markets (Nutt et al. 2010)); the *administration of contractual agreements*; or they may be related to key *Human resource* policies and resource allocation and finally, the *governance structure* (e.g. the selection and development of project management practices). These strategic decisions deal with overall project effectiveness and adequate resource utilization so that the organization can obtain all expected benefits (Bourgault et al., 2008). Tactical or operational decisions are decisions that relate to the day-to-day functioning of the project. These decisions have a lot of input into an efficient vision of the project, making certain that project goals are pursued as planned, e.g. solving technical problems and fine-tuning project planning (Bourgault et al., 2008 p. 57). Mintzberg (1987) characterizes these decisions as *Plan*, an action carried out with a clear purpose. In the paper, these decisions are related to *Technical decisions* that are usually taken by an expert, *stakeholders management*; the *daily tasks* attached to the management of the project, and *change or unforeseen* events that occur throughout the lifecycle of the project. These decisions that are more task-oriented ones that are usually under the responsibility of the horizontal leader (Müller et al., 2017).

The literature reviewed so far has shown the exploratory nature of the study, which covers new grounds by focusing on the dynamics of interaction, rather than leadership styles. Little research has been done on balanced leadership and further empirical validation studies for the theoretical framework are needed. The present study and the related research question addresses that by focusing on the horizontal leadership event as it unfolds in projects, a subject unexplored up until now.

Methodology

So far, it was mentioned that there is a need to investigate the balance between vertical leadership (of a senior or project manager) and horizontal leadership (of a team leader or team members) and the context in which the balanced leadership occurred to lead to project success. Thus, we ask the following research question: *How do horizontal leaders execute their leadership task in the context of balanced leadership?* To answer this research question, the study was designed and followed the seven step process by Saunders, Lewis and Thornhill (2007). Accordingly, Critical Realism was chosen as philosophical stance as outlined in the introduction section. An abductive approach was used to combine the credibility of deductive reasoning, with the creativity of inductivism and the prior experience of the researchers, hence following Alvesson and Sköldbberg (2009). A case study methodology using a multiple case study design (Yin, 2009) was adopted. Sampling of cases aimed for maximizing diversity to identify the most basic principles and patterns. This was done by identifying a variety of sectors to collect data including utility, construction (private and public sector), financial services and professional services. Data was collected from six case studies conducted in three countries – Canada, Scandinavia and Australia – using a series of 29 interviews and analyzing 136 decisions taken during a project in a variety of situations. All interviews conducted were semi-structured and followed a case-study protocol which was developed and tested at the outset of the study, which, among others, included questions about the leadership style of the project managers and the type of decisions that were made under the authority of horizontal leaders, and those under vertical leaders.

Thematic analysis was used for data analysis, which allows to move from a broad reading of the data toward discovering patterns and scenarios and gaining insights and knowledge from the data gathered. Thematic analysis is highly inductive (Howitt & Cramer, 2007; Boyatzis, 1998). The process used is now described. First, each interview was coded by the researchers and reviewed by more than one researcher to validate the codes. Researchers coded the data by hand or by using a software program (NVivo). The integration of the codes from the data became the codebook from which themes emerged. Then, the researchers, individually, extracted themes from the cases ifrom their country based on responses from selected questions asked during the interviews. Themes were not predetermined by the researchers but emerged from the coded data. The authors then worked together at a data analysis workshop to compare notes and put together Consolidated Tables¹ of findings that were further developed to explain the phenomenon in this article. These Consolidated Tables grouped general information and the different themes used by the authors such as: *Vertical*

¹ Consolidated Tables are not provided with this paper but were used to built the Tables and Figures presented in this paper.

leader (i.e. project manager or senior manager); *horizontal leader* (a team member); *Sector* (the industry in which the firm evolve according the Canada Industry classification); *leadership style* of vertical leader; the *nature of decisions* and finally *individual* or *team* decision making. These inductive findings were then exposed to deductive validation, using, among others, Frame's framework of leadership styles.

Validity and reliability

Validity and reliability were addressed using Yin's (2014) suggestions. Construct validity was ensured by using multiple informants and gaining access to the best informants possible. Internal validity was achieved through explanation building, and external validity through replication logic in multiple cases. A common case study protocol for all researchers and all cases was developed as a guide to ensure reliability (Yin, 2014). Informed consent was sought from interviewees by carefully explaining the study and its aims, as well as their ethical rights in interviews. Ethical approval was granted by the Norwegian Data Protection Institution and the home universities of the Canadian and Australian researchers.

Case Studies Descriptions

Canadian Cases

Utilities. Project 1 (Canada) is around \$500 millions (CAD) and consists of the rehabilitation of the intake and the spillway at a generating station. This undertaking is intended to ensure long-term facility operability. The project lasted 10 years and involved at its peak a dozen people from the company plus external stakeholders such as contractor teams. The on-site team was composed of a senior manager, in charge of a portfolio of five major projects in a specific geographical region. This senior manager reported directly to its immediate superior, who was based at the headquarters of the company. The project manager was responsible for all project-related activities and reports directly to the senior manager. A security adviser was a team member in charge of the construction safety and relations with the contractors. The on-site engineer was accountable for all mechanical and technical engineering issues, and he reported directly to the project manager and frequently collaborated with the engineering division based at the headquarters. Finally, the clerk was mainly in charge of buying equipments that support the management of the teams and the on-site facilities. External stakeholders were mostly contractors (3 or 4 depending on the phase of the project) and the team of the turbine manufacturer. The Canadian company leading this project is a world leader in the field of hydroelectricity (power from water). It focuses on the refurbishment of generating and transmission hydroelectricity facilities to meet the needs of its clients.

Construction / Public Sector. Project 2 (Canada) encompasses the construction of a sport stadium. With an allocated budget of slightly over 50 million dollars (CAD), the stadium had to house both an indoor and an outdoor field. The building of a state-of-the-art sport stadium turned out to be an election promise several years prior to its formal authorization. The fulfillment of Project 2 subsequently stretched over a period of approximately eight years and involved an architectural contest in order to select a design that would become a symbol of creativity and innovation. Initially taken in charge by the city's Sports department, the project was afterwards carried out jointly with

the Property planning and management department, brought on board as it was more experienced in the fields of project management and infrastructure construction. Operating under a matrix structure, project 2 was supervised by senior managers from both departments, who were also in charge of other projects and programs simultaneously. Under their authority, two project managers were assigned full time to the project, each originating respectively from one of the departments involved. The project manager attached to the Sports department was mainly in charge of communications, public relations and fostering relationships with sports associations, while the project manager from the Property planning and management department was assigned to oversee the activities related to the planning and the building of the infrastructures. When the construction phase began, an on-site engineer and an on-site assistant junior engineer were also added as full time members of the project team in order to monitor the construction site and ensure compliance with contracts. As for external stakeholders, the primary parties were the architectural firm, chosen through a contest, and the building contractor, selected following a call for tender. A steering committee was formed in order to facilitate collaboration between the core project team and additional concerned stakeholders, such as representatives from other internal departments, sports associations, municipal regulatory bodies and energy service providers. The organization commissioning the infrastructure project is a municipal government administering an urban city that has over one million inhabitants.

Scandinavian Cases

Professional Services. Project 3 (Scandinavia). The organization plans, builds, operates and maintains roads in a Scandinavian country. It is more than 150 years old, and a highly multi-disciplinary organization of 7 585 employees, including a wide range of analysts, engineers, and other skilled workers. This organization runs a large number of projects of varying size at any point in time. The unique geography and climate in Scandinavia present a number of challenges to road construction projects, like subsea tunnels, long tunnels, and advanced bridge constructions. The case study was done on four large road construction projects in northern Scandinavia. In addition to the typical project execution processes that are widespread in infrastructure development projects, the focal projects contain a large number of stakeholders and are highly infused with local and regional political issues. The interviews were conducted with two senior managers, as well as project managers and project team members of a wide spectrum of projects.

Engineering. Project 4 (Scandinavia). The organization is a global engineering corporation with more than 130,000 employees. Their focus is on development of technologies in the automation and power industry, for which they develop and support a broad range of products and services. The organization maintains a global network of Corporate Research Centers for the development of technologies for future products and services. The case study was done on one of these centers. There the focus of activities is very broad and covers technology developments for automation, environment, machines, and new materials, as well as underlying services and processes, such as those for software architecture and processes. The Research Center does this by surveilling the market to identify opportunities for technologies in need for development, develop them, and then transfer them to the business areas of the wider corporation, where they are used in and for products. This implies, that employees in this center are typically engaged in collaborations with Universities and other research

centers internal and external to the corporation, and to a lesser extent to customers and their specific projects. The interviews were conducted with a senior manager, as well as project managers and project team members of a wide spectrum of projects. These include engineering and engineering studies, technical Research and Development (R&D), and IT projects.

Australian Cases

Construction / Private Sector. Project 5 (Australia) is the IT Department for a major international property and infrastructure group employing more than 12,000 people. Their business covers managing projects over the life-cycle including coming up with new ideas. They also invest in development projects and participate in construction. The IT department was mainly focused on solutions to internal departments like human resources, finance and property development in helping delivering technologies for business operations. There were two project teams managed by two delivery managers delivering close to fifteen pages at any time. The teams used both waterfall and agile methodologies depending on the context in which the project was carried out.

Financial Services. Project 6 (Australia) is a major financial services company in Australia with close to 100 billion in assets and employing more than 15,000 people. Their business service is in banking and several types of insurance and wealth management. The people interviewed at this organization have been members of a major business transformation IT-based project that was carried out over two years and estimated to cost more than 300 Million A\$. The project was in collaboration with a major technology partner and employed close to 600 people at its peak. Work was also outsourced to offshore service providers but managed centrally from Australia. The project was aimed to increase efficiency, speed up transactions and make better use of business intelligence. The major methodology used by the organization was agile due to its heavy IT emphasis. While the organization did not use a large scale PMO the project was supported by sponsors from Technology and Business areas at the top.

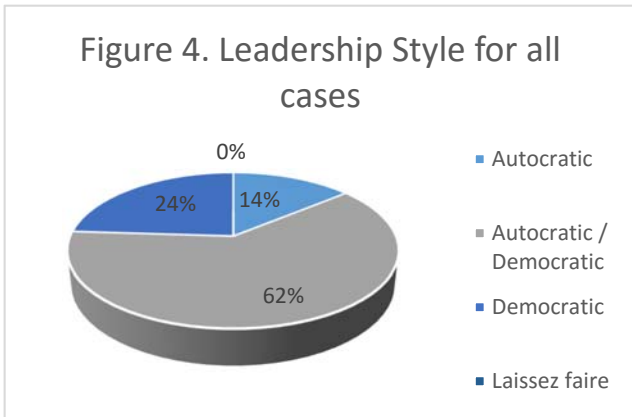
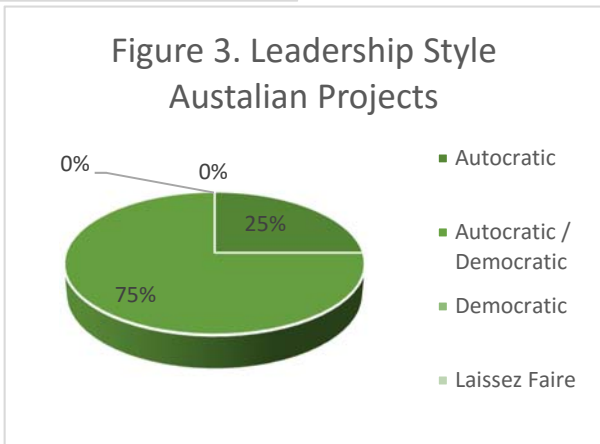
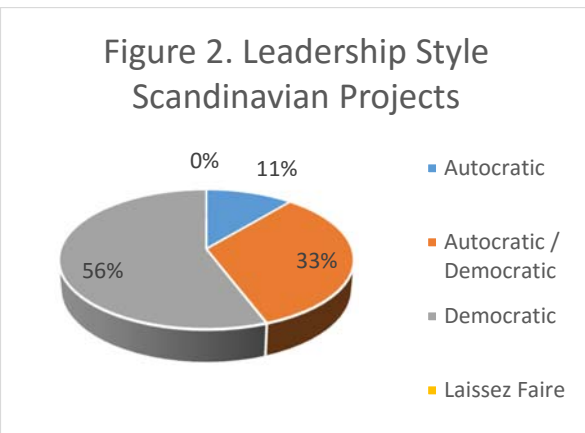
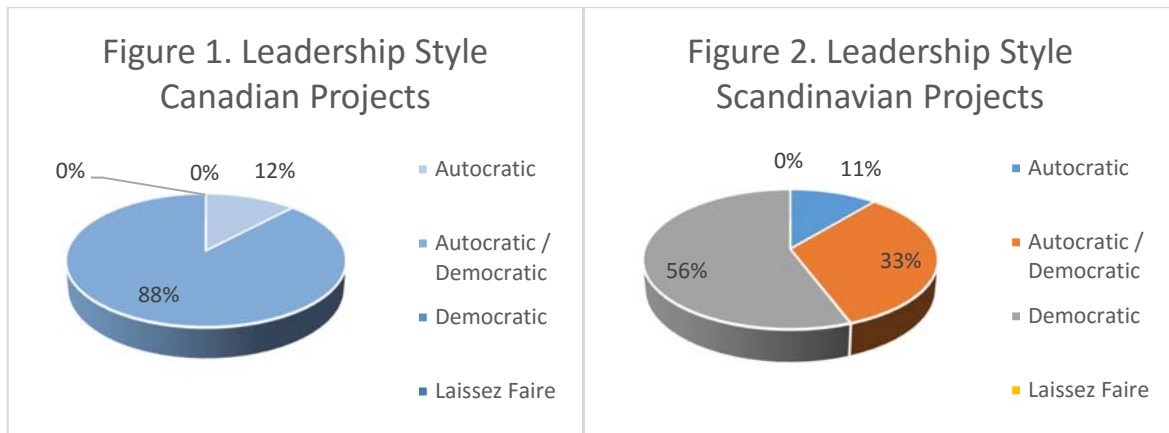
Analysis

Leadership style

Table 1 presents the leadership style for each project under study by calculating the number of times one particular style was observed for vertical leaders. A percentage was then calculated to draw conclusions and identify the style by country. Figures 1 to 3 show the results by country and Figure 4 summarizes these results for all cases. In addition, Table 1 also includes information on whether the horizontal leader delegation is to a particular individual or to the team. According to Zbojnik (1989), it may be optimal to let workers decide on how to do their jobs, even though managers may have better information. Zbojnik (1989) further argues that decentralization of decisions is recommended when quick responses to changing technologies and environments are required, and new information flows upward through the hierarchy. Thus, decisions could be taken by *individual (I)* or by *team members as a group (T)*.

Case Studies	Leadership style of Vertical Leader				Individual or Team delegation to HL	Total Number of VL
	Autocratic	Autocratic / Democratic	Democratic	Laissez faire		
CANADA						
<i>Project 1 (Utility)</i>	1	4			Team	5
<i>Project 2 (Construction/ public)</i>		3			Individual	3
Total (%)	12%	88%	0%	0%		8
SCANDINAVIA						
<i>Project 3 (Engineering)</i>	1	1	3		Individual	5
<i>Project 4 (Construction/private)</i>		2	2		Individual	4
Total (%)	11%	33%	56%			9
AUSTRALIA						
<i>Project 5 (Financial services)</i>		1			Team	1
<i>Project 6 (Construction / private)</i>	1	2			Team	3
Total (%)	25%	75%	0%	0%		4
Total for all cases	3	13	5	0		21
in %	14%	62%	24%	0%		

TABLE 1. Leadership style by project and country



Overall, our results show that 62% of the vertical leaders use a mixture of a democratic and autocratic approach to manage their projects; 24% prefer a democratic approach while 14% an autocratic one. If we analyze by country: for the Canadian projects, the vertical leaders clearly preferred an Autocratic / Democratic approach in both projects (88%) where decisions seem more centralized by vertical leaders and when delegated, they are either at the level of the project team or to individuals. The project manager of Project 1 (Canadian case) explained this centralized leadership as follows: *I would say it depends on the type of decisions because in fact, it is sure that the security advisor is like our eyes on the site, when we want to know what happened, well, is the person being questioned. On the other hand, we must not forget that it is her opinion that he gives us. We still have to weigh things. What I would say to you is that we should not take everything like cash. It's his interpretation. We can listen, of course, but that does not mean that we adopt his position. It gives us arguments only.* Another example is as follows. In Project 1 (Canadian case) a team member illustrates the leadership style of the senior manager. *He [the Senior Manager] was further away from the action and all the*

work and the team members, so when he had a decision to make, well, he came to ask me if his perception was good. For example, he said to me: " does this really happen on the jobsite? Do we need supervisors?" in short, he came to consult me for information, to validate his information.

Only one project manager in the utility sector (Project 1) was identified as having an autocratic style. This project manager particularly centralized the decision making within his team and his delegation to horizontal leaders was either at the individual level or to team members. For instance, this project manager said: *I would say there are topics that I discussed then there are other topics that I did not discuss at all. For example, the financial issues, the costs of changes, when there was additional work to do. You know, it was things that somewhere I did not think it was about supervisors, it was not about the security advisor. There were things left in a small closed box, for the sake of the project, it was not something to disclose.*

The vertical leaders in the Australian projects were also characterized for using an Autocratic / Democratic Approach (75%) and one project manager in Project 6 (construction sector) preferred an autocratic style. Delegation to horizontal leaders is mainly through the team and a combination between an individual and team delegation was observed for the autocratic leader. On the other hand, we observed in Scandinavian projects a 56% presence of democratic leadership style and a 33% combination of autocratic and democratic which, for the latest is a significantly lower percentage than what we observed in the Canadian and Australian projects. Only one project manager in Project 3 (Engineering) appears to use an autocratic leadership style (11%). As far as the delegation to horizontal leaders is concerned in the Scandinavian projects, the latter is done by all vertical leaders mainly through individuals. None of the vertical leaders exhibit a laissez-faire style.

Nature of decisions and Frequency

Every project investigated had decisions that were needed to be taken. This could involve solving a problem, choosing between options, developing a solution, or any other situation that requires the use of decision making mechanisms (Bourgault et al., 2008, p. 32). Decisions are also made at different hierarchical levels, with the responsible actor operating in a certain number of fields of action corresponding to certain decision types. Traditionally, strategic decisions (strategic planning) are made by upper management, tactical decisions (management control) by middle management, and operational decisions (operational control) by non-management employees (Anthony, 1965; Bourgault et al., 2008). Table 2 below lists the decisions that are traditionally made by vertical leaders in our study (*Strategic and political; Business management decisions; Administration of contractual agreements; Human Resources policies; Governance structure and other*) and those delegated to horizontal leaders (*Technical decisions; Stakeholders management; Daily tasks, Unforeseen events; Improvement and change and other*). We analyzed the frequency of each decision made by vertical leaders or horizontal leaders. In total, 136 decisions were identified in 29 interviews. The percentage of each decision frequency was then calculated by dividing the frequency of each of the decisions by the number of interviews.

Canada	Scandinavia	Australia	Total (Decisions)			
Frequency	Frequency	Frequency			Nature of Decisions	
				% of all interviews		
2	3	1	6	21%	Strategic / political	
9	8	6	23	79%	Business / management	VLS
10	4	2	16	55%	Administration / contract	
7	3	3	13	45%	HR	
8	3	1	12	41%	Structure	
1	1	0	2	7%	Other	
11	10	4	24	83%	Technical	
4	4	1	9	31%	Stakeholders	
10	5	6	21	72%	Daily tasks	HLS
3	0	2	5	17%	Unforeseen events	
0	1	2	3	10%	Improvement / change	
0	2	0	2	7%	Other	
			136	29		

TABLE 2. Nature of Decisions and Frequency on total number of interviews

Our results show that 83% of the decisions that are delegated to horizontal leaders are technical decisions. Therefore, one can say that technical decisions are strongly delegated to horizontal leaders and senior and project managers count on the specific expertise of horizontal leaders to make decisions in this regard. Similarly, decisions affecting the day-to-day activities of projects are under the responsibility of horizontal leaders (72%) as well as stakeholder management with a lower percentage of 31%. When horizontal leaders get involved in stakeholder management, it is often because of their technical skills, as described by a project manager in Project 4 (Scandinavian case): *I have a corporate fellow working very close with one of the stakeholders. And there he definitely can help me a lot in communicating with him, and also with the people in Switzerland who are working in his technological area. [...] I would leave it knowledge-wise in his hands to handle things because, I mean, he has more experience than me in that technology area.*

Another project manager from Project 4 (Scandinavian case) reflected on the distribution of tasks like this: *Let the team live their own life. They take a lot of decisions by themselves, and then I more or less tell them that they are okay. So I would say in the technical part they actually have quite a lot of freedom and they take more or less all the decisions. Off course, I discuss with them, talk to them and sometimes they come to me, but there are, I would say, quite a lot of things they do by themselves. [...] Since they are doing so deep, technical stuff it's sometimes quite hard for me to understand. I think it's too frustrating for them to tell me all the time the details of what they are doing. Sometimes I have to trust the team. So it's mainly my lack of knowledge in the details that I have to go by my gut feeling. Do I trust them? Then they take a decision.*

Vertical leaders do have a strong control over business management decisions (79%) but seem to have less control over decisions related to the administration of contracts (55%), human resources management and resource allocation (45%) and governance structure of projects (41%). The lowest control for vertical leaders is for strategic and political decisions (21%), suggesting that these decisions can be handled at higher hierarchical levels within the organization.

Business decisions are illustrated by project managers from Project 4 (Scandinavian case). One reported on his decision-making on the scope of the project: *We [project managers] have to ask ourselves "is it really beneficial for the organization to work on certain things". There was a decision*

when we were going into a new project where I had to resist, or kind of oppose, certain ideas coming from different members of the steering committee, saying we will not do this. And I had to bring my team members on board to that idea because while it could be fun and really easy to make a fancy looking prototype and impress people, this was not the objective of the project.

Another described his work in building a common view of the project through centralized communication: *I took over this project when it was almost two years old. And there was some discussion on the progress, of the information on the concept chosen or rather not chosen, so what I did the first couple of months was to state very clearly a sort of a common view for everybody, the stakeholders and the project members, what we were about to accomplish. And one thing was that I don't want people to distribute reports around to everybody, which is sort of a tradition here.*

The third reflected on another business decisions: *Hiring for sure. [Finding] these people who usually have the solutions at hand is more complex, more than just doing the technical work. It could be through collaboration with Universities or other partners in order to get the suitable person into the project.*

Emerging Scenarios

	Canada		Scandinavia		Australia		Total	
	Autocratic / Democratic	Autocratic / Democratic	Autocratic / Democratic	Autocratic / Democratic	Autocratic / Democratic	Autocratic / Democratic	Frequency	%
Nature of Decisions	Frequency	%	Frequency	%	Frequency	%	Frequency	%
VLS								
Strategic / political	2	5%	3	14%	1	8%	6	8%
Business / management	9	24%	8	36%	6	46%	24	32%
Administration / contract	10	27%	4	18%	2	15%	16	22%
HR	7	19%	3	14%	3	23%	13	18%
Structure	8	22%	3	14%	1	8%	12	16%
Other	1	3%	1	5%	0	0%	2	3%
	Total number of decisions	37	22	13			74	
HLS								
Technical	11	39%	10	45%	4	27%	24	37%
Stakeholders	4	14%	4	18%	1	7%	9	14%
Daily tasks	10	36%	5	23%	6	40%	22	33%
Unforeseen events	3	11%	0	0%	2	13%	5	8%
Improvement / change	0	0%	1	5%	2	13%	3	5%
Other	0	0%	2	9%	0	0%	2	3%
	Total number of decisions	28	22	15			65	

TABLE 3. Nature of Decisions and Frequency on number of decisions per country

In our cases, the leadership style is either qualified as a mixture of autocracy and democracy or is better qualified as democratic. Linked to these leadership styles, the scenarios that emerge from the results are:

1) Business management decisions remain very much under the authority of vertical leaders, especially for the Scandinavian projects and Australian ones (per country: Canada (24%); Scandinavia (36%); Australia (46%)). The vertical leader in Project 5 (Australian case) mentioned that: *Most of it is if its' a decision that I take on, it's usually because I understand my stakeholders and understand my business.* The same vertical leader of Project 5 added: *Any decisions that will affect the business, business operations or the daily processes, then we'd seek the business approval... Decisions around architects or guidelines on how we best implement or what to follow go through the architects (team members).*

2) Peculiar to Canadian projects, the relatively low importance of vertical leader's authority on contractual administration (27%) and governance structure decisions (22%), is observed while these specific decisions seem to be taken elsewhere within the hierarchy of the Australian and Scandinavian organizations. This is illustrated by the project manager of Project 1 (Canadian case) as follows. *I [project manager] have developed some expertise at the contractual level. You know sometimes, they [team members] say we can do this business, is there a problem if we do it that way? Well, I was often able to help them on that side. It also allowed to somehow standardize, especially at the contractual level with the professionals, the management of the contracts of the professionals, the management of the construction contract. I intervened on that side.*

3) Particular to Australian projects is that the management of human resources is under the authority of vertical leaders, with a score of 23%.

4) Despite slight differences in leadership styles, similar scenarios were identified for the delegation of authority to horizontal leaders. Delegations to horizontal leaders mainly occurred through technical decisions (Technical decisions per country: Canada (39%); Scandinavia (45%); Australia (27%)) and decisions associated to the execution of tasks to deliver projects (Daily tasks per country: Canada (36%); Scandinavia (23%); Australia (40%)). Vertical leader of Project 6 (Australian case) illustrated this as follows: *Teams work very collaboratively to make decisions. Technical decisions are taken within the team but the team listens to senior managers when they are given direction.*

5) Finally, if we look at whether the delegation is to the individual or to the team, Table 1 indicates for Project 1 (Canada Utility) that the delegation is more at the *team level*. Project 2 (Canada Construction) is more at the level of *an individual*, which can be explained in this particular case by the size of the team that has been reduced during the lifecycle of the projects. For Scandinavian projects 3 (Engineering) and 4 (Construction), there is a clear tendency for delegation to be at the *level of individuals*. For Australian projects, these projects (Project 5: Financial services and Project 6: Construction) seem to favor delegation of decisions to *team* rather than to individuals in particular. In Project 6 (Australian Case) it is expressed by the vertical leader as follows: *The team is empowered to make decisions day-to-day, as a project manager, I'm there as a point of reference if they need any support at all or if there's particular risk or issues that we need to address. Certainly technical decisions are made within those teams.* Another vertical leader in Project 6 says: *It's a democratic model, so the decision is made as close as possible to the person who is implementing the change...The team can decide... a couple of developers might get together in a little huddle and agree on something that is good enough.*

Discussion

This study examined how horizontal leaders (within project teams) execute their leadership task in the context of balanced leadership and pinpoints scenarios that occur when horizontal leaders are identified and empowered by the vertical leader (senior or project managers) and a project task is handed over to the horizontal leader to lead. Throughout the literature, a variety of leadership styles were identified (Hawkins & Page, 2011; Dumais, 2010). Previous studies identified a preference of transaction styles among project managers (Keegan & Den Hartog, 2004) or a transformational leadership that seemed to dominate for complex projects (Turner & Müller, 2006). Other studies

assumed a situational dependency of leadership styles and investigated the personality factors to identify the range of leadership styles (Dulewicz & Higgs, 2005; Müller & Turner, 2010). Our first results highlight the use of two preferred leadership styles in six projects: *a mixture of autocratic and democratic approach* (Canadian and Australian vertical leaders) and *a democratic approach* (Scandinavian vertical leaders). What is interesting to note is that the vertical leader can sometimes be autocratic, sometimes democratic in the same context. Balanced leadership and the delegation of decisions occur in conjunction with different leadership styles that vary on a continuum between autocratic and democratic styles in some cases but seem to be stabilized throughout a democratic leadership style for the Scandinavian vertical leaders. Although Bass (1990) recognized delegation occur in conjunction of any leadership style, our results raised that delegation occur in conjunction of vertical leadership style that adjusts and varies in the same project context.

Another important result of this research is that we acknowledge scenarios that connect vertical leadership styles and the nature of decisions delegated to horizontal leaders. Few research works relate the vertical leadership style to its horizontal delegation through the lens of the nature of decisions (Müller, Packendorff & Sankaran, 2017). For instance, an autocratic leader may delegate decisions because of a lack of time to handle a problem directly or a laissez-faire leader may delegate to avoid a potential blame (Bass, 1990) but these studies do not tie leadership to the nature of decisions. Our results clearly show a traditional task-oriented delegation with leeway and maneuvering for the horizontal leader. This finding implies that delegation occurs when vertical leaders see horizontal leaders as competent relative to the specific task demands and trustworthy to allow the vertical leader to be confident undertaking the risks associated with delegation to horizontal leaders (Schriesheim et al., 1998, p. 300). In addition, our results indicate that vertical leaders do indeed distinguish among delegation to individual or teams. It highlights two specific patterns. One for the Scandinavian cases where the democratic leadership style favors the delegation to individuals and the Australian cases where a mixture of autocratic and democratic leadership styles encourages the delegation to teams.

The relative difference in leadership styles may stem to a certain extent from the cultural differences between the countries, Table 5. Using the six dimensional framework from Hofstede (2017) shows that the Scandinavian country of Norway scores significantly lower on the masculinity dimension than the other countries (Figure 5). Masculinity represents the preference for achievement, heroism, assertiveness, and material success. (Hofstede, 1984). It is seen as the opposite to femininity, which Hofstede explains as:

A low score (Feminine) [...] means that the dominant values in society are caring for others and quality of life. A Feminine society is one where quality of life is the sign of success and standing out from the crowd is not admirable. The fundamental issue here is what motivates people, wanting to be the best (Masculine) or liking what you do (Feminine). Hofstede (2017)

A further difference between Norway and the two English speaking countries is in the indulgence dimension, which Hofstede (2017) explains as

One challenge that confronts humanity, now and in the past, is the degree to which small children are socialized. Without socialization we do not become "human". This dimension is defined as the extent to which people try to control their desires and impulses, based on the way they were raised. Relatively

weak control is called “Indulgence” and relatively strong control is called “Restraint”. Cultures can, therefore, be described as Indulgent or Restrained.

Australia and Canada tend to be more indulgent than Norway, which means their people *generally exhibit a willingness to realize their impulses and desires with regard to enjoying life and having fun. They possess a positive attitude and have a tendency towards optimism. In addition, they place a higher degree of importance on leisure time, act as they please and spend money as they wish.* (Hofstede 2017).

Other indicators of more careful social interaction within the Scandinavian countries than others was found by Müller, Spang and Ozcan (2009) in their study of cultural differences between Swedish and German project teams. It showed that decision making in the teams from the Scandinavian country is based on consensus (everyone must agree with the decision to become accepted), as compared to decision-making based on expert opinion in the German speaking countries. This is supported by the finding of a high sensitivity of managers in Scandinavian countries for the work-life balance of their project managers, as shown by Turner and Müller (2006).

All these indicators point towards a generally more people oriented leadership approach in projects in the Scandinavian countries. To that end, a relatively higher democratic leadership style in the Scandinavian country used in this research can be traced back to the cultural value system. This indicates a strong influence of national cultures on the leadership and its balance between vertical and horizontal leaders in projects. While the general balance of technical and daily tasks to be led by horizontal leaders and business related tasks by vertical leaders prevails across all countries, the style with which this is implemented is contingent on the local national culture and its particular value system. Hence, the global phenomenon of balanced leadership is implemented using local leadership styles and approaches.

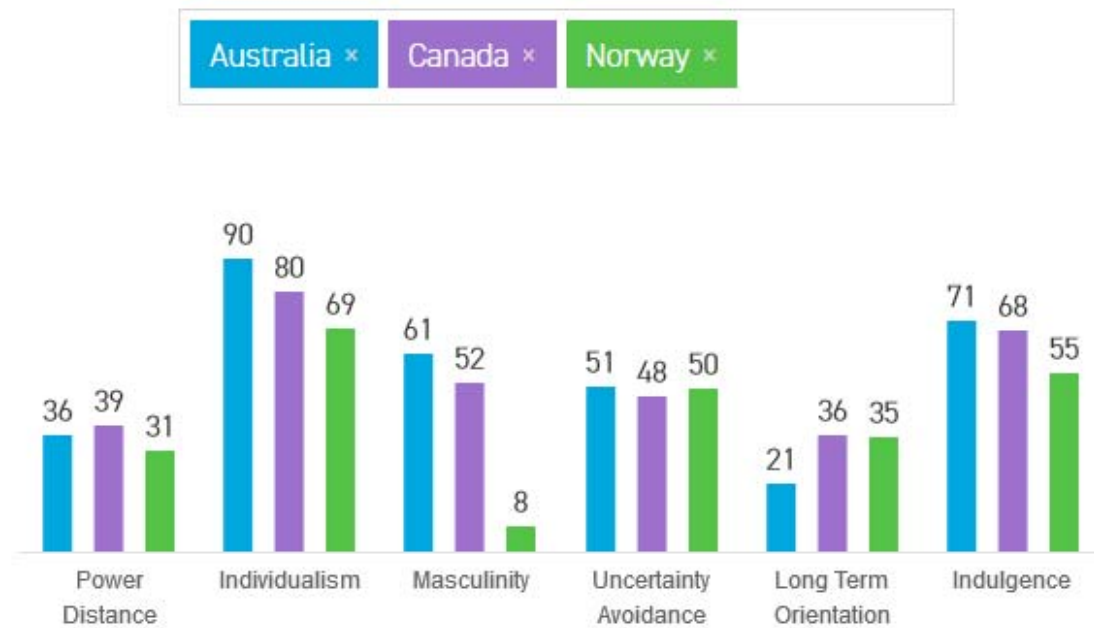


Table 5. Cultural differences by country

Conclusions (to be completed by Shankar)

In summary, the result of this study provides important support on how horizontal leaders execute their leadership task in the context of balanced leadership in projects. It reveals that balanced leadership is executed mainly through task oriented leadership and the switchings of leadership authority are based on trust that the vertical leaders place on the horizontal leader as well as the evaluation of the competencies raise indicates that vertical leadership style is strongly influence by cultural differences and Scandinavian vertical leaders may use a more people oriented leadership style compared to the Anglo-Saxon countries such as Canada and Australia. The study results are also useful to practitioners in horizontal leadership roles to adjust their leadership approaches to the styles of the project managers governing their leadership task. This helps by a r a reduction in ‘friction’ between organizational layers that leads to a reduction of transaction costs. Academics benefit from the insights in the linkage between leader and follower styles, the situational contingencies of horizontal leaders’ approaches both in terms of structures (as given by the respective role understanding of vertical and horizontal leader) and agency (the human behavior within these structures).

Given the evidence presented here, future research should address the relationship between vertical leaders and horizontal leaders in more depth and in additional cases studies to be able to generalize the results.

The research question raised to be addressed in this paper was:

How do horizontal leaders execute their leadership task in the context of balanced leadership?

The emerging scenarios shown in Table 3 reveal that tasks of a technical nature (such as software development decisions) or daily tasks (a task within the operational control and authority of the team) are often carried out under the leadership of horizontal leaders in the cases investigated whereas business and management decisions (such as scope changes or decisions affecting time and cost) are usually left to the vertical leader or carried out by the horizontal leader in consultation with the vertical leader. Also, as expected, project administration and contract related tasks (such as variation orders) were also mostly carried out by the vertical leader. It was surprising that the horizontal leader was not involved as much in stakeholder related issues even though specialist teams in projects often engage directly with corresponding specialists on the other side of a contract. This may be due to the nature of the projects examined within this study. The scenarios illustrated in this study can provide a clue to project managers and senior managers of organizations on what tasks are best delegated to horizontal leaders and what tasks should be handle by the project manager. This could help in empowering the horizontal leader to take up tasks that they are capable of managing so that the project manager can focus on tasks that s/he is better placed to manage. This can also help in better governance of the tasks and less interference into the 'nuts and bolts' issues in projects when such tasks can be clearly delegated and managed by the team.

"The role of leaders is not to get other people to follow them but to empower others to lead." -Bill George (Geroge and Sims 2007; 36)

References

- Alvesson, M., & Sköldbberg, K. (2009). *Reflexive methodology: New vistas for qualitative research*. SAGE Publications, London, England.
- Archer, M. (1995). *Realist social theory: the morphogenetic approach*. Cambridge, UK: Cambridge University Press. <https://doi.org/10.2307/2655684>
- Baccarini, D. (1996) The concept of project complexity: A review, *IJPM*, Vol 14 Iss 4, pp 201-214
- Bhaskar, R. (2016). *Enlightened Common Sense: The Philosophy of Critical Realism*. Abingdon, Oxon, UK: Routledge, UK.
- Bolden, R. (2011). Distributed leadership in organizations: A review of theory and research. *International Journal of Management Reviews*, 13(3), 251–269. <https://doi.org/10.1111/j.1468-2370.2011.00306.x>
- Burke, R.J. & Cooper, C. (2004) *Leading in Turbulent Times: Managing in the New World of Work*. Blackwell Publishing: Oxford (ralf to check)
- Crevani, L., Lindgren, M., & Packendorff, J. (2010). Leadership, not leaders: On the study of leadership as practices and interactions. *Scandinavian Journal of Management*, 26(1), 77–86. <https://doi.org/10.1016/j.scaman.2009.12.003>
- Drouin, N., Müller, R., Sankaran, S., Vaagaasar, A.L., Nikolova, N., Jain, K. (2017). Balanced Leadership in Projects: the concept of socio-cognitive-space to support the building of organizational capabilities. The "Project Hat". *IRNOP Conference, Boston, MA 11 -14 June 2017*
- Dulewicz, V., & Higgs, M. (2005). Assessing leadership styles and organisational context. *Journal of Managerial Psychology*, 20(2), 105–123. <https://doi.org/10.1108/02683940510579759>
- Flyvbjerg, B. (2014). What You Should Know About Megaprojects and Why : An Overview.

Project Management Journal, 45(2), 6–19. <https://doi.org/10.1002/pmj>

Hauschildt, J., Keim, G., & Medcof, J. W. (2000). Realistic Criteria for Project Manager Selection and Development. *Project Management Journal*, 31(3), 23–32.

Hersey, P., & Blanchard, K. H. (1988). *Management of Organizational Behaviour*. Englewood Cliffs, NJ: Prentice Hall.

Hofstede, G. (2017). Country comparisons,

<https://www.hofstede-insights.com/country-comparison/australia,canada,norway>, retrieved 2017-12-06.

Keegan, A., & Den Hartog, D. N. (2004). Transformational leadership in a project-based environment: a comparative study of the leadership styles of project managers and line managers. *International Journal of Project Management*, 22(8), 609–618.

Lindgren, M., & Packendorff, J. (2009). Project leadership revisited : towards distributed leadership perspectives in project research Monica Lindgren and Johann Packendorff *. *International Journal of Project Organization and Management*, 1(3), 285–308.

Lundin, R.A. & Soderholm, A. (1995) A theory of temporary organization, *Scandinavian Journal of Management*, Vol 11, No 4, pp. 437-455.

Maylor, H., Vidgen, R. and Carver, S. (2008), Managerial complexity in project-based operations: A grounded model and its implications for practice. *PMJ* 39: S15–S26.

Müller, R., Packendorff, J., & Sankaran, S. (2017). Balanced Leadership: A New Perspective for Leadership in Organizational Project Management. In S. Sankaran, R. Müller, & N. Drouin (Eds.), *Cambridge Handbook of Organizational Project Management* (pp. 180–193). Cambridge, UK: Cambridge University Press.

Müller, R., Sankaran, S., Drouin, N., Vaagaasarm A-L., Bekker, M.C. & Jain, K. (2017). A theory framework for balancing vertical and horizontal leadership in projects, *International Journal of Project Management*, <http://dx.doi.org/10.1016/j.ijproman.2017.07.003>

Müller, R., Sankaran, S., Drouin, N., Vaagaasar, A., Bekker, M. C., & Jain, K. (2018). A theory framework for balancing vertical and horizontal leadership in projects. *International Journal of Project Management*, 36(1), 83–94.
<https://doi.org/http://dx.doi.org/10.1016/j.ijproman.2017.05.011>

Müller, R., Spang, K., & Ozcan, S. (2009). Cultural differences in decision making in project teams. *International Journal of Managing Projects in Business*, 2(1).
<https://doi.org/10.1108/17538370910930527>

Müller, R., & Turner, J. R. (2010). *Project-Oriented Leadership*. (D. Dalcher, Ed.). Aldershot, UK: Gower Publications

Müller, R., & Turner, R. (2010). Leadership competency profiles of successful project managers. *International Journal of Project Management*, 28(5), 437–448.
<https://doi.org/10.1016/j.ijproman.2009.09.003>

- Müller, R., Vaagaasar, A. L., Nikolova, N., Sankaran, S., & Drouin, N. (2015). The socio-cognitive space for linking horizontal and vertical leadership. In *Proceedings of the APROS/EGOS Conference 2015, December 9-11, 2015, Sydney, Australia*.
- Müller, R., Zhu, F., Sun, X., Wang, L., & Yu, M. (2018). The identification of temporary horizontal leaders in projects: The case of China. *International Journal of Project Management*, 36(1), 95–107. <https://doi.org/10.1016/j.ijproman.2017.05.011>.
- Partington, D., Pellegrinelli, S., & Young, M. (2005). Attributes and levels of programme management competence: an interpretive study. *International Journal of Project Management*, 23(2), 87–95.
- Pearce, C. L., & Conger, J. A. (2003). *Shared Leadership*. (J. L. Pearce & J. A. Conger, Eds.). Thousand Oaks, CA, USA: SAGE Publications Inc, USA.
- Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research Methods for Business Students*. Harlow, England: Pearson Education Limited.
- Shao, J. (2018). The moderating effect of program context on the relationship between program managers' leadership competences and program success. *International Journal of Project Management*, 36(1), 108–210. <https://doi.org/10.1016/j.ijproman.2017.05.004>
- Tuckman, B. W. (1965). DEVELOPMENTAL SEQUENCE IN SMALL GROUPS 1. *Psychological Bulletin*, 63(6), 384–399.
- Turner, J. R., & Müller, R. (2005). The Project Manager's Leadership Style as a Success Factor on Projects: A Literature Review. *Project Management Journal*, 36(2), 49–61
- Turner, J. R., & Müller, R. (2006). *Choosing Appropriate Project Managers: Matching their leadership style to the type of project*. Newtown Square; USA: Project Management Institute.
- Yukl, G., & Mahsud, R. (2010). Why flexible and adaptive leadership is essential. *Consulting Psychology Journal: Practice and Research*, 62(2), 81-93.