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Identifying and managing persisting tensions affecting strategic learning from projects

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ABSTRACT

While research recognises that strategic learning from projects helps build organisation-wide knowledge capabilities, learning from projects still remains fragmented and is often prematurely discontinued. Although research demonstrated that persisting tensions affect project-based organising, little is known about specific tensions affecting strategic learning from projects. A single, in-depth case study in a multinational food processing and packaging corporation is used to explore paradoxical tensions affecting strategic learning from projects. The study uncovered three persisting learning tensions: project/organisational identity, short-/long-term-orientation and standardisation/flexibility. Seven strategies are proposed, supported by the empirical data, to respond to these tensions.

1. Introduction

Most organisations now use projects to deliver innovative services or products and to undertake change or implement internal improvements. Projects provide a vital source of knowledge for organisations. Learnings and experiences gained from past projects can benefit future projects and organisation contributing to building and adjusting organisational learning capabilities (Alegre and Chiva, 2008; Pemsel et al., 2018). Learning from projects has therefore a strategic purpose of adjusting and renewing organisation-wide capabilities (Brady and Davies, 2004; Wiewiora et al., 2020). Organisations that deliver projects face challenges of discontinued learning flows from projects, often attributed to temporal and structural properties of project-based organising (Scarbrough et al., 2004; Bakker, 2010). Research on project learning recognises that the learning flows from projects to the organisation remain fragmented and are often prematurely discontinued (Berends and Lammers, 2010; Chronéer and Backlund, 2015).

Meanwhile, recent literature on tensions in projects points to the ongoing competing priorities that exist in project-based organising (Arvidsson, 2009; DeFillippi and Sydow, 2016). The tension between learning and performing, presented in previous studies (Lewis et al., 2002; Andriopoulos and Lewis, 2010; Davies et al., 2016), provides a good example. Projects often develop new knowledge and innovations through exploration activities and resource investments spent on learning. Yet, project success also requires efficient execution of project tasks to keep the project on schedule and within budget. The project manager (PM) needs to decide between the two competing priorities: to invest resources in learning or to focus on delivering objective project outcomes. It is also acknowledged that projects experience a tension between the ease of knowledge creation, due to the interdisciplinary nature of projects, and the inability to transfer that knowledge beyond the project due to project temporality and weak linkages between the project and parent organisation (Scarbrough et al., 2004; Bakker, 2010). This phenomenon, referred to as the "learning paradox", is noted in the project management literature but not explored in depth.

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Tensions affecting learning within and from projects have been recognised but rarely empirically explored, apart from the tension between the simultaneous pursuit of exploration and exploitation. The most relevant research exploring this tension in the context of projects was presented by Andriopoulos and Lewis (2010). Using comparative case study, the authors identified four types of paradoxical tensions affecting ambidexterity in product development projects. Their research provides a departure for a more thorough understanding of persisting tensions affecting project learning. However, its focus on exploration and exploitation activities that occur within a project limit the extent to which this learning can be considered strategic and as affecting the wider organisation. Most of the research on tensions in projects remains conceptual (Burke and Morley, 2016; DeFillippi and Sydow, 2016), or the tensions emerge from empirical studies focused on investigating other phenomena (Davies et al., 2016).

Empirical evidence explaining how project-based organisations can capitalise on the presence of tensions to achieve strategic learning from projects is still lacking and little is known about how to manage these tensions. Paradox research suggests various ways to deal with tensions (Poole and Van de Ven, 1989; Lewis, 2000; Smith and Lewis, 2011), while more recent research offers some direction on managing tensions affecting exploration and exploitation (Andriopoulos and Lewis, 2010). In their systematic review of existing paradox studies, Schad et al. (2016) advocate that more empirical research is needed to understand how to respond to learning tensions. Understanding what persisting tensions affect strategic learning from projects might offer useful insights to explain the challenges of discontinued project learning flows and disruptive project learning cycles (Berends and Lammers, 2010; Chronéer and Backlund, 2015). Identifying a set of strategies that are useful in managing these tensions would assist project-based organisations in adjusting their project management practices and achieving better learning outcomes from projects. Often, in practice, project performance outcomes are prioritised over learning (Samset and Volden, 2016). Using a paradox lens may help viewing these seemingly opposite aspects of learning and performing, as not mutually exclusive.

This research brings together insights from strategic learning models (Crossan et al., 1999; Thomas et al., 2001; Sirén et al., 2017), project learning (Brady and Davies, 2004; Bakker et al., 2011), and paradox theory (Poole and Van de Ven, 1989; Smith and Lewis, 2011; Schad et al., 2016) to investigate the tensions impacting strategic learning from projects and to unveil strategies to manage these tensions. The focus of the paper is on strategic learning that encompasses learning acquisition and execution. The following questions guided the current research: (1) "What paradoxical tensions affect strategic learning from projects?" and (2) "How can these tensions be managed?"

Paradox theory provides a useful lens that shifts from the "either/or" to the "and/both" approaches to thinking and working with competing demands. Rather than portraying learning-related tensions (such as learning versus performing) as mutually exclusive, paradox research provides a mindset to consider and achieve both demands.

A single, in-depth case study in a multinational food packaging and processing organisation was conducted to explore these learning-related tensions. The study focuses on understanding interactions between key actors involved in project learning: PMs and Project Management Office (PMO) personnel. Both these actors have been identified as having an influence on learning from projects (Wiewiora et al., 2020) and having knowledge-brokering capabilities (Pemsel and Wiewiora, 2013). Using an in-depth case study approach allowed a deep dive into the rich case to uncover complexities and even contradictions of the phenomenon under investigation (Flyvbjerg, 2006). Some aspects of the process-research approach (Pettigrew, 1990; Van de Ven and Huber, 1990) were also used to examine how tensions affecting learning processes unfold.

This study contributes to the research on strategic project learning (e.g. Brady and Davies, 2004; Berends and Lammers, 2010; Wiewiora et al., 2020) by identifying three persisting tensions affecting strategic learning from projects: project/organisational identity, short-/long-term-orientation and standardisation/flexibility tensions. Previous research has discussed similar tensions in the context of projects (Andriopoulos and Lewis, 2010) but not from the strategic learning perspective. This present research provides a more nuanced understanding of how these persisting tensions affect strategic learning processes within the organisation. This study further contributes to the research on managing paradoxical tensions affecting learning in project-based organising (Andriopoulos and Lewis, 2010; DeFillippi and Sydow, 2016) by offering a set of strategies that can be applied to manage these tensions.

2. Theoretical underpinning

This research brings together literature on strategic learning, project learning and paradoxical tensions to explore and deal with persisting tensions affecting strategic learning from projects. This section first outlines the foundational knowledge on strategic learning and paradox theory. Next, it presents the most relevant findings on paradoxical tensions affecting learning in organisations. It then moves to the context of project-based organising, outlining the most relevant research on strategic learning from projects and current understandings of paradoxical tensions affecting project learning.

2.1. Strategic learning

Strategic learning is a process characterised by a purposeful approach to managing and transferring learning to achieve organisational benefits and has been described as a long-term adaptive capability that allows organisations to continuously adapt and renew their core capabilities (Kuwada, 1998; Thomas et al., 2001). Influential work by Kuwada (1998), Thomas et al. (2001) and Crossan et al. (1999) helped crystallise the current understanding of strategic learning. Strategic learning involves processes of (i) acquiring knowledge by obtaining existing or creating new insights to improve organisational practices (Thomas et al., 2001; Crossan and Berdrow, 2003), (ii) consolidating the knowledge to build shared understanding, and (iii) institutionalising through adjusting or changing existing practices.

There are four integral elements of strategic learning identified in the existing literature: knowledge generation, multilevel focus,

change and purposeful learning. Firms that are effective in strategic learning must be able to effectively generate strategic knowledge from different parts and levels of the organisation (Kuwada, 1998; Crossan et al., 1999). The organisation has to act on that knowledge through a change or adjustment of organisational practices (Anderson et al., 2009). Strategic learning is purposeful because it involves focused attention to those learnings that have links to the organisation's strategy and practices (Thomas et al., 2001). Strategic learning can be therefore described as a purposeful generation of knowledge that involves various levels of learning and results in change or adjustment to organisational strategy.

Strategic learning contributes to strategic renewal, which requires organisations to explore new possibilities while, at the same time, exploiting what has already been learned (March et al., 1991). Strategic learning is similar to organisational learning and knowledge management concepts. However, at least two attributes distinguish strategic learning from these other two concepts. First is the purposeful aspect of learning aimed at changing or adjusting already institutionalised knowledge (Anderson et al., 2009) embedded in the organisation's existing strategies and routines (Thomas et al., 2001). The second attribute is the orchestrated integration of various levels of learning (Crossan et al., 1999), which is fundamental to the strategic learning concept but not always evident in organisational learning and knowledge management research.

2.2. Paradox and paradox management

Paradox, as a meta-theory, offers a powerful lens for deeper understandings of tensions and perceived contradictions present in organisations (Schad et al., 2016). Paradoxes are defined as "contradictory yet interrelated elements that exist simultaneously and persist over time" (Smith and Lewis, 2011, p. 382). Organisational tensions result from a presence of interdependent contradictions (Das and Teng, 2000) and represent natural features of organisational life. The idea that competing demands are contradictory yet interdependent is the core characteristic of the paradoxical tension (Schad et al., 2016).

The influential work of Poole and Van de Ven (1989) and Quinn and Cameron (1988) offered early insights that helped shape paradox research and theory. Their work explored the existence of competing demands present in the organisational system that can exist and interact simultaneously. Further work by Lewis (2000) and Smith and Lewis (2011) centres on the concept of dynamic equilibrium, suggesting that competing demands exist in ongoing interactions that morph over time. More recently, paradox research has sought answers to better understand ways to deal with paradoxical tensions; for example, how to manage persistent tensions of exploration and exploitation to achieve ambidexterity (Papachroni et al., 2015; Zimmermann et al., 2018).

Paradox management entails exploring, rather than suppressing or eliminating, tensions. Prior research suggests that managing paradoxical tensions does not mean eliminating them. Elimination is not advisable because some of the tensions produce positive responses. Smith and Lewis (2011) explain that persisting tensions can activate positive or negative responses, resulting in virtuous or vicious cycles. Vicious cycles that spur reinforcing negative responses stem from pulling too much to either extreme of the paradoxical tension. Effectively managing paradoxical tensions, however, can fuel virtuous, reinforcing cycles that allow the organisation to learn, survive, thrive and perform (Smith and Lewis, 2011).

Research suggests various ways to deal with paradoxical tensions. An acceptance strategy proposes accepting that the opposites exist and using them constructively (Poole and Van de Ven, 1989). Learning to live with the tension offers a sense of freedom, reduces anxiety and helps members avoid needless debates (Schneider, 1990; Lewis, 2000). A splitting (or differentiating) strategy suggests separating contradicting tensions to different locations or different temporalities. For example, one element of the paradox is assumed to hold at one time and the other during a different time, but they may still influence each other through their prior actions (Poole and Van de Ven, 1989). A synthesis (or integrating) strategy involves finding synergies that accommodate both poles. Finally, transcendence implies the capacity to think paradoxically; that is, to consider both/and possibilities (Lewis, 2000). As such, paradoxical thinking reflects an ability to recognise and accept the interrelated relationships and underlying tensions and identify potential synergies (Smith and Lewis, 2011).

2.3. Paradoxical tensions affecting strategic learning

Paradox research recognises that persisting tensions affect learning in organisations (Smith and Lewis, 2011). Learning tensions are described as persisting pressures between building upon and destroying the past to create the future in an effort to adjust, renew, change and innovate (Smith and Lewis, 2011). At the individual level, learning tensions are described as intense negotiations between competing perspectives and the exchange of conflicting mental models, which eventually lead to new learnings (Antonacopoulou, 2014). Smith and Lewis (2011) identified three types of tensions between learning and three core organisational activities: performing, organising and belonging. The tension between learning and performing deals with building capabilities for the future while ensuring success in the present. The tension between learning and organising requires focus and efficiency while also enabling change and agility. Finally, the tension between learning and belonging deals with conflicting demands between the need for change and the desire to retain a developed sense of self and purpose.

Persisting tensions affecting learning in organisations have been discussed in the extant literature. Using a single case study approach, Antonacopoulou (2014) identified tensions that affect the process of knowledge integration, including the tension between strategic and operational realities and between the use of formal versus informal knowledge management practices. Exploring these tensions helped deepen understanding of how knowledge integration contributes to innovation. Davies and Nutley (2000), in their position paper, discussed tensions affecting organisational learning in the context of the National Health Services. Authors argued that "the values underpinning learning organisations have inbuilt tensions that require a careful balance between their sometimes conflicting demands (for example, celebrating success while tolerating and learning from mistakes)" (p. 1000). Davies and Nutley (2000)

concluded that within organisations, especially those facing ongoing time pressures (such as a hospital), a tension between "doing" and "learning about doing" is one that is persistent and needs addressing. Analogously, it is also important to address this tension in the context of project-based organising, in which projects are inherently time-poor and where tensions between doing (i.e., performing) and learning is prevalent.

Strategic learning research calls for more studies into tensions affecting organisational learning (Crossan and Berdrow, 2003). The most relevant paper exploring these tensions was presented by Andriopoulos and Lewis (2010). As noted earlier, their comparative case study research identified four types of paradoxical tensions affecting exploration and exploitation in the context of product development projects: (1) long-term adaptability–short-term survival; (2) possibilities–constraints paradox; (3) diversity–cohesiveness, and (4) passion–discipline. While Andriopoulos and Lewis' (2010) research provides a good starting point for a more thorough understanding of persisting tensions affecting project learning, its focus on exploration and exploitation activities that occur within a project limits the extent to which this learning can be considered strategic and as affecting the wider organisation. Besides the exploration and exploitation tension, limited research exists that explores persisting tensions affecting strategic learning processes.

2.4. Strategic learning from projects and underlying tensions

2.4.1. Learning from projects

The focus of this research is on strategic learning from projects, which is aimed at adjusting and renewing organisation-wide capabilities, including project management capabilities. Strategic learning from projects contributes to the strategic improvement of organisation-wide project operations. It takes place as a project acquires and integrates learnings during its life cycle and shares these learnings with other projects or the organisation for future application so that they can capitalise on the accumulated organisational learning. As such, strategic project learning is influenced by individuals, teams and the organisation, and can occur within projects, between projects, and from projects to the wider organisation.

Synthesising existing strategic learning models (Crossan et al., 1999; Thomas et al., 2001; Sirén et al., 2017) and applying them to a project management context, we suggest that strategic learning from projects takes place through a set of four learning processes: (1) strategic project knowledge acquisition, (2) strategic project knowledge dissemination, (3) strategic project knowledge integration, and (4) strategic project knowledge institutionalisation. *Strategic project knowledge acquisition* involves efforts targeted at obtaining knowledge from projects aimed at adjusting, changing or improving organisation-wide project management practices. *Strategic project knowledge dissemination* involves the transfer of project knowledge within and beyond the project. This can occur through dialogue, conversation and sharing documents and involves interactions within or between projects. *Strategic project knowledge integration* is a process of integrating knowledge within and from projects to create a shared understanding. It involves multiple actors from within and beyond the project, making sense of different points of information and developing a common understanding. Project knowledge integration is achieved through a collective action involving discussion and mutual adjustment. *Strategic project knowledge institutionalisation* involves adjusting existing or creating new organisation-wide project management practices and routines based on the new learnings. Strategic knowledge institutionalisation helps to build organisational memory (Walsh and Ungson, 1991), which is beyond the individual and project as it remains within the organisation even if the individuals leave or projects terminate. *Strategic project knowledge institutionalisation* therefore contributes to the strategic renewal of project management practices.

The process of learning from and by projects is discussed in the project management literature (DeFillippi, 2001; Brady and Davies, 2004; Grabher, 2004; Söderlund, 2008; Wiewiora et al., 2020). For example, Brady and Davies (2004) present a model of two interacting levels of learning: project-led and business-led learning. From their research, we learn that project-led learning (i.e., learning from vanguard projects) allows discoveries and exploration of new knowledge. Business-led learning allows exploitation of already existing company-wide capabilities (Brady and Davies, 2004). These two learning landscapes trigger bottom-up and top-down learning flows, connecting projects with the parent organisation through the learning efforts.

Project learning literature acknowledges that projects face learning challenges due to temporal and structural elements of project-based organising (Berends and Lammers, 2010). Learning in the context of projects is often isolated to a project level and not considered from a strategic perspective. Project temporality and weak communication links with other projects or organisational units also contribute to the project learnings not being effectively captured and institutionalised at the organisational level (Bakker, 2010). Projects by themselves are not structured to address challenges of ineffective knowledge sharing beyond the project and need supporting structures that will assume the learning responsibilities.

There is emerging research on project learning that points to the role of the PMO as an important structure in navigating learnings from projects to achieve strategic organisational benefits (Wiewiora et al., 2020). PMOs can be regarded as organisational units that facilitate the coordination of knowledge and other resources between projects and the parent organisation (Pemsel and Wiewiora, 2013). Multiple studies have discussed the role of the PMO as a knowledge broker spanning organisational boundaries and assisting in inter-project knowledge transfer (Desouza and Evaristo, 2006; Julian, 2008; Pemsel and Wiewiora, 2013). A PMO's strategic management function links a project to the parent organisation and helps interpret corporate strategy to guide projects and ensure they represent the business interest of the parent organisation (Aubry et al., 2011). Although the recent research on PMOs points to their brokering role in connecting projects and the parent organisation, the role of PMOs in managing persisting tensions affecting strategic learning from projects has not yet been explored.

2.4.2. Paradoxical tensions affecting learning in project-based organising

Paradoxical tensions affecting learning within and from projects have been recognised in the extant research (Bakker et al., 2011; Davies et al., 2016; DeFillippi and Sydow, 2016) but not sufficiently explored. Bakker et al. (2011) described the learning paradox in

the context of inter-organisational projects as a tension between the ease of knowledge creation due to interdisciplinary nature versus difficulty to transfer knowledge beyond the project due to temporality. Their work concluded that to successfully manage the project learning paradox, project-based organisations need to develop a high level of absorptive capacity to recognise and realise the value of project knowledge. A tension between exploration versus exploitation emerged in the study by Davies et al. (2016) on the design and construction of Heathrow Airport Terminal 5. They concluded, based on data, that these opposite project activities are not mutually exclusive as there is often a simultaneous requirement for exploitation in one part of the project and exploration in another (Davies et al., 2016). Their research investigates challenges between engaging in innovation and routine work within a large-scale project rather than from projects.

There is limited but growing research on the types of tensions in the project-based environment, and previous research has discussed tensions related to the project temporality and project-based organising principles (Arvidsson, 2009; DeFillippi and Sydow, 2016; Samset and Volden, 2016; Majoor, 2018). Most of the research on paradoxical tensions in projects remains conceptual (e.g. DeFillippi and Sydow, 2016) or tensions in projects have emerged from empirical studies focused on investigating other phenomena (Davies et al., 2016). Existing research has not, however, explored how these tensions affect learning from and within projects; little is known about what specific tensions affect learning processes in project-based organising.

3. Research method

3.1. Research context

A single, in-depth case study in a multinational organisation, Foodglobe (name changed to ensure anonymity), was conducted to

Table 1
Information about the study participants and additional data sources.

ID	Position	Location	Years at Food-globe	Interview conducted	Means	(rounded)
R1	Senior leader	Europe	15	2015 2015	Face-face	45
					Face-face	60
R2	Local PMO manager	Australia	14	2015	Online	55
				2015	Online	65
R3	PMO Coach	Europe	38	2015	Face-face	75
R4	PMO Coach	Europe	4	2015	Face-face	75
R5	Senior leader	Europe	10	2015	Face-face	65
R6	Global PMO manager	Europe	6	2015	Online	70
R7	PM	Europe	5	2015	Online	60
R8	PM	Europe	13	2015	Face-face	75
R9	PM → PMO Coach	Europe	6	2015	Face-face	100
				2016	Online	55
R10	PM	Europe	1	2015	Face-face	100
R11	PM	Europe	31	2015	Face-face	70
R12	Senior leader	Europe	25	2015	Face-face	50
R13	Senior leader	Europe	38	2015	Face-face	60
R14	PM	Europe	21	2015	Face-face	60
R15	PM	Europe	8	2015	Face-face	45
R16	PM	Europe	17	2015	Face-face	65
R17	PMO Coach	Europe	22	2015	Face-face	55
R18	Senior leader	Europe	7	2015	Face-face	60
R19	PM	Europe	28	2015	Face-face	60
R20	PM	Malaysia	N/A	2015	Phone	60
R21	Local PMO director	Japan	7	2015	Phone	60
R22	Local PMO manager	US	25	2015	Phone	60
R23	Senior leader	Europe	10	2016	Online	60
R24	PMO officer safety	UK	15	2016	Online	60
R25	Local PMO manager	India	9	2016	Online	60
R26	Local PMO manager	US	30	2016	Online	60
R27	Local PMO manager	Brazil	10	2016	Online	60
R28	PM	Indonesia	18	2016	Online	60
R29	Senior PM	Singapore	10	2016	Online	45
R30	Senior PM	New Zealand	10	2016	Online	55
R31	PM	New Zealand	7	2016	Online	70
R32	PM	US	7	2016	Online	55
R33	Senior PM	US	4	2016	Online	45
R34	Senior PM	New Zealand	8	2016	Online	35

Additional data sources

- Review of the project organisation structure
- Review of annual reports
- Review of the company website

PM = project manager, PMO = project management office

explore tensions affecting learning from projects. Foodglobe provides food packaging and processing services for multinational and local food producers across developed and developing markets. Foodglobe is a strong matrix organisation that delivers food and beverage packaging projects, food and beverage processing projects (such as the development of processing equipment and equipment installation) and internal business transformation projects. The size of Foodglobe's projects varies from approximately 10,000 Euro to 20+ million Euro. The company's largest geographical markets are China, the United States (US), Brazil and Europe. Foodglobe deploys one Central PMO office and 24 local PMOs, operating as a network and nested within multiple contexts of project maturity, geographical location and cultural diversity. The main role of these PMOs is to provide support to projects in terms of training and methodology, standardising project practices, and providing a centralised structure aimed at improving project organisation. This case study was chosen because of its contextual characteristics. Being a multinational organisation experienced in managing small to large scale projects and with multiple PMOs operating across different regions, the case study provided rich insights about how the learning flows between different organisational levels and tensions affecting the learning. Access to PMs with various levels of experience and operating across regions (some of them working in more than one region) provided a richness of perspectives and allowed us to make comparisons between the regions and organisational levels.

3.2. Data collection process

The field study was conducted in two rounds: January to July 2015 and March to August 2016. The first round focused on investigating learning processes and how project learning flows between individual, project and organisational levels. Findings from the first round uncovered the presence of multiple tensions affecting project learning, which became a focus for the second round. Interviews and meetings were conducted with 34 participants: PMO personnel ($n = 12$), PMs ($n = 15$) and senior leaders ($n = 6$) and one PM who, in the course of the study, transitioned to the PMO role. Nineteen participants were from Europe, four from the US, three from New Zealand, and there was one participant each from Australia, Brazil, India, Indonesia, Japan, Malaysia, Singapore and the United Kingdom (UK). On average, participants had 14.5 years of working at Foodglobe, ranging between 1 and 38 years. Three participants were interviewed two times over the course of the study (R1, R2 and R9). We also held online meetings with R9, R24, R25, R26. Interviews with participants from distant locations were conducted via phone or online to save time and to lower travel cost. Interviews lasted between 35 and 100 min with the average interview duration of approximately 60 min (see Table 1 for details).

Interviews were recorded and transcribed, providing over 300 single-spaced pages of data, with direct quotes and insights from the participants. Interview data were supplemented with field notes, a review of reports, documents, presentations and observations. In addition, a review of the company's website, annual reports and articles widely available on the internet provided background information about the company's structure, strategic directions and history. The author and a research assistant conducted interviews, meetings and observations. The interviews were semi-structured, which allowed asking follow-up questions and provided participants with the opportunity to explain and elaborate on their responses. To minimise the risk of biased or withheld information, before the interview began, each participant was informed about the study's objectives and was reassured that all their comments and responses would be treated confidentially and that they would not be judged.

Interviews began with questions about the participant's background and their role in the organisation. We discovered that most participants have had multiple roles in the organisation and have worked in different geographical locations; it became apparent that Foodglobe supports employee mobility. The first round of interviews focused on gaining more insights about the organisation, its projects and project learning processes. The second round asked questions focusing specifically on the tensions and ways these are managed in the organisation. The research was approved by the Ethics Committee and participants' consent was obtained before data collection began.

3.3. Data analysis process

Data analysis involved a reflexive and iterative process (Alvesson and Sköldberg, 2009; Srivastava and Hopwood, 2009) of making sense of the data while considering the extant literature. Reflexive iteration involved visiting and revisiting the data, focusing on different perspectives and connecting data with emerging insights, progressively leading to an in-depth understanding of the phenomenon (Srivastava and Hopwood, 2009). This process allowed an accurate picture to unfold through the varying perspectives and facets observed within the case. Some aspects of the process-research approach (Pettigrew, 1990; Van de Ven and Huber, 1990; Hällgren and Söderholm, 2012) were also used to examine how tensions affect learning processes.

Step One of the analytical process involved the detailed examination of the empirical data, a careful reading of the transcribed interviews and supporting documents, and sense-making of the data. This step revealed the presence of competing demands affecting strategic learning from projects.

Step Two involved coding the transcripts into NVivo based on the sense-making of data from Step One. The coding focused on the tensions that affected the learning processes. Once the coding structure was established, a number of coding queries, including matrix queries, were conducted to examine data from different perspectives. Coding queries helped uncover that PMs perceive the tensions and respond to them differently to the PMO personnel and top-level managers. This observation helped to further enrich the findings and exposed the presence of an identity tension.

Step Three of the analytical process focused on further refining the coding structure and distilling more silent findings. This step focused on revisiting the data to better understand the practices used in Foodglobe to deal with the tensions. This step involved continuous verification and interplay between emerging empirical observations and the existing literature on organisational learning and learning paradoxes. This process helped crystallise the emerging findings and further refine the coding structure. The iteration

between data, literature and analysis was repeated until an overarching framework that fitted the emergent findings was established. To ensure inter-coder reliability, three randomly selected interviews were coded independently by the author and a research assistant. A comparison was run using NVivo and the result was an average Kappa of .65 across all nodes, which indicates good agreement according to Altman (1991), who suggests that a value range of 0.61–0.80 indicates good strength of agreement between observers. At the end of the third round, more structured themes emerged with more consistent second- and third-order themes, which provided the basis for reporting on the findings (presented below). Following Flyvbjerg's (2006) recommendations on reporting a single case study, this case study is presented in its diversity and unfolded from the many, sometimes conflicting, complex and interrelated sides.

In Step Four, the findings were compared with the existing literature on learning within and across projects and the literature on learning paradoxes, in particular literature in the context of projects. This last step helped identify more nuanced theoretical contributions, which are presented in the Discussion section.

4. Findings

The data analysis revealed that the strategic learning from projects at Foodglobe was affected by multiple paradoxical tensions. Three tensions were identified: (1) short-/long-term orientation (investing in continuous improvement of the project organisation, while ensuring success in the present), (2) standardisation/flexibility (the pursuit of uniformity on the one hand while providing space for localised approaches on the other), and (3) project/organisational identity tension (commitment to project contrasted with a commitment to the organisation). Furthermore, seven strategies to manage these persisting tensions were also identified. A summary of the study findings is presented in Tables 2 and 3.

Although identity tension was the last to emerge from the data, it is reported first in the findings because it helps explain some aspects of the other two tensions. Based on findings from the data, the subsequent sections first describe the tensions that emerged from the data, explain how these tensions affect learning and, finally, how these tensions were managed to ensure strategic learning from projects.

4.1. Project/organisational identity tension

Identity tension manifests in members' sense of belonging to a group that represents a common set of values and priorities while coexisting with other groups that represent opposing or different values (Smith and Lewis, 2011). Two kinds of identities affecting strategic learning from projects were identified from the data: project and organisation identity. It was evident from the data that PMs displayed a greater commitment to their projects whereas PMO personnel identified more strongly with the organisation and were more committed to organisational-level improvements.

Data from interviews revealed that the identity tension originated from the distinctive nature of these two actors'—PMs and PMO personnel—roles and responsibilities. PMs tended to be more project- and outcome-oriented, focused on resolving immediate project issues and having the best interests of the project in mind. PMs' work was evaluated based on the performance of their respective projects rather than based on their contribution to organisational improvement. PMs, therefore, tended to prioritise projects over the organisation. In contrast, PMO personnel were concerned with the ongoing improvement of the project organisation. The PMO's role was to help both the PM and the organisation to improve project management practices, as well as to adapt and integrate business interests into the project management efforts. There were several remarks from the PMO personnel and PMs confirming the distinctive nature of their roles. Some PMs commented that the PMO is "too management heavy" and "withdrawn from the reality". One of the

Table 2
Paradoxical tensions affecting the strategic learning process and relevant strategies.

Paradoxical tensions affecting strategic learning from projects	Definition	Strat. knowledge acquisition	Strat. knowledge dissemination	Strat. knowledge integration	Strat. knowledge institutionalisation	Strategies to deal with paradoxical tensions
Project/organisational identity tension	Members' stronger commitment to either the project or organisation in which the project is embedded	x	x	x		*1. Feed-forward synthesis* *2. Feedback synthesis*
Short-/long-term-orientation tension	Investing in continuous improvement of the project organisation while ensuring success in the present	x	x	x		*3. Paradoxical thinking* *4. Actor-based separation* *5. Market-based separation*
Standardisation/flexibility tension	Pursuing uniformity in the way projects are managed while allowing customised approaches to address diverse project sizes, local contexts and needs	x			x	*6. Flexible uniformity* *7. Improvised routines*

Table 3
Paradoxical tensions affecting strategic learning from projects—summary of analysis.

Tensions	Summary of findings	Direction of learning
Identity tension	The tension between organisational members' sense of belonging to a project while maintaining their commitment to the organisation.	
How the tension affects strategic learning from projects	PMs tend to be more committed to their projects. They have access to important project learnings but no time and commitment to capture these learnings and share them beyond the project.	
	PMO personnel identify more strongly with the project-based organisation and are committed to the continuous improvement of project management practices but have no direct access to project learnings.	
How the tension is managed in Foodglobe	PMO personnel use formal and informal networks to capture project learnings from PMs. PMO personnel then disseminate and integrate these learnings for use in other parts of the organisation via PMO networks.	P → O
	PMO personnel disseminate organisational learnings to projects via informal and formal activities (e.g. coaching, PM accreditation program, and project audit sessions).	O → P
Short-/long-term-orientation tension	Tension between investing in learning and building project management capabilities for the future while ensuring success of the present through focusing on immediate project deliverables.	
How the tension affects strategic learning from projects	PMs pursue short-term learning objectives for immediate project benefits through ad hoc sharing and acquisition of the localised project knowledge. This short-term orientation restricts opportunities to share project learnings beyond the project.	
	Developed markets have access to resources to invest in long-term learning and capability building. Developing markets concentrate on immediate project and market needs and lack the resources to invest in long-term improvements.	
How the tension is managed in Foodglobe	Experienced PMs use paradoxical thinking to pursue both demands: achieving short-term project objectives and sharing their project lessons beyond the project for future use.	P → P
	PMO personnel roles and responsibilities focus on continuous improvement of project management practices, contributing to long-term capability building.	P → O
	Developed markets invest in long-term capability building (i.e. improvement of project management practices) and disseminate these practices, via PMO networks, to developing markets.	O → O
Standardisation/flexibility tension	The tension between the pursuit of uniformity and regularity in the way projects are managed while providing a space for flexibility and localised project management practices.	
How the tension affects strategic learning from projects	Standardised project practices promote exploitation and help achieve economies of scale, but excessive standardisation can lead to overly rigid and impractical practices.	
	Flexibility allows dealing with emerging issues, exploring novel ideas and providing customised approaches to suit local project needs. Excessive flexibility leads to miscommunication and missed opportunities for learning.	
How the tension is managed in Foodglobe	PMs use standardised project practices but are provided with autonomy to customise these practices to suit project needs and the local environment (exploitation though flexible uniformity).	O → P
	PMs create new practices based on the emerging needs in their project and share these practices with other PMs (exploration through improvised routines).	P → P

P = project; O = organisation

participants, who was interviewed twice, one year apart, provided further evidence of the project/organisational identity tension being prevalent at Foodglobe. During the data collection, she changed her role from a PM to a PMO Coach employed within the Central PMO. It was apparent that not only her role but also her identity and perspective changed as a result of the role change. As a former PM, her main focus was on the projects she managed and their success. In her initial interview, she confessed that she often took her own initiative to solve project problems, even if that meant bending the rules. She stated: "You are allowed to do things, take the initiative, better to do, don't ask, do it and then apologise" (R9_PM, Europe). In her new role, she displayed a different attitude and was more focused on following the rules, creating structures and control. In the second interview, she stated: "we expect that they [PMs] are actually working according to PMI [Project Management Institute] standards" (R9_PM Coach, Europe). This example demonstrates the dichotomy between project and organisational identities.

4.1.1. How identity tension impacts strategic learning from projects

Data provided strong evidence that the project/organisational identity tension impacted strategic learning from projects, in particular strategic learning acquisition, dissemination and integration. PMs mostly acquired knowledge from their past project experiences and occasionally from project team members or stakeholders. They rarely searched for knowledge from databases or repositories. This was explained by one of the PMs:

> *I'm focused on the immediate project in front of me at the time … unless I directly experience something good or bad from the last project will [it] be translated right to the next project I'm working on, and it seems like I'm almost running my own business all the time because it's [my] little world, [my] project management house.* (R33_Senior PM, US)

Participants who were PMs appeared confident that they can learn best from their own personal experiences rather than from others. This was evident from the following quotes: "I probably sit six feet away from my colleague and most of the time I have no idea what he is working on" (R33_Senior PM, US) and "I don't need so much coaching. For me, the best experience actually is to burn

myself' (R9_PM, Europe).

The strong identification with the project, rather than the organisation, also affected strategic dissemination of knowledge from projects to the wider organisation. Data showed that many PMs were dedicated and focused on their own projects rather than on providing opportunities to disseminate their localised learnings to benefit the wider organisation: "I'm 99% working on [a] project now. I mean, I don't have much time to do all the things. I would like that [but] I can't do everything" (R29, Senior PM, Singapore). PMs had access to localised project learnings, insights and experiences that could potentially benefit the broader organisation. However, because of their strong dedication to a project, they often did not consider sharing these learnings to benefit other projects or the organisation. This was most likely due to the lack of commitment to the organisation and the inward (project-focused) orientation.

The identity tension also affected the strategic knowledge integration from projects. Participants emphasised the "us versus them" when describing interactions between PMs and the PMO. PMs rarely asked for advice from or proposed suggestions to the PMO, assuming they would not be understood by the other party. For example, one PM stated: "if we go back to Central [organisation] and with this kind of statement, they [PMO] will probably not understand us to be honest" (R29_Senior PM, Singapore). PMs had access to localised project learnings, insights and experiences, which could benefit the broader organisation. However, because of their strong dedication to a project, they often did not consider sharing these learnings beyond the project to benefit the organisation. In contrast, PMO personnel displayed a greater commitment to the organisation but often had no direct access to the project learnings:

> *They [PMO] are not necessarily entirely in touch with the reality today … I know one of the ladies from the PMO office who they consider this wonderful project manager to help me on a disaster project, and I sent her home after two weeks because she had no clue.* (R32_PM, US)

4.1.2. Strategies to deal with identity tension to facilitate strategic learning from projects

Foodglobe effectively used what appears to be a synthesis strategy (Poole and Van de Ven, 1989) to manage project/organisational identity tension and create learning opportunities that benefited projects and the organisation. Two strategies in particular—labelled *feed-forward synthesis* and *feedback synthesis*—were utilised to connect PMs and PMO personnel and provide opportunities for these two actors to manage identity tension and unlock the project learning process, illustrated in Fig. 1.

The *feed-forward synthesis* helped connect PMs who had access to relevant project knowledge but had no desire to transfer that knowledge beyond the project with the PMO personnel who lacked first-hand experience but were committed to organisational improvement. This was facilitated by well-established formal and informal networks that connected PMs and PMOs. The learning process began with the local PMO personnel, who were encouraged to talk to the PMs and collect their individual project learnings and practices, often during informal discussions or formal meetings. This helped to unlock the process of strategic knowledge acquisition. These individual project learnings were captured by the local PMO and shared during PMO monthly meetings. These meetings were organised with all 24 local PMOs with the aim of sharing local project practices and seeking opportunities for improvement and standardisation. These meetings facilitated strategic knowledge dissemination and integration processes. During these meetings, the local PMO managers presented project practices from their respective regions, typically focusing on a particular topic deemed of interest. These meetings were followed by discussions about practices from other regions and how these could be formalised and used across the organisation. The Central PMO captured these insights and used them to design new or improve existing project management practices available to the entire project organisation. These formally established PMO networks enabled strategic knowledge

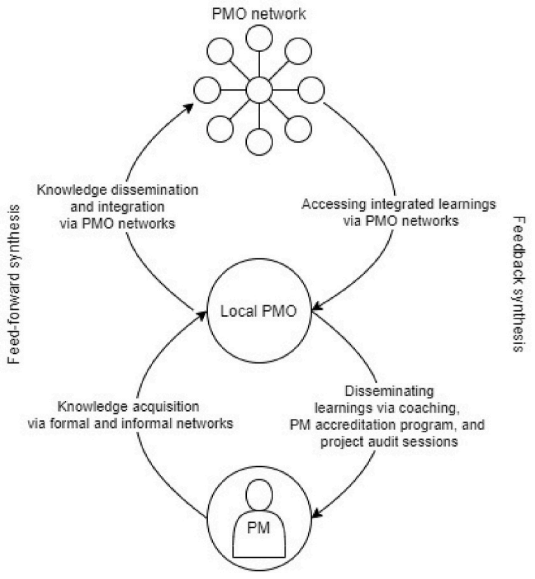

Figure 1. Feed-forward and feedback synthesis driving strategic learning from projects.

dissemination and integration of project knowledge for organisational benefit.

The *feedback synthesis* enabled strategic knowledge dissemination from the organisation to projects. The data revealed three types of initiatives—the coaching program, accreditation program and annual audit—that provided opportunities for feedback learning. At Foodglobe, the Central and local PMOs employed PMO coaches, who were often senior PMs wanting to change their career paths or those close to retirement. During one-on-one coaching sessions, junior PMs could learn from the experienced coaches' useful insights and skills, such as leadership skills, stakeholder management, conflict resolution or skills to deal with complex project issues. Project management accreditation programs were another formalised way to promote feedback learning. During these accreditation sessions, a local PMO staff member assessed a PM based on their effectiveness in managing projects, including dealing with stakeholders. At the end of the session, the PM was provided with feedback on their strengths and often with an action plan for improvement. If the assessment was successful, the PM was accredited to the next level and authorised to manage larger-scale projects. Another mechanism used was the project audit sessions, which were conducted annually by the Central PMO. These sessions focused on providing feedback to more senior PMs on the governance and management practices of large-scale projects. These three initiatives connected PMOs and PMs and provided opportunities for feedback learning, where PMs could learn and improve their project management practices via their access to experienced PMO personnel.

4.2. Short-/long-term-orientation tension

The second tension that affected strategic learning from projects that emerged from the data was the focus on pursuing short-term versus long-term objectives by Foodglobe. This tension is related to building capabilities for the future; that is, investing in long-term learning and improvements on the one hand and ensuring success of the present through focusing on immediate deliverables and short-term goals on the other (Smith and Lewis, 2011). It is the long-term focus that was associated with strategic learning and continuous improvement of the project organisation in Foodglobe.

At Foodglobe, both the long- and short-term focus are paramount, and it is a "balancing act" to ensure that both priorities are met. This is reflected in the following quote: "A great allowance is given for the time necessary for the PM to work on the jobs. However, long term, self-development are [sic] equally important" (R26_PMO manager, US). Similarly, one PM acknowledged:

> *I can definitely say it's all about the bottom line; it's all about the project management and delivering to the key deliverables. Having said that, I do think there's a definite desire and effort being made in the training and developing space, where there is a mapped-out career path looking to grow people.* (R31_PM, New Zealand)

Participants recognised that a long-term orientation requires investment in learning and capability development to help build the company's reputation and ensure a strong, competitive position in the market. They also acknowledged that the short-term focus on productivity and incremental improvement of existing competencies is necessary for organisational survival and for maintaining their established position in the market. Participants noted that it is difficult to ensure a good balance between engaging in short- and long-term objectives, as explained by one PMO manager:

> *When it comes to short-term, of course you know, every year we have to deliver targets, financial targets, volume margin, and so on. They drive behaviour in a certain way, that's undoubtedly … sometimes those behaviours are not always in the best support of long-term improvement. On the other hand, some long-term improvements you know, and the investment you need in them, probably doesn't [sic] support the short-term requirements.* (R24_ PMO manager, UK)

4.2.1. How short-/long-term-orientation tension impacts strategic learning from projects

Although most of the participants agreed that simultaneously pursuing short- and long-term goals ensures more sustainable functioning of the organisation, in reality, it was apparent that different groups of actors pursue either the short- or long-term orientation. PMs mostly displayed a short-term focus on meeting immediate project goals, whereas the senior leaders and PMO personnel tended to display a long-term orientation on capability building.

There was a clear sense of urgency among PMs that provoked the short-term focus and hindered the learning process. PMs often commented that they have many ideas about how things can be improved but have no time to implement these improvements because of the urgency in dealing with immediate project deliverables and targets they have to meet. There were remarks from PMs stating that any lessons and learnings from their daily work are utilised only if they can be applied immediately—any ideas that require long-term initiatives or involvement are often parked for the future and almost never actioned. The following quotes illustrate how PMs justified the focus on meeting short-term goals over the learning:

> *It's unfair for me to charge a customer to [capture] learning [on] how I can correct myself or do better for the next project. They hired me to deliver something for them, not to learn on how to deliver something for somebody else, so I lean heavily towards a customer-focused results [sic], which leads me back to the project objectives, scope, schedule, budget.* (R33_Senior PM, US)

> *[E]ven if we have brilliant ideas, we just try to do our job and sometimes we just keep the idea on the side. And we just, ok, we talk about it next time. But at the moment, I don't have time to deal with this.* (R29_PM, Singapore)

Although PMs were exposed to valuable project learnings on a daily basis, they often did not capitalise on these learnings for future project improvements because of their focus on the immediate project needs.

PMO personnel on the other hand displayed a long-term orientation. Role descriptions and work responsibilities of the senior

leaders and PMO personnel encouraged seeking opportunities for organisational learning and continuous capability building. Senior leaders' work involved overseeing projects and ensuring that projects have the required capabilities. The PMOs' core responsibility was to continuously improve the project organisation and build project and organisational capabilities. This long-term orientation and focus on improvement triggered strategic learning from projects and was illustrated in one of the business transformation initiatives led by the Central PMO, as explained by one PMO manager:

> *[It has] taken quite a while to decide if the solution that was coming out of America that they've developed themselves could be globalised […] So it's not just something that is just a short-term investment. […] that's a long-term investment. That will take up resources that are not then allocated to customer projects. So, there is then that balance of the investment that we're putting in with man-hours and time into that long-term improvement opportunity.* (R24_ PMO manager, UK)

In particular, PMO personnel were actively engaged in the strategic knowledge acquisition, dissemination and integration, which mostly occurred during PMO monthly meetings but also during other formal and informal meetings or networking sessions, as well as directly from PMs during assessment sessions or informal meetings.

4.2.2. Strategies to deal with the short-/long-term-orientation tension to facilitate strategic learning from projects

Three strategies emerged from the data that Foodglobe used to manage the tension between the short- and long-term focus. Experienced PMs, senior leaders and PMO staff used *paradoxical thinking* to deal with the short-versus long-term tension through their acceptance and creative efforts to simultaneously pursue both demands. The following quotes provide direct experiences from the participants who adopted paradoxical thinking to meet short- and long-term objectives simultaneously:

> *I don't think you need to differentiate between those two [short and long term objectives] … I've got an extra tab that I've got for lessons learnt type stuff in that. So I just store it in there, and we could be having a meeting now, come across one thing I just put it into that log and then it's captured for some future date when I can actually have a look at it. So I don't think you need to [differentiate]; it's not necessarily one or the other. I think you can do the two concurrently.* (R_34, Senior PM, New Zealand)

> *[E]ach year I present what will be our opportunity for improvement during that year, and then our leadership team agree if we want to spend the resources and time to get those things, just between that 1- and 12-month period. So there's a short term trying to hit the smaller gains, and then there's the bigger long-term projects where we try and make things.* (R24_ PMO manager, UK)

Those adopting paradoxical thinking demonstrated the ability to accept and meet the short-term demands while finding the space and time in their agendas to pursue long-term objectives and engage in both.

An *actor-based separation strategy* was one that separated the attainment of the short- and long-term objectives by assigning different responsibilities to different actors. At Foodglobe, PM and PMO personnel role descriptions and key performance indicators were structured to steer their focus on either short-term or long-term objectives. PMs, driven by their performance indicators of meeting project goals, financial targets and ensuring customer satisfaction, focused predominantly on pursuing short-term project objectives. PMs engaged in learning activities at the project level and utilised these learnings only if they could be immediately applied to their current projects. A core responsibility of the PMO was to continuously improve the project organisation and build project and organisational capabilities. Therefore, PMO personnel were engaged in a range of capability-building initiatives including revising the project governance model, business transformation projects and standardised risk-management initiatives aimed at improving project operations. Working on these initiatives involved collecting best practices from projects, thus unlocking strategic knowledge acquisition, integrating these practices to develop improved versions (e.g. improved governance models), institutionalising these practices by developing project guidelines or templates and finally disseminating these practices across the markets for other projects to use. An actor-based separation strategy helped balancing short- and long-term demands through different temporal orientations of the key actors (PMs and PMOs) engaged in the project learning process.

A *market-based separation strategy* was used in reference to developed and developing markets to better balance the long- and short-term demands and provide improvement opportunities for developing markets. The data revealed that project process innovations were normally introduced and tested in developed markets, the US, Europe, New Zealand or Australia. These markets were more predictable, had resources and slower periods, which were used to propose improvements. On the other hand, developing markets were rapidly growing and did not have sufficient resources—time and manpower—to invest in the improvement initiatives due to shortage of experienced staff and unpredictable market fluctuation. Participants reported that in the developing markets, the focus was concentrated towards meeting short-term objectives:

> *We are definitely focusing on short-term objectives because we are in the business where we need to deliver figures every year. We have the pressure from our management … And then, only if we have time, then we start to think about long-term improvement.* (R29_Senior PM, Singapore)

The developing markets often looked for ideas, standards and tools from the developed markets. This was achieved by the local PMO, who captured and filtered already tested project practices from the mature markets and fed these back into developing markets that did not have sufficient resources to improve their own practices. Using the market-based separation strategy allowed developing markets to learn from developed ones through acquiring already tested practices and disseminating them to the developing markets for use. Improvements and learnings generated by the developed markets provided a good source of knowledge for the developing regions and the opportunity to adopt tested practices rather than reinvent them.

4.3. Standardisation/flexibility tension

The third tension that affected strategic learning from projects was the tension between standardisation and flexibility of the project practices. This tension manifested in the pursuit of uniformity in the way projects are managed at Foodglobe while at the same time providing a space for flexibility and autonomy. Standardised project practices allowed more transparency across the regions and, in turn, supported staff mobility across the organisation, while flexibility allowed using tailored approaches to suit specific requirements, project sizes, local contexts and needs. Participants acknowledged that too strong an emphasis on either one of the elements is not desirable:

> *[I]f you completely standardise it 100%, you won't allow a Project Manager to, let's say, use his skill set when he think[s] it's appropriate. On the other hand, I think having no standardisation is completely not acceptable. (R22_Local PMO manager, US)*

Too much standardisation can lead to overly detailed and rigid project processes, which in turn may lead to inflexible solutions for the client. Excessive standardisation can be impractical for small projects or small markets that do not have the required resources to adhere to these processes. Participants warned that too much reporting means that time is tied up in the administration of proving that the process has been followed but does not bring much value to the organisation or client.

On the flip side, participants asserted that too much flexibility can also have drawbacks, such as a lack of consistency and common approaches to working on various aspects of the project, which can result in miscommunication and missed opportunities for learning. This was expressed in the following quote:

> *[W]hen you get a new project assigned to you, you'll get a different process engineer … and [when] I go and ask him or her to do something or I interact with them in one way, and they will routinely come back to me and say, well, so and so project manager does it this way, or they don't do it this way kind of thing. I hear that a lot … so it's not consistent how each one of us interact[s] with one another and manage[s] projects. (R33_Senior PM, US)*

4.3.1. How the standardisation/flexibility tension impacts strategic learning from projects

The case study interviews accentuated that these seemingly opposite elements—standardisation and flexibility—provide a source of learning for the projects and the organisation. Standardised project practices were considered to promote exploitation through reusing already tested ways of managing projects; for example, standardised project templates, checkpoints or guidelines were developed to unify and improve project management practices across the regions. At the same time, data revealed the importance of ensuring a degree of autonomy for PMs to provide opportunities to explore novel ideas and customise approaches to managing projects. Participants stressed that PMs should be given autonomy to use their skills to solve emerging problems and provide customised solutions, especially when dealing with unforeseen issues and demands in their projects.

Standardisation unlocked strategic knowledge institutionalisation by capturing individualised project management practices and translating them into organisational procedures and routines. This helped create organisational memory that could be used by current and future projects. Flexibility provided an opportunity for strategic knowledge acquisition that allowed more organic creation of knowledge through learning by doing and dealing with unique experiences in projects. The process of strategic knowledge acquisition through flexibility occurred mostly at the project level. This allowed empowered PMs to creatively deal with the day-to-day issues encountered in their projects.

4.3.2. Strategies to deal with the standardisation/flexibility tension to facilitate strategic learning from projects

Participants agreed that a balance between standardisation and flexibility is required for more effective learning from projects through exploitation and exploration. Analysis revealed two strategies to manage the tension between standardisation and flexibility to ensure strategic learning from projects, labelled here as flexible uniformity and improvised routines.

Flexible uniformity was based on standardising key project management processes while providing flexibility for the markets and PMs to design their own localised versions, building on the key standardised aspects. This strategy helped with the strategic project knowledge institutionalisation. Flexible uniformity helped ensure consistency of the key processes across regions while providing space for customisation, depending on the size of the project or market maturity. For example, every project must use a risk register template to capture and assess potential project risks. Other aspects of risk management were optional, depending on the project's size or regional characteristics. Such as some processes were not mandatory for very small projects or very small markets. The following direct quotes demonstrate how the organisation dealt with the standardisation and flexibility tension through flexible uniformity: "it's not one process suits all, you've got to be agile, you've got to be flexible enough that you can work within the different parts of the world" (R34_Senior PM, New Zealand), "what you're doing in Sydney simply isn't the same as what you'll do in New Zealand" (R30_PM, New Zealand). A PMO manager from India further clarified:

> *[W]hen it comes to drive the standardisation we say that it cannot be the exact same … [for] example, the feedback collection can be different in different markets … we can give a basic template and they customised it for their local needs so standardisation is [a] little like support to the markets and they always have a freedom to extend that to [customise it] for their needs, for their legal laws or their customer expectation. They always have a free hand to customise that … different market needs this tool to be more flexible and to adapt and change this tool according to their needs, so that is how we drive that. (R25_PMO manager, India)*

Flexible uniformity allowed applying standardised approaches to key processes to ensure consistency and transparency in the way projects are managed across the organisation while allowing flexibility by using localised practices to account for specific

characteristics and requirements of the local environment.

The second strategy used to manage the tension between standardisation and flexibility is labelled as improvised routines. This strategy was driven from the bottom up and involved PMs creating project templates or improving project practices organically, based on the emerging needs they encountered in their projects. These templates and practices were later used by other projects in the market. This is explained in the following quote:

> *[W]hen situations arise, and it could be any file or document that we created as part of a project, and someone may run into a situation like, "hey do you have a template for this?" and I think, "oh yes, I created something when I did my last project" … I think we get a lot of value and running into situations where we are extracting some … you know it's not a global template, it seems to be like a template that someone created, it's never dispersed, it only happens from one project to the next, but it doesn't get dispersed across many projects … it could be as simple as [a] letter transmittal, "does anybody have a letter transmittals they used?" and it's like "I can't find one, I can't find a global template", "well I created one on this project just use this one". You know, you kind of run into situations like that all the time. (R33_Senior PM, US)*

The improvised routines strategy helped capture and share localised practices across projects. Many useful templates were developed organically from the emerging needs of the projects and were later shared with others.

5. Discussion

Strategic learning from projects is important because it enables project organisations to learn from past project experiences and mistakes, and to improve management of current and future projects (Brady and Davies, 2004). Yet, strategic learning from projects remains a challenge due to project temporality and competing organisational priorities that restrict learning (Scarbrough et al., 2004; Bakker et al., 2011). Existing research on strategic project learning (Brady and Davies, 2004; Wiewiora et al., 2020) and research on paradoxical tensions in projects (e.g. DeFillippi and Sydow, 2016; Majoor, 2018) has not fully explored tensions that restrict or fuel the learning processes within and beyond projects.

Using a single in-depth case study, this research was conducted to uncover the types of paradoxical tensions affecting strategic learning from projects and unveil strategies to manage these tensions. The study was conducted in the context of a multinational, project-based organisation operating in the food packaging and processing sector, which represents the boundary conditions of the research (Busse et al., 2017). Findings from this research contribute to strategic learning from projects (Brady and Davies, 2004; Berends and Lammers, 2010) and also build on work that explores the paradoxes of learning (Smith and Lewis, 2011), in particular those in the context of projects (Bakker et al., 2011; DeFillippi and Sydow, 2016).

5.1. Paradoxical tensions affecting strategic learning from projects

Using the paradox perspective helped better understand the tensions affecting learning processes from the project to the organisation. Current research on project learning recognises that tension exists between the ease of knowledge creation in a project and the difficulty of knowledge transfer beyond the project (Bakker et al., 2011). It also recognises the need to balance opposing learning activities of exploration of new opportunities and exploitation of existing capabilities to achieve project success (Davies et al., 2016). This current study further contributes to the research by uncovering and explaining how the three persisting tensions affect strategic learning from projects in the context of project-based organising: project/organisational identity tension, short-/long-term-orientation and standardisation/flexibility tension.

Project/organisational identity tension deals with members' stronger commitment to either the project or the organisation in which the project is embedded. Focusing on the key project learning actors—PMs and PMO personnel—our data demonstrated that in the context of a matrix-type, project-based organisation, PMs are more committed to their projects, whereas PMOs identify more strongly with the project organisation. Both these actors engage differently with the learning processes. PMs focus on acquiring and disseminating learning within the project to address localised project learning needs, whereas PMO personnel are more committed to integrating learnings from projects to improve the project organisation.

The identity paradox in projects has been discussed by Hietajärvi and Aaltonen (2018) and DeFillippi and Sydow (2016) , but not from the perspective of learning. Building on this, we found that the temporal nature of the project, which creates a sense of urgency and pressure, motivates PMs to work effectively towards meeting project learning goals. Lacking organisational commitment, PMs are not motivated to disseminate or integrate project learnings beyond the project. We found that, when working together, PMs and PMO personnel can overcome learning challenges associated with the identity tension, discussed further in the third contribution: management of paradoxical tensions.

Short-/long-term-orientation tension concerns investing in continuous improvement of the project organisation while ensuring success in the present. Research on paradoxes in projects recognises tensions related to the project temporality in the context of large-scale public investment projects (Majoor, 2018; Samset and Volden, 2016), but this is not explored from the perspective of learning. Grabher (2004) posits that learning in projects is valued more for its usefulness to the immediate task and performance demands of the project rather than to the wider context. This suggests that learning in projects is driven by short-term orientation. Building on these previous findings, our research observed that differing orientation of PMs (short-term) and PMO personnel (long-term), coupled with their access to knowledge, affected their engagement in learning. PMs have direct access to localised project learnings that could potentially benefit the broader organisation. However, due to the project temporality, PMs were focused on the localised learnings from other PMs to address immediate project goals rather than on capturing and disseminating learnings beyond the project. In

contrast, although PMO personnel had no direct access to project learnings, they proactively engaged in the acquisition of learning from projects and the dissemination and integration of that learning to other projects and the project organisation. It therefore appears that these two actors have complementary learning capabilities and can jointly overcome challenges to learning from projects caused by the short-/long-term orientation tension, which is further discussed in the third contribution: management of paradoxical tensions.

The third tension affecting strategic learning from projects was standardisation/flexibility. In the context of a multinational project-based organisation, this tension manifests in the pursuit of uniformity in the way projects are managed across geographical locations while providing space for customised approaches to suit project sizes, local contexts and needs. Findings demonstrated that flexibility positively affects strategic knowledge acquisition by allowing exploration and creation of new knowledge through dealing with unique experiences in projects. Standardisation, on the other hand, positively affects strategic knowledge institutionalisation by systematising project practices and allowing economies of scale.

Standardisation/flexibility tension is related to organisational demands for dynamic capabilities to continuously renew and alter stable routines (Teece et al., 1997) and make these routines flexible and versatile (Eisenhardt and Martin, 2000). This tension manifests in organisational capability that seeks to balance exploitation through standardising and reusing existing project practices on the one hand and exploring novel ideas and customised approaches for managing projects on the other. The standardisation/flexibility tension is closely related to the ambidexterity paradox, which seeks to balance exploration and exploitation, well-illustrated by Davies et al. (2016) in the case of the London Heathrow Terminal 5 mega-scale project. Their work concluded that the opposing project activities of innovation and routine work are not mutually exclusive as there is often a simultaneous requirement for exploitation in one part of the project and exploration in another. This present research extends Davies et al.'s finding and that of similar work by Andriopoulos and Lewis (2010) conducted in the context of product design projects. The novelty of our research lies in its examination of the standardisation/flexibility tension in the context of learning from projects in a multinational organisation where projects are geographically dispersed and the locations within which they operate have different market maturity.

In the context of a multinational project-based organisation, we found that both flexibility and standardisation are needed to trigger learning from projects. Flexibility provides opportunities for experimenting with and improving project management practices in stable markets. These improved practices can then be standardised and fed into growing volatile markets that do not have sufficient resources to develop their own practices. Standardised ways to manage projects also help project staff to get up to speed easily when they move to a different location. Our research also demonstrated that excessive standardisation could be impractical for small projects or volatile markets that do not have the required resources to adhere to overly standardised processes. Volatile markets need flexibility to be able to rapidly adjust and address unpredictable and emergent situations. This finding confirms Davies et al.'s (2016) recommendations that dynamic capabilities are needed to balance and deal with stable and volatile conditions.

5.2. *Interwoven dynamics between project- and organisational-level actors*

This research extends the current understanding of the learning paradoxes in project organising by revealing how the key actors engaged in learning, situated at different organisational levels, navigate through these paradoxes. Paradox studies have focused on investigating how managers and decision-makers navigate through paradoxes (Andriopoulos and Lewis, 2010; Smith, 2014), but, as noted by Knight and Paroutis (2017), limited research has been carried out that examines decision-making practices between actors with access to different types of information. Building on this research, empirically we observed how project- and organisational-level actors' respond to competing demands, which in turn affect the way they engage in learning processes.

We observed that PMs' loyalty towards their projects interplays with PMOs' loyalty towards the organisation, affecting strategic learning from projects. These project and organisational actors contribute to creating learning opportunities but on a different level and with different magnitude. PMs are focused primarily on creating the ad hoc, individual and localised learnings from their projects, while the PMO concentrates on creating organisational-level learning opportunities. Providing too much power or too many learning responsibilities to one actor only (e.g., the PM) is likely to overemphasise one element of the paradox (e.g., focusing solely on learning within a project while ignoring organisational learning opportunities), leading to suboptimal strategic learning outcomes. This finding, explained in detail below, is novel and has not yet been explored in the strategic learning or project learning literature. This finding offers insights into developing suitable strategies to manage paradoxical tensions affecting learning in project-based environments.

This study found that PMs and PMO personnel can jointly overcome short-/long-term-orientation tension. The analysis revealed that although PMs generated or were exposed to valuable project learnings on a daily basis, they often did not capitalise on these learnings for future projects due to their short-term orientation on pursuing immediate project objectives. Turning to the premise of paradox theory, focusing exclusively on short-term gains while ignoring opportunities for long-term improvement and learning may lead to suboptimal outcomes not only for learning but also for performance. Missed learning opportunities can affect future organisational performance and the organisation's competitive advantage. The unbalanced state leads to the creation of vicious cycles—pulling too much to either extreme of the paradoxical tension. Virtuous cycles can be achieved if consideration is given to both competing demands (Smith and Lewis, 2011). Our research demonstrated that virtuous cycles could be achieved by providing learning responsibilities to both project- and organisational-level actors while acknowledging the differences between them in terms of the focus and scope of their learning practices. PMO personnel, who display a long-term focus on improvements and learnings, proved to be ideal candidates to help PMs manage the tension and achieve a better balance between the short- and long-term goals.

5.3. *Management of paradoxical tensions affecting strategic learning from projects*

This study further contributes to the management of paradoxical tensions (Jarzabkowski et al., 2013; Lewis, 2000; Poole and Van

de Ven, 1989; Papachroni et al., 2015), especially those in the context of projects (Andriopoulos and Lewis, 2010; DeFillippi and Sydow, 2016), by offering a set of strategies that can be applied to manage persisting tensions and achieve strategic learning from projects. Seven strategies (captured in Table 4) were empirically identified to address Schad and colleagues' (2016) urgent call to learn how to respond to paradoxical tensions affecting learning. These strategies have elements of synthesis, separation and transcendence.

The first set of strategies, *the feed-forward and feedback synthesis*, help connect project-level and organisational-level actors and provide them with opportunities to learn from each other. Analysis of the data revealed that PMs and PMOs engage in project learning but on different levels, and this has an influence on the strategic learning outcomes when these actors work together. Project-level actors (i.e., PMs) have access to rich project learnings while rganisational-level actors (i.e., PMO personnel) do not have such direct exposure to the project, but they have a drive and capability to transform project learnings into practices for other projects and the organisation. The feed-forward synthesis helps capture localised project practices and institutionalise these practices for organisational benefit by connecting PMs and PMO personnel and creating PMO knowledge networks. The feedback synthesis uses organisational learnings to enhance project operations through learning initiatives such as coaching sessions, accreditation programs, audits, and any other forms of upskilling PMs. Together, the feed-forward and feedback strategies fuel learning cycles that benefit projects and the organisation. These strategies will work only when there is a structure available for the project- and organisational-level actors to connect with and learn from each other. This learning will be hindered if projects operate in isolation or if organisations do not have a proper governance structure to link projects through the PMO.

Paradoxical thinking, an individual-level strategy, is used by experienced project and organisational actors who display cognitive flexibility. These individuals are able to cognitively control and shift between divergent mental sets and consider both/and possibilities (Good and Michel, 2013). Individuals equipped with paradoxical thinking are cognitively capable of simultaneously pursuing both demands, for example, meeting short-term project performance goals and ensuring long-term learning objectives. These individuals feel comfortable when exposed to the tensions and use creative efforts to simultaneously pursue both demands.

The actor-based separation strategy can be used by project-based organisations to pursue both short- and long-term objectives by delegating the execution of short-term goals to project-level actors and long-term goals to organisational-level actors. This can be achieved through performance evaluation measures. At Foodglobe, project-level actors (PMs) were evaluated based on the immediate project results and outcomes for clients; hence, they prioritised short-term project goals over a long-term focus. Meanwhile, organisational-level actors (PMO personnel) were evaluated based on their contributions to organisational improvement; hence, they were concerned with long-term capability building. This strategy can add to the existing research on temporality tensions (Slawinski and Bansal, 2015) by providing further evidence of how learning and performance can be achieved through effective management of short- and long-term goals.

The market-based separation strategy is particularly useful to global organisations operating in diverse markets that are not equally developed. This strategy can be used to manage the tensions between short- and long-term orientation and standardisation and flexibility. Developed regions, with more time and resources, can focus on testing new approaches and continuously improving the project organisation. Conversely, developing regions, often with a shortage of experienced personnel, market instability and rapid, difficult-to-control growth, can focus on developing the market by using approaches already tested in the developed regions. In other words, the market-based separation strategy creates an opportunity to institutionalise learnings across the markets through capturing and filtering already tested project practices from developed markets and feeding them back into growing markets that do not have sufficient resources to develop their own practices.

Table 4
Strategies to manage persisting tensions affecting strategic learning from projects.

Strategy	Description	Application	Help manage
Feed-forward synthesis	Design network structures to connect project-level actors and organisational-level actors	Allows transfer of learning from project to organisation	Project/organisational identity tension
Feedback synthesis	Develop initiatives and programs to disseminate organisational learnings and upskill project-level actors	Allows the transfer of learning from organisation to project	Project/organisational identity tension
Actor-based separation strategy	Split attainment of contradicting goals between the actors Delegate attainment of capability-building goals to organisational-level actors and attainment of immediate performance to project-level actors	Helps achieve seemingly opposite objectives such as performance and learning	Short-/long-term-orientation tension
Market-based separation strategy	Use already tested project practices from developed and steady markets and disseminate them to growing markets that do not have sufficient resources to develop their own practices	Connects regions, provides an opportunity for developing regions to use best practices Contributes to continuous improvement	Short-/long-term-orientation tension Standardisation/ flexibility tension
Paradoxical thinking	Individual ability to cognitively control and shift between divergent mental sets and consider both/and possibilities	Allows actors to cognitively and emotionally deal with persisting tensions	All tensions
Flexible uniformity	Standardise only key aspects of project practices and allow flexible arrangements to develop customised approaches	Ensures consistency and transparency across the regions and, at the same time, provides customised approaches to address the unique needs of the regions and projects	Standardisation/ flexibility tension
Improvised routines	Project practices are created organically, from the bottom up, and shared with the local units	Localised learnings and practices are shared across projects	Standardisation/ flexibility tension

Flexible uniformity can be used to manage the tension between standardisation and flexibility. This strategy requires the application of standardised approaches to key aspects of the process to ensure consistency across regions while allowing flexibility to account for specific characteristics and requirements of the local environment, such as diverse customer demands, size and maturity of the region.

Finally, *improvised routines* is a bottom-up strategy used by project-level actors who organically create project practices, such as templates, based on the emerging needs of the project. These practices are then shared with other projects that experience similar knowledge needs. This strategy contributes to strategic knowledge institutionalisation at the project level and assists in managing the tension between standardisation and flexibility. Davies et al. (2016) emphasised that to achieve a balancing act between opposing forces, the organisation needs to develop dynamic capabilities. Our research confirms that the seemingly opposite aspects of short- and long-term standardisation and flexibility are not mutually exclusive but rather complement each other. PBOs require abilities to recognise when and how to embrace the opposing sides of the tension to achieve the most optimal learning outcomes.

5.4. Limitations and directions for future research

The empirical setting and the use of only one case study may raise some questions about the generalisability of the findings to other types of organisations while, at the same time, it offers an opportunity for future research investigating paradoxical tensions affecting learning in other contexts. Nevertheless, combining interviews with various other sources of data, including field notes, meetings, observations and a review of documents, is likely to have strengthened the validity of the findings. Further research is needed to observe whether similar or different types of tensions affecting learning flows are present in other contexts. For example, publicly funded mega-scale projects provide a good context to further explore paradoxical tensions affecting learning. These projects have to deal with persisting and competing expectations and pressures from stakeholders; often, they must meet demanding expectations to deliver the project on time and within budget while developing an innovative and viable solution that needs to be proven over time (Flyvbjerg, 2014).

Future studies may focus on exploring tensions affecting strategic learning and ways to deal with those tensions in project organisations operating in different sectors or industries (e.g., biotechnology, information technology or internet services) where meeting both learning and performance goals is paramount. Future research can also examine, in greater detail, tensions affecting learning across different organisational levels to further contribute to the growing literature on multilevel learning and learning discontinuities (Crossan et al., 1999, 2011; Berends and Lammers, 2010). Finally, our findings suggest some underlying triggers of the three paradoxical tensions, including the specific nature of multinational project-based organising that seek to simultaneously achieve convergence and divergence across regions. Future research could more systematically examine the causes and effects of the tensions affecting learning in various organisational contexts.

5.5. Recommendations for practice

Through the data analysis, it became apparent that both individuals and the organisation can embrace the ability to manage paradoxical tensions. First, to become better at dealing with paradoxes, PMs, PMO personnel and other decision-makers need to increase their awareness that paradoxes exist and can produce positive outcomes. This will help remove any negative perceptions and anxiety when confronted with a paradox and will limit the urge to minimise or avoid tensions. Decision-makers need to be able to scan the environment for paradoxes and be open to confront them. One way to equip them with this ability is through building their soft skills and developing their emotional resilience through mentoring or coaching programs. Second, paradoxical tensions affecting learning are nested in the project and organisational processes and structures. Organisations, like individuals, need to be able to recognise and respond to tensions. This can be achieved by adopting flexible structures and an appropriate environment in which to manage tensions. Ambidextrous organisations that are able to explore new opportunities and exploit existing learnings (Benner and Tushman, 2003) should be more successful in balancing competing demands.

In the context of project-based organising, both project- and organisational-level actors are subject to the paradoxical tensions affecting learning. Therefore, project actors cannot be expected to be fully in charge of capturing and disseminating project learning. Learning responsibilities need to also be assigned to organisational-level actors. In addition, formal or informal networks connecting these actors need to be developed to address the tensions and facilitate acquisition, dissemination and integration of project learnings between these actors.

Author statement

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Appendix A. Supplementary data

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