RESEARCH ARTICLE

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How do project-oriented organizations enhance innovation? An institutional theory perspective

Abstract   A project-oriented organization is a hybrid form of organization where a functional hierarchy is augmented with structures to manage projects strategically across the organization. Six project-oriented organizations from diverse industries that emphasize innovation in their strategies were selected for this study. We use the three pillars of institutional theory — regulative, normative and cultural-cognitive — and institutional entrepreneurship to analyze interview data from executive and project, program and portfolio management personnel in the project-oriented organizations to investigate how innovation is facilitated through external influences and internal responses. Our findings indicate that processes and new structures provide effective ways for innovation and, while individuals are important, processes are more effective than individuals at enabling innovation. We put forward some lessons for practice that emerge directly from the findings, including suggestions on improving allocation of resources, a need to focus on processes, reconceptualization of "failure", and dedicated investment in market knowledge, customer knowledge, performance metrics and flexible governance structures.

Keywords   project-oriented organizations, innovation, institutional entrepreneurship, institutional theory

1   Introduction

Kotter ([2012](#)) suggested that "perhaps the greatest chal-

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lenge business leaders face today is how to stay competitive amid constant turbulence and disruption". Hierarchical processes and well-controlled routines are necessary to meet daily demands, however additional organizational features are required to cope with the challenges of rapid change. While organizations understand the need to innovate to remain competitive, it is often not realized in practice, thus creating an innovation problem (Storey, [2000](#)). Innovation is also a challenge for traditional hierarchical organizations that thrive in a stable economy due to their efficiency based on control (Dougherty, [2006](#)). Such organizations often develop structures that are risk averse and foster a mental model that does not encourage disruptive innovation (Assink, [2006](#)).

One way in which organizations have addressed the need for innovation is through integrating projects that deliver capabilities as one-off processes within normal business operations (Gann and Salter, [2000](#)). Davies ([2014](#)) discussed the convergence between innovation and project management, calling for organizations to support innovation through project structures, using adaptable approaches that make the best use of routines in stable project-based organizations (PBOs). Davies's view was also supported by Zhang et al. ([2021](#)).

A hybrid form of organization referred to as the project-oriented company (Gareis, [1991](#)) came into being in the 1990s to focus on managing projects strategically across an organization. These organizations integrate stable routines with one-off processes to drive innovation. Turner ([2018](#)) explained that project-oriented organizations make a strategic choice to run the business by projects. Huemann ([2014](#)) elaborated further, stating that project-oriented organizations use "project, program and portfolio management to manage specific business processes to deal with uncertainty, contradiction, change and collaboration, all of which contribute to an ability to innovate".

The imperative to innovate is repeatedly emphasized in organizational strategies. However, supporting innovation is challenging, especially in large institutions with multiple

layers of management and oversight. Such institutions develop structures to protect their core revenue streams and ensure the delivery of repeatable and reliable results, and struggle to nurture innovations characterized by exploration, uncertainty and unknowns.

Classical institutional theory posits that organizations mimic other organizations in their field in order to be socially accepted and succeed. While this presents a constrained view of organizations in their environment, neo institutional scholars suggest that organizations can change their institutional logics (assumptions, values and beliefs to guide daily activities) and remain viable. Hardy and Maguire (2008) attributed this ability to change to the role played by institutional entrepreneurs, referring to the "activities of actors who have an interest in particular institutional arrangements who leverage resources to create new institutions or transform existing ones". The individual actor is often portrayed as the "hero" who brings about institutional change. Yet some researchers argue that the entrepreneur is not always a solo actor and is more likely to bring about entrepreneurial changes as part of a team (Hardy and Maguire, 2008; Aldrich, 2011; Di Muro et al., 2021).

Our research demonstrates that entrepreneurial activities promote organizational innovation through projects. We find that actors cope with external forces (from markets and stakeholders) and internal forces (realizing that change is needed for survival and growth) to create or facilitate innovation through new structures and processes to enable innovation.

2 Literature review

First, we discuss the various forms of project-related organizations to explain how they support innovation.

2.1 Forms of organizations to manage projects

Turner and Müller (2003) defined a project as: "A temporary organization to which resources are assigned to undertake a unique, novel transient endeavour managing the inherent uncertainty and need for integration in order to deliver beneficial objectives of change."

Thus, a project is a temporary organizational form and differs from a functional organization, which is often how a permanent organization is set up to manage routine operations using a rigid structure to ensure the predictability of outputs offered.

Multi-project management concepts related to programs and portfolios are also relevant to our discussion.

Turner and Müller (2003) offered the following definitions: "A programme of projects is a temporary organization in which a group of projects are managed together to deliver higher order strategic objectives not delivered by any of the projects on their own. A portfolio of projects is an organization (temporary or permanent) in which a group of projects are managed together to coordinate interfaces and prioritizes resources between them and thereby reduces uncertainty."

PBOs, while prominent in the literature, differ from a project-oriented organization. Hobday (2000) explained that a PBO is "ideally suited for managing product complexity, fast changing markets, cross-functional business expertise, customer focused innovation and market and technological uncertainty" in contrast to functional organizations. Some large firms that handle multiple products combine functional departments and PBOs to deal with "different technologies and markets".

Turner (2018) distinguished between project-based and project-oriented organizations, by clarifying that "project-based is bottom up ... project-oriented is top down", elaborating that a project-oriented organization "makes the strategic decision to adopt project management as its way of doing business, and to adopt a project culture; it is project oriented by choice", whereas a PBO takes its characteristics "perforce" to do its work as projects.

2.2 Institutional theory and institutional change

Classical institutional theory posits that organizations mimic other organizations in their field to be socially accepted and to succeed (DiMaggio and Powell, 1983). This mimicry could act as a barrier to change. Neo-institutional theory scholars suggest that although some aspects of organizations are relatively rigid, they can change when external and internal factors force them to do so (DiMaggio and Powell, 1983; Lawrence and Shadnam, 2008). Some scholars attribute this ability to change of the influence of institutional entrepreneurship, where actors within the organization mobilize resources to influence organizations to change from within (Dacin et al., 2002; Maguire, 2007).

Often, the institutional entrepreneur is seen as instrumental in adopting changes, yet research has demonstrated that the entrepreneur is not simply a solo actor who uses opportunities to mobilize others (Biygautane et al., 2019; Di Muro et al., 2021). It is proposed that these actors are more likely to bring about changes that make institutions more entrepreneurial when they act collectively as entrepreneurs rather than individually (Aldrich, 2010; 2011). This view of institutional entrepreneurship as a coalition of actors was also found in Public Private Partnership projects by Biygautane et al. (2019). Hardy and Maguire (2008) stated that most of the literature on institutional entrepreneurship provides a narrow, functionalist view "centred on the institutional entrepreneur". They pointed out that the alternative process-centric view portrays institutional entrepreneurship as "an emergent outcome of activities of diverse spatially dispersed actors". Qiu et al (2022) explained how institutional

entrepreneurs contribute to institutional work through modifying the construction logic at a megaproject in China.

2.3　How is institutional theory relevant to project organizations?

Project management researchers have taken increased interest in applying institutional theory to projects since Morris and Geraldi (2011) advocated extending the thinking about projects to three levels: Institutional, technical and strategic. Bresnen (2016) promoted the use of institutional theory as a lens to advance project management as a discipline, since value "can be derived from a more critical and reflexive take on understanding processes of professionalization and institutionalization associated with the development of project management as a body of knowledge, professional practice and academic discipline". Pinto and Winch (2016) noted that "research in projects from an institutionalist perspective has begun to emerge (or re-emerge)".

Table 1 summarizes a sample of the project and construction management literature that has applied institutional theories.

We selected Scott's three-pillar framework as the basis of our investigation into innovation in project-oriented organizations based on its prominent use as shown in Table 1.

2.4　Three-pillar framework

Scott (2014) described institutions as made up of "regulative, normative, and cultural-cognitive elements that, together with associated activities and resources, provide stability and meaning to social life". Regulatory processes generally set rules and monitor and sanction organizations. Normative systems "include both values and norms". Values express desirable behaviors while norms "specify how things should be done". Normative systems specify desirable outcomes and how to pursue them. Cultural-cognitive areas are based on organizational cultures and behaviors bringing conformity to the way "things are done"; indeed, "a cultural-cognitive conception of institutions stresses the central role played by the socially mediated construction of a common frame of meanings".

Scott (2014) also added that while institutional forces seem to "control and constrain behavior", they also "support and empower activities and actors". Thus, institutional forces could also create opportunities to innovate and pursue change driven by institutional entrepreneurship, given that institutional systems can change through the influence of both exogenous and endogenous factors (Hardy and Maguire, 2008; Scott, 2008). Therefore, our research question in this article is based on the three-pillar framework and institutional entrepreneurship.

3　Research question

Based on the literature reviewed, we established the potential for institutional theory to provide insights and improve the understanding of innovation in organizations. We have previously highlighted the role of project structures in delivering innovation, and the growing interest in how innovation is achieved through projects in functional organizations. Therefore, we decided to use project-oriented organizations as the context for this study. Our main research question is: How do the three pillars of institutional theory (regulative, normative and

Table 1　Some examples of application of institutional theory concepts in project and construction management literature (2007–2022)

Reference	Aspect of project	Concepts used
Mahalingam and Levitt (2007)	Conflicts in global projects	Scott's three-pillar framework
Bresnen and Marshall (2010)	Partnering in construction	Institutional logics; Institutional actors mobilizing for change
Orr et al. (2011)	Global projects	Scott's three-pillar framework
Henisz et al. (2012)	Project governance and relational contracting	Scott's three-pillar framework
Johnson (2013)	Factors resulting in emergence of project management	Scott's three-pillar framework
Hu et al. (2015)	Megaproject and complex project management	Scott's three-pillar framework
Müller (2016)	Enablers and barriers to project governance	Scott's three-pillar framework
Locatelli et al. (2017)	Corruption in public projects	Scott's three-pillar framework
Biesenthal et al. (2018)	Megaproject management	Scott's three-pillar framework
Hall and Scott (2019)	Integrated project delivery	Institutional entrepreneurship; Scott's three-pillar framework
Biygautane et al. (2019)	Public Private Partnership	Institutional entrepreneurship
Loosemore et al. (2021)	Social procurement in construction firms	Isomorphism: Coercive, mimetic and normative
Qiu et al. (2022)	Megaproject (China)	Institutional logics; Institutional entrepreneurship
Sydow and Söderlund (2022)	Organizing complex projects	Institutional entrepreneurship; Institutional logics; Institutional field

cultural-cognitive) facilitate innovation through projects in project-oriented organizations?

As a corollary, we also asked: Does institutional entrepreneurship play a role in facilitating innovation in project-oriented organizations? If so, how?

4   Method

We used the case study method to inform institutional theory by exploring our research questions (Eisenhardt, 1989). We investigated a contemporary phenomenon in its natural context for which case studies are appropriate (Yin, 2014). We adopted an interpretivist paradigm to understand social construction of reality of the people interviewed. The unit of analysis for this study is a project-oriented organization. We selected a purposeful sample of organizations that emphasized innovation as a major component of their strategy as explained in their websites and annual reports, as well as through their reputation. Our selection criteria looked for evidence that projects were considered important for delivering the organization's strategy and project. Program and portfolio management and governance structures are used in the organizations we interviewed. We chose organizations from diverse industries to provide a broad view of innovation within these project-oriented organizations.

A research protocol was developed with questions derived from the literature and the questions were pilot tested. Human research ethics approval was obtained from the university where the research team conducted the study.

Data was collected from six large project-oriented organizations representing a range of industries: A communications and Internet services provider (CIS), a state-owned utility (SOU), a financial services provider (FSP), a technology developer (TD), a technology systems provider (TSP) and a privatized utility (PU).

We interviewed 4–6 members from each organization who held a range of leadership and project management roles. To protect anonymity, we do not report the exact titles of the research participants, but instead provide examples of the types of roles represented. Senior management interviewees represented the leadership team (Chief Financial Officer, Chief Technology Officer, Chief Information Officer, Business Unit Head, etc.) and those who report directly to the senior leadership team (Senior Technology Manager, Portfolio Manager, Head of a Project Management Office, etc.). Other interviewees included managers (Technology Manager, Program Manager, etc.) and professional staff (Project Manager, Engineer, and other professionals). We also collected secondary data about these organizations from company reports and by searching their websites.

The duration of the 28 interviews conducted ranged between 45 and 70 minutes. With interviewees' consent, most of the interviews were recorded and later transcribed. One organization did not provide consent for audio recording, so summary notes were taken instead.

The data collected was coded using QSR NVIVO 12 qualitative data analysis software (Jackson and Bazeley, 2019). Coding was compared and cross-checked by two researchers to increase reliability. Themes derived from Javernick-Will and Scott (2010)'s framework based on Scott's three-pillar framework summarized in Table 2 provided a conceptual framework for the research helping to create initial nodes. Several sub-nodes also emerged from the data and were then added to the framework.

Table 2   Source of initial nodes and sub-nodes (Javernick-Will and Scott, 2010)

Regulative	Normative	Cultural-Cognitive
Laws and regulations Operating laws Knowledge of government	Work practices Social norms, expectations and local preferences Industry organization Logistics Relationships Resources and productivity Market knowledge	Local culture/beliefs Language/Concepts/ Meaning

The initial coding scheme was further developed based on the literature on the three-pillar framework and institutional entrepreneurship to be set up as nodes and sub-nodes in NVIVO. The final nodes and sub-nodes covered an extensive range of areas and activities within each organization. The following section shows frequencies of nodes and sub-nodes to identify the most important factors acknowledging that these are not quantitative data but serve as a guide to focus on specific aspects.

We use the term "knowledge types" to describe the nodes/sub-nodes of the main pillar. Knowledge types were both pre- and post-coded as a key for analyzing the data and enhanced the coding by allowing emergent themes to be added. The relevance and volume of topics were coded against nodes and sub-nodes that directly related to discussion around projects and innovation as they were applied and/or understood within the project-oriented organization.

5   Data Analysis

Our main research question was: How do the three pillars of institutional theory (regulative, normative and cultural-cognitive) facilitate innovation through projects in project-oriented organizations?

To answer this question, we used NVIVO qualitative analysis software and developed nodes based on our coding of the 28 interviews. We tabulated the frequency with which the discussions reflected themes related to specific nodes and sub-nodes within the three pillars as shown in Table 3.

Table 3   Frequencies against nodes and sub-nodes

Main nodes and sub-nodes	No. of references	Total (main node)	Relative frequency/%
Normative			
Experiment and trial and error*	75	75	5.0
Industry organization*	15	128	8.6
Agile as a practice adopted in IT	24		
Competition	25		
Professional roles	58		
Stakeholder market demands	6		
Standards project management prescribed peak bodies	0		
Institutional entrepreneurship*	54	179	12.0
Individuals	6		
New structures	43		
Processes	76		
Logistics	0	20	1.3
Contractors or suppliers	0		
Systems	20		
Market knowledge*	35	102	6.8
Knowledge of customer	48		
Knowledge of market requirements	19		
Relationships	44	45	3.0
Between projects and functions	1		
Resources and productivity*	43	137	9.2
Cost	36		
Performance	49		
Quality	0		
Speed	9		
Social norms, expectations, and local preferences	68	68	4.6
Standards	5	5	0.3
Industry standards	0		
Technology (Apps)	10	10	0.7
Work practices*	46	74	5.0
Incentives	28		
Cultural-Cognitive			
Language/Concepts/Meanings*	89	316	21.2
Communication norms	13		
Local practices	33		
Sensemaking	181		
Local culture beliefs*	64	132	8.8
Collaboration	20		
Cultural norms	48		
Regulative			
Operating laws	3	44	2.9
Finance	37		
Labor	0		
Tax	4		
Knowledge of government	2	4	0.3
Political considerations	2		
Laws & Regulations*	121	154	10.3
Government related	8		
Policies governing the business/industry	14		
Rules to follow due to law regulations	11		
Total references		1493	

Note: * refers to frequencies equal to or over 5% for the main node, where main nodes are shown in bold.

The frequencies were used to identify themes that were most likely to provide insight into how innovation is facilitated through the project-oriented organization's projects. They are not used as a basis for quantitative analysis but to guide us discuss our findings from a qualitative research perspective.

The 1493 total references were then reviewed against the nodes and sub-nodes. The relative frequency is the percentage of the total number of references, not the total information in the transcribed material. The relative frequency percentages ranged from 0.3% to 21.2% for single nodes.

Based on these relative frequencies, collective counts for all items under the main pillars produced the following schema that highlights important aspects of institutional theory: Normative (56.5%), Cultural-Cognitive (30.0%), and Regulative (13.5%). Thus, the normative aspects dominated, with over half the coded items relating to this pillar, while the cultural-cognitive and regulative pillars were less prominent.

5.1   Emergent themes from the normative pillar

Themes to emerge from the normative pillar reflected discussion on the principles and frameworks of enacting standards of behavior, professional standards, and codes of conduct and training. Institutional entrepreneurship was one of the dominant nodes. Processes were more frequently mentioned than Individuals in the interviews on navigating innovation within the organizations, indicating that innovation may be facilitated more by processes than by individuals in project-oriented organizations.

Industry organization was also a strong node in terms of the total frequencies, and included the sub-nodes Professional roles, Competition, and Agile as a practice adopted in IT. Often, these sub-nodes were heavily related to the cultural-cognitive pillar.

Market knowledge was also highly relevant for enabling innovation and included knowledge of customer and market requirements (Cui and Wu, 2016). Another normative node, Resources and productivity, included areas of cost, performance, quality and speed, with performance showing the highest frequency count. This node was particularly important as it related to the parameters around innovation through projects and their viability. The use of experimentation and acceptance of a trial-and-error approach as a "way of doing things" that enabled innovation was evident in discussions clustered under the node of Experiment and trial and error. Finally, Work practices were also important as an identified impetus for enabling innovation with the Incentives.

5.2   Emergent themes from cultural-cognitive pillar

Themes relating to the cultural-cognitive pillar included cultures and behaviors pertaining to the organization and related to a level of conformity and acceptable practices. The coding focused on the way the cultural-cognitive pillar is inherently connected to how institutions are seen through a "socially mediated construction of a common frame of meanings" (Scott, 2014). Within this pillar, there was an indication of individuals working collectively to understand, define and make sense of innovation in their environment. Themes in this pillar also demonstrate how the organizational culture supports and is reinforced by actions under the normative pillar.

Language, concepts and meanings formed the largest node in terms of highest frequency for a single item. This finding demonstrated the high impact of the cultural-cognitive pillar in an organization's perceptions and uptake of innovation. This sub-node included Communication norms, Local practices and Sensemaking.

Language, concepts and meanings indicated the importance of participants understanding the mindset of customers and being aligned with colleagues, and how fundamental this was to innovation in organizations. This aspect of the coding reinforced the importance of the cultural forces, even though the normative pillar was dominant in overall frequency. This node pivoted on socially constructed shared meaning and demonstrated how sensemaking is critical in the acceptance and enhancement of innovation (Dougherty et al., 2000).

5.3   Emergent themes from the regulative pillar

Themes associated with the regulative pillar comprised several topics related to rules and regulations, including areas where managers and executives used their authority and inherent power to apply rules. The information coded here related to all references to governance, whether applied, upheld or affecting the level of innovation either positively or negatively. Regulative knowledge included the rules of formal governance structures and legal processes, and formalized knowledge relevant to the organization. The data showed a complex relationship to this knowledge type as regulative aspects of organizations were also seen as an inhibitor of innovation. However, transformed structures and governance as flexible or tiered for easier authoritative processes served as imperative for enabling innovation. The regulative pillar posed some complexities in coding as it referred to multiple and deeper levels of structural aspects of innovation uptake.

Our corollary research question was: Does institutional entrepreneurship play a role in facilitating innovation in project-oriented organizations? If so, how?

We analyzed all the interviews to gather evidence of individuals, structures and processes that enabled innovation in the six project-oriented organizations. Table 4 summarizes our findings.

Our findings identified specific institutional entrepreneurs in only two of the six organizations, a senior

Table 4 Roles of individuals, structures and processes in innovation at the case organizations

Project-oriented organization	Individual entrepreneur	Structures to promote innovation	Processes to promote innovation
FSP		Skunkworks to drive innovation Outsourced innovation initiative Tribes and Guilds Cross-functional teams	Forums to discuss innovation Emphasis on designing with customers using prototyping Customer journey mapping Managers asked to pitch ideas in forums
CIS	Head of Strategy and Technology Innovation	Dedicated innovation labs Setting up business unit to innovate Decentralized project structures Chief Technology Office managing an innovation portfolio Labs to test ideas	Collaboration with hi-tech companies Innovations at different levels of business managed by local operations Fast tracking gateway process to accelerate innovation Use agile projects to test innovations Innovation around customer experience
SOU	Chief Information Officer supporting innovation through Customer Experience (CX) Lab and discretionary funding	CX Lab to develop customer experience design Change governance group to approve new initiatives Innovation group to develop digital services	Cycle of exploration before funding innovation after pilot testing Hierarchical decision-making on innovation through CX Lab Internal recognition systems for new ideas Human-centered design Prioritize innovations that have an impact on customer Customer journey mapping Road map with strategy for innovation
TD	Senior Vice President Innovation Research and Development (R&D) Manager and Chief Technology Officer	Advanced innovation group in R&D (works with external stakeholders) Product innovation groups	New product development processes and roadmap Yearly R&D meeting with expo to gather ideas Allocate time for people to develop concepts Decision-making process to authorize innovation projects
TSP		Innovation hubs Innovation lab for an industry sector Innovation teams	Reward systems for ideas Hackathons Technology innovation strategy plan Alignment between business strategy and R&D programs Annual awards for innovation
PU	IT Innovation Manager (driving from bottom)	Skunkworks Development teams Guilds for knowledge sharing Strategic partnership for funding New energy group Innovation plans based on time horizons	Annual innovation maturity assessment Data-based decision making on investment Experiments by marketing team Prototyping Hackathons Crowdsourcing innovation challenges Energize awards Human-centered processes

manager (TD) and a mid-level IT innovation manager (PU). In contrast, all of the organizations had set up specific structures to promote innovation such as skunkworks, or dedicated units responsible for innovation. For example, the Customer Experience (CX) Labs are a central unit that conducts experiments and processes innovative ideas to be considered by top management. Such customer-focused processes (including human-centered design and customer journey mapping) were introduced in most of the cases to promote innovation as part of the organization's innovation goals. A two-way relationship was evident where the introduction of such processes to drive innovation reflects the organization-level strategy and culture while also acting to deliver the strategy and strengthen the innovation culture. Other processes introduced to drive innovation included events to gather ideas and promote innovation, hackathons, and awards to recognize innovative ideas. Overall, structures and processes were much more predominant than solo actors in our findings.

6 Findings and lessons for practice

These lessons are offered as areas for explorative learning by project-oriented organizations to adopt practices to facilitate innovation (Liu et al., 2022).

6.1 Cultural-cognitive pillar

The cultural-cognitive pillar plays a major role in enabling innovation as cultural changes are required to promote innovation (Kostis et al., 2018), it was borne out by the use of language, metaphors and the importance of sensemaking.

Exploring how innovation works within organizations generated discussions on how to make sense of the way innovation could be conveyed or facilitated and understood. One interviewee used history as a vehicle to explain innovation in their organization:

[The organization] is very much like ancient Egypt. With enough resources and enough manpower, you can build pyramids. And that is pretty much what it is. (Transformation Manager, SOU)

The interviewee then emphasized the importance of culture in delivering strategy in the context of innovation:

Consistently, the term thrown around here is culture ate strategy for breakfast. ... It is genuinely a fact. Culture does eat strategy for breakfast, ... but sometimes the culture in itself can just overwhelm it. (Transformation Manager, SOU)

The most frequently observed knowledge type was Language, concepts and meanings, highlighting the impact and influence of the cultural-cognitive pillar on the perceptions and uptake of innovation in an organization.

Our research suggests that organizations can enhance innovation by focusing on cultural-cognitive activities, training and perspectives extending from employees to customer base. This requires making sense of wider processes and linking them to organizational outcomes. Participants benefit from using stories and metaphors to make sense of how their environment takes up innovation.

New structures and processes can facilitate creativity when applied to specific projects (Donada et al., 2021). Such activities could be led through creative training involving high-level targeted activities around dynamic and focused storytelling, roleplay and creative ways of understanding customer experience.

6.2　Regulative pillar

The laws and regulations were at times deemed to act as inhibitors to innovation, although there were suggestions on how regulations can be adjusted to support innovation. A participant offered the following insight on how members of governance committees understand the complexities associated with delivering innovation:

I think they are too removed from where the issues arise. ... They misunderstand the risks associated with being innovative, so if costs go up and time frames go out, they become very emotive. A key failing is the executive teams have no real appreciation of the complexity. (Program Director, FSP)

Governance was also seen as a hierarchy of approvals. Participants saw governance processes as something that needed to be flexible for innovation to flourish. One participant commented that while governance-imposed restraints, the nature of governance is changing to recognize the need to be more flexible and adaptive:

They still are accountable, and we still see the overall dynamics and how they are running those programs, but they do not come through the normal governance channels. So, they have a bit more freedom to be iterative, reactive, proactive, responsive, whatever the case may be, according to what is evolving, because they are evolving much more quickly. (Planning and Delivery Director, CIS)

Overall, governance and associated regulations are seen as inhibitors, but the need to be more flexible is being increasingly recognized. The regulative pillar considered the rules of formal governance structures and legal processes and formalized knowledge relevant to the organization and to wider societal aspects.

The relative frequency was made up mainly of Laws and regulations, with a focus on governance issues as they related to the uptake or barrier to innovation. Governance structures within large organizations were seen as necessary while cumbersome.

Innovation in this area intrinsically links the governance and approval processes with associated budgets and financial imperatives in developing and delivering projects. Although the regulative pillar was represented by relatively low frequencies in our findings, further analysis revealed high impact with suggestions that governance structures and processes should be renewed to include more flexible arrangements to facilitate innovation through projects.

Organizations could draw on this research to explore localized, flexible governance processes to facilitate innovation while achieving project goals and delivery with realistic sign-off, gatekeeping and financial impact in check. Channels between project management and governance board need to be stronger, with communication strategies in place to offset delays.

Regulative processes and structures, such as executive boards, sign-off processes and associated activities, need to have a clearly defined relationship with approval processes. Flexi-governance structures could be used to facilitate projects in a timely manner, decentralize governance and delegate local authority to enable innovation.

6.3　Normative pillar

As normative systems relate to achieving desirable goals, this topic was frequently discussed, and themes related to the normative pillar dominated the coding. Knowledge and the importance of understanding the customer provided impetus to innovation. Normative behaviors pertained to standardizing practices to enable professional

approaches. This pillar is also related to Market knowledge, a knowledge type linked to discussions on the importance of understanding customer needs to innovate.

A critical theme to emerge in the normative pillar was that, although individuals are important in enabling innovation through projects, the emphasis on processes outweighs any specific influence by an individual. A highlight of the research is the finding that innovation is facilitated more by processes than by individuals acting as "champions" in our case organizations.

One participant discussed innovation linked to customer experience where the organization is geared beyond profit with a focus on:

> ... emerging criterion around the customer experience, about the customer's level of connection and advocacy with the brand, with the [organization's] brand as a result of this innovative feature that we roll out. (Chief Project Officer, CIS)

Some processes were linked to innovation from a number of different areas within the organization. These were seen as aligned to "define the innovation" for the organization:

> ... The way we actually align that part and define the innovation, comes from various sources. ... We have a process to align that, with a roadmap that widens our horizon for the next zero to five years and up to 10? That acts as input into [company], but we also encourage innovation to be coming from it. (Portfolio Manager (R&D), TD)

In another company (SOU), a targeted process takes place to incorporate the development of products and services though experimentation and exploration. This occurs within a process that the Line Manager "owns":

> ... They do a lot of experimentation in that group, and they work with the line business managers who are owners of the particular process that is their target to work out how do things currently work? Why do they work that way? What are the opportunities for fixing it? What are the opportunities for changing and experimenting, and developing things? (Improvement Delivery Lead, SOU)

In the same organization the focus on continued improvement was connected to what the interviewee described as a "lesson learned process" that permeated within the organization at different levels:

> We run our projects, lessons learned process, through project reviews. So we are putting

together from the results of last [year's] lessons, things that we can do better, things that we can do differently, things we need to do more of. (Manager Portfolio Management, SOU)

Our research demonstrated that creating structures around the uptake of innovation was a significant and integral part of facilitating innovation:

> Because we had a customer-centered design, we had done a lot of prototyping and testing and we followed a very well-structured product architecture. What worked well was a structured design approach, and a visual representation of products which we could present to our governance. (Technology Lead, FSP)

Experimentation and trial-and-error approaches were generally perceived as ways of working that facilitate innovation. However, the importance of reinforcing norms was highlighted, and acceptance of failure is required to truly enable innovation through experimentation. A participant explained:

> Fast fail is a great concept. Probably, I think, misunderstood by a lot of people, because the biggest element you need to allow people to fail is to treat a failure as a positive. (Digital Market Development Manager, TD)

Formal processes had a role to play in promoting innovation, but experimentation could require different structures to be used effectively:

> I feel we need ... all the processes, that all makes a lot of sense when you have got a very large channel. We need another vehicle to do experimentation and testing. (General Manager of the Project Management Office, CIS)

Our research suggests the key lesson is that organizations should step away from emphasizing individual actors as innovation "heroes", and pay attention to their processes and structures, including ways to support experimentation.

Although our research findings indicate that innovation was primarily advanced through processes, it was critical to explore what role social actors played in maintaining the facilitation. These social actors were not champions of innovation, nor solely the catalyst of innovation:

> I am also responsible for the transformation program. ... I need to get the program that is really designing the strategy doing original piece, so I have a team that runs the execution, but I am ultimately responsible for it. (Technology Lead, FSP)

Other normative lessons suggested that organizations may benefit from allocating resources to develop well-considered and dedicated processes and structures that are designed to promote innovation.

The Market knowledge node was deemed relevant in our analysis. Customer and market knowledge are pivotal to enable innovation within the organization and its impact on the wider market. Customers are part of the feedback loop to product development, and relationships with them need to be assessed for enhancing and adopting innovation.

Organizations need to invest in the development of processes revolving around market knowledge, particularly customer knowledge. Specific market knowledge and customer interaction needs dedicated consideration by the organization.

Future scenario planning could envisage the complex relationship of the clients in the market environment. This scenario planning could consider continuous and rapid transformation in response to volatility and complex inter-relations with technology, social media and other technology platforms both imagined and currently in play.

Resources and productivity was another strong aspect of the normative pillar and included cost, performance, quality and speed. This pillar was particularly important as it related to the parameters around innovation projects and their viability, with Performance being the highest in the frequency count within this node.

Performance and productivity need to be assessed commensurate with the cycles and expected outcomes of projects and processes in place. Performance metrics and processes could be considered and explored for how they enhance innovation. This includes processes and structures linked to a radically different business model development and factoring resources and productivity issues to enable innovation through projects.

7   Key contributions

This article makes three key contributions through applying institutional theory to a study of innovation in project-oriented organizations. First, it uses institutional theory to address this under-researched area by applying Scott (2014)'s three-pillar institutional framework and institutional entrepreneurship (Hardy and Maguire, 2008) to explore the facilitation of innovation in project-oriented organizations. Findings illustrate how project-oriented organizations use their hybrid structures to foster innovation. Second, the article offers practical implications through lessons for practice that provide starting points for organizations aiming to improve their innovation outcomes. Third, it provides new insights on the importance of structures and processes as instigators of innovation, offering a counterbalance to the idea of the institutional entrepreneur as a "solo champion" of innovation

acting as a visionary for change.

These lessons are inspired by the experiences and understanding relayed by project managers and executives working with innovation in the selected project-oriented environments and can be adapted and customized for application in other organizational contexts.

8   Conclusions

Institutional theory provided a novel perspective for our exploration of how specific behaviors play out at the organizational level to facilitate innovation in project-oriented organizations. We set out to explore whether and how Scott (2014)'s three pillars of institutional theory act as facilitators of innovation through projects in project-oriented organizations, and to explore the role of institutional entrepreneurship (Hardy and Maguire, 2008) in enabling innovation.

Classical institutional theory suggests that the normative pillar could inhibit innovation. However, our findings reveal that the normative pillar can play a strong role in facilitating innovation. Through the lens of institutional theory, this study observed the pivotal role played by processes and structures in promoting innovation in project-oriented organizations. This finding underscores the impact of the normative pillar and challenges the commonly held notion that individual institutional entrepreneurs acting as "heroic" champions are the main ingredient for innovation in organizations.

We started with the premise from classical institutional theory that organizations will mimic others and behave in ways that resist change and innovation. We also expected that institutional entrepreneurs would gather force within the organization to help it change to adjust to the external environment that would trigger innovations. We found that along with the influence of individual actors, change was primarily triggered by processes and setting up specific structures to nurture innovation. We illustrate how institutional entrepreneurship is a combination of actors, processes and structures that work together to support organizational change.

In line with expectations, we observed some ways in which the three pillars proposed by Scott (2014) constrained innovation; however, we also discovered how some of the knowledge types promoted innovation. These were most prominent in the normative pillar. We found that behaviors related to institutional entrepreneurs fit best within the normative pillar as it is new processes and structures that best promote innovation, and not the "heroic" behavior of individuals (Aldrich, 2010; 2011).

The cultural-cognitive pillar also demonstrated themes that promoted innovation. Sensemaking through language and communication of stories and analogies (Reischauer, 2015) highlighted the centrality of communication for innovation and revealed a complex phenomenon that

involves both individual and collective actors (Garud et al., 2013) creating narratives of innovation (Sergeeva and Winch, 2020). Although we observed a lower frequency of supportive behaviors relative to the normative pillar, the cultural-cognitive pillar has high impact and includes the knowledge type with the highest frequency for a single node (language, concepts and meaning). Again, this highlights the complex relationships between the nodes transposed across all three levels.

The regulative pillar was not as strongly emphasized in our study; however, important lessons are still revealed. We observed that governance mechanisms are often cited as inhibiting innovation, but our study revealed examples of how governance can be designed to better support innovation through tailored metrics and increased flexibility.

In applying institutional theory and using its normative, cultural-cognitive and regulative pillars, our analysis enabled recognition of the dominant areas and distinct ways each element presents itself in organizational innovation processes. Although the elements are interconnected in practice, understanding the impact of specific behaviors helped us to better understand how innovation occurs through projects across project-oriented organizations.

Building on the understanding afforded by institutional theory, we have suggested several lessons for practice, designed to enhance innovation behaviors. Our suggestions provide guidance for project-oriented organizations to dedicate resources to the development of structures and processes for innovation, with a focus on engaging with and understanding the customer, embracing trial and error, and facilitating creativity. We also suggest that innovation processes clearly identify metrics and approval paths while also incorporating flexibility in governance to support innovation.

In summary, a key finding is that innovation appears to be more often facilitated by processes and structures rather than by individual actors in project-oriented organizations. Other findings highlight those regulative aspects of institutions, such as governance and regulations, can pose inhibitors to innovation. That said, attention paid to restructuring and localizing these processes and structures, can work towards creating a flexible governance approach that could strengthen practices that enhance innovation.

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