

# Enabling Knowledge Management Initiatives through Organizational Communities of Practice

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## Abstract

Learning the concept of organizational communities of practice (OCoP) is very effective but too complicated when it comes to implementation. Challenges arise when cultivating OCoPs and creating effective communication processes, particularly within an organization that has a traditional hierarchy. Literature on knowledge management (KM) fails to provide an inclusive comprehension of the significance of OCoPs. Thus, the current exploratory research aims to determine how organizational contexts can enable or disable the establishment and development of OCoPs. This article is built on communities of practice (CoP) theory to study the phenomenon of intentionally established OCoPs within large organizations. The case studies conducted for this research involved two companies based in Saudi Arabia, with intentionally created OCoPs. The selected cases assist in providing a holistic understanding of the influential role of organizational context in enabling OCoP activities, using semi-structured interviews, document reviews and field notes. The study findings support an integrated framework to assist organizations in establishing effective OCoPs. Its five phases include *establishment*, *enforcement*, *recognition*, *maintenance* and *sustainability*, representing OCoP development phases. The resulting framework organized 16 enabling or disabling factors in OCoP development. This article expands the focus of research beyond traditional CoPs, to investigate the intentional establishment of OCoPs within organizations and understand opportunities and challenges that enable OCoPs. The study argues that organizations implementing OCoPs should offer a comprehensive, long-term strategy for KM initiatives that leads to designing OCoP activities that enable better alignment with the organization's business plan. A company can shape perceptions and behaviours by establishing the organizational context for social interaction. Thus, this article extends the perspective on developing OCoPs within organizations and argues that the role of middle management requires more thoughtfulness about OCoP research.

## Keywords

Organizational communities of practice, knowledge sharing, knowledge management, organizational context

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## Introduction

Knowledge management (KM) plays a significant role in enhancing existing expertise and knowledge that may give rise to competitive advantage. It also cultivates a better work environment that includes reusing knowledge at opportune moments. However, organizations strive to enhance their learning process to maintain their competitiveness (Macpherson et al., 2019). Accumulated knowledge is crucial in building new ideas or learning about individuals and organizations. An example of group learning is the creation of knowledge when employees share practical experiences and ideas (Peñarroja et al., 2019). Interactions influence the knowledge creation process, and thus, organizational groups contribute to retaining shared knowledge.

Research on the subject includes broad investigation of communities of practice (CoPs) as an instrument to enhance organizational knowledge sharing. Wenger et al. (2002) describe it as a ‘group of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis’ (p. 128). Wang et al. (2019) emphasize that organizational communities of practice (OCoPs) cannot exist without effective communication among community members.

Applying CoP’s theoretical significance is very challenging. Several issues surround creating an appropriate organizational context within a traditional hierarchy (Bardon & Borzillo, 2016). As Lee and Edmondson (2017) stress, flat organizations inspire employees to organize their work and promote openness towards ideas and sharing experiences. However, recent literature differentiates traditional CoPs from OCoPs (Macpherson et al., 2019; Peñarroja et al., 2019).

The intentional creation and management of OCoPs can help to achieve strategic knowledge-sharing objectives (Bolisani & Scarso, 2014). Aljuwaiber (2016) identifies organizational culture, structure, information technology and senior management as fundamental dimensions of promoting knowledge sharing, demonstrating the importance of an organizational context in which OCoPs can function effectively. More recent, evidence shows OCoPs’ relation to knowledge boundaries at different stages (i.e., exploration, design, decision-making, implementation). Consequently, Schwarz and Legner (2020) urge further research on these phases, and this study revolves around that recommendation.

This study aims to show how improving organizational context enables OCoPs to thrive in the business milieu, mainly discussing current thought on the role of OCoPs within an organization, using two case studies. Specifically, it seeks to answer the following research questions: (a) to what extent does organizational context contribute to the creation and development of OCoPs? (b) What enablers and disablers assist OCoP cultivation from establishment to sustainability? The study contributes to KM by investigating OCoPs as a tool for knowledge sharing that fulfils two purposes: (a) expanding the focus of research beyond traditional CoPs, to explore the intentional formation of OCoPs within large organizations for a better understanding of associated challenges and opportunities, and (b) supplementing the few relevant studies by investigating the contribution of organizational context to OCoP creation and development. In order to attain these purposes, this research study presents a model, outlining the factors that enable or disable OCoPs. Also, an overview of OilCo and PetchCo (case study acronyms) with their critical methodological elements illustrate the study’s implications for managing knowledge from an organizational perspective. The findings provide empirical evidence for a better understanding of the phases that enable the implementation of OCoPs, from establishment to sustainability.

## Organizational Communities of Practices and their Establishment in Different Organizational Contexts

The term ‘OCoP’ appears in management literature and broadens the CoP concept (Kirkman et al., 2011, 2013; Macpherson et al., 2019). Agrawal and Joshi (2011) found that OCoPs represent more

intentionally formed CoPs, more successful than CoPs, whose voluntary membership limits direct management support. The implication is that organizations willing to provide direct support initiate OCoPs' success. Large firms with geographically dispersed activities prefer more formalized OCoP activities to conventional CoPs (Gimenez et al., 2017).

An organization's ability to understand its context ensures a comprehensive picture of its operating environment. According to Bardon and Borzillo (2016), OCoPs 'should evolve in an organizational context in which members enjoy total freedom with network collaboration across their respective units' (p. 17). A company can shape perceptions and behaviours through social interaction and enhancement, due to shared language and visions (Lefebvre et al., 2016). Identifying its features (e.g., structure, culture, policies, practices) activates phases that facilitate the stream of knowledge among individuals in the organization (Gao et al., 2008). Therefore, a potentially dynamic relationship exists between organizational context and the success of OCoPs (Dulewicz & Higgs, 2005). For example, Yamklin and Igel (2012) used three case studies to investigate different OCoPs in Thailand's manufacturing sector, establishing their contribution to realizing tangible organizational performance results. One significant finding was that assigning definite activities to OCoPs produced tangible organizational advantages. Receiving attention from senior management supports reviewing and implementing ideas and suggestions. A recent study by Aljuwaiber (2020) corroborates this in an investigation of the role of knowledge sharing in business development among members of sectoral committees. The study found that the level of support from senior management affected the willingness to share knowledge and exchange personal expertise.

The study argues that during OCoP implementation, firms should offer an explicit strategy for KM initiatives. This would lead to improving an organization's OCoP activities, strengthening the association with the firm's business plan. The study expanded the perspective on the OCoP development within organizations.

Limited studies concerning cultural variances in knowledge sharing in emerging economies, including the Middle East, South America and Africa, are inadequate. Alsereihy et al. (2012) found that Saudi Arabia has not yet widely accepted and implemented KM. A previous study (Idris, 2007) of five leading companies in Saudi Arabia identifies a lack of managerial encouragement, leading to low awareness that limits involvement in OCoP activities. The study assumed that the participants recognized the knowledge-sharing value of OCoPs but failed to outline how managers encouraged employees' use of OCoPs. Therefore, understanding the organizational context is vital in examining OCoPs from a non-Western context.

## **Methodology**

### ***Study Context***

Case studies of two big companies support this investigation of OCoPs. A case study approach using qualitative methods enables the researcher to examine each company's OCoPs from a holistic perspective (Yin, 2014). This research study adopted a case study approach that involved companies with intentionally created OCoPs—an oil company (OilCo) and a petrochemical company (PetchCo). Case selection criteria emerged from instances of established OCoPs that illustrate opportunities and challenges in KM implementations for big, geographically distributed firms (Gimenez et al., 2017). Each company is contextually bound, with various managers' practical knowledge and behaviour. The difference between the two cases is that each firm espouses distinct structures and strategies (Nonaka & Toyama, 2005). The case studies enhance external validity that accompanies large-scale operations with numerous affiliates and prominent OCoP representation. Moreover, these organizations' OCoPs are at different stages of development, providing insight into the development process.

### *Case Study 1 (OilCo)*

Case study 1 is a large oil company in which OCoPs have operated as an initiative, for approximately 15 years, to share best practices and lessons among employees. The company has clear guidelines that help employees comprehend the goals, roles and responsibilities of setting up OCoPs. The primary incentives to establish OCoPs within OilCo are to reduce repetitive work and fill gaps in competence and know-how. Members of OCoPs can communicate virtually or face to face and exchange their experiences.

### *Case Study 2 (PetchCo)*

Case study 2 is a petrochemical company. The OCoP terminology is not common among PetchCo participants; 'Expert Network' is their alternative term for 'OCoP'. PetchCo establishes Expert Networks based on disciplines or professions within industrial sites, and members' formal assignments reflect their accumulated knowledge and expertise.

## *Data Collection*

Methodologically, data collection from both case studies occurred concurrently. In-depth semi-structured interviews collected insights about the role of knowledge sharing for purposeful OCoPs. A total of 22 interviews were conducted to collect data from interviewee groups; OCoP members, managers, leaders and non-members participated. Analysis of 91 documents (e.g., publicly available reports and research, company's annual reports) supported the interviews. Field notes collected during 12 h of observations were added to the study data. A snowball sampling strategy resulted in many respondents giving interview referrals; many became participants who suggested other potential respondents (Robinson, 2013). Table 1 presents an overview of the data collected.

## *Data Analysis*

The researcher used MAXQDA software to analyse qualitative data. Interview transcriptions were stored in a secure computer to perform a thematic analysis to identify, analyse and report patterns (themes) (Braun & Clarke, 2006, p. 79). A structured coding scheme helped to group codes into categories and subthemes. Themes that emerged from several iterations were perfumed using a constant comparison between structure and raw data. The final iteration supported developing the study's proposed framework, considering the stages of OCoP development that the case studies represented. Themes were organized into five categories: establishment, enforcement, recognition, maintenance and sustainability, representing OCoP development phases.

## **Research Findings and Discussion**

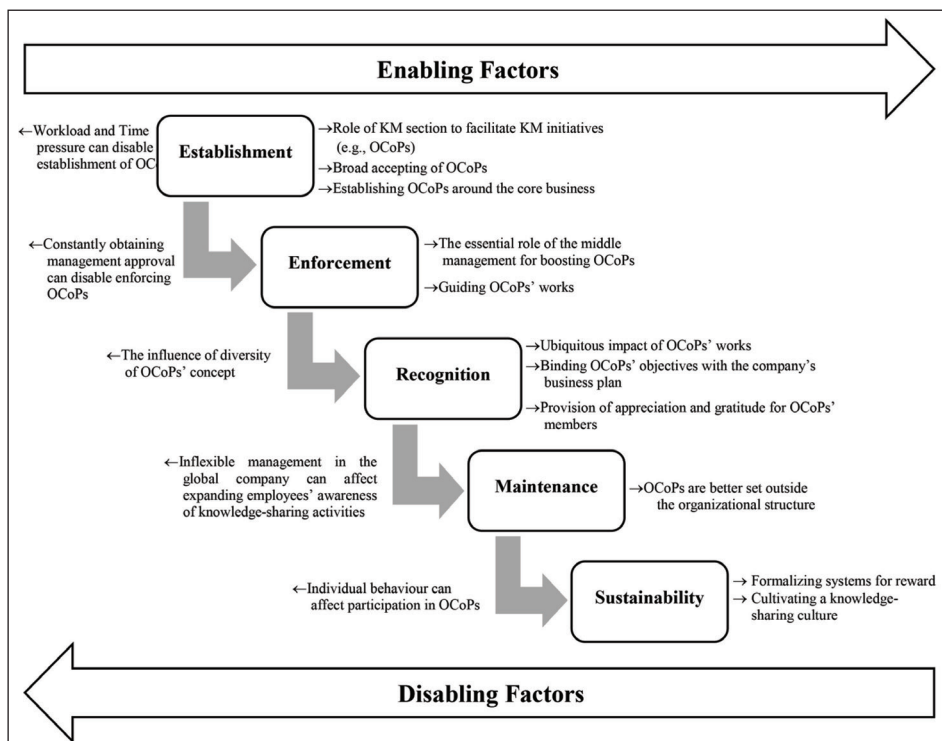
### *Case Studies and Their Organizational Communities of Practices' Cultivation in Five-Phase Framework*

Insights from data analysis on establishment, enforcement, recognition, maintenance and sustainability of each firm's OCoPs inspired the study's five-phase framework. Each phase comprises overlapping

**Table 1.** A Summary of Data Collection in Both Companies

Data Source	OilCo	PetchCo
Semi-structured interviews		
Senior managers	1	6
Middle managers	2	4
Senior technicians	3	2
KM specialists	1	1
Employees	2	0
<b>Total</b>	<b>9</b>	<b>13</b>
Observation (h)		
Informal observation (7)	3	1
Workplace impression	1	2
Documents		
Internal documents	3	5
Annual reports	6	4
Email correspondence	2	0
Company journals	4	9
Public sources	26	32

**Source:** The author.

**Figure 1.** The Five-phase Framework for Enabling and Disabling Components of OCoPs

**Source:** The author.

enabling and disabling factors influencing OCoPs. Representative quotations, together with additional examples from the data set, appear in Appendix A. Figure 1 presents the overall framework for the five phases that enable or disable configuration of OCoPs within the organization.

### *Establishment Phase*

The establishment phase is significant in seeding OCoPs within a company. Organizations may have various aims for establishing OCoPs as tools for enhancing KM initiatives (Kirkman et al., 2013). That requires setting clear rules and procedures and providing essential resources to assist OCoP leaders in stimulating group activities. Many studies emphasize the importance of collaborative efforts in the establishment phase (Roberts, 2006), which senior management roles enhance and support. The best approach is avoiding restrictions on senior management, using their role as a guideline for providing resources and coordination to OCoP activities (Wenger & Snyder, 2000).

Moreover, resources should be available and accessible to all members, for easier interaction. Three enablers and one disabler of OCoPs characterize the establishment phase; starting by creating KM forum identity is important to grounding the initiative. Both OilCo and PetchCo have established KM units that augment the exchange of best practices and lessons learnt.

During OCoP establishment, a KM-division department plays a crucial role since KM practices can promote acknowledging the significance of supporting KM initiatives. As the study findings indicate, employee type is critical when applying and supporting KM initiatives. Findings from other studies note that OCoPs have materialized in reaction to bolstering social interactions and distributing knowledge (Jørgensen et al., 2019; Pattinson et al., 2016).

ShareKnow and Expert Networks (OilCo's and PetchCo's respective OCoPs) seemed to follow KM value. The majority of OilCo and PetchCo employees are technicians and engineers, with strong chances of facing complex problems that require using experience to avoid further issues. Accordingly, the initial steps in establishing OCoPs are acknowledging their importance, fostering knowledge sharing and securing the support of managers and senior management (Macpherson et al., 2019). Supporting OCoPs is a central pivot step in their establishment, while managers must believe in the value they add to the organization, particularly at the initial stage.

Earlier research on links between OCoPs and strategy focused on alignment with the company's core business (i.e., satisfying the main business objectives), positively impacting the establishment and appreciation of OCoP activities (Duryan & Smyth, 2019) and their great value for knowledge steadiness and creation.

OilCo OCoPs appear closely linked with areas of work, where employees can elaborate OCoP and company activities. This concurs with the viewpoint of Macpherson et al. (2019) that OCoP members are experts, expected to develop innovative solutions and best practices. This implies the purposeful establishment of OCoPs around the company's core business, where their activities contribute to achieving company goals. In addition to good advocacy from senior management, this lets OCoPs to increase awareness of knowledge sharing's vital role and acquiring organizational acceptance.

Among issues that influence OCoP success, time pressure and work overload are inhibiting factors. This finding is consistent with some evidence from past studies that state that time pressure is a significant administrative factor influencing individual participation in OCoPs (Oliver & Kandadi, 2006). Heavy daily routine and workload consumes a lot of time, which could be utilized by OCoP members in knowledge sharing. Oliver and Kandadi (2006) agree, stating that to maintain participation levels, employees should sacrifice 15%–20% of their working hours for OCoP activities that focus on establishing new knowledge.



### *Enforcement Phase*

Senior- and middle-management roles are essential to reinforcing company OCoPs, by bringing managers' attention to OCoP activities and effectively applying them in deliberating a firm's goals (Radaelli & Sitton-Kent, 2016). Past research has not sufficiently addressed middle-management roles in ratifying and cultivating OCoPs (Hislop, 2013). Ooi et al. (2012) emphasize that the senior management should build confidence among the middle management through sharing company directions and strategies, an approach that encourages frequent social interactions. Studies addressing middle management's role in supporting OCoPs are yet inadequate.

This study sees middle management's role as crucial and argues that it should receive greater attention in OCoP research. In both case studies here, middle management includes positions as a direct (or general) manager, using titles interchangeably. The leadership approach is to inspire middle managers or OCoP leaders to take on leadership roles in organizing and aiding OCoP activities. Lank et al. (2008) indicate that always seeking acceptance from higher-level managers is necessary to legitimize devoting time to OCoPs; therefore, support from both senior and middle management is important for OCoPs to thrive.

Concerning control, the study maintains that regulating OCoPs during the enforcement phase is unnecessary. Extensive pressure and control on OCoP happenings may hinder quicker task performance (Bardon & Borzillo, 2016). However, OCoP undertakings should parallel the firm's intents and team requirements in achieving goals. A top-down management style with a centralized decision-making process can have a reflexive sway on the implementation of purposeful OCoPs.

Controlling occurs when OCoP activities reflect uncertainty about its role, expectations or membership (Bardon & Borzillo, 2016). OCoPs should steer rather than control activities, by including members in the decision-making process, reducing requirements for management control and encouraging self-governance.

Employees from both case study companies consider management approval essential, highlighting variances between Western and Eastern administrative styles. OilCo and PetchCo are based in Saudi Arabia; the decision to establish both intentionally formed OCoPs and self-organized CoPs should first gain management's approval. OilCo offers an example—its procedure required many signatures and approvals for OCoPs, a difficult process. Participants from PetchCo voiced a concern for having independent powers during decision-making to develop OCoPs, but they were blocked. The management's approval crystallizes and appraises the forming and setting of OCoPs.

The two case studies highlight a prevailing divide between wanting to enhance joint action and catalyse shared proficiency, and, on the other hand, the necessity for a relentless pursuit of senior management's approval. In both cases, this was largely accepted as a feature within Saudi Arabian culture; it may not apply elsewhere. An initiative culture where one can express one's thoughts can improve interaction and facilitate OCoPs as an arena for sharing acquaintances and thoughts.

### *Recognition Phase*

The recognition phase raises consciousness and visibility of such activities and involvement in a company's OCoPs and clarifies group achievements for all members of an organization. The fundamental drive is to present OCoP activities at annual gatherings of senior administrators. OCoP members can share accounts of their accomplishments and ensure that the organization recognizes their involvement (McDermott & O'Dell, 2001). Company leaders' demonstration of interest transforms employees' and managers' attitudes.

PetchCo participants emphasized the necessity of senior managers manifesting their demonstrated commitment to OCoP activities. Inviting executives and presenting outcomes purposefully in the meeting

can alter senior management's insights into OCoPs. To improve recognition, the company's business plan should articulate OCoP objectives (Macpherson et al., 2019). OilCo illustrates this as the OCoP leader completes a charter form as a preliminary step when establishing an OCoP, identifying and confirming the relation of its activities to business intents. A recent study (Peñarroja et al., 2019) also asserted that sharing knowledge with others and organizational recognition motivated employees.

Conversely, PetchCo officially assigns its OCoP members and ends by potentially controlling their involvement. As Pattinson et al. (2016) affirm, managers endorse groups (e.g., OCoPs) whose tasks align with the firm's commercial goals. Such goals are necessary for encouraging isolated employees and company's departments to participate (Annabi et al., 2012). However, a company's goals should not constrict OCoP activities, which can lead to knowledge domain restriction and inhibit effective cultivation of OCoPs.

Central members of OCoPs in both OilCo and PetchCo had amassed knowledge and work experience by devoting a portion of their daily activities to OCoPs. The OilCo case emphasizes the significance of instituting a reward system that inspires involvement. In PetchCo, receiving the senior management's appreciation optimistically impacted individual commitment to OCoPs. The evidence showed that valuing members for their contribution to OCoPs encouraged others to follow. Appreciation from senior managers can encourage members to dedicate more time to OCoPs and relieve any negative attitude that the manager might harbour.

#### *Maintenance Phase*

The maintenance phase includes transacting guidelines for long-term enhancement of the company's OCoP implementation. OCoPs prosper in slack and less compacted structure that Wenger (2010) describes as a common feature of traditional CoPs. Providing facilities and sharing documents or tools figure considerably in maintaining OCoP activities. The maintenance phase is fundamental to ensuring that OCoPs deliver effective outcomes and contribute to the firm's aims.

Study outcomes confirm that OCoPs should not have a limiting structure. More significantly, exchange of information and proficiency within firms require a stimulating environment. OCoPs in OilCo and PetchCo comprise scientists and specialists who view OCoPs as self-governing and conducive to innovative thinking. OilCo experts considered OCoPs an aspect of their job rather than part of the company's structure, avoiding managerial hierarchies.

PetchCo employees were in the midst of resisting a plan for OCoPs to become more hierarchically structured, which would have resulted in the need to seek approval for their activities. The current study argues that OCoPs should not be subject to a company hierarchy; flexible formation encourages members to communicate and interact freely in terms of innovative ideas. Previous studies agree that decreased flexibility could result in passivity towards sharing ideas and expertise within a company (Duryan & Smyth, 2019; Lee & Edmondson, 2017). To advance its development, PetchCo must ensure that OCoPs are informally managed, with no rigid structure, to prevent employees from losing motivation for knowledge sharing. PetchCo uses top-down decision-making, so OCoPs gain access to data from its affiliates to help them understand the current issues and recommend suitable solutions.

#### *Sustainability Phase*

Sustainability, the final phase of the framework, guarantees continuity of OCoP activities with well-defined aims and undeviating involvement in the firm. Concerns and real problems are most effective, and sustainable OCoPs link to the firm's objectives (Jørgensen et al., 2019). Cheung et al. (2013) argue that knowledge self-efficacy and intention to continue knowledge sharing would achieve sustainability of OCoPs.



Duryan and Smyth (2019) contend that switching in leaders from time to time would create new knowledge and pragmatic insights into contemporary issues confronting business, making OCoPs unsustainable. Such leaders' experiences and interests of members do not associate with the changing business environment. However, the sustainability level may indicate that OCoPs are well situated and sophisticated during implementation, with a considerable degree of good results benefitting the firm and employees. Therefore, OCoPs call for optimized interactions and enhancements with other entities, that is, affiliates.

Research findings build on proposals in earlier studies (Walter et al., 2013), concerning rewards and their influence on improving involvement in OCoP activities. Most interviewees differentiated between direct and indirect rewards. OilCo participants found financial rewards and career growth important. This underlines the necessity of designing an official reward system, to establish criteria for assessing OCoPs members appropriately, limiting improvised judgements from immediate managers. This research study contends that the initial definition of CoPs (Wenger et al., 2002) contradicts the reward system because OCoP membership is not voluntary. Incentive systems should apply to OCoPs, so senior and middle administration recognize them more fully.

The current study notes that cultivating a knowledge-sharing culture can prove a contributing factor in a firm's and employee's success (Oyemomi et al., 2019). Thus, creating a knowledge-sharing culture is essential to preserving OCoPs' sustainability. This was particularly significant at OilCo, owing to its role in the petroleum industry, which requires applying cutting-edge technology. Apparently, the firm has established a knowledge-sharing culture among its affiliates in Saudi Arabia, while persuading employees to trade their thoughts and knowledge with affiliates globally. Consequently, this cooperative environment can motivate people to share their professional knowledge and technical expertise, by employing OCoPs.

PetchCo findings confirm several studies (Roberts, 2006) that show that those living within an Arab culture (e.g., Saudi Arabia) feel more comfortable when participating in informal settings, that is, OCoPs. This particularly occurs due to the absence of blame for lack of specific knowledge. The cases reveal that some staff lack willingness to exchange knowledge with others in OCoPs due to barriers such as fear sharing incorrect information, wishing to avoid exposure to a technicality, legal problems or language barriers. Individuals are unlikely to perform effectively if they are not confident in exchanging knowledge, particularly when knowledge sharing is not a mandatory requirement.

Actions of staff towards KM initiatives influence the broad culture of firms within the context of this study. Thus, many discreet employees create a culture of conservatism within their organizations, attributing reluctance to share expertise to concern about missing an opportunity for a promotion. They also fear that knowledge shared could subsequently reflect negatively on them. Flexible organizational culture should be nurtured among employees, particularly at the senior- and middle-management levels. Cultivating a knowledge-sharing culture is more conducive to embracing knowledge-sharing behaviour in the company (Ooi et al., 2012).

## **Conclusion and Implications**

This research study contributes to the KM literature and OCoPs by increasing comprehension of how an organizational context enables OCoPs. The study uses two case studies of OCoPs at different stages of implementation. Interviews and observations enabled examination of the intentional establishment of OCoPs within the companies, together with enabling or disabling factors of their activities. The study has extended prior research by proposing a framework for demonstrating how organizational contexts enable OCoP activities and enhance knowledge sharing within OCoPs.

The study findings suggest five interdependent phases, enabling or disabling development of OCoP in the organizational context, that is, (a) establishment; (b) enforcement; (c) recognition; (d) maintenance; and (e) sustainability. The proposed framework arose from observing the phases that OilCo and PetchCo employed in recognizing components, enhancing development of OCoPs and communication in KM at every phase. The proposed framework has only been implemented in businesses in Saudi Arabia, resulting in a need to establish its relevance to various organizational sectors and environments.

In general, the study's findings achieved research objectives and enhanced development of the objective, regarding theoretical and practical implications. First, this article extends the understanding of the nature of OCoPs; the concept previously discussed several studies focusing on KM (e.g., Kirkman et al., 2011, 2013; Macpherson et al., 2019; Nithithanatchinnapat et al., 2016), but without discussing how an organizational context impacts the development of OCoPs. Thus, this research provides a comprehensive picture of the specific phases that implementing OCoPs requires, from their initial establishment to ensuring their efficiency and sustainability. The findings are significant, extending our comprehension of the factors enabling and disabling OCoPs within organizations. The research study establishes the proposed integrative framework to assist managers in developing a comprehensive approach to founding OCoPs. Also, the framework's phases should not operate separately, but, rather, it should be combined to enable OCoPs to realize maximum advantage and sustainability within the organization, particularly during their establishment phase.

Second, the research study provides empirical evidence that adequate support from senior executives can strengthen KM initiatives, reflecting its success in different organizational forms, including OCoPs. Previous research demonstrates the importance of associating OCoP activities with business goals (Annabi et al., 2012; Macpherson et al., 2019). The current research study contends that OCoPs that achieve goals call for establishing and maintaining them in line with the firm's business strategy, that is, at the start of each year. Specifically, the study results suggest the desirability of achieving a closer relationship between OCoP and KM plans, coordinating group activities to achieve the firm's goals.

Finally, based on this study's findings, OCoPs should be embedded in business processes, where both the firm and the employees realize mutual benefits, and the employees can see their contribution valued and recognized. This current study also finds that the configuration of OCoP activities in business processes can both sustain and endorse their objectives from the perspective of the business. This finding is not only consistent with Lefebvre et al. (2016), who indicate that aligning organizational knowledge initiatives with KM goals will help to create the context for social interactions. It also shows that this alignment offers the flexibility to form OCoPs, imparting a degree of authority, that is, establishing new OCoPs without having to seek the approval of senior or middle management.

This study has some limitations. First, it is based on two case studies, involving organizations located in Saudi Arabia, which encourage further studies to provide a more holistic picture of opportunities and challenges that OCoPs face in various regions. Second, the proposed framework is conceptual and requires validation. Future research might examine the validity level of the conceptual model and assure the stability of its enabling and disabling factors for new research on OCoPs.

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**Appendix A. Examples of Data Set****1. Establishment Phase**

*Role of KM Section to Facilitate KM Initiatives (e.g., OCoPs)*

PetchCo.

*In the company the terminology KM is used almost—I don't want to be neutral—exclusively in T&I. We are the department that has a dedicated team called 'Knowledge Management'. You will not find this in the factory, they may call it with different name, for example in the factory they call it the Manufacturing Centre of Excellence. People are excellent at sharing the expertise but not calling it formally 'Knowledge Management'.*

*Broad Accepting of OCoPs*

OilCo

*The top management should have faith in the policies they propose. There is a difference between saying 'we have it, we will write it down, we will put it in the policy', and saying 'you have it written in the policy and you are applying it, and you are leading in the organization by example'.*

PetchCo.

*We have, as technicians, agreed to unite into one group, that is, the Expert Group, where everyone can help each other to resolve [issues] and give insights about a certain problem, drawing from experience. This will save time and money for the company.*

*Workload and Time Pressure can Disable Establishment of OCoPs*

PetchCo.

*I do not think we have a problem with top management, it is with the affiliates—it is a challenge from the management under whom a member works. For example, if we want to arrange a business trip and workshops and so on. I have received promises from the management [in an affiliate] about the person involved, who is a member of the group, but their management is different to mine. We do make excuses for them, because they are really overloaded, but this is one of the main obstacles.*

**2. Enforcement Phase**

*The Essential Role of the Middle Management for Boosting OCoPs*

PetchCo.

*In the process of networking, we sometimes receive a request from another company [i.e. an affiliate] to give them some advice, if we have experience of the issue. But we have priorities, [and it is difficult] to give them our time and effort, as my management is my direct duty, and at the end of the year I will [be] evaluated according to that. So why should I give time and effort to others?*

*Guiding OCoPs' Works*

PetchCo.

*Control can come from both sides. Set-up mechanisms can be controlled by networks personnel, but the company has to control the results. These results should be organized by the company, but the procedures and decisions about how to interact, or how to share, should not be formalized.*

### *Constantly Obtaining Management Approval Can Disable Enforcing OCoPs*

OilCo

*It is organizing. There are requirements you need to follow if you wish to establish [O]CoPs. You should be clear. You should have a certain experience and a minimum number of members. Moreover, you should obtain management approval. The matter requires justification, no subject can be used for communities of practice. You must satisfy minimum requirements.*

PetchCo.

*Endorsement of activities by management is important, because every year we have to set goals, we call them short term, where we set objectives for the whole group. The Expert Group will have the same objectives, so we need to get endorsement or approval from management for these activities.*

## **3. Recognition Phase**

### *Ubiquitous Impact of OCoPs' Works*

OilCo

*This is the major aspect—'showing value' to encourage people to participate. Because some [O]CoPs are vague and do not have clear work [to present], it is necessary to show value, and to be very specific and have a purpose.*

PetchCo

*This kind of appreciation means so much to the engineers—having a visit from the Vice President, who will acknowledge their hard work, and after three or four months, the Executive Vice President might pay us another visit. This way, I can change the culture of the people. So when their direct managers hear that they are appreciated by the Vice President, they will start to pay more attention to them. That is why I do not go to the direct managers, or even the General Manager, because you are wasting time with them, and [they] do not really pay attention to what I want; but when the order comes from the top they comply with it, and will take good care of those who work with them, as they know that the top management cares about them.*

### *Binding OCoPs' Objectives with the Company's Business Plan*

OilCo

*One of the communities of practice we tried to form was not accepted and I was requested to resubmit an application, in addition to following other procedures. So, you take your time working on paper and saying whether we need this or not. Not every subject can be covered by an [O]CoP. So, you should be clear and satisfy requirements in order to establish [O]CoPs.*

PetchCo

*Whatever you are doing needs to be linked to business objectives, linked to the business plan... Things need to flow from 2020, five strategies into the five-year plan, down to the one-year plan. They need to be working on business related issues, on the manufacturing business plan; they need to have key deliverables. It is not just a group of people getting together. They are getting together because they have collective knowledge that they want to optimize.*

### *Provision of Appreciation and Gratitude for OCoP' Members*

OilCo

*If we are a strong [organizational] community of practice, then this will be reflected in the annual member review at the end of the year, and consequently the company will recognize it.*

PetchCo

*When you have a team and you recognize one of the team for doing something you are actually motivating the other members to do the same, so it is very important to recognize the achiever, the best achiever. The other thing is that when you recognize people's work and effort, this helps retain staff. If you do not recognize them... you know most people like recognition, like to be visible and for their work to be announced as in newsletters, for example.*

*The Influence of Diversity of OCoPs' Concept*

OilCo

*This is the first time I have heard of this term. This idea is not familiar to me because I am busy with work. When we started employment here, our duties were defined. For example, you have 100 oil wells, so my duties are confined to them. In my view, our management has a big role [to play] in improving this aspect. About three years ago, the company, started to affirm very strongly that knowledge sharing and knowledge transfer are crucial.*

PetchCo

*[M]aybe the terminology is not clear... Here they call them 'Networks'; they do not call them [O]CoPs. If you say to them 'Domain', they will know about it. However, there is mixing between Domains because they were established recently, about three years ago, and it is not on the radar of top management in any effective way.*

#### **4. Maintenance Phase**

*OCoPs Are Better Set Outside the Organizational Structure*

OilCo

*Communities of practice should be flexible and not in a division called 'Communities of practice', or Unit of [O]CoPs. Further, it is not appropriate to bring some subject matter expert and appoint him as communities of practice specialist. However, it is part of his task to support [O]CoPs.*

PetchCo

*Creating the organization, [and] establishing any change within the organization would make some things abnormal, because [organizational] communities of practice are very dynamic [and] complex, and this, combined with the characteristics [of OCoPs] as big and small and so on, would make it difficult to manage such organizations. Sometimes, communities of practices merge. So if you get a merged organization within a company, the whole project will be affected. This is why the company decided to keep the communities of practices as virtual [O]CoPs.*

*Inflexible Management in the Global Company Can Affect Expanding Employees' Awareness of Knowledge-Sharing Activities*

OilCo

*The company has to consider issues like points of experience and points of knowledge that the company is gathering in those communities. There were attempts to compare communities of practice and organizations but the decision, [was] that, for the benefit of the company, the company is to connect [with] organizations that are not being controlled by administrative organizations of the company using control by technical policies and procedures.*

## 5. Sustainability Phase

### *Formalizing Systems for Reward*

OilCo

*You can add your participation in [O]CoPs to your achievements. So any technical person who has participated in [O]CoPs' activities and delivered (for example) a presentation or documents can add this to their CV. It is not only a financial reward but also a benefit to your CV. I would prefer to have a reward system, because [otherwise] some people do not give it such importance or value.*

PetchCo

*You can put a reward system in place, some drivers encourage people to participate. The main goal is to find people who are willing to work on these activities even without an allowance, but if there were some reward in return, that would be an assisting factor.*

### *Cultivating a Knowledge-Sharing Culture*

OilCo

*Knowledge sharing is encouraged within the company. So, through this tool you can suggest any ideas and transfer them to your direct supervisor, who will pass them along to the Engineering Management Services, and if the idea is implemented and is successful at the worksite and it possible to use it elsewhere it can be circulated to other departments in the company.*

### *Individual Behavior Can Affect Participation in OCoPs*

OilCo

*I think local culture is winning now. It means that if you are from my tribe, I will share my knowledge with you. If you are not, I will not share it with you. If you are a technician, I will do so. Bear in mind that clan culture exists in the company. All the sectarian problems from local culture influence organizational culture.*

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