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Article

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MANAGEMENT | RESEARCH ARTICLE

The role of project management office (PMO) manager: A qualitative case study in Indonesia

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Abstract: In recent years, the need for PMOs in various organizations has increased due to the positive impact of PMOs on the projects being carried out. This phenomenon is also occurring in Indonesia, but it does not work the way PMO should. This study, therefore, attempts to provide the role of the PMO manager so that they can adequately carry out their task, as there is as yet no literature that specifically addresses the role of the PMO manager. This study uses descriptive qualitative research methodology by performing three main activities. First, determining the functions of PMO that were derived from 70 papers. Second, making the pre-FGD survey based on the findings from the literature review of the functions of PMO. Third, making focus group discussion (FGD) to discuss, validate the result of the pre-FGD survey, and determine the role of PMO manager. This study found 60 roles of PMO manager within the scope of the seven functions of PMO. Although the study was carried out as part of the PMO in Indonesia, the respondents were PMO Managers. practitioners, and academics from Indonesia, the findings contribute to

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the latest PMO literature developments and open up opportunities for future research on the PMO manager's competency framework.

Subjects: Human Resource Development; Operational Research / Management Science; Operations Management; Project Management

Keywords: PMO Manager; PMO Roles; PMO Function; PMO Competency; Competency

1. Introduction

Project management is the practice of starting, planning, implementing, monitoring, and completing a project or work that aims to achieve specific goals at a particular point in time (Lippi & Mattiuzzi, 2019). Project management can also be defined as monitoring and controlling the achievement of project goals and objectives (Aftab et al., 2016). According to the PMI declaration, project management applies knowledge, skills, tools, and techniques to meet the requirements needed in the project (Abdelghany et al., 2017). While the Association for Project Management (APM) gives a different definition, namely, a process by which projects are defined, planned, monitored, controlled, and delivered to realize the agreed benefits (Moehler et al., 2018). Project management was identified as a facilitated function due to its organized process and soft skill competencies such as teamwork, leadership, and cooperation to cope with complex problems more effectively and efficiently (Silva et al., 2021). Using an effective project management methodology requires changes in the company's organizational structure and the introduction of new positions and departments, among which the project office or project office plays a significant role (Tulembayev et al., 2019).

The uncertainty appears in almost all aspects of a project (Haghighi et al., 2019). Therefore, to deal with uncertainty in a project, an organization shall be set up to have end-to-end visibility of the projects. For this reason, a Project Management Office (PMO) is introduced as part of an organization to oversee a project and provide valuable insights into the decision-making process. The importance of PMO has been significantly growing since 1994. It is found that up to 76% of senior executives have established three PMOs at the executive level (Hobbs & Aubry, 2010a). From a financial perspective, PMO had projects at stake with an average value of 100 million in 2012; hence, it allows the PMO to evolve to maximize its importance within the organization (Faridoon, 2014). In 2019, KPMG, the Australian Institute of Project Management (AIPM), and the International Project Management Association (IPMA) conducted a survey, and they found that 40% of the organizations are using PMO to coordinate various projects (Klynveld Peat Marwick Goerdeler Duarte et al., 2019). PMO is seen as a valuable organization that brings benefits by helping organizations manage their projects more effectively. It is reported that three out of four active PMOs provide a more structured path for project managers compared to a global average of 41% (ESI International, 2013). PMO is also becoming more imperative in India, as 76.8% of PMO managers claim that PMO has increased customer satisfaction, which is a measure of PMO effectiveness (ESI International, 2012). Therefore, it can be concluded that an organization with a PMO has a significant influence, both on the project and from both internal and external stakeholders. A PMO is also responsible for providing support functions to the project management team. The presence of PMO in an organization is becoming a growing need for the organization to manage any ongoing or future projects. The importance of PMO presence in Indonesia is becoming increasingly inevitable. Looking at the state of PMO around the world, the exact condition has also been occurring in Indonesia in recent years (Ichsan et al., 2018a).

A study in Indonesia has found that around 40% of commercial banks do not have a formal PMO. For those who have formal PMO, the PMO influences the implementation of strategic initiatives significantly, and thus they have a significant impact on the firm performance of the banks (Ichsan & Hamsal, 2019; Ichsan et al., 2018b). Ichsan (2020) found that it is also a tendency in other industries. This study found that out of 125 respondents (with various job titles, such as PMO leader, PMO, manager/lead/specialist, PMO officer, and senior program manager) up to 87%

had a formal PMO in their company. In contrast, 9% of the respondents do not have a formal PMO or at least a plan to establish a PMO. This study has also found that 55 out of 114 respondents failed to see that senior management was satisfied with the existence of PMO as expected. Hence, it can be concluded that there is an increasing demand for PMO from various industries in Indonesia. The functions of PMO were not performed as expected, and the perceived needs of the role of the PMO manager are evolving. PMO in Indonesia is needed to support the effectiveness of various project implementations.

Due to the ambiguity of the PMO practices especially in Indonesia, the authors find it imperative to explore what are the main functions that shall be performed by PMO. Furthermore, considering the importance of the functions, it is also essential to find out what roles the PMO manager plays in order to perform the functions of PMO. Apart from a proposed framework by the Project Management Office (PMO) professional organization in other countries, it is believed that it was established using a more practical approach. Furthermore, it is believed that there has been a lack of studies exploring the function of PMO managers/leaders. Most of current studies have been focusing on the role of the PMO as an organization (Aubry & Hobbs, 2010; Hobbs, 2007; Hobbs et al., 2008; Hobbs & Aubry, 2007, 2008, 2010b). Therefore, this study is imperative to fill the gap in the individual role in addition to the organizational role.

This research aims to conduct a complete literature review packaged in a qualitative study approach in two phases: surveys and focus group discussions (FGD). This research then contributes to or becomes one of the updates to the latest PMO literature and opens up opportunities for future research to further develop PMO manager competencies. Ultimately, it helps PMO managers to have such skills to make the PMO the center of project success in any company. The implications of answering the research question are knowing the updated PMO role and helping to create a PMO manager competency framework. In addition, this paper aims to contribute to the PMO Value Ring, one of the models that guide PMO strategy as PMO managers understand the phases of the PMO Value Ring to run the PMO in their organization (Duarte et al., 2019).

2. Literature review

2.1. Project management office (PMO)

According to Desouza and Evaristo (2006), the Project Management Office or PMO is an organizational unit established to improve project performance by providing standards and methodologies, thereby expanding knowledge of project management practices, and from the lessons learned through implementation. The organization benefits from various projects (Wedekind & Philbin, 2018). Another definition is that the PMO was established to improve the efficiency and effectiveness of the organization by supporting project managers, teams, functional areas, and organizational levels (Oliveira & Martins, 2020). According to Project Management Institute (2013), PMO is an organizational structure aiming to standardize project management processes and facilitate the exchange of resources, methods, tools, and methods (Katunina, 2018). The PMO can be seen as a showcase project center addressing various programs with a high strategic impact on the entire organization (Braun, 2018).

The existence of PMO is a necessity for public and private sector organizations whose main activities are project-related. Because of this, the project management unit in the host organization can actively interact with the project and business environment and be responsible for improving the project management skills of the host organization (Khoori & Hamid, 2020). As a structure that standardizes processes, PMO facilitates the sharing of resources, methods, tools, and techniques to regulate management and enable the development of routines (Rigassi & Campos, 2018). According to Aubry and Hobbs (2010), another advantage of using PMO is the increase in the value contribution of project management, which is ensured by the efficient and effective use of resources by the PMO (Scheiblich et al., 2017).

2.2. PMO as the Organizational Function

Some functions are defined from previous studies. Recent studies have defined PMO function as one of the organizational functions focusing on providing overall views of the managed projects. First, PMO as knowledge management, i.e., its function is to carry out retrospective learning and become a knowledge center to project work to become the center of organizational learning (Arbabi et al., 2020; Lacruz & Cunha, 2017; Lucca et al., 2020; Paton & Andrew, 2019). Second, PMO is a supporting role that acts as a method provider for projects, provides services and support for projects, and monitors and controls ongoing projects (Braun, 2018; Duarte et al., 2019; Fateev & Zaporozhets, 2020; Otrá-Aho et al., 2019; Paton & Andrew, 2019; Wedekind & Philbin, 2018; Zouheir et al., 2019). Third, PMO is a Strategic Alignment in which the PMO has the function of creating added value for projects, contributing to project success, and managing project portfolios (Bagherpour & Erjaee, 2017; Braun, 2018, 2018; Bredillet et al., 2018; Ershadi et al., 2021; Fateev & Zaporozhets, 2020; Ichsan, 2020; Ko & Kim, 2019; Otrá-Aho et al., 2018). Fourth, PMO is an enabler for project performance, with the PMO serving as the project evaluation manager, centralizing different perspectives on company performances and refining and standardizing processes in projects (Carvalho et al., 2018; Fateev & Zaporozhets, 2020; Junqueira & Passador, 2018; Lacruz & Cunha, 2017b; Siregar et al., 2018). Fifth, PMO is a governance control, whereby the PMO has a permanent function of leading projects that support company's operational activities (Eriksson & Leiringer, 2015; Fateev & Zaporozhets, 2020). Sixth, PMO is an innovation enabler. PMO has a pivotal function in managing innovative projects and achieving long-term competitive advantages and growth (Ershadi et al., 2021; Sergeeva & Ali, 2020a). Seventh, PMO is an organization performance enabler, a function used to dynamize the project work process, provide administrative support, and generate customer satisfaction and employee efficiency (Desmond, 2015a).

These seven PMO roles come from various publications, both magazines and conferences. For more information on the definitions and sources obtained, see the explanations in Table 1.

In line with this research, the study of Yesica et al. (2022) has concluded several PMO manager's function that comprised of following perspectives (Roden et al., 2017):

- a. Communication to related guidelines and establishment of project management procedures
- b. Interaction with stakeholders in the organization.
- c. Communication and adherence to methodology of project, program, and portfolio in the organization
- d. Managing communications and feedbacks
- e. Reporting and analysis

Furthermore there are some other function that are also concluded from some other studies that is relevant to the PMO manager's tasks (Faridoon, 2014; Jerbrant, 2013; Roden et al., 2017; Urbancic et al., 2004a; Zouheir & Rachid, 2020).

- a. Project support: Developing a team, supporting the project team, managing stakeholders and monitoring, and controlling project progress.
- b. Strategic alignment: Participating in portfolio management and strategic planning and contributing to the project's success.
- c. Governance oversight: Supporting operational activities within the organisation and interacting with stakeholders.
- d. Project performance enablers: Leading the team, providing project evaluations, improving project standardisation, and reporting project progress to upper management.
- e. Organisational performance enablers: Having responsibility for every project development and implementation process.

Table 1. Functions of PMO

Function of PMO	Definition	Sources
Knowledge Management/Repository	PMO acts as a knowledge management/repository, which is a function to carry out a retrospective learning, information processing, knowledge storage, and exchange process and a facilitator of organizational learning and the integration of resources within the organization.	(Fateev & Zaporozhets, 2020; Aubry et al., 2011; ESI International, 2013; Hubbard & Bolles, 2015; Aubry, 2015; Khaksefidi & Miri, 2015; Lacruz & Bagherpour & Erjaee, 2017; Ichsan, 2020; Milin et al., 2012; Müller et al., 2013; Nadae & Carvalho, 2017; Pemsel & Wiewiora, 2013; Haghighi et al., 2019; Salameh, 2014; Sanz & Ortiz-Marcos, 2019; Shenjun et al., 2014; Spalek, 2012; Tshuma et al., 2018; Widfross & Rosqvist, 2015)
Supporting Role	PMO has support role capable of providing project methodologies, creating significant benefits for the parent organization, providing project management support and services, and providing project monitoring and control.	(Braun, 2018; Aubry, 2015; Bagherpour & Erjaee, 2017; Duarte et al., 2019; Catarina et al., 2017; Cuthbert, 2012; Fateev & Zaporozhets, 2020; Fan, 2013; Jalal & Koosha, 2015; Kim & Yoon, 2011; Lavoie-Tremblay et al., 2017; Mariusz, 2014; Monteiro et al., 2016; Otrá-Aho et al., 2019; Paton & Andrew, 2019; Shenjun et al., 2014; Spalek, 2012; Szalay et al., 2017, 2018; Wedekind & Philbin, 2018; Zouheir & Rachid, 2020)
Strategic Alignment	PMO acts as a strategic alignment, a feature that can add value to the project, manage project portfolios, contribute to project success, develop a business ecosystem, and provide more project authority in generating project outcomes.	(Barbalho et al., 2017; Bredillet et al., 2018; Cahyadi & Firman, 2020; Esquierro et al., 2014; Fayadh, 2020; Karayaz & Gungor, 2013; Khoori & Hamid, 2018; Ko & Kim, 2019; Kutsch et al., 2015; Linde & Steyn, 2016; Meléndrez L. et al., 2021; Ogbu & Amade, 2017; Otrá-Aho et al., 2018; Salameh, 2014; Sandhu et al., 2018; Shenjun et al., 2014; Unger et al., 2012)
Project Performance Enabler	PMO acts as a Project Performance Enabler, a role it has to lead project evaluations, centralize multiple perspectives on business performance, refine and standardize processes, manage benefits to improve cost performance, and influence project communication.	(Aubry & Brunet, 2016; Aubry & Hobbs, 2010; Carvalho et al., 2018; Fateev & Zaporozhets, 2020; Guimaraes et al., 2018; Junqueira & Passador, 2018; Lacruz & Cunha, 2017; Siregar & Mohammad Ichsan, 2018; Pinto et al., 2019; Santos & Varajão, 2015; Tsaturyan & Müller, 2015; Ward & Daniel, 2013)
Governance Control	PMO acts as governance control, a function owned by the PMO to manage projects that support operational activities within the company	(Eriksson & Leiringer, 2015; Fayadh, 2020)
Innovation Enabler	PMO acts as an innovation enabler who plays a crucial role in managing innovative projects, achieving competitive advantage and long-term growth, and coordinating and stimulating innovation.	(Artto et al., 2011; Ershadi et al., 2021; Pansini et al., 2014; Sergeeva & Ali, 2020)

(Continued)

Table1. (Continued)

Function of PMO	Definition	Sources
Organization Performance Enabler	PMO acts as an Organization Performance Enabler, a function that makes the project process more dynamic to build trust and mutual understanding, provide administrative support, and achieve customer satisfaction and employee efficiency.	(Artto et al., 2011; Desmond, 2015b; Zohrevandi, 2014)

3. Research Method

This study uses a qualitative approach where the research is divided into two main phases: survey and FGD. This approach is broken down into several sections, including defining research questions outlined in the introduction, identifying research sources, reaching the discovery process using keywords, extracting data, and analyzing results to answer research questions. The research flow was shown in the following research process as shown in Figure 1:

3.1. Research Phase 1 – Systematic Literature Review

Before getting into the actual research phase, searching the functions of the PMO from various papers has been performed in the previous study (Yesica et al., 2022). The papers search was carried out from December 2020 until 30 April 2021. A total of 310 papers were found, and after the extraction process, 70 papers got through. The keywords used in this search were as follows: “Project management office,” “PMO,” “PMO function,” and “project management function.” English-language articles in peer-reviewed journals and conferences are the focus when searching the papers.

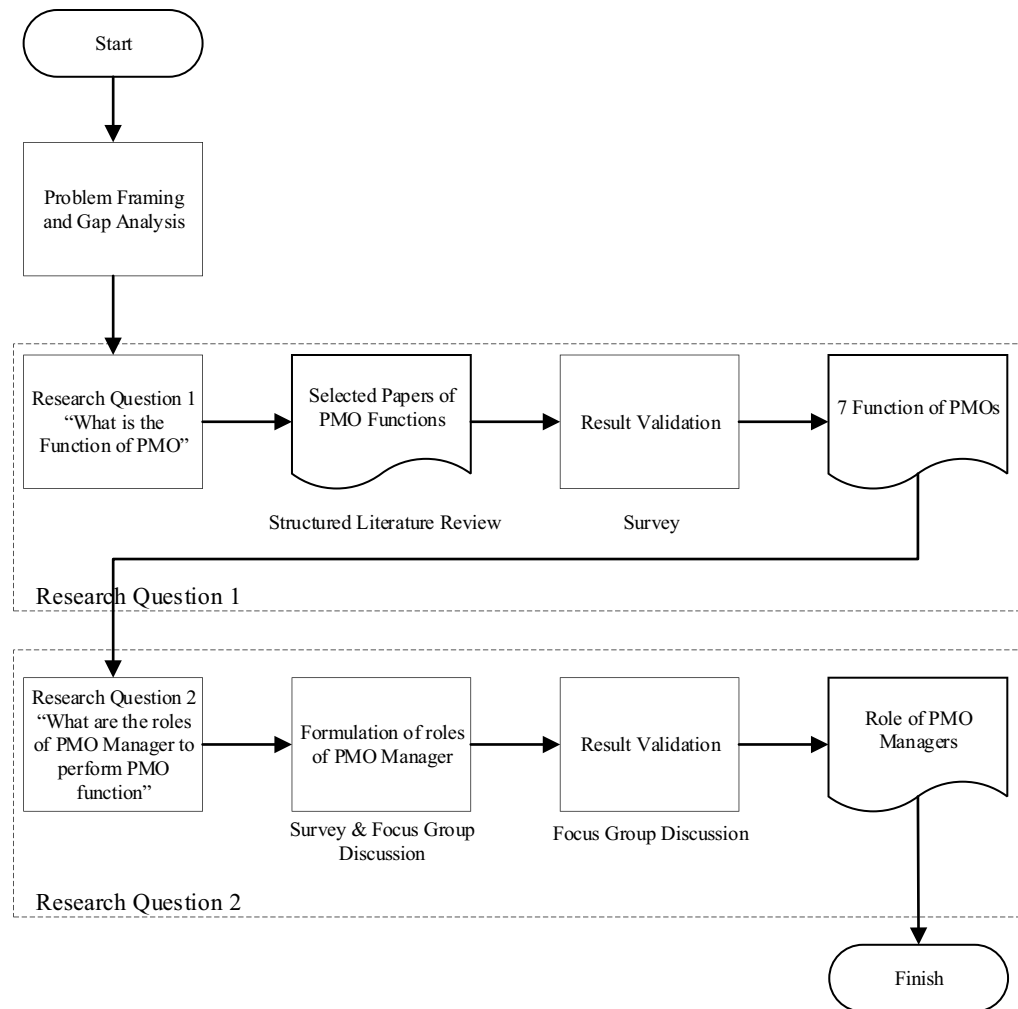
After entering keywords, papers on the keywords found are displayed as “Studies found.” The next step is to choose which paper to include or not. The trick is to read the title of the paper. Suppose the published title does not determine whether the thesis is accepted as a candidate paper. In that case, the next step is to read the executive summary. If the title and abstract match the research question specified in this study, this work will be downloaded and categorized as a “candidate study.” This particular need led us to exclude many of the articles from the initial search results. Deleted articles that did not examine the explanation of the PMO function were found in the study, taking into account the survey results. After the “selected study” was discovered in research, the function of PMO was found. The following is a further explanation in Figure 2.

3.2. Survey and focus group discussion

After the literature review has been performed, furthermore the result was clarified using a pre-FGD survey and answered by the respondents to confirm the role of the PMO manager Project Management Office Professional Indonesia (PMOPI), the first organization to set up a PMO community in Indonesia, provided a list of respondent names willing and able to become respondents and resources in the author’s FGD. About 11 respondents with backgrounds of PMO practitioners, the head of the PMO, and educational practitioners were selected.

This FGD was performed once. However, before the FGD was carried out, the author distributed, as a preparation activity, a pre-FGD questionnaire using Microsoft Word. The questionnaires were distributed by sending questionnaires to each respondent’s email address. The duration of the specified work is from 14 April 2021 to 7 June 2021. The specified period is quite long, considering that the respondents work quite long each week and need time to work on the given preparation activities prior to FGD. In these preparation activities, the invited PMO managers are requested to

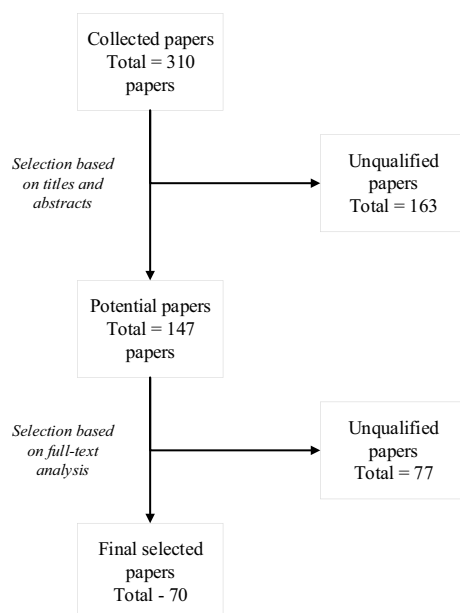
Figure 1. Research workflow.



jot down the function of PMO managers based on their best practices and experience. After the respondents had completed this activity, they sent the results by email. In this activity, the PMO functions are first determined. These PMO functions come from a collection of literature review results and have been grouped into seven PMO roles (Yesica et al., 2022). The respondents then wrote down job descriptions that the PMO manager should perform for those PMO roles. Each function is assigned 10 lines in a table to fill in the corresponding tasks of the PMO manager so that the respondents can answer according to their preferences. Respondents do not have to fill out all 10 lines but must provide at least two PMO manager roles. The preparation activities could have differences and similarities. Finally, the result was concluded based on the relative similar functions that have been validated by the respondents.

After the preparation activities have been collected, the invitations for FGD have been sent to the respondents. The FGD will take place on 12 June 2021 via the Zoom meeting platform. The FGD started with words of welcome and thanked the respondents for their willingness to participate in this study. Then, it comes to explaining the FGD process from start to finish. The following schedule discusses the collected pre-FGD results and shows each PMO role's job descriptions. The respondents were later allowed to agree or reject the job description or express a different opinion. The respondents' answers were given by filling out a Google Form. So, when the screen shows the job description of each role, respondents fill out the Google form provided. The work is carried out simultaneously, i.e., when the respondents have completed the first function segment, they write

Figure 2. Paper selection process.



“Done” in the chatbox, so it can be seen whether they have completed the filling or not. When the filling process is finished, there is a break of 10 min to compile the data. Also, the data were collected from respondents who disagreed with the job descriptions displayed. For example, when the FGD was carried out in the next meeting, the respondents could justify their rejection or explain it in more detail. Finally, the last session is a discussion regarding the results. Also, it is a moderated discussion so all respondents can have their say.

After the results of the FGD are available, the authors will compile the data received and summarize the roles that the PMO manager must have according to the PMO functions. The method of a summary is to collect the respondents’ answers in the FGD using an assessment in the form of a score. Here is the technical evaluation:

- If the respondent agrees with the PMO job description, they will receive a score of 1
- If the respondent disagrees with the PMO job description, they will receive a score of 0
- If the respondent disagrees but makes entries, the entry is adapted to the PMO manager task and automatically receive a score of 1
- If the total number of points per job description is more than 4 (or at least 4 out of 9), the assignment will be declared eligible

4. Results

After mapping the results of the FGD, it mapped all results by the assessment procedure in Chapter 3. It found that the respondent approved all job descriptions and discarded them either before or after the FGD. There are 60 roles for PMO managers. The findings from the FGD can be summarized and explained in Table 2 as follows:

- Knowledge Management/Repository: PMO Manager is responsible for managing the processes and tools of Project Management (PM) Knowledge Management (KM), ensuring that ready-to-use information and resources work correctly, collecting all data for implementation progress, all risk issues, and reports on the implementation of measures that PMO lead as a knowledge center for PM and organize the latest PM approach from information media.
- Supporting role: The PMO manager is responsible for building the competence of the PMO team, identifying building, and managing the correct PM methodology, maintaining the project implementation corridors by translating project strategy guidelines, and is the only trustworthy source for

Table 2. Role of PMO Manager

No	Function of PMO	Role of PMO Manager
1.	Knowledge Management/Repository	1. Identify, create a knowledge management taxonomy, build awareness and competence, and manage project management (PM) knowledge management (KM) processes and tools
		2. Gather and compile data on lessons learned, knowledge sharing sessions, and gather and provide input based on crucial historical information
		3. Ensure that the ready-to-eat information and resources are working properly
		4. Actively promote the role or function of the PMO in the organization
		5. Gather all data for the implementation progress, all risk issues, and reports on the implementation of the measures
		6. Manage PMO to become the knowledge center in PM
		7. Design of PM activities and provision of PM process guidelines
		8. Perform regular checks that the KM system is working effectively and providing benefits
		9. Gather the latest approaches to PM from the information media
		10. Create a new draft concerning the existing PMO process guideline
		11. Providing training and mentoring for project managers regarding PMO and project implementation
2.	Supporting Role	1. Build the PMO team's competency identity, build and manage appropriate PM methodologies
		2. Create KPIs for rewards
		3. Maintain corridors for project execution by translating project strategy guidelines
		4. Create a forum to ensure alignment between strategy and implementation
		5. Support all stakeholder risk questions
		6. Create and manage SOPs, tools, and techniques for PMO
		7. Create and set standards for PM governance compliance and create tools and standards
		8. Selection of the technical expert (SME) required in the project
		9. Create and define a framework according to the needs of the organization
		10. To be the only trusted source for a professional corporate PM implementation
		11. Training of staff in the application of project methods
3.	Strategic Alignment	1. Identify, create, and manage processes, team skills, and tools for organizational change management and managing the organization's project portfolio

(Continued)

Table2. (Continued)

No	Function of PMO	Role of PMO Manager
		2. Have discussions and agree with crucial management stakeholders on the roles and values that the PMO must carry out
		3. Implement top management guidelines and maximize benefits at the company level
		4. Provide an analysis of the project risks and benefits with options and consequences
		5. Specify the order of priority and change in project status
		6. Analyze and evaluate portfolios and programs
4.	Project Performance Enabler	1. Carry out a risk analysis of each project and carry out a project control
		2. Identify, create and manage processes, competencies, and teams for project appraisal and evaluation as well as benefits realization management
		3. Ensuring the governance meeting and implementation and implementation of the project reporting
		4. Use monitoring tools to provide information and analysis of the project situation
		5. Conducting the audit, providing reports and feedback on audit results
		6. Have business acumen, prioritize projects, and communicate well with stakeholders
		7. Provision of timely reports for all levels (project to portfolio)
		8. Map the project under vision and mission, business model, KPI, or company goals
5.	Governance Control	1. Convince the stakeholders to follow the PMO's governance project
		2. Control the project from the side of the implementation of the PMO SOP
		3. Identify, develop and manage the project governance structure and process
		4. Assistance with baseline control such as scope, schedule, and costs and has a project control function
		5. Establishment of a platform to monitor the implementation of strategic initiatives
		6. Verify and validate to ensure product project control
		7. Create milestones and schedules and weekly meetings
		8. Establish a governance framework for a consistent P3M implementation
		9. Become the competence center for all PM matters
		10. Monitor project progress and make sure team members are performing tasks efficiently
6.	Innovation Enabler	1. Creation of innovation championship, award winners, and provision of PM certification facilities
		2. Develop the competence of the PMO team

(Continued)

No	Function of PMO	Role of PMO Manager
		3. Identify and manage critical success factors for innovative projects and build an ecosystem that stimulates innovation
		4. Application of project management methods and techniques such as DMAIC (Define, Measure, Analysis, Improve, & Control) to real cases in projects
		5. Lead the PMO team to participate in new technology assignments or workshops actively
		6. Describe challenges during project movement and alignment with business processes
		7. Implementation of project evaluations/ retrospectives of the tools used in the future
		8. Support the team at the retrospective
7.	Organization Performance Enabler	1. Do business process engineering related to project management and customer satisfaction surveys for each project
		2. Identify, create and manage processes, team skills, tools, and PMO services as required by the organization
		3. Create a forum for understanding, support, and coordination from stakeholders
		4. Assignment of PIC to each stakeholder for participation in the project
		5. The PMO must communicate with the business owner, be neutral towards the project and be able to resolve conflicts within the project
		6. Work with other department heads to define, prioritize, and develop projects

a professional PM implementation in the company and training of the staff in the application of the project methodology.

- Strategic alignment: The PMO manager is responsible for discussing and coordinating the roles and values that must be carried out by the PMO with crucial management stakeholders, assigning priority sequences and project status changes, and identifying, building, and managing processes. Team skills and tools for organizational change management and project portfolio management of the organization.
- Enabler for project performance: The PMO manager has business acumen, prioritizes projects and good communication with stakeholders, assigns tasks according to the vision and mission, business models, KPIs, or company goals, and discusses and agrees on roles with the vital management stakeholders and values to be carried out by the PMO.
- Governance control: The PMO manager's job is to convince the stakeholders to follow the project governance made by the PMO, to help control baselines such as scope, schedule, and cost, and to have a project control function, verification, and Perform validation to ensure the product, project control and monitor project progress and ensure that team members are performing tasks efficiently.
- Innovation Enabler: The PMO manager has the task of creating an innovation championship, honoring winners, providing PM certification facilities, carrying out project evaluations/retrospectives on tools used in the future, and leading the PMO team actively to engaging in tasks or technology workshops. Participate in the new and apply project management methods and techniques such as DMAIC (Define, Measure, Analysis, Improve, and Control) to real cases in projects.
- Enabler for organizational performance: The PMO manager's job is to develop business processes related to project management and customer satisfaction surveys for each project, to create forums to gain understanding and support and coordination among stakeholders, and to work with other department heads to determine, prioritize, and develop projects.

5. Conclusion and contribution of the study

5.1. Conclusion

This study discusses the role of the PMO manager through the functions of PMO that have been found. To date, many publications have only addressed the roles and functions of the PMO. However, few or very few have discussed the role of the PMO manager. Any new PMO established must reconsider the role of the PMO manager in light of the state of PMOs, either globally or in Indonesia, which are in high demand.

Then, this study collects 70 papers containing the functions of the PMO. It can be concluded that there are seven functions of the PMO: knowledge management/repository function, supporting role, strategic alignment, governance control, enablers for project performance, innovation, and organizational performance. These seven functions of PMO determine the result of the PMO manager's roles that were carried out in two stages: using the respondents' pre-FGD result as a data source and validating the functions of PMO that were found. That is, using a pre-FGD survey that contains the content of the functions of PMO and asks the respondent about the role of the PMO manager from the function found. Then, the results are collected and displayed during the FGD, where the validation of the results takes place.

This research certainly has limits. First, this FGD was conducted on respondents who have served as PMO practitioners, PMO leaders, and educational practitioners. Second, this research is done in a case study in Indonesia, explicitly describing the background in Indonesia and using Indonesian respondents, so the results provided are sure to meet the needs of PMOs in Indonesia. Therefore, it will be fascinating and more thorough if future research on the state of PMO is conducted globally or institutionally and only focuses on a few sectors or industries.

The following future research and development measures have been identified:

- Creation of a PMO manager competence framework. The results of this study are the basis for developing PMO manager competencies that later can be used in future research by combining a manager's competencies in general. However, since APM has issued competencies for PMO managers, they stated that not all competencies created are relevant for all specialists but that the framework is designed in this way and identified as role-relevant (Associations for Project Management (APM), 2015). Due to these limitations, creating a more comprehensive PMO manager competency framework is possible.
- Two publications state that the PMO manager is connected and accountable in different ways to many parties. For example, he is responsible for negotiating and organizing project offices, departments, and project portfolios, performing many management activities, maintaining communication, and delivering essential updates and information to stakeholders (Jerbrant, 2013; Urbancic et al., 2004b). From this research, the focus of the results can be continued with stakeholders' perspectives on a project, namely the project manager, the project owner or sponsor, and clients outside the organization.

5.1.1. Contribution of the study

This study provides more insight into the current development of competencies that are required not only by the project managers but also the PMO Managers, considering the importance of their role in supporting the organizations in providing more visibility to the projects. Depending on the needs in accordance with the contingency theory, the PMO manager's function may differ from one organization to another; however, the organization may still need to decide what function is required from the PMO that brings more benefit to the organization. The result of this study can be used as a guide to the organizations in setting up roles and responsibilities of PMO managers based on the business needs, where it can be enriched more to the PMO manager's competence development framework and its program to develop them to be more effective in performing their role. The proposed framework can be further investigated in the context of other countries, by conducting a similar study where the respondents are from various industries and regulations from each respective country.

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