A critical review into the evolution of Japanese Project Management: a comparative approach

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Abstract

The success or failure of a company relies on how a particular project is managed, and the proper use of project management improves management performance. This article emphasizes the importance of discovering more about project management with the help of two globally renowned project management methods, namely the United States (US) method (Project Management Body of Knowledge (PMBOK)) and the Japanese method (Project & Program Management (P2M) and Kaikaku (reform) Project Management (KPM)). The objectives of this article are (a) to identify the features and essence of P2M/KPM; and (b) to compare them with those of PMBOK. Features and essence of P2M/KPM are innovative reformations, value creation, flexibility, mission-driven approach, 3K- kakusin (innovation), kaizen (improvement) and kaihatsu (development) and 3S- scheme, system and service project models. The comparative results show that PMBOK and P2M/KPM both have different philosophies in terms of scope, managerial approach and problem-solving methods. Identifying suitable criteria will provoke interest in organizations to implement the most suitable method in their project management processes.

Keywords: P2M, KPM, PMBOK, comparison

1. Introduction

The proper use of project management radically improves management effectiveness and performance [1]. Although project managers in different countries run projects of a similar nature, they approach them in different ways in order to bridge the cultural differences of international stakeholders [2-3]. The most common and well-established United States (US) method, the Project Management Body of Knowledge (PMBOK), has been adopted in many organizations around the world, including in Japanese organizations. Thus, it is interesting to point out the different project management methods that are more or less influenced by different cultures.

On the other hand, although more than 2000 Japanese have obtained the Project Management Institute's (PMI) Project Management Professional qualification [4], the Japanese also generated their own approach to project management in 2002, namely Project & Program Management (P2M). Although P2M is still being put into practical use both internationally and in Japan [5], an improved paradigm called Kaikaku (reforms or innovative reforms) Project Management (KPM) has been introduced [6]. The application and effectiveness of P2M and KPM need to be addressed, as many studies have shown an increased interest in and appreciation for Japanese management principles and practices in recent years [7].

This research thus stresses the relevance of identifying the features and essence of two globally renowned project management methods, PMBOK and P2M/KPM. A critical review of both these management methods was carried out and by clarifying the pros and cons of each method; a project manager can apply them when managing projects in order to obtain the ultimate results. Therefore, the objectives of this article are (a) to identify the features and essence of P2M/KPM methods, and then, (b) to compare them with those of PMBOK.

2. P2M and KPM

Japan's economy declined in international competitiveness, dropping from number one in 1993 to number 30 in 2002. Furthermore, it was threatened after China became the world's factory, by producing improved qualities of various manufacturing goods at low costs [4]. These factors inspired the Japanese to develop their own project management methods.

P2M is the first Japanese project and program management for enterprise innovation developed by Professor Shigenobu Ohara in 20016 [8]. The P2M model aims at creating a strategic framework of innovation to improve corporate values in project management methodologies [4] and to create a way for Japanese enterprises to develop more innovative approaches to ensure that their businesses can compete in the global business environment [9]. The P2M model has a combination of entry-level project management, program management, and 11 segment management frames [8]. The essence of P2M is focused on the profiling ideas of complexity to implementation and findings solutions to complex issues [10].

Subsequently, to survive and regain their global competitiveness, the Japanese looked for solutions in the kaikaku (reforms) of business management, organization, and technology [11]. Although not all companies could accept reformation in order to keep up with the economic crisis, it was found that those who were successful at reforming were those who had utilized the intellectual property of the entire organization rather than those who had only focused on technological abilities [6, 11]. The P2M/KPM adopts mission-driven approach in managing their projects [6]. KPM consists of three significant elements for successful performance: 3K-kakusin (innovation), kaihatsu (development) and kaizen (improvement). Kakusin is anything to do with creation of new ideas, devices or processes based on combination of new knowledge; kaihatsu is the challenge to acquire the latest knowledge and information; and kaizen is the continuing efforts for improvement at the work-floor level [12]. In P2M, there was no classification according to 3Ks. However, the KPM method concentrates on the innovation, development, and improvement of Japanese management methods using the foundations of P2M. Thus, it takes into account the whole lifecycle of the project from idea, planning, execution, investment, and recuperation to creating value for the future. The KPM method promotes the creation of future value by implementing a number of reform projects linked to strategy, thus providing a body of knowledge to train core leaders, whose responsibility is to recoup the investment, and propose a methodology for avoiding the risks of failure and resistance in an organization that solves complex issues[6].

Japanese organizations place an emphasis on the flexibility to adapt to environmental changes, and their models are created based on this concept. The strategies and methodologies of KPM have proven to be effective and successful in providing learning opportunities in companies, enhancing participation, and motivating the consensus and awareness of core leaders [12]. Modeling idea is part of P2M/KPM which integrates interdisciplinary knowledge, methodologies and approaches [11]. There are three project models, namely 3S- scheme, system and service, whereby these models represent a generic lifecycle of project combination from mission to capital recovery [13]. Companies that construct

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their organizations with the elements of KPM, while being aware of the 3S project models, will have a project management system that functions well [14].Overall, the summarized features and essences of P2M/KPM can be depicted in Fig. 1.

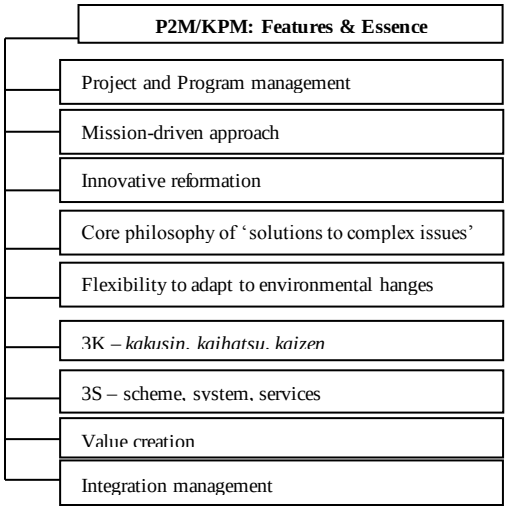

Fig. 1 Features and essence of P2M/KPM

3. PMBOK

The PMI (Project Management Institute) attained PMBOK standardization in 1983 and released its first edition of PMBOK in 1996, with updated editions in 2000, 2004 and 200815. PMBOK describes generally accepted knowledge and practices that are applicable to most projects most of the time [9, 16]. This standard describes the project management processes, tools, and techniques utilized to manage projects toward a successful outcome, and it divides projects into nine knowledge areas: project integration management, project scope management, project time management, project cost management, project quality management, project human resource management, project communications management, project risk management, and project procurement management [15]. Not all key areas are applicable on all types of projects and it is the responsibility of the project management team to determine the appropriateness in a given project [9]. The main feature of PMBOK is to acquire an expected performance in accordance with stakeholder needs by operational process [17]. Operational process involves planning, executing and controlling. PMBOK aims at achieving three requirements: time, cost, and project scope [18]. PMBOK is strictly focused on bringing activities in line with a plan [19] and does not manage resources to achieve objectives [20].

Managing projects with PMBOK is found to be beneficial to various industries. A good project management method should be adopted to ensure the organization achieves its long-term goals.

4. Methodology

An exploratory study has been carried out to examine project management theories by extracting relevant information from Japanese and western project management guidebooks as well as from other major journals, articles, conference proceedings, and published books. Two major processes were involved in this critical review. Firstly, the principles of P2M and KPM were summarized and analyzed. Subsequently, their essence or distinct features were evaluated by comparing them with those of PMBOK.

5. Comparative Study

The PMBOK method is narrower in conceptual breadth and scope compared with P2M [21]. Before, it deals mainly with projects, whereas P2M handles program management as well as project management; therefore, evaluations are based on the entire mission rather than on just a specific mission as practiced in project management [4]. However, four years after the first release of P2M, PMI has published standards for program management as well [22, 23]. However, there is limited information on program management in the latest PMBOK version [15].

In view of social behavior in management, Japanese people tend to practice collectivism and humanism, while the west emphasizes individualism [24]. Individualism means work or job tasks are clearly defined and divided for each employee, and appraisals or evaluations are based on individual performance. In the P2M method, collaboration with colleagues or cooperation among team members is common. Rather than individual goals, they look more into achieving group goals[25]. Having a common goal facilitates good teamwork and eventually, enhances communication among project members. Bad communications will result in communication conflicts that can provoke misunderstandings [26]. Therefore, communication management is vital in managing projects.

Relationship in the Japanese community is important for bringing together or connecting a group of people, such as the associations among project team members or departmental staff. In P2M, the relationship management framework is one of the 11 individual management domains that are not specifically featured in PMBOK as one of the main knowledge areas. Japanese coworkers have stronger friendships at work compared with their US counterparts [27], because they emphasize human relations and mutual trust [28]. Trust will lead to the formation of long-term relationships [17]. For example, longer-term alliances and informal relational contracts have been applied in information technology (IT) related projects in Japan compared with the US approach [29].

When good relationships are built, employees feel obligated to perform at their best for their companies. Based on the conventional Japanese way of management, lifetime or lifelong employment is common in Japanese organizations, which is based on an unwritten employment contract and thus it relies on mutual trust [28, 30]. Lifetime employment encourages loyalty31. Therefore, workers are rarely dismissed due to business downturns [32]. This is different from the American-style layoff [33]. Culturally, the Japanese take better care of their workers compared with the west [34].

However, when the economy turns sour in the 1990s for Japan, their conventional model has to be reformed in order to survive the recession. Restructuring, which includes work force lay-offs, production and inventory reductions, and plant closures, was applied [35]. For example, due to the above-mentioned scenario, the Toyota group has revised its conventional lifelong employment system by accepting contract workers and temporary employees extensively [28]. At the same time, kaikaku or innovative (kakusin) reformations also encompass joint venture activities with foreign companies to overcome the recession [35, 36].

In addition, P2M/KPM also incorporated knowledge and intellectual properties into the kaihatsu and reform processes [23]. New inventions, development of new ideas, R&D and technologies know-how progressions play an important role in a company to secure the company's competitiveness and to increase the value of intellectual property rights [28]. Kaihatsu is not limited to development of technology alone, but also covers business, product, process, and even market as well [12]. Just-in-time (JIT) production is another innovative approach to regain profits [37], as it aims to reduce inventory to minimal. JIT system only produces the necessary items in the required quantities when needed [38, 39].

P2M/KPM emphasizes flexibility and adaptability and proposes how organizations can achieve total optimization [6]. Rather than focusing on mere partial optimization when economic crises occurred in the 1980s and 1990s, Toyota maintained its market share by using the flexible kaizen philosophy. This philosophy

applied to manufacturing and production processes [40, 41] that strive to eliminate waste and problems and to improve quality through persistent efforts [42]. Other kaizen activities include continuous improvement of products, business operations and management systems, achieving highly flexible approaches to rapid changes, and learning from accumulated knowledge [8]. In PMBOK, however, there is inflexibility in terms of project schedule, costs, and quality [9]. Adaptability to environmental changes or flexibility in these aspects is not very much emphasized under the PMBOK method.

Table 1 Comparison between P2M/KPM and PMBOK

P2M/KPM	PMBOK
Scope: -Handles programs & projects [6]. -Broader in scope[21]. -Evaluations based on the entire mission[4]. -Collectivism[24]	**Scope:** -Deals mainly with project level [15]. -Narrower in scope[21]. -Evaluations made on specific missions[4]. -Individualism[24]
Managerial approach: -Concurrent development and integration management[23, 29, 44]. -Lifelong employment and loyalty[31]. -Do not practice layoff system in conventional model[28, 32]. -Partially adopts the layoff system[28, 35].	**Managerial approach:** -Phased development concept [29]. -Practice layoff system[33].
Problem-solving methods: -Flexibility approach[42] -Mission-oriented: Focus on not only clients' goals, but also how they are achieved, taking into account opinions and suggestions[13]. -Ambiguous, uncertain[24]. -Decision making outcomes favor inter-human relations[46].	**Problem-solving methods:** -Fixed approach on schedule, cost and quality [9] -Goal-oriented: Focus on delivering whatever is required by clients without considering other factors as long as the result is achieved[13]. -Definiteness, clarity[24]. -Decision making outcomes favor performance oriented[45] and recognition of effort[46].

Another difference between the PMBOK and P2M methods is that the former is relatively goal-oriented, whereas the latter is mission-driven [13, 43]. In order to accomplish a mission, P2M takes into account not only each process that comes along the way but also the detailed content of each process. It uses clear and measureable success measures for each project. Mission- driven approach enables solving of complex problems by transforming strategic aims into value creation operations and capital recovery through the 3S project models [11]. By contrast, PMBOK is prone to place emphasis on meeting the project objectives through initiating, planning, executing, monitoring and controlling, and closing [15]. In the construction industry, for instance, there is a need to go through certain stages, such as design, planning, construction, commissioning, and maintenance. These stages of the entire project follow a phased development concept, whereas parallel or concurrent development concept applies to Japanese project management [29]. Furthermore, P2M is the only standard that furnishes an integration management model across programs and portfolios of projects at enterprise level [23, 44].

Last but not least, another point of difference between these two approaches is their styles of decision making, thinking and mindsets. In P2M/KPM, the Japanese tend to be uncertain and ambiguous, whereas PMBOK practices definiteness and clarity [24]. In the mindset of the western, logical thinking is emphasized and this eventually removes all ambiguities. Things are defined and made clear. In terms of decision making, American business leaders tend to be more performance oriented [45]. They make decisions that will create opportunities for their efforts to be recognized, thus reflects a comparatively higher need for achievement [46]. In contrast to this, the Japanese people give priority to inter-human relations [24], thus creating an indecisive environment. When making a decision, Japanese business leaders tend to favor outcomes that preserve already established relationships or that could assist in cultivating new ones [46]. They need to consider the other party's concerns and conditions before finalizing a conclusion or making a decision. Conclusions are often made based on a group verdict. Overall, a comparison of the differences between P2M/KPM and PMBOK is summarized in Table 1.

6. Conclusions

Project management is a special management technique applied globally in organizations, and its practice has proven to be successful in certain industries. The goal-oriented PMBOK claims that excellent results are accomplished by focusing on time, cost, and quality and it promotes the idea of standardized project management. PMBOK is prone to place emphasis on meeting the project objectives through the five process groups: initiating, planning, executing, monitoring and controlling, and closing, whereas the mission-oriented P2M/KPM takes into account the detailed content of each process and responds well to environmental changes. In other words, P2M/KPM emphasizes flexibility and adapting to environmental changes in order to overcome crises and takes into account other factors rather than only concentrating on the end result. The P2M/KPM method focuses on solving complications that occur during the process, concentrating on measures of success, customer satisfaction, and communication management. The Japanese method of management also stresses loyalty and trust. In any industry, an organization requires good project management skills to increase the success rate in projects. Improper management will lead to problems and trouble in the long run.

Thus, by highlighting and extracting the features, essences, and applications of PMBOK and P2M/KPM, we get a clearer picture on how the east and west manage their projects in general. Nevertheless, these two management styles are found to be beneficial to industries such as manufacturing, construction and IT in their own ways, and the execution of projects under these management methods have proven to be successful.

This article, however, has some limitations. It only touches on P2M/KPM and PMBOK, briefly discussing their main features and essences. Further in-depth investigations should be completed on each of the frameworks and features to understand in greater detail their essence, importance, and appropriateness in order to successfully apply them in a project. Since at present, there is no such universal project management body of knowledge for any industry, selecting and combining the best features of PMBOK and P2M/KPM might create a well-rounded project management body of knowledge that may work not only regionally but also for the rest of the industry.

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