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Project and Process Realms: Analysis of Two Strategic Management Means in the Context of Competitive Advantage

Proje ve Süreç Alanları: İki Stratejik Yönetim Aracının Rekabet Avantajı Bağlamında Analizi

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Abstract

Projects and processes are powerful strategic management means. They play a significant role in the implementation of strategies and in gaining a competitive advantage by using them as a lever. Projects and processes are based on two operationally complementary strong wills (founding and operating will) and strategic-level decisions based on this will. Projects are used to create processes as an output. Processes, on the other hand, support the key indicators of the firm's vital functions. The two approaches are examined together in terms of their mutually supportive contributions to the realization of strategic goals.

Developing project and process competencies strengthen competitive muscles. Effective projects and improved processes bring the business closer to its goals. Success emerges thanks to the positive effects of project and process outputs on key performance indicators (KPI).

In the study, project and process realms are defined, their similarities and differences are emphasized and their functions in terms of strategic management are explained. In addition, it is aimed to clarify the transition zone between the realms and to raise awareness for making the right decisions to achieve greater gains. In this context, decision criteria for determining project and process priorities are presented to firms. Thus, a link will be established between the strategies and these realms, the sustainability of the competitive advantage will be ensured and the synergy created will contribute to the realization of the strategic goals of the firm.

Keywords: Project, Process, Management, Strategy, Competition

Öz

Projeler ve süreçler güçlü stratejik yönetim araçlarıdır. Stratejilerin hayata geçirilmesinde ve bir kaldıraç olarak kullanılarak rekabet avantajı elde edilmesinde kayda değer işlevler üstlenirler. Projeler ve süreçler, operasyonel açıdan birbirinin tamamlayıcısı olan iki güçlü iradeye (kuran ve işleten) ve bu iradelere yönelik stratejik düzeydeki kararlara dayanır. Projeler, bir çıktı olarak süreçlerin yaratılmasında kullanılır. Süreçler ise sürekli iyileştirme gayretlerinin neticesinde firmanın yaşamsal fonksiyonlarının temel göstergelerini destekler. Stratejik hedeflerin gerçekleştirilmesine yönelik birbirlerini güçlendirici katkıları itibariyle iki yaklaşım birlikte incelenmektedir.

Proje ve süreç yetkinliklerini geliştirmek rekabetçi kasları güçlendirir. Etkili projeler ve iyileştirilen süreçler işletmeyi hedeflerine yaklaştırır. Başarı, proje ve süreç çıktılarının temel performans göstergeleri üzerindeki pozitif etkileri sayesinde ortaya çıkar.

Çalışmada, proje ve süreç alanları tanımlanmakta, benzer ve farklı yanları vurgulanmakta ve stratejik yönetim açısından üstlendikleri işlevler açıklanmaktadır. Ayrıca, alanlar arasındaki geçiş bölgesinin netleştirilmesi ve proje ve süreçlerden daha büyük kazanımlar elde etmek üzere doğru kararların alınmasına yönelik farkındalık geliştirilmesi hedeflenmektedir. Bu kapsamda firmalara, proje ve süreç önceliklerini belirlemeye yönelik karar kriterleri sunulmaktadır. Böylece stratejilerle bu alanlar arasında bağlantı kurulacak, rekabet avantajının sürdürülebilirliği sağlanacak ve yaratılan sinerji ile firmanın stratejik hedeflerini gerçekleştirmesine katkıda bulunulmuş olacaktır.

Anahtar Kelimeler: Proje, Süreç, Yönetim, Strateji, Rekabet

Introduction

Projects and processes are powerful means that focus on different approaches and strategic priorities (Edelenbos & Klijn, 2009) and have special methods, systems, and techniques at planning and control levels (Harrison & Lock, 2004). They have a central position among management concepts (Harvey & Aubry, 2018). All business activities are either part of a project or a process. Work packages such as developing new software, or investing in a machine can be handled as projects. The output of a project can be a product, a service, or a process (Shenhar, 2000). Processes are directly related to the existence of firms and play an important role in their economic survival (Harrington, 1991). The process is considered an initial state as it is the output of the project. According to PMI, ongoing operations fall outside the scope of a project (PMI, 2017).

Projects are increasingly becoming an integral part of business and social life today. The literature confirms this trend. For example, the share of the project work carried out in Germany in the total working time was 34.7% in 2013 (Schoper et al., 2017). These project studies, on the other hand, are carried out in a process-based manner to a large extent. For example, according to a study conducted in England in 2007, 53% of the project studies were carried out to improve processes and 32% to develop new products/processes (Singh & Lano, 2014).

Despite strong research and extensive experience in the field, disappointing project failures are common (Coelho & Valente, 2017; Cooke-Davies, 2002). Many companies make wrong project choices or invest in projects that cannot provide the expected benefit even if they meet the basic success criteria. Efforts resulted in the consumption of scarce resources. The problem is resulting from faulty project expectations, strategic mismatch, inept project management, and poor decision-making competencies (Kerzner & Saladis, 2009). Similarly, focusing on the wrong process solutions leads to unnecessary effort and wasted resources. Sometimes, it can be seen that an improved process does not contribute positively to the process output or that the continuity of the gain cannot be ensured and disappears after a while. However, with the right decisions and choices, it is possible to produce benefits for customers and value for firms, both in the field of projects and in the field of processes (Chang, 2006).

Toyota estimates that only 5% of all industrial activities add value to the firm, 35% do not add value although necessary, and the remaining 60% is pure waste (Maylor, 2010). The multiplicity of non-value-creating activities is important as it shows the extent of unnecessary efforts and resource consumption. In this context, firms need to make effective use of projects and processes both to create new values and to eliminate efforts that do not create value, while walking towards their strategic goals.

Global competition and changing customer expectations constantly increase the cost of operations. To meet expectations, firms need stronger infrastructure and technology investments on the one hand and seek ways to increase their performance by improving their processes on the other. Strategies and project preferences and process solutions need to be compatible and considered together. Because when solutions are compatible with strategic goals and decisions are taken in a way that supports these goals, the greatest benefit can be obtained from projects and processes. Weakening the link with strategies can result in dramatic failures (Skrinjar & Trkman, 2013).

The paths followed by the projects and processes, the tools they use, and the outputs they produce are different. In this context, it can be said that there is a kind of complementarity relationship between them and thus they create synergy. Synergy occurs thanks to the project's ability to create new products, services, and processes, and the process's ability to continuously improve existing ones. At points where processes cannot be improved any further, project solutions can step in and provide transformation.

How to manage the uncertainties that arise when process improvement efforts are ineffective is not a subject that has been studied much in the literature (Harvey & Aubry, 2018). Moreover, very few groups of researchers have been paid attention to this issue (Maylor et al., 2015). However, the intersections of projects and processes are very critical and need to be handled meticulously. In this context, it is aimed this study will contribute to a better understanding of these decision realms as a source of competitive advantage within the framework of the firm's resources and capabilities.

Literature Review

Two basic views describe a firm's competitive position. These are the Industry-Based View (IBV) explained by Michael Porter in the 1980s and the Resource-Based View (RBV) prominent in the 1990s (Caliste, 2013). While IBV focuses on the role of external elements in providing a competitive advantage, RBV focuses on the role of internal elements such as strategic resources, dynamic capabilities, and competencies. If resources and capabilities are valuable, rare, inimitable, and have organizational support, in other words, if they fall within the framework of VRIO, it can provide a competitive advantage (Barney & Hesterly, 2015). Strategies based on RBV recognize that resources are not evenly distributed among firms and use this heterogeneity to explain different levels of success (Killen & Hunt, 2010).

Competitive advantage is achieved through resources and capabilities. The firm thus defends itself against its competitors. Competitive advantage cannot be gained by accident, conscious effort is required (Vafaei et al., 2019). The basic question of business strategy is about how to gain a competitive advantage (Benner & Veloso, 2006). Developing a competitive strategy is to develop a general formula about what the competitive dimensions and targets will be and what policies will be implemented to achieve these targets (Porter, 1980). Almost all of the strategy frameworks used today are based on the understanding that

the main purpose of strategy is to provide a sustainable competitive advantage (McGrath, 2013). According to Porter (1980), every organization has a competitive strategy, whether it is clearly defined or not.

Projects and processes are useful means for firms seeking to transform their strategies into a competitive advantage. Both the project and the process approach are fundamentally based on systems theory and offer a general framework within which problems can be solved in integrity. Project management has established its scientific field by removing itself from daily operational activities over time. Thus, it can be said that the field of projects supports strategies more strongly and its connections are stronger (Harvey & Aubry, 2018).

In the literature, the number of studies that examine projects and processes comparatively is very few. When the relationship of these two areas with strategy and competition comes into play, this number drops considerably. However, the number of theoretical and empirical studies examining the relationship of projects or processes with strategy or competition is high (Edelenbos & Klijn, 2009). Based on complementarity, no study has been found to introduce the dynamics of the transition zone between projects and processes.

Project Literature

Project management is of strategic importance and its value is increasing rapidly. Because it is thought that making the project management compatible with the business strategy will make the firm reach its goals more easily (Pinto, 2019). Thus, there is a need for studies on how to achieve this strategic alignment. Many firms have misaligned projects and lack a systematic approach to aligning those projects with their strategy. Although projects are accepted as the cornerstones of business strategies, the fact that projects are not handled with due diligence, especially at the functional level, makes this adaptation difficult (Srivannaboon, 2006).

Alignment between strategies and projects is critical, and project management needs to ensure that projects align with both business strategy and functional strategies. Business strategy, portfolio management, project selection, planning, and execution are often the responsibility of senior management. When alignment is achieved, the strategy portfolio drives the portfolio project management, and the project management drives the projects and teams. In many cases, however, this alignment cannot be achieved and firms fail to link their projects to their portfolios and business strategies. The alignment problem causes the organization to implement projects that will not contribute anything to its goals, thereby wasting significant organizational resources (Milosevic & Srivannaboon, 2006). Turner (2007) proposes Portfolio Management as a tool that enables managers to monitor, and control projects and programs to align project management with business strategy.

According to Jamieson & Morris (2007), although projects and project management are often one of the important means for implementing strategies, this area has been the subject of few detailed studies. Strategy formulation starts from the firm's mission and goals and extends to the corporate, organizational, and functional levels. Whether a project is directly related to business units or indirectly through portfolios and programs, it is necessary to have project management processes integrated with strategic management to move business strategy to project strategy most effectively. Project selection is an important stage of this association.

The harmony between the projects and the business strategy paves the way for the emergence of new and creative strategies that will provide a competitive advantage. This alignment also helps senior management to select the project that suits its objectives. Defining strategic objectives is necessary for project success and for achieving a competitive advantage with the project. A mismatch between strategy and projects can lead to loss of market share opportunities (Awwal, 2014).

The project management area has been significantly standardized by organizations such as ISO, PMI, IPMA, and APMG. PMBoK (PMI) is the most dominant standard as it is used in over 75% of projects worldwide. Project management emphasizes standards, techniques, and certification (Söderlund, 2004; Singh & Lano, 2014). Projects are important mechanisms for strategic and operational goals. Due to time-based competition and rapid technological advances, managing a project brings many challenges with it. Meeting the general requirements of the project output and its integration with the existing structure are the most important problems for project management (Söderlund, 2005).

In addition to the need for projects to support strategies, project managements also need to monitor and improve different parameters, especially cost, time, and quality (*iron triangle*). Other parameters can be listed as efficiency and effectiveness, reliability, profit, sustainability, customer satisfaction, personnel development, management support, organizational learning, strategic goals, knowledge, and reduced waste (Atkinson, 1999; Pinto, 2019; Shokri-Ghasabeh & Kavousi-Chabok, 2009).

There is a strong correlation between project management and corporate success and competitive advantage (Jaleel & Khan, 2013). This correlation arises as a result of direct or indirect relationships. In project-based organizations, project gains fall directly to the bottom line, while in operations-based organizations, projects indirectly increase their profit margins. R&D projects directly increase revenue, shorten new product development time, strengthen the competitive position, increase product sales and profitability. IT/IS projects, on the other hand, provide direct or indirect financial returns. It shortens the time to market and the return on investment, reduces operating costs, and creates sustainable value (Cooke-Davies, 2002).

Process Literature

Understanding business strategy is very important to improve business processes and make the business run better. For this, companies need to identify the critical business processes that support the business strategy, execute them consistently, and

improve them continuously. The quality of the processes and the key performance indicators show the extent to which the processes are aligned with the strategy (Lehmann, 2012).

Business Process Management (BPM) stands out as an important management discipline used in the realization of business strategy (Kirchmer, 2017). For companies to fully exploit the potential of process management, operations managers need to make decisions based on strategic priorities and implement process improvement initiatives in line with these priorities (Kirchmer et al., 2018). Thus, BPM helps a firm to achieve its strategic goals by improving, managing, and controlling key business processes (Jeston & Nelis, 2008; Ubaid & Dweiri, 2020). In addition, the expectations of increased revenues, lower costs, profitability, improved quality, efficiency, and performance in the operational dimension are thus met (Hammer & Champy, 1993).

BPM is the best practice management principle in maintaining competitive advantage in the strategic dimension (Hung, 2006). BPM owes its existence to Total Quality Management (TQM) and Business Processes Reengineering (BPR) (Jeston & Nelis, 2008). BPM is based on dynamic capability theory and acts as a facilitator to manage business complexity. Dynamic talent theory and competitive advantage perspective have shown that BPM can be a distinctive potential resource that can create sustainable competitive advantage (Nadarajah & Kadir, 2014; Eisenhardt & Martin, 2000). According to Caliste (2013), dynamic capabilities provide a competitive advantage by enabling companies to develop new resource configurations.

Some studies in the literatüre show that process management can provide a competitive advantage to the firm, while others show that it cannot. The difference is that these advantages have less impact on competition as more firms adopt similar improvements. As process management turns into practices that are easily adopted by companies, it becomes relatively difficult to turn gains into advantages (Benner & Veloso, 2006). From this point of view, for example, it is understood that some business process practices and techniques increase profitability while others have less impact on financial performance. For this reason, it is of greater importance to align objectives with each other and with core business processes and to align them with strategies (Skrinjar & Trkman, 2013). Thus, as a result of many empirical studies, it is possible to talk about a positive correlation between corporate success and process management (Anand et al., 2013).

According to Cleveland (2006), it is necessary to ensure internal consistency in processes to increase business process gains. *Consistency* means unifying process definitions, measuring outputs accurately, and aligning process goals. Consistency increases the effectiveness of the process by providing *optimization*. In this context, *automation* can be focused on by automating manual operations. Automation has an impact on ROI as it provides shortened cycle time, lower cost, increased quality, and rapid access to critical data. Next comes *compliance*, which refers to procedural requirements against legal regulations. The final stage is the *integration* of IT infrastructure and complex processes and operations by communicating with each other.

To be competitive, it is necessary to improve business processes constantly. Successful BPM helps to gain a competitive advantage at lower costs. BPM is a method that helps organizations achieve their strategic goals. Therefore, processes need to be periodic re-evaluation, benchmarking, and improvement. Processes that are low in value, low effectiveness, or at low-efficiency levels may be subject to decommissioning), consolidation, or elimination (Lehmann, 2012).

Projects and Processes Realms

Problems in business life arise from being ineffective against the productivity and quality gains of competitors as a result of not keeping up with the pace of environmental change. Opportunities for change are often missed because the management level deals with management not leadership and maintenance engineering, not organizational architecture. Due to the problems of insufficient growth, low profitability, and declining market share, managements occasionally take up the restructuring weapon. Restructuring is concerned with correcting mistakes and rarely brings drastic change and lasting improvement. Since it is a weak competitive element, it cannot ensure the continuity of competitive advantage. Rather, the aim is to preserve the current situation (Stalk & Hout, 1990). But to be concerned with correcting mistakes is not to be concerned with the future. Instead, companies prefer reengineering. Reengineering weeds out useless work speeds things up and focuses on quality and customer satisfaction. It is more promising than restructuring. If the industry is undergoing a major transformation and the firm lags far behind this transformation, both efforts will fall short. In this case, the compatibility of new strategies and efforts gains great importance (Hamel & Prahalad, 1994).

Managerial decisions in business life can be grouped into three groups: *i*. Decisions that keep things running as they are done. *ii*. Decisions that partially or significantly change the business. *iii*. Decisions that greatly change or completely transform the business. The first is "*approval*", which allows getting the same outputs over and over, the second is "*change*", which gives a better output, and the third is "*transformation*", which allows getting completely different output. Approval serves the goals more of process management, change serves the goals of both process and project management, and transformation serves more of project management. Thus, it can be said that project and process managements have capabilities that both ensure continuity and trigger change and transformation. Projects and processes cover all activities carried out to provide products and services to the customer. While processes can be encountered at any time in a business, projects emerge when they are needed. Therefore, administrations have to make decisions about processes and projects at any time.

Projects are powerfully transformative and problem solver that radically changes their focus. The need for transformation applies to every process. In cases where process improvements are insufficient, projects step in and realize the transformation. Here, the timing and extent of the intervention are of great importance. Project work can be initiated by establishing a

transformation framework for the intervention. Transformation involves much larger changes than improvements (ABPMP, 2013).

Projects are evaluated according to their goals and methods. This distinction leads to four types of project implementation. *i.* In engineering projects, objectives and methods are defined. *ii*. In research projects, both are undefined. *iii*. In product development projects, while objectives are defined, methods are undefined. *iv*. In software development projects, while the methods are defined, the objectives are undefined. Well-defined goals and methods increase project success, while undefined goals and methods increase failure (Turner & Cochrane, 1993). In processes, both goals and methods are defined. Here, engineering projects and engineering processes converge. For example, a bridge construction project is perceived as a process because of the numerous bridges that have been built before. But this is a project, not a process. Knowing their distinctions and basic features is essential to get the maximum benefit from projects and processes.

Projects Realm

A project is a temporary endeavor to create a unique product, service, or result. It is done for a strategic position to be attained, a purpose to be achieved, a result to be obtained, a product to be produced, a service to be performed. It has a start and end date. It drives change and creates value (PMI, 2017). The projects area is a reliable way of managing business objectives and is one of the important development areas (Svejvig & Andersen, 2015). The life cycle of a project consists of basic stages; *i.* conceptualization. *ii*. Planning. *iii*. Execution. *iv*. Termination. The information required for the execution of the stages is provided with the help of developed standards (Sandhu & Gunasekaran, 2004; Pinto, 2019).

Project management is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements. It enables projects to run effectively and efficiently (PMI, 2017). While projects turn strategy into action (Romero, 2018), project management provides the firm with the necessary power to cope with competitive pressures and uncertainties (Killen & Hunt, 2010). Project management includes tangible and intangible assets. Tangible assets contain explicit information while intangible assets are based on tacit knowledge. This information is also the knowledge of "*what*" and "*how*". While the RBV framework is receiving increasing attention, few studies have used it to examine project management capabilities as a source of competitive advantage. However, project management is of great importance in the relationship between competitive advantage and the VRIO framework (Mathur et al., 2013).

Project success is about meeting project expectations. The general approach is that a project is considered successful if cost, time, and quality constraints are completed successfully (Maylor, 2010; Lindhard & Larsen, 2016; ABPMP, 2013). Although the criteria are well known, it is very difficult to achieve them in reality. Often companies have to sacrifice others to achieve one of the three goals (Patrick & Warchalowski, 2013). Even if these constraints are met, the project can be seen as a failure in the eyes of the customer. For this reason, the performance and efficiency of the project output should also be considered (Kerzner & Saladis, 2009; Shenhar, 2000). A project that fulfills the specification criteria on time and within its budget is not considered successful if it cannot deliver the expected performance and value. The success of project management is considered together with the dimensions of project expectations, customer satisfaction, profitability, market share, and innovation (Mathur et al., 2013). Ensuring that projects are compatible with strategic goals, ensuring stakeholder participation, managing change and risks, and ensuring sustainability are other issues under the responsibility of project management (Schelini et al., 2017).

Project management is a complex field of management that requires technical and human skills and helps the organization achieve its strategic goals. It can support all business models. Project management is a popular means needed to improve internal operations, respond quickly to external opportunities, make technological breakthroughs, develop new products, and manage business challenges. It forms the basis of offering more added value (Pinto, 2019). Therefore, the traditional role of project management is expanding from an operational perspective to a more strategic perspective. Better business results are achieved in projects managed from a strategic point of view. Thus, companies spend time and attention on activities that will improve business results in the long run, deal with customer needs, competitive advantage, and market success, and focus on producing better business results. The main idea in project management is to adopt a strategic perspective (Shenhar, 2000).

Since projects are conducted towards an output that needs to be defined (Slack & Brandon-Jones, 2018), they are based on a vision of the future. Project management capabilities in companies are often limited. To improve these capabilities, companies need to focus on; *i.* Project selection techniques (cost-benefit analysis, risk and sensitivity analysis, etc.). *ii*. Project execution planning techniques (WBS, PEP, etc.). *iii*. Project scheduling and coordinating techniques (bar chart, life cycle, LOB, PERT/CPM, etc.). *iv*. Project monitoring and progress techniques. *v*. Project cost and productivity techniques. *vi*. Project communications and clean-up techniques (Mishra & Soota, 2005).

Project Portfolio Management (PPM)

A portfolio consists of projects, programs, sub-portfolios, and operations managed as a group to achieve strategic goals. Portfolio management includes centralized management of one or more portfolios. The portfolio's programs and projects may not be directly related to each other. Portfolio management verifies that the entire portfolio is aligned and consistent with strategies (PMI, 2017).

PPM is a dynamic capability required to integrate resources, create, organize and prepare the capabilities needed for different projects. PPM supports all the approaches necessary to give the organization a competitive advantage (Caliste, 2013). This

dynamic capability both facilitates the organization's responsiveness to change and contributes to competitive advantage by prioritizing and selecting projects. The PPM capability enables the alignment of projects with strategy and distributes resources evenly among projects. Firms should invest in creating and developing their PPM capabilities to generate more returns from projects (Killen & Hunt, 2010).

PPM also influences long-term acquisition, development, and deprecation decisions of the corporate resources that support the strategy. PPM helps develop the organization's existing resources and capabilities while utilizing them. Effective PPM capability provides organized support for companies to select projects that can create a competitive advantage (Ferreira et al., 2019). It can be said that PPM, which is a necessary skill for managing projects to maximize their contribution to the firm's strategic goals, will create a competitive advantage as long as it is effective in achieving these goals, and the advantages created will be sustainable as long as it facilitates adaptation to the dynamic environment.

Project Management Maturity (PMM)

PMM is the ability to simultaneously and in series plan and manage a firm's portfolio of projects. Evaluating a firm according to the PMM model reveals several possible improvement suggestions (Chinta & Kloppenborg, 2010). Companies with high PMM use project management both as a core competency and to develop other competencies. Thus, it is possible for the strategies to be successful and to obtain high returns from the project investments. By providing certain skills and unique abilities, they can create a competitive advantage (Reginato & Ibbs, 2002), and create new resources that will contribute to this advantage (Schelini et al., 2017). Firms with high PMM levels can more successfully reduce project management costs and create customer benefits by transferring these savings to the customer (Reginato & Ibbs, 2002).

PMM models allow comparing successful project implementations. Thus, current practices related to project management, PMM provides a systematic method for analyzing, comparing, and improving against standards. As the project management matures, it becomes easier to apply project management principles in the processes, and the organization becomes "*project mature*" as the problems are tried to be overcome in innovative ways (Pinto, 2019).

Maturity is a concept that refers to the level of effectiveness of the organization's capabilities in performing tasks. It is used to assess the current situation, guide improvement initiatives, and control progress (Röglinger et al., 2012). Maturity models support companies that want to realize their strategies with the help of their projects. The models not only explain the level of project management but also provide a roadmap and explain the steps to be followed for improvement (Caliste, 2013). There are many maturity models. It is stated that the OPM3 model developed by PMI is a model that can provide a competitive advantage to companies due to its strong strategic approaches (Farrokh & Mansur, 2013).

Project Management Office (PMO)

A PMO is a unit or division that oversees the management of projects. PMO provides direct expertise support to project management to help projects achieve their goals. PMOs have three functions according to their degree of control and influence over projects: *i*. The supportive function advises projects with the help of good practices, training, and lessons learned from past projects. *ii*. The controlling function provides support for compliance with standards and procedures. *iii*. The directive function undertakes the projects of the organization and directly manages them (Pinto, 2019).

PMO guides the creation of a project management culture in the firm. It facilitates the sharing of resources, methodologies, tools, and techniques by standardizing governance processes. PMO responsibility can be extended from providing necessary support to project management to direct management of one or more projects (PMI, 2017). As the field of project management evolves from single project management to an all-encompassing management approach, PMOs emerge as a natural evolution and manage the complex web of relationships that connect strategies, projects, and structures. PMO strategically guides the organization. The level of guidance and the PMO's capacity to direct strategic activities reflect the organization's level of PMM.

PMO is the result of the maturation process and is at the core of enterprise project management. It is also considered a sign of maturity because it appears at the end of a certain maturation process. Enterprise project management is an organizational capability and the role played by PMO in this field cannot be ignored. When a project management capability that can achieve strategic goals is combined with the role of PMO that manages, monitors, and organizes resources well, a significant advantage is gained against the competition (Caliste, 2013).

Processes Realm

Process is a set of activities that transforms inputs into outputs and interacts with each other (TS ISO 10006, 2004). It gives a holistic view of all processes by integrating corporate capabilities (strategic alignment, method, technology, people, and culture) (vom Brocke & Mendling, 2017). Business processes consist of a set of activities, sub-processes, or logically related tasks. It is characterized by its in-unit and cross-functional structure. It works horizontally and links operations to strategic goals and customer needs (Ubaid & Dweiri, 2020; McCormack, 2001).

Processes can be classified into three groups; managerial processes, operational processes, and support processes (Kirchmer, 2017; Lehmann, 2012). Managerial processes are related to strategy and direction setting, business planning, and audit functions. Operational processes are all processes that create value, from production to delivery. Support processes, on the other hand, include activities that support the value chain such as financial, personnel and information processing (Armistead

et al., 1999). Process management requires visualization, measurement, and continuous improvement of business processes (Sujova & Marcinekova, 2015). Thus, it is possible to reduce costs, shorten cycle times, produce products that meet customer demands, increase customer satisfaction, improve quality, increase productivity, and improve operational effectiveness (Springer, 2013).

Alignment is the most important function of BPM (Elzinga et al., 1995). The firm's strategic goals are linked by correlating its organizational structure, culture, corporate values, performance management, coordination ability, and corporate learning ability (Armistead et al., 1999). BPM helps the firm reduce its technological risks and gain flexibility. It increases performance and efficiency by incorporating agility into business processes (Ubaid & Dweiri, 2020). It focuses the entire organization on process improvement (Lee & Dale, 1998). When the firm adopts BPM, its impact is felt throughout the firm (Hung, 2006). Improvement means increasing performance, reducing costs, shortening implementation times, and reducing error rates. BPM is about managing events, activities, and decision mechanisms that add value to the organization and create value for the customers rather than individual activities (Dumas et al., 2018). It focuses not only on automation and process analysis but also on the management and organization of firms (van der Aalst, 2013).

Operational processes transcend traditional boundaries and occur across functions. As strategic tasks cross-functional boundaries, functional structuring creates inconsistencies in achieving strategic goals (Kanji, 1995). Firms have realized the need to move from function-based (vertical) to process-based (horizontal) to carry out clearly defined customer-oriented activities (Zairi, 1997). Process orientation is adversely affected by the limitations of functional management. Therefore, it emphasizes cross-functional performance rather than optimization of functional structure (Hung, 2006). According to Hammer & Champy (1993), process orientation is one of the basic elements of organizational development. Process orientation contributes to increasing current profitability by transforming organizational knowledge into shareholder wealth (Chinta & Kloppenborg, 2010).

Business Process Improvement (BPI)

The basic principle of BPM is continuous improvement. BPI ensures the effective and efficient use of resources-facilities, people, equipment, time, capital, and inventory. Improvement makes activities better by giving them new qualities. Improvement efforts have enabled the progress of civilizations by meeting the increasing needs of humanity for centuries (Lehmann, 2012). Identifying improvement opportunities is easier with the help of BPM (McAdam, 1996).

The BPI framework unifies all improvement efforts. BPI starts with *an idea* with stakeholder engagement and strategic goals in mind. This improvement idea requires a good understanding of existing processes. At this point, *the performance measurements* of the processes show which processes need improvement first. Thus, an *improvement road map* can be prepared. *The organizational structure* meets the skills, incentives, and attitudes required for improvement efforts. Efforts are futile because employees do not have basic skills, their efforts are not encouraged, or their authority and responsibility to initiate improvement is unclear or limited. A *toolbox* consisting of effective tools should be prepared to be used in the process (Andersen, 2007).

Every BPI activity is an attempt to improve the alignment of processes with strategies and customer expectations. BPI determines, analyzes, redesigns, and implements the process to be improved (ABPMP, 2013). If the processes are statistically sufficient and stable, or if the output characteristics are predictable and can meet customer requirements, the expected results from continuous improvement are achieved (IATF 16949, 2017). Improvements are considered successful as they make processes more effective, more efficient, and more adaptable to changing demands.

Improvements are cyclical and continuous. When a strong improvement culture is established in the firm, improvement becomes inevitable (Andersen, 2007). Improvement ideas are handled with the PDCA cycle (Plan-Do-Check-Act). PDCA is the mechanism that works at the very core of improvement thinking (TS ISO 10006, 2004). The PDCA cycle is operated to ensure processes are well managed, resources are used properly, and opportunities for improvement are evaluated (IATF 16949, 2017). For process improvement opportunities, sectorial best practices are generally followed and benchmarks between applications are made (Bost, 2018). Benchmarking reveals weaknesses and strengths. It also provides an understanding of how business strategy can be differentiated, how resources can be used more effectively, and how investments can be managed more accurately to create a competitive advantage (Lehmann, 2012). BPI begins with personal improvement and extends to group improvement, quality improvement, process simplification, process reengineering, business integration, and business reengineering (Childe et al., 1994).

Business Process Reengineering (BPR)

Kaizen is a philosophy focused on incremental and continuous improvement. Kaizen cannot radically change existing processes. When Kaizen gains begin to decline, the radical change option should be prioritized (Childe et al., 1994). These radical process improvements, called BPR, were advocated by Michael Hammer (1990) in the early 1990s and suggested by Thomas Davenport (1993) as a complement to continuous improvement (Harvey & Aubry, 2018).

BPR is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in performance measures such as cost, quality, service, and speed (Hammer & Champy, 1993). Radical performance improvements are achieved with BPR. BPR cannot be performed in small, cautious steps. They must be used in conjunction with integration and automation instruments to achieve strategic goals (Childe et al., 1994). BPR consists of 7R components (realization, requirement, rethink, redesign, retool, reevaluate, and re-orchestrate) (Mishra & Soota, 2005).

BPM, as an integrated management philosophy, emphasizes incremental and radical changes, continuous improvement, customer satisfaction, and employee engagement. TQM and Lean are incremental, evolutionary, and continuous (IEC). BPR, on the other hand, is radical, revolutionary, and one-time undertaking (RRO) (Hung, 2006). BPM integrates the IEC methodology of TQM and Lean with the RRO methodology of BPR (Nadarajah & Kadir, 2014; vom Brocke & Rosemann, 2015).

BPR is called by names such as process innovation, business process redesign, business engineering, and process engineering. BPR can be quality-driven or IT-driven. Quality-driven BPR is a quality improvement methodology. IT-driven BPR uses business modeling, soft systems analysis, and workflow and value chain analysis techniques. Thus, it aligns processes between functions (McKay & Radnor, 1998). The transition to BPR is faster thanks to IT that already has a cross-functional perspective. IT-driven BPR is a more comprehensive approach than connecting computers and consolidating databases (Childe et al., 1994).

BPR transforms processes by rethinking activities. Transformation is achieved through the creative application of innovative approaches, techniques, and technologies to business. Transformation should be addressed at the organizational level and implemented at all levels, as its scope concerns all business units. The goal is to find ways to make processes better. These can be new equipment, new application, new IT infrastructure, new approaches, new staff, and new skills. It is strategic because it is a deviation from the firm's past approaches and thoughts. It is the firm's commitment to modernize, upgrade and rethink its operating model and is long-term (ABPMP, 2013).

Business Process Standardization (BPS)

Process improvement starts with a process definition and is standardized by recording procedures. As the activities are repeated, the process gains a stable structure, and it gets perfect by becoming effective and efficient with improvement efforts. After each recovery, the procedures must be adapted to the new situation, that is, standardized. Standardization provides a strong basis for process improvement studies by ensuring that activities are always carried out in the same way. If the execution of activities differs from person to person, it becomes difficult to make improvements. Standardization is a necessary prerequisite for improving processes. Procedures should document standards and be available for each process. Procedures should show the management and employees how the process should be operated. They should be realistic, clarify responsibilities, determine the limits of authority, be closed to different interpretations, be easy to understand, and define training requirements and performance standards. Procedures should include written instructions and flowcharts (Harrington, 1991). Standards should be aligned with strategies (van Wegberg, 2004). Standardization defines the best, easiest, and most reliable ways of doing business. It brings the processes to a stable level, provides balance and sustainability. The goal of standardization is continuous improvement. JIT, 5S, Kanban, and TPM support standardization (Dennis, 2015).

Standardizing is not fixing. With standardization, risks and uncertainties should be minimized, but processes should not be allowed to lose their flexibility. The process entropy will inevitably rise over time and the need for improvement will arise. Firms operating in the same sector come closer to each other and reach similar productivity levels by standardizing and automating their business processes over time. In this case, process improvement ceases to be an element of competitive advantage and becomes the norm (Marjanovic & Freeze, 2012). As quality has become a feature that everyone has as a hygiene factor since the 90s and the effect of competitive advantage decreases over time (Kaplan & Norton, 2015), the effect of process improvement activities on competition may decrease over time. However, process management supports efforts to create new advantages by offering change opportunities in terms of the tools it uses.

Project and Process Integration

Incremental improvements are the repetitive behavior form of the processes domain. Since the change happens incrementally, it is easier for the employees to adapt to the change. For radical improvements, BPRs and projects are leveraged. Incremental improvement is no longer sufficient for many companies today. Therefore, incremental improvements and radical improvements should be managed together (Chinta & Kloppenborg, 2010).

A project-based firm produces its products and services through projects. These organizations thrive on the knowledge they learn from projects. Like knowledge production, learning is more valuable when it is organizational rather than individual (Williams, 2008). Learning is a central function needed to maintain and improve competitive success. There are two types of learning: i. Exploitative learning, and ii. Explorative learning. Exploitative learning is single-loop, operational, reactive, and incremental. On the other hand, explorative learning is double-loop, strategic, proactive, and radical. Organizational learning takes place through the creation, sharing, and use of information with the participation of all employees (Chroneer and Backlund, 2015). Learning through projects is both exploitative and explorative learning (Eriksson & Leiringer, 2015). What is learned from processes is more exploitative learning. Therefore, projects are characterized by innovation and differentiation, and processes by repeatability and continuous improvement (Harvey & Aubry, 2018).

Firms grow and develop thanks to their processes (Jansen et al., 2006). Projects are necessary both to develop new processes and to radically improve processes. There are radical improvements in the projects area, and incremental improvements in the processes area (Chinta & Kloppenborg, 2010). Improvements are essential for both lowest cost leadership and differentiation position (Porter, 1980).

Project management is a kind of continuous decision-making (de Bruijn et al., 2010). Because project activities do not have predefined roadmaps. Therefore, it involves high levels of uncertainty, delays, and risks. For example, in projects, unlike

processes, if the steps are stopped at the time (t) of any decision, the information required to restart the activities are not available in a defined manner. For this reason, it can be said that there is a constant state of decision-making in the projects.

Although project and process management differ in many ways, they are complementary to each other (Ferreira et al., 2019). In project management, stakeholder participation is low and internal control is high. The control mechanism is based on deciding, announcing, and defending. The project team decides on the solution itself and announces it to the stakeholders. Therefore, quick decisions are made. Process management focuses on interaction with stakeholders. The control mechanism is based on the principles of dialogue, decision, and delivery. Decisions are made more slowly. Thus, project management is result-oriented and fast but has insufficient support, while process management has strong stakeholder support but is more disadvantaged in terms of time, energy, and costs (Edelenbos & Klijn, 2009).

Projects and processes often coexist. Projects are used to improve processes, and processes are used to improve projects. Project processes are iterative processes that occur throughout the project. These processes fall into one of three categories: i. Processes used once in the project or used at predefined times (opening process, closing process, etc.). ii. Periodic processes when necessary (purchasing process, etc.). iii. Continuously occurring processes throughout the project (monitoring and control process, etc.) (PMI, 2017). Project processes can also be divided into processes related to project management (planning, auditing, etc.) and processes related to project outputs (design, manufacturing, etc.). For project success, all project processes must be determined and described in advance (TS ISO 10006, 2004).

Firms can afford to lose some efficiency to obtain the benefits of project management that serve differentiation. For companies to reach their long-term interests, they need to manage conflicts that may arise between a philosophy that tries to achieve the highest efficiency in activities (process management) and a philosophy that requires some sacrifices in terms of process efficiency (project management) (Sandhu & Gunasekaran, 2004).

Correct and balanced resource allocation between projects and processes is very important for the effective management of areas. However, the tools used for this (Lean, 6Sigma, TQM, BPR, Benchmarking, etc.) should not be allowed to replace strategies. Because, although operational efficiency is necessary for superior performance, it is not sufficient for sustainable growth. Processes realm is one-half of the efforts for sustainable profitable growth and the realm of the project is the other half. Focusing only on new projects without considering process improvements creates vital risks that will disrupt the vital activities of the organization (Chinta & Kloppenborg, 2010). Similar risks are taken by ignoring the project area and focusing only on processes. But the worst happens when projects and processes are not handled in a way that supports a strategy. Focusing on strategies and not allowing tools to replace strategies is necessary for sustainable competition.

Competition in Project and Process Realms

Resources and capabilities are valuable to the extent that they facilitate the achievement of strategic goals (Porter, 1980). Core competence is the skills and technologies that enable customer benefit. They passed from one person to another via word-of-mouth or by demonstration (tacit) or systematically codified and dispersed throughout the organization by various mediums of communications (explicit). They are expected to be sustainable and create value. When a skill becomes ubiquitous in the industry, it begins to lose competence. The competitive advantage it provides decreases over time and eventually disappears completely (Reginato and Ibbs, 2002).

The RBV-VRIO model is a powerful framework for identifying and evaluating resources and capabilities. If these resources are raised to the level of competence, they provide a sustainable competitive advantage (Schelini et al., 2017). A firm's effectiveness depends on how effectively it implements key business processes that have the power to determine overall performance. Business processes can turn resources and capabilities into a competitive advantage. The empirical literature supports these claims of RBV (Ray et al., 2004).

Strategy research aims to understand why some companies are more successful in competition and to identify the mechanisms of this (Killen & Hunt, 2010). If there are high uncertainties in the strategy and there is no consistent and well-functioning balance and control system, it is difficult to achieve high performance (Nilsson & Rapp, 2005). Sustainable performance cannot also occur when there are large mismatches between strategic goals and market requirements. To compete successfully in the market, the firm must establish maximum harmony between its strategies, actions, and performance measures (Hung, 2006).

Developing competitive strategies is the biggest challenge for organizations (Sterling, 2003). To meet this challenge, companies need to make the most of their capacity and integrate their activities with their strategies. At this point, they can receive systematic support in reaching solutions that support value delivery with continuous improvement from the field of processes, and in reaching solutions that serve strategic goals from the field of projects. Thus, the firm seizes opportunities to achieve its strategic objectives by contributing to the execution of the actions specified in the strategic plan, on the one hand, and aligning the firm's activity routine guidelines on the other hand (Ferreira et al., 2019).

The project and processes realm is at the center of sustainable profitable growth. Processes are knowledge management tools that are necessary for surviving today and projects are knowledge management tools that are necessary for existing tomorrow. They provide an overall framework to ensure the longevity of the firm. Knowledge is at the core of value creation efforts and is an integral part of project and process management. Concepts such as search, discovery, experimentation, risk-taking, and innovation are related to knowledge creation, and concepts such as refinement, implementation, efficiency, production, and

selection are related to value creation. Knowledge creation and innovation are at the forefront in the field of projects, on the other hand, value creation and efficiency are at the forefront in the field of processes. The information produced in the field of projects is used in the field of processes to be transformed into shareholder wealth (Chinta & Kloppenborg, 2010).

Time is the most important competitive weapon of modern times. With the effective management of this weapon in the field of projects, it is possible to reduce overall project costs and increase benefits. Because the short duration of the project brings forward and extends the contribution time of the project output to the firm. Thus, companies can achieve a competitive advantage by completing projects earlier. This advantage occurs as more projects with the same resources, lowering the overall labor cost per project, higher net profit, or greater price competitiveness (Patrick & Warchalowski, 2013). Time also offers advantages over cycle time, which is included in the performance of business processes. Time-based competition is process-oriented, as it aims to radically reduce the time required for the entire process to take place. Concomitant benefits include increased productivity, increased profitability, reduced risks, and increased market share (Childe et al., 1994).

A large amount of data and information that can be collected as a result of technological advances is used for strategic actions. The ability to analyze large datasets is the key to competitive differentiation. The technology makes it possible to automate particularly manual operations. With the increase in efficiency to be obtained by new investments in high technology or the improvement of existing processes, waste and costs are reduced. Thus, the highest return on investments can be obtained (Cleveland, 2006).

Projects and Competition

Since projects are defined as means used to implement strategies, it can be said that the purpose of project management is not only to produce output but also to strengthen the competitive position of the firm (Caliste, 2013). For this reason, projects should be determined in a way that will provide a competitive advantage. Project strategy is about what needs to be done to get the greatest benefits and best outputs from the project. It is the power project strategy that turns project management into a competitive weapon for the firm. Choosing the right strategy at the beginning of the project and aligning it with the business strategy contributes positively to both the success of the project and the overall business results (Shenhar, 2000).

Core competencies are based upon knowledge assets. Considering project management, which is a knowledge-based field, as a basic competence depends on the existence of a suitable culture. Because the knowledge behind the core competencies is not found in a single person or team but spread throughout the organization. Competence does not occur when this scattered information is not collected. Firms that raise their project management capabilities to the level of core competence are those that strive to collect, analyze and disseminate project information, manage information correctly at the institutional level, and turn into institutions that constantly learn (Reginato & Ibbs, 2002). It is necessary to record and analyze the knowledge and experience gained from the projects and to establish an infrastructure for this. It is benefited from this infrastructure in continuous improvement studies (TS ISO 10006, 2004).

Firms using the VRIO framework in project management should invest in intangible assets as well as tangible project management assets. Intangible assets rely on tacit information that, like tangible assets, cannot be easily transferred or copied. But as firms increasingly invest in tangible assets such as project management tools and techniques, methodologies, and project management offices, sharing of project management know-how and knowledge across teams and departments is undervalued. However, companies need to realize that they provide a competitive advantage in tacit project management knowledge such as tangible assets (Mathur et al., 2007). In particular, companies need to determine the right methods on how to share information and how to manage this area.

Project management assets make up a subset of firm resources. Some of these assets are strategic and a source of competitive advantage for the firm (Mathur et al., 2013). For companies that only improve their existing processes and do not make strategic investments, the opportunities for further performance increase are decreasing day by day. For this reason, it is possible to consider project management as an important source of competition that companies have not yet used at the level they deserve (Maylor, 2010).

Processes and Competition

BPM is the best practice management principle that helps maintain competitive advantage. Firms use these principles, strategies, and technologies to cope with global competition. BPM is positioned at the base of competition by aligning operations with strategies and strategic priorities (Hung, 2006).

There is a positive and significant relationship between BPM and sustainable competitive advantage. The firm can achieve this advantage through business processes by ensuring the right balance and coordination among its resources (Vafaei et al., 2019). BPM creates competitiveness by accelerating processes and increasing productivity and efficiency (Bai & Sarkis, 2013).

Process management connects all activities. Technological capabilities create synergy by strengthening this bond. The firm's technological capabilities level determines the level of its processes. The level of financial gain from the applications between the earlier adopters and the later adopters of process management applications differ in favor of those with more technological means. Those with limited technological capabilities are both deprived of the synergy that can arise with process management practices and gain less from the potential of coordination and complementarity between activities. The main benefit comes from the overall productivity increase, not from the inimitability of operations. Technologic capabilities gain an inimitable

function to synergy opportunities arising from mutual activities (Benner & Veloso, 2006). High-tech systems tend to be high-performing by nature. Therefore, the need for process improvement efforts may initially be lower. However, after a certain period, the process entropy will increase and the need for improvement will arise.

Efficiency is the basis of process management. It reduces losses and waste. For example, Detroit automakers can take a new car from design to market in about five years, while Japanese manufacturers can do it in a year and a half. They have achieved this through well-defined and automated business processes. Increased process efficiencies can deliver output at lower costs and put the firm in a more competitive position. More efficient and consistent processes often result in higher-quality products. This is an obvious competitive advantage (Cleveland, 2006).

TQM is an integrated management philosophy that requires continuous improvement, meeting customers' requirements, reducing rework, long-range thinking, increased employee involvement and teamwork, process redesign, competitive benchmarking, team-based problem-solving, constant measurement of results, and closer relationships with suppliers. Its practitioners associate TQM with improved products and services, reduced costs, more satisfied customers and employees, and improved bottom-line financial performance. The success of TQM seems to depend on process improvement efforts (Powell, 1995). Firms generally consider establishing a quality management system as a project and operate it as a process after the system is established. It is understood that process improvement efforts have developed TQM, which provides a competitive advantage. This approach places continuous improvement at the core of TQM (Zairi, 1997).

Knowledge is the only means of production that is not subject to diminishing returns. This means that the better the business processes are understood, the more they can be improved (Harrington, 1991). Information assets are the firm's products obtained through people, processes, and systems. IT capability undertakes a fundamental function in revealing information at the right place and at the right time (Nadarajah & Kadir, 2014). IT is a powerful facilitator for managing business processes and transforming business. It provides the integration of functions by making corporate information easily accessible. Although IT systems alone do not provide sustainable performance, they can be carefully incorporated into all business processes, reducing integration problems and improving the performance of functions and inter-firm processes. According to Alignment theory, IT applications are necessary for organizational performance. With this aspect, IT can provide a competitive advantage by guaranteeing the success of processes (Hung, 2006). Therefore, IT constitutes one of the main fields of activity of BPM studies (Ubaid & Dweiri, 2020).

Compliance of processes with strategies increases business performance. For this, BPM initiatives should be based directly on the firm's strategy, and how process improvement efforts will achieve strategic goals should be outlined in improvement plans. Thus, the organizational benefits of BPM are clearly articulated. Process improvement plans should also include information on how to link BPM activities with corporate-level projects (vom Brocke & Rosemann, 2015).

Vision and strategy, strong leadership, and capable managers are often considered key factors for successful corporate transformation. These are necessary conditions. Sufficient conditions are organizational systems to connect these elements and effective process management (Kim, 2007). As the firm tries to be process-oriented, the level of success increases. To strengthen the link between strategy and processes, management support, the capacity to change processes, technological adaptation, and training of employees are needed (Skrinjar & Trkman, 2013).

Operational Decision Criteria in Practice

Competition in project and process realms are experienced among companies that can develop competence in these areas and use them effectively. Because it is not the projects or processes themselves that are continuous, but these competencies that create them. It is getting harder and harder to maintain a competitive advantage every day. Competition is associated with efforts that involve numerous decisions and actions, from identifying the best option for solving a problem or realizing an improvement idea, to planning, implementing, developing, and producing competitively effective outputs. If competitors are ubiquitous in the market, or if the products do not excite the customers, or if the employees do not prefer their products, or if the best employees leave the firm, or if the job seekers do not prefer the firm, or if the share value of the organization decreases, the existing competitive advantages are ineffective (McGrath, 2013). Strategic and operational mistakes, wrong managerial choices, failure to notice the big change by focusing on efficiency and process improvement are the main reasons for this situation (Harvey & Aubry, 2018). At this point, it is necessary to start looking for ways to create new advantages and to mobilize opportunities to take advantage of opportunities.

When the right efforts give results at the right time, they create an advantage. The timing is just as important as the content. Here, we are talking about starting a reengineering study or developing a new project idea. Transformative ideas should come to the fore when improvement ideas begin to fail. Because at this point, no further development can be achieved with process improvements, and more cost, time, and quality advantages cannot be created since saturation is reached. The belief that the problems that require a radical change can be overcome with improvement activities can drag the situation into a deadlock and cause unnecessary waste of labor, time, and resources. This is the bottom level where operational efficiency declines and it is not competitively possible for the firm to sustain this situation any longer. It is possible to determine this point by following some operational and managerial indicators. Decision criteria explain the operational dynamics of these moments when improvement efforts are ineffective and the need for radical change arises and presents the leading signs of the need for radical change. Among the main decision criteria are the following (Zahra & Covin, 1993; Slater & Narver, 1996; Yamin et al., 1999;

Frambach et al., 2003; Schilke et al., 2009; Parnell, 2011; Santos-Vijande et al., 2012; Ferreira et al., 2019; Ubaid & Dweiri, 2020);

If costs are increasing or not falling: Non-deductible costs are the most important indicator of the need for radical change, excluding temporary or permanent costs arising from the general market or industry challenges. In this context, all operational costs, especially labor, energy, material input, and financial costs, should be followed in detail. Only after analyzing these collected data can definitive judgments be made about the actual costs. Thus, it is understood what the costs originate from, and the negative effects of conjectural fluctuations on the decision processes are prevented.

If the advantages provided by improvements are lost in a short time: It should be questioned whether an improvement provides permanent value and the continuity of the gains should be monitored. The impact of an improvement, particularly on the value delivered to the customer, should not be temporary, or ensuring that the improvement is permanent should not result in increased effort and costs.

If the quality level is not increasing or decreasing: The quality level of the output is very important as it is a hygiene factor. Because the quality of the product and service and ensuring its continuity are the most basic customer expectations. If efforts to improve product quality fails, or if current quality levels are difficult to maintain, or if even minor operational changes create quality problems, it may be time to take radical actions. Customer complaints should be perceived as leading signs in this regard. In particular, the reactions of loyal customers should be carefully monitored.

If production or delivery speed is not improving or deteriorating: To customer satisfaction, a paid product should be delivered without delay. For this, operations need to be lean and waste-free. It is not sustainable that the benefit provided by speed lags behind the cost. If operations cannot be accelerated or incur great costs despite all improvement efforts, this may be another indication of the need for radical change.

If performance or efficiency does not increase or decrease: It is the situation where the improvements made do not have a positive effect on performance or productivity. At this point, one problem is usually tried to be solved, while another problem is caused. For example, a raw material decreases the quality while increasing the performance. Performance and efficiency concepts are directly or indirectly related to many parameters. If the difficulties experienced cannot be overcome and the desired improvements cannot be achieved, this can be seen as a sign of the need for radical change. Performance and efficiency can be considered as direct indicators, like cost, due to their relationship with a large number of parameters.

Apart from these five basic criteria, there are many other signs such as increased maintenance requirements and extended maintenance times, increased occupational safety risks, or the need for more work for the same production quantities. When these criteria are evaluated properly, they can help to determine the point where the process improvement efforts are insufficient in terms of competition. Many companies struggle with uncertainties because they cannot determine the point required for radical change, they cannot escape from being stuck, and they consume scarce resources for fruitless efforts. Understanding that the value a process offers is no longer sufficient or can no longer be improved is a gateway to opportunities for transformation. This is also the hardest way of continuous development. For this reason, organizational capabilities that enable the understanding of the boundaries of the transition zone from the field of processes to the field of projects can be seen as a core competence for the firms.

Conclusion

Projects end when set performance targets are met. Both the phases and outputs of a project are project-specific and open to improvement. The function of the projects to create new processes precedes the radical change function, as it is the founding will. Whenever a new process is needed or a radical change is needed, projects are applied. The process-transforming power of projects can be used over and over throughout their process lifecycle. Processes, by their iterative nature, are improvement-oriented. The success of the processes can be increased by developing organizational skills such as collaboration, communication, engagement, and knowledge sharing. Projects require more competencies such as specialization, innovation, change, and differentiation. Projects and processes support strategies thanks to the gains they provide on key success parameters. Gaining a competitive advantage by contributing to strategic goals is realized through this mechanism.

The decision criteria that emerge within the scope of the preferences between projects and processes are the criteria that should be considered when the success parameters are ineffective and are necessary to manage the transformation correctly. Firms always use appropriate project and process management tools as a lever to realize the targets they have set in line with their strategies. Thus, it is ensured that the projects and processes are aligned with the strategies and their connections with the competition are established. It is meaningful and valuable in terms of competition to produce information that is compatible with strategic goals at the level of projects and to use this information in the right areas, especially in process improvements.

Although having process management competencies is not a sufficient condition for competitive advantage, being indifferent to these developments while everyone is making projects and improving their processes means being dragged into a competitive disadvantage. It is necessary to be aware of the need to move to the realm of the project when improvements are insufficient and radical change has become a necessity. Incremental improvements are a vital necessity for companies, but seeing them as sufficient carries vital risks. Because in this case, it is always possible for competitors to emerge with more effective processes and affect the direction of competition. In this context, it is possible to say that the factors that strengthen

the project and process management muscles are important supporters against competition and the use of powerful means will strengthen firms against the competitors.

Two contributions to the literature are made with this study. When evaluated within the framework of competitive advantage, the main function of organizations is primarily to improve their existing processes. Efforts in the process realm help deliver gains, from cost and quality improvements to delivering enhanced value, from increasing production and delivery speed to performance and efficiency improvements. Support is received from project management capabilities also for differentiation-oriented outputs. There is a struggle between cost improvement and differentiation preference. As Porter (1980) pointed out, most of the businesses are located in this struggle zone. The existence of such a field is demonstrated through two powerful management means, projects and processes realms. Another contribution is the explanation of the decision criteria to help define this transition zone. By considering these criteria, companies can make maximum use of the project and process realms and can survive longer in the face of competition.

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