HOW IMPLEMENT BUSINESS STRATEGY IN UNCERTAINTY ENVIRONMENT? IMPLEMENTATION OF PROJECT PORTFOLIO MANAGEMENT WITH DYNAMIC FEATURES

RAMTIN NAYEBVALI\textsuperscript{a1}, HAMID ZARGARPOUR\textsuperscript{b}, MOHAMAD HOSSEIN SOBHIYAH\textsuperscript{c} AND SAEED ZARABADIPOUR\textsuperscript{d}

Project Management (MS), Tarbiat Modares University-Tehran – Iran
Vice-president of Mapna Group
Project Management - Professor Assistant - Tarbiat Modares University-Tehran – Iran
Executive Manager of Mapna Management consulting group

ABSTRACT

The purpose of this paper is to describe and explore a general framework that defines the relationship between access to business strategy, portfolio management project and business success, considering the environment of uncertainty, and its impact on this communication. This is purely qualitative, and proves relationships and provides solutions, by using comprehensive benefit existing literature in the field of strategic management, project portfolio management and other relevant literature to identify challenges. The results of this study show that, positive and significant correlation could be established in conjunction with business strategy, the success of the project portfolio and business success. Also in this study were identified, measures of business success and the success of the project portfolio, with an extensive review of literature, which can be considered as a touchstone of performance strategy and portfolio management for the organization. Then, too, considering the uncertainty of the environment, and its impact on the performance of Portfolio Management Project, and the subsequent effects that will have on its success, was identified skills and abilities , with the help of literature, which should be used to reduce and prevent negative impacts on environment uncertainties. Thus, the final output of this research is a comprehensive model that is consisted in the range of organizations and project-oriented environments. Of course validation of model with quantitate research will be needed.

KEYWORDS: Environmental Uncertainty, Business Strategy, Project Portfolio Management, Business Success

Studies show that over the past two decades, 60 to 80 percent of companies have not achieved their strategic objectives [1], as well as 66 percent of the company's strategies, has never been implemented [2]. While the most focus, has been on defining and formulating strategy, implementing the strategy, has been minimal attention [43]. Herbiniak (2006), expresses that implementation of strategy, is much more difficult than to define it in terms of concepts [5].

Organizations in order to achieve their strategic objectives, using Business strategy which help them to determine how to compete with competitors for earn a greater share of the market [67]. Lashgar Bolouki (2011), expresses that the implementation of the business strategy, means translate strategies into executable programs, projects and key metrics. Based on this approach in order to execute strategies, the gap between strategic layer (steering) and operational layers (administrative) in organization should be covered. Which leads to a gap between practical action and decisions [8] and this point is where the role of project portfolio management will be more needed. Shenhar and et al (2001) have names project portfolio management and special projects as a strategic tool and a powerful weapon and refer to it as the foundation of strategy implementation [10,11,12,9].

Project portfolio management, is the management of an enterprise integrated set of projects, that increases its importance in both theory and in practical [11,14, 13]. Project Portfolio management increases the benefits of the organization [15]. Project portfolio is a set of projects that compete for organizations limited resources and are managed by a part of the organization at the same time [16].

Current literature on project portfolio management, shows its importance in the field of assessment, prioritize and select projects in line with organizational strategies [19,18,17]. So choosing the right project as an important part of strategic management by project portfolio management shows its importance too[9,4]. Despite of its importance there are few studies exploring of the linkage between strategic management,
Project portfolio management and business success by considering the conditions of uncertainty.

Muller et al (2008) showed a positive relation between strategy and portfolio selection and projects portfolio performance [20]. Also, in relation to prioritize projects, as part of the portfolio management process, and a key factor in its success, there are few other studies [23,22,21]. Also studies have been undertaken in relation to the positive impact of project portfolio performance and business results. [26,25,24]. Yan Petit (2011), has also conducted a study that explores relation between project portfolio management processes and the conditions of uncertainty [27]. But in general, has not done research in relation with a general framework which is to express the relationship between the achievement of business strategy, project portfolio success and business success in the environment of uncertainty. To achieve such a framework would be the ultimate goal of this research.

Figure 1 shows the overall structure of the study. Under this structure the relationship between the achievement of business strategy, project portfolio success, business success is evaluated considering the circumstances and environment of uncertainty.

This research direction will be to develop a project portfolio management literature, in order to reduce the gap between the definition and implementation of the strategy (Morris and Jameson (2005)) [4]. So, in the end, will be described, the overall structure of the research, along with details. Thus, the first and the second part will be described, the relationship between business success and the success of the project portfolio, and the third section will discuss the relationship between the success of the project portfolio and achieve business strategy. Finally the expression will be, how the portfolio of projects in an environment of uncertainty, and this research will eventually with conclusions and proposals for future studies.

**Impact of project portfolio success on business success**

**Definition of project portfolio success**

Project Portfolio Management, through a series of iterative processes, evaluates and chooses the current and proposed new projects, taking into account the strategic and environmental restrictions [16] and the success of the project portfolio are rated based on multifaceted goals, which was proposed by Cooper et al (2002) [28]. And since, successfully manage the portfolio of projects, have roles to play in achieving business goals and business success based on the idea Shenhar et al (2001), to consider the need for long-term and short-term goals projects is essential. The success of the project portfolio should be required to achieve short and long term goals [9]. But in addition to these goals, consider an environment with characteristics of uncertainty can lead to challenges to achieve their goals.

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**Figure 1: Structure of research**

Project portfolio management objectives, well-defined by Cooper et al (2002) [26,22,30,29]. The main objectives are: to maximize the financial value of the portfolio, linking the portfolio to company's strategy, balancing projects within the portfolio taking into account the capacity of the organization. In this study, the aforementioned purposes to be used as the main objectives.

In many studies, it has been pointed out, the success of the project portfolio [26,30,11]. But Lehtonen and Martinsuo (2007), in their research demonstrated the success of the project portfolio is essential, but not sufficient for the success of the entire portfolio [30]. Therefore, the proposed goals for successful project portfolio is divided into two dimensions by Cooper et al (2002). The first aspect, which shows the project portfolio success, which will include access to the time, cost, quality and customer satisfaction and the second aspect,
benefit from the synergies between the projects portfolio. strategic fit and balance the project are the third and fourth dimensions of successful portfolio of projects which were proposed by Cooper et al (2002) [28].

**Average single project success**

Most studies in the literature on project management, have concentrated on the constraints of time, cost and quality [9,31,32]. However, research on the transition from the traditional constraints [33] and other criteria are emerging [35,36,11,34] a lot of criteria that covers the needs of market and customers [9,38,37]. Martinso and Lehtonen (2007) in their research have registered a wide range of criteria which are effective in the management of projects and lead to positive projects portfolio performance [30].

Therefore, the Average single project success is the first aspect of the success of the project portfolio in this research.

**Use of projects synergy**

According to research Platje and et al (1994), coordinated management of all projects in the portfolio, will have benefits beyond the benefits of project management, separately and individually [15]. This approach is examined and confirmed in other studies [39,35,30,14]. However because a lot of interactions between projects and their complexity, there are some benefits in reality are not however, project portfolio management, will be more valuable, because reinventing and enhancing synergies, especially in the aspects of technology marketing, knowledge and resources [40,41]. Extensive analysis is performed by Henard and szymanski (2001) and Pattikawa and et al (2006), the market and technology synergies, have called factor The great success of the project [42,43]. Also Kaplan and Norton (2006) have also stressed the importance of synergies strategic aspects [44].

Therefore, the second aspect of the success of the project portfolio, that is, the use of synergies in technology and market aspects the project portfolio is considered.

**A strategic fit**

On strategic alignment in different fields in the literature has been carried out, various studies [45]. The idea of strategic alignment has Origin the research done in the field and by taking measures such as strategy structure technology and environment [46,47]. Therefore, the order portfolio of strategic projects will indicate the amount of the order portfolio of projects with business strategy. Although it is one of the major objectives of project portfolio management, the literature about it is very limited [45]. Coulon et al (2009) express in their study the high level management of the portfolio in the achievement of business strategy [29]. Also the allocation of resources based on organizational goals [48,49,50] and gap analysis between what is planned and what is running to provide corrective measures as an important element in the implementation of the strategy there are cases that can be expected from the implementation of project portfolio management [13]. However project portfolio management should establish a mutual influences between the project itself and the order of business strategy [51].

In this study, the idea of strategic alignment which is given by (Dai Rich and Lehtonen (2005)) will be considered as the basis of the work [11]. This aspect was considered the alignment of strategy objectives with resource allocation and alignment of projects with business strategy.

**Portfolio balance**

The idea of a balanced portfolio is based on Markowitz's theory (1952-1991) [52,53]. This theory is consistent with the strategic management literature in 1970s. This idea in project management literature has been used in this definition that portfolio balance is a good mix of projects that will enable the organization to achieve its goals with minimal risk [54]. Based on the literature on project management, portfolio must be balanced in different dimensions which can provide the most value to the organization [16,28,26]. Although there is a general consensus that in the case of portfolio balance but Killen and et al (b2008) have proposed project type risk level and adequacy of resources as criteria for portfolio balance [26]. The Chao and Kavadias (2008) and Chao and et al (2009) have defined criteria for short-term benefits in exchange for long-term benefits as a measure of the portfolio balance running new projects [55,48].

In this research portfolio balance it is considered as used and making an appropriate allocation of resources the projects portfolio[26,54].
Definition of Business Success

Most organizations traditionally employ certain financial measures to assess and evaluate the success of their business [56]. But many studies have shown these measures alone are not the answer to long-term success of the organization and multi-dimensional measures of success such as the balanced scorecard [57] intellectual capital [58] and the dimensions of success [59] should be applied. Consequently the project management research also suggests that the project portfolio and business level should also be evaluated by some aspect of the criteria [60,30,20]. According to the model multi-dimensional it is not created for the portfolio of projects the success of the project which is presented by Shenhar and et al (2001) this study will be used taking into account the portfolio and compliance with it. According Shenhar et al (2001) evaluating the success of the project and the subsequent project portfolio should encompass both portfolio performance and the results of it [9].

The success of the first two aspects called effectiveness and impact of the project on the client this includes aspects the implementation phase of the project and this is covered in the studies the review focuses on project success.

The third aspect "Business Success" and the fourth dimension "Preparing for the Future" also derived from the results of the project which subsequently includes the effects of short-term economic future and long-term approaches (Shenhar et al (2001)). Therefore in this study based on the idea Shenhar and et al (2001) short-term success (1) economic success and long-term success (2) will be considered as a preparation for the future of course with considering the context of portfolio [9].

Economic success

The success of a business is divided into the following two groups: market performance and business performance (Shenhar et al (2001)). This aspect has a direct impact on the portfolio of projects. Market success explains the achievement of sales objectives such as market share or sales volume [38,9] these goals are often measured in comparison with the other competitors according to changes in the business environment. Commercial success measured according to traditional financial metrics such as return on investment (ROI) profitability and break even [38]. Griffin and the Pig (1996) in their study identify and analysis of an extensive range of portfolio success criteria. Based on their results the company's status and strategies they will indicate success criteria. Thus there was not a standard measure of success and approved either at the project level and at the portfolio level [9].

In this study the economic success of the project portfolio it is considered as generated income gain market return expected [38].

Preparing for the Future

Preparing for the future including aspects of long-term success and is defined to mean the preparation and the technological infrastructure for the upcoming needs [9]. This aspect is the study of the benefits and opportunities for long-term projects that indirectly affect our goals or finishes we will observe the results. That perspective it has been pointed out by Shenhar and et al (2001) covers create new markets developing and improving processes and technologies creating new efficiencies and overall skills and ability to respond to external changes such as Market changes and technology [9].

In this study preparation for the future includes theoretical material drawn from Shenhar Studies (2001) which is consistent with the portfolio. Ie the side covers new technologies and develops sufficient competencies market development compared to other competitors who make the future of the industry.

The relationship between business success and the project portfolio success

Corporate managers have shifted the focus of its approach the portfolio of projects in order to communicate effectively with business objectives [13,11]. Subsequently the success of the project portfolio will lead to benefits beyond time, cost and quality of the project [61,24] as well as effective and positive relationship between the level of portfolio and business results have also repeatedly stressed is [30,20,26]. Killen and et al (2008) in their studies have described the relationship between the portfolio of projects and the success of new products as a core part of business success [26]. Shenhar and et al (2001) have also noted the positive impact of project portfolio management on the long-term success of the organization [9] this approach has been confirmed by other authors such as Martinso and Lehtonn (2007) [30].
Therefore the following proposition is defined the relationship between business success and the success of the project portfolio in order to confirm P1 and move forward in the model (Figure - 2):

P1 "- there is significant positive relative between successful projects portfolio which include Average single project portfolio success, portfolio balance, Use of projects synergy and strategic fit and successful businesses which include commercial success and prepare for the Future. " 

The success of the project portfolio and achieve business strategy

Achieve business strategy

Lashgar Bolouki (2011) has introduced strategic planning as the actions that should be drawn to achieve ideals. For achieve strategic planning purposes it should be necessary to build the path that called strategy. Road building strategy requires two essential steps which include:

1) Definition (formulating ) of Strategy

2) Implementation of strategy [8]

Between this steps of strategy there are five key differences which include:

1) In Definition the strategy which emphasizes the effectiveness, but in the implementation strategy the performance is emphasized.

2) develop strategies mental process but the implementation of the strategy operational process.

3) formulation requires diagnostic skills analytical and synthetic while implementing strategies often are required to have an interactive skills and allocate track and organize.

4) strategies require the creation of harmony among a handful of others, while implementing the strategy involves creating harmony between the many individuals

5) develop a strategy to take between three to six months while the current implementation strategy is a one-year period up to five years [62].

The point here is important, if not the implementation strategies, strategic planning would fall as an intellectual game rather interesting because the strategy without execution is unable to change the situation. Tony Hayward CEO of the New (BP) as will be clear: we are the problem not the strategy but its implementation is ongoing [63].

Lashkar Bolouki (2011) the implementation of the business strategy title will meet one of the following:

1-. Turning strategy into executable programs, projects and key metrics

Strategies to be implemented it should be covered the gap between strategic layer (steering) and operational layers (administrative) in organization which leads to a gap between practical action and decisions daily compared to the strategic orientation of the organization.

2-. Acceptance of implementation strategy by organizations and its environment

Structure, culture and stakeholders may be facilitator strategy in which case the strategy is potentially feasible and if the structure, culture and other factors do not be compatible with a strategy , in this situation the strategy will not feasible.

Implementation of strategy with strategic change management approach

Implementation of strategy is a full sense of change and transformation. This principle of the strategy is a revolution, so this optimization strategy it makes sense: strategic change management [8].

Regarding this issue project portfolio management through screening assessment and selection of appropriate projects with the organization's strategies makes an important part of the process of implementing the strategic objectives of the organization [26,9] this study also of the three main approaches to implement the strategy the first approach was selected as the main view and continue to study the implementation strategy will be organized around it. The main thing in this view is to establish the relationship between strategy and operational layers (the projects).

Effect of project portfolio success on the achievement of business strategy

Research by Cooper and et al (1999) shows, Successful Project Portfolio Management can be followed with the following objectives:

• Select the right project as a competitive advantage in the organization

• allocation of resources and limited institutional
• Project selection based on business strategy
• Set up business based on the selection of projects and taking resources [21]

For these reasons it argues the success of the project portfolio to achieve the business strategy as well as the relationship between strategy and portfolio management [51]. Also the success of the project portfolio is reviewed and recommended in order to achieve the strategy and the necessity of it by Cooper and et al (2001) and Killen and et al (2008)[18,26].

Therefore the following proposition is defined the relationship between business success and the achievement of business strategy in order to verify P2 and move forward in the model (Figure - 2):

\[ P2 \quad \text{"- projects portfolio success which include Average single project success, portfolio balance synergy and strategic fit, influences positively and significantly associated with the achievement of business strategy."} \]

**Project portfolio management function in an environment of uncertainty**

To date the literature the performance of project portfolio management in dynamic environments and problems they have been less studied [27]. Although the standard Project Management Institute has described two types of changes that affect the project portfolio management. The first type of change occurs based on portfolio performance review and to identify any deviations in the achievement of strategic objectives chooses to prioritize and change projects. The second change also involves a change in the business environment which will lead to a new orientation the strategies of the organization [64]. But in a dynamic environment characterized by uncertainty it is necessary to understand and manage the variables that affect the decision making of project portfolio management [27]. This view provides needed capabilities and techniques that are noted the possibility of creating a dynamic project portfolio management [27]. When projects are implemented in environments where uncertainty is beyond the traditional risks, managers should act beyond what already had been expected. Ie they must be continuously synchronized to roles and techniques and on the move whatever it is away from schedule-driven approaches and to move toward approaches are flexible. These were things that were mentioned in the studies of Meyer et al (2002) and the buch and Seidel (1993) also [65,66].

Salden (2009) Permonia and et al (2008) and ward and Chapman (2003) in his findings uncertainty management have not only restricted to face the threats and opportunities and their effects. It has been introduced to discover and understand the roots of uncertainty before managing them as a new approach [67,68,69]. Chapman and ward (2003) Managing uncertainty in project portfolio management platform has been defined attention perception and management variables the activities of which affect in a range of projects [69]. This view has highlighted the need for techniques and different approaches to cope with different environmental conditions. Among these conditions the following can be mentioned:

• Lack of recognition and appropriate during the implementation process [70]
• Dynamic environment due to constant changes in technology market and competitors [71]
• Complex information comes from a variety of decision-makers, the complex processes of the organization , organizational complex interactions [72]
• Multi-project organizations need to maintain the flexibility in responding to the complexities of the portfolio [73]
• Conflict of interest when making decisions [74]
• Resource constraints [75]

Therefore in order to achieve optimal portfolio performance project and subsequent breakthrough portfolio of projects [20] skills and abilities required would be able to respond to this uncertainty [72].

Dynamic capabilities are organizational capabilities so that they make the creation of competitive advantage in an environment of uncertainty. These abilities refers to those organizational capabilities that are possible integration and reorganization of internal and external competences to respond to changes to the periphery [76]. Overall structure of the sources which is a major factor in creating competitive advantage a measure that is always created by the dynamic capabilities [77].

Although this study directly will not benefit from the concept of dynamic capabilities which of course be
comprehensive theoretically also be an important factor in this approach the research will focus on how to.

Wang and Ahmed (2007) identified three main power dynamics in their studies: the ability to absorptive, innovative and adaptive [78]. Also Killen & Et al (2008) also in their studies have emphasized the impact of these three abilities the positive performance of project management [79]. Therefore in this study as expected these three abilities affect the performance of the project and the subsequent project portfolio management [80].

**Ability to absorptive**

According to research conducted by Lane et al (2006) the ability of the organization to receive and acquire knowledge in order to benefit from the knowledge outside the organization and through the learning process of discovery learning exploitation (operation) and learning to become capacities the ability to absorptive called [81]. Also Garud and Nayyar (1994) and Zahra et al (2002) concluded that learning should occur the learning processes of the organization's knowledge and this knowledge should be maintained at first and then to be applied in accordance with the terms of organization [82,83]. Lane et al (2001) in their research concluded that the ability to absorptive are vital to the inner workings of the organization and finally in 2006 they provide a model voiced the ability to absorptive the performance of the organization and ultimately expressed its effect on the output in terms of trade and knowledge [81,82]. Likewise, Levinthal & Cohen (1990) and oltra and Flor (2003) concluded that the ability to absorptive in innovation which is effective in the portfolio to participate in new business areas plays a positive role [85,86].

**Ability to innovative**

Generally innovation can be defined the second batch incremental innovation (Incremental) and the Innovation Foundation (Radical) [ 80]. Incremental innovation we improve existing products and services in order to improve the knowledge of marching but radical innovation in order to change the product or service a change in the direction of the knowledge [87]. Sabramaniam and Yant (2005) in their research they emphasized that innovation will be a combination of incremental and radical innovation [87]. oltra and Flor (2003) Biden Bach and Mueller (2012) in their research they came to the point that the ability to innovate is very effective innovative outputs of the organization and the ability to effectively have a positive effect on Performance Portfolio [86,80].

**Ability to adaptive**

Biden Bach and Mueller research (2012) shows the parameters of market knowledge and customer knowledge is introduced as parameters the potential adaptive of the portfolio which have a significant effect on portfolio performance [80]. Much research has been done about adaptive. Chakraoas (1982) Holley and et al (1992) Miles and Snow (1978) Wang and Ahmed (2007) have defined adaptive ability to organize identify and capitalize on emerging opportunities in the market [88,90,91,78]. Chakraoas (1982) set a key factor in creating adaptive ability to respond to market opportunities and respond quickly to changing market conditions [88]. Partington (2000) in their research acknowledges the need to adapt to the surrounding environment. He also refers to the ability of adaptive should lead to improved performance [89]. It has also been noted in studies Bourgeois (1980) Snow and Herbiiniak (1980) [92,93]. Grinstein, (2008) during his research it refers to a market oriented organization as a key factor in the ability of adaptive which has a significant effect on portfolio performance as well [94].

Therefore the following proposition is defined the relationship between the performance of the project portfolio management and environmental uncertainty in order to confirm the P3 and move forward in the model (Figure - 2):

P3 "- project portfolio management success that will be followed to achieve the objectives of the portfolio the positively and significantly correlated with adaptability skills absorptive and innovation"

**CONCLUSION AND SUGGESTIONS**

In this study we investigated the relationship between business success project portfolio management and the achievement of business strategy. Environment of uncertainty a factor that affects the performance of the project portfolio management which is effective in achieving its objectives the concept that was discussed in this paper which is Finally the proposed introduction of A conceptual framework (figure 2) which is formed on the basis of existing theories portfolio management and can be effective in reducing the gap between strategy definition and implementation in context of Three's main proposition explained and research was settled.
This paper presents a model providing detailed concepts for research and practice of project portfolio management. The objectives of project portfolio management proposed by Cooper et al. (2002) were extended and combined to an overall project portfolio success factor covering average single project success, portfolio balance, strategic fit, and use of synergies.

A business success construct to evaluate the immediate and long-term impact of project portfolio success on the business level was developed by adopting the concept of Shenhar et al. (2001) to the portfolio level. The project portfolio management function was evaluated in an environment of uncertainty and established strengths based on the ideas of Wang and Ahmed (2007) for better performance portfolio management and achieves its goals. These theories which are well developed can be used in future studies as benchmarks. According to propositions made in this study the organization will measure design strategy with the help of project portfolio management processes.

Evaluation and benchmarking project portfolio management success criteria are provided and its results will make possible adoption of project portfolio management as an appropriate and effective approach to the organization's strategy. However this study yielded limitations and strengths that should be considered. Provide a comprehensive model the expression of the relationship between business strategy and achieve successful project portfolio and business success in a uncertainty environment, it knew its strengths. Also this model is not specific to a certain industry or a specific project and the extent of its application is other positive factors in this study. But the lack of accuracy in the model based on empirical data and quantitative data (including the questionnaire) you know the main limitation of this model. Therefore quantitative analysis model is suggested as a topic for future studies.

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