

# Organizational Strategic Thinking, Project Selection Practices and Portfolio Project Implementation: A Conceptual Framework

Nicasio Gicovi Njue\*, Dorothy Ndunge Kyalo, Angeline Sabina Mulwa, John Mwaura Mbugua

Department of Extramural Studies, University of Nairobi, Kenya

## Abstract:

**W**ith the increased globalization, the environment for growth and development of organizations is growing competitive. In attempt to counter this, organizations are expanding their strategies in line with the dynamic needs. As a result, portfolio project management has been utilized as the maiden model for strategy implementation due to its versatility. The contextual design of a strategic orientation for any organization are claimed to influence project development approaches. Owing to the complex nature of projects due to constraining resources and time, the selection and implementation of projects ought to be supported by an organizational philosophy that reflects the systematic desires to realizing transformative benefits. Consequently, strategic thinking should allow project organizations to respond flexibly to the changing organizational needs during the project selection and implementation discourses. However, literature suggests that as organizations strive to execute projects, there are myriad forms of systematic challenges whose linkage to organization philosophy are yet to be empirically demonstrated. In order to unearth this enigma, this paper presents a conceptual framework to examine the interaction between organizational strategic thinking and the relationship between project selection and portfolio implementation. In particular, the Pareto 80/20 theory of cause and effects, theory of constraints and system theory of organization are discussed relative to the research variables and respective relationships.

**Key words:** *organizational strategic thinking, project selection practice, portfolio project implementation, project need, selection method.*

## I. INTRODUCTION

As the world continues to agglomerate, the organizations' need are exponentially growing complex. Consequently, most organizations are experiencing increased competition, shortened product development life cycles and an increasing emphasis on time to market [1]. In response, organizations are quickly rejuvenating their strategies in order to survive and adapt to obey the natural law of selection famously described as the "survival for the fittest" by Charles Darwin [2], [3]. As a result, portfolio project management is dominantly emerging as the vehicle and expedient model for strategy implementation, organization transformation, new product development and impetuous for continuous learning and improvement [4], [5], which [6] considers as having more optimal value than individual projects. Portfolio project management is viewed as an option for modernizing and re-inventing alternative service delivery paradigm [5]. Similar views are held by [7] that the demand for quality services and goods by customers is compelling organizations to transform their delivery approaches and working practices through projects and programs [8]. As a result, there is growing scholarly interest in the way projects practices and processes inter-play with the organization's strategic orientation [9], [10]. Whereas project selection is considered as a critical decision making step in project development due to its multi-criteria problem considerations [16], [18], [19], literature lacks consensus on the most reliable approaches to project selection for effective and responsive implementation [20]. However, numerous studies draw consensus on the importance of selecting and implementing the right projects in line with strategic aspirations of an organization [11], [12], [13], [14], [15], [16]. This paper presents a model that can be harnessed to explore, explain and predict the interaction of organizational strategic thinking on the relationship between practices in project selection and implementation of portfolio projects.

## II. PROBLEM STATEMENT

Studies have indicated that projects implementation continue to face challenges not limited to cost overrun, scope creep, ineffective stakeholder participation and poor quality of project deliverables which of course leads to customer dissatisfaction, unfulfilled project objectives and loss of investment opportunities [21],[22],[23], [24]. Further, evaluation reports suggest that poor frameworks in the selection and implementation of projects is causing duplication in funding of organization projects, increased costs of some programs and projects thus leading to spillage of the funds,

transparency and accountability issues [25]. It becomes more challenging and complex when implementing portfolio projects. While some organizations have stipulated standards and guidelines for the financial and operational frameworks to which project development must adhere to, the approaches to selection and implementation of projects is often bestowed to the management prerogatives. With reference to [26], portfolio project implementation often fails due to ineffective decision making frameworks attributed to the systematic challenges of shifting of focus, scope creep, innovation challenges, unbalanced portfolios as well as non-systematic problems of overloading project portfolios [27], [28]. It is claimed that approaches in which projects are selected and governed is costing portfolio project performance [29]. While such claims remains contentious and inadequately supported within the context of organization set up [30], [12], [31], [32] considers such as inconsistencies to complicate decisions in project selection prone to project implementation pitfalls. For this reason, [10] and [33] recommends for micro-level studies on the activities of temporary organizations or projects as part of the wider organizational or organizational context. Reference [34] recommends for closer selection analysis of a problem prior to project planning since the interaction of the projects with the environment process poses severe challenges during implementation discourses. Whereas [2] and [35] account that only 63% of organizations are able to realize the value of their strategic potential and that 66% of corporate strategy is never implemented, unfavorable organizational policy guides and decisions in the development and execution of projects like procurement, low level of creativity and innovation, inadequate technological and senior support systems and stakeholders involvement often hinder strategic plan implementation [36], [37], [38], [39]. Owing to the establishment that projects are essential to the growth and survival of organizations, [40], the greater the use of projects in accomplishing organizational purposes and strategies, the more reliant, effective and efficient the organization is in the selection and management of those projects [41]. This argument is supported by [42] that most of organization plans are not objectively creative and thus are prone to adjustments due to political influences. While the challenges related to strategy implementation are attributed to the spill-over effects of the strategic interventions including programs and projects [43], it would imperative to examine how the strategic orientation of an organization interplay the project selection for effective portfolio project implementation. Hence this paper puts into consideration the emerging importance of strategic potentials of organizations to conceptualize the influence of organization strategic thinking on the relationship between project selection practices and portfolio project implementation.

### **III. LITERATURE REVIEW**

Organizations have more than one role to play in the 21<sup>st</sup> Century. This is in responses to own, customer and market needs [44]. Thus, organizations are developing significant deeper strategies to support projects and programs in line with strategic plans [45]. Nonetheless, the complexity in managing and integrating project portfolios is posing serious challenges during the implementation [46]. Challenges facing portfolio project implementation can be systematic or non systematic in nature [27]. Systematic challenges have triggers right from the conceptualization whereby strategic desires of an organization are believed to play a supportive role. However, little is known about the interaction of organizational strategic orientation with project development processes. In order to develop a conceptual model, this paper examines the relationship between projects selection aspects such as the nature of project concepts, screening methods and the realism of project selectors and the portfolio project implementation under the aspects of efficiency, integration, innovation and responsiveness with a shift to how such relationship interacts with organizational strategic thinking in terms of strategic priorities and leadership.

#### **1). Portfolio Project Implementation**

While the implementation of portfolio projects allows organizations to respond flexibly to changing organizational aspects such as needs and structures [43], [47] feels that the interaction between organizations and project brings about the complexity which is a key factor that influences uncertainty because it introduces non-linearity to consequences thus rendering the development of events unpredictable. The work of [31] signifies the imperative control function of the project selection processes on the way projects are implemented. Nevertheless, there exists a relationship between portfolio implementation and organizational performance [23], [48]. Reference [49] advances similar view that as organizations move towards portfolio approaches to project management, portfolio project selection and implementation must focus on ensuring that projects are reviewed to prioritize resource allocation [23] and alignment to organizational strategies so as to assure significant level of stability in the implementation process [50], [51]. Outside this, portfolio project implementation may be prone to two systematic problems namely; shifting of focus, unbalanced portfolios and the overloading of project portfolios as organizations try to achieve revenue growth goals [27]. This leads to perennial problems that reduce the likelihood of portfolio success due to their inability to be effective and efficient [26], [27]. Even though this calls for careful portfolio project selection and implementation [52], [53], lack of interconnectivity between elements in a multi-project in relation to organization environments calls for the need to

explore key compositions of projects portfolios and how they relate to their environment. This would facilitate in drawing a systematic approach in managing project interdependencies at different levels [54]. Hence more understanding would be drawn on how portfolio project implementation responds to the project needs and contributes to the realization of the organizational goals. The choice of implementation of project portfolios as the dependent variable is cognizant to the view that the effects of project selection usually are maturely manifested during the execution phase of project cycle and as such may be indicated by the levels of effectiveness, efficiency, creativity, integration, and responsiveness to the needs [55], [56].

## **2). Projects Selection**

Project selection which is a systematic, objective and subjective process of conceiving and critical assessment of project ideas and concepts with an aim of producing an output profile of prioritized project alternatives so as to facilitate informed decision making on the choice of the most viable, feasible and prolific projects for implementation [41], [52], [40]. Project selection forms the independent variable for this paper since it can be manipulated under project needs, selection methods, nature of selectors and user participation. Whereas literature indicates a diversity in the approaches to project selection, this paper conceptualizes the practices of project selection based on three steps namely; (a) prescreening or conception of project idea and needs, (b) actual screening or the assessment of the project concepts and needs and (c) post screening or the decision making on the final portfolio projects for implementation as advanced by [13], [12], [57]. Even as the project selection appears complicated especially due to competing needs and limitation of resources [48], use network and hierarchy process of judgment when analyzing concepts in the projects selection is supported by [58]. Similar views are echoed by [12] that project selection should be more detailed and specific thus requiring specific tools for assessment and decision support. There are over a hundred methods of selecting projects; each method having merits and demerits that make their application selective by organization [12]. However, literature identifies three main methods of project screening namely; (a) stochastic or non-numerical method like the sacred cow, operating necessity, competitive necessity, product line extension and comparative benefit; (b) numerical method like Net Present Value (NPV), Earned Value Analysis (ENA), Pay Back Period (PBP), Internal Rate of Return (IRR), Average Rate of Return (ARR) Benefit / Cost Ratio (BCR), Opportunity Cost (OC), Profitability Index (PI), Initial Risk Assessment (IRA), Discounted Cash Flows (DCF) and (c) hybrid methods of numerical and non-numerical like multi-criteria methods such as checklist methods, scoring cards, the Analytical Hierarchy Process (AHP), profile method, institutional strategy model, bubble diagrams or portfolio maps [52], [59], [60], [61].

## **3). Strategic Thinking of an Organization**

It is inevitable for organization to design strategic approaches and structures for integrating the projects processes to the existing organization structures [5]. One of main ways of doing so is through institutionalization of strategic thoughts into short and long-term programs and projects, management and operations, fundraising and finances, facilities and governance [41], [62]. Nevertheless, firms are facing more difficulties in the implementation of strategic plans than its formulation. According to [2], [26], firms only realize 63% of their strategies' potential value and that 66% of corporate strategy is never implemented respectively. Some of the most common challenges are: inadequate human resources management systems, insufficient management approaches, resources constraints, rigid organizational structures and cultures, unfavorable institutional policy guides in the execution of projects, subprograms and programs like in procurement, low level of creativity and innovation, inadequate technological support systems, inadequate senior management support, inadequate stakeholders involvement, poor risk management approaches and loss of control in monitoring and evaluation over the implementation processes [37], [38], [39]. While projects are essential to the growth and survival of organizations [40], [41] argue that the greater the use of projects in accomplishing organizational purposes, the more reliant the organization is on the effective and efficient selection and management of those projects. However, strategy implementation challenges are attributed to the spill-over effects of the strategy intervention; programs and projects [43].

## **4). Hypotheses**

**Hypothesis One: there is significant relationship between internal and external sources of project concepts and portfolio project implementation: There is a growing shift of new product studies to the early steps of product conception** due to the organizations desires to ensure that the right needs are identified and the right products are effectively and efficiently realized [63]. Needs are the opportunities that are conceptualized, assessed, analyzed, and ultimately developed into projects usually managed through a life cycle [23]. Whereas the more logical, clear and workable project concepts are the more the definition of requirements and specifications are for smooth implementation, [64] suggest that the nature of the basic concept for investment influences the action and outcomes of the product. Project ideas and concepts can emanate from internal sources such as employees, research and development, engineering or ICT,

customer services and complaints desk; sales and marketing units or external sources such as the external consultants, customers and suppliers, competitors and partners, investors, laws and regulations [65]. However, [20] is on the view that internal sources of projects can be triggered by the board of committees and employees or external customers and investors based on their interests. Though [65] argues that investment and knowledge based ideas can be generated either through specialist or through generalists, there lacks adequate theoretical basis for discussing how sources of project ideas and concepts influence project implementation. Hence this paper views external and internal source of project idea and concepts as having significant implications on project implementation due to diverse and complex needs and interests which are believed to compete for the project inputs, processes and outputs.

**Hypothesis Two: there is significant relationship between project selection methods and portfolio project implementation:** As a systematic and objective process of assessing and substantiating project ideas and concepts, project selection practices ensures that the selected projects are feasible to the resource constraints, productivity and adaptable in making informed decision during implementation [52], [40], [20]. However, the selection process can also be subjective due the diversity of stakeholders' needs as well as the realism of the selectors [41]. The systematic nature of project selection demonstrates the process as an organized practice blended with norms, techniques and procedures for carrying out the tasks [41]. Even as the project selection appears complicated especially in competing projects needs and limitation of resources [48], project selection should be reliable enough to ensure that appropriate informed decisions are reached so as to support the realization of organizational goals through feasible projects [58]. Hence the use network and hierarchy process of judgment when analyzing concepts in the actual choosing of the projects is supported by [58].

Literature designates various methods to project screening as: (a) Deterministic or numerical models (b) stochastic or non-numerical and (c) hybrid of deterministic and stochastic methods [52], [59], [60], [61]. The basic criteria for classifying these methods is based on the level of objectivity (numerical) or subjectivity (non-numerical) or mix of both (multi-criteria) depending on the parameter under consideration. However, the more quantitative the parameter underscore is presented, the more objective and reliable it is during the evaluation over subjective qualities [59]. Whereas project selection is said to play a critical role in project implementation [52], [37], the use of non-numerical methods are closely associated with the subjective expectations of the users in relation to success of the organizations goals and growth [21], [11]. In their study on project selection and management implications in Kenyan Local Authorities, [24] combined a case study and descriptive survey and descriptive statistics revealed that, many organizations lacked formalized project selection and prioritization methodologies as the selection was founded upon the availability of fund and visible community needs. The finding provides fertile grounds for testing hypothesis on influence of project selection prospects to the project implementation in the context of organization norms. However, [66], [59] agree on six criteria when choosing a project selection model as: (a) realism of manager's in making decision based on multiple factors: (b) capability of the model to simulate different scenarios like multiple time periods, (c) situations both internal and external to the project and optimize the decisions, (d) flexibility of the model to provide valid results within the dynamic range of conditions, (e) easy use of the model in terms of comprehension, convenience, usability and (f) cost effective models and ease computerization in terms of data management.

While [32] is on the view that the traditional methods for project screening such as internal rate of return (IRR) or the Net profit Value (NPV) and other financial models are inadequate when assessing the risks and uncertainties associated with projects, most managers prefer financial/numerical project selection methods over nonnumeric methods due to reduced biasness especially when there is a high level of confidence associated with estimates of future cash flows [67]. This is supported by the findings of a study to examine the consequences of poor portfolio project management practices to industrial research institutes (IRI) in America by [30] that financial methods are the most popular (77.3%) and widely used (40.4%) in project selection as they are usually used to compare financial risks and to rank projects against each other. The findings are supported by those of [18], [68] that numerical models are 77% popularity. Another study by [13] suggested that about 40.6% of firms use Bubble Diagrams or Portfolio Maps model of project selection. However, a hybrid of numeric and non-numeric methods of selection is recommended as it facilitates unbiased decision by objectively subjecting projects factors to scrutiny [17], [69]. However, most popular project portfolio methods yield the poorest results in the course of project development [30]. Specifically, popularity of screening methods decreases from: strategic approaches, bubble diagram, weighed scoring card, checklist model having popularity levels of 64.8%, 40.0%, 37.9%, and 20.9% respectively [30]. Nonetheless, the study was limited to the scope and approaches and since the sampled organizations were heterogeneous the findings could not be generalized [70]. Even though the findings were based on the broad framework of good project selection practices, the authors could not recommend on the most effective and efficient project selection method. These conflicting finding and arguments reveals how incongruent the theory of project selection.

**Hypothesis Three: there is significant relationship between the internal and external origins of project selectors and portfolio project implementation:** The origin of project selectors determines whether the individual is an internal or

external customer, which intern may be used to examine the level of project attachment. Reference [71] suggest that the source and personality of an individual attributes have greater influence in their abilities to an outcome of an uncertain task. References [72], [73] support similar views that no current conceptualization of investment opportunity can happen in isolation with actor-dependency, pre-existing external conditions. Whereas project staffs demonstrated to contribute significantly to the project performance and success, the study by [74] described the general explanations on the project staff contribution to project performance, little understanding on how realism of staffs related to project development is revealed. Reference [75] holds the view that the knowledge and experience of a project selector have significant contribution to the understanding and ability to assess, evaluate and combine resources logically when discovering project ideas. In their study to examine the link between individuals' knowledge sourcing and their creative contributions, [76] used a survey design and the regression analysis suggested that the external sources of information and knowledge influenced the level of creativity and innovativeness to an individual and overall project development over internals sources. However, there is scarce empirical justification on how the origins of project selectors influence project implementation discourse.

**Hypothesis Four: there is significant relationship between stakeholder participation in the project selection and portfolio project implementation:** Stakeholders are increasing becoming interested in project implementation so as to be aware of the opportunities, benefits, potential risks and risk-related costs associated with running projects [77]. A survey by [34] to investigate the determinants of successful project implementation in Nigeria revealed that stakeholder's participation had more positive significant influence on the project implementation and success than the project management skills of project managers which only aided the generation of accurate designs, cost and time estimates for effective and efficient project delivery. Equally, stakeholder's engagement is believed to promote equity, ownership and accountability during the project implementation to ensure that the products are responsive to the needs [52]. In their documentation on the project selection approach for Spent Nuclear Fuel Cleanup in Hanford USA, [78] shares similar views that when stakeholders participate and understand dynamics of project selection, they facilitate in making informed and consultative project decisions essential for project success. While investigating how involvement of project's stakeholders defined the level of project scope, [79] found that involvement of stakeholders in project definition and selection improves stakeholders' sense of procedural justice and fairness in project decision-making and scope definition, which could in turn increase the chance of having a better and successful project outcome as well as satisfied stakeholders [80]. However, over-accommodation of the stakeholders' demands often leads to loss of scope and focus during project implementation due to uncertainties of interests [81]. While stakeholders can participate in project development by sharing information, consultations, decision making, negotiation, implementation, resource contribution etc., studies have inadequately demonstrated how such aspects in project selection implicate on portfolio project implementation.

**Hypothesis Five: The strength of the relationship between the practice of project selection and portfolio project implementation is mediated by strategic priorities of an organization:** With the adoption of portfolio management approach to strategy implementation [4], the value created by projects is increasingly being subjected to more scrutiny [82], [83]. In most organizations, strategy priorities are mostly implemented via projects and programs [5]. Of paramount is to ensure that suitable project organizations are anchored within the strategic desires of an organizations structure [84]. A quantitative study by [51] to investigate the relationship between strategy alignment and the overall performance of project portfolio management using self-administered survey and multiple regression analysis technique revealed that project portfolio management performance is directly influenced by the strategic alignment between projects and organizations core obligations. Reference [40] holds similar view that projects must be streamlined to the strategic intention and resource considerations of an organization. Due to lack of interconnectivity between elements in a multi-project cum organization environments, there is need to explore key compositions of projects, programs, and portfolios and how they relate with the organization environment in order to draw a systematic approach in managing the interdependencies at different levels [54]. While organizations priorities can be demonstrated by the mandates and elaborated in the organizational charter, rules, regulations, policies, strategic plans and other procedural documents, many of such mandates are mostly realized through projects and programs [85]. Although the strategic orientation of an organization is attributed to the typical strategic plan, such approach is subjected to SWOT analysis and review of the organizations' mission, objectives, strategies and assessment of alternatives or projects [67]. Project specific objectives must be aligned to the organization strategies, priorities, goals and mandates in order to produce deliverables that conform to the organizations dreams [86]. Surprisingly, despite organization priorities consisting of musts in terms of requirements, constraints and expectations, few organizations are able to draw the line between the core and noncore priorities during their operations [85]. This aspect can be used to explain the reason why some projects fail to live up to then expectations over the compromise of organization priorities in terms of needs and resources during the

implementation. This dilemma can be answered through examination of the influence of strategic priorities of an organization in the project development processes.

**Hypothesis Six: The strength of the relationship between the practice of project selection and portfolio project implementation is moderated by the strategic leadership of an organization:** As organizations strive to maximize strategy realization through projects [87], [88], conflicting objectives, lack of support and other contextual issues held by top management in an organization can negatively impact on the progress and outcomes of project development [82]. For example, poor project leadership arising from poor integration of organizational governance with the project leadership is believed to hinder the flexibility and innovation essential for navigating the projects across the dynamic environment hence negatively influencing the performance of projects [89], [90]. As suggested by [91], this challenge emanates from bureaucratic governance and structural coordination of the organizations entities like in public sector, which defines the execution of the projects [92]. These findings are maintained by those of [5] that complexity in running public projects is attributed to functional role conflict, political interferences, partnerships conflicts and low community participation in projects. As reference [93] draws a link between the high and low level leadership principles to the project specific and organizational internal processes, [5] aver that bureaucratic organizational structures and cultures hinders the level of innovation in project development and to some extent obstructs the inter-phase between the organization and projects implementation. Similar views are held a by [94] that involvement of top management in project implementation has significant contribution to successful projects.

Organizations having strategic aspects that are conceptualized to leadership inter-play with the project development like decision support, strategy implementation and the organization structure [95], [96]. For this reason, investors believe that a company with good strategic orientation in leadership can perform better with time as can reduce the risks and attract further investment [97]. Whereas decision making process ought to be systematic right from problem identification to the consideration of alternatives [98], [99], cognitive and personal biases are found to be the main hindrance to successful outcomes of a decision-making processes [100], [101]. This stand is held by [42] in their study to examine the strategic planning process and implementation in the higher education sector of Kenya who found that most of Kenyan public universities and colleges have always planned but nothing objective, strategic and creative in their plans of actions as the strategic planning processes are inflated by politics from the incumbent government. Even though, studies have demonstrated positive relationships between corporate leadership and organizational performance [102,] there is scarcity of knowledge on how such leadership and decision making structures influence the project development discourses [103], [104], [105].

#### **IV. SUPPORTING THEORETICAL AND CONCEPTUAL FRAMEWORKS**

##### **1). Theory of Pareto's 80/20 rule**

Pareto theory demonstrates that about 20% things matter in any organizational undertaking which managers should mostly focus on during decision making [106]. Thus the 80/20 rule or factor sparsity or principle of imbalance avers that for many phenomena 80% of consequences stem from 20% of the causes. This principle depicts the significance of minor (20%) procedures, approaches in project selection and decision making during implementation. Even though the 80/20 theory is a rule of thumb employed in economic inequalities related to diverse phenomena, it has been reliably applied in statistical analysis in various fields relating to organization management, citation analysis, criminology, web analysis, production and marketing, stakeholder management [107]. Such correlated findings includes: about 80% of profits are the result of 20% of employees, 80% of problems are caused by 20% of customers, 80% of decisions are made in 20% of meeting time, 80% of efforts are wasted and 20% are productive [107]; about 80% of all citations cite 20% of scientists; 80% of crime is committed by 20% of criminals; 80% of films are made by 20% of actors; 80% of web links are connected to 20% of Webpages and while 20% of library resources are rarely used, 80% are used often [108]. Through Pareto theory the following assumptions in project development are hereby made; (a) 80% of the organizational needs are met by 20% of the portfolio projects; (b) 80% of portfolio projects are selected using 20% project concept selection methods; (c) 80% of portfolio projects are selected by 20% of the stakeholders and (d) 80% of portfolio projects implementation depends on 20% of strategic directions/decisions.

##### **2). Theory of Constraints**

The theory of constraints (TOC) which emphasizes on logical and systematic thinking when analyzing the cause and effects of issues underscore and verifying the basic assumptions while exploring alternatives for process improvement [109] supports the conceptualization that project selection must be conducted in a manner that optimizes the realization of effective, efficient, responsive, innovative and integrative portfolio project implementation. Thus organizations need to competently dedicate their strategic resources and efforts in support of organizational strategies and

projects [110], [111]. Similar views are echoed by [112] that the ultimate goal of TOC is to maximize the efficiency of a process selectively at the most critical points and thereby maximize realization of corporate objectives. This is achieved through five steps namely; (a) identifying the constraint, (b) exploiting the physical constraint and eliminating the policy constraint, (c) subordinating the system to the constraint, (d) elevating the constraint, and (e) overcoming inertia by starting over [109]. In data analysis, TOC is used to explain the choices and decision options for project selectors pursuant to the limiting factors in the organization.

### **3). System Theory of Organization**

The evolution of system theory can be traced right from the era of Aristotle, Socrates and Plato where system was cumulatively grounded to be a set of interconnected, interrelated and interdependent components working and coordinating as whole in order to achieve a common goal [113], [114]. Broadly, there are two types of system; (a) open system and (b) closed system. Closed system theory originates from classical (Newtonian) physics of closed system thinking whereby few variables are tolerated in an observation so as to minimize the influence by external variables [114]. However, open systems theory considers several variables whose interaction with its environment is inevitably uncontrolled [115], [116]. Whereas closed systems use error-controlled regulation to eliminate external influence, open systems use anticipatory control since it is as a result of interaction with the environment that a system achieves a dynamic stability [116]. System theory is founded upon the principles that the subsystems are; open, focused, interrelated, continuously transforming inputs into outputs, flexible, responds to environment through feedback, brings about the equilibrium to the system and are coherent [117]. Similarly, project management operates in an open system since the sub-systems or components of project are diverse and unique [52] and the environment is always changing [116]. The interaction between project system and environment becomes even more complex in a portfolio project set up [46]. However, as indicated by [116], portfolio projects run smoothly when a balance is stricken between the internal system and external forces. Reference [118] holds similar view in his argument that through system approach, organizations become more flexible and adaptable in managing innovation, complexities and uncertainties for project success. System theory has reliably been applied in deductive and simulation studies in project management as well as in contingency and cross-functional studies generating correlated findings [119], [120]. However, the studies were limited in their approaches and view of project organization taking the functional role of an organization [121] thus contradicting [52], [86] argument that projects are unique in terms of settings, stakeholders, resources, activities, objectives. Nevertheless, the studies demonstrate that system theory can provide a framework for understanding the critical elements in the value creation of an organization besides providing grounds for comparing the basic structures of different systems against the contribution to the well being of the organization [116], [121]. Therefore, system theory of organization is used to describe the utility of project interaction with main organization and environment so as to explain how these components are aligned to ensure that projects are effectively and efficiently selected and implemented.

Figure 1 illustrates the conceptual model for the interaction between organization strategic thinking and the relationship between the projects selection practices and the portfolio project implementation. As demonstrated by [10], [40] the implications of project practices are not limited to the levels of efficiency and efficacy on the resource use, but also on the responsiveness to the project needs. While the practices of project selection form the independent variable, portfolio project implementation is the dependent variable. Specifically, this model focuses on three aspects of project selection as by demonstrated by [13], [12], [57] namely; (a) pre-screening, (b) actual screening and (c) post screening. Pre-screening step is characterized by need identification and formulation of project concepts which must be passed for assessment and is hereby conceptualized as sources of project concept. In order to surface feasible projects, these project ideas and concepts are subjected to the next step project selection or screening [59] and is hereby conceptualized as project selection methods. The third step of decision making level or post-screening is normally done by the project selectors whose desires, interests, needs and realism are proposed to influence the practice and outcomes of project selection. Stakeholders' participation in any project development is said to sway the course of project performance and success. Hence this paper considers involvement of stakeholders in the project selection as having an influencing role in the project implementation. Project implementation involves the activation of project resources so as to execute the projects and hence realize the intended objectives [52]. In this paper, portfolio project implementation is indicated by the levels of resource utilization, product development, process improvement and integration which inform the extent of responsiveness, efficiency and effectiveness [122]. Finally, the project selection-portfolio project implementation relationship is conceived to have an interactive relationship with the organization strategic orientation whereby strategic priorities in terms of customer focus, growth opportunities and potential of resources are believed to mediate while strategic leadership in terms of communication, motivation, meeting expectations and facilitating support are conceived to moderate the relationship respectively.

4). *Conceptual Framework*  
 Project Selection Practices

Portfolio Project Implementation

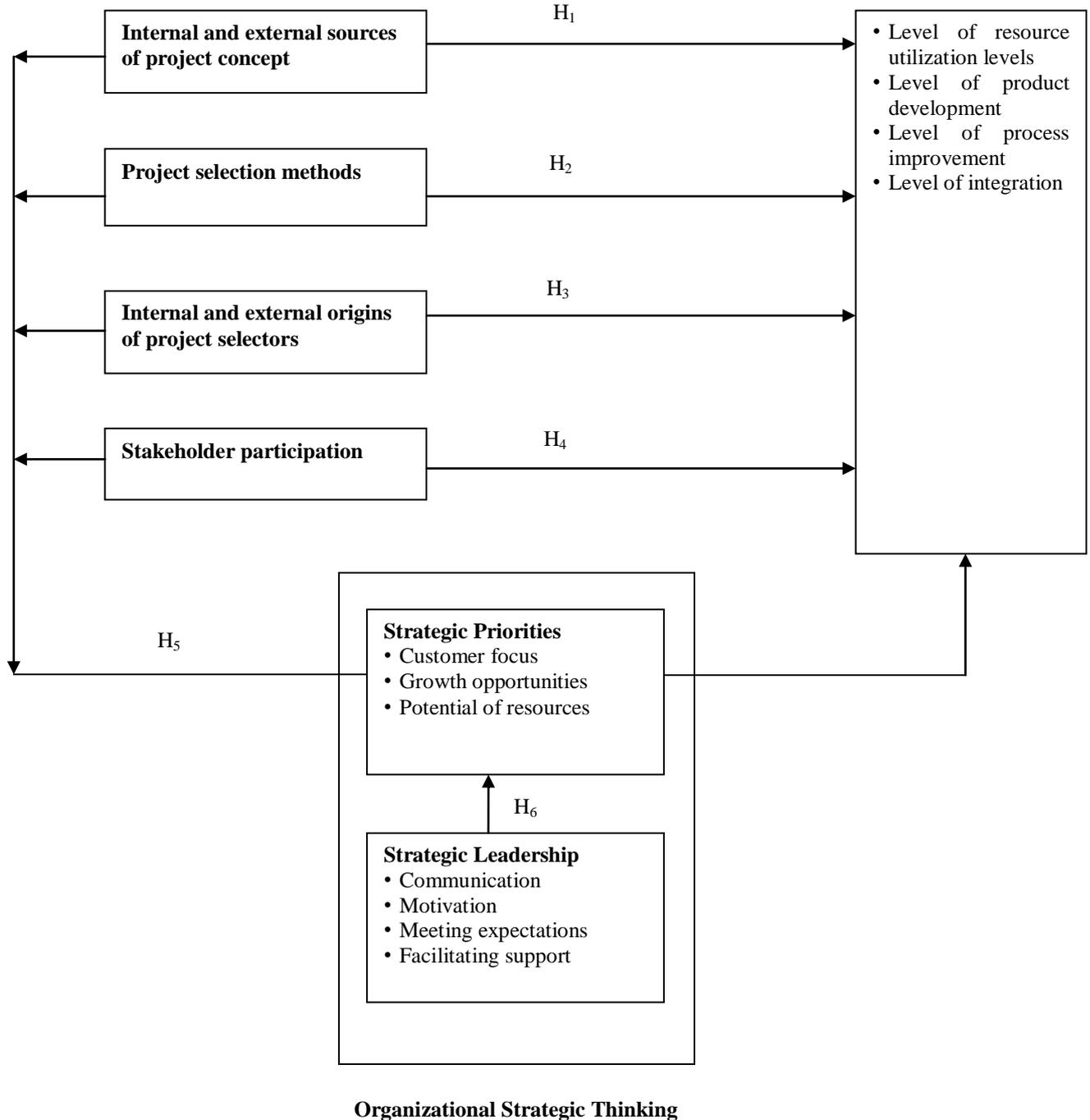


Fig. 1 Conceptual framework

V. **DISCUSSION AND CONCLUSION**

The main purpose of this paper is to present a conceptual framework for advancing empirical studies on the interaction of strategic orientation of an organization with the relationship between project selection practices and portfolio project implementation. As discussed, the independent variable is the project selection practices as characterized by origins of project concept, method of project selection, origins of project selectors and stakeholder participation. The dependent variable is portfolio project implementation whose indicators are resource utilization levels, product development, process improvement and integration. The strategic thinking which is conceptualized as having both mediating and moderating attributes forms the third variable. These variables have been discussed with the broad framework of the existing literature leading to the development of six hypotheses. In addition, three potential theoretical frameworks supporting the variables and relationships underscore have been discussed. These theoretical frameworks are Pareto 80/20 theory of cause and effects, theory of constraints and system theory of organization. Finally, a conceptual framework derived from the relationships envisaged from the literature is illustrated.

This conceptual framework provides basis for validating and contributing to theory and practice of project planning, design and management. The findings from a study based on this model would strengthen the understanding of the best practices during the process of project selection for effective, efficient and innovative portfolio project implementation thus offering profound grounds for improving practice, behavior, planning and policy development. Most significantly, the findings would improve theories related to the body of knowledge in project design, planning and implementation. With the increased competition and dynamic challenges in identifying and planning for the most responsive project needs relative to the strategic thinking of an organization, the study would generate adequate knowledge that would facilitate practitioners and professionals in project management to redirect their efforts in making informed decisions on project choices. In addition, organizations would be better informed on the strengths and weaknesses of the existing practices of project selection for necessary adjustments and reforms.

This model is delimited to the choice of the research variables as they fit well into the theoretical framework of Pareto 80/20 rule, theory of constraints and system theory of organization. The variables and relationships are well anchored within the existing knowledge thus providing basis for arguing and concluding the results. The entire concept of project selection is placed in the independent variable. In addition, the model is delimited to the application in all organizations regardless of industry orientation provided a set of projects are being implemented. Also, pragmatic paradigm whereby a mixed strategy of research can well fit in due to the objective and subjective nature of the research variables. This would be essential in increasing the content and criterion validity for generalizing the findings. However, since projects are complex and even grow more dynamically complex when implemented within another organization, this paper assumes that projects underscore ought to operate under a matrix organization structure. This form of project organization is quite challenging due to multiple realities of management. This aspect poses limitations to other forms of project structures.

#### ACKNOWLEDGEMENT

We acknowledge the philanthropic support and the exemplary assistance accorded by the staffs of the Jomo Kenyatta Memorial Library of the University of Nairobi.

#### REFERENCES

- [1] Hobbs, B., Aubry, M. & Thuillier, D. (2008). The project management office as an organizational innovation. *International journal of project management*, Vol 26, No.5
- [2] Mankins, M.C., & Steele, R., (2005). Turning great strategy into great performance. *Harvard business review* 83 (7), 64–72.
- [3] Von Sydow, M. (2014). *Survival of the fittest' in darwinian metaphysics-tautology or testable theory?* In E. Voigts, B. Schaff & M. Pietrzak-Franger (Eds.). Reflecting on Darwin. Farnham, London: Ashgate
- [4] Winter, M., Smith, C., Morris, P., & Cicmil, S. (2006). Directions for future research in project management: the main findings of a UK government-funded research network. *International journal of project management*, 24(8), 638-649
- [5] Van der Walldt, G. (2009). Towards a project-based service delivery approach: uncovering organizational tensions. *Administratio Publica*, 17(2): 36-53]
- [6] Rajapakse, A., Titchener-Hooker, N. J. & Farid, S. S. (2006). Integrated approach to improving the value potential of biopharmaceutical R&D portfolios while mitigating risk. *Journal of chemical technology & biotechnology*, 81, 1705-1714.
- [7] Holl, J. L., Oh, E. H., Yoo, J., Amsden, L. B., & Min-Woong, S. (2012). Effects of welfare and maternal work on recommended preventive care utilization among low-income children. *American journal of public health*, 102(12), 2274-2279.
- [8] Teece. J. D. (2010). Business models, business strategy and innovation, long range planning; *International Journal of Strategic Management Amsterdam*: Elsevier Science
- [9] Mirza, M. N., Pourzolfaghar, Z., & Shahnazari, M., (2013). Significance of scope in project success; *Procedia Technology*, Volume 9; 722 – 729. Elsevier Ltd Publishers.
- [10] Engwall, M. (2003). No project is an island: linking projects to history and context. *Research policy* 32 (5) 789-808.
- [11] Rosacker, K. M & Olson D. L (2008). An empirical assessment of I.T project selection and screening methods in State Government. *Project management journal* (ISSN: 1938-9507) 39 No 1, pp. 49–58. The magazine publisher
- [12] Archer, N. P. & Ghasemzadeh, F. (2004). *Project Portfolio Selection and Management*. In: Morris, P.W.G., Pinto, J.K. (Eds.), *The Wiley guide to managing projects*. John Wiley & Sons Inc., New York, pp. 237–255.
- [13] Cooper, R.G., Kleinschmidt, E.J., & Edgett, S. J. (2001). Portfolio management for new product development: results of an industry practices study. *R & D management journal*; Vol 31 (4)
- [14] Englund, R. L. & Graham, R.J. (1999). From experience: linking projects to strategy- strategic boundaries between order and chaos in organizations. *Journal of product innovation management* 16 (1), 52–64.

- [15] Pakseresht, A. & Asgari, G. (2012). Determining the critical success factors in construction projects: AHP approach. *Interdisciplinary journal of contemporary research in business*, Vol. 4, pp. 383–393. Institute of interdisciplinary business research (IIBS) publisher
- [16] Frame, J. D. (1994). Selecting projects that will lead to success. Reprinted in: Dye, L. D. & Pennypacker, J. S. (eds). (1999) *Project portfolio management: selecting & prioritizing projects for competitive advantage*, pp.169-181, West Chester, PA: centre for business practices
- [17] Chen, C. T. & Cheng, H. L. (2009). A comprehensive model for selecting information system project under fuzzy environment. *International journal of project management*, Vol. 27(4)
- [18] Liang, C. & Li, Q. (2008). Enterprise information system project selection with regard to BOCR. *International journal of project management*, Vol. 26 No. 8, pp. 810-820.
- [19] Lee, J.W. & Kim, S.H. (2001). An integrated approach for interdependent information system project selection”, *International journal of project management*, Vol. 19 (2)
- [20] Le, C. M. & Nguyen, V. T. (2008). *Strategy for project portfolio selection in private corporations in Vietnam*, Umea University, school of business
- [21] Shenhar, J. A, Levy, O. & Dvir, D. (1997). Mapping the dimensions of project success. *Project Management Journal: The Professional Journal of the Project Management Institute* Volume 28 (2)
- [22] Yeong, A. & Lim, T.T. (2010) Integrating knowledge management with project management for project success. *Journal of project, program & portfolio management* Vol.1(2)
- [23] Culligan, M., Marks, S., Nelson, T., Radstone, L. & Verzuh, E (2013) *A Guide to the Project Management for Development Professionals (PMD Pro)*. Version 1.7 PM4NGOs Publishers
- [24] Asaka, C. N, Aila F. O. & Odera, O. (2013). “Project selection and management implications in Kenyan Local Authorities”. *Asian Journal of Business and Management Sciences* (ISSN: 2047-2528) Vol. 1 No. 10 [65-75]. Society for Business Research Promotion Publishers
- [25] Republic of Kenya, Ministry of Education (2012). Task force report on the re-alignment of the education sector to the constitution of Kenya 2010: *towards a globally competitive quality education for sustainable development*, Nairobi Kenya.
- [26] Repenning, N. P. (2001). Understanding fire fighting in new product development. *Journal of Product Innovation Management* 18: 285–00.
- [27] Barczak, G., Griffin, A. & Kahn, K. B. (2009). Perspective: trends and drivers of success in NPD practices: Results of the 2003 PDMA best practices study. *Journal of product innovation management* 26 (1): 3–23
- [28] Cooper, R. G., Edgett, S. J. & Kleinschmidt, E. J. (2004). Benchmarking best NPD practices III. *Research-technology management*. 47: 43–55.
- [29] Young, R., Jordan, E., & O’Connor, P. (2012). Is strategy being implemented through projects? Contrary evidence from a leader in New Public Management. *International journal of project management*, 30(8), 887–900.
- [30] Cooper, D. C. & Schindler, P. S. (2001). *Business research methods* (seventh edition). New York: McGraw-Hill.
- [31] McGrath, R.G. (1997) “Real Options Logic for Initiating Technology Positioning Investments,” *Academy of Management Review*, 22, 974
- [32] Bresnen, M. Goussevskaia, A. & Swan, J. (2004). Embedding new management knowledge in project-based organizations. *Organization studies* 25 (9) 1535-1555.
- [33] Amade, B., Ogbonna, A. C. & Kaduru, C. C. (2009). Determinants of successful project implementation in Nigeria, *International journal of management sciences and business research*, 1 (6): 2-7.
- [34] Johnson, L.K. (2004). *Execute your strategy -without killing it*. Harvard Management Update 9 (12),
- [35] Meskendah, S. (2010). The influence of business strategy on project portfolio management and its success- A conceptual framework. *International journal of project management*, Vol 28 (2010)
- [36] Kihanya, T. (2013). Challenges influencing the implementation of business strategies in public sector firms in Kenya: A survey of parastatals in the Ministry of Agriculture, *International journal of social sciences and entrepreneurship*. Vol.1, Issue 2,635- 649
- [37] Mucai, P. G. (2014). Factors Affecting the Implementation of Strategic Plans in Government Tertiary Institutions: A Survey of Selected Technical Training Institutes. *European Journal of Business and Management*, Vol 3, No.3
- [38] Ndegwah, D. M. (2014). Factors affecting the implementation of strategic plans in public secondary schools in Nyeri County, Kenya. *International Review of management and business research journal*; ISSN: 2306-9007, Vol. 3 Issue.
- [39] Cleland, D. I. & Ireland, L. R. (2002). *Project management, strategic design and implementation*. Newyork, McGraw-Hill publishers
- [40] Kloppenborg, T., & Opfer, W. (2002). The current state of project management research: Trends, interpretations, and predictions. *Project management journal*, 33, 5
- [41] Lewa M, Mutuku, S. & Mutuku, M. (2009). Strategic planning in the higher education sector of Kenya: case study of public universities in Kenya: A conference paper presented at the 1<sup>st</sup> KIM conference on management: *A Journal of the KIM school of management* .ISSN 2070- 4730

- [42] Mittenenthal, R. A. (2002): *Ten keys to successful strategic planning for nonprofits and foundation leaders*, New York: TCC Group briefing paper
- [43] Weber, L. (2003). *Justification and methods of university screening: a European perspective*.
- [44] Sart, G. (2014). Strategic model and strategic planning in higher education. *International journal of social and economic sciences 4 (1): 34-37*
- [45] Murray, J. P. (2000). Reducing IT project complexity, *Information Strategy - The executive's Journal*, vol.16, no.3, pp. 30-39.
- [46] Sanchez, H. & Robert B. (2010). A matrix for monitoring the strategic performance of project portfolios; *International journal of project organization and management*, Vol. 2 (2)
- [47] Martinsuo, M. & Lehtonen, P. (2007). Role of single-project management in achieving portfolio management efficiency; *International journal of project management*, 25: 56–65
- [48] Maylor, H., Brady, T., Cooke-Davies, T., & Hodgson, D. (2006). From projectification to programmification. *International journal of project management*, 24(8), 663-674.
- [49] Padovani, M. Monteiro de Carvalho, M. & Muscat, A. R. N. (2008). Current project portfolio management practices: A case study, *Product management and development*, volume 6 (1)
- [50] Filippov, S., Mooi, H. G. & Weg, R. (2012). Strategic alignment of the project portfolio: an empirical investigation. *Journal on innovation and sustainability*. RISUS, Sao Paulo, Vol. 3, No. 1
- [51] Project Management Institute. (2013). *A guide to the project management body of knowledge (PMBOK Guide)*, Fourth Edition. Newtown Square, PA
- [52] Robinson, M.A., Sparrow, P.R., Clegg, C. & Birdi, K. (2007). *Forecasting future competency requirements: A three-phase methodology*. *Personnel Review*, 36(1):65–90.
- [53] Gronevall, R., & Danilovic, M. (2014). Designing and integrated project, program and portfolio system - A case study of healthcare. *The Journal of modern project management*, 2(2).
- [54] Carayannis, E. G. & Provan, M. (2008). Measuring firm innovativeness: towards a composite innovation index built on firm innovative posture, propensity and performance attributes. *International journal of innovation and regional development: IJIRD*. Vol. 1.2008, 1, p. 90-107
- [55] Kaiser, M. G., Fedi E. A. & Ahlemann F. (2014). Successful project portfolio management beyond project selection techniques: Understanding the role of structural alignment, *International journal of project management*. JPMA - 01629; Pg 14.
- [56] Alpaugh, A., Burgher, K., Flachsbart, B. & Elrod, C. C. (2010). Development of a systematic approach to project selection for rural economic development. *Journal of rural and community development*, ISSN: 1712-8277, Vol 5(3)
- [57] Qin, Z., Li, Z., & Ji, X. (2009). Portfolio selection based on fuzzy cross-entropy. *Journal of computational and applied mathematics*, 228(1), pp. 139-149
- [58] Meredith, J. R & Mantel, S. J. (2009). *Project Management, a Managerial Approach*. 7<sup>th</sup> Edition, Washington D.C USA, John Wiley & Sons, Inc.
- [59] Cooper, R. G., Edgett, S. J. & Kleinschmidt, E. J. (2002). *Portfolio management: fundamental for new product success*. The PDMA Tool book for new product development, Wiley & sons
- [60] Wysocki, R. K. (2009). *Effective project management: traditional, agile extreme*. 5<sup>th</sup> Edition. Wiley Publishing Inc: Indianapolis, Indiana
- [61] Pearce, J. A. & Robinson, R.B. (2007). *Strategic management: implementation and control (3<sup>rd</sup> Ed.)*. Boston: Richard D. Irwin McGraw-Hill, USA
- [62] Calantone, R.J., Di Benedetto C. A., & Song, M. (2011). Expecting marketing activities and new product launch execution to be different in the U.S. and China: An empirical study. *International journal of china marketing*; vol. 2(1)
- [63] Suddaby, R. (2010). Editor's comments: Construct clarity in theories of management and organization. *Academy of Management Review*, 35(3)
- [64] Gabriellsson, J. & Politis, D. (2010), Work experience and the generation of new business ideas among entrepreneurs. An integrated learning framework. *International journal of entrepreneurial behaviour & research* vol. 18 No. 1, 2012. Emerald group publishing limited 1355-2554
- [65] Souder, W. E. (1973). Utility and perceived acceptability of R & D project selection models; *Project selection models: Management science*. Vol. 19 no. 12 1384-1394
- [66] Larson, E. W., Clifford F. Gray. & Clifford, F. Gray. (2011). *Project management: the managerial process*. New York: McGraw-Hill Irwin
- [67] Killen, C. P., Hunt, R. A. & Kleinschmidt, E. J. (2008). Project portfolio management for product innovation, *International Journal of Quality and Reliability Management*, Volume 25, issue 1, pages 24-38.
- [68] Bolat, B. Cebi, F. Temu, G.T. & Otay, I. (2014). A fuzzy integrated approach for project selection *Journal of enterprise information management*. Vol. 27 No. 3, 2014 pp. 247-260 Emerald Group Publishing Limited
- [69] Best, J. W. & Kahn, J. (2009). *Research in education*, New Delhi & Prentice Hall of India private
- [70] Simon, M., Houghton, S. & Aquino, K. (1999). Cognitive biases, risk perception, and venture formation: How individuals decide to start companies. *Journal of business venturing*, 15

- [71] Eckhardt, J. T., & Shane, S. A. (2012). Response to the responses: the IO nexus integrates objective and subjective aspects of entrepreneurship. *Academy of management review*, Published online before print April, 27, 2015, DOI: 10.5465/amr.2012.0192
- [72] Shane, S. (2012). Reflections on the 2010 AMR decade award: Delivering on the promise of entrepreneurship as a field of research. *Academy of Management Review*, 37(1),10-20.
- [73] Mir, F. A. & Pinnington, A. H. (2013). Exploring the value of project management: Linking project management performance and project success. *International journal of project management*. Volume. 32 (2014)
- [74] Shepherd, D.A. & DeTienne, D.R. (2005). Prior knowledge, potential financial reward, and opportunity identification; *Entrepreneurship theory and practice*, Vol. 29 (1) 91-112.
- [75] Lundmark, E. & Klofsten, M (2014). Linking individual-level knowledge sourcing to project-level contributions in large r&d driven product-development projects. *Project management journal*, Vol. 45, No. 6, 73–82
- [76] Begicevic, N., Divjak, B. & Hunjak, T. (2009). Decision-making on prioritization of projects in higher education institutions using the analytic network process approach. *Central European journal of operations research* , vol. 18, no. ISSN 1435-246X, ZDB-ID 11788756. - Vol. 18.
- [77] Fulton, J. C. (1996). Complex Problem; Simple Concepts; Transformed Organization. *PM Network*
- [78] Fageha, M. K. & Aibinu, A. A. (2014). A Procedure for involving stakeholders when measuring project scope definition completeness at pre-project planning stage. *Australian institute of project management-AIPM*; National conference proceedings held on Sunday, 15<sup>th</sup> October, 2014 at Brisbane convention and exhibition centre ISBN: 978-0-646-92925-5 Pg 16-23
- [79] Heywood, C. & Smith, J. (2006). *Integrating stakeholders during community FM's early project phases. Facilities*, 24(7/8), pp. 300-313
- [80] Gale, S. F. (2007). "The Bottom Line," *PM Network*, vol. 08. 34-38
- [81] Assaf, S. A. & Al-Hejji, S. (2006). Causes of delay in large construction projects. *International journal of project management*, Vol 24, 349-357.
- [82] Too, E. G. & Weaver, P. (2014). The management of project management: A conceptual framework for project governance. *International journal of project management* (2014), Vol. 32, Issue 8,
- [83] Marnewick, C. & Labuschagne, L., (2008). *The substantiation of the vision-to-projects (V2P) framework through action research*, in: Andrews, E.J. (Ed.), PMI research conference: Defining the future of project management. Project management institute, Warsaw, Poland.
- [84] Bryson, J. M. (2005). *Strategy planning for non-profit organizations*, revised edition.
- [85] Kerzner, H. R. (2009). *Project Management: A systems approach to planning, scheduling, and controlling* (10<sup>th</sup> Edition) Wiley publishers.
- [86] Blomquist, T & Muller, R. (2006). *Middle managers in program & project portfolio management: practices, roles & responsibilities*. Newtown Square, PA: Project Management Institute.
- [87] Stawicki, J., & Muller, R. (2007). From standards to execution: *Implementing program and portfolio management*, Presented at the 21<sup>st</sup> IPMA World Congress, Krakow, Poland.
- [88] Blomquist, T., Muller, R., & Martinsuo, M. (2008). Project portfolio control and portfolio management performance in different contexts. *Project management journal*, 39(23), 28-42.
- [89] Sanderson, J. (2012). Risk, uncertainty and governance in megaprojects: A critical discussion of alternative explanations. *International journal of project management*, 30, 432-443
- [90] Sargeant, R. (2010). *Creating value in project management using PRINCE2*. Queensland University of Technology, Brisbane.
- [91] Miller, R. & Lessard, D.R. (2000). *The Strategic Management of Large Engineering Projects-Shaping Institutions, Risks and Governance*. MIT Press, Cambridge, MA.
- [92] Patel, D. (2007). *Why executives should care about project governance; what your peers are doing about it. PM World Today*, 9.
- [93] Winch, G.M., (2001). Governing the project process: a conceptual framework. *Construction management and economics*, 19, 799-808.
- [94] Basu, V., E. Hartono, A. L. Lederer & V. Sethi (2002). The impact of organizational commitment, senior management involvement, and team involvement on strategic information systems planning. *Information management journal*. 39(6): 513-524.
- [95] Turner, J. R. (2007). *Gower Handbook of Project Management*, 4<sup>th</sup> Edition, Hampshire, England, Gower Publishing Ltd,
- [96] Monahan, G. (2000). *Management decision making*. Cambridge: Cambridge University Press. ISBN 0-521-78118-3.
- [97] Agrawal, A. & Knoeber, C. R. (1996). Firm performance and mechanisms to control agency problems between manager and shareholders. *Journal of financial and quantitative analysis*, 31, 377-397
- [98] Rockman, M. S., & Russell, S.T. (2009). *Decision-making/reasoning skills*. Building Partnerships for Youth: National 4-H Council and the University of Arizona
- [99] Walker, K. (2001). *Decision making*; K-State Research and Extension, Manhattan, KS
- [100] Drake, R. A. (1993). Processing persuasive arguments: Discounting of truth and relevance as a function of agreement and manipulated activation asymmetry. *Journal of research in personality*, vol 27 (2): 184–196.

- [101] Nightingale, J. (2008). *think smart - act smart: avoiding the business mistakes that even intelligent people make*. John Wiley & Sons. p. 1.
- [102] Dalton, D.R., Daily, C.M., Ell strand, A. E. & Johnson, J. L.(1998). Meta-analytic review of board composition, leadership structure and firm performance; *Strategic management journal*, vol. 19.
- [103] Kwak, M. (2003). The advantages of family ownership. MIT Sloan management review, 12
- [104] Black, B. S., Jang, H. & Kim W., (2006). Does corporate governance affect firm value?. *The Journal of Law, Economics, & Organization*, V22 N2, Oxford University Press
- [105] Anderson, R. C. & Reeb, A. D. M. (2003); Founding-family ownership and firm performance: Evidence from the S&P 500. *The journal of finance*, volume 58, issue 3, pages 1301–1327
- [106] Pareto, V. & Page, A. N. (1971). Translation of *Manuale di economia politica (Manual of political economy)*, A.M. Kelley,
- [107] Barabasi, A. L. (2002). *Linked: The new science of networks*. Cambridge, MA: Perseus publishing.
- [108] Gummesson, E. (2007). Case study research and network theory: birds of a feather. *Qualitative research in organizations and management: An international journal* vol. 2 (3): 226-248.
- [109] Goldratt, E. M. & Cox, J. (1992). *The Goal*. Great Barrington, Mass: The North river press,
- [110] Johnson, G., Scholes, K. & Whittington, R. (2006). *Exploring Corporate Strategy* (7<sup>th</sup> ed.) Harlow, Essex: Pearson education limited.
- [111] Porter, M. E. (1985). *Competitive advantage*. New York, USA: The Free Press.
- [112] Watson, K. J., Blackstone, J. H. & Gardiner, S. C. (2007). The evolution of a management philosophy: The theory of constraints. *Journal of operations management* 25, (2): 387-402.
- [113] Dostal, E. (2005). *Biomatrix: A systems approach to organizational and societal change*. Cape Town: Biomatrix Web. pp.2.
- [114] Barzilai, K. (2011). *Organizational theory*. Western Reserve University
- [115] Checkland, P. (1981), *Systems thinking, systems practice*, Chichester, UK: John Wiley & Sons.
- [116] Ahrne, G. (1994). *Social Organizations: Interaction inside, outside and between organizations*. London: Sage
- [117] Kast, F. & Rosenzweig, J. (1972). General systems theory: applications for organization and management, *Academy of management journal*, pp.447-464.
- [118] Kapsali, M. (2011). Systems thinking in innovation project management: A match that works. *International journal of project management*; Vol 29; 396–407
- [119] Crawford, L., Pollack, J., (2004). Hard and soft projects: a framework for analysis. *International journal of project management* Vol 22, 645–653
- [120] Partington, D. (1996). The project management of organizational change. *International journal of project management* 14 (1), 13–22.
- [121] Pollack, J., 2007. The changing paradigms of project management. *International journal of project management* 25 (3), 266–274.
- [122] Bartuseviciene, I. & Sakalyte, E. (2013). Organizational assessment: effectiveness vs. efficiency. *Journal of social transformations in contemporary society*, 2013 (1) ISSN 2345-0126