



**The influence of Control Strategies on Benefits
Realization in Construction organizations**

تأثير استراتيجيات الرقابة على تحقيق الفوائد في المؤسسات أعمال البناء

by

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of the requirements for the degree of
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Abstract

The necessity to control and manage the benefits of projects/programs is being accepted as a method that ensures success of that project or program. Control is accepted as a process that defines, plans and executes the objectives of organizations to ensure business efficiency and succeed business objectives. Benefits realization is perceived as an important aspect of programs and projects management that enables organizations to realize the strategic objectives and create value to the business. The control mechanisms focus on improvement of organizational system and enhancing their capabilities to sufficiently realize their target benefits.

This study aims to distinguish the influence of control mechanisms on benefits realization process in construction organizations. This research also investigates the effectiveness of control strategies in organizational management system and addresses its specific features that contribute to the benefits realization process.

The theoretical background led to conceptual framework demonstrates that control mechanisms in form of strategic control, administrative control, and cultural control influence the identification, planning, execution, and evaluation phases of benefits realization process. It also helps organizations to sustain current benefits and look for future expected benefits.

To assess the information and understanding attained from the literature review, this research study adopted quantitative approach to obtain the data from practical viewpoint of professionals, by designing and distributing a research questionnaire. The questionnaire was distributed to professionals who have experience in construction organizations. The research questionnaire was designed in five sections to obtain the respondent view on benefits realization process and the relevant types of control mechanisms.

The research findings have expressed that control strategies have strong relationship with the benefits realization process. It also verified that the strategic control, administrative control and cultural control significantly improve the different stages of benefits realization process and enable organizations to efficiently achieve their target benefits.

Keywords: Benefits Realization, Benefits Realization Management, Strategic Objectives, Control strategies, And Organizational Control Mechanisms.

ملخص البحث

إن ضرورة التحكم و الإدارة في نتائج المشاريع و البرامج هو موضوع تم قبوله كمحدد لنجاح تلك المشاريع أو البرامج. تم قبول التحكم كوسيلة لتعريف و تخطيط و تنفيذ الأهداف المؤسسية، للتأكد من فاعلية الأعمال و نجاح أهدافها يعتبر تحقيق المنفعة جانباً مهماً في إدارة البرامج و المشاريع، بحيث يمكن المؤسسات من تحقيق أهدافها الاستراتيجية و خلق قيمة للأعمال. تركز آليات التحكم على تحسين النظم المؤسسية و تحسين امكانياتها لتحقيق أهدافها المرجوة بشكل كافي.

تهدف هذه الدراسة لإظهار تأثير آليات التحكم على عملية تحقيق المنفعة في المؤسسات العاملة في مجال الانشاءات. تحقق هذه الدراسة ايضاً في مدى فاعلية استراتيجيات التحكم في نظم الإدارة المؤسسية، و يخاطب سماتها المحددة التي تساهم في عملية تحقيق المنفعة.

تم بناء إطار مفاهيمي على خلفية نظرية يوضح أن آليات التحكم و التي تتجلى من خلال التحكم الاستراتيجي و الإداري و الثقافي، تؤثر بالفعل على عمليات تعريف و تخطيط و تنفيذ و تقييم عملية تحقيق المنفعة كما تساعد ايضاً المؤسسات للمحافظة على الفوائد الحالية و استطلاع فوائد مستقبلية لتقييم و فهم المعلومات القادمة من الإطار النظري، تبنت هذه الدراسة التقييم الكمي للحصول على بيانات من وجهة نظر عملية عن طريق تصميم و توزيع استطلاع.

تم توزيع الاستطلاع على أشخاص ذوي خبرة في المؤسسات العاملة في مجال الانشاءات. تم تصميم استطلاع هذا البحث ليتكون من خمسة اقسام، للحصول على وجهة نظر المجيب فيما يتعلق بعملية تحقيق المنفعة و أنواع آليات التحكم ذات العلاقة.

أشارت نتائج هذا البحث إلى وجود علاقة قوية بين استراتيجيات التحكم و عملية تحقيق المنفعة. كما تم التحقق من ان التحكم الاستراتيجي و التحكم الإداري و التحكم الثقافي قد ساهموا بتحسين المراحل المختلفة في عملية تحقيق المنفعة بشكل ملحوظ، مما مكن المؤسسات من تحقيق فوائدهم المرجوة بشكل فعال

الكلمات المفتاحية: تحقيق المنفعة، إدارة تحقيق المنفعة، الأهداف الاستراتيجية، استراتيجيات التحكم، آليات التحكم المؤسسي

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Chapter One – Introduction

1.1 Background

Organizations manage their strategic changes through implementation of certain processes and tools such as portfolio, program and project management. Generally, construction organizations tend to focus on the project delivery in terms of time, cost and quality. Patanakul and Shenhar (2012) argued that although some organizations works on its strategic goals and objectives, but most of the project managers still fail to focus on the business supportive strategy that creates value to the stakeholders. This problem creates issues for organization and for the management as well. The issues at organizational level restrict the organization to effectively realize the expected benefits of its projects. Also, individually, the inexpert project managers ignore key aspects of their projects (customer satisfaction, company image), and tend to just focus on the project completion in terms time, cost and quality (Eweje, Turner & Muller, 2012).

Basically, construction industries accomplish the projects through a group of stakeholders and projects are driven to satisfy the benefits of these stakeholders (Winter et al., 2006). Esteves (2009) discussed in his research that the projects initiatives could be considered successful if the intended benefits of project are realized. However, benefit realization of construction projects is still a challenge for construction organizations due to various reasons. The integration between various parties with diverse interests, capacity and qualifications working in a construction project make it complicated to maximize end value and realize the benefits of the project (Ibrahim, Costello & Wilkinson, 2015). Although projects are successful with respect to cost, time and quality, but still lots of organization fails to realize the expected benefits of their projects. Bradley (2010) argued that majority of project benefits are usually achieved after the project handover and therefore it is required to consider those benefits during the project execution phase. Thus, a benefit realization management process implemented during the project execution phase would result an effective return to the organization in term of its strategic goals and objectives. Winter et al. (2006) argued that benefits realization of a project in its early stages satisfies the involved stakeholders of a project and positively affect the project execution. Thus, efficiency Incensement of

human efforts in the organization by using a project management framework can enable organization to achieve the expected result (Judge & Bretz, 1994).

The process of benefit realization management is not a distinct method to be considered in all organizations. It needs to be fulfilled with the current system, culture and size of the organization. An extensive process for a simple and small industry would not be effective in terms of actual benefits realization and would be a concern in terms of financial resources for the organization. In addition, a light process implemented in a complicated large organization would not be efficient to achieve the goals efficiently and effectively. Therefore the management needs to analyze the organization, establish and assign a suitable benefit realization process to achieve a better result. After the selection of the suitable benefit realization process, it is important to implement it in a way as to match with the organization's existing management system and organizational culture.

In addition, this research undertakes the effects of control strategies in construction organizations on its projects benefits realization. Control is important for industries to utilize based on its purpose and goals. Control strategies used in construction industries help organizations to achieve its strategic goals and realize the product end value (Ouchi, 1979). But, it is important to understand how we enterprise control for the value and performance of the organization. Briefly, control strategies ensure organizations about the project execution according to the organization's policies and standards. Serra and Kirsch (1994) claimed that control strategies are effective in stakeholder's awareness about the business value that organization achieve from its project. This awareness ensures stakeholder's adequate support in the project execution. Sisaye (1998) states that control mechanisms are used in construction projects to achieve goal congruence and support industries' standards and principles. Merchant and Stede (2007) stated that organizational control encompasses the organizational devices and systems to be consistent with the organization's strategies, goals and objectives.

Due to technology development, growth of business areas, complexity of organizations, and customers segments, the organizations need to realize control mechanisms, introduce it to their employees and implement it in the organization. Control enable management to set organizational standards, measure actual performance, collect accurate data, assess nonconformity, and take corrective action. Researchers identified different control types such as strategic control, management control, financial control

and operational control. These control mechanisms are understood as important tools that considerably support the organization to achieve its strategic objectives.

This study aims to identify the control mechanism exercised within construction organizations to comprehend its effects on benefits realization of its projects. The research will assess the result of control modes implemented within construction organization in achievement of the strategic goals of the organization. Furthermore, a benefits realization management approach will be practiced in construction industries to determine how the organization can empower the achievement of its strategic goals and objectives.

1.2 Problem Statement

Most of the construction organizations focus on the project execution in term of time, cost and quality regardless the benefits generated by it projects after its completion. However some projects target benefits are identified in the start of the project, but still the organizations fail to introduce an efficient benefits realization management process to assure the project stakeholders about the achievement of the project target benefits. On the other hand, the control strategies used by the organizations are used to manage the ongoing processes of the projects without considering its effect on the strategic goals of the organization related with the successful project completion. Bradley (2010) argued that through implementation of the benefit realization management process, the organization will achieve the strategic significance and value of each project and will enable its project governance system. Thus, this study aims to present the effects of control strategies on the projects end benefits along with the project success in term of cost, time and quality.

This study focus on the importance of the project benefits achieved through implementation of control strategies within construction organization. Kaplan & Norton (2002) stated that based on a survey, 60 to 80 % of all organization fails to execute their strategies in achievement of the expected outcomes of their change process. In a recent study, PMI (2016) suggested a framework endorsing that the Benefits Realization Management enables organizations to measures their projects and program based its value to the business. Therefore, the organizations need to propose a system that includes management of the project in terms of time, cost and quality, as well as to

address the realization and achievement of the strategic goals and end benefits of the project.

1.3 Research Question

This Research aims to address the question regarding the influence of control strategies adopted within construction organizations on the benefits realization process. The benefits realization process identifies the benefits that are assumed by the business strategy of the organization in order to create value to the business and attain wider business objectives (Maylor et al., 2006). So this research tend to address the following questions:

1. What is a successful benefits realization process?
2. What are the primary control mechanisms in construction organizations?
3. What are the effects of control strategies on benefits realization within construction organizations?
4. What is the relationship of control strategies with benefits realization?
5. How can control strategies improve the process of benefits realization?

1.4 Research Aim and Objectives

This Research aims to establish a model that tests effects of control strategies implemented within construction industries on strategic goals of the organization and benefits realization of its projects. The construction industries need to realize the result of a successful change filling the gaps between the current situation and expected target situation through a strategic plan. Thus, the objective of this research is to identify the efficient control strategies in achievement of the benefits realization and to address a mature process to achieve the end benefits of construction projects significantly. The importance of this process is that it enables the organization to evaluate its project success through a most relevant way. As a result the construction industry will be able to perform a valuable set of projects through managing its benefits.

Consequently, the following objectives will be achieved to meet the aims of this research:

- To investigate the benefits realization process in construction organizations.
- To Practice an applicable benefit realization management process that executes the projects and program focusing on achievement of expected benefits.

- To Review and analyse control strategies implemented in construction organizations.
- To discuss the different types of control mechanism and analyse its impact on benefits realization.

1.5 Significance of the study

This research study is significant in terms of both academic awareness and practical compartments. From an academic viewpoint, this research (a) develops a benefits realization process that enables organizations to identify, plan, execute, evaluate and attain required business value from its ongoing business, and (b) structures a control framework from certain types of control mechanisms that significantly improves the benefits realization process within construction organizations. This study illustrates the impact of strategic control, administrative control, and cultural control on the identification, planning, execution and evaluation phases of benefits realization process. It will also justify how control mechanisms help organizations to sustain the current benefits and to look forward to its future benefits.

As a practical instrument, this study developed a framework from different types of control strategies aimed to be a significant practice for construction organizations to identify, structure, plan, execute, review and sustain benefits of its ongoing projects. This study also enables organizations in implementation of a successful benefits realization process. This research study is important for construction organizations in development of a control department in their management system to improve their ongoing business activities. The findings of this research will help organizations to make a framework for their organizational management for improvement of its benefits realization process.

1.6 Thesis Structure

This dissertation is structured in five chapters and appendices illustrated below:

Chapter One: Introduction: Chapter one provides a brief description of research background, the research problem statement, the research questions, the research aims and objectives, and the significance of the study.

Chapter Two: Theoretical Background: The theoretical background in chapter two represents a critical analysis of empirical literature about the benefits realization and control strategies. The first part of this chapter describes the definition of benefits, benefits realization process, business strategy and business value, types of benefits, and benefits realization management approaches. The second part of this chapter provides relevant literature about control strategies and organizational control system, types of control mechanisms, and an organizational framework for control system.

Chapter Three: Theoretical Framework: Chapter three describes the establishment of theoretical framework and development of research hypothesis. A summarized literature is presented for each hypothesis.

Chapter Four: Research Methodology: Chapter four contains the research methodology, research design, explains the research questionnaire survey development and distribution methods, briefs the data collection, and demonstrates all the statistical analysis of the research question and their associated hypothesis.

Chapter Five: Discussion, Conclusion and Recommendation: The last chapter of this research provides a discussion about the research methodology and statistical analysis providing the evidence that how the literature review supports this research. This chapter either provides a summary conclusion of the research outcomes. In addition the discussion about further research and the applicable recommendations are also part of this last chapter.

The Appendices: The research related appendices are attached at the end

Chapter Two – Theoretical background to benefits realization And Control Strategies

2.1. Introduction

This chapter provides the literature related to Benefits Realization Management (BRM) and control strategies. The literature justifies the content of this research based on the current studies, concept and theories. The literature used in this research can be considered as a source of information collected from books, researchers article verified and published by journals, and conference papers. The first part of the literature review represents the benefit definition, business strategy and business value, benefits types and the current managerial approaches for benefits management and realization. The second part of this chapter explains the organizational control strategies, the project management view regarding the control strategies and the current types of control strategies implemented within construction organizations. These contextual theories make a fundamental understanding of topics, the Benefits Realization and the control strategies. The result of this literature review is the generation of the Theoretical Framework presented in chapter three that verifies that impact of control strategies on benefits realization.

Organizations, programs and projects are essentially driven to realize benefits during their progression throughout applying the required standards within the organization. A massive amount of literature about benefits realization in projects and programs has been applied since 1980s and early 1990s. The literatures indicate that benefits identification and planned benefits achievement is difficult within complex and large construction organization (Bradley, 2006). This author claimed that failure in achievement of success and benefits mostly depend on management and control process rather than technical issues. In order to achieve the outcome of the projects successfully, the required control strategies should be implemented within the organization, which enables the organization to customize its goals and adapt the resources reasonably (Ouchi, 1979). Thus, through presenting and analyzing the details literature review, this chapter represents the successful way of benefits realization and the influence of the

various types of control strategies implemented within organization on realization process of those benefits.

2.2. Benefits Realization

Researchers analyzed the term of Benefits Realization in 1980s to understand the return of investment on the projects in organizations (Bradely, 2010). The word “Benefit” has been widely used and discussed in project management. Researchers claimed that benefits in business are intended as cost saving, development of services, customer satisfaction, improved image, more sales, strategic advantages, mitigation of risk, strengthening of decision-making process and reflectivity of information. Short, Payne and Ketchen (2008) discussed that benefit is a quantifiable improvement achieved from an outcome. Ward, Taylor, and Bond (1996) argued that benefit is the outcome that represents an advantageous nature and value of an organization. Bradely (2010) perceived benefits as an outcome of change that is observed positively by a stakeholder or group of stakeholders. The same author added that although this definition is short, but it contains all the basic elements that distinguish benefits from its resourced change. Glynne (2007) stated that these definitions illustrate that benefits are preserved by individuals or groups as a value obtained from an investment. Benefits are expected from a change process and are owned by those who invest in the process to attain the expected value. (Glynne, 2007)

Benefits realization, which is also referred as “benefits realization management” (BRM) is a process of project management. Authors described the phenomenon differently based on their research. Serra & Kuncce (2015) argued that Benefits realization management is an aspect of project management that positively impacts on the project success by creating a value to the business and as a result it enable the organizations to effectively achieves their strategic goals. Conventionally, the perception of value in project management is fundamentally associated with the outcome, which is called product creation. The process of development of a physical product, system or facility to the requirement of specification, budget and schedule is called value management (Winter et al., 2006). Authors from different background expressed their views regarding the Benefits realization. Bradley (2010) discussed that the organizing and managing process that cause the achievement of potential benefits from an investment in change, is called Benefits Realization Management. Jenner (2010b) stated that the

benefits management is a management approach of an active based value management that leads to improvement of the organization. Most of the researchers debated that the Benefits Realization Management leads the organization to an effective governance of a project and makes the project valuable and strategically significant. Thus, the organization with effective project governance can successfully complete projects, based on their strategic plans and objectives.

Reiss (2006) stated that benefits are attained throughout the lifecycle of a program. He explained that based on the value path from projects to benefits, the projects forms deliverables and these deliverables jointly produces the skills leading to achievement of benefits. Benefits realization management and portfolio management together closing the gap of project management with strategic management. The path from projects outcome to the desired strategic objectives recognize the benefits as well as specifics the dis-benefits generated upon achievement of the desired outcomes that needs to be managed (OGC, 2007a).

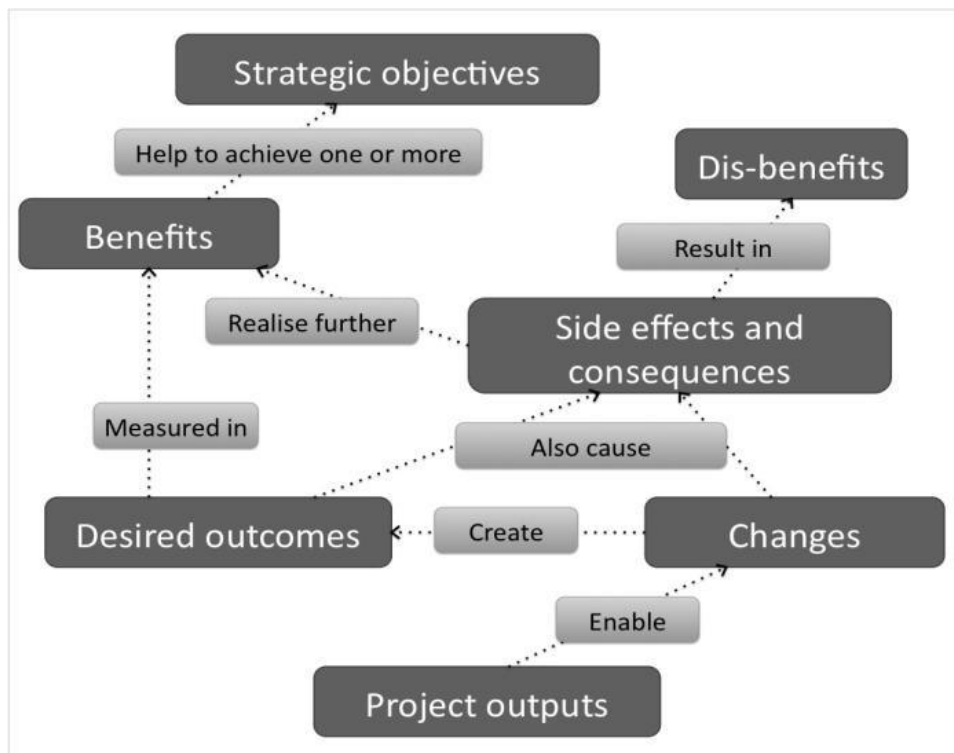


Figure 1: Path from project outputs to strategic objectives (OGC, 2007a)

Thus, the achievement off the desired objective of a project or program depends on the interaction amongst various activities, and a project would be completed successfully if others completed in a definite way (Bartlett & DeSteno, 2006). The benefits expected

from projects are normally defined distantly and the identification process of the essential methods to achieve the benefits is poorly implemented (Thorp, 1998). The importance of benefits realization and its management make able the organizations to prepare different models for identification, monitoring and continuously improvement of their systems to achieve the originally targeted benefits. Therefore the benefits realization approach is recommended to develop the traditional way of projects management based on control of the triple constraints (Time, Cost, & quality) to realize the expected benefits and efficacious objectives achievement (Farbey, B., Land, F., & Targett, D., 1999). Marnewiek (2016) proposed that benefit realization management process is the main central process that is the main driver for all other program and changes such as: stakeholders engagement, establishment of vision or end goals, development of project and program plans, organizing business case and identification of the related project risks. This author claimed that BRM process distinguishes the starting point, current business statues and the business end point, which is the goals and objective supported by the vision. Bradley (2010) developed a diagram and argued that BRM process is the central process to main management disciplines such as performance management, stakeholder management, change management, program management, project management and portfolio management in organizations.

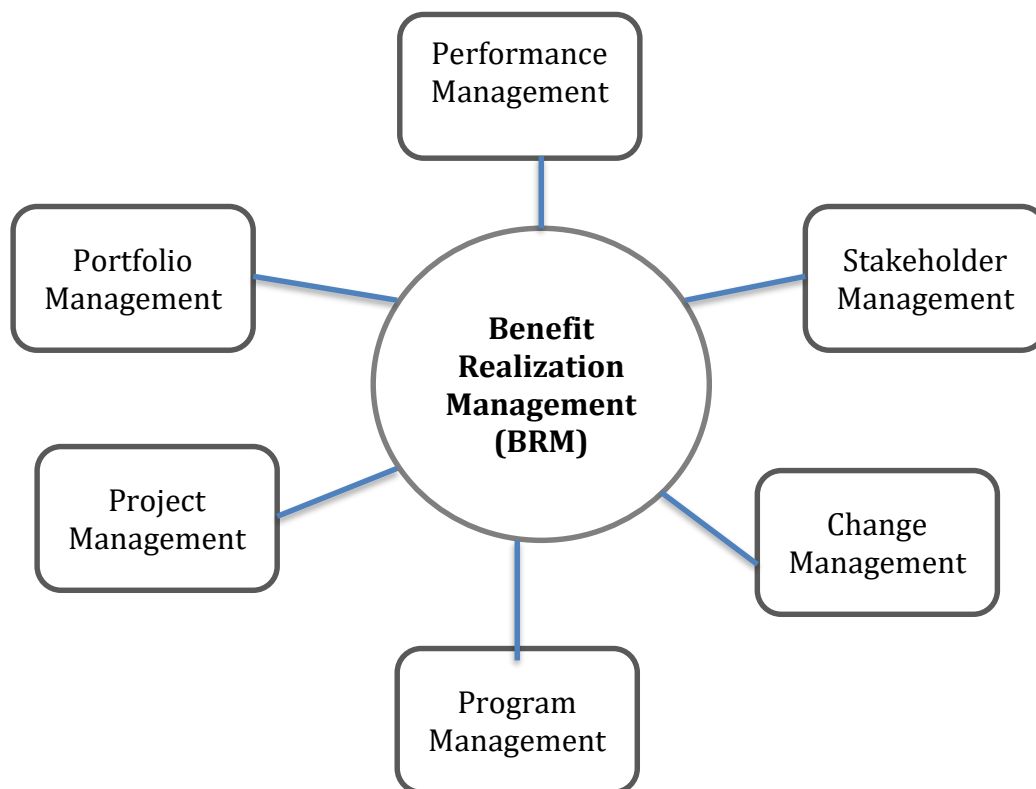


Figure 2 – Relationship of BRM with other management discipline (adopted from Bradley, 2010).

2.3. Business Strategy and business value

Most of organizations develop business strategies to improve their performance in terms of strategic objectives. Mintzberg Raisinghani and Theoret (1976) studied different aspect of the strategic business management and viewed the business strategy as a pattern of main objectives and goals of the organization. Johnson and Scholes (2002) proposed a framework for identifying the business strategy. In their proposed framework, they defined the business strategy as a long term and maintainable alignment for organization that can be achieved through establishment of competitive advantages. To achieve it, the business strategy needs resources and decisions that will affect the organization's operations and activities. Therefore it is understood that business strategy is extremely affected by the required resources accessibility, perceptions and values of organization's stakeholders. Kay (1995) defined the strategy as internal capability of an organization matching its external relationships. He stated that it describes the method and process of responding to its suppliers and the environment in which it operates. Shleifer and Vishny (1997) viewed business strategy as a process that directs the organization to its long-term objectives considering its stakeholder's beliefs and values. Mintzberg (1976) argued that strategy is the sum of tools and techniques that defines, plans, directs and efficiently operates the organization and give consistency to its business.

Organizations develop business strategies to attain the return of their financial investment (Shleifer and Vishny, 1997), and the corporate control helps organizations to establish the relationship between an organization's management with its stakeholders, set objectives and obtain those objectives, implement the organization's strategies, and finally achieve the business objectives (APM, 2004). Business strategies are the composed set of portfolio strategies, program strategies, project strategies, and project management strategies that lead the organization to achievement of the business objectives (Serra, 2015). These business strategies make a change that is enabled by efficient project governance, which encourage the benefits realization and create value to the business to achieve the business objectives (Serra and Kunc, 2015).

The management plays an important role in determining the organization's strategies toward management and achievement of the benefits associated with investment in

business change (OGC, 2007a). So the organization is required to establish a benefits realization strategic plan with all possible key risk associated with the target benefits (OGC, 2007a). Because without a plan it is challenging for an organization to estimate an effective method of benefits realization associated with its business activities (Ward, Taylor & Bond, 1996).

When organization develops its business strategy, the organizational member needs to apply the required approaches to successfully achieve the desired objectives (Gray & Larson, 2010). The effective business strategies increase the organization's shareholder's value, which is perceived as long-term objectives (Johnson and Scholes, 2002). Serra and Kune (2015) argued that business strategies enable the organization to set its vision for achievement of planned target value of the organization. The gap between present value and the future planned value is filled by the strategic objectives. So organizations need to accomplish strategic objectives to reach to the future target value. The process is fulfilled through a set of initiatives in forms of portfolio, programs and project and upon completion of this process the organization reaches to the final target value (Kaplan and Norton, 2008). The same author recommended measuring the value produced by the project or program based on the usage of resources and fulfillment of needs, which varies according to the expected outcomes. Bradley (2006) assumed value as the quality that extracts the desire and value of something, the importance of the outcome, and the statistical value that can be measured and computed. Thorp (1998) perceived value as the significance of investment for the organization's basic shareholders. The value created by project for organization can be internal or external.

2.4. Classification of Benefits

Researchers identified different types of benefits through using certain tools and techniques such as benefits map, issue map, and benefits dependency network. The assessment criteria, various processes and techniques produced the different types of benefits. Thus, after identification of the benefits, they classified benefits by different ways such as, by category, by stakeholder impact, by impact of business area, or by other classification techniques depending on the organization-working environment (Bradley, 2010). As an example, Remenyi, Money, and Twite (1995) identified different groups of benefits such as regulatory benefits (that complies with regulatory),

financial benefits (that improves productivity & reduce overhead costs), quality of service benefits (that improves the quality process and management response to the client requests), customer view of the industry benefits (that increase staff and customer confidence) and internal management benefits (that improve management of organization and improve decision making process). The same author associated each type of benefits with a sequence of benefits category that could be helpful in achievement of the objectives of the organization based on their investment. In addition, some other classification techniques divided benefits based on the related expected value to be generated, which is an appropriate way to classify benefits. This process openly subordinates the benefits to applied realization type of the benefits (Serra, 2015). The same authors stated that this classification directly leads the next step that is benefits measurement and targets. The process of measurement and specifying targets enable the industry to determine the effectiveness of benefits realization process based on the realized benefits at a given time. Ika (2009) divided the benefits into project/product success, satisfaction of customers, stakeholder's financial benefits, and organizational benefits in term of strategic objectives.

Additionally, as a second example, the British Office for Government Commerce (OGC, 2011b) recommended a classification system that categorize benefits according to the value types such as Tangible/Definite (Value is Predictable with certainty), Tangible/Expected (value is predictable with high level of confidence), Tangible/Anticipated (Value is not dependably predictable, but benefit is anticipated) and Intangible (Value is difficult to validate, but may be anticipated, and its realization evidence could be achieved from benefits measurement process).

Table 1: Value of benefits adopted from (Bradley, 2010)

Value Type		Definition	Example	
			Cashable	Non-Cashable
Tangible	Definite	Value is anticipated with certainty	Decreased cost	Less steps in process
	Expected	Value is predicted with high confidence based on historic trends	Increased sales	Task performance quickly
	Anticipated	Benefit is predicted without expected value	Less insurance	More customer satisfaction

Intangible	Might be predicted but is hard to validate.	Enhanced image and reputation
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In another research, Teixeira and Pereira (2015) classified the value created based on the issues or problems, which the organization will undertake or mitigate. They grouped those organization problems in four categories:

- Business growth
- Cost reduction
- Efficiency increase
- Legal compliance

Although the sort of value is essential in supporting additional undertakings and making a conclusion on respective organization's Benefits Realization Strategy, but still it is a significance cross-referencing unusual classification system. Ward and Daniel (2012) suggested a classification matrix that classifies benefits by their types, in terms of "how to achieve" and "how to track".

Giaglis, Mylonopoulos, and Doukidis (1999) established a model and classified benefits of IS/IT projects through applying a four quadrants matrix. They classified benefits as strategic benefits, hard benefits, indirect benefits, and intangible benefits. In their model, Strategic benefits could be recognized over a long period of time and different factors contribute in its achievement. Hard benefits could be measured and have the characteristics of Information System. Indirect benefits could also be measured, but are not element of information system, and the intangible benefits that can be achieved through measurements of the benefits. Payne (2007) discussed the benefits types based on the output, budget, timeline, and quality of the relevant project. This author defined the intangible benefits as improvement of organization's image, employees moral, and improvement in customer services. In his discussion, the tangible benefits are explained as accuracy in services, timely response to customers, staff reduction, and interaction of different peoples having different skills.

Benefits are also classified according to the organizations. Farbey, Land, and Targett (1999) categorized benefits based on the organization business streams such as strategic, administration, operative, and supportive. He defined these benefits as following:

Strategic benefits: Benefits, which are related to future opportunities of the business leading to business development and growth.

Management benefits: Management benefits can be achieved through lowering the risk and uncertainty, application of reward and motivation system in organization and implementation of standard rules and structure.

Operational benefits: using existing equipment effectively that leads to achieve operation benefits. These benefits arise as a result of increase efficiency and effectiveness of the organization's operational system.

Supportive benefits: supportive benefits are the outcome of organizational growth and sustainability, usually derived from improvements of non-critical activities.



Figure 3: Categories of Benefits adopted from (Farbey et al, 1999).

Bradley (2006) argued that benefits classification based on organizational business stream helps to balance the strategy orientation in comparison with benefits significance.

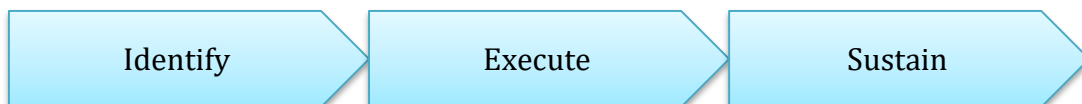
Looking to the types of benefits discussed in this section, it is recognized that different model can be applied to classify benefits. Although each model presents a various

position, but all of them provides appropriate evidence and significant information to improve the process of benefits realization management (BRM) process.

2.5. Benefits Realization Management approaches

The benefits realization management process certifies the delivery of expected benefits from the created changes. Researchers proposed different theoretical models for Benefits Realization Management that are applicable in organization's portfolio, programs, and projects. PMI (2016) discussed that BRM enables the organization to measure the proper value to the enterprise through its programs and projects. The BRM practices ensure the organization to improve project management efficiency by creating value to the business (Serra and Kunc, 2015). This process enables the organization to identify the achievable benefits ensuring that accurate decision and action are taken. The benefits realization management reflects the constructive effect of a change process. Reiss (2006) claimed that through benefits realization management process manages and organizes the potential benefits rising through change process. The benefits management is an approach to evaluate and recognize the benefits of investment through implementation of certain process. This process at first clarifies the project value and then strengthens the relationship of corporate governance with business strategies (Serra, 2015). Therefore, the benefits realization management processes are jointly implemented along with program and project delivery processes to realize the estimated and embedded benefits of the business change after completion of the program and project (Ghosh, 2014).

PMI (2016) suggested a framework for benefits realization management (BRM) that ensures organizations to effectively realize and manage their project's benefits. This framework contains professional practices that enable organizations to identify, assess, deliver, and sustain benefits associated with the organizational goals and objectives. This framework contains the following main processes:



- **Benefits Identification:** The organization needs to determine whether portfolio, programs and projects are able to create the intended business result.

- **Benefits Execution:** The management of organization reduces the correlated risk to predicted benefits and increase the chances to attain additional benefits.
- **Benefits Sustainment:** The organization needs to ensure the creation of value generated by its programs and projects. The sustainment plan contains the required tool that identifies risks, methods, measures, and metrics to ensure the constant benefits realization process.

According to PMI framework, In benefits identification process, organizations assess whether the benefits are associated with its strategic goals and objectives, identify the benefits type, analyze the business case to determine how the benefits will be measured, prepare a benefits realization register, ensure that key stakeholders are involved in the benefits realization plan, consider project's selection impact on the benefits, and make sure that benefits owners are aware of the expected benefits.

In benefits execution phase, organizations confirm that key stakeholders are communicated about the expected benefits and its delivery, ensure that the management understand the importance of business benefits, regularly review the progress versus benefits, determine the benefits effects on business changes, control the change utilization process to realize the gap between actual and expected benefits, underline a standard process to create new benefits chances, and make sure that the benefits owners are responsive in achievement of target benefits.

To Sustain benefits, the organizations review the current organizational practices that ensure organization to attain the benefits, verify benefits type, ensure stakeholders accountability in relation with benefits, validate benefits measurement process, and endorse that the unexpected benefits are discovered to realize it in future.

The approaches to Benefits Realization Management identified in literature main focus is on encompassing a cycle that includes planning, monitoring and continues Improvement of the process. OGC (2007a) illustrated a generic approach for benefits realization management that contains the process of setting strategies to realize benefits, identification of benefits, benefits measurement and benefits monitoring. However, Payne (2007) perceived that the leadership and people either play an important role in this approach to realize and manage benefits.

Ward and Daniel (2006) concluded that benefits management is a process that organizes and manages the potential benefits created by a change process. These authors proposed a benefits management approach containing the following five stages:

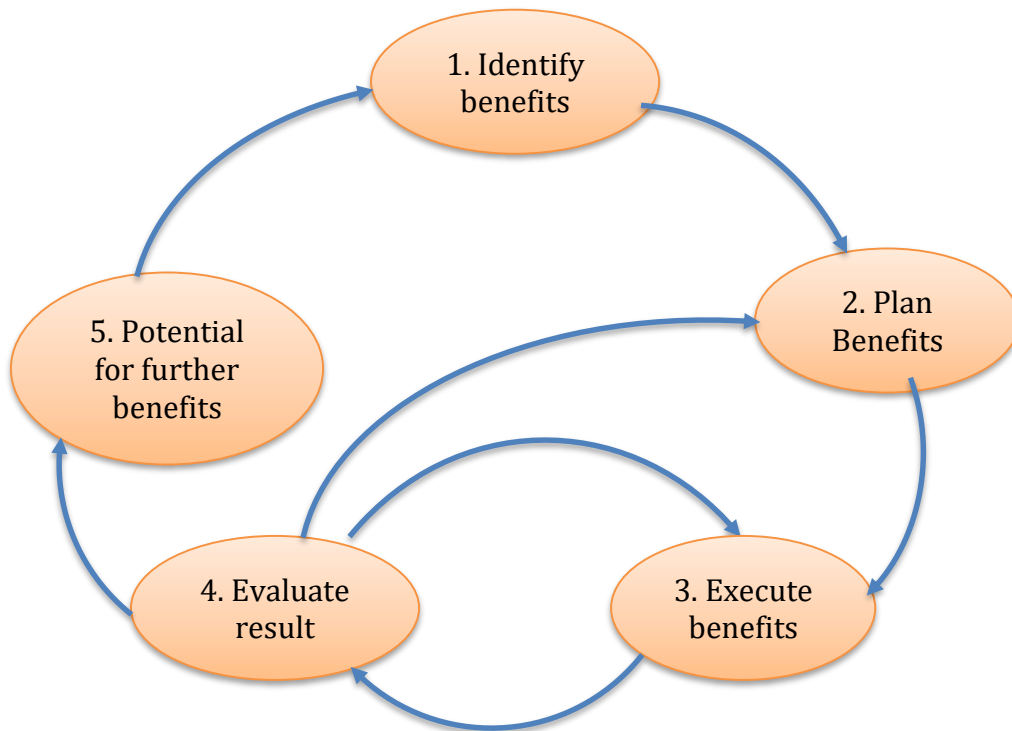


Figure 4 – Benefits Management Process (Ward & Daniel, 2006).

The benefits management process presented in figure x explaining a framework that enables organizations to successfully plan, structure and execute benefits within an organization. This process enables the organizations to develop their current management skills in combination with the benefits management process.

Identifying benefits: The initial step is to recognize the possible benefits and the way to achieve it. In this step, the management identifies the benefits and develops business measures for the proposed benefits. In order to realize the relationships of technology effects with business changes and overall business, they structure the proposed benefits in relevant way. By identifying and structuring the benefits, this step enables the organization to analyze the overall business benefits and evaluate the current situation with the established measures.

Planning Benefits: to realize benefits, for each benefits, definite accountability is assigned to the business, business changes are analyzed, and a benefits realization plan

is generated. At this stage, the overall cost of the business is analyzed to determine the business viability.

Execution benefits realization plan: the proposed and planned benefits are implemented and the required business changes are carried out.

Result evaluation: the benefits achieved through the benefits execution process should be analyzed and evaluated. The measures are reviewed to understand whether the required and planned benefits are really achieved.

Potential for further benefits: As a result of the benefits evaluation, it will be cleared that further benefits could be achieved. So In this stage, further benefits are planned and realized considering the project success.

Benefits realization management is not a standalone process and need to be applied along with other change process. Jenner (2014) proposed a model and claimed that the process of benefits realization includes the following key elements:

- Business strategy is the key driver of benefits and it ensures organization in achievement of strategic objectives.
- Development of change initiative ensures realization of needed benefits.
- Operational and human resources management system help organization in to sufficiently follow the benefits.
- Benefits realization process needs to be applied to the overall change program rather than a specific department.
- Organizational value culture helps to create and sustain value from the business.

Serra and Eduardo (2016) proposed the following 5 stages for benefits realization process within organizations:

Benefits Identification: The Benefits realization management process has been studied considering its effects on portfolios, programs and projects. Generally, organizations link the project governance and other administrative processes with benefits realization management. Serra and Eduardo (2016) claimed to start the benefit realization management process, the organization at first need to identify standard methods to enhance the maturity of organization through BRM process. Smith (2003) underlines the analysis of previous and current situation of the organization to develop the best strategy for the implementation of benefits realization management process.

The analysis of the organization's program and projects enables the organization to work on areas that requires improvements. (Bradley, 2010). Gable, Roseman, and Sedera (2001) recommended making a specific model to identify the maturity level of benefits realization to realize the strength and weakness of the organizational environment in terms of benefits realization. Glynne (2007) argue that the execution of benefits realization strategy at organizational level will enhance the tools and techniques enabling the organization to apply the same practices among all business areas for benefits realization management. This will lead the organization to practice effective benefits realization management process addressing the organization's goals and objectives.

Benefits Planning: Throughout the process of benefits planning, it is required to identify the expected benefits that are realized later (Serra & Eduardo, 2016). The best method is to engage the main stakeholders in the identification process of the desired benefits, which can significantly increase the possibility of realization of those benefits across the program and projects (Glynne, 2007). Ward and Daniel (2012) proposed that the organizational drivers should be analyzed to identify the expected benefits through using a framework that links the business drivers among the investment objectives as well as to the organizational issues affecting the change initiative. The benefits realization plan describes the benefits, the dependencies of benefits, and the estimated time to realize the benefits. In the benefits planning process the benefits are identified, benefits mapping are analyzed, then benefits matrixes are produced (Serra & Eduardo, 2016). A benefits dependency network is developed to identify the interdepending changes and benefits grow along with the originally identified benefits (Bradley, 2006). Based on the prepared matrix and the dependency network, the benefits classification is performed to set out the benefits measures and targets. Finally benefits ownership are defined and the proposed benefits profile are presented. Reiss (2000) claimed that the dependency network of benefits describes that business changes support organizational changes (Reiss, 2000).

Realizing Benefits: After identification of all relevant benefits, these benefits should be realized and measured. Benefits measurement helps to accurately and consistently measure the performance of the program and projects (Thorp, 1998). Target settings for organizational performance improvement and measuring business benefits are the predominant factors of project management (Ward and Daniel, 2006). Fox

(2008) proposed to measure all benefits but it is important to measure the key benefits that empower the strategic objectives of the organization. However, it is important to determine what should be measured in which stage (Farbe, Land & Targett, 1999). Several researches discovered that the main failure reasons of benefits realization could generally be followed back to the business case (Jenner, 2014). The benefits realization concept enables organization to define and measure the outcome by using the possible methods to relate the programs and project to those outcomes (Thorp, 1998).

Benefits Review and Evaluation: The process of benefits monitoring is a process that monitor the benefits from the phase of benefits planning until the benefits realization phase, review those benefits and evaluate it (Serra & Eduardo, 2016). The process of monitoring clarifies the effects of internal and external changes on the provision of scheduled benefits (Ward et al., 1996). Effective benefits monitoring enables organization to efficiently manage the anticipated benefits associated with the program and project (Serra & Eduardo, 2016). Levine (2005) claimed that the performance assessment in terms of triple content (Schedule, budget, and scope) of a program or project enables the organization to create the expected value of the business. The process of benefits monitoring starts from the planning phase of benefits and proceed until the benefits are realized (Bartlett, 2006). Benefits management translates business objectives into particular determinate benefits, which ensures the achievement of anticipated result through business change (OGC, 2007a).

2.6. Control Strategies and Organizational Control System

Control is development of practices that ensures achievement of the desired objectives. Organizational control enables organization to work effectively, customize its goals and adapt its resources reasonably (Ouchi, 1979). Currently, Organizational control is viewed as important aspect of organizational structure and design, and fundamental management methods (Eisenhardt, 1985). During past decades, researchers have interpreted and discussed the term “control” in different ways. Control is defined as a practice, as a role and as an outcome (Olawale & Sun, 2010), and as a process in which managers motivates and encourage the organizational members to achieve the organizational objectives (Jaeger, Alfred & Baliga, 1985). Tannenbaum (1968) discussed that organizational control is “the collection of interpersonal influence relations in an organization”.

Organizational control is viewed as the practice that inspires and improves the performance of employees within an organization (Flamholtz, Das & Tsui, 1985). Similarly, organizational control is outlined as a regulatory process that makes a system’s elements expectable through establishment of principles in detection of certain anticipated objectives or state (Liefer & Mills, 1996). Etzioni (1965) views organizational control as a treat of power in organizations. Simon (1995) defined organizational control as a process that enables the organization to improve the individuals’ behavior to attain the organizational objectives. The presented various definitions of control recognize it as a key managerial skill required for entire project management roles (Walton, 2005). Therefore, it is essential for a project manager to have sufficient knowledge of all features of control that can be achieved through project control tools and methodologies (Rozenes, Vitner, & Spraggett, 2006).

The reasons of implementing control in an organization are: to implement organizational strategy, to avoid dysfunctional conduct of personnel, to increase coordination, and to enable proper communication system. Merchant (1985) argued that organizational control should be applied in the areas of strategic objectives of the organization. Trough organizational Control, the managers assure the efficient and effective usage of resources to accomplish the organization’s objectives and intended goals (Anthony, 1965). Therefore control is viewed as the essential task of the managers

within an organization (Hofstede, 1981). Considering the construction projects complex nature with high uncertainty, the organizational control encompasses the entire administrative system to make sure that the objectives and goals of the organization are consistent with the organizational decision and strategies (Flamholtz, Das & Tasui, 1985).

Mintzberg (1983) claimed that organizational control could be build through work process formalization, employee's skills development, productivity improvement, job satisfaction, behavior control and other organizational factors. Kirsch (1996) argued that the organizational control is practiced in organizations through various types of control modes, which is believed effective for the industries to attain their goals and objectives. Researchers classified the control levels at different organizational levels. Three controls hierarchical levels introduced by Anthony (1965) are:

- Strategic planning control
- Management control
- Operational control

Strategic control occurs at global level of organization to decide on the organizational objectives considering the required resources to attain these objectives. Management control manages the application of resources in effective and sufficient way and enables the organization to attain its objectives. The control at operational level assures the organization that certain tasks are performed according to the organization's plan.

Merchant and Stede (2003) proposed a two-dimension view for control: Management control and strategic control. The management control focuses on the internal management system of the organization concerning that organization's strategy is to be achieved through an appropriate way. The strategic control focuses on external aspect to validate the existing strategy.

From the various types of control mechanisms, each mechanism has certain characteristics and manages the distinctive feature of control. This research paper analyzes the effects of control strategies in a construction organization on benefit realization. Considering the different views about the organizational control, it is crucial to understand the mechanisms and strategies of control that can be applied within an organization. Thus, the different types of control strategies are explained in the following section.

2.7. Types of Control

Control strategies are implemented within organizations to achieve its objectives and create value to the business (Nilsson & Olve, 2001). It is understood that control is applied within organizations through implementation of different control strategies for achievement of their goals and objectives (Krisch, 1996). Organizations can apply various control mechanisms at different organizational levels. In general, the organizational control contains a set of controls and control mechanisms to apply in different part of the organization such administrative control, traditional control, financial control and social control. It is understood that practically everything is incorporated as part of the overall organization control (Merchant & Otley, 2007). Flamholtz, Das & Tasui (1985) underline the three main tradition of control mechanism within organizations: The sociological, administrative, and psychological. Sociological control focuses on entire organization, while the administrative view of control considers the departments or individual within organization, and the psychological control just considers the individuals.

Current literature provides different control mechanisms. Merchant (1985) discussed that organizations implement different control mechanisms and the sum of these control modes basically creates a management control system. This author states that the different elements of management control system work together in order to attain the organizational objectives. The following section provides a brief explanation of the well-known control modes.

The organization needs a management control system to direct its personal, solve organizational issues, and overcome on personal limitations (Merchant, 1985). To address these issues, Merchant (1985) proposed a management control framework that need to practice the following controls: result control, performance control and personnel control. Having the various control mechanisms. Ouchi (1979) suggest three organizational control mechanisms as market, bureaucratic and clan control that enable organizations to manage and achieve their goals. The following section presents an overview of these three types of control mechanisms that includes most of the above-mentioned types of controls. The strategic control, administrative control and cultural control are the three types of control

mechanisms that control organizations in term of business strategies, management system, and leads to organizational cultural improvement.

2.7.1. Strategic control

Strategy describes the scope and direction of organization in terms of long-term objectives and enables the organization to achieve these objectives through alignment of its resources within a competitive situation (Johnson and Scholes, 2002). The achievement of the organizational long-term objectives justifies market desires and accomplishes stakeholder expectations. Strategic control is the process that controls the organization's strategy based on the concept of beliefs, vision, aims and objectives (Mintzberg, 1994). The strategic planning control process contains the following four primary steps: examining mission of the company, assessment of business environment, evaluating the organization's resources, and establishment of a strategy (Warszawski, 1996). The key components of strategic management are the organizational mission, concept, goals and objectives. Brown and Adams (2000) argued that strategic planning control anticipates the future plans for the organization and make the employee involved in the organization's strategy to avoid business failure. The managers ensure the organizational management that all employees understand the role and importance of the organizational strategy (Mintzberg, 1994). Therefore it is important to measure daily work of all employees comparing to the organization's strategy and provide required support and trainings for their work improvement (Turner, 1993). This measurement process also considered as a predominant factor in teambuilding creation within organizations (Warszawski, 1996).

2.7.2. Administrative Control

Administrative control recognized as management control that enables organizations to work effectively, directs & motivates its employees and establish standard organizational structure. Management control directs employees to contribute in fulfillment of organizational objectives, motivate employees for their positive and productive behavior and eliminate their personal limitations. (Merchant & Stede (2003) distinguish management controls based on object of control that focuses on result control, action control, personal control and cultural control.

Result control indirectly oversees the employees' performance by comparing with the desired result and basically this control process is applied through employees' rewards such as position promotions, job security, self-sufficiency and appreciation based on their performance result (Merchant & Stede, 2003). Result control identify outcomes to be recognized by the managements to set target for their employees. The result control empowers the employees' performance through the reward process based on their outcome. Thompson (1967) concludes that result control could be applied in four steps within an organization: defining the performance dimensions, measurement of performance based on these dimensions, specifying the target, and reward or punishment of employees for task improvement.

Action Control focuses on the employees functioning in term of organizational objectives achievement and ensures the organization best interests through employees' performance (Merhcant & Stede, 2003). The action control or performance control mostly depend on the manager's capability to apply within organization for the improvement of their employees' performance in terms of organizational objectives and goals.

Personnel Control focuses on the employee's expectations, ensures the management about the employee's capabilities, and enables employees to be engaged in self-assessment process (Merchant & Stede, 2003). The personnel control is basically applied through selection process, training, cultural awareness, employees rewards and resources reliability.

Formal control could be achieved throughout performance evaluation of organizational members based on monitoring and rewarding policies. In this form of control outcome as well as behavior will be measured and evaluated, based on the outcome it will be then rewarded or punished (Eisenhardt, 1985).

These two control strategies (Formal & Informal) are interconnected. An organization would be able to accept work force having extremely various goals through execution of an accurate evaluation system. In contrast, a deficient performance evaluation system can occur if the goals and objectives are similar (Ouchi, 1979). Selection of these two control strategies is determined by the simplicity of performance evaluation. Performance evaluation control strategy is behavior or outcome based as in this strategy the behavior of employees or the outcome of that behavior is measured (Ouchi, 1979). The Formal control strategy covers the outcome control and behavior control (Eisenhardt, 1985). Merchan and Stede (2003) discussed that outcome control strategy

focus on project outcome, while the behavior control strategy focuses on the process to achieve the objectives. Thompson (1967) stated that the information characteristics (knowledge and ability) specify the usage of one of the behavior or the outcome as a control mechanism. Thus, the control system can be regarded based on the monitoring and evaluation of behavioral control and output control. The below figure adapted from Ouchi (1979), and Thompson (1967) shows the relation of control strategies with task characteristics. The relationship of task characteristics with control strategy is naive. The behavior would be defined if the task has been programmed. And hence the control would be accomplished through performance evaluation.

		Task Programmability	
		Perfect	Imperfect
Outcome Measurability	High	Behavior or outcome control	Outcome control
	Low	Behavior control	Clan Control

Figure 5– Organizational Theory (adapted from Ouchi (1979)).

Ouchi (1979) proposed the following three types of organizational control.

Bureaucratic control mechanism considers the evaluation of organizational members in terms of organizational standards, rules and policies (Ouchi, 1979). The same author presented a model of bureaucratic control explaining that this kind of control mechanism stands on organizational member’s close observation and subordinates direction in terms of quantitative and qualitative rules. Nieminen and Lehtonen (2008) argued that this kind of control enables the observation system of organizational member’s performance, creates value to the performance and finally compares that value to the rule. Hereby it is recognized that that the basic purpose of this type of control is the control of behavior or outcome of the organizational members. Ouchi (1979) differentiated the two types of bureaucratic control as to behavior control and output control. Kirsch (1996) claimed that in the behavior control the controller use the tools and techniques of control to improve the desired behavior of the contreee. Eisenhardt (1985) argued that through bureaucratic control mechanism, the basic types of control would be implemented, which are formal control mode, and informal control

mode. The same author claimed that in formal control mode the employee performance would be evaluated and rewarded. While in informal control mode the goals and objectives differences between controllers and controlee would be reduced through people socialization strategies. Merchant (1985) stated that both formal control and informal control are influencing the behavior of the controlee. According to a study by The same author explored that the bureaucratic control is efficient in task specialization and creation of employment rules within the organization. Using this type of control, the rules and procedures are formalized to guide employees towards goals achievement. The organization structure is organized as vertical hierarchy of authority, which enables the organization to effectively coordinate, communicate and operate its ongoing projects. Clegg and Kreiner (2013) argued that bureaucratic control rules that ensures that promote career development, creates impersonality organizational actions and formalize a recording method that contribute the organization to form certain rules for probability achievement.

Market control mechanism focuses on individual contribution through establishment of control standards implemented within organization based on accurately measurement and reward system (Ouchi, 1979). In this control, the required market information and prices are effective in decision-making process and an efficient competition. The activity performance are measured based on the prices, which reflect the output's actual value. Eisenhardt (1985) argued that market control is the most efficient type of control as it conveys all the required information for an effective decision-making to the management. Market control admits competition among the actors. This mechanism is viewed as an effective mechanism in transferring information between organizational members. A study conducted by Ouchi (1979) suggests that market control enables the organization to control its supplier and contractor in term of prices and uses a budget limit to accept the pricing process. This process accepts the price based on competition of the suppliers in term of the desired services. The market control mode enables the managers to softly supervise the pricing process and decide based on the organization's standards and roles.

2.7.3. Cultural Control

Cultural control is designed to support and encourage mutual supervising based on the certain norms, values and beliefs. Schein (1984) argued that Cultural control copes with organizational problems and creates a feeling in organizational member to perceive and

think in a correct way in relation to those problems. Ouchi (1979) claimed that cultural control is performed through creation of symbols, values, interactions, norms, and beliefs that improves organizational culture and leading to improvement of organizational performance. The organizational culture is shaped by its norms, beliefs, morals, methods of behaving, and principles. Pettigrew (1979) discussed that cultural control enables employees to interpret situations, direct behaviors, and deliver identity and strength to the organization. Merchant and Stede (2003) discussed the cultural control and suggested that code of conduct, group-rewards, intra-organizational transfers, and social arrangement are the examples of cultural control. Denison (1984) concluded that cultural control in organizations positively impact organization's performance through development of competitive advantages. Schwartz and Davis (1981) analyzed the corporate culture impact on its performance and concluded that cultural control has a major impact on organizational performance in achievement of its strategic objectives and plans. Cultural control helps in organizational sustainability. Marrewijk (2016) that significant changes in organizational values, beliefs and culture leads to organizational sustainability that improves decision making, economic balance and cultural objectives.

Informal Control is also called social control and this form of control execute a strategy that minimizes the divergence of favorites amongst organizational participants, based on people selection, trainings and socialization.

Clan Control Mechanism is basically implemented in the informal hierarchy of the organization and regulates the employees' behavior through, shared values, norms, relationships, traditions, and mutual principles (Deal & Kennedy, 1983). The clan control mode reduces the objective incongruence among organizational members. In clan control, the knowledge of revolution practice is incomplete and the evaluation process is difficult. Ouchi (1979) suggests that clan control is assumed as the most efficient and helpful to the organization to apply when it has several performance paths to achieve its goals. Ouchi (1979) recommended improving the employees through giving professional trainings and socialization process to attain their work result. To implement clan control, individuals need to be selected carefully with professional knowledge, to socialize them to the value and beliefs, and reward them based on their outcome.

2.8. Control framework in organization

The organizational control mechanism surrounding the organization's administration system and processes to ensure that organizational behavior and decisions are coherent with the strategies, goals and objectives of the organization (Flamholtz, Das & Tasui, 1985). The proposed modes of control such as outcome, clan, behavior and self-control have been progressive within organizational control. Flamholtz, Das and Tasui (1985) claimed that outcome, and behavior controls are formal control modes that are effective in restriction of outcomes or behavior, while clan control and self-control modes are informal control that struggle to encourage values beliefs. Thus, the form control relies on observation and evaluation to build a comparison of the predetermined outcomes and behavior with the current ones. Clan control is used to socialize shared values and beliefs and to eradicate goals incompatibility. Kirsch (1996) stated that self-based control is the situation in which an organizational member sets his target in regards with the requirements of organizational task, monitor his behavior and change it based on the achievement of target.

Based on the researchers views regarding control mechanisms explained above, Nieminen & Lehtoned (2008) presented a framework to be applied within organizations for control. These researchers merged the perspective of Ouchi (1979) and Kirsch (1996) and claimed that the organizational control suggests the process and techniques that influence the organization's member's behavior. These authors claimed that this framework is designed to implement the mechanism of core control system that changes the members behave in such a way to attain organizational objectives. The elements of core control system are as following:

- A- Planning – In the planning stage, the organization establishes the goals settings standards for each functional area of the administrative system. Planning as a control mechanism impacts work performance through development of work standards and setting of certain goals.
- B- Operation – In Operational stage, the organization focus on larger organizational unit operational system to accurately allocate and utilize the resources for the development process.
- C- Outcome evaluation – In this stage, the organization evaluate the organizational members productivity, performance, work attitudes, and outcomes.
- D- Measurement – The measurement elements includes the administrative measurement, financial control system, and the appraisal system of employees performance. This process is accomplished through assignment of certain rules

and standards that affect the employee’s performance in terms of anticipated outcomes.

- E- Feedback – In feedback process, the control system compare the performance evaluation information with the planned goals and objectives, analyse and adjust the operation system and produce a rewarding administrative system within the organization. The feedback control mode can be applied through two methods: first it can control the organizational member work performance through giving direction by offering the required information to take the needed corrective action. Second, the control can be applied by motivating the employee through a motivational reward.
- F- Rewarding process – the rewarding elements drive the administration system to assess the employees based on pre-recognised objectives and goals, and reward the them based on the evaluated performance. Ouchi (1979) stated that an effective rewarding control mode could be excepted if the management consider both reward-possibility and gaol similarity.

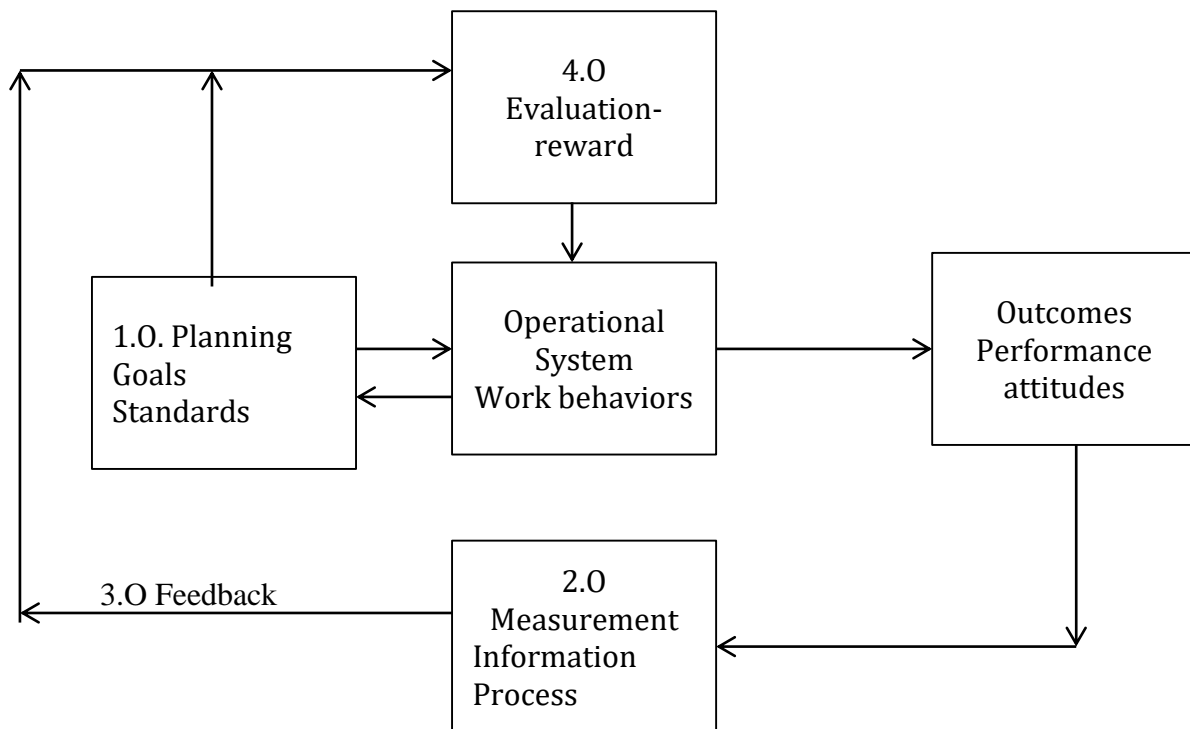


Fig 6 – Organizational control integrative framework (adopted from Flamholtz, 1985)

Chapter Three – Conceptual Framework and Research Hypothesis

3.1. Introduction

This chapter provides answers to the problem statements through development of the theoretical model, which works as the foundation of conceptual framework for implementing of control strategies within construction organization to determine its effects on the benefit realization process. Theoretical framework organizes the perceptions, hypothesis, principals, prospects, and ideas to support the research, concurrent to the literature review. The theoretical framework can be developed graphically as well as in narrative form.

Based on the literature review clarified in chapter 2, this chapter of research aims to underline the research variable, interpret the interactions among variables, and elaborate the importance of the reasons of having such an interactions between these variables.

3.2. Conceptual Model

The conceptual model is developed to understand the effects of control strategies on strategic goals and determine its influences on benefits realization process in construction organizations. The theoretical framework aims to discover the most suitable control strategies that are efficient to realize the benefits of construction projects. Anthony (1965) explained control as a process the enable organization to achieve its desired objectives. Thus, control without plans and objectives cannot be carried out within organizations. As presented in chapter two of this study, there are three important types of control such as strategic control, administrative control and cultural control, which positively impact the benefits realization process in construction organizations. The conceptual model offered in Figure 3.1 represents the relationships of the most effective types of controls with relevant benefits realization process. Through this systematized investigation we obviously examine the relationship among the use of these three control mechanisms (Strategic, Administrative, Social) with the relevant benefits realization in organizations.

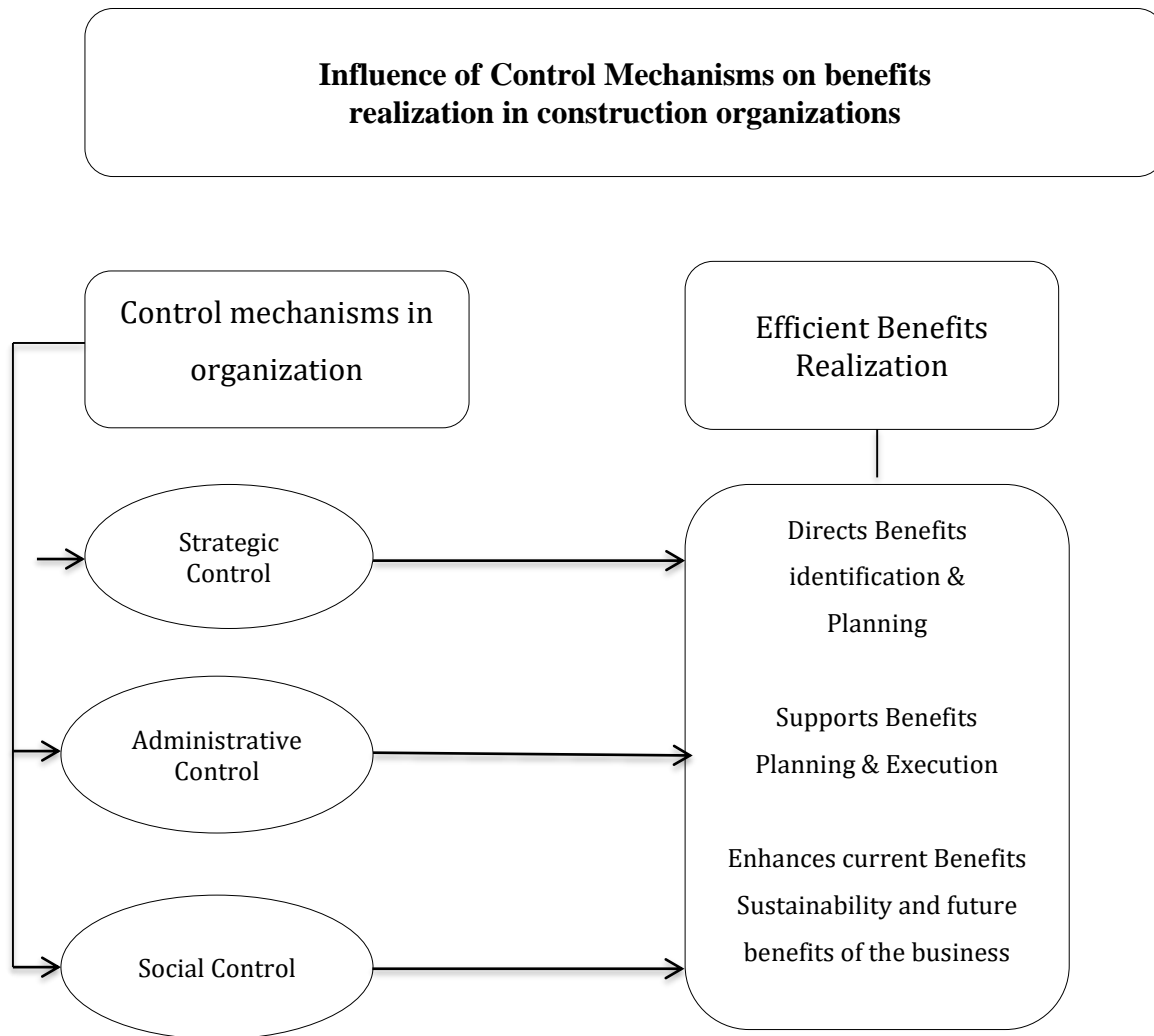


Figure 7: Conceptual Model (Theoretical Framework)

3.3. Research Hypothesis

3.3.1. Strategic control impact on benefits realization

Bradley (2006) defined benefits realization as “One becomes fully aware of the positive impact as a result of a change”. The benefits realization and management allows organizations to plan and attain benefits. The literature represents various approaches to the benefits realization process, which almost all require the process of benefits identification, planning, execution, evaluation, and potential for further benefits.

Strategic control is the process that controls the organization's strategy based on the concept of beliefs, vision, aims and objectives (Mintzberg, 1994). Brown and Adams (2000) states that strategic control enables organizations to achieve its goals and objectives. Therefore strategic control influences positively the benefit realization process in terms of strategic benefits. These authors argued that strategic planning control anticipates the future plans for the organization and make the employee involved in the organization's strategy. Benefits perceived as business value and can be achieved through execution of business strategies, enabling the organization to accomplish its strategic goals and objectives. One of the important types of Benefits determined by Farbey, Land, and Targett (1999) is the strategic benefit. The key strategic benefits include the organizations' strategy, long-term viability, and creation of value to the business, innovation, identifying new business models, and geographic market expansions. For strategic benefits realization and achievement, the organizations need to adopt the strategic management approach within organization. The strategic management includes the three basic steps of strategic thinking, strategic planning and strategic control. Thus, the strategic control improves the identifying and planning phases of the benefits realization process.

H1: Strategic Control enhances benefits identification process.

H2: Strategic Control significantly improves benefits planning.

3.2.2. Administrative Control influence on Benefits Realization

Administrative control within organization also mentioned as management control, identifies rules and standards in the organizations, controls boundary of concerned personnel on the decision power and establishes specific measurable target objectives (Nieminen and Lehtonen, 2008). The benefits relevant to management identified Farbey, Land and Targett (1999) are better control, improvement in workforce skills, floater organizational structure and inadequacy of the organizational system. Looking to these two concepts presented above regarding the management control and benefits, verifies that the management control has significant influence on the benefits realization process in organizations. Administrative control increases performance efficiency of organizations. Current literatures of management views control, as a tool that incorporate the organization's devices and systems to ensure the decisions and performance of organization is consistent with the organization's strategies and objectives. Serra and Kunc (2015) argued that established a control environment within

organization lead the organization to support and attain the relevant benefits of their business. Effective organization control can significantly decrease the project's failure rate in term of strategic perspective. Serra & Kunc (2015) claimed that Benefits realization management is an aspect of project management that positively impacts on the project success by creating a value to the business and as a result it enable the organizations to effectively achieves their strategic goals.

Control modes implemented within the organization affecting the organization's structure, culture and the organizational environment and increase the probability that individuals will behave in such a way that will cause the achievement of organizational objectives. Thus, the organizational control increases the organizational effectiveness. Olawale and Sun (1980) stated that organizational effectiveness is the capacity of organization in that can achieve multiple goals through principle and standards coalition.

H3: Administrative Control justifies benefits planning process.

H4: Administrative Control improves benefits execution.

3.3.3. Cultural Control impact on Benefits Realization

Cultural control is an informal type of control that minimizes the divergence of favorites amongst organizational participants, based on people selection, trainings and socialization. Cultural control is important for short and long-term organizational performance. Judge and Bretz (1994) discussed that cultural control has a positive significant impact on organizational performance. Furthermore, it has also been discussed in literature review, that cultural control is efficient to organizational sustainability. Thus, it can be concluded that cultural control has a positive impact on benefits execution process, and enables organizational sustainability. Social Control is designed to support and encourage mutual supervising based on the certain norms, values and beliefs. The organizational culture is shaped by its norms, beliefs, morals, methods of behaving, and principles. Merchant and Stede (2003) discussed the cultural control and suggested that doe of conduct, group-rewards, intra-organizational transfers, and social arrangement are the examples of cultural control. Ouchi (1980) recommended improving the employees through giving professional trainings and socialization process to attain their work result. The benefits sustainability is achieved through improvement of organizational environment. The organizational environment improvement has strong effect on the business.

H5: Social Control supports benefits execution process.

H6: Social Control advances benefits evaluation and review.

Chapter Four - Research Methodology

4.1. Introduction

This chapter aims to outline the adopted research methodology in order to validate the extracted hypotheses presented in chapter three, and to achieve the aims and objectives of this research. Basically the research purpose is a theory that explains the phenomena, finds solutions to the problems and give responses to the questions that remained without answers (Tzortzopoulos, 2004). Research methodology denotes the development of research process logics, used for the theory generation. Thus, it discusses the research framework route in which the research is conducted. In addition research methodology accomplishes the practical part of the study and is conducted through statistical analysis of the data collected to come up with the result that support the interpreted literature review and achieve the goals and objectives of the study.

This research was applied within construction organizations to discover the effects of different types of control strategies such as strategic control, administrative control and cultural (social) control on the strategic goals and objectives of the organization and benefits realization. The overall research process includes three key phases: literature review, theoretical framework, and verification by statistical analysis. The two primary stages are explained in chapter 2 and 3, and so the following chapter focuses on designing of questionnaire survey and data collection.

4.2. Research Methodology

This study applied a quantitative research method in construction organization in order to analyze the influence of the implemented control mechanisms on benefits realization of its business. Veal (2006) claims that the research questions and hypothesis, previous research, required data accessibility, and resource validity and reliability play an important role in selecting an appropriate research method. Stede, Young, and Chen (2007) state that quantitative research is used for descriptive purpose as well as for explanatory purpose. Looking to the research hypotheses developed in chapter 3, and the research question asked in chapter 1, the researcher for this study used quantitative research method by designing a research questionnaire, which contains questions about

benefits realization and organizational control. To complete this research study, the following consecutive interrelating research parts are incorporated:

- The questionnaire was distributed to professionals working in public and private organizations to collect the data.
- The data collected by quantitative method was analysed to test the research hypotheses and to develop the research model that addresses the connection of control mechanisms with the benefits realization.

4.3. Research Design

A quantitative research approach was selected for this research study in order to examine the research hypotheses through statistical analysis. A questionnaire was used to obtain realistic profiles, views and attitudes of the respondents. The questionnaire was sent by emails, to the target population of 115 individuals who hold key positions in both public and private construction organizations. Total 71 responses were received. The concepts of the quantitative part of this study were measured by relating them to the designed questionnaire. The questionnaire was divided into three parts: the first part concerns with the general profile of the respondents, the second part aims to get respondents ideas about the statements that are significant to the benefits realization process within their organizations, and the third part covers statements about the three control mechanisms implemented in organizations to obtain information about its influence on the benefits realization process.

4.3.1. Questionnaire construct and development

The questionnaire survey was developed to explain the constructs of the research, which includes the benefits realization and control mechanisms. To measure these research constructs, the survey questionnaire statements were developed based on the literature review presented in chapter 2. The first part of questionnaire obtains the general information of the respondents and briefs the relevant organization type. The second part the questionnaire contains 12 statements about the process of benefits realization. The statements are obtained from the literature review, demonstrating the efficient practices leading to effective benefits realization process. A likert scale method was applied for the responses from 1 (strongly efficient) to 5 (strongly inefficient). There are 5 options to be chosen. The third part of questionnaire contains 24 statements that

determine the result of implemented control mechanisms and discover the efficiency of these practices in terms of benefits realization process. These practices are likely to be the result of the three control mechanisms implemented with construction organizations. The control strategies to be implemented within construction organizations are divided into three types and 8 questions statements have measured each type of the control mechanisms. The statement aims to clarify the effects of strategic control, administrative control and social control on the process of benefits realization. The questionnaire is presented in Appendix 1.

4.3.2. Sampling and Data Collection

The target population includes the units and individuals that the research wants to study (Diamond, 2011). To obtain information regarding this target population, the researcher chose a survey population. Stede, Young, and Chen (2007) defined the survey population as the sum of available respondents that could be essentially tested. The researcher for this survey selected employees from different consulting and contracting organizations. Since this research study is about the benefits realization process and its functionality under the influence of control strategies, the construction organizations were selected based on its current management systems with its ongoing construction projects. The survey was distributed through emails and the data was collected during one month. The questionnaire was distributed to 115 individuals and total 71 responses were received. The concept of benefits realization may be recognized differently in public and private organizations. Therefore the sample was distributed to professionals who work in government, public organizations as well as private organizations.

The following chapter provides the details of the statistical analysis performed on the collected data, by SPSS software.

Chapter Five - Data Analysis

5.1. Introduction

This chapter aims to summarize the data analysis and provide the research findings of the research analysis. This chapter briefs the data coding process, the result of demographic parts of research questionnaire, details of Cronbachalpha calculation, correlation and regression analysis.

5.2. Data Coding

The questionnaire statements were made for both dependent and independent variables. The data collected from the respondents through questionnaire survey was properly coded for data entry to SPSS and to use it by the software for statistical analysis. This process was performed as following:

- The collected data was transferred to numerical system and was then entered into the software in order to complete the statistical analysis.
- Exploratory data analysis was conducted for summarization and structuring of the data.

5.3. Response Rate

This research survey data was sent by emails to professionals working in public and private organizations and they responded the questionnaire survey by email. Among the 115-emailed questionnaires, 71 responses were received through online questionnaire form using Google website. 44 respondents didn't participated in the survey due to unknown reasons. The information of survey response rate is shown in table 4.1 below:

Table 2: Summary of responses

Descriptions	Target Populations
Total emailed questionnaires	115
Responses received	71
Completed responses	71
Total response rate	$71/115 * 100 = 62\%$

As displayed in the table, the overall response rate of 62% (of total sample size 115) is exceptionally good. The response rate denotes the number of proper sample size based on the statistical point of view. Kish (1965) claimed that at least 10% response rate with 95% confidence level is acceptable for a survey. Thus, the response rate of 62% for this survey is exceptional.

Descriptive analysis of the numeric variables tests the various logical measures of means, median, and mode. The measurement of variability or standard deviation is also performed through descriptive analysis. In standard deviation the placement shows the central location of the data and the variability measures the difference of data from the central point, which rectifies how the data is plotted. Below is a description of the measures:

5.4. Descriptive Analysis and statistics

The descriptive analysis gives us the details of univariate statistics relating to variables and analyzes its standard values. The descriptive statistics encompasses the elementary features such as means, median, mode and standard deviation details, and the basic details of the sample size. Here is a narrative of the descriptive statistics followed by the table displaying the statistic result of this research data.

- **Mean:** Mean is the average that is calculated through dividing the number of data points by the total number of data points.
- **Median:** Median shows the middle pointed value in the arranged data, while the value is increasing; the median is calculated from lowest to the highest order. For odd number, median is the middle value and in case there is two middle values, the calculated average of two middle value is the median.
- **Mode:** Mode is the most frequent repeated number amongst the data points.
- **Standard deviation:** The data spread measurement is performed by standard deviation, which shows the variation of data points from the value of mean. In addition standard error measures the distributed mean amongst the data set.

Table 3 – Descriptive statistics

Statistics						
		Gender of Respondents	Age Of Respondents	Organisation	Job Status of Respondents	Working Experience of Respondents
N	Valid	71	71	71	70	70
	Missing	0	0	0	1	1
Mean					2.99	2.29
Median					2.50	2.00
Mode					1	3

The research questionnaire demographic part statistic details that includes gender information, types of organization of the respondents, age of respondents, job status, and the total experience of the respondents are summarized below extracted from the SPSS software.

A- Gender: As described below in the table, around 88% of the respondents are male, and 12% are female participated in this study.

Table 4– Respondents gender

Gender of Respondents					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	1.4	1.4	1.4
	Male	62	87.3	87.3	88.7
	Female	8	11.3	11.3	100.0
	Total	71	100.0	100.0	

B- Organization: The Respondent participated in the survey are from different types of organizations. The below tables shows, that 71% of the respondents are working in private organizations, 9% are working in Semi-government organizations, while 20% of them are employees of government.

Table 5 – Organization’s type of the respondents.

Organization					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	1.4	1.4	1.4
	Government	14	19.7	19.7	21.1
	Semi-Government	6	8.5	8.5	29.6
	Private	50	70.4	70.4	100.0
	Total	71	100.0	100.0	

C- Age: The statistic describes that most of the participants (38%) responded to the survey questionnaire are within range of 25-30 years. The two other age groups 31% and 31% for the range of 30-35 years, and 35-40 years respectively. The table presented here shows all the information about the age of respondents.

Table 6 – Age of respondents

Age Of Respondents					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	1.4	1.4	1.4
	25-30 Years	26	36.6	36.6	38.0
	30-35 Years	22	31.0	31.0	69.0
	35-40 Years	22	31.0	31.0	100.0
	Total	71	100.0	100.0	

D- Job status: The job status of participant are different, Table 7 is the result of job status of the respondents. fortunately most of participants (39%) are project managers. This is a positive point for this research study as the project managers are mostly involved in both topics of the study, the benefits realization as well as control mechanisms in organizations. The remaining 61% of the respondents are 11%, 20%, 3% and 27%, as construction managers, program managers, change managers, and other respectively.

Table 7: participant job status

Job Status of Respondents					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Project Manager	27	38.0	38.6	38.6
	Construction Manager	8	11.3	11.4	50.0
	Program Manager	14	19.7	20.0	70.0
	Change Manager	2	2.8	2.9	72.9
	Others	19	26.8	27.1	100.0
	Total	70	98.6	100.0	
Missing	System	1	1.4		
Total		71	100.0		

E- Work experience: The descriptive statistics of work experience for the survey participators displayed in table 8. The table shows that most of the respondent, which are 39% have sufficient experience of 10-15 years in project management. The participators having 5-10 years experience are in second place in the table and are 35% of all the respondents. 22% respondents are have 0-5 years experience, and finally 6% of the participators have more than 15 years experience. Looking to the job status table, it is well known that all these participators have been working in management section of the organizations.

Table 8– Working experience of the respondents

Working Experience of Respondents					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5 Years	15	21.1	21.4	21.4
	5-10 Years	24	33.8	34.3	55.7
	10-15 Yeras	27	38.0	38.6	94.3
	More than 15 Years	4	5.6	5.7	100.0
	Total	70	98.6	100.0	
Missing	System	1	1.4		
Total		71	100.0		

5.5. Reliability Test

Reliability test, which is known as internal consistency test is performed through calculating of the value of Cronbach's Alpha to estimate the reliability. Lee Cronbach established alpha in 1951 to test the internal consistency of the measures scale. This test of Cronbach's Alpha is used to examine the reliability of the research questionnaire instruments. Internal consistency must be examined to ensure validity. Furthermore, this test enables the researcher to extract the inadequate question from the questionnaire and then explore relevant indication of its reliability. In this research, we look to understand about the consistency of the result for the various items of the same construct inside the measure. We used all items of the dependent variable among the independent variable to achieve the result. Kline (1999) argued that a value of 0.7 up to 0,99 is a good and an acceptable value for cronbach's alpha. In case the value is lower than 0.7, it shows that the scale of the item is unreliable. If the items are reversed scored, this will affect the cronbach's alpha value in calculations. Therefore it is recommended to reverse the method of scoring for the reverse phrased items during the reliability analysis. The items correlation to each others directly affecting the alpha's value. In this study, we examined the cronbach's alpha for all items of dependent and independent variables.

The survey Question # 1, which about the benefits realization has 12 items and the alpha value, indicates accepted level of consistency between the items (0.955) . The result is indicated in table 9.

The reliability test for survey question # 2 Strategic control that consist 8 items indicates an accepted level of consistency (0.937). The result is shown in table 10.

The reliability test for survey question # 3 Administrative control that consist 8 items indicates an accepted level of consistency. The result is shown in table 11.

The reliability test for survey question # 2 Strategic control that consist 8 items indicates an accepted level of consistency. The result is shown in table 12.

Table 9.

A. Benefits Realization's Items Reliability test result

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.955	.955	12

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
27.90	170.381	13.053	12

B. Strategic Control's Items Reliability test result

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.937	.937	8

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
18.44	69.207	8.319	8

D. Administrative Control's Items Reliability test result

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.944	.944	8

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
18.87	75.882	8.711	8

E. Cultural Control's Items Reliability test result

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.932	.933	8

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
18.61	70.211	8.379	8

5.6. Correlation

Correlation analysis is used to recognize the relationship amongst the constructs and to measure the direction and strength of the linear relationship between the dependent and independent variables. The correlation coefficient is always a value of $(-1 \leq r \leq 1)$. The most the correlation coefficient is closer to 1 or -1, it suggests that the variables have a strong linear relationship. If the r values is “ $r \leq .3$ ”, it shows a weak correlation between the two variables, if “ $.3 \leq r < .7$ ”, it shows a moderate correlation, and if “ $r \geq .7$ ”, then the two variables are highly correlated with each others.

In this research study, the casualty correlation analysis is used to determine the relationship of independent variables (strategic control, administrative control, and social control) with the dependent variable the benefits realization process in construction organizations.

Correlation analysis between Control mechanisms and Benefits Realization

In this research study, the correlation analysis of the dependent variable (Benefits realization) and the independent variable (Control mechanisms) is illustrated in table 11. Pearson correlation analysis was conducted to test the relationship of the control mechanisms with the process of benefits realization in organizations. Control mechanisms are represented by three independent variable as strategic control, administrative control and social control. These three control mechanisms were measured with 24 factors, each independent variable has 8 factors. 12 items represent the benefits realization, which is represented by global factor “Gbenefits” in the calculations.

Table 11 – Correlation analysis result

Correlations					
		Gbenefits	StrgControl	AdmtControl	CltrControl
Gbenefits	Pearson Correlation	1	.951**	.941**	.906**
	Sig. (2-tailed)		.000	.000	.000
	N	70	70	70	70
StrgControl	Pearson Correlation	.951**	1	.939**	.899**
	Sig. (2-tailed)	.000		.000	.000
	N	70	70	70	70
AdmtControl	Pearson Correlation	.941**	.939**	1	.888**
	Sig. (2-tailed)	.000	.000		.000
	N	70	70	70	70
CltrControl	Pearson Correlation	.906**	.899**	.888**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	70	70	70	70

** . Correlation is significant at the 0.01 level (2-tailed).

Looking to the result of calculations presented in table 11, it determines that strategic control ($r = .951^{**}$, $p < .001$) is strongly correlated with the benefits realization process. Similarly Administrative control ($r = .941^{**}$, $p < .001$) is significantly correlated with the benefits realization process. Finally the cultural control ($r = .906^{**}$, $p < .001$) is also correlated with the benefits realization process. The calculation indicates that there is a positive relationship between the control strategies and the benefits realization process in construction organizations. The values show that there is a strong positive relationship between all the control mechanisms with benefits realization.

5.7. Regression

Regression analysis is use of statistical calculation determining the relationship of dependent variable with one or more independent variables. It is basically used for prediction and causal inferences. The simplest form of regression (bivariate) is analyzed using the following equation:

$$Y = \beta_0 + \beta_1 X + U$$

In this equation, the direction of the relation attained through slope parameter is called (β_1), and the dependent variable status in case of unavailability of the independent variable is represented by the inceptor parameter (β_0), the error term (U) takes the

variation amount that is not anticipated by the intercept terms and slope. The coefficient of regression indicates the fitness of values with the data.

Through regression, this research study explains the relationship among variables in supplementary detail. The research hypotheses generated in the conceptual framework are discussed in full details here.

H1: Strategic Control enhances benefits identification process.

H2: Strategic Control significantly improves benefits planning.

H3: Administrative Control justifies benefits planning process.

H4: Administrative Control improves benefits execution.

H5: Social Control supports benefits execution process.

H6: Social Control advances benefits evaluation and review.

As represented in the research questionnaire, the dependent variable has been described by 12 items, while the independent variables are demonstrated by 3 factors, 8 items describe each factors.

The multiple regression analysis demonstrates the significance of the research hypotheses and its factors. The analysis is performed with the dependent variables, which is benefits realization and independent variables Control mechanisms (Strategic, Administrative and Social). The regression calculation determines the relationship of strategic control, administrative control and cultural control to the benefits realization process. Based on the regression calculation, the means and standard deviations for both the dependent variable (benefits realization” and the independent variable (control mechanisms) are shown in table 11. N shows the number of respondents.

Table 12 – Descriptive statistics

Descriptive Statistics			
	Mean	Std. Deviation	N
Gbenefits	2.3250	1.08775	70
StrgControl	18.4429	8.31906	70
AdmtControl	18.8714	8.71101	70
CltrControl	18.6143	8.37922	70

Table 12 below, describes the correlation between the benefits realization with the strategic control, administrative control and cultural control as demonstrated in person correlation section. The correlation table below demonstrates that Strategic control has a significant relationship with the benefits realization process. The correlation between the measures of independent variable is moderate. The value indicates a high positive correlation between the control strategies and the benefits realization process.

Table 13 – Correlations of control strategies with benefits realization

Correlations					
		Gbenefits	StrgControl	AdmtControl	CltrControl
Pearson Correlation	Gbenefits	1.000	.951	.941	.906
	StrgControl	.951	1.000	.939	.899
	AdmtControl	.941	.939	1.000	.888
	CltrControl	.906	.899	.888	1.000
	Sig. (1-tailed)		.000	.000	.000

Table 13 below indicates the regression model summary, in this table R-value that shows the overall correlation of the two variables is (0.965) and it shows a high correlation between the two variables. The R Square is known as coefficient of determination or the covariance, which is the proportion of the variability and is explained by the independent variable in the regression model. The R square value of (0.93) determines how much variances In our dependent variable are explained by our predicted variable. This means that 93% variance of the benefits realization process can be predicted by the control strategies. Which indicates a high significant impact of control on the benefits realization process.

Table 14 – Regression model summary

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.965 ^a	.930	.927	.29333	.930	294.280	3	66	.000

a. Predictors: (Constant), CltrControl, AdmtControl, StrgControl

In multiple regressions model presented above, the Adjusted R Square is a more reliable statistics, which takes into account the sample size of the model. The standard error measures the variability of the actual dependent variable value from the predicted value. It is the same as standard deviation. the intension is to estimate the parameters. In table xxx above, the summary model demonstrates the regression weights and significance level of change.

The ANOVA Table 14 describes the arrangement of variation between the factors independent variable in the model. Looking to the values of (F=96.491=96.491, df=3, sig=. 000), it determines that the control strategies (Strategic control, administrative control and cultural control) are statistically significant. And in our model the control strategies are good predictor of the benefits realization process.

Table 15– ANOVA table of regression analysis

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	75.962	3	25.321	294.280	.000 ^b
	Residual	5.679	66	.086		
	Total	81.641	69			
a. Dependent Variable: Gbenefits						
b. Predictors: (Constant), CltrControl, AdmtControl, StrgControl						

In regression model development, the linearity assumption of the dependent variable and independent variable must be followed. Linearity assumption is allied based on the homoscedasticity; normality and independence of residuals should not be interrupted.

In coefficient table presented below in table 15, the P value for the strgcontrol is p=. 000, which shows that this independent variable has a high statistically significant impact on the benefits realization. The p value for admtcontrol is p=.002, shows that administrative control also has a statistically significance impact on the benefits realization process. Finally the p value for the cultural control p=0.17 shows that cultural control also has impact on the benefits realization process but less than strategic control and the administrative control.

Table 16 – Coefficients

Coefficients ^a									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	-.047	.088		-.535	.595			
	StrgControl	.062	.014	.473	4.575	.000	.951	.491	.149
	AdmtControl	.041	.012	.327	3.312	.002	.941	.377	.108
	CltrControl	.025	.010	.190	2.455	.017	.906	.289	.080

a. Dependent Variable: Gbenefits

In the table of coefficients presented above, the unstandardized coefficients for (strgcontrol = .062, admstcontrol = .041, and cltrcontrol = 0.025) means that for one unit increase in independent variable, the model predicts that the dependent variable increase by the said number units. The standardized coefficients show that the dependent variable will be changed by this amount of each of the independent variable. The collinearity phenomena are associated with independent variable’s inter-correlation. However, the overall model is significant, but the multicollinearity estimates may lead to lack of statistical significance of individual predictor variable.

Table 17 – Coolinearity Diagnostics

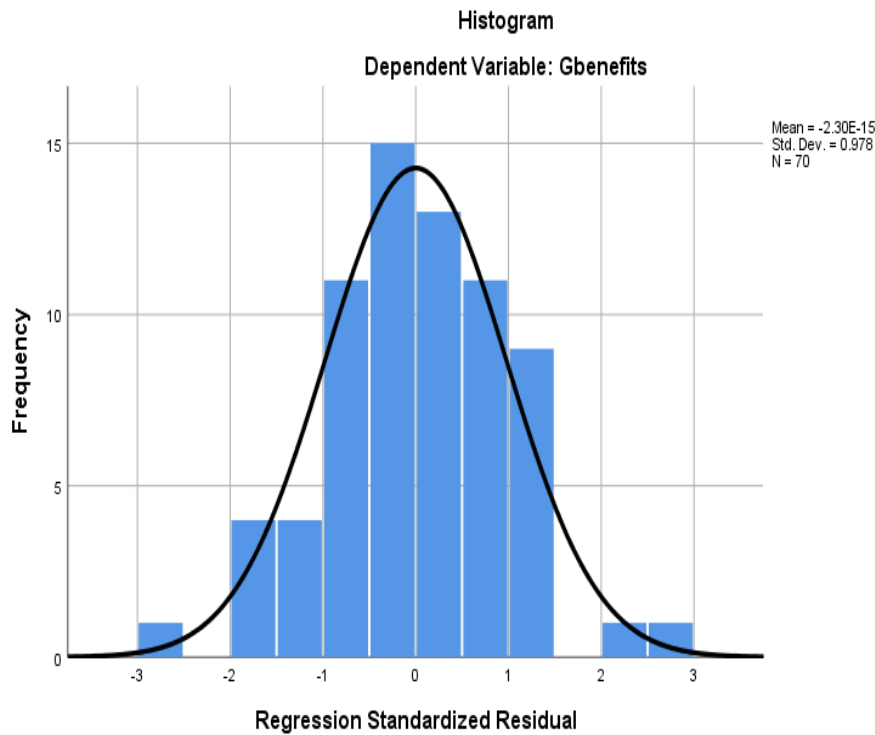
Collinearity Diagnostics ^a							
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	StrgControl	AdmtControl	CltrControl
1	1	3.845	1.000	.01	.00	.00	.00
	2	.124	5.569	.98	.01	.01	.02
	3	.020	13.707	.01	.08	.21	.96
	4	.010	19.358	.00	.91	.77	.02

a. Dependent Variable: Gbenefits

In collinearity diagnostics table, if the condition index is great than 15, it indicates a possible problem. In case it is greater than 30, it shows there is a serious problem in that specific independent variable. In this model, the collinearity is not existed because it will be used for random simulation. Therefore, the result will not be impacted by the collinearity, as the independent variable sample will be tested differently.

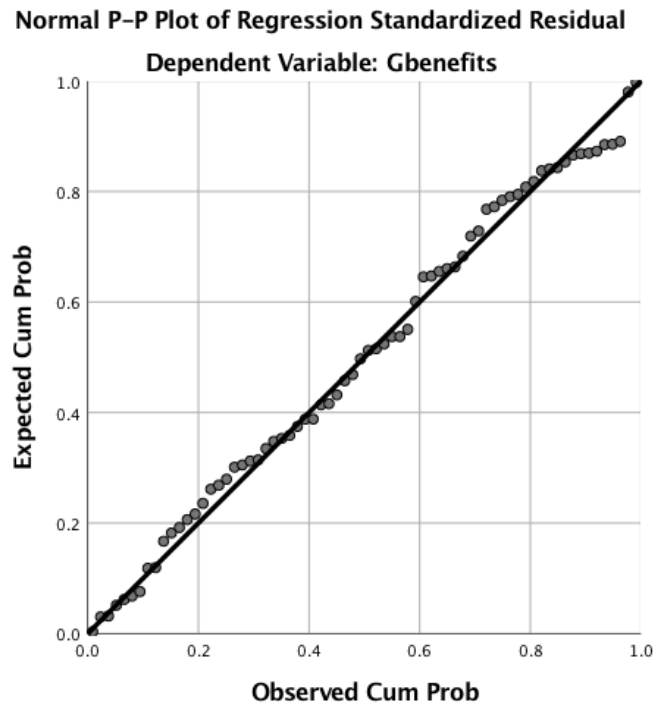
For testing normality of the residuals, the frequency standardized residual histogram was plotted as presented in Figure 8. The Histogram offers that the frequency of the standardized residuals properly tracks the normal curve. This indicates that standardized residuals are suitably adjacent to the standard normal curve and the assumption of normality is not failed.

Figure 8 – Histogram of Control strategies and benefits realization.



To assess the normality of the distribution, The Probability plot for the Global dependent variable (Benefits Realization) and the independent variable (Control Strategy) is presented in figure 9, which indicates that data points follow the straight line in the graph and it shows that our data is normally distributed.

Figure 9 – Probability Plot



The research survey and the quantitative data analysis in SPSS determine that Benefits realization process is significantly improved by the strategic control, administrative control as well as the cultural control. The reliability analysis illustrates that all items of the research questionnaire have the accepted consistency. The correlation and regression analysis determined that there is a positive relationship between the dependent variable and the independent variables. This positive relationship is magnified by the combination of three types of control strategies that expressively improves the benefits realization process.

The following chapter of this research study will discuss the research findings interpreting with the related literature in sufficient details.

Chapter Six – Discussion, Recommendation, and Conclusion

6.1 Introduction

This chapter interprets the research findings, provides a conclusion, and research limitation. The first part of this chapter provides an explanation on how the benefits are realized under the impact of various types of control strategies. Additionally, it will analyze the relationship of each type of control strategies with different process of benefits realization in organizations, based on the literature review and statistical analysis described in this study. The outcomes of this research are compared with preceding researches and the research association to academic view is highlighted. At the end of this chapter, research limitation is deliberated and proper recommendations are made for the future researches.

6.2 Control strategies and benefits realization

This research identified Benefits Realization Practices supported by control mechanisms applied in organizational management system. As discussed in literature review, Benefits realization management is a set of practices that increase business success rates from a strategic perspective. Benefits Realization process identifies, plans, executes, monitor, and evaluate the expected benefits from a project. This process increases organizations capability to enable strategic business outcomes through delivery of their program and projects. The benefits realization approach intends to create a better understanding of business benefits to stakeholders, and to create value to the business. The benefits realization process consists of four groups of practices, Structuring and identification, Benefits planning, benefits execution, and the continuous benefits review and evaluation to ensure value creation and investment return.

Control is viewed as a continuous development practices that incorporate the organizational management system towards achievement of desired objectives. It was discussed that control can be applied through three main approaches: strategic control, administrative control, and cultural control. Strategic control enables organizations to work towards the achievement of its long-term objectives through establishment of business strategies. Administrative control enhances organizational management system to efficiently execute its business strategies. And Cultural control known as social

control shapes the organizational culture by its norms, values and beliefs that leads to performance improvement of the organization.

6.3. Discussion

This part of research discusses the research findings based on the result of research analysis and the explored literature review in order to answer the research questions and attain the research objectives. The primary focus of the research is to understand the benefits realization process in construction organization and to determine the influence of control mechanism on this process. The control mechanisms are summarized in three types of control as strategic control, administrative control and cultural control. This research analyzed the impact of each type of these control mechanisms on the process of benefits realization.

Objectives 1 & 2

- *Investigate the benefits realization process in construction organizations and determine how this process enables organizations to realize their benefits.*
- *To Practice an applicable benefit realization management process that executes the projects and program focusing on achievement of expected benefits.*

The first part of literature review explored a benefits understanding and suggested the primary approaches to benefits realization and management. Most of the researchers proposed a five stages benefits realization approach that includes benefits structuring and identification, benefits planning, benefits execution, benefits evaluation, and to sustain benefits.

This study measured the benefits realization process, as dependent variable with 12 items to recognize its importance and effectiveness to the BRM process. The findings of this research alike the relevant literature; determine that organization can structure and plan its target benefits through development of organization's long-term strategic objectives; planning of project outputs and successfully executing of their programs and projects.

The research findings illustrate that a standard organizational structure and better management system in organizations enhance organizations to successful implementation of their projects and programs to achieve their strategic objectives

and create a value to their business. In addition, an improved communication system in organizations, good decision-making and teamwork evaluates the current situation comparing to the target situation to ensure efficient projects execution. This study also determines that improved organizational culture and standard organizational management system empowers organizations to sustain current benefits and work for future anticipated benefits.

Objectives 3 & 4

- ***To Review and analyse control strategies implemented in construction organizations.***
- ***To discuss the different types of control mechanism and analyse its impact on benefits realization.***

The second part of the literature review discussed the control strategies in construction organizations and proposed the primary control mechanisms that are efficient to the benefits realization process. Similarly to the literature review, the research findings determine that control strategies in construction organization improve organizational system in terms of strategic, management and cultural perspectives that leads to an effective benefits realization process. This research developed a conceptual framework that illustrates the relationship and impact of these three control mechanisms on the benefits realization process. The research findings are discussed below:

6.3.1. Strategic Control influence on Benefits Realization

To examine the relationship and impact of strategic control on benefits realization process. This study presented the relevant literature discussing that the strategic control in organizations creates and implement business strategy that outlines business benefits and strategic goals for the organizations to make sure that the benefits of projects and programs are aligned with organization's strategic goals and objectives. The literature determines that strategic control empowers organizations through establishment of certain rules and standards that help organizations to identify and structure its business benefits. It was discussed that strategic control assesses the company's mission, enhance its business environment, and evaluate its resources to make sure that organizations are able to achieve its long-term objectives. The research findings relatedly determine that strategic control is effective to the identification and planning phases of benefits realization process. The strategic control as the first factor of independent variable was

measured with 8 items. The strategic control was introduced through these 8 measures to see how it effects the organizational management and what are the consequences on the benefits realization process. The result determines that strategic control improves the benefits realization process through development of business strategies that enable organizations to reduce uncertainty and achieve its long-term objectives. This agrees with (Johnson & Scholes, 1999) who noted that strategy directs organizations to achieve its long-term objectives. Additionally, the result shows that strategic control supports organizations to use its resources effectively to reach its target objectives and to avoid business failure. This agrees with (Brown and Adam, 2008) who noted that strategic control uses organizational resources for achievement of its future plans and avoiding business failure. Furthermore, strategic control facilitates organizations to define its strategic objectives, align it with organizational goals and successfully plan the target benefits or their projects and programs. This agrees with the PMI (2016) developed framework for benefits realization process that identifies and plans benefits by alignment of organization strategic goals with the benefits.

Thus, this findings offers that the strategic control has a positive relationship with benefits realization process and positively influence the identification and planning phases of benefits realization process.

6.3.2. Administrative Control influence on Benefits Realization

The second hypotheses tested the administrative control relationship and impact on benefits realization process. The control literature illustrates that administrative control is an important aspect of organizational management system. The relevant literature defines that administrative control directs and motivates employees, and improve their performance in order to create business efficiency. The administrative control establishes organizational structure, develop governance structures and enhance organizational procedures and policies to control employees' performance by comparing the actual result with the desired result. Comparably, This study found that administrative control has a significant positive impact on benefits realization process. In this study, the administrative control as the second factor of independent variable was measured with 8 items to determine its relationship and impact on the benefits realization process. The findings denote that goal setting for employees, and establishment of standard rules improve employee's performance and productivity. This

agrees with Merchant & Stede (2003), and Gulati & Singh (1998) discussions claiming that manager's capability in setting organizational goals and objectives develop employee's performance and productivity. Consequently, This study found that employee's performance measurement and establishment of a competitive organizational environment leading to organizational member accountability and creates cost efficiency. This finding coincides with Merchant & Stede (2003) and Nieminen & Lehtonen (2008) views stating that personal control that measures employee's performance creates self-assessment in organizational member. In addition, the analysis result determines that standardized organizational structure, reward system, and teamwork improve decision-making and business operations. This findings determines that Administrative control has a positive relationship with benefits realization process and significantly influence on the Planning and Execution phases of benefits realization process.

6.3.3. Cultural control influence on benefits realization

The literature review discussed that cultural control contributes with the benefit realization process through improvement of the working environment, enhancement of effective communication, establishment of teamwork, collaboration, and upgrading of organizational participant behavior. This study analyzed the cultural control as third independent variable with 8 items to determine its relationship and impact on the benefits realization process. This study found that cultural control enables organization to efficiently evaluate and sustain the benefits realization process. The cultural control directs and improves employee's behavior, which influence on the achievement of organizational goals and objectives. Likewise the relevant literature by Ouchi (1979) stating that cultural control creates values, norms and beliefs to improve employee's behavior and performance. Moreover, this study finds that employing of behavior norms and standards, and development of organization's vision and mission motivates employees' behavior and creates a productive organizational environment. This was discussed by Marrewiik (2004) concluding that significant organizational values and beliefs improve decision making, and leads organizations to reach to its cultural objectives. The findings of this research determine that formal communication in organizations; openness to ideas and having proficient norms improves employee's productivity and leads to customer satisfaction. The same theory was discussed by

Schein (1984) stated that cultural control copes with organizational problems and create a feeling to think in a correct way in relation to the problems.

6.4. Recommendation

This study explored a successful benefits realization process and the impact of three types of control mechanisms as Strategic control, administrative control, and cultural control on different stages of the benefits realization process in construction organizations. Based on the findings of this research, the following set of recommendation are proposed:

1. Organizations need to develop business strategies and set long-term goals and objectives in order to reach to its strategic objectives and create value to its business.
2. To execute business strategies, organizations need to establish standard rules and principles in their management create result based reward system; and apply professional norms to improve organization's management system.
3. Organizations need to establish substantial items for motivation of their employees, enhance teamwork and collaboration, and develop a comfortable environment for teamwork to improve to improve organizational culture.
4. According to the findings of this research, a successful benefit realization process leads organizations to attain its strategic objectives and create value to its business. Thus, it is recommended to construction organizations to apply the benefits realization process in their management system.
5. The control has been found as an important aspect of projects and program that improves organizational performance in terms of benefits realization. Thus, it is recommended to construction organizations to establish apply organizational control in order to implement a successful benefits realization process.

6.4. Conclusion

This research aimed to describe a successful benefits realization process and to determine the impact of different types of organizational control on the benefits realization process. This is because most of construction organizations tend to focus on its projects completion in terms of cost, time and quality, rather than its expected outcomes. Thus, organizations need to measure their project success based on its

expected outcome and value creation to the business. Control strategies are recognized as an important management aspect in achievement of strategic objectives. So this research offers to examine the influence of strategic, administrative and cultural control to recognize its relationship with the benefits realization process and see its influence on this process. For this purpose research objectives and research questions were explored and to attain the research objectives and answer the research questions, a conceptual model was developed based on the detailed literature review. Based on the theoretical model, a set of research hypotheses was developed as a source of quantitative research analysis. A research questionnaire was developed to collect the data from professionals working in construction organization. The data was analyzed by using of SPSS software to attain the results.

Benefits realization as dependent variable was measured with 12 items anticipated to be fundamental to a successful benefits realization process in construction organizations. The research found that Business strategy, projects output, setting of long terms objectives, measurement of outcomes, enhanced organizational environment, improved organizational culture, good communication, effective planning, training and support, and application of standard rules were found the most contributive items to the benefits realization process.

The control strategies as independent variable represented by three factors as strategic control, administrative control and cultural control. Each factor of the independent variable was measured with 8 items to determine its relationship and impact on the dependent variable, the benefits realization. This study found that development of business strategies, effective use of resources, long-term strategic planning, realization of organizational goals, defining strategic objectives, and alignment of organizational goals with its functional extent are the most effective practices to identification and planning phases of benefits realization process. This study also denotes that administrative control practices that include Goal setting, establishment of standard rules, measurement of employees output, development of standardized organizational structure, reward system, management of organizational resources and integration of organizational department are leading to successful planning and execution phases of benefits realization process. Finally, the organization's culture control that includes the practices of establishment of training and socialization process, development of vision, mission and beliefs, creation of professional norms and standards, formal

communication system, innovative environment and efficient resources utilization are found effective to benefits evaluation and sustainability process.

As a result, it can be concluded that control strategies are energetic drivers to the benefits realization process in construction organizations. The findings suggest that benefits realization process is positively influenced by the control strategies in construction organizations. This research study provides us a basis to determine the availability of a resilient relationship between control mechanisms and the benefits realization process. The strong correlation coefficient between the model construct indicates that (strategic control, administrative control, and cultural control) separately, and as a model of control strategies, significantly improves the benefits realization process in construction organizations.

Based on the research findings, it is concluded that benefits realization significantly contribute to the concept of value generation in construction industries.

This research study is anticipated to contribute in formulation of a framework that empowers organizations to apply the control mechanisms to achieve their strategic goals and objectives, improve of their employee's performance and organizational culture. As a result, the Organization will have a successful benefits realization process.

6.4. Research Limitation

This framework can be examined in other types of organizations to determine the effects of different control strategies on benefits realization of certain organization. This research needs to be presented in full details in terms of study size and the survey method. To contribute considerably to the control strategies literature, the knowledge and experience of professionals to different types of control strategies should be verified to determine the current control strategies and to enhance more prime control modes for organizational management system.

There are some limitations in this research that needs more researches in this field, we assumed the benefits realization as a process and determined just the three types of control strategies. It is required to analyze the control strategies and assess its impact on each stage of benefits realization separately.

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APPEDEX A – Research Questionnaire

Questionnaire	
<p>Dear Participant,</p> <p>This Questionnaire will give you the opportunity to express your view on the influence of control strategies on benefits realization of organizations. Your answers will help us to develop a framework for control strategies implementation within organizations and analyze its their effects on the benefits realization process.</p> <p>We assure you that your responses are confidential and we will just use it for research purpose.</p> <p>The questionnaire is structured in 6 parts:</p> <ol style="list-style-type: none"> 1. General information (Demographic) 2. Benefits realization 3. Control Strategies <p>Thank you for your time and effort.</p> <p>Mohammad Sabir Habib Dissertation in MSc Construction Project Management The British University in Dubai</p>	<p>Part I. Demographic</p> <p>1. Gender</p> <ul style="list-style-type: none"> <input type="radio"/> Male <input type="radio"/> Female <p>2. Age</p> <ul style="list-style-type: none"> <input type="radio"/> 25-30 years <input type="radio"/> 30-35 years <input type="radio"/> 35-40 years <input type="radio"/> Above 40 years <p>3. Job Title</p> <ul style="list-style-type: none"> <input type="radio"/> Project Manager <input type="radio"/> Construction Manager <input type="radio"/> Program Manager <input type="radio"/> General Manager <input type="radio"/> Change Manager <input type="radio"/> Other <p>4. Years of Experience in construction</p> <ul style="list-style-type: none"> <input type="radio"/> 0-5 years <input type="radio"/> 5-10 years <input type="radio"/> 10-15 years <input type="radio"/> More than 15 years <p>5. Function of organization</p> <ul style="list-style-type: none"> <input type="radio"/> Government <input type="radio"/> Semi-government <input type="radio"/> Private

Part II - Benefits Realization: Please rate to what extent the following statements are efficient to the benefits realization process within organizations.

No	Benefits Realization of Construction Organizations	Very Efficient	Efficient	Neutral	Inefficient	Very Inefficient
BRM1	Benefits management strategy and long term planning within organization					
BRM2	Planning of Projects outputs and outcomes in the business case.					
BRM3	Setting Long-term objectives and accomplishment of strategic objectives through projects outcomes					
BRM4	Sufficiently description of projects output and outcomes in the organizational business plan.					
BRM5	Measurement of outcomes and employees rewards and motivation					
BRM6	Enhancing organizational environment and improvement of Employees' behavior					
BRM7	Enhancing Organizational culture and employees behavior					
BRM8	Improvement of communication and accountability in organization					
BRM9	Achievement of business actual outcomes in alignment with the expected outcomes.					
BRM10	Effective planning and regular monitoring of project outcomes					
BRM11	Training, supporting, monitoring and evaluation of employee's operation in terms of business outcomes					
BRM12	Application of rules and standards within organization and effective Decision-making					

Part II: Looking to the following statements, Please rate to what extent the following control strategies are significant to the benefits realization process within organization.

	1- Strategic Control	Strongly Significant	Significant	Neutral	Insignificant	Strongly Insignificant
1	Development of business strategies creates innovations and lead to organization's permanent stability.					
2	Establishment of Business strategies reduce uncertainty and enable organization to define and achieve long-term objectives.					
3	Effective use of resources by organization for achievement of its strategic objectives, creates value to the business					
4	Long term strategic planning avoid business failure of the organization					
5	Realization of organizational goals and objectives by its stakeholders ensures sustainability of the business					
6	Defining strategic goals and objectives motivate managers and employees and enhance mutual confidence between management.					
7	Goals alignment across organization's functional area develops teamwork and result work efficiency.					
8	Successful projects execution helps organization in reaching to long-term objectives					
	2 - Administrative Control	ngly Significant	Significant	Neutral	Insignificant	ngly Insignificant
1	Goal setting within Organizational directs employees' functional efforts and improves their performance.					
2	Establishment of standards and rules for achievement of long-term organizational objectives improve employees' productivity					
3	Measurement and quantification of employee's activity within organization improve feedback process and employees					

	accountability.					
4	Suppliers cost control and establishment of a Competitive environment within organization results cost efficiency.					
5	Organizational structure establishes formal contacts and relationships, reduces miscommunication and increases accountability within organization					
6	Combination of reward with the result empowers employee motivation, improve employee's working capability, and is effective in decision making.					
7	Planning, organizing and management of organizational resources accomplish operational objectives of the business strategy.					
8	Integration of diverse departments of the organization encourages effective collaboration and enhances business operation.					
	3 – Social Control	Strongly Significant	Significant	Neutral	Insignificant	Strongly Insignificant
1	Professional trainings and socialization process improve employee's behavior and enhance company reputation.					
2	Organizations establish their vision and mission through implementation of certain roles and standards, which enhance organizational performance.					
3	Having proficient norms, values and beliefs within organization influence employees' behavior and lead to customer satisfaction.					
4	Formal and systematic communication between organizational members improves employees' productivity.					
5	Openness to ideas creates innovations and enables organizational reliability					
6	Rewards and compensation increase effort and performance of employees					
7	Application of standard roles and responsibilities enhance organizational success.					
8	Effective Resources utilization improves productivity of organizational members.					