

Project Delay and Managing Project Performance among Construction Companies: Literature Review

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Abstract— *Project management is a contemporary management concept. It develops in the thought and the philosophy of current management. It comprises the concept of the quality of the operations as well as the quality of the products. It encourages the employees to engage in the work team and to concentrates on the beneficiaries and contact with them. In the present worldwide competition and economic progression, quality has turned out to be one of the essential elements for the basic. Even though the issues of natural assurance and enhancing item quality have received noteworthy consideration in numerous nations, Libya seems to have been slower in modernizing ideas that consolidate ecological and quality management. Delay do occur in all the phases, but the major cause of delay takes place in the construction phase. This literature review paper explored the scientific literature provided by the major publishers regarding project management including books, journals, conferences, as well as previous relevant studies handling the factors Influencing the Project Delay and Managing Project Performance among Construction Companies. The next section will highlight the major concerns. This research provides the reason for choosing the topic and the subject of the researcher for several factors, the most important is that the subject of PM is one of the modern topics in the science of management, in Libya and it is one of the areas that have become much discussed and vital in these days. It was appropriate to determine the impact of the application of this topic on public projects in Libya and to know the extent to which project managers are aware of what is going on in this field at the global level. To know the importance of project quality in project management and its role in the process of planning, implementing, monitoring, and evaluating projects, and to manage resources in such a way that the work required through these resources can be accomplished by restricting the specific scope of the project and considering the commitment to quality, timing, and cost factors.*

Keywords— *Project Delay, Managing, Project Performance, Construction Companies, Literature Review.*

I. INTRODUCTION

The subject of project management is a contemporary management concept. It develops in the thought and the philosophy of current management. It comprises the concept of the quality of the operations as well as the quality of the products. It encourages the employees to engage in the work team and to concentrates on the beneficiaries and contact with them. In the present worldwide competition and economic progression, quality has turned out to be one of the essential elements for the basic. A decent quality item or administration empowers an organization to include and hold clients (Evangelos, and Jiju, 2017, Nilda e al. 2017). Low quality prompts unhappy clients, so the expenses of low quality are those of quick waste or amendment as well as the loss of

future deals. Mechanical innovations have diffused geological limits bringing about clients that are more educated. The business condition has turned out to be progressively overwhelming, and the commercial Centre has changed from neighbourhoods to worldwide. Steady weight is connected to the management to enhance aggressiveness by bringing down working expense and enhancing calculated (Hassan et al. 2016, Marina et al. 2017). Clients are winding up progressively mindful of rising models, approaching an extensive variety of items and administrations to browse. There is a consistently expanding interest for a quality item, and additionally, administrations and this global insurgency had constrained associations to put significant assets in embracing and actualizing project management methodologies (Saumyaranjan, 2018; Ahmed et al. 2018). Quality is a standout amongst the most misjudged issues in business today, but then it is fundamental to the survival of even the best organization (Vinh and Ferry 2018; Emmanuel and Monica 2016; Daniel, 2018).

The construction industry constitutes an important element of the Libyan economy. Although it accounts for less than 5% of GDP, the industry is a strong growth push because of its extensive linkages with the rest of the economy. In particular, the industry has extensive linkages with the construction related manufacturing industries such as basic metal products and electrical machine. Presently, more than 600,000 people are employed in the construction sector including about 110,000 legal foreign workers. With the involvement of illegal workers, the construction sector is identified as a labour generating industry and the dependence on foreign labour is very high. Construction industry has been an engine of growth and development in Libya. Therefore, the successful completion of a project is critical so as not to hinder the development of the country especially the construction of infrastructure. Construction of infrastructure consist of the building of roads/highways, ports, airports, water supply, electricity supply and telecommunication to names a few. One of the electricity infrastructures is the construction of transmission line. In this research study proposal, we try to examine the root cause of the delay in the construction of transmission line projects. What are the factors that contribute to this delay and how do these factors do relate to the delay? With the finding, it is hoped to minimize the delay as to totally remove the delay is impossible as this research study proposal cannot include all the variables that contribute to the delay.

Even though the issues of natural assurance and enhancing item quality have received noteworthy consideration in

numerous nations, Libya seems to have been slower in modernizing ideas that consolidate ecological and quality management. Delay do occur in all the phases, but the major cause of delay takes place in the construction phase. According to Chan and Kumaraswamy (1997), most project delays occur during the construction phase where many unforeseen factors are always involved. Nkado (1995), who stated that construction period demands the focus of attention of all key participants in construction process as it is during this period that the greatest part of the resources for a scheme is irreversibly committed, supports this. Furthermore, according to Nkado, construction time is basis for evaluating the success of a project and the efficiency of the project organization. This research will emphasis only on delay takes place in the construction phase. So far, not much study has been done to determine the major causes of delay in transmission line projects. Therefore, it is important that thorough analysis be carried out to identify delay contributing factors and mitigate them and minimize the project delay. The aim of this study is todetermine the level of awareness and culture of the concepts of project management and its applications in project management by the Construction companies.

II. LITERATURE REVIEW

PM has become one of the most contemporary tendencies in the organizations, which have paid more attention to develop their organizations by using this concept. Their application has proved the ability to address the reasons that lead to the low level of services they provide. PM aims to achieve the objectives of the organization and win customer satisfaction, and the search for the expectations of the customer is a vital work, but the foundation is based on the happiness of the beneficiary inside and outside the

organization. PM is the substrate basis upon which the organization relies on constantly to improve and develop the quality of goods and services, especially considering the challenges it faces in terms of increasing competition, product diversification, and diversity. In this context, the organization has become more interested in winning customer satisfaction by providing the product or service in a timely manner, at the right price, at the right quality and at the lowest possible cost.

Quality turned into an issue with the start of industrialization period and selection of new logical way to deal with management, which was proposed by Stanislaus, Premaratne, and Tritos, (2018). The quality issues in this time were simply the duty of the specialists by utilizing self-checking of quality. The later stage the requested for investigation of the item to guarantee they meet the models that been resolved before they cleared out the processing plant, which is be known as (quality control). In the 1930, Walter, Shewhart of Bell research centres utilized factual process control (SPC) to examine variety in the execution of frameworks. Edwards Deming, an understudy of Shewhart, helped specialists and administrators in the war years. His exertion was not acknowledged in his nation of origin, the USA, but rather he and his thoughts were grasped by the Japanese. He considered as the dad of measurable quality control. Deming’s commitments to the quality are Deming Cycle, his Fourteen Points, and the Seven Deadly Diseases (Rawan et al. 2018; Barbara et al. 2017; Vinh and Ferry 2018). Juran built up the change winding demonstrating that quality change is a nonstop procedure and not only a program with begin and end point. Feienbaum can think about the originator of the idea of aggregate quality control. Investigation, quality control, quality confirmation and aggregate quality management. Figure 1 demonstrates the four level of quality improvement including:

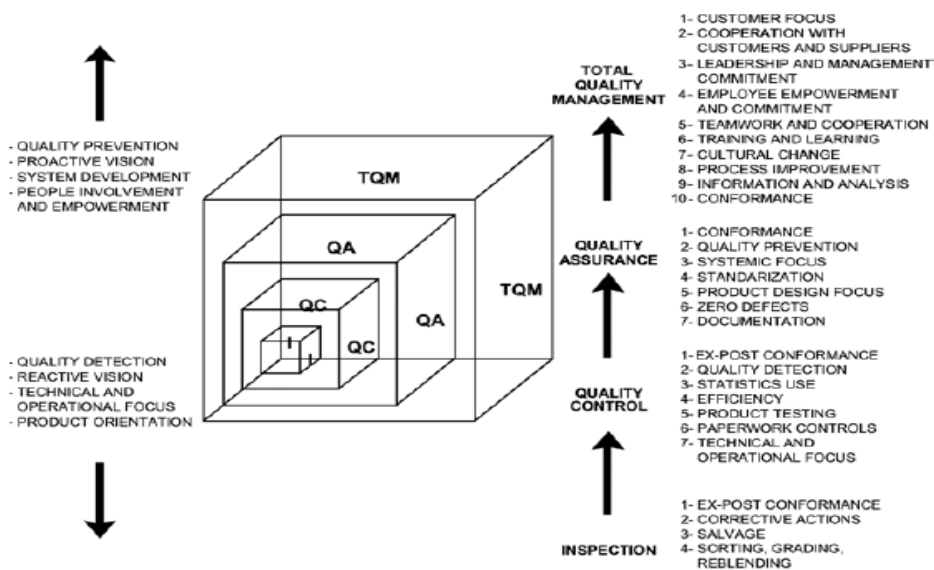


Fig. 1. Evaluation of total quality management, adopted from (Maria D. Moreno Luzan, 2011)

Project Management (PM)

PM has turned into a piece of corporate management on a worldwide scale (Stanislaus, Premaratne, and Tritos, 2018), and numerous organizations have had encounters with chipping away at the change towards aggregate quality management and this is combined with its spread from assembling to the service area and on to open services (Jose et al. 2018). Journalists of PM have endeavoured to recognize customary management approaches and the PM approach and have subsequently demonstrated that PM presents its management reasoning and standards uniquely in contrast to conventional management logic and standards (Ammar et al. 2017). Table 1 demonstrates an examination between the two methods of insight and standards.

TABLE 1. Difference between Traditional and PM philosophy

Traditional management philosophy	PM philosophy
Organizational correspondence is essential best day break	Organizational correspondence is top-first light, sunrise best and sideways.
The Organization has different contending objectives.	Quality is the essential Organizational objectives.
Money related concerns drive the organization	Consumer loyalty drives the organization
Management and experts figure out what the quality is	Client figures out what the quality is
Change is sudden and accomplished by victors doing combating the organization	Change is constant and accomplished by

Principles of Project Management

The methodology of Project Management (PM) is dependent on number of dimensions and according to a broad agreement by many scholars, including Bardri and Davis (1995), Ehrenberg (1992), Karajewisky and Ritzman (1996). Although there are many names which are used to call the PM such as pillars, anchors, elements and fundamentals, the researchers differed on the number of key dimensions of the PM methodology. Ehrenberg identified them in five dimensions: focus on improving processes, defining quality by the consumer, enabling individuals to make decisions, and relying the decisions making on specific facts and results, and the commitment of senior management to the project quality (Tarawneh and Albblesbi, 2002). Al-Saqqaf (1997) identifies it with six dimensions: continuous improvement, strengthening the organization’s relationship with its suppliers, enhancing, and empowering employees, focusing on the beneficiary, teamwork, and commitment to change. Al-Humaidhi (2000) defined it by six dimensions: focus on the customer, continuous improvement, prevention rather than inspection, decision-making based on facts, employee empowerment and participation, and cooperative action. Al Khalf determines the PM by ten dimensions: continuous improvement, motivating employees, organization education, participation and empowerment of the staff, training, senior management commitment, customer focus, strategic plan for quality, measurement and analysis, and prevention of errors before they happen. In this part, the researcher finds it useless to delve into the justifications of the different names and the number of dimensions. Rather, the focus of this study will be

on the common dimensions and delusions that were mentioned in the studies mentioned above which represent the main principles of the PM.

Work Experience

Experience is a general term that includes the concept of knowledge, skill, or ability. The general experience can be defined as it is an accumulation of years of work in a particular field of course with the academic study and the truth there is no accurate description of the experience and there are no criteria for measuring it. For the same person whether the person can develop himself/herself or not because the number of years may not be a measure of experience. For example two employees with the same degree of functionality and the same certificate and the same number of years in the administration when you compare them find that one of the best than the other if the experience depends on the person and his/her potential. So, you will find a good employee and but the other has the average performance. The enhancing the capabilities of the workers as a management step towards training and the boost their skills of the employees lead the workers to better perform the understanding of practical experience with practical guidelines that contribute to the progress and development of the labour organization. As Alani pointed out, (2012) that the acquisition of scientific expertise and excellence in raising the level of scientific thinking and mental abilities, this can be done only by increasing the scope of their participation in research projects and activities. The study of Shams al-Din (2014) concluded that there is a close relationship between the practical experiences that a person experienced in his/her life and his/her mental production. Through these experiences, he/she learns imagination, creativity and problem solving, and thus plays a role in developing his/ her ability to design. Therefore, the current study aims to examine the effect of the variable of work experience on the relationship between the dependent and independent variables, the variable was chosen from within the demographic variables of the sample. Therefore, the hypothesis was imposed, which states the following: (There is a positive effect of statistical significance in the impact of work experience on the relationship between the user of the dictatorial style of managers and resistance to change and Project delay and managing project performance.

Project Management Practice for Project Management

The concept of practice involves the meaning of continuity and the abundance of action, which is in its Latin practice of Greek origin (practices), is one of the concepts commonly used in philosophical thought from then on. It has been used to denote the continuous activity such as the practice of singing, and the practice of politics. It is also used to study the maintenance of mental activities, such as the practice of thinking, meditation, etc. (Khalid AF Albayouhd, 2003). Project Management practices help to enhance business excellence by satisfying customers, reducing costs, increasing productivity, and improving the quality of output. Idris (2011) reported that the best practices are ultimately those that give the organization the ability to outperform competitors by

providing the best goods and services to customers. Organizations should try to come up with new practices that they can offer for the first time a temporary advantage over their competitors, in building a strong business platform as well as revenues and profits. Rachel (2012) pointed out in her study the relationship between quality management practices and the effects of these practices on performance. The results indicated that there is a positive relationship between quality management practices or Project Management and the performance. There is also a large body of literature highlighting the positive impact of quality management practices and the performance.

Adza-Awude Kenneth (2012) stated that management should build trust between employees to improve teamwork and should exercise PM to the highest level to ensure customer confidence in the company's products. As PM programs influence the nature of the relationship between PM practices and project quality achievement in projects that implement PM in the organization. Therefore, this variable was selected, the project management practice of PM as a dependent variable and the corresponding effect of independent variables.

Project Management

It is defined as the art of directing and coordinating the human and material resources during the life of the project using modern technologies to achieve the specific objectives in a way that enables the completion of the project by implementing the contents of the project and taking into consideration the factors of quality, timing, and cost. Since these are the components of any project: Scope, time, cost, as shown in Figure 2.

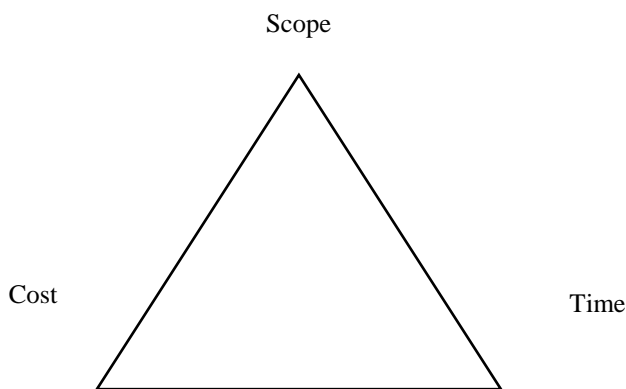


Fig. 2. Components of any project: Scope, Time, and Cost

Evaluation of Results

Construction companies' projects are one of the most important projects serving the citizen and society in any country. They seek to achieve a variety of goals serve generations and meet their needs in a distinctive and effective manner, through the monitoring of governments to implement them from huge budgets and facilities. The construction companies' projects that serve the citizen and society are varied to include the health, food, economic, educational, agricultural, tourism, informatics and other vital areas that

facilitate the enhancing and development of life. There is no doubt that the accuracy in the implementation of these projects and the importance of quality in their application is an important thing that reflects the ability of government agencies to make use of available resources and possibilities and harnessing them in projects that serve the citizen and society. Thus, promoting the movement of a renaissance in the country and giving it a globally competitive position among the countries of the world. There is no doubt that the effective and wise management of the projects of government agencies should be by the administrators who are able to bear this responsibility and whose experience is distinguished from others. He holds a degree in Project Management. Therefore, all ministries and agencies should work uniformly to serve construction companies' projects and contribute to their support. There is no doubt that there are many factors that prevent the achievement of the objectives of these projects and contribute to the delay. The attention should be taken on these points and work to reform and develop continuously to ensure the conduct of construction companies' projects in a way that ensures the service of citizens and society.

Obstacles of Construction companies' projects

The reasons that prevent the effective implementation of construction companies' projects in the Libyan state are varied. There are many opinions and reasons discussed in this regard to find solutions that suit the various projects. There is no doubt that the reasons for the failure of construction companies' projects are multiple and varied, some due to the lack of some regulations and instructions governing the relationship between government agencies and contractors. While others are due to the lack of government agencies themselves, and the contractors themselves have a fuller share of those reasons. Project implementers lack of experience: In an interview with one of the project managers, this study reveals that one of the main reasons behind the failure of construction companies' projects is the fact that a large number of projects - and infrastructure projects - are assigned to unqualified contractors as a result of the weakness of the executive classification system in order to get projects that are bigger than their ability, and at the same time there are projects carried out by unclassified contractors, and they do not have the minimum experience in the field of competition. At the same time, all this happens with the knowledge and blessing of the systems themselves. In theory, the financial, technical, administrative, and executive aspects of construction companies' projects appear to be well-regulated, but with the blessing of the executive regulations of the taxonomy system, the judgment can be reduced to the extent that an unclassified contractor can have that project regardless he/she has previous experience business or otherwise, and he is not subject to any financial, technical, or administrative evaluation. There is no doubt that the project manager as mentioned at the beginning of the study is the person who has the ability and experience to implement the project in a professional and effective manner, and therefore he should be qualified and knowledgeable in the field of the work of the project, and that can be through the experience gained and supported by professional training

courses that enhance the ability of the manager to understand the concepts of global project management and then apply them in managing the construction companies' projects he receives.

III. METHODOLOGY

This literature review paper explored the scientific literature provided by the major publishers regarding project management including books, journals, conferences (Azam et al., 2021); as well as previous relevant studies handling the factors Influencing the Project Delay and Managing Project Performance among Construction Companies. The next section will highlight the major concerns.

IV. RESULTS AND DISCUSSION

This section deals with the presentation, analysis, and discussion of the results of the study based on the statistical tests carried out in this chapter to answer the study questions regarding the management of housing and utility projects in Libya by measuring the impact of the application of PM on its management of public projects. Although there are many names which are used to call the PM such as pillars, anchors, elements and fundamentals, the researchers differed on the number of key dimensions of the PM methodology. Ehrenberg identified them in five dimensions: focus on improving processes, defining quality by the consumer, enabling individuals to make decisions, and relying the decisions making on specific facts and results, and the commitment of senior management to the project quality (Tarawneh and Albblebesi, 2002). Al-Saqqaf (1997) identifies it with six dimensions: continuous improvement, strengthening the organization's relationship with its suppliers, enhancing, and empowering employees, focusing on the beneficiary, teamwork, and commitment to change. Al-Humaidhi (2000) defined it by six dimensions: focus on the customer, continuous improvement, prevention rather than inspection, decision-making based on facts, employee empowerment and participation, and cooperative action. Al Khalf determines the PM by ten dimensions: continuous improvement, motivating employees, organization education, participation and empowerment of the staff, training, senior management commitment, customer focus, strategic plan for quality, measurement and analysis, and prevention of errors before they happen. In this part, the researcher finds it useless to delve into the justifications of the different names and the number of dimensions.

The awareness in the concept of Project Management PM can be defined as that the introduction of any new principle in the organization requires a re-formation of the culture of that organization. Accepting or rejecting any principle is depended on the culture and beliefs of the employees of the organization. The quality is fundamentally different from the traditional administrative culture and thus it is necessary to find this for the application of the concept of PM by changing managerial methods (Qahtani, 2011). PM starts by raising awareness of the concept of quality by presenting it as a religious and ethical value that should be adhered and, make it a standard to produce goods and services in the best manner

and the best quality to suit the needs of the customer (Nadia, 2014). Al-Rashed (2011) added that companies should adopt the values and concepts of collective action and promote its practices and spreading the culture of quality and training employees to provide them with knowledge, skills and behaviours that enable them to apply quality, re-design incentive systems and evaluate employee performance and employment in line with the quality philosophy (Saadi, 2016). All previous studies indicated that awareness and culture of the concept of PM is one of the most important principles of PM and its foundation, and any organization when adopting the PM principle, it should educate its employees first.

The support and boosting of the top management of PM are the most important if not the most important in the success of the PM project in any organization or establishment, and it serves as the cornerstone in building quality. It is possible to say that the leadership within PM structures is the most influential factor in the performance of organizations and therefore leads to best practices and focus on stakeholders (Fazli Idris, 2011). The management believes that the success is directly related to the direct support of the senior management. The management should define a clear future vision based on the facts, giving the ideal and ability to all employees and customers. This extends to understanding the needs of the society and customers and accommodating them, supporting the employees to make the right decisions, encouraging positive participation, support and develop methods of training and education and work to take full advantage of the potential of workers and finally build confidence with employees (Al-Rashid, 2011). The degree of clarity and support are the essential components that the management is taken to succeed in the application of the project quality. An important aspect of PM is "senior management responsibilities and involvement in providing the necessary support from the lowest level to the highest level" (Baba Md. Deros et al., 2008). Devid (2019) has referred to the role of the organization leadership in the establishment of an infrastructure its components are functions that are an integral part of the company and contribute to it as a homogeneous work team and supports the company's strategic vision.

Zaidia (2007) mentioned that the successful management of any organization is the one that has the sincere desire to work to achieve success and continuous development over the years of its life, and in light of the internal and external environment and the changes that may occur which may pose a threat or opportunities for it, where the organization works to utilize the energies and resources available to it to seize opportunities and control the threats, by continuous work and looking forward to the future and proper planning to achieve the objectives of the organization and the objectives of the workers, so it can be said: the quality to be done is only from the top of the organizational pyramid and no one can claim the achievement of project quality in the absence or lack of support for the efforts of quality from the top. The senior management creates the environment for quality, nurturing, improvement, and development. The previous studies and the

first pioneers of Project Management such as (Edward Dewing, Joseph Goran, and Flip Kars by) mentioned that the success and implementation of PM depend on the degree of the senior management believe in the benefit of the application of the PM to achieve continuous improvement in the quality of goods and services to create a good competitive position for the organization in the market. This conviction should be translated continuously in the form of material and moral support, and the establishment of the appropriate regulatory environment on the basis that the new PM methodology and application requires strategic decisions from senior management in an organization which alone has the authority to make such decisions.

Continuous improvement is a management philosophy that aims at continuously developing processes and activities related to machines, materials, individuals, and methods of production. Continuous improvement process is an unlimited process. The three quality philosophers: Deming-Crosby-Goran agrees that quality improvement is not an end process. The researchers Muhannad and Rasha (2019) concluded that organizations need to be modernized to ensure that scientific developments are kept abreast of and contribute to the ability to survive in the light of technological developments. PM requires non-stopped continuous improvement of products, services, and performance, and it should be the goal to be reached. It is not easily accessible. The Japanese used the word Kaizen to describe the continuous progressive improvement process. If they are simple and they have a net effect that exceeds the total of those improvements and without having to incur high costs (Rezan and Barzan, 2009). Boucha (2019) recommends that expertise is employed in the process of continuous improvement, which will lead to non-repetition of mistakes and high performance, and the training on the PM is essential for all task forces concerned because it is the most effective way to solve business problems. In the United States (Flip Crosby), he describes this effort as Zero defect. Therefore, the organization's policy, organizational structure and working methods should be built based on encouraging and supporting processes of improvement and development to provide the best always.

The results of the Eman and Alaa's study (2008) showed a positive and moral relationship between the variables of PM and process improvement, which means that employees can communicate with the work and face the challenges that encounter them.

Ziad (2005) has continued to diagnose the factors influencing the quality improvement in construction contracting companies by the unanimous opinion of project managers who need urgent corrective measures to improve quality, in the forefront of which is the subject of wages, incentives, authority, increased knowledge and training. Therefore, continuous improvement is achieved through continuous improvement which is deemed as the most important principles of PM and must be studied. The continuous improvement occupied the concern of all organizations to continue and stay in the market. PM requires unstoppable continual improvement of products; services and performance, the perfection should be the goal to be achieved.

The Japanese used the word Kaizen to describe the process of continuous progressive improvement. In the United States, this effort has been described as Zero Defected Al Timimi (1997) therefore, the organization's policy, organizational structure and working methods should be built based on encouraging and supporting processes of improvement and development to provide the best. Therefore, the process of improvement and development is the responsibility of headers and subordinates at all organizational levels.

Experience is a general term that includes the concept of knowledge, skill, or ability. The general experience can be defined as it is an accumulation of years of work in a particular field of course with the academic study and the truth there is no accurate description of the experience and there are no criteria for measuring it. For the same person whether the person can develop himself/herself or not because the number of years may not be a measure of experience. For example two employees with the same degree of functionality and the same certificate and the same number of years in the administration when you compare them find that one of the best than the other if the experience depends on the person and his/her potential. So, you will find a good employee and but the other has the average performance. The enhancing the capabilities of the workers as a management step towards training and the boost their skills of the employees lead the workers to better perform the understanding of practical experience with practical guidelines that contribute to the progress and development of the labour organization.

As Alani pointed out, (2012) that the acquisition of scientific expertise and excellence in raising the level of scientific thinking and mental abilities, this can be done only by increasing the scope of their participation in research projects and activities. The study of Shams al-Din (2014) concluded that there is a close relationship between the practical experiences that a person experienced in his/her life and his/her mental production. Through these experiences, he/she learns imagination, creativity and problem solving, and thus plays a role in developing his/ her ability to design. Therefore, the current study aims to examine the effect of the variable of work experience on the relationship between the dependent and independent variables, the variable was chosen from within the demographic variables of the sample. Therefore, the hypothesis was imposed, which states the following: (There is a positive effect of statistical significance in the impact of work experience on the relationship between the user of the dictatorial style of managers and resistance to change and Project delay and managing project performance.

V. CONCLUSION

This research provides the reason for choosing the topic and the subject of the researcher for several factors, the most important is that the subject of PM is one of the modern topics in the science of management, in Libya and it is one of the areas that have become much discussed and vital in these days. It was appropriate to determine the impact of the application of this topic on public projects in Libya and to know the extent to which project managers are aware of what is going on in this field at the global level. To know the

importance of project quality in project management and its role in the process of planning, implementing, monitoring, and evaluating projects, and to manage resources in such a way that the work required through these resources can be accomplished by restricting the specific scope of the project and considering the commitment to quality, timing, and cost factors. It is also interesting to note that many previous studies dealt with the subject of the study, but no local study took the subject of the study, which is one of the most important reasons that encouraged the researcher to choose the subject and address it. In addition, the researcher encouraged the researcher to select a study that illustrates the current situation of the implementation of PM in the projects of the Construction Companies in Libya, which can be used in developing the current situation and finding solutions to the problems and difficulties faced by specialists as well as the advanced in the field of PM in public projects. Secondly, the research problem of the study dealt with the impact of the management of public projects in the Libyan environment. The objective of this study is to identify the impact of the application of PM in its practice in managing the projects of the Construction Companies. The failure of the quality certificate in the right manner leads to waste of public money and loss in time and service.

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