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Factors Influencing Project Delay and Managing Project Performance among Libyan Construction Companies

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Abstract

The Libyan State spends much money from its annual budget in essential projects in favour of the projects of the Construction Companies and Infrastructure since these public projects are of great significance to the Libyan society to develop the so-called of urban boom whose contracts equal to more than 44 billion Libyan Dinars. Moreover, after reviewing the 2019 report of the Construction Companies and Infrastructure in the Libyan State from its official website via Internet, it has been found that the financial value of the contracts for projects until the end of 2012 was 44 billion Libyan Dinars. Likewise, there are many contracts in large financial amounts in all areas and basic facilities of the State, but large numbers of these contracts have been entirely or partially stopped, or the percentage of their achievement is, or the ministry has not spent any amounts on these contracts yet. Where the hypothesis says, there is a positive impact of the principles of PM on Project delay and managing project performance. The study community consists of all engineers and supervisors in the projects of the Libyan Construction Companies. Random and stratified sample approach is used to select the sample of this study. Three hundred fifty participants contributed to this study as a targeted sample. SPSS program version (20) is used to analyse the data collected. The returned forms are 310 forms only out of the 350 forms that are the ratio is 88.5% and lost 11.5 % from the distributed forms. This shows an excellent ratio in terms of statistical analysis. The study concluded that there is an interest from the project management in the Construction Companies to apply the Project Management in the different positive degrees of application. The highest level of the application the principle of PM is the variable of the focus on the customer while the variable of awareness and culture in the concept of PM is the lowest principle in terms of application. Furthermore, this study finds that this organisation has a high awareness of the obstacles of the application of the PM. These obstacles stand against of continues improvement. This organisation makes efforts to get rid of these obstacles to obtain customer satisfaction and community the study.

Keywords: Project Delay, Managing, Project Performance, Construction Companies, Empirical Study, Libya

1. Introduction

The project management 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 actualising 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 organisation (Vinh and Ferry 2018; Emmanuel and Monica 2016; Daniel, 2018).

The Libyan construction industry is generally separated into two areas. One area is general construction, which comprises residential, non-residential construction and civil engineering construction. The second area is special trade works which comprises activities of metal works, electrical works, plumbing, sewerage and sanitary works, refrigeration and air-conditioning works, painting works, carpentry, tiling and flooring works and glass works. 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 to investigate the factors influencing project delay and managing project performance among construction companies: an empirical study in Libya.

2. Literature Review

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). 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. 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

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.

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.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.

Advantages of applying PM.

The competitive position of the organizations is strengthened if the emphasis is placed on providing the product or service of the highest quality to the customer and thus increasing production at the lowest costs.Its

application represents a series of successive events that enable the organization to achieve its objectives represented in achieving growth, increasing profits, and optimizing the investment of its human resources.It represents one of the most important organizational challenges that require the mobilization of the efforts of all and that is by focusing on the customer, it is the starting point.Continuous focus on improving the process and increasing innovation: Focusing on outputs or outcomes is a very important issue.Increase efficiency by reducing loss of inventory and reducing operational errors.Increasing the market share: The activities related to its use contributed to increasing the market share of the productive and service organizations significantly with increasing profits and return on investment.Low complaints of consumers about the quality of the product and service provided to them.Reduce quality costs. Reducing employee complaints. Improving human relations and raising morale. (Al-Azzawi, 2005).

Obstacles of the application of PM in the public sector:

PM is one of the modern administrative concepts that aim to increase productivity in organizations and increase their ability to face and solve problems for survival and sustainability, in addition to the benefits that can accrue to organizations and individuals and to society in general. As a new application of this concept, many authors and researchers addressed this subject with study and analysis and concluded the implementation of PM in the public sector. They found that there are no negative effects and there are no barriers to its application, because good management and full support by good management and support by senior management and by individuals, and work to provide the appropriate climate are sufficient tools for the success of the application of PM in the government sector. However, the application of this concept in the government sector is not easy. Successful implementation requires work to provide a set of requirements, considering differences between public and private sector customer, which may mean different degrees and levels of PM implementation in each sector. Differences vary between needs and ability to achieve satisfaction among the public. The conceptual framework is shown below, which is the proposed relationship between the variables. The surveys are conducted to measure the characteristics of different groups, their attitude towards, or perceptions of, a particular phenomenon. In contrast, research uses coherence to identify, as well as to study strengths and trends, the relationship between two or more variables in relation to the same group of people (Ari et al., 2002).

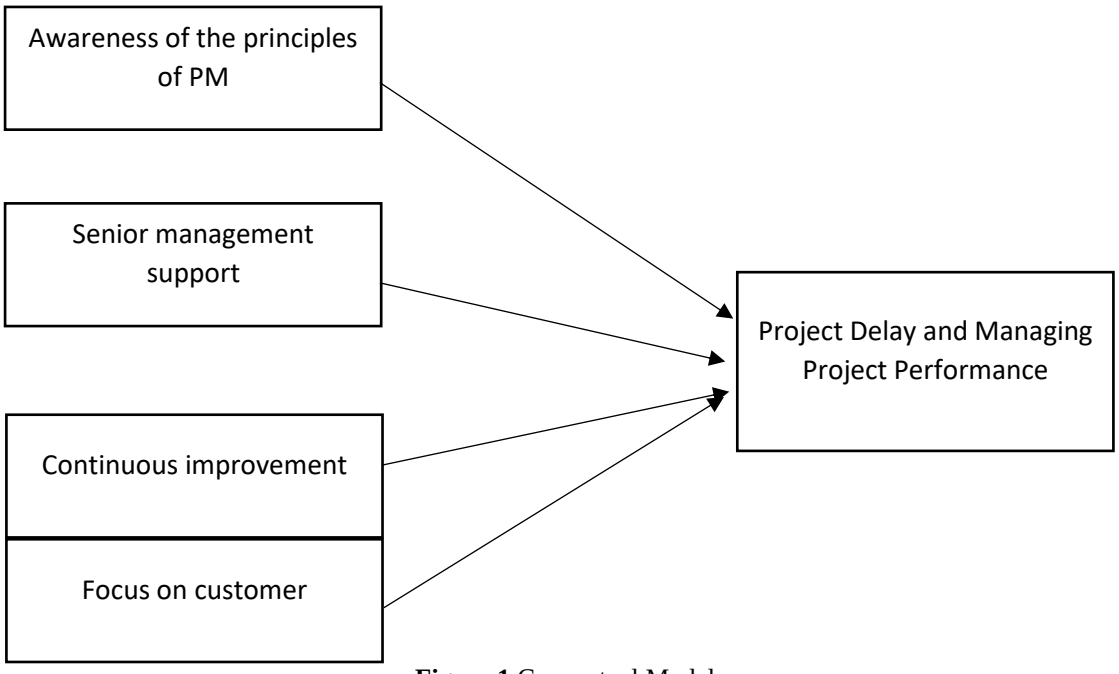

Figure 1 Conceptual Model

Research Hypotheses

H1: There is a positive relationship between the awareness and culture on the concepts of Project Management and Project delay and managing project performance.

H2: There is a positive relationship between the senior management and Project delay and managing project performance.

H3: There is positive relationship between continuous improvements and Project delay and managing project performance.

H4: There is a positive relationship between the Focus on customer and managing project performance.

Quantitative research includes numbering relations between variables (Azam et al., 2021), which uses objective measurements and statistical analysis of data collected from a well-controlled environment. The population consists of all the engineers, supervisors and employees who are responsible for the projects of the Construction Companies as it is the supervision part of all public projects in Libya. The study was applied to a stratified random sample using statistical equations with 350 respondents. The analysis was conducted in using SPSS20.

3. Discussion

Measuring coefficient factor

Carmins and Zeller (1991) define reliability as the measure of accuracy, namely, the ability of the instrument to give the same results if the scale is repeated on the same person several times in the same circumstances. The reliability analysis was performed using the Cronbach Alpha method. Table 1 showing the results of this test.

Table 1 Reliability coefficient of the study questionnaire

Sequence	The hub	Number of paragraphs	Stability coefficient
1	Awareness and culture in the concept of Project Management	6	0.741
2	Support senior management	6	0.821
3	Continuous improvement	6	0.759
4	Focus on the client	6	0.795

Table 1 the value of the reliability coefficient is high for all axes in addition to the total reliability coefficient of the study axes 0.923, which confirms the ability of the tool to measure what has been measured to ensure the achievement of the objectives of the study.

Descriptive Analysis

Descriptive analysis depends on the description of the sample of the study by describing the demographic variables of the sample members, which were collected through the questionnaire of the study. The following results are the descriptive analysis of the individuals of the study.

Table 2 Demographics

Items		Number	Percentage %
Gender	Males	240	77.4
	Females	70	22.6
Education level	Engineer	236	76.1
	Technician	44	14.2
	Administrative	21	6.8
	Other	9	2.9
Academic Qualification	Diploma	58	18.7
	Bachelor	227	73.2
	Master	20	6.5

	Doctorate	5	1.6
Experience	From 1 year to 5 years	48.7	151
	From 6 year to 10 years	27.7	86
	From 11 year to 15 years	17.1	53
	More than 16	6.5	20

Table 2 show that the sample of the study contains the percentage of males 77% and the proportion of females 23%, indicating that the largest group of the study sample is the male category. The engineers have the highest proportion among the sample of the study by 76%, while the rest of the working titles had a lower proportion, where the proportion of technicians 14% of the total sample of the study the rest was only 3%. The scientific qualification prevailing among the sample of the study is the bachelor's degree with 73.2% followed by a much lower percentage of academic qualification is diploma by 18.7%, then the academic qualification is Master with 6.5% Very little scientific qualification doctorate by 1.6%. The work experience (1 to 5 years) had the most significant percentage of the sample of the study 48.7% followed by work experience (from 6 to 10 years) 27.7% and then work experience (11 to 15) year) 17.1% and finally work experience (from 16 years and above) by 6.5%.

The study aspects

The first aspect: Awareness and culture in the concept of Project Management. The objective of these sections is to study the current state of awareness and culture in the concept of Project Management in project management at the Construction Companies in Libya. See table 3.

Table 3 Awareness and culture in the concept of Project Management

No	Item	Strongly agree	Agree	Neutral	disagree	Strongly disagree	Mean
		%					
1	I believe that cooperation and particip9ation contribute to achieving the goals efficiently and effectively	11.0	42.6	12.3	29.7	4.5	3.26
2	I believe in the importance of encouraging constructive and creative ideas	8.7	37.1	18.1	28.1	8.1	3.10
3	I think that collective action generates renewed ideas to improve work	15.8	34.2	17.4	25.5	7.1	3.26
4	I think it is necessary to train on the concepts of PM principles	24.5	43.9	17.1	11.6	2.9	3.75
5	Be aware of the concept and principles of PM among employees	8.4	23.9	24.5	36.1	7.1	2.90
6	I believe that project quality in its principles is prevention rather than treatment	14.2	38.1	20.0	23.9	3.9	3.35
Total average		3.27					

Table 3 indicates that the weighted mean of respondents' responses to the awareness and culture level of the concept of Project Management according to the five-point scale was generally indicative of neutrality, indicating that the respondents' opinion on awareness and culture in the concept of PM did not turn to positive or negative. This confirms the overall weighted mean of (3.27) which indicates neutrality.

Supporting senior management

This section of the questionnaire consisted of 6 items. These sections aim to study the current situation of the support of senior management in the project management in the Construction Companies in Libya. Table 4 shows the direction of the views of the sample on the items of this aspect.

Table 4 The support of senior management aspect

No	Item	Strongly agree	Agree	Neutral	disagree	Strongly disagree	Mean
		%					
1	The management has a clear plan on quality and is specific to specific objectives, and the administration is committed to implementing them	11.6	19.0	11.9	36.5	21.0	2.64
2	The management supports the principle of delegation of authority and facilitation of the flow of information between the various sections	6.1	10.0	8.4	41.0	34.5	2.12
3	Training courses on PM are provided	21.0	40.3	13.9	21.6	3.2	3.54
4	Encourage creativity and innovation in problem analysis and analysis	11.9	25.5	23.5	34.5	4.5	3.06
5	Empowering employees to participate in decision making	11.6	23.5	13.5	35.8	15.5	2.80
6	Making decisions based on information and facts given	10.6	32.6	17.4	27.7	11.6	3.03
Total average		2.87					

Table 4 shows that the weighted mean of the responses of the sample on the senior management support aspect according to the five-point scale was generally indicative of neutrality, indicating that senior management does not adequately support the project quality applications according to the opinion of the sample members (2.87) which indicates neutrality.

Continuous improvement

This section of the questionnaire consisted of 6 items. These sections aim to study the current state of the extent of the continuous improvement in project management at the Construction Companies in Libya. Table 5 shows the direction of the sample opinions on the items of this aspect.

Table 5 Continuous improvement

No	Item	Strongly agree	Agree	Neutral	disagree	Strongly disagree	Mean
		%					
1	Project Management is keen to improve employee performance to improve service quality continuously	16.8	24.2	22.9	26.5	9.7	3.12
2	PM goes hand in hand with the institutional development	15.5	36.1	14.5	27.4	6.5	3.27
3	There is a plan for a short time to complete the tasks with high quality	15.2	17.4	18.7	35.5	13.2	2.86
4	Encourage creativity and innovation in problem analysis and analysis	7.4	19.4	15.8	38.4	19.0	2.58

5	There are methods to analyse the activities required to provide the service	22.3	45.2	21.3	10.0	1.3	3.77
6	Management considers continuous improvement in work as part of the overall quality requirements	12.6	26.5	20.0	34.2	6.8	3.04
Total average		3.11					

Table 5 shows that the weighted mean of the respondents' responses to the continuous improvement aspect according to the five-point scale was generally indicative of neutrality, indicating that the study sample members did not agree on the importance of continuous improvement of project quality implementation in project management.

Correlations

Pearson test was used as based on a linear relationship between two variables with a moderate distribution. The numerical correlation coefficient between zero and the correct one is zero in the case of lack of correlation. The value of the scale is positive when the correlation is direct, negative in the case of reverse correlation and the value of this numerical scale is increased whenever the degree of correlation is increased. Table 6 shows the results of the correlation tests between the independent variables (the focus of awareness and culture in the concept of PM, the aspect of the senior management support, the focus of continuous improvement, the customer focus) and the project management practice of PM.

Table 6 Pearson correlation coefficient between the study aspects and the project management practice of PM

Aspect	Pearson coefficient value	Level of significance
Awareness and culture in the concept of Project Management	0.369	0.000
Support senior management	0.478	0.000
Continuous improvement	0.519	0.000
Focus on the client	0.574	0.000

Table 6 illustrates the following: The correlation between the practice of project management and PM is affected by the awareness and culture level in the concept of PM. The coefficient of Pearson correlation coefficient was 0.369, which is a weak correlation and a significant level of 0.00 which indicates the significance of the relationship between the two axes. Since the correlation coefficient value is positive, the higher the interest in awareness and culture in the concept of PM, the higher the practice of project management for PM. The correlation between the project management practice and Project Management was affected by the support of senior management for Project Management. The correlation coefficient was Pearson 0.478, which represents the correlation of the mean strength. The significance of the relationship confirms the value of the level of 0.000 which indicates a robust statistical indication of the correlation coefficient between the senior management support aspect to practice project management for Project Management according to the answers of the sample and since the value of the correlation coefficient is positive, this indicates that the correlation is definite, namely, the higher the interest in supporting the senior management of PM the more the practice of project management to manage the PM.

The correlation between the study aspects, taking into consideration the internal variable (work experience). The correlation analysis was used between the two aspects of the PM implementation, namely the focus of awareness and culture on the concept of PM and the support of senior management, the focus of continuous improvement and the focus on the customer and the aspect of the project management practice of PM. Table 7 shows the results of this test

Table 7 Pearson correlation coefficient between the aspects of the implementation of the principles of PM and the project management practice of PM, considering the effect of an internal variable on the correlation relationship

Aspect	Value of Pearson Coefficient	Level of significance
Awareness and culture in the concept of Project Management	0.372	0.000
Support senior management	0.480	0.000
Continuous improvement	0.519	0.000
Focus on the client	0.576	0.000

The variable of work experience has a positive but feeble effect on the relationship between the aspect of awareness and culture in the concept of Project Management and the field of project management practice for PM. Pearson correlation coefficient increased from 0.369 to 0.372 where the increase was only 0.003 which is a minimum value that can be statistically ignored. The variable of work experience also has a weak effect on the correlation between the project management practice to PM and the senior management support aspect. The correlation coefficient of Pearson became 0.480 after it was 0.478, although the difference is very weak, it increases the value of the correlation coefficient with a minimal difference which is 0.002. From a statistical perspective, this difference can be ignored, and we consider that the variable of experience does not affect the correlation relationship.

Multi Linear Regression

Multiple linear regressions is a statistical analysis used to study the effect of a set of independent variables on a single dependent variable to determine which of these independent variables are more influential on the dependent variable, as well as the future prediction of the effect of both independent variables on the dependent variable.

Table 8 The multiple linear regression test of the relationship between PM implementation aspect and the project management practice of PM

Simple Correlation Coefficient R	R Square	Adjusted R Square	F	Sig.
0.615	0.379	0.371	46.488	0.000

Table 8 illustrates the simple correlation coefficient (R) with a value of 0.615 and the coefficient of determination of 0.379 and the corrected coefficient of 0.371. This indicates that the focus of the project management practice for Project Management is affected by 37.90% of PM applications, Support senior management, continuous improvement, and customer focus. The table also shows that the mean level of 0.000 for the analysis of the mono-variance test, where the F-value indicates a high significance that confirms the high explanatory power of the multi-linear regression test model, and the results of the multiple linear regression tests can be relied on.

Table 9 The multiple linear regression

Aspect	Value of constant B	T	Sig.
Awareness and culture in the concept of Project Management	0.367	6.970	0.000
Support senior management	0.401	9.553	0.000
continuous improvement	0.480	10.653	0.000
Focus on the customer	0.504	12.307	0.000

Table 9 shows the extent of the impact of the PM application hubs on the project management practice of PM. We conclude that all the aspects have a statistically significant effect and the linear regression test at a significant level below 0.05. A real standard indicates that the higher the order of the independent variables that represent the PM applications the higher the dependent variable (the project management practice of PM) and vice versa. The value of the B constant which is non-standard also indicates the extent of the prediction level of the impact of the PM application on the project management practice of PM. The focus of the customer was the highest value (0.504) in the other aspect, indicating that customer focus is the most important (0.480). This indicates that the focus of continuous improvement positively affects the project management practice of PM. Hence, the role of the senior management support centres (0.401). Finally, the focus of awareness and culture on the concept of Project Management is (0.367).

Table 10 The moderator test of the multiple linear regression

Simple correlation coefficient R	R Square	Adjusted R Square	F	Sig.
0.618	0.382	0.372	37.617	0.000

Table 10 shows a simple correlation coefficient (R) with a value of 0.618 and a coefficient of 0.382 and a corrected coefficient of 0.372. This indicates that the focus of the project management practice for PM is 38.20% affected by the implementation of the principles of PM overall support of senior management and continuous improvement and focus on the customer when considering the impact of work experience as an internal variable in the relationship and the level of moral 0.000 of the models of linear regression and table (4.36) shows the rest of the test results.

Table 11 The multiple linear regression values of the impact of the aspect representing PM implementations together on the focus of the project management practice of PM considering the impact of work experience as an internal variable

Aspect	Value of constant B	T	Sig.
Awareness and culture in the concept of PM	0.371	7.031	0.000
Support of senior management	0.402	9.583	0.000
Continuous improvement	0.480	10.639	0.000
Focus on customer	0.505	12.337	0.000

Table 11 shows that the work experience as an internal variable did not affect the relationship between the PM application aspect on the aspect of the project management practice of PM where the results were almost equal in both cases.

The summary of tests and hypothesis

The following table summarises the result of the direct and indirect linear regression between the principles of PM (awareness and culture in the concept of PM, senior management support, continuous improvement, and customer focus) and the dependent variable.

Table 12 indicates the summary of the preliminary results of the multi-linear regression test and the relationship between the principles of PM and the practice of running PM projects directly and indirectly.

Hypothesis H	Simple correlation coefficient R	R Square	Adjusted R Square	F	Sig.
HD	0.615	0.379	0.371	46.488	0.000
HIN	0.618	0.382	0.372	37.617	0.000

Table 13 The multiple linear regression values of the impact of the aspects representing the PM implementations together on the aspect of project management practice for direct and indirect PM management.

Aspects	Beta HD	Beta HIN	T HD	T HIN	Sig.
Awareness and culture in the concept of Project Management	0.367	0.371	6.970	7.031	0.000
Support senior management	0.401	0.402	9.553	9.583	0.000
continuous improvement	0.480	0.480	10.653	10.639	0.000
Focus on the client	0.504	0.505	12.307	12.337	0.000

Tables 12 and 13 indicated that the regression model, based on the regression model outputs, ANOVA, and coefficients, finally concludes that the work experience as an internal variable did not affect the relationship between the PM implementation aspect and the project management practice to PM. The relation is relatively equal in both cases. Based on the analysis, the hypotheses were formulated and tested to identify the effect of applying the principles of PM to its practice in managing the projects of the Construction Companies and to measure the effect of the simple variable in the independent and dependent variables.

Table 14 Result of the Hypotheses

Hx	Statement	Decision
H1	There is a positive relationship between the awareness and culture on the concepts of Project Management and Project delay and managing project performance.	Accepted
H2	There is a positive relationship between the senior management and Project delay and managing project performance.	Accepted
H3	There is positive relationship between continuous improvements and Project delay and managing project performance.	Accepted
H4	There is a positive relationship between the Focus on customer and managing project performance.	Accepted

4. Conclusion

The amount of the disbursements on the reconstruction program is distributed to the buildings damaged in the areas of military operations during the war in Libya estimated at (1 billion Libyan dinars) was disbursed during the year 2019. All these amounts were spent without planning and the impact of the situation in Libya, where the slippage of war in Libya is disastrous, and this caused the destruction of what has been maintained, in addition to the depletion of public money and time and effort and the beneficiary is not satisfied from the service. Determining the impact of work experience as an internal variable on the implementation of PM (awareness and culture of PM concepts, support of senior management, continuous improvement and customer focus) and project management practice for PM Also, the importance of the subject of the study and its application to the addition of the possibility of benefiting from the management of public projects in the future to apply the scientific and correct basis for public projects in the application of PM and the expectation of the sustainability of the Project Management in particular and the concept of project management in general in construction projects, especially in the infrastructure of the country, The preservation of public projects is considered to be the maintenance of public money. The study contributed to shed light on the practice of managing projects for Project Management in the management of projects of the Construction Companies. Recommendations made it necessity of faith in senior management to increase the interest in the practice of applying PM and to spread the culture of PM in all the projects of the Construction Companies by distributing periodic bulletins, continuous monitoring of the work and improving the administrative process and developing it to achieve the objectives in the shortest and least cost ways. Also, to hold training courses and educational seminars in the management of project quality and to provide scholarships in local universities and foreign universities, to qualify engineers and supervisors and raise their competence and increase their administrative and technical capabilities.

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