

Mid-Ocean University

College of Management

Master of Project Management



Scheduling & Time Management Challenges in Shipbuilding Projects "

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تحديات الجدولة وإدارة الوقت في مشاريع بناء السفن بالمملكة العربية
السعودية

Scheduling & Time Management Challenges in Shipbuilding Projects

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Chapter one

the general frame

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The Introduction

Projects have become the way of the working world, as computers and mechanization have given people the opportunity to focus on new things – new products, new services, new organizations. Since there is a need to create things, there is a need to create projects. Unfortunately, control over projects can be lost easily and in a short time, which leads to a huge waste of the budget and repeated delays in project delivery, which is dangerous. Therefore, good project management skills are considered an advantage for project managers. At the present time, which allows them to deliver high-quality projects on time and within the established budget, proper planning of activity can reduce the possibility of such losses to a minimum, and clear identification of activities early in any project helps to discover missing activities, project monitoring. Controlling is the process by which actual project performance is tracked compared to planned project management activities. Project monitoring and compliance can be considered one of the basic processes that may occur at all stages of the project, from the start of operation until the closure or termination of the project. The project monitoring and control process is considered a relatively easy task for small projects, but it is a difficult task that requires a great effort to monitor and control how operations are progressing for large projects. Planning the shipbuilding process in the port of Jeddah in the Kingdom of Saudi Arabia. Measuring the performance of good management in containing the risks and challenges faced in terms of scheduling and time management, and working to confront them and reduce their negative effects on the company's performance. The earlier the management anticipates the challenges, analyzes them, and develops strategic options to confront them, the less the effects. Negativity that may contribute to poor project management performance, increased costs and weak competitive position in the shipbuilding industry among competitors. Since the beginning of the first decade of the twentieth century, many institutions have sought to search for

planning and time management rules, as many companies have sought in an increasing number of projects with diverse business activities, which requires leadership based on analyzing time management planning methods using modern technological systems, and confronting them. . Constraint management is a process of identifying, evaluating, and monitoring planning defects that project management is exposed to, that undermine its market balance among competitors, and affect its capital. Here, the challenges of scheduling and time management in shipbuilding projects in the Kingdom of Saudi Arabia will be studied.

The Study Problem

Project management in shipbuilding within the port of Jeddah in the Kingdom of Saudi Arabia is considered to be many challenges, and the most important of these challenges is scheduling time management processes, which is considered one of the new pillars in the science of modern business management, due to the challenges and fluctuations faced by many business institutions, and perhaps the collapse of many... Sometimes due to their inability to cope with the good planning and scheduling of time management processes for the projects of these companies, which forced many business institutions to approach the confrontation on the basis that each of the projects has its own challenges, pattern of operations, methods of time management, as well as the problems it faces, and they established an independent management. Its organizational structure is based on managing project operations and planning and managing the time required to complete the project. It carries out expensive practical research and studies that fall on the company, as the management of shipbuilding projects in the port of Jeddah in the Kingdom of Saudi Arabia. The departments that are characterized by dynamism, movement, and continuous growth are not far from this controversy surrounding learning from past lessons from economic

and financial crises, environmental and political disasters, in Dealing with challenges and risks after they occur, and what modern business administration has imposed on business institutions in adopting the approach to managing operations management and time scheduling, in order to contribute to predicting the period available for project implementation, measuring the specific completion rate and its impact on business and project management in business institutions, and developing solutions and proposals to reduce Among those obstacles that lead to wasting time or delaying the completion of the project, and mitigating its impact on the performance of its projects and its strategic objectives, this was what justified the researcher to conduct an exploratory study to identify the application of time management and scheduling in shipbuilding projects in the port of Jeddah in the Kingdom of Saudi Arabia, and what It showed that he was weak in applying it, so he proceeded to do this study.

The problem of the study is summarized in answering the following main question:

What are the scheduling and time management challenges in shipbuilding projects in Saudi Arabia?

The following sub-questions branch out from the main question:

1. What are the results of the analysis of time management challenges on shipbuilding projects in the port of Jeddah, Saudi Arabia?
2. What are the results of the evaluation of scheduling and time management challenges on shipbuilding projects in the Port of Jeddah, Saudi Arabia?
3. What are the outcomes of decision making and meeting scheduling challenges of time management on shipbuilding projects in Jeddah Port, Saudi Arabia?

4. What are the results of time management scheduling challenges in shipbuilding based on demographic variables (gender, age, qualification, job level, and years of experience)
5. What are the results of continuous control in time management on the shipbuilding process in Jeddah Port in the Kingdom of Saudi Arabia?

Research Importance:

Scientific importance:

The most important points of theoretical and scientific importance are as follows:

- ❖ In that it discusses an issue that is considered one of the biggest issues that concern the development of maritime transport companies in the Kingdom of Arabia, as the port of Jeddah represents the main place in the Kingdom for providing shipbuilding services.
- ❖ The importance of planning and time management in influencing the economies of countries. The study may be useful in enriching the Arab library with modern studies that will benefit researchers, scientific research centers and specialists.
- ❖ Explaining the importance of evaluating time management and scheduling operations and their role in enhancing the performance of the shipbuilding process within the port of Jeddah in the Kingdom of Saudi Arabia, and thus it will be the basis on which scholars and those interested in the field of scheduling and time management in the shipbuilding process will build.

Practical importance:

The most important points of practical and applied importance are as follows:

- ✓ Time management and its role in enhancing the performance of shipbuilding scheduling operations within the Port of Jeddah in the Kingdom of Saudi Arabia
- ✓ The importance of the research is that it deals with one of the most important components of the economic sector, which is represented by the operations of the shipbuilding industry, which works on many activities that serve the national economy.
- ✓ Protecting its activities from any poor planning of the time management scheduling process for the completion stages that may affect it or hinder its continuity, and this will negatively affect the costs of operations and the completion of shipbuilding within the port of Jeddah in the Kingdom of Saudi Arabia.
- ✓ Through this study, we are trying to search for the most important ways and successful methods to address or avoid them in order to maintain planning for time management processes and the scheduled completion rates for the shipbuilding process in the port of Jeddah in the Kingdom of Saudi Arabia and develop them further and further.
- ✓ The importance of working to stabilize it and increase its production efficiency and competitive capabilities, including contributing to the national product and serving supply chains in the Kingdom.

Research Aims:

The research aims to identify the various challenges in scheduling and time management processes in shipbuilding projects in the port of Jeddah in the Kingdom of Saudi Arabia, and to create a system of indicators and measurement for them so that they can be analyzed, evaluated, and their effects determined. And setting all the procedures and strategies that must be followed to be able to manage them within a system of standards that reduce the negative effects of their occurrence or

lead to preventing or avoiding their occurrence in the future. The objectives of the study are as follows:

- ❖ Benefiting from the results of the analysis of time management challenges on shipbuilding projects in the port of Jeddah in the Kingdom of Saudi Arabia
 - ❖ •Benefiting from the results of evaluating the challenges of scheduling and time management on shipbuilding projects in the Port of Jeddah in the Kingdom of Saudi Arabia?
 - ❖ •Leveraging the results of decision making and meeting the challenges of scheduling and time management on shipbuilding projects in Jeddah Port, Saudi Arabia?
 - ❖ Study the results of time management scheduling challenges in shipbuilding based on demographic variables (gender, age, qualification, job level, and years of experience)
- Benefiting from the results of continuous control in time management on the shipbuilding process in Jeddah Port in the Kingdom of Saudi Arabia
1. Spreading the culture of scheduling and time management in both large and small projects.
 2. Facilitating obtaining accurate information related to the rates of achievement of performance indicators of strategic and operational plans.

Research Hypotheses and Their Variables:

Industries of vital importance operate in the field of shipbuilding projects in the port of Jeddah in the Kingdom of Saudi Arabia, where scheduling and time management processes are among the

main activities in completing projects as planned, and there are many challenges facing this management that can lead to disastrous results. The primary goal of managing scheduling operations is to schedule the time needed for projects, which is one of the areas that helps determine and evaluate the percentage of completion and stages of operating operations and coordination between those stages, whether it is related to designing maps of the flow of production requirements and the required working hours, proper planning for managing it, and scheduling the time available to complete the project, as the study conducted. The main hypothesis states: - *There is a correlation between scheduling challenges and time management in shipbuilding projects in the Kingdom of Saudi Arabia.*

Based on the main hypothesis, the sub-hypotheses were formulated as follows:

Hypothesis 1:

There is a relationship between the results of the analysis of time management challenges on shipbuilding projects in the port of Jeddah in the Kingdom of Saudi Arabia.

Hypothesis 2:

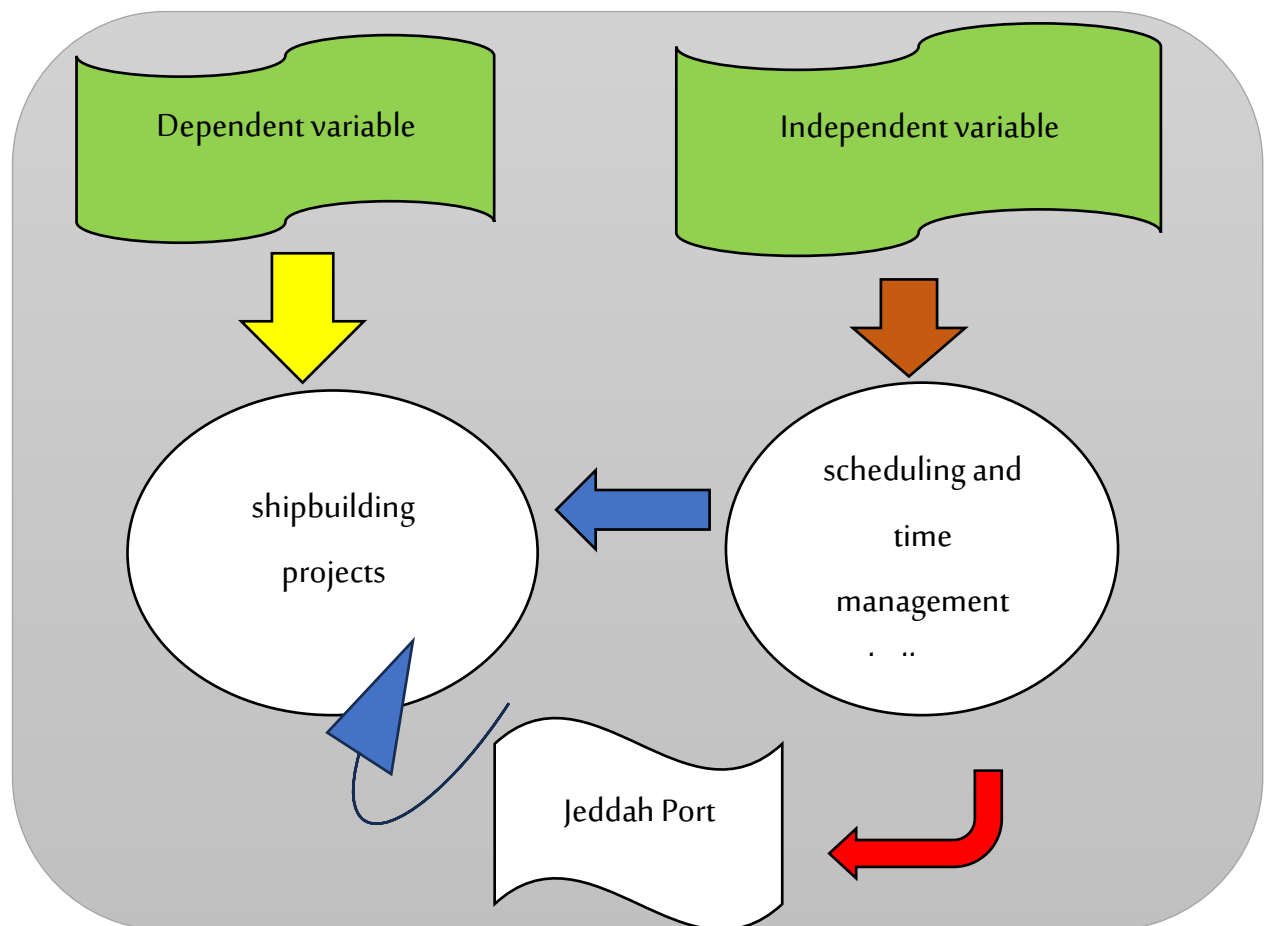
There is a relationship between the results of the evaluation of scheduling challenges and time management on shipbuilding projects in the port of Jeddah in the Kingdom of Saudi Arabia.

Hypothesis 3: There is a relationship between studying the results of time management scheduling challenges in shipbuilding based on demographic variables (gender, age, qualification, job level, and years of experience).

Study variables:

The figure represents the relationship between the independent variable (scheduling and time management challenges) and the dependent variable (shipbuilding projects). These variables can be explained as follows:

- Independent variable: scheduling and time management challenges.
- Dependent variable: Jeddah Port shipbuilding projects in the Kingdom of Saudi Arabia.



Study Methodology:

In order to achieve the objectives of the study and give positive answers to its questions, the study used the descriptive approach to describe the problem and objectives of the study and review some previous studies and analyze them in order to arrive at a preliminary definition of the content of the study tool. In analyzing the problem at hand and testing the adopted hypotheses, we followed the use of the descriptive analytical approach, as the study relied on it as it is one of the most widely used approaches in studying phenomena. Social Humanitarian Society, where it presents the concept of scheduling and time management challenges, as well as the performance of projects working in shipbuilding within the port of Jeddah in the Kingdom of Saudi Arabia, where the descriptive approach is a tool and method for analyzing and describing time management and its role in enhancing the performance of projects working in shipbuilding in the port of Jeddah in the Kingdom of Saudi Arabia. Saudi Arabia.

Information Sources:

1. Secondary sources:

In the theoretical framework of the study, a group of scientific theses was used in addition to research and studies published in magazines and websites.

2. Primary sources:

The questionnaire was relied upon and is considered the main tool for the study in order to collect data and information.

Limitations, Study Population and Sample:

The study population consists of workers in shipbuilding projects in the port of Jeddah in the Kingdom of Saudi Arabia. Given that this population is limited, the study will use the random sampling method by applying it to a sample of directors, deputy directors, and senior administrators in the project management of shipbuilding in the port. Jeddah operating in the Kingdom of Saudi Arabia.

Time limit: academic year 2023 AD

Spatial limit: Jeddah Port in Saudi Arabia

Objective Limit: Scheduling and Time Management Challenges in Shipbuilding Projects in the Kingdom of Saudi Arabia.

The human limit: managers and workers in shipbuilding projects in the port of Jeddah in the Kingdom of Saudi Arabia.

Reasons For Choosing the Study Topic: The reasons we chose this topic are:

- Lack of research and studies dealing with this topic, especially in the field of shipbuilding projects
- The importance of shipbuilding projects in supporting supply chains in the Kingdom of Saudi Arabia as an essential component of the economic sector.

•Shipbuilding projects operating in the Kingdom of Saudi Arabia are increasingly exposed to multiple challenges that have required finding an appropriate and effective method that enables them to overcome the problem of time management and scheduling operations.

•An attempt to provide a method based on scientific and methodological foundations in dealing with the challenges of scheduling and time management imposed by various environmental changes.

Definitions And Terms

•Schedule management planning:

It is the process of defining the policies, procedures, and documents necessary to plan, manage, and monitor the project schedule.

•Identify activities:

It is the process through which specific procedures that must be completed to produce the required outputs are identified and documented.

•Arranging activities sequentially:

It is the process through which relationships between various project activities are documented.

•Estimating activity:

resources, through which the type and quantity of material and human resources needed to complete the project are estimated.

•**Estimating the duration required for activities,:**

which includes estimating the time periods required to complete each project activity.

•**Developing the schedule:**

It is the process of analyzing the sequence of activities, their time periods, resource requirements, etc., with the aim of preparing a project schedule model.

•**Finally, follow the schedule:**

It is the process by which the status of project activities is monitored and changes to the schedule reference plan are managed

Project scope statement:

It is a description of the project scope, its key deliverables, and the assumptions and constraints associated with the project scope. The project scope statement provides documentation of both project scope and product scope. It also explains what the project outputs are and their specifications, in addition to the methods and work necessary to produce those outputs. Includes project scope statement.

Project monitoring and control:

The process by which actual project performance is tracked compared to planned project management activities. Monitoring and adhering to the project can be considered one of the basic processes that may occur in all stages of the project, from initiation until closing or terminating the project. The project monitoring and control process is considered a relatively easy task for small projects, but it is a difficult task that requires a great effort to monitor and control how operations are progressing for large projects.

project management:

It is the process through which the project's material and human resources are organized and managed effectively and efficiently to ensure the success of the project and achieve the required quality within the time and cost available for the project. This process goes through several stages, starting with the establishment stage, followed by the planning stage, then the implementation stage, followed by the monitoring and control stage, until this process ends.

Conclusion

In general, in shipbuilding and construction projects, there are some times that are considered important determinants in the project other than the final time of the project. In some projects, there are specific ends for certain stages during the project period or the completion of the implementation of one of the buildings within the project. In the event that the contractor fails to finish the project on time, he is subject to a fine. In addition, the reputation of the project management and the project that is delayed is considered one of the moral aspects that are taken into account. In addition, the costs charged to the project increase from time to time. Likewise, the end of the project means the transfer of All resources to another project. The summary of the above

is that the project end time is one of the most important objectives in project management. The contractor usually has complete freedom in how to plan its resources and arrange project activities to achieve its contractual objectives. Planning, in this case, is considered one of the very important parts within project management because it depends on detailed studies of business needs, and the planning function is completed by dividing the project into small parts called project monitoring and control activities, which is the process through which the actual project performance is tracked compared to the planned project management activities. Project monitoring and compliance can be considered one of the basic processes that may occur at all stages of the project, from initiation until closing or terminating the project. The project monitoring and control process is considered a relatively easy task for small projects, but it is a difficult task that requires a great effort to monitor and control how operations are progressing for large projects. The project monitoring and control process helps the project manager balance the requirements of different knowledge areas, in addition to overseeing all the tasks and metrics necessary to ensure that the project will be completed on time, within the specified scope, and without exceeding the specified cost. This process involves comparing actual performance with planned performance and taking corrective action to achieve the desired result when significant discrepancies exist. So that the monitoring and control process is conducted continuously throughout the project period, and this process includes the following main tasks: verifying the project scope and change control, controlling the project schedule, cost control, quality control, risk control.

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