

Causes for Delays in Municipal Projects in Jordan: A Case Study of the Zarqa Municipality

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Abstract

Municipalities are considered among the most critical governmental institutions. They represent the local administration in any country and are in direct contact with citizens and stakeholders. They implement service and development projects in their related areas. This study aimed to investigate the causes for delaying projects in Zarqa Municipality as a case study, where a sample was chosen. A survey of personal interviews of 45 people representing government agencies, contractors, clients, and consultants, who were asked about the reasons for the delay was suggested by Odeh and Battaineh (2002). Respondents identified a group of the most important reasons for delaying projects, the most prominent of which are: Finance and payments of completed work, Inadequate contractor experience, Change orders, Mistakes and discrepancies in the contract document. This study reveals the decisive factors for delay facing the Jordanian municipalities in general, particularly the Zarqa municipality. The study presented a set of proposals to avoid these obstacles in the future.

Keywords: Municipalities, Projects, Causes for Delaying, Jordan.

Introduction

Usually, the process of implementing projects faces many obstacles, as it is considered a common global phenomenon that leads to problems in time and cost, which leads to a delay in the delivery of the project by contractors, and an increase in the costs incurred. Various sectors face these problems at the level of the public and private sectors. In developing countries, the public sector is more vulnerable than others to such problems.

In addition, delay in the implementation of public sector projects may lead to damage to the private sector, such as damage to commercial shops. This may raise many stakeholders, as stakeholders have a number of demands that must be met (Al Amosh, 2021). Which may damage the reputation of the public sector and raise compensation lawsuits, which leads to the public sector incurring more financial burdens due to the problems of delay in the delivery of projects.

In general, municipalities are one of the forms of local administration of countries, as they provide many services to citizens and it is directly related to them (Bordignon et al., 2003). The municipality is governed by a mayor and a municipality council consisting of a set

councilor (i.e., elected political members). In addition, there is an administrative body, consisting of an administrative head of the municipality (called the municipality director) And another group of managers according to specialization (Eskerod et al., 2015).

Therefore, it is working on a number of projects that serve the local community, and faces a number of obstacles that may cause delay or failure of these projects. It may be attributed to reasons in implementing service and development projects required by the municipality's areas of non-approval of the municipality's budget and this limits the municipality's ability to bid for projects Also, the problems facing government-funded projects are often attributed to contractual and institutional failures that lead to time and cost overruns (Singh, 2010).

This study aims to investigate the delay of project in the Jordanian municipality of Zarqa as a model for the Jordanian municipalities.

Literature Review

Hamzah et al (2011) defined the delays in projects as "time overrun or extension of time to complete the project". Where government agencies usually suffer from delays in projects. According to Arabzad and Shirouyehzad (2012), the concept of project management should be developed by enhancing knowledge of design and implementation methods and standards. This requires a high qualification of the municipality's cadre, and extensive knowledge of the issues, dimensions and consequences associated with the implementation and management of projects.

On the other hand, the needs and expectations of stakeholders must be considered (Al Amosh and Mansor, 2021; Al Amosh and Mansor, 2018), and this is done through the efficient management of stakeholders to assess their needs and assess the extent to which the project is compatible with the aspirations of various stakeholders (Olander, 2007). The management of stakeholders in the implementation of municipal projects works on giving stakeholders feedback on the extent to which the project has achieved its societal objectives.

In a study conducted in America, Syed et al (2003) argued that the underlying reasons for the delay in the implementation of construction projects are the lack of prioritization and the distribution of roles and responsibilities in addition to the design process, which falls under the responsibility of the consultants. In another study conducted in South Africa, Larsen et al (2016) argued that project budgeting and financing is one of the main problems faced by construction projects within Zarqa Municipality area. The study included interviews with members of the Zarqa Municipality and local Department of Housing.

In another study carried out by Sambasivan & Soon (2007), which included 150 respondents from clients, consultants and contractors, the results concluded that the reasons for the delay in the implementation of projects fall within 10 points: (1) contractor's improper planning, (2) contractor's poor site management, (3) inadequate contractor experience, (4) inadequate client's finance and payments for completed work, (5) problems with subcontractors, (6) shortage in material, (7) labor supply, (8) equipment availability and failure, (9) lack of communication between parties, and (10) mistakes during the construction stage. Also, there are six main effects of delay were: (1) time overrun, (2) cost overrun, (3) disputes, (4) arbitration, (5) litigation, and (6) total abandonment.

Research Method

This study uses the questionnaire as a tool for collecting study data, to identify the reasons for delays in projects for Zarqa municipality. The interview consists of two parts, the first section deals with questions about the basic and demographic information of respondents,

while the second section contains the reasons behind the delay in projects. The interviews included 45 people related to Zarqa municipality projects.

Results

The biographical results of the study sample show that most of the individuals are between the ages of 40 and 49 years, meaning that they have good work experience, and 80% of the sample have a university education with a bachelor's degree, while only 2% hold a master's degree and the rest of the individuals hold a diploma. On the other hand, we note that most of the sample members are males, constituting 82% of the total sample, while only 18% of females. Most of the sample also included government employees and contractors who are knowledgeable enough. On the subject of the study, with regard to work experience, the table shows that 42% have experience ranging from 2-5 years, while 29% have experience between 6-10 years, and those who have experience more than 11 years were 16%, and the field of specialization was as follows: 22% Building, 49% Infrastructure, 18% Mechanical, 11% Electrical.

Table 1

The demographic characteristic of the study sample

Demographic characteristic	Frequency	%
Age		
20-29	4	9
30-39	14	31
40-49	17	38
50 and above	10	22
Sex		
Male	37	82
Female	8	18
Education		
Diploma	8	18
BCS	36	80
Master	1	2
Ph.D	0	0
Type of organization		
Client	12	27
Governmental	13	29
Consultant	3	6

Contractor	17	38
Occupational level		
Non-executive	12	27
Executive	21	46
Managerial	12	27
Working experience		
Less than 2 years	6	13
2-5	19	42
6-10	13	29
11 and above	7	16
Field of specialization		
Building	10	22
Infrastructure	22	49
Mechanical	8	18
Electrical	5	11

Causes for delaying Zarqa municipality projects

The relative importance index (RII) was adopted and the model that Khoshgoftar et al. (2010) followed in their study (1) Finance and payments of completed work (RII= 0.889), (2) Inadequate contractor experience (RII= 0.801), (3) Change orders (RII= 0.794), (4) Mistakes and discrepancies in contract document (RII= 0.787), (5) Labor supply (RII= 0.786), (6) Mistakes during construction stage (RII=0.782), (7) Shortage in material (RII= 0.782), (8) Preparation and approval of drawings (RII=0.754), (9) Equipment availability and failure (RII=0.744), (10) Inappropriate overall (RII= 0.733).

Table 2

Causes of delay

Causes of Delay	1	2	3	4	5	RII	Rank
Client related causes							
Finance and payments of completed work	0.7	2.7	6.6	32.9	40.8	0.889	1
Owner Interference	1.3	18.5	22.5	17.9	30.2	0.717	12

Slow decision making	2.8	24.4	33.3	41.5	29.6	0.709	14
Unrealistic contract duration and requirements imposed	4.9	21.6	25.1	37.8	29.2	0.593	27
Contractor related causes							
Subcontractors	3.9	6.7	22.2	19.8	39.6	0.714	13
Site management	4.1	10.6	12.8	40.8	34.2	0.627	23
Construction methods	3.2	17.6	30.8	34.7	31.6	0.603	25
Improper planning	3.9	12.1	28.7	31.5	39.9	0.683	19
Mistakes during construction stage	4.8	22.9	35.9	40.1	41.4	0.782	6
Inadequate contractor experience	4.5	16.5	26.7	27.3	36.2	0.801	2
Consultant related causes							
Contract management	0.8	14.6	20.2	35.9	34.2	0.667	20
Preparation and approval of drawings	4.5	20.3	33.9	32.1	21.5	0.754	8
Quality assurance/control	4.6	27.8	24.9	33.6	29.8	0.621	24
Waiting time for approval of tests and inspection	5.7	25.4	37.5	21.5	24.3	0.643	21
Material related causes							
Quality of material	0.6	17.9	21.2	19.5	31.2	0.601	26

Shortage in material	1.2	19.5	12.3	21.7	31.6	0.766	7
Labor and equipment category causes							
Labor supply	1.5	22.3	16.5	20.8	31.2	0.786	5
Labor productivity	3.5	18.4	19.2	20.3	17.4	0.775	6
Equipment availability and failure	4.2	15.6	12.7	19.3	22.9	0.744	9
Contract related causes							
Change orders	2.2	12.6	20.4	30.1	26.3	0.794	3
Mistakes and discrepancies in contract document	3.4	11.2	15.9	24.5	21.6	0.787	4
Contract relationships related causes							
Major disputes and negotiations	1.0	9.2	13.5	8.6	14.3	0.628	22
Inappropriate overall organizational structure linking to the project	1.3	12.5	17.2	26.9	33.2	0.733	10
Lack of communication between the parties	3.6	14.4	12.6	22.5	26.1	0.729	11
External causes							
Weather conditions	4.4	22.6	18.8	29.5	35.5	0.691	18
Regulatory changes	4.2	19.4	26.1	37.6	39.5	0.702	16
Problem with neighbors	5.4	20.1	19.7	18.5	27.4	0.708	15

Unforeseen site conditions	4.9	18.4	16.3	22.7	24.9	0.699	17
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Conclusions and Recommendations

This study aimed to assess the delay in the completion of projects of the Jordanian municipalities, and the municipality of Zarqa was decided as a case study, where a set of proposed factors were put forward based on studies of Odeh and Battaineh (2002), and Khoshgoftar et al. (2010). The results showed that the most important reasons for delaying projects in Zarqa municipality were poor funding and payments of completed work, lack of experience of contractors, change orders, mistakes and discrepancies in contract document, labor supply, mistakes during construction stage, shortage in material, preparation and approval of drawings, equipment availability and failure.

In this regard, I recommend reviewing and adjusting the project financing budget and trying to obtain more fantastic financial support to finance the projects implemented by the Zarqa Municipality, whether through government support or the support of international organizations and directing those projects to sustainable development, which will provide greater supporters for those projects. On the other hand, establishing special criteria that require appropriate experience for contractors and study their previous projects to avoid any future problems. Moreover, contracts must be prepared through specialized lawyers and engineers with expertise and competence to reach an ideal contract that guarantees the municipality and contractors' rights and is free from errors or vague phrases, and this will limit the resort to change orders. On the other hand, it must be ensured that there are qualified workers with contractors. Also, the supervisory staff must verify construction errors that may occur and not receive any work before it is completed as agreed upon in the contract.

The study has important implications for decision-makers in the municipalities of Jordan, especially the Zarqa municipality, and on contractors, and various stakeholders, as it provides an insight into the causes of delays in municipal projects, which are of great importance to citizens and various stakeholders, as municipal projects are often considered that with service and development goals. Therefore, the results of the study provide a clearer picture about the reasons for the delay in the implementation of projects, to avoid these obstacles in the future and to reach an ideal implementation of projects that serve the various parties.

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