DELAYS IN CONSTRUCTION PROJECTS

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INTRODUCTION:

The construction industry is one of the main sectors that provide important ingredient for the development of an economy. However, many projects experience extensive delays and thereby exceed initial time and cost estimates. Construction delays are considered to be one of project success in term of time, cost, quality, and safety.

Projects are underway around the country, and motorists are experiencing delays and detours at construction zones. And many areas have begun building booms that are supposed to ease our Congestion woes by adding new capacity to existing roads. But ironically, the construction projects themselves can create significant congestion and delay. The wealth of any nation is gauged by its performance in infrastructure provision through its construction industry. The construction industry is large, volatile, and requires tremendous capital outlays. For developing economies, road construction constitutes a major component of the construction industry. This means that much of the national budget on infrastructure development is channeled to road construction projects. Inflation and local government pressures were the major causes of cost escalation in Kurdistan Region's road construction projects. On the other hand, delayed payments, financial processes and difficulties on the part of contractors and clients, contract modification, economic problems, materials procurement, changes in drawings, staffing problems, equipment unavailability, poor supervision, construction mistakes, and poor coordination on site, changes in specifications and labor disputes and strikes were found to be the major causes of schedule delays in road construction projects. Appropriate project management practices are thus required to curb the causes and effects of cost escalation and schedule delays in road construction projects. The Construction delay is a universal evident reality not only in Kurdistan region however all the countries faced this global fact.

KURDISTAN REGIONAL GOVERNMENT CONSTRUCTION PROJECT:

Like any other country, the Kurdistan Regional government plays a dominant role in the construction industry due to the capital intensive nature of its operations. Billions of Dollars are invested into various government construction projects. The sources of funding for these projects, though largely from budgetary allocation include contributions from 17% of Iraqi budget shared to Kurdistan Regional government according to new constitution of Iraqi Federal Government. Government construction projects mainly cover four (4) basic areas. They are construction of building, roads, other construction and maintenance

Table 1: Categories of Construction Projects in Kurdistan Regional Government:

	Building	Road	Others	Maintenance
1.	Domestic	Highways	Dams	For all three previous categories
2.	Commercial	Urban, Town	Irrigation	
3.	Factories	Tunnel	Electric station	
4.	Investment	Runway for airport	Water distribution line	
5.	Offices , Publics	Village	Tele communication	

The government is significantly involved in the construction of roads, dams, airport runways. These projects are national assets that the government often undertakes due to the capital intensive nature of their construction. With the construction of buildings, we usually see the involvement of individuals and other private partners in such ventures. There is however more delays in the government projects than in those of private individuals. This may be as a result of little or no bureaucracy and red-tapes in the operations of the private companies or individuals. The procedures involved in the construction projects of government from start to finish can sometimes be an albatross around the neck of the project contractors and consultants.

WHAT IS DELAYS?

Delay in government construction projects, especially the road sector, has had a significant impact on economic activities in the country. Several road construction projects have littered the length and breadth of the country for which government has commenced that has yet to be completed. Unfortunately the time line for these projects is unknown to the citizens of the country. This has led to an increased number of uncompleted road construction projects by government and has further compounded the woes of Kurdistan Region's Citizens.

The cost of a construction project is one of the most important factors in the construction industry. Due to many reasons, the total cost of a project can significantly vary from the initial estimated cost. The reasons could be changes in scope of work, specifications, or any other contract documents. In the construction industry, variation orders are created when changes occur. It is an official document that states the changes made into the original agreement between the client and the contractor. When a variation order is created, it brings several negative effects to both the client and the contractor.

The construction industry is the tool through which a society achieves its goals of urban and rural development [5]. It is one of the sectors that provide important ingredients for the development of an economy.

The construction industry tends to fluctuate with the general economy, and it has quick response to the changes in the economy. According to Chitkara [7], the construction industry in many countries accounts for 9 % of the Gross Domestic Product (GDP). However, it is becoming more complex because of the sophistications of the construction process itself and the large number of parties involved in the construction process [5].

The construction delay menace is not peculiar to Kurdistan region but almost every country has a fair share of this trouble. Assaf and Al-Hejji ,in their work on the Saudi Arabia construction industry observed that only 30% of construction projects were completed on time with an average overrun between 10% and 30%. This leaves a significant proportion of delayed construction projects in Saudi Arabia standing at about 70%.

Delay has been defined severally by many researchers often times with some bias towards the central theme of their research work. That notwithstanding, there are some definitions that explain the concept of delays with precision. There are number of definitions for delay:

To make something happen later than expected; to cause something to be performed later than planned; or to not act timely each of these definitions can be describe a delay to an activity of work in a schedule. On construction project s, as well as on the projects where a schedule is being used to plan work, it is not uncommon for delays to occur. [1].

Another definition is by A.A. Aibinu who defines delay as a situation where the contractor and the project owner jointly or severally contribute to the non-completion of the project within the agreed contract period. Likewise, Sanders and Eagles also define delay as an event that causes extended time to complete all or part of a project.

TYPES OF DELAYS:

Delays in construction projects have been put in various classifications by several authors but most of these classifications have a lot in common in terms of their fundamentals. Although various types of delays have been put in several studies, they are somewhat linked to one another. These classifications have been elaborated in the arguments below.

Most importantly, delays can be seen in these four major categories as explained by Theodore J. Trauner Jr (2009);

1. Critical or Non Critical.
2. Excusable or Non Excusable,
3. Compensable or Non Compensable
4. Concurrent or Non Concurrent.

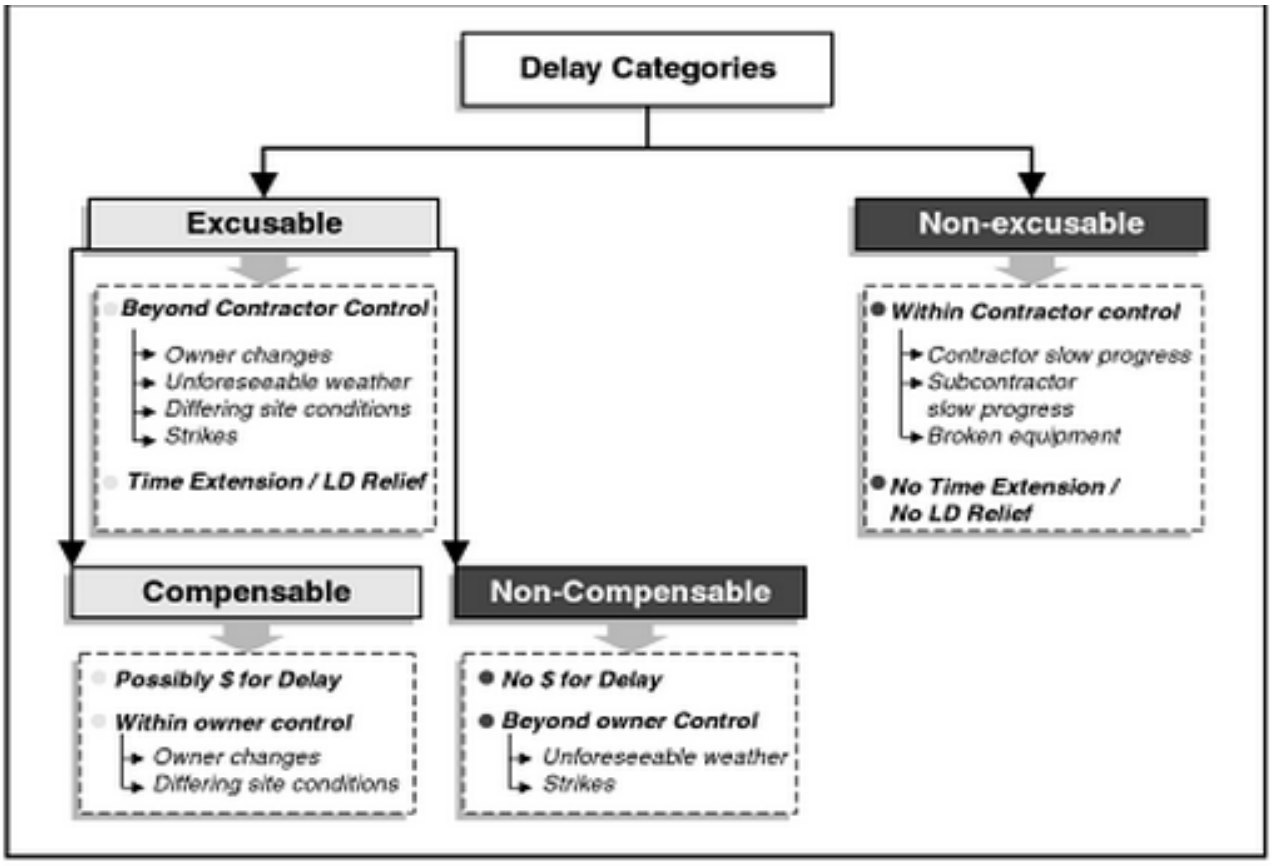

FIGURE 2.1 Note: This figure represents one interpretation. However, excusability and compensability can vary, depending on the contract.

1. Critical Delays and Non Critical Delays:

As indicated earlier in the above classification of delays as portrayed by Bolton J. this set of delay classification has some connection with previous ones. Critical delays are delays which prevent the contractor from finishing the work on the scheduled completion date as agreed upon in the contract. This concept has roots entrenched in the Critical Path Method (CPM) schedule which helps identify the critical activities in a construction project. All projects have critical activities embedded in their execution irrespective of the kind of schedule being run. These critical activities are sometimes referred to as the controlling item of work. CPM seeks to accomplish three main objectives:

- To calculate the project's completion date
- To identify the extent to which each activity in the schedule could slip without delaying the project.
- To identify which activities in the schedule would have the highest risk of affecting the project completion date if they slipped.

How is the CPM used to estimate the project's finish date? There are basically two methods of estimating the project's date using the CPM, the Forward Pass Calculation and the Backward Pass Calculation. The Forward Pass computes the early start and the early finish dates of the project whiles the Backward Pass estimates the late start and the late finish dates. That notwithstanding, identifying which activities truly impact the completion date of the project also depends on the following factors as given by Trauner (2009):

- The project itself
- The contractors plan and schedule (particularly the critical path)
- The requirements of the contract for sequence and phasing
- The physical constraints of the project – how to build the job from a practical perspective.

It is important to note that irrespective of how one chooses to analyze a construction project schedule to identify delays; there will always be an overriding factor which will need much attention. This is known as the contemporaneous information which refers to the daily reports, the schedules in effect and any other job data available to reflect the existing situation at the time of the delay (Trauner, 2009). From the above explanation, non critical delays can be seen as those delays that do not impact

the completion date of the project but in a way, affect the progress of the work. It can therefore be said that both excusable and non excusable delays are all critical delays. This leaves non critical delays as a standalone delay classification.

2. Excusable Delays& Non Excusable Delays:

2.1 Excusable Delays:

Excusable Delays is a delay that is due to an unforeseeable event beyond the contractors or the subcontractor's control. Normally, based on common general provisions in public agency specifications, delay resulting from the following events would be considered excusable:

- General labor strikes.
- Fires.
- Floods.
- Acts of God.
- Owner- directed changes.
- Errors & omissions in the plans and specifications.
- Differing site conditions or concealed conditions.
- Usually sever weathers.
- Intervention by outside agencies.
- Lack of action by government bodies, such as building inspection.

Before the analyst concludes that a delay is excusable based solely on the preceding definition , he or she must refer to the construction contract documents . Decision concerning delays must be made within the context of the specific contract. the contract should clearly define the factors that are considered valid delays to the project that justify time extensions to the contract completion date , for example some contracts may not allow for any time extension caused by weather conditions, regardless of how unusual , unexpected ,or sever.

2.2 Non Excusable Delays

Non excusable delays are events that are within the contractor's control or that are foreseeable. These are some example of non excusable delays:

- Late performance of subcontractors.
- Untimely performance by suppliers.
- Faulty workmanship by the contractor and subcontractors.
- A project specific labor strike caused by either the contractor's unwillingness to meet with labor representatives or by unfair labor practices.

3. Compensable or Non Compensable:

A compensable delay is a delay where the Contractor is entitled to a time extension and to additional compensation. Relating back to the excusable and nonexcusable delays, only excusable delays can be compensable. A noncompensable delay means that although an excusable delay may have occurred, the contractor is not entitled to any added compensation resulting from the excusable delay. Thus, the question of wheatear a delay is compensable must be answered. Additionally, anonexcusable delay warrants neither additional compensation nor a time extension.

Weather or not a delay is compensable depends primarily on the terms of the contract. In most cases, a Contract specifically notes the kinds of delays that are noncompensable, for which the contractor does not receive any additional money but may be allowed a time extension.

4. Concurrent or Non Concurrent:

Concurrent delays like most other delays have several definitions as put forth by practitioners in the industry. A few definitions as prescribed by the Association for the Advancement of Cost Engineering (AACE) (Recommended Practice 10S-90) have been considered below;

- Two or more delays that occur or overlap within the same period, either of which occurring alone would have affected the ultimate completion date.
- Where two or more independent causes of delay occur during the same time period. The same time period being referred to is not always literally within the exact period of time but can be related by circumstance, even though the circumstance may not have occurred during the exact same period.
- True concurrent delay is the occurrence of two or more delay events at the same time, one an employer risk event, the other a contractor risk event and the effects of which are felt at the same time.

Concurrent delay mostly refers to the situation where two or more delay activities occur at different times but the impact is felt (in whole or in part) at the same time. It occurs when both parties to the construction contract (owner and contractor) delay the project during an excusable but non compensable delay (such as severe weather conditions). Such delays do not necessarily have to occur simultaneously but can be on two parallel critical path chains. Concurrent delays may also be an excusable delay with compensation which may grant some reliefs to the contractor in the form of extension of time, remission of liquidated damages and sometimes potential delay of damages subject to the given circumstance and the contractual agreement. In the same vein, a concurrent delay may also be inexcusable where the delay of the contractor, though concurrent with that of the owner, had a more severe impact on the finishing date. For instance, the owner's delay occurred from the 5th to the 8th month of the project period while the contractors delay was from 4^{th}

to the 10th of the project period. Though these two delays happened around the same time, the contractor's delay would impact the completion date rather than the owner's.

Concurrent delays could be caused by the delaying effects of events that were either excusable (i.e. the events for which the employer takes the risk of time and for which extensions of time should be

granted to the contractor) or culpable (i.e. events for which the contractor takes the risk of time) (Rawlings, 2003). However, the effects of two delaying events by both parties to the contract, which impacted upon progress of the contract at mutually exclusive time frames, could not be said to be concurrent.

DELAY FACTORS IN CONSTRUCTION PROJECTS:

There are several causes or factors of delays that have been identified by researchers in the field of project management in the construction industry. Some of these researchers have even attempted to categorize the causes of delays based on certain factors. These categories may have some geographical limitations and as such cannot be applied using a wholesale approach. This probably explains why there are several researches on the causes of delays in construction projects from several countries. Although there are some similarities in these findings, the differences reiterate the need to have geographic dimension to this subject matter. Some causes are major whiles some are minor in their prevalence as observed by various researchers hence, those who attempted classifying the causes based them on the ones identified by stakeholders as very pervasive in nature.

A number of studies have been conducted in regard to delays in construction projects for decades with scholars advancing various factors and groups of factors that contribute to causing delays. Available literature reviewed indicate categorization of the various factors in groups of up to eleven (11) categories of consultant-related, contractor - related, design-related, equipment-related, externality - related, labour-related, material-related, owner-related, project-related, engineer-related and human-behavior related among others [27] and [8]. This study however re-clustered these factors into four (4) broad categories of consultant-related, contractor-related, client-related and external-related factors.

1 .Consultant Related Delay Factors:

The literature review was done through books, engineering journals, conference papers, masters and academic theses, the internet, and interview with experts from the construction industry to identify factors that are responsible for delays in delivering construction projects globally. Several studies have identified consultant related factors to cause schedule delays. Aibinu and Odeyinka [9] assert that incomplete drawings, late issuance of instructions and inadequate supervision critically impacted on consultant related group of delays. Al-Khalil and Al-Ghafly [10] concluded that inadequate site supervision by the consultant was the major cause of delay. Al-Kharashi and Skitmore [11] identified delays in approving major changes in the scope of works, inadequate experience of the consultant and late in reviewing design documents as critical. In a separate study, Arditi et al., [12] identified delays in design work and inadequate site inspection as the main causes of consultant related delays. Assaf and Hejji [13] identified the consultant related delay factors as; delay in performing inspection and testing by consultant, delay in approving major changes in the scope of work by consultant, inflexibility (rigidity) of consultant, poor communication and coordination between consultant and other parties, late review and approval of design documents by consultants, conflicts between consultant and design engineer, inadequate experience of consultant. Assaf et al., [14] identified design errors made by designers, changes in types and specifications during construction, insufficient communication between owner and consultant during design stage as critical.

Chan and Kumaraswamy [15] identified delays in design information, inadequate design team experience and mistakes and discrepancies in design documents. In a separate study, El-Razek et al., [16] concluded that design changes during construction, changes in material types and specifications during construction and design errors made by designers contributed to delays. Faridi and El-Sayegh [17] identified slow preparation and approval of drawings, incomplete drawings, specifications and or documents and change in drawings as factors of consultant related delays. Gündüz, et al., [7] identified delay in performing inspection and testing, poor communication and coordination with other parties, and conflicts between consultant and design engineer as the most significant in causing delays. In a study analyzing factors affecting delays in Indian construction projects, [8] concluded that lack of commitment and Architect's reluctance for change contributed to delays. Iyer and Jha [18] identified the factors of inadequate project formulation in the beginning and reluctance in timely decision by the consultant as key causes of delay. Kumaraswamy and Chan [19] identified the factors of unforeseen ground conditions, delays in design information and necessary variations of works as key consultant

related delays. Ling and Hoi [20] looked at the causative factors in terms of technical risks that included design failure, estimation error and new technology failure. Lo et al., [21] identified the factor of poor site management and supervision as the main cause of consultant related delay. Mansfield et al., [22] highlighted the problems of poor contract management, mistakes and discrepancies in contract documents and inspection and testing of completed portions of work as key causes of consultant related delays. Olawale and Sun [23] identified the factors of inadequate evaluation of project's duration, discrepancies in contract documentation and contract and specification interpretation disagreement as causes of delay under consultant-related. Sambasivan and Soon [24] identified contract management, preparation and approval of drawings, quality assurance and control and waiting time for approval of tests and inspections as factors causing delays under the consultant-related categories.

2. Contractor Related Delay Factors:

Available literature contend that proper project planning, availability of materials, equipment and adequate labour are key critical success factors for the successful implementation of building construction projects. A number of studies have been carried out in those key critical dimensions in order to assess their relative contributions to schedule delays in the construction industry.
Aibinu and Odeyinka [9] identified financial difficulties, equipment breakdown and maintenance problems, planning and scheduling problems, material and equipment shortages, slow mobilization and shortage of manpower as main contributors to this category of delay factors. Al-Khalil and Al-Ghafly [10] observed that financing and cash flow challenges, poor project management and inadequate manpower were key considerations. Al-Kharashi and Skitmore [11] contend that poor qualification of contractor's technical staff, poor site management and supervision and difficulty in financing the project were critical. Arditi et al., [12] observed that inadequate supply of materials, and contractor's financial difficulties were the main causes of delay. Assaf and Al-Hejji [13] identified the contractor related delay factors as; difficulties in financing project by contractor, conflicts in sub-contractors schedule in execution of project, rework due to errors during construction, conflicts between contractor and other parties (consultant and owner), poor site management and supervision by contractor, poor communication and coordination by contractor with other parties, ineffective planning and scheduling of project by contractor, improper construction methods implemented by contractor, delays in sub-contractors work, inadequate contractor's work, frequent change of sub-contractors because of their

inefficient work, poor qualification of the contractor's technical staff, delay in site mobilization. Assaf et al., [14] identified inadequate contractor finance, shortage of manpower, slow delivery of materials and errors committed during construction works affected delivery of the projects. Chan and Kumaraswamy [15] identified the factors of poor site management and supervision and improper project planning and scheduling that contribute to causes of delays. El-Razek et al., [16] observed that contractor's inadequate financial resources and slow delivery of materials were the major causes of delays. Faridi and El-Sayegh [17] identified shortage of manpower, poor site supervision and management and non-availability of materials on time as lead causes of delays under contractor related category. In a separate study, [7] concluded that inadequate contractor experience, ineffective project planning and scheduling, and poor site management and supervision respectively ranked highly. Hemanta et al., [8] using factor analysis conclude that site accidents due to lack of safety measures, use of improper or obsolete construction methods, and delay in material delivery contributed the highest impact. In a separate study, [18] identified the factors of poor human resource management and labour strike and uniqueness of the project activities requiring high technical know-how as causes of delay during construction process. Kumaraswamy and Chan [19] identified poor site management and supervision, inadequate contractor experience and delays in subcontractor's works as key causes of delay. In a separate study, [20] assessed the vulnerability of Singaporean firms undertaking construction projects in India in terms of economic risks (materials supply, labour supply, and equipment availability), financial risks (relating to credit rating, capital supply and cash flow), managerial risks (relating to productivity, quality assurance, cost control and human resource management) and technical risks (relating to equipment and systems failure, collision and accidents. Several studies have identified material related delay factors as one of the key dimensions in contractor related delays that has contributed significantly to causes of schedule delays in construction projects. Chan and Kumaraswamy [15] concluded that shortage of material and poor procurement of material topped as contributors to causes of delays. In a separate study, [19] identified shortage of materials in the market as a factor causing delay, poor quality of materials, escalation of material prices and late delivery of materials as factors causing delay. Assaf and Al-Hejji [13] identified the material related delay factors as; shortage of construction materials in market, changes in material types and specifications during construction, delay in material delivery, damage of sorted material while they are needed urgently, delay in manufacturing special building materials, late procurement of materials, late in selection of finishing materials due to availability of many types in market. Other scholars examined

the contribution of equipment related attributes to contractor delay factors and assessed their significance in causing schedule delays in construction projects. Chan and Kumaraswamy [15] identified the factor of shortage of equipment and improper equipment as factors that contribute to causes of delays. Assaf and Al-Hejji [13] identified equipment breakdowns, shortage of equipment, and low level of equipment-operator's skill, low productivity and efficiency of equipment, lack of high-technology mechanical equipment as causes of delays.

3. Client Related Delay Factors:

Several studies have identified owner related delay factors to cause schedule delays. Aibinu and Odeyinka [9] concluded that Clients' cash flow problems, variation orders and slow decision making were critical. In a separate study, [10] observed that lack of incentive for contractors for early finish and slow decisions from owners were critical. Al-Khalil and Al-Ghafly considered delay in making progress payments by the client as critical. Al-Kharashi and Skitmore [10] identified lack of finance to complete the works and slow decision making by the owner as having greatest impacts to delays. Arditi et al., [12] identified delay in payments to contractor and frequent change orders had the greatest effect. Assaf and Al-Hejji [13] identified the owner related delay factors as; delay in progress payments by owner, delay to furnish and deliver the site to the contractor by the owner, change orders by owner during construction, late in revising and approving design documents by owner, delay in approving shop drawings and sample materials, poor communication and coordination by owner and other parties, slowness in decision making process by owner, conflicts between joint-ownership of the project, unavailability of incentives for contractor for finishing ahead of schedule and suspension of work by owner.

Assaf et al., [14] identified intermitted stoppage of works due to cash flow challenges and delays in making progress payment to the contractor as the main causes under this category. Chan and Kumaraswamy [15] identified client initiated variations, unrealistic contract durations imposed by client and low speed of decision making as key. El-Razek et al., [16] identified delays in effecting payments to contractors and slow decision making process were critical causes of delays. Faridi and El-Sayegh [17] identified slowness in owner's decision-making process and changes in materials type and specification during construction by the owner as factors that contribute to causes of delay under this category. Gündüz, et al., [7] identified change orders, delay in site delivery and slowness in decision making as the most significant factors under this category. In a separate study, Hemanta et al., [8] identified slow decision from owner and unrealistic time schedule imposed in contract as causes of

delays. Iyer and Jha [18] identified the factors of vested interest of client's representative in not getting the project completed in time, project completion date specified but not yet planned by the owner and urgency emphasized by the owner while issuing tenders as key causes under this category. In a separate study, Kumaraswamy and Chan [19] identified client initiated variations as a major cause of delay. Lo et al., [21] identified the factor of unrealistic contract duration as the major cause of delay under the client related category. Mansfield et al., [22] identified the factors of financing and payment of completed works and design changes by client as key causes of delays. Nkado [25] identified the factors of specified sequence of completion, priority on construction time, financial ability and possible changes to initial design as the major causes of delay under this category. Olawale and Sun [23] identified the factors of design changes by client, and financing and payment for completed works as main causes of delays. Sambasivan and Soon [24] identified the factors of inadequate client's finance and payments for completed works, owner interference and slow decision making as critical causes of delays under the client-related category.

4. External Related Delay Factors:

Several studies have identified external related delay factors category as one of the groups of causes of schedule delays in construction projects. Aibinu and Odeyinka [9] observed that price escalation, inclement weather, labour disputes and strikes, government regulations, slow permit by government, civil disturbances and acts of God consecutively were critical. In a separate study, delay in obtaining work permits from authorities was ranked as the most significant cause of delay by [9]. Arditi et al., [12] identified unfavourable weather conditions as the major cause of external related delays. Assaf and Al-Hejji [13] identified the external related delay factors as; effects of subsurface conditions (e.g. soil, high water table, etc.), delay in obtaining permits from municipality, hot weather effect on construction activities, rain effect on construction activities, unavailability of utilities in site (such as, water, electricity, telephone, etc.), effect of social and cultural factors, traffic control and restriction at job site, accident during construction, differing site (ground) conditions, changes in government regulations and laws, delay in providing services from utilities (such as water, electricity), delay in performing final inspection and certification by a third party. Assaf and Al-Hejji [13] also identified legal disputes and ineffective delay penalties, shortage of construction materials in market, and delay in manufacturing special building materials as factors that contributed to delays. Assaf et al., [14]

identified delay in manufacturing building materials and delays in obtaining permits from authorities as the main cause of external-related delay. Chan and Kumaraswamy [15] identified unforeseen ground conditions and long waiting time for approval of drawings as critical factors. El-Razek et al., [16] identified unfavourable weather conditions as key. Faridi and El-Sayegh [17] identified the factors of subsurface soil conditions and unfavourable weather conditions as contributors to delays. Gündüz, et al., [7] identified delay in obtaining permits, global financial crisis and unexpected surface and subsurface conditions as the key factors.

A study conducted by [8] revealed that extreme weather conditions and obtaining permission from local authorities were critical in causing delays. In a separate study, [18] identified the factors of harsh climatic conditions at the site, hostile political and economic environment and hostile social environment as key contributors to delays. Kumaraswamy and Chan [19] identified unfavourable weather conditions as a factor causing delay. Ling and Hoi [20] assessed external related delays in terms of natural risks (weather systems and geological systems) and political risks that include war, civil disorder and industrial relations actions that affect the progress of the project. Lo et al., [21] identified the factors of environmental restrictions, slow coordination and seeking of approvals from concerned authorities, uncontrollable external factors and inclement weather were key in causing delays within this category. Mansfield et al., [22] identified the factors of changes in site conditions and inclement weather as causes of external related delays. Nkado [25] identified the factors of unfavourable weather and regulations are key causes of delays. Olawale and Sun [23] identified the factors of unpredictable weather conditions, dependency on imported materials, inflation of prices, weak regulation and control and unstable government policies as causes of delay. Sambasivan and Soon [24] identified the main causes under external-related delays as unfavorable weather conditions, regulatory changes, problems with neighbors and unforeseen site conditions.

IMPACT OF CONSTRUCTION DELAYS:

The effect of construction delays carries a rippling effect on the contracting parties and the citizens in an economy. Unlike the causes that may have some geographical restrictions, the impact is universal in nature. In the survey conducted by Sambasivan and Scon (2007), they ranked the feedback from the respondents in terms of the frequency of responses received for individual effects identified. It turned out that all the respondents chose time and cost overrun giving it the highest ranking.

Cost overrun will be the cost in excess of the estimated project cost. This excess cost is an inconvenience to the parties to the construction project. In the case of government, tax payers' are not getting value for money as a result of the cost overrun. Similarly for the contractors, they experience abnormal losses and sometimes a cash flow crisis. To the consultants, it remains a dent in their reputation as clients lose confidence in their execution plan (Mbachu and Nkado, 2004).

Another effect of construction delays is the total abandonment of projects. Delays in construction projects can lead to the parties abandoning the project entirely. If a construction project gets abandoned, it reduces employment opportunities, slows down economic activities, government loses revenue and foreign investors get deterred from funding construction projects in the economy. Aside these, there is a serious damage to the reputation of the parties to the construction contract.

CONCLUSION:

Delays are inevitable; however, they can be avoided or minimized when their causes are effectively identified and analyzed. In summary, delays in construction projects are a widely researched area for which more researches are constantly being carried out. Due to the wide coverage of construction projects in terms of size, type, geography and so on, there is still the need to investigate the causes and assess the effect of delays on various construction projects at various levels. This may eventually lead to the much needed development in the industry. For this reason, this researcher sought to analyze the construction of government road projects in Kurdistan Region to address the inefficiencies in the system and prescribe some solutions to mitigate them.

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