Critical Factors Causing Delay in Steel Construction

Projects in Jordan

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This thesis (Critical factors causing delay in steel construction projects in Jordan) was successfully defended and approved on (10-1-2019)

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DEDICATION

This thesis is dedicated to my family, parents, friends and teachers have been a strong and steadfast support in my master journey. They taught me the value of life and faithful love. I can’t fully express in words for insightful comments and encouragement that and Dr. Walid Hasan gave me.
ACKNOWLEDGEMENT

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Special thanks are attributed for his patience, help and valuable support during this study. I also extend my thanks to my friends for their help and support.

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ABSTRACT

Throughout the past decades and until this very moment the world trends toward the steel construction infrastructure due to the many benefits that this type of buildings affords; from the flexible and sustainable steel as a building material to the strong and durable facility as a structural steel construction. However, the most significant factors to adopt the steel construction around the world and in the Hashemite kingdom of Jordan as a developing country in particular is the economic benefits that the steel infrastructures afford in contrast with what the ordinary reinforced concrete structures are afford. Yet the delay in such projects leads to overrun the cost.

This study conducted on the most critical reasons behind the delay of steel projects in Jordan, the importance of this research come from the enormous benefits that Jordan as a developing country would gain from improving the steel construction industry; economic durability and sustainability. Nevertheless, as the delay of construction affects all the other aspects of the project, it is essential to study those delay factors in order to provide solutions specially for the cost which considered the most significant factor to decide whether the project management was successful or not.

This study conducted from a Jordanian perspective to identify the most critical barriers to commit to the steel construction projects in Jordan, those barriers related to; (1) owner, (2) contractor, (3) materials, (4) labor, (5) equipment, (6) project, (7) consultant, and (8) extra circumstances. Data collected from specialists of both the private and public sectors, the questionnaire's population includes; Consultants, Contractors, Owners, with experience ranges from 1 to 5 years to more than 16 years. Through the SPSS software the results had been analyzed and studied. The most ten critical factors are determined and accordingly effective recommendations had been proposed to reduce the time overrun in the steel projects in Jordan thus reduce the cost overrun as well.
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<th>Description</th>
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<tbody>
<tr>
<td>WBS</td>
<td>Work break down structure</td>
</tr>
<tr>
<td>CPM</td>
<td>Critical path method</td>
</tr>
<tr>
<td>ASEC</td>
<td>American society of civil engineers</td>
</tr>
<tr>
<td>CFs</td>
<td>Critical Factors</td>
</tr>
<tr>
<td>AIA</td>
<td>American institution architects</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
</tr>
<tr>
<td>AACE</td>
<td>Association for the Advancement of Cost Engineering</td>
</tr>
<tr>
<td>S. D</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>Sig</td>
<td>Significant</td>
</tr>
<tr>
<td>RII</td>
<td>Relevant Importance Index</td>
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