Critical Factors Affecting the Spreading of Steel Constructions in Jordan

By:

Eng. Rakan Ismail Abu Matar

Supervisor:

Dr. Walid Hasan

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Faculty of Engineering

Isra University

Amman-Jordan

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AUTHORIZATION FORM

I, Rakan Ismail Abu Matar, authorize Isra University to supply copies of my thesis to libraries or establishments or individuals on request, in accordance to the university regulations.

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COMMITTEE DECISION

This thesis (critical factors affecting the spreading of steel constructions in Jordan) was successfully defended and approved on (3-1-2018)

Examination Committee

Associate Dr. Walid Hasan (Supervisor)  
Al Isra University

Dr. Mohammed Salman Al_Lami (Member)  
Al Isra University

Dr. Ghanim A. Bakr (Member)  
Zarqa University
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 priceless love and encouragement that Eng. Ismail Abu Matar, Laila Huzaien, Doctor Ahmad Abu Matar and Rafat Abu Matar gave me in my life.
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ABSTRACT

The aim of this research is to identify the factors that affect the spreading of steel constructions in Jordan, and classify these critical factors into understandable groups for whom would participate in this type of projects and arrange it according to its importance, so this research is important because no one has addressed this subject before in Jordan.

All the informations were analyzed by statistical basis that includes the mean value, standard deviation and test failure indicator to determine the critical factors and weather to accept or reject the hypothesis.

Nineteen factors were identified from the references, researches and interviews and they were divided into four groups. Two hundred and forty questionnaires were handed and one hundred fifty eight were filled and that equals 66%.

Seven factors were taken into consideration as critical factors with different levels of effects. And they are (1) nonacceptance of the society of steel construction projects, (2) High cost of steel construction projects, (3) No tax exemption for residential and commercial steel constructions compared with industrial constructions, (4) Lack of specialized labor, (5) Lack of specialized companies in the field of steel constructions, (6) Lack of engineers specialized in steel constructions and (7) Lack of knowledge in international codes.

These factors are belonging to three groups, namely, factors related to manufacturing and installation, factors related to human competencies, and factors related to external issues.

Two groups were considered to have the major effect on the speeding of steel constructions in Jordan, but the last group which is factors related to manufacturing and installation had one factor it was excluded.
Finally, some results and recommendations were mentioned that would help in the spreading of steel constructions in Jordan.
ملخص البحث

الغرض من هذا البحث تحديد العوامل المؤثرة على انتشار البناءات الفولاذية بالأردن وتصنيف العوامل الحرجة إلى فئات مفهومة لكل من يشارك في البناءات وتصنيفها بالنسبة إلى أهميتها. ويعتبر هذا البحث مهم لعدم تطرق أحد في الأردن إلى هذا الموضوع.

المعلومات تم تحليلها عن طريق أسس إحصائية شملت المتوسط الحسابي، الإنحراف المعياري والاختبار الفشل لتحديد العوامل الحرجة واختبار قبول الفرضية أو رفضها.

تسعة عشر عامل تم تحديدها عن طريق قراءة الكتب والبحوث وعمل المقابلات وتم تقسيمها إلى 4 مجموعات. تم توزيع مئتان وأربعون استبيان واسترجع مئة وثمان وخمسون استبيان أي ما نسبته 66%.

7 عوامل تم اعتبارها لعوامل حرجة مع احتلاف تأثيرها وهم عدم تقبل المجتمع للبناءات الفولاذية ارتفاع كلفة البناءات الفولاذية. عدم وجود إعفاء ضريبي للبناءات الفولاذية في مجال الأبنية السكنية والتجارية وحصرها في مجال الأبنية الصناعية. عدم توفر أيدي عاملة متخصصة. عدم توفر شركات متخصصة في مجال البناءات الفولاذية. عدم توفر مهندسين متخصصين في البناءات الفولاذية. عدم الدراية الكافية بالكودات العالمية.

تم تصنيف هذه العوامل إلى ثلاث مجموعات وهي العوامل المتعلقة بالتصنيع والتركيب، العوامل المتعلقة بالكفاءات البشرية والعوامل التي تتعلق بالأمور الخارجية.

العوامل التي يمكن أن يكون لها التأثير على عدم انتشار البناءات الفولاذية بالأردن وهما مجموعة العوامل المتعلقة بالتصنيع والتركيب لكونها على جملة واحدة حرجة. ومجموعة العوامل التي تتعلق بالإدارة.}

وأخيراً ذكرت بعض النتائج النهائية والتوصيات التي من شأنها المساعدة في نشر البناءات الفولاذية بالأردن.
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<td>Analytical Hierarchy Process</td>
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<td>PS</td>
<td>Project Success</td>
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<tr>
<td>CSFs</td>
<td>Critical Success Factors</td>
</tr>
<tr>
<td>CFs</td>
<td>Critical Factors</td>
</tr>
<tr>
<td>PIP</td>
<td>Project Implementation Profile</td>
</tr>
<tr>
<td>SFs</td>
<td>Success Factors</td>
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<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
</tr>
<tr>
<td>ISO</td>
<td>International Organization for Standardization</td>
</tr>
<tr>
<td>PQMS</td>
<td>Project Quality Management System</td>
</tr>
<tr>
<td>PMI</td>
<td>Project Management Institute</td>
</tr>
<tr>
<td>IPMA</td>
<td>International Project Management Association</td>
</tr>
<tr>
<td>PERT</td>
<td>Program Evaluation and Review Technique Evaluation System</td>
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<td>Sig</td>
<td>Significant</td>
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