



إسراء
Isra University

**Critical Factors Affecting the Spreading of Steel
Constructions in Jordan**

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**This Thesis is Submitted in Partial Fulfillment of the Requirements for obtaining the Master's
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AUTHORIZATION FORM

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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 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 الانشاءات الفولاذية بالاردن, وتصنيف العوامل الحرجة الى فئات مفهومة لكل من يشارك في الانشاءات وتصنيفها بالنسبة الى اهميتها, ويعتبر هذا البحث مهم لعدم تطرق احد في الاردن الى هذا الموضوع.

المعلومات تم تحليلها عن طريق أسس احصائية شملت المتوسط الحسابي, الانحراف المعياري وإختبار مؤشر الفشل لتحديد العوامل الحرجة وإختبار قبول الفرضية أو رفضها.

تسعة عشر عامل تم تحديدها عن طريق قراءة الكتب والبحوث وعمل المقابلات وتم تقسيمها الى 4 مجموعات, تم توزيع منتان واربعون استبيان واسترجع مئة وثمان وخمسون استبيان اي ما نسبته 66%.

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

تم تصنيف هذه العوامل الى ثلاث مجموعات وهي العوامل المتعلقة بالتصنيع والتركيب, العوامل المتعلقة بالكفاءات البشرية والعوامل التي تتعلق بالامور الخارجية.

مجموعتان لم يكن لهم التأثير على عدم انتشار الانشاءات الفولاذية بالاردن وهما مجموعة العوامل المتعلقة بالتصنيع والتركيب لكن شملت على عامل واحد حرج, ومجموعة العوامل التي تتعلق بالادارة.

وأخيرا ذكرت بعض النتائج النهائية والتوصيات التي من شأنها المساعدة في نشر الانشاءات الفولاذية بالاردن.

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LIST OF ABBREVIATIONS

AHP	Analytical Hierarchy Process
PS	Project Success
CSFs	Critical Success Factors
CFs	Critical Factors
PIP	Project Implementation Profile
SFs	Success Factors
SPSS	Statistical Package for Social Sciences
ISO	International Organization for Standardization
PQMS	Project Quality Management System
PMI	Project Management Institute
IPMA	International Project Management Association
PERT	Program Evaluation and Review Technique Evaluation System
S. D	Standard Deviation
Sig	Significant
RII	Relevant Importance Index