



Cairo University

MULTI CRITERIA DECISION SUPPORT SYSTEM TO ASSESS CONSTRUCTION DISPUTES' NEGOTIATION PROCESS IN CONSTRUCTION PROJECTS IN EGYPT

By

Maged Mohamed Azab Swelam

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree of
DOCTOR OF PHILOSOPHY
in
Structural Engineering

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
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Title of Thesis:

Multi Criteria Decision Support System to Assess Construction Disputes'
Negotiation Process in Construction Projects in Egypt

Key Words:

Construction; Dispute; Negotiation; Assessment; Egypt

Summary:

Escalation of Construction Disputes cause schedules delays, money loss, quality defects and lawsuit measures to resolve. Negotiation between parties is the first step to resolve disputes and is influenced by many factors among which is the Personality Traits (PT) and the Conflict Management Styles (CMS) of the negotiators. Good negotiators know the right time to engage and balance between needs and competences, long-term, fruitful relations and mutual financial benefits. Limited number of Companies in construction industry in Egypt and all over the world have systematic automated process for negotiation team selection, negotiation team performance evaluation and measurement of negotiation process Key Performance Indicators (KPIs). Hence, it is the aim of this research to establish a rigorous and well-established decision support system that process collected data through its different modules as an essential step in ensuring a successful outcome to construction disputes negotiation.

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

"إِنَّمَا أَمْرُهُ إِذَا أَرَادَ شَيْئًا أَنْ يَقُولَ لَهُ كُنْ فَيَكُونُ -

فَسُبْحَانَ الَّذِي بِيَدِهِ مَلَكُوتُ كُلِّ شَيْءٍ وَإِلَيْهِ تُرْجَعُونَ"

صدق الله العظيم

يس - الآيتان 82 و 83

In the Name of Allah, the Most Gracious, the Most Merciful

" Verily, when He intends a thing, His command is to be and it is - So glory to Him in Whose Hands is the dominion of all things: and to Him we will be all brought back. "

"The Noble Qur'an - Surah Yassin – Verses 82 and 83"

Disclaimer

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute.

I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

Name:

Date:/...../.....

Signature:

Dedication

To my father (Mohamed Swelam) who passed away on 17 December 2018, for all his support during my entire life. He taught me everything I know. Although he is no longer physically present in my life, I still feel his impact every day.

I would not be this person without his influence.

It was his dream and I wish he was here to witness this very special moment

This PhD is for his memorial

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