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ENGINEERING PROJECT MANAGEMENT IN THE INTERNATIONAL CONTEXT: A CHINESE CULTURE-BASED EXPLORATORY AND COMPARATIVE EVALUATION

by

DONGDONG JIANG

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Declaration

I declare that the thesis, which I hereby submit for the degree Philosophiae Doctor (Project Management) at the University of Pretoria, is my own work and has not been previously submitted by me for a degree at another University.

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Dongdong Jiang

Summary

ENGINEERING PROJECT MANAGEMENT IN THE INTERNATIONAL CONTEXT: A CHINESE CULTURE-BASED EXPLORATORY AND COMPARATIVE EVALUATION

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Dongdong Jiang

Supervisor: Prof Leon Pretorius

Department: Department of Engineering and Technology Management

UNIVERSITY OF PRETORIA

Degree: PhD

Much of the research in project management focuses on developing better scheduling techniques in order to generate successful engineering and construction projects. However, with the advent of globalisation, project management is not only a domestic endeavour. Better scheduling techniques are not necessarily sufficient to ensure the successful completion of projects. Working with people with different cultural backgrounds and managing in foreign cultural areas is very common today. Cultural differences can actually affect project success and specifically the success of projects of a technological nature.

Five typical Chinese cultural behaviours are identified and discussed in terms of philosophy of life, the "face" issue, personal relationships, communication and conflict solving. The

effects of these cultural behaviours on communication, negotiation, conflict resolution, contract process and project team-building are researched through a designed survey questionnaire. Although the questionnaire is designed based on the Chinese culture, South African project managers have also been asked to participate in order to illustrate the cultural differences, where applicable. Researchers and practitioners still find it difficult to define what constitutes cultural differences and how to mitigate the influence of cultural differences on engineering projects. Data analysis and survey results for cultural effects on international engineering team performance are presented in this thesis and a method to mitigate the effect of cultural difference is conceptualised. This thesis contributes to the knowledge of managing engineering and construction projects in multicultural environments specifically in the international context. Moreover, a conceptual model has been developed and evaluated to indicate and explore the relationships between cultural differences, Chinese behaviours, project activities, project management processes and mitigation methods, from the South African and Chinese perspectives.

Keywords

International project management; cultural difference; Chinese behaviours, project activities.

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List of Acronyms

AEC: Architecture, Engineering and Construction

AHP: Analytical Hierarch Process

BOOT: build-own-operate-transfer

BOT: build-operate-transfer

DB: design-build

DBB: design-bid-build

DBIO: design-build-improve-operate

DBO: design-build-operate

DBOM: design-build-operate-maintain

DBOT: design-build-operate-transfer

EIA: Environment Impact Assessment

ICB: IPMA Competence Baseline

ICT: Information and Communication Technology

IPM: International Project Management

IPT: International Project Team

KPIs: Key Performance Indicators

NPEC: Net Project Execution Cost

NPOV: Net Project Operation Value

PM: Project Management

PMBOK: the Project Management Body of Knowledge

PMS: Proposed Mitigating Solutions

PPP: public-private partnerships

Super-TKY: super-turnkey

TKY: turnkey