

UNIVERSITY OF SOUTHERN QUEENSLAND



**IDENTIFYING THE CIO ROLE CONFIGURATIONS ACROSS
THE ORGANISATIONAL LIFE CYCLE STAGES**

A Dissertation submitted by

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ABSTRACT

Arrival of the information age has made the role of the chief information officer (CIO) as vital as other C-suite managers. Since the emergence of the CIO role in the early 1980s, much has been written about it. However, its role remains ambiguous and ill-defined. It is anticipated that one of the main reasons for the lack of clarity and the ambiguity of the CIO role is that the organisational contingencies that shape that crucial role in an organisation have not been considered. The purpose of this research is to identify the role's configuration for the chief information officer (CIO) across the organisational life cycle (OLC) stages. A quantitative study using component-based SEM was deployed to address three research questions and six hypotheses. This research takes a novel approach to investigate these questions and related hypotheses by empirically examining the relationship between a five stage model of the organisational life cycle and a configuration of six CIO roles. Data were obtained from 174 CIOs through a large scale Australia-wide survey. Findings suggest that the configurations of the CIO role differ across the five stages of the OLC. Results also revealed that CIOs tend to concentrate on the operational (or supply) side role during the early stages of the OLC, whereas a strategic (or demand) side role is predominant in the later stages and in the decline stage of the OLC. Furthermore, no significant interaction effects have been found for organisational information intensity and strategic IT vision which has been proposed to moderate the relationship between the independent variables of this study (the OLC stages) and its dependent variables (the CIO roles). The empirical findings of this study were used to develop the integrated OLC-CIO role framework that can be used to establish stage-wise thinking and improve situational awareness for modern CIOs. This research made several important contributions to existing knowledge and practice and adds substantially to our understanding regarding the role of the CIO in different stages of the OLC. Theoretically, this research has contributed to the growing body of knowledge by conducting an extensive review of the existing literature and addressing an existing gap—that is, investigating the CIO roles across different stages of the organisational life cycle.

This research provided support to the OLC and CIO role theories, validated and modified two instruments, introduced two new definitions, and applied and evaluated PLS/SEM in testing complex model competently. The integrated OLC-CIO role framework developed in this study has many useful implications for practitioners, organisations' top management, and for specialist education and training institutes responsible for preparing future CIOs. The limitations of this study are acknowledged and a number of suggestions for future research are provided that build on the theoretical and practical contributions of this study.

CERTIFICATION OF DISSERTATION

I certify that the ideas, results, analysis, and conclusion reported in this dissertation are entirely my own effort, except where otherwise acknowledged. I also certify that the work is original and has not been previously submitted for any other award. To the best of my belief, the thesis contains no material previously published or written by another person, except where due reference is made in the thesis itself.

..... /12/2014

Moyassar Zuhair Al-Taie

Endorsement

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Michael Lane, Principal Supervisor

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Aileen Cater-Steel, Associate Supervisor

CANDIDATE'S PUBLICATIONS

During the course of the research, a number of publications were published.

I was the primary author of the following co-authored publications:

Al-Taie, Moyassar, Lane, Michael and Cater-Steel, Aileen (2014) 'A past to present journey: A critical examination of the role of the chief information officer'. In: Manish Wadhwa & Alan Harper (eds.) Technology, Innovation and Enterprise Transformation" Advances in Business Information Systems and Analytics (ABISA) series, IGI-Global, Hershey, PA, USA.

Al-Taie, Moyassar, Lane, Michael and Cater-Steel, Aileen (2013) 'The CIO Role Expectations Instrument: Validation and Model Testing', *Proceedings of the 24th Australasian Conference on Information Systems: Information Systems: Transforming the Future*, 4-6 Dec 2013, RMIT University, Melbourne, Australia.

Al-Taie, Moyassar, Lane, Michael and Cater-Steel, Aileen (2014) 'The Relationship between Organisational Strategic IT Vision and CIO Roles: One Size Does Not Fit All', *Australasian Journal of Information Systems*, vol 18, no.2, pp. 59-89. (Ranked "A" by the Australian Council of Professors and Heads of Information Systems and the Australian Business Deans' Council 'ABDC').

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List of Abbreviations

| | |
|-----------|--|
| CIO | Chief Information Officer |
| CEO | Chief Executives Officer |
| CFO | Chief Financial Officer |
| CTO | Chief Technology Officer |
| COO | Chief Operation Officer |
| TMT | Top Management Team |
| OLC | Organisational Life Cycle |
| IT | Information Technology |
| ICT | Information and Communication Technology |
| IS | Information Systems |
| SEM | Structural Equation Modelling |
| PLS | Partial Least Square |
| CBSEM | Covariance-based Structural Equation Modelling |
| AVE | Average Variance Extracted |
| CR | Composite Reliability |
| SPSS | Statistical Package for Social Sciences |
| H | Hypothesis |
| <i>RQ</i> | Research Question |
| <i>P</i> | Probability Testing for Statistical Significance |
| R^2 | Coefficient of Determination |
| VIF | Variance Inflation Factor |