

**A MODEL FOR SUCCESSFUL IMPLEMENTATION OF
INTERNET-BASED ELECTRONIC COMMERCE
IN BUSINESS OPERATIONS**

by

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**A thesis
submitted for the Degree of
Doctor of Philosophy**

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CERTIFICATE

I certify that this thesis has not already been submitted for any degree and is not being submitted as part of candidature for any other degree.

I also certify that the thesis has been written by me and that any help that I have received in preparing this thesis, and all sources used, have been acknowledged in this thesis.

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Bismillahirrahmanirrahim

**In the name of Allah,
Most Gracious, Most Merciful,
Praise be to Allah, Lord of the Universe,
and Peace and Prayers be upon
His Final Prophet & Messenger Muhammad.**

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ABSTRACT

A MODEL FOR SUCCESSFUL IMPLEMENTATION OF INTERNET-BASED ELECTRONIC COMMERCE IN BUSINESS OPERATIONS

The dramatic impact of Internet-based electronic commerce is attracting a great deal of attention in the business world. It is a reality that Internet-based electronic commerce is still in its infancy and it will take a few more years or a decade before it becomes a full medium of business operations. However, many long vision organisations are implementing Internet-based electronic commerce (e-commerce) in their business operations in order to be able to cope, survive and obtain competitive advantage in this very dynamic, and rapidly changing global business environment. E-commerce refers to moving business-related operations and transactions from paper-based to a fully electronic (digital) environment over the Internet.

Therefore, as we enter the third millennium, business operations all around the world are starting to move inevitably from the traditional method to the Internet-based electronic commerce. Threat or opportunity, e-commerce over the Internet will change the way we do business. The development of Internet-based e-commerce might be seen as one of the most exciting trends in the business marketplace.

Research shows that almost every organisation that wants to stay in business beyond the turn of the century must re-evaluate every aspect of its strategy and operations from customer service to marketing, product development to retailing, and logistics to distribution and all value-added supply chain business processes. That is why Internet-based e-commerce is essential for companies entering a virtual distribution marketplace to survive in this very competitive business environment.

This study attempts to identify, examine, analyse, test and empirically determine the strategic critical (key) success factors (CSFs) in order to develop a comprehensive

model for successful implementation of Internet-based e-commerce in business operations. CSFs were considered in this research from the perspective of Internet-based e-commerce user companies' executives and managers. There is no previous and specific study on the critical success factors for the implementation of Internet-based electronic commerce at the time of this study.

This research consists of two parts. In order to realise the research purpose, the study employed two Focus Group sessions, a pilot-test (pre-test) followed by a comprehensive quantitative survey. Questionnaires were mailed to CEOs, Directors and IS/E-commerce executives/managers from randomly selected e-commerce user companies in Australia. There was no comprehensive business index available for e-commerce user companies at the time of this research. Therefore, e-commerce user companies were randomly selected from the Internet by using one of the most powerful and popular search engines, Yahoo!

The collected data was examined for validity and reliability. Statistical tests included descriptive analysis, Chi-Square goodness-of-fit, canonical correlation analysis, factor analysis, and regression analysis. *As a result of the statistical analysis, the top ten critical success factors for Internet-based e-commerce implementation success were identified.* The ten CSFs were statistically significant for e-commerce implementation success and supported the proposed original research model.

The expected contribution of this study is to identify and provide knowledge on key or critical success factors for companies who have already implemented or plan to implement Internet-based e-commerce in their business operations. The recommended key strategic success factors for Internet-based e-commerce implementation enables executives, managers or practitioners (implementors) to use effectively and efficiently these strategic factors when planning, developing and implementing an e-commerce business operations system over the Internet. This study also provides a basic knowledge for further research on CSF and e-commerce

implementation. E-commerce user companies may also benefit from the results and may be able to utilise the critical success factors for planning purposes.

Further, this research, like any other research, is subject to a number of limitations. However, this is the first study of its kind as far as the researcher is aware. The findings are clear and significantly supported by statistical analysis. Additional research is however needed for better understanding of this new medium of digital business operations.

Finally, a model was developed to present the most critical success factors for successful implementation of Internet-based e-commerce in business operations. It may be said that the developed model is one of the first developments in this field.