Impacts of enterprise resource planning (ERP) on the decision-making process in Australian organisations

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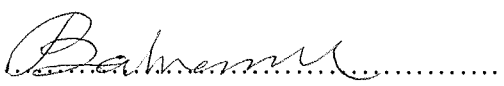
Certification

This thesis is submitted in fulfilment of the requirements of the degree of PhD, in the Macquarie Graduate School of Management, Macquarie University. This represents the original work and contribution of the author, except as acknowledged by general and specific references.

I certify that the research conducted for this thesis has received ethics approval from the Macquarie University Human Research Ethics Committee. Ethics application ref HE25AUG2006-D04856 received approval on 15th September 2006.

I hereby certify that this has not been submitted for a higher degree to any other university or institution.



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Abstract

This research investigated the impacts of the vast amounts of data produced by enterprise information systems on decision-making processes in Australian organisations. Knowledge of the underlying theory is limited, and research in the context of Australian organisations is particularly sparse.

The exploratory stage of this research, therefore, comprised a series of semi-structured interviews with managers and practitioners in order to gain insight into the problem and cater for the lack of established theories. The findings from these interviews, presented as a paper at the PACIS 2009 conference, were used to design the survey instrument used in the second stage of the study. Finally, the findings from interviews and survey were combined with the researcher's professional experience to build a theoretical system dynamics model for gaining a holistic and systematic understanding of participating factors and their interactions and behaviour over a long period of time. This model was used to simulate practical scenarios and conduct sensitivity analyses.

Throughout the research, the topic was investigated from three different perspectives: users' expectations of the ability of enterprise information systems to provide decision-support features and capabilities; exhibition of decision-support features and capabilities in enterprise systems; and realisation of these features and benefits in practice. This study found significant gaps between expectations, exhibition and realisation.

Analysis of the data and experiments with the system dynamics model have led to the development of practical guidelines that could help organisations better utilise their investment in enterprise information system towards more strategic benefits, such as decision making.

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