A coevolutionary framework for engaging trading partners in interorganisational e-commerce

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Statement of Authorship/Originality

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of the requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

Bruce McCabe, December 2006

Production Note:
Signature removed prior to publication.

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Abstract

The objective of this research was to produce a better understanding of the way trading partners engage in interorganisational e-commerce systems in order to help practitioners.

An interpretive philosophical approach was taken via an empirical study of ten e-commerce interorganisational systems, spanning a variety of technological approaches, trading scenarios and industry settings. Using semi-structured interviews, qualitative data were collected and a thematic analysis undertaken. The results suggested coevolutionary theory as a useful perspective for understanding the context. An in-depth case study was then used to build a detailed coevolutionary interpretation for the history of change, technological development and engagement in a single system.

The resulting framework incorporates social and technological components in a three level coevolutionary hierarchy. The e-commerce system is reconceptualised as a socio-technical trading system, and the move to Internet based trading operations as part of the ongoing evolution of that system. Under this interpretation interdependencies and coevolutionary effects, both between components and between levels, lie at the heart of understanding why trading partners are successfully or unsuccessfully engaged in e-commerce. Successful engagement is characterised by positive feedback loops, and failure is characterised by negative feedback loops and whole-part coevolutionary competition.