

**PREDICTING INTENTION TO ADOPT B2B ELECTRONIC
COMMERCE IN JORDAN: THE MODERATING ROLE OF
TRUST AND DEPENDENCY**



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**PREDICTING INTENTION TO ADOPT B2B ELECTRONIC COMMERCE IN
JORDAN: THE MODERATING ROLE OF TRUST AND DEPENDENCY**



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ABSTRACT

Business to Business Electronic Commerce (B2B EC) has great potentials to extend firms' competency and efficiency. As such, Jordan has an objective to increase the diffusion of this technology. Despite extensive government efforts, the adoption of B2B EC is still limited. Consequently, there have been extensive efforts to better understand the phenomena. Yet, documented findings regarding the determinants of the adoption are not altogether consistent. To provide more insight, this study developed a research model utilizing the Technological, Organizational, and Environmental (TOE) framework to identify the determinants of the firms' propensity to adopt B2B EC. Since B2B EC is an inter-organizational phenomenon supporting transactions of partnerships, this study emphasizes the context of partnership characteristics. Grounded on inter-organizational theories, this study hypothesized that partnership characteristics, namely trust and dependency, moderate the role of TOE motivating factors. Moreover, given that B2B EC is used on both sides of the buyer/seller relationship, this study examined the differences and similarities in the perception of the marketing and purchasing departments regarding the determinants of the B2B EC adoption. A total of 798 questionnaires were self-administrated to marketing and purchasing managers in 462 firms that have large registered capital in Jordan. In total, 114 marketing and 125 purchasing managers participated in this study. Marketing and purchasing responses were analyzed separately using the Partial Least Squares approach. The result revealed that the marketing and purchasing departments do have different views regarding the determinants of the adoption, specifically in terms of the role of Relative Advantage and Competition Pressure. Moreover, the results showed that the moderating role of trust was less pronounced. Meanwhile, the moderating role of dependency was partially supported particularly in the purchasing perspective. These findings have demonstrated how dependence asymmetries between trading partners may change the adoption motivations. They further explain the importance of considering the views of the business partner for the adoption to be done successfully.

Keywords: business to business electronic commerce, innovation diffusion, technological, organizational, and environmental framework, resource dependency theory.

ABSTRAK

Business to Business Electronic Commerce (B2B EC) berpotensi untuk meningkatkan kecekapan dan persaingan syarikat. Oleh itu, Jordan telah menetapkan objektif untuk meningkatkan penggunaan teknologi ini. Namun begitu, tahap penggunaan B2B masih terhad. Sehubungan dengan itu, pelbagai usaha untuk meningkatkan pemahaman terhadap fenomena ini telah dilaksanakan. Namun, hasil penemuan kajian-kajian lepas adalah tidak konsisten. Bagi memberi gambaran yang lebih jelas, kajian ini membangunkan model kajian berdasarkan rangka kerja Teknologi, Organisasi dan Persekitaran (*Technological, Organizational and Environmental*) (TOE) bagi mengenal pasti kecenderungan syarikat untuk mengguna pakai B2B EC. Memandangkan B2B EC adalah fenomena antara-organisasi yang menyokong perkongsian transaksi, kajian ini turut menekankan elemen berkaitan perkongsian iaitu Kepercayaan dan Kebergantungan yang menjadi moderator kepada faktor-faktor TOE. Tambahan pula, B2B EC diguna pakai oleh dua-dua pihak iaitu hubungan antara pembeli/penjual. Oleh itu, kajian ini mengenal pasti perbezaan dan persamaan persepsi jabatan pemasaran dan jabatan pembelian mengenai faktor penentu terhadap penggunaan B2B EC. Secara keseluruhannya, sebanyak 798 borang soal selidik adalah ditadbir sendiri kepada pengurus pemasaran dan pengurus pembelian di 462 buah syarikat modal berdaftar di Jordan. Seramai 114 pengurus pemasaran dan 125 pengurus pembelian telah terlibat dalam kajian ini. Maklum balas responden daripada kedua-dua pihak telah dianalisis secara berasingan dengan menggunakan pendekatan *Partial Least Square*. Keputusan kajian menunjukkan bahawa jabatan pemasaran dan pembelian mempunyai pandangan yang berbeza mengenai faktor penentu terhadap penggunaan B2B EC, khususnya terhadap faktor berkaitan dengan Tekanan Persaingan dan Manfaat Relatif. Selain daripada itu, keputusan juga menunjukkan bahawa peranan moderator bagi faktor Kepercayaan adalah tidak signifikan bagi kedua-dua kumpulan berkenaan. Manakala, peranan moderator untuk faktor Kebergantungan hanya signifikan daripada perspektif jabatan pembelian. Penemuan ini menunjukkan bagaimana perbezaan tahap Kebergantungan antara rakan niaga mampu mengubah tahap motivasi penggunaan B2B EC. Kajian ini juga turut menjelaskan keperluan untuk mengambil kira pandangan pihak rakan niaga bagi membolehkan penggunaan aplikasi B2B EC dilaksanakan dengan jayanya.

Kata kunci: *Business to Business Electronic Commerce*, difusi inovasi, Rangka Kerja Teknologi, Organisasi, dan Persekitaran (TOE), Teori Kebergantungan terhadap Sumber.

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RELATED PUBLICATION

- 1- Alsaad, A. K., Mohamad, R., & Ismail, N. A. (2015). Perceived Desirability and Firm's Intention to Adopt Business to Business E-Commerce: A Test of Second-Order Construct. *Advanced Science Letters*, 21(8), 2028–2032.
- 2- Alsaad, A. K., Mohamad, R., & Ismail, N. A. (2014). The Moderating Role of Power Exercise in B2B E-commerce Adoption Decision. *Procedia - Social and Behavioral Sciences*, 130(C), 515–523.



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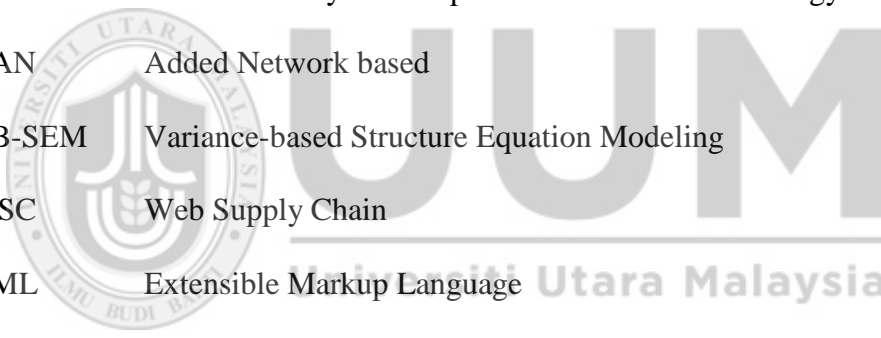
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LIST OF ABBREVIATIONS

AVE	Average Variance Extracted
B2B EC	Business to Business Electronic Commerce
CB-SEM	Covariance-Based Structure Equation Modeling
CCD	Companies Control Department
DOI	Diffusion of Innovation
EDI	Electronic Data Interchange
ESC	Electronic Supply Chain
ESCWA	Economic and Social Commission for Western Asia
GDP	Gross Domestic Product
HOC	Higher-Order Construct
ICT	Information Communication Technology
IOIS	Inter-Organizational Information Systems
IOS	inter-organization system
IS	Information System
IS/IT	Information Technology/Information Systems
MOICT	Ministry of Information and Communications Technology
NRI	Networked Readiness Index
OR	Organization Readiness
PLS	Partial least square
RAT	Reasoned Action Theory
RDT	Resource Dependence Theory
REACH	Jordan's first national information technology strategy

RFID	Radio-Frequency Identification
SEM	Structure Equation Modeling
SME	Small and Medium-Sized Corporation
SPSS	Statistical Package for Social Sciences
TAM	Technology Acceptance Model
TCE	Transaction Cost Economics
TMS	Top Management Support
TOE	Technological, Organizational, and Environmental framework
TPB	Theory of Planned Behavior
TTF	Technology-Task-Fit
UTAUT	Unified Theory of Acceptance and Use of Technology
VAN	Added Network based
VB-SEM	Variance-based Structure Equation Modeling
WSC	Web Supply Chain
XML	Extensible Markup Language



CHAPTER ONE: INTRODUCTION

1.1 Research Background and Motivation

Nowadays, Information Technology (IT) is widely diffused in a firm's internal operations and processes. It is rare to find firms that do not automate all or some of their internal functions such as accounting, production, and/or human resources activities. The revolution in Information Communication Technology (ICT) offers many opportunities that enable firms to improve their relationship among customers, suppliers and other business partners. With this advancement, it seems there is no technical barrier that could prevent organizations from taking steps to transcend organizational borders and connect with trading parties electronically. In general, IT that mediates the inter-firm transaction is labeled in different ways. For instance, prior studies label these technologies as inter-organization information systems (Sila, 2010), e-commerce systems (Cullen & Taylor, 2009), e-business systems (Wiengarten, Humphreys, Mckittrick, & Fynes, 2013) or electronic supply chain management systems (Lin, 2013a). This study categorizes these technologies as Business to Business e-commerce (B2B EC), since it organizes transaction between businesses (Sila, 2013).

B2B EC systems provide several potentials. They enhance the transmission of information and communication in real time (Dedrick, Xu, & Zhu, 2008; Ranganathan, Teo, & Dhaliwal, 2011; Wu, Zsidisin, & Ross, 2007; Yao & Zhu, 2012). In addition, they enable tighter business process' integration between trading partners. In this manner, B2B EC assists in increasing information availability, processing capacity, and coordination efficiency. These potentials can also provide

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