Electronic Logistics Services: The Mobile Phone Industry in Taiwan

Yen-Chun Jim Wu, National Sun Yat-sen University, Kaohsiung, Taiwan
Chan-Lan Chang, Stu-Te University, Kaohsiung, Taiwan
Tse-Ping Dong, National Taiwan Normal University, Taipei, Taiwan

ABSTRACT

This study begins with discussing the relationship between the marketers’ organizational performance and E-marketing performance in the Taiwan’s mobile phone industry. From the perspective of dealers, this study discovers the effects on Relationship Quality, which generated by expected benefits derived from implementing the interorganizational information system on the management of marketing activities. The authors conducted Structural Equation Modeling approach on marketers and dealers respectively. The quality of the information system will affect marketers’ intention to use. Research findings also suggest that the system quality and information quality will affect marketers’ satisfaction and then will affect the Relationship Quality among dealers. From the implementation of information systems, the Relationship Quality has positive effects on the expected strategic benefits, informational benefits and transactional benefits. Therefore, combining the two perspectives from marketers and dealers, this study examines how the E-marketing channel contributes the effects of Relationship Quality on both marketers and dealers.

Keywords: DeLone & McLean Model, e-Marketing, Information Systems, Mobile Phone, Relationship Quality

INTRODUCTION

Barry (2004) mentioned that the application of internet to provide a platform for e-Business is a common phenomena. The internet technology of e-Commerce pushes enterprises to inspect their logistics services and look for more effective and innovative ways to distribute their products (Vlosky & Westbrook, 2002). On the other hand, the popularization of internet forces marketing managers to prioritize internet-related issues (Webb & Hogan, 2002). It can be said that how to connect information technology and internet with the enterprise features has become a huge challenge to entrepreneurs.

According to ‘Telecommunications Competitiveness Analysis in Taiwan (II)’ conducted by the Ministry of Transportation and Communications of Taiwan (MOTC, 2003), Taiwan’s telecommunications competitiveness is ranked in the sixth place in the world in 2002. Furthermore, in the Digital Access Index (DAI), conducted by ITU, Taiwan is ranked in the 9th placed in terms of Information and Communi-

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cation Technology (ICT) (ITU, 2003). During 2001 and 2002, the penetration rate of mobile phone subscribers exceeds 100% and reaches 105.6%, which is on top of the world. Up to the present, every person in Taiwan has at least one mobile phone on average. Though the penetration rate seems to drop a bit, many international enterprises locate Taiwan as the test market for their Asian products. With respect to the rise of China, for those enterprises who would like to enter this emerging market, Taiwan is the best choice for testing projects (MOEA, 2006), due to the linguistic and cultural similarities.

The development of mobile phones has added more and more features to it, such as PDA, digital camera, voice and image recording, internet connections, Bluetooth technology, etc. However, the logistics services of mobile phones in Taiwan are not developed with the device: the supply chain largely remains in manual operation, such as the product distributions between agents and the salespersons’ service to agents. In comparison, mobile phones are more advanced than the logistics service of it in terms of information technology.

With regard to fast-moving consumer goods, such as mobile phone; the competition in the industry is fierce. New products have to be produced constantly to meet the demands of the changing market. While the product life circle is shortened, the errors of manual operation should be decreased, the supply chain should be effectively managed, the relevant information should be collected and updated all the time for the reference of the entrepreneur to make decisions and do analysis, so that new marketing channels can be identified and the competitive capacity of an enterprise can be enhanced.

The main theme runs through is study is how logistics services influence on Relationship Quality, exploring how electronic logistics services in relation to the Relationship Quality. On the one hand, this study investigates how electronic logistics services are brought into the industry by a certain major mobile phone manufacturer in Taiwan. On the other hand, this study targets at agents to analyze their anticipated profits and anticipated improvement of the Relationship Quality after the use of electronic logistics services. Overall, this study attempts to present a holistic view over electronic logistics services and organizational effectiveness, which hopefully provides useful information for mobile phone enterprises in building their electronic logistics services. Consequently, the research questions are as follows:

1. What’s the extent of raising the profits for mobile phone enterprises if the logistics service is upgraded to electronic logistics services?
2. Which factors of the information system of electronic logistics services would influence organizational profits? What’s the extent of this influence?
3. After the agents use the information system of electronic logistics service to manage the cooperation with their associated enterprises, how would the anticipated profits influence their Relationship Quality? What’re the possible factors of the influence? What’s the extent of the influence?

LITERATURE REVIEW

Delone & McLean Model

DeLone and McLean (1992) review 100 papers, published during 1981 to 1987, with a variety of topics related to assessing the effectiveness of information system. They find that information system is a multi-dimensional structure, so it is necessary to assess it via six dimensions, including (1) System Quality, (2) Information Quality, (3) Use, (4) User Satisfaction, (5) Individual Impact and (6) Organization Impact. They think that System Quality and Information Quality would influence Use and User Satisfaction, and that Use and User Satisfaction are inter-related and would have influence on Individual Impact, and consequently on Organization Impact. They
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