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## AN EXAMINATION THE IMPLICIT COSTS ON EMERGING ICT-DRIVEN INNOVATIONS

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### ABSTRACT

Innovations have been regarded as the key driver for business to achieve business competitive advantages and survive in a rigorous environment. Businesses need to continuously adopt innovative business models and exploit opportunities from new technologies. The information and communication technologies (ICT) are claimed not only important sources for efficiency, effectiveness, and quality but also essential drivers for business innovations. In particular, the recently emerged social networks and mobile applications have increased the speed of evolving business models and the content of a variety of services.

Social networking services have radically changed our life over past few years. McKinsey & Company indicated that “It took 13 years for commercial television to reach 50 million households and 3 years for Internet service providers to sign their 50 millionth subscribers. Facebook hit the 50 million–user mark in just a year and Twitter in 9 months.” With continuous and seamless interaction between entities, the nature of social networking services keeps consumers stick with these innovations. On the other hand, mobile applications are also accelerating the pace of adoption by worldwide consumers, even in the developing nations. Given the continuously development of networking, mobile devices, and social media applications, those technologies have changed not only the way messages transferring but also the cost, frequency, and speed of transferring. While those innovations have accumulated a pervasive population, more businesses are interested in adopting those emerging ICT-driven innovations in order to capture opportunities in building channels and creating values. However, the characteristics of emerging ICT are totally different from traditional ICT, such as the adopting cost and implementation time.

In difference to traditional technologies such as enterprise resources systems and supply chain systems which require great investment in money and time, emerging ICT present a more accessible and easier way to implement. For instances, Facebook’s Fan-page is a new channel for brands in social networking. This application is effective to access a great number of consumers that most of the worldwide brand such as Coca-Cola, Disney, and McDonald's have created Fan-pages to seamlessly promote services and closely interact with netizen. In addition, this application is free and even a start-up company can offer. As a platform to communicate with consumers, Fan-page communication as well as other innovative applications, such instant messaging, social games, and mobile ordering, are characterized with a consumer-to-consumer communication and a low cost of establishment.

In spite of the convenience characteristics of the social technology, potential problems may exist. The technological convenience may lead businesses easy adopt and easy drop the innovation without further consideration. This research tries to examine the unexpected results associated with the dropping of the emerging social technology and provide a framework of the implicit costs associated with the termination of business model innovations.

Related to the explicit costs such as material, equipment, wage, and other expenses, the implicit costs are easily hidden, unavoidable, and immeasurable. The implicit costs may occur when companies adopt and drop emerging ICT-driven innovations without elaborated consideration. First, distorted messages. The frequency and speed of message transferring is the key characteristics of emerging ICT. While complex and plenty of messages are provided, enterprise decision-makers may become overwhelmed and confused in make accurate and proper decision. Second, the deployed deficiency in the human resources may occur. While all enterprises rely on the deployment of human resources to coordinate the physically and virtually networked resources, most enterprises may notice the cost of human resources in physical stores but ignore the service support needed on virtual platforms. Emerging ICT-driven applications require adequate deployment of the human resources to survive and react to the quickly distributing online WOM (word-of-mouth). Third, the disruption of consumer loyalty. While the online WOM quickly distribute, it would be a crisis when companies don’t deal well with any emergency or negative rumors. Moreover, the nature of Internet have intensified the negotiating power of consumers online. Companies have to carefully treat every consumers and keep away from concentrating and activating the angry netizens.

The objective of this research is to discuss the realistic result of quickly adopted and dropped business innovations with emerging ICT. There are three contributions to the field of innovation study. Given the different characteristics between traditional and emerging technology, the study of emerging ICT innovations can lead to unexpected effects and additional costs which is rarely discussed so far. Second, in difference to most literatures which are focused on the benefit and competitive advantages gained by innovation adopters, this research tries to examine the causes of innovation failures. Lastly, this research tries to provide a framework of implicit costs for companies to plan for the risks in adopting emerging ICT-driven innovations.

*Keywords:* Implicit costs, emerging ICT-driven innovations.