

## ICT for small and medium enterprises

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The intense global competition, technology advances, and rapid changes in the business environment are forcing enterprises to become agile. Corporate agility is about firm's ability to adapt quickly to change, constantly innovate across the value chain, engage the customer to create new value, and be integrated to the global market. Information and communication technology (ICT) plays a critical role in improving corporate agility, especially for small and medium enterprises (SMEs). SMEs need to maintain the competitive edge that they traditionally have over their larger counterparts: their resiliency and agility to adapt while sustaining innovation and strengthening customer relationships. Having access to and adopting ICT, which were not available to previous generations, are helping SMEs not only to achieve and sustain their traditional edge, but also to enable them to expand across customers, products, and geographies, thus growing their market share and expanding globally. Through ICT, SMEs can compete with larger players on a more level playing field and also participate in extended supply chains more effectively. ICT and the Internet are enabling SMEs to be as competitive and successful as large businesses not only at the local, but also at the global level.

The impetus with which ICT has rooted itself in the business world has brought about a veritable revolution whose true consequences and scope are yet to be seen. Effective ICT management is particularly important for SMEs not only because they have much less financial resources to invest in IT and training, but also because they operate differently from large companies. Countries where they operate also have an impact on IT and SMEs, because of differences in technological status and available infrastructure, economic development, government regulations, and cultures.

This special issue "The impact and use of ICT in SMEs" deals with the important issue of improving agility and global competitiveness of SMEs through

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effective management of ICT. For the special issue, six papers were accepted that deal with diverse topics; all deal with critical aspects of ICT application for improving the performance and competitiveness of SMEs.

In the first paper, “Successful implementation of ERP systems in small businesses: a case study in Korea,” Lee, Lee, and Kang discuss about how a small (less than 90 workers) manufacturer was able to successfully implement and benefit from ERP implementation. Benefits were of both quantitative and qualitative in nature. There was a tremendous reduction in inventory loss, decrease in personnel, and improvement in quality of product, corporate image, business opportunities, and employee attitude towards ICT. Factors for such a successful implementation mentioned in this case are: the top management support, successful involvement and commitment of employees in designing and implementing the system, data consistency across departments, government incentives, and continuous support and maintenance from the developer.

Small companies that cannot afford access to expensive enterprise applications that are commonly used by their larger competitors are finding application service providers (ASPs) as an attractive option. Kim, Jeon, and Kim in “An exploratory investigation of application service providers (ASPs) effects in small sized enterprise: a case of Korea Telecom’s Bizmeka in Korea,” surveyed 1,200 small companies that are currently using Bizmeka for the purpose of identifying the factors that affect the perceived benefits of ASP usage in SMEs. Saving cost and time was found to be the most important factor followed by no need for maintenance and the worry of security risks (fear of losing control over systems, network connection, and data). Dependency on legacy systems was not an important factor since small companies, compared to their larger counterparts, have less dependence on such systems. The research concludes that based on these results, ASP is the most appropriate business solution for SMEs than their larger competitors.

Baloco, Andreoni, and Rangone in “e-business applications in SMEs of Italian industrial districts: the textile and wood-furniture cases,” present the results of a study done regarding the adoption of e-business applications in two Italian industrial districts and networks of SMEs. These firms have achieved very high volumes of export worldwide not only because of their high quality products, but also as a result of using ICTs and e-business applications. Through questionnaires and interviews, authors reemphasize and discover some of the opportunities and obstacles for SMEs created as a result of different e-business applications available to them today. On the basis of the result of this study, it seems like the greatest opportunity for SMEs is not the disintermediation, access to new markets, and new businesses, but the improvement in efficiency and effectiveness of interactions among partners in the supply chain.

Open market is not a new phenomenon for e-commerce. It has enabled thousands of individual sellers and users to find consumers for their products. However, the new digital convergence is expanding the open market possibilities in new dimensions never seen before. Jeon, Park, and Digman, in the “Strategic implications of the open market paradigm using digital convergence: the case of small business C2C,” examine the drivers of digital convergence that enable the

open market paradigm. The study provides the direction for open market participants by using a blue ocean framework and an industry analysis, all these illustrated with the Cyworld market of Korea.

Lee, DeWester, and Park, in “Opportunities for small businesses in the Web 2.0 era,” provide a review of Web 2.0 technologies, their advantages, and potential of their usage by small businesses. The mass collaboration and participation by prosumers provide new opportunities to create business models in the Web 2.0 era.

In “Development of ubiquitous computing and its effect on small businesses,” Lee, Park, Yoon, and Hwang present current practices of UbiComp in developed countries. The purpose of this study is finding new potential for successful implementation of UbiComp for small businesses, in general, and laying out strategies that can work for follower countries particularly.

### **The review board for the special issue**

First, we would like to thank the authors who submitted the accepted papers for this special issue on the “Impact of ICT in SMEs.” We believe that these studies would make significant contribution to this important area of IT research. We are very grateful to the following reviewers who made possible to select and refine the contributed papers.

Teuta Cata, Northern Kentucky University, U.S.A.

Silvana Faja, University of Central Missouri, U.S.A.

Seong Bae Lim, SUNY at Geneseo, U.S.A.

David Olson, University of Nebraska Lincoln, U.S.A.

Shanggeun Rhee, Kean University, U.S.A.

Michael Wells, Minnesota State University, U.S.A.