

## Chapter 7.1

# Preparedness of Small and Medium-Sized Enterprises to Use Information and Communication Technology as a Strategic Tool

**Klara Antlova**

*Technical University, Czech Republic*

### **ABSTRACT**

The objective of this chapter is to emphasize issues connected with adoption of information and communication technology (ICT) as a strategic tool contributing to further organizational growth. This understanding is based on the results of a qualitative analysis of a group of small and medium-sized enterprises (SMEs). Gradual development of a group of 30 organizations has been monitored over the last fifteen years during their co-operation with the Technical University of Liberec. These organizations have hosted one-year student placements where students, as part of their Bachelor's degree course, undertake a long term work experience enabling them to integrate the practical and

theoretical aspects of their course. The research focused on SME management's approach to ICT, its utilization for competitive advantage and its relation to and defining of business strategy. Other aspects of the study looked at the effect of ICT on organizational performance, knowledge and skills of the employees, training and organizational culture. The results indicate that successful and growing companies have gradually established business, information and knowledge strategies and make strategic use of ICT.

### **INTRODUCTION**

The current business world is undergoing consistent change. To survive in the current competitive environment companies have to be able to respond

DOI: 10.4018/978-1-60566-892-5.ch019

to such changes. The ability to react quickly to these changes is itself becoming a competitive advantage for small and medium-sized enterprises compared to those that are unable to be as flexible as the other SMEs or larger companies. These companies also demonstrate their ability to work with large companies with which they create new partnerships and strategic alliances. These adaptable companies working in a global environment with the consistent threat of new competition and changing markets, legislation and suppliers, show it is necessary to possess data, information, knowledge and value the experience of their employees. The need for new knowledge and skills requires that employees improve their skills and knowledge continually; by increasing their intellectual capital employees contribute to consistent improvement in services and product innovation. The transformation of intellectual capital into new products and services, however, requires a new approach to management of the organization, a flexible organizational structure and the use of information and communication technologies.

For many SME owners the business represents their lifestyle fulfilling their personal dreams and visions. The research suggests the approach of the owner, age, personality, experience, managerial skills, education, enthusiasm, etc. are important for growth of SME. The owner's approach may be also influenced by mutual relations with other family members who participate in the ownership or run of the organization. Sometimes quite complicated family relations can be observed to have negative impacts on the running of the business.

The structure of this chapter is as follows; the first part analyses ICT adoption in the group of thirty small and medium-sized companies while the second part looks at the most frequent reasons and problems cited as barriers of ICT adoption. Understanding these barriers can help to find better solutions for ICT adoption and implementation in SMEs and to show how successful, growing companies use ICT as a strategic advantage.

## **Definition of Small and Middle-Sized Enterprises**

SMEs are considered as a homogenous group of business entities meeting certain criteria, such as turnover, headcount, but the reality is different. In fact it is better considered a heterogeneous group with differing needs and objectives.

The European Union (EU) defines SMEs according to two sets of criteria. First a set of qualitative criteria which characterizes them as: independent leadership connected with ownership of the company, limited division of production and technologies, limited capital owned by one or several owners, focus on local markets, etc. The second a set of quantitative definitions based on comparison of economical factors, i.e. turnover, capital, number of employees.

The definition used for the purpose of this analysis divides the companies according to the following criteria:

- A **medium-sized company** is considered to be an organization with the number of employees between 50 and 250, with an annual turnover not exceeding € 50 million, or its yearly balance sheet not exceeding € 43 million.
- **Small companies** are defined as companies employing less than 50 employees, with an annual turnover or yearly balance sheet not exceeding € 10 million.
- **Micro companies** are defined as businesses employing less than 10 people, with an annual turnover or yearly balance sheet not exceeding € 2 million.

## **Benefits of SME for Economics**

Based on the long term survey of ICT using in European countries (E-business W@tch, 2007) the economic and social benefits of being a small and middle-sized enterprises are:

18 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/preparedness-small-medium-sized-enterprises/48630](http://www.igi-global.com/chapter/preparedness-small-medium-sized-enterprises/48630)

## Related Content

---

### Enterprise Information Systems for Business Integration in Global International Cooperations of Collaborating Small and Medium Sized Organisations

P. H. Osanna, N. M. Durakbasa, M. E. Yurciand J. M. Bauer (2010). *Enterprise Information Systems for Business Integration in SMEs: Technological, Organizational, and Social Dimensions* (pp. 175-186).

[www.irma-international.org/chapter/enterprise-information-systems-business-integration/38198](http://www.irma-international.org/chapter/enterprise-information-systems-business-integration/38198)

### Smarter Decisions, Faster Results: The Rise of Cognitive Enterprises

Salam Al E'mari, Yousef Sanjalaweand Fadi Fataftah (2026). *Digital Twin Applications and Cognitive Enterprise Transformation Across Industries* (pp. 153-186).

[www.irma-international.org/chapter/smarter-decisions-faster-results/410288](http://www.irma-international.org/chapter/smarter-decisions-faster-results/410288)

### A Success Model for Enterprise Resource Planning Adoption to Improve Financial Performance in Vietnam's Equitized State Owned Enterprises

Long Phamand Jeffrey E. Teich (2011). *International Journal of Enterprise Information Systems* (pp. 41-55).

[www.irma-international.org/article/success-model-enterprise-resource-planning/51616](http://www.irma-international.org/article/success-model-enterprise-resource-planning/51616)

### Competition and Coordination in a Dual-Channel Supply Chain With Asymmetric Retailers

YuHang Zhangand Ying Wang (2018). *International Journal of Enterprise Information Systems* (pp. 98-115).

[www.irma-international.org/article/competition-and-coordination-in-a-dual-channel-supply-chain-with-asymmetric-retailers/203042](http://www.irma-international.org/article/competition-and-coordination-in-a-dual-channel-supply-chain-with-asymmetric-retailers/203042)

### Pricing Outcomes in Dual-Channel Monopoly and Partial Duopoly

Farooq M. Sheikh, M. Ruhul Aminand Nafeez Amin (2007). *Modelling and Analysis of Enterprise Information Systems* (pp. 134-149).

[www.irma-international.org/chapter/pricing-outcomes-dual-channel-monopoly/26846](http://www.irma-international.org/chapter/pricing-outcomes-dual-channel-monopoly/26846)