

MANAGERIAL TOOLS & INTERNET THE SOURCES OF COMPETITIVE ADVANTAGE OF FIRMS

**Mirjana Cicak
Mechanical Engineering in Slavonski Brod
J.J.Strossmayer University of Osijek
Trg I.B.Mazuranic 2, Sl.Brod
Croatia**

**Marina Dabic
Faculty of Economics & Business
University of Zagreb
Trg J.F.Kennedya 6, Zagreb
Croatia**

**Timothy S. Kiessling
Bond University
Faculty of Business, Technology and
Sustainable Development
University Drive, Gold Coast,
Queensland, 4229, Australia**

ABSTRACT

Knowledge of Production technology and information communication technology covers many aspects of the knowledge process in firm. Digital Manufacturing is one of the core strategies of the European Manufacture vision and strategic agenda towards the knowledge based production. It is driven by the application and standardization of information and communication technologies and the increasing demand for the efficiency of operations in global networks.

The knowledge managerial tools and information technology are forming a bridge between knowledge creation and knowledge utilization. On one side they are used to enhance creativity and on the other side, they optimize knowledge work and improve efficiency and productivity. Indicators like productivity, profitability and market share could be improved by using Internet and managerial tools. In this work we try to give insights that can help to understand the role of managerial tools and Internet as a competitive weapon in modern firms.

Keywords: Managerial tools, Internet, competitive advantage

1. INTRODUCTION

Internet has altered the nature of global markets and made it possible to connect to other networks, people, and firms, free from the limitations of time and space. The current development of the broadband Internet access market varies greatly across different countries. The diffusion of such an infrastructure is strategically important for economic growth of every country. The advantage that enables business to survive against its competition over a long period of time is competitive advantage and it is the focal point of corporate strategy at firm. It allows the maintenance and improvement of enterprise's position in the market. With the growth and advancement of the information and communication technology (ICT), competitive advantage plays an important role in today's firm. Competitive advantage is a process monitored by the firm management in order to assess the growth and development of an industry and assess capabilities and behavior of the existing and new competitors. Consequently, information science plays an important role in providing more effective planning and decision making in the firm's business activities.

Today's manufacturing environment is increasingly competitive, with demanding customers which require better and faster products. Satisfying this demand requires more specialized companies, working together in complex networks. This means that management obtains a direct link to every employee in the production system and enhances the quality of leadership.

2. INTERNET, COMPETITIVE ADVANTAGE AND STRATEGIC POSITIONING

Internet has become essential for a wide range of applications and services, today. Networked collaborative firms are a reality; e-business, digital manufacturing and social networks are developing fast and are becoming an essential part of today's globalized world. The basic tool for understanding the influence of information technology on firms is the value chain, the set of activities through which a product or service is created and delivered to customers. In any industry, Internet performs a number of discrete but interconnected activities that affect the activities, such as operating fabricating, sales or delivering products. Convergence between enterprise intranets and the Internet contributes to development of services such as content distribution and access infrastructures directly offered on the Internet. Internet enabled creating control products with the ability to monitor machine operations from anywhere in the world through Web pages that contain all the machine control information. World Wide Web enabled Decision Support Systems, Presence Development Services, support security technologies, Interactive product information, online trade shows, blueprint archiving, multimedia presentations, Training programs, sales automation, database management, and videoconferencing services.

Current industry is looking to create new revenue opportunities, strengthen relationships with customers, and reduce supply chain inefficiency. The openness of Internet technologies ensures in the long run, the compatibility with other technologies and the changeability of web-based information systems. The competitive force determines profitability which varies considerably from industry to industry. It would be a mistake to draw general conclusions about the impact of the Internet on long-term industry profitability - each industry is affected in different way. Internet can boost an industry's efficiency in various ways, expanding the overall size of the market by improving its position relative to traditional substitutes. However Internet technology provides buyers with easier access to information about products and suppliers, thus bolstering buyer bargaining power. Internet technologies also tend to reduce variable costs and to create significantly greater pressure for companies to engage in destructive price competition. Internet affects on the operational effectiveness and strategic positioning in different ways, but it also opens new opportunities for strengthening or achieving strategic positioning. Sustaining operational advantages and strategic positioning is becoming a top priority, and the only way to generate higher levels of economic value is to gain a cost advantage or premium price by competing. Firms today define competition involving the Internet almost entirely in terms of operational effectiveness. The Internet has created some new industries, such as on-line auctions and digital marketplaces. However, its greatest impact has been to enable the reconfiguration of existing industries that had been constrained by high costs for communicating, gathering information, or accomplishing transactions.

We need to move away from the rhetoric about "Internet industries," "e-business strategies," and a "new economy" and see the Internet for what it is. It is powerful set of tools that can be used wisely, in almost any industry and as part of almost any strategy. We need to answer fundamental questions: Who will capture the economic benefits that the Internet creates? Will it increase or shrink profits?

3. MANAGERIAL TOOLS IN ENTERPRISES

In order to create a competitive firm the use of support tools in decision making, control, coordination, analysis and visualization is crucial. It is important to stress that the managerial tools are primarily tools for helping managers to see the "big picture". They are schemas which they can use to organize various conditions that affect industry profitability and assess the efficacy of alternative business strategies.

There are a lot of different tools available for management. Managers must be more knowledgeable than ever and they must choose the tools that will best help them make business decisions that lead to enhanced processes, products and result in superior performance and profits. Use of such tools requires an understanding of the strengths and weaknesses as well as ability of creative integration. The past years in business have witnessed an explosion in the use of management tools and

techniques. The tools range from broad processes such as strategic planning and benchmarking to highly focused initiatives such as the use of radio frequency identification (RFID) tags. Technologies such as Radio Frequency Identification (RFID), for example, are now revolutionizing supply chain and delivery processes.

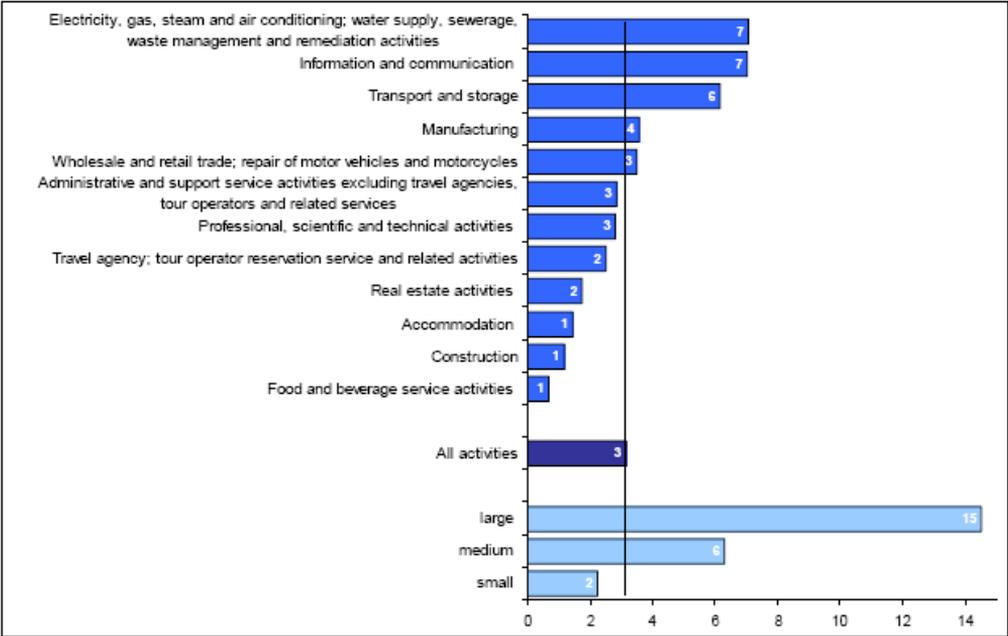


Figure 1. Use of Radio Frequency Identification (RFID) technologies by economic activity and size class, EU-27, January 2009 (% of enterprises)[1]

Figure 1. shows the percentage of enterprises that use of RFID technologies by economic activity and size class in the EU-27. According to a Eurostat study, use of RFID technologies is still limited on the medium and large enterprises, enterprises in energy sector and information and communication. [1] Keeping up with the tools and deciding which ones to use have become an essential part of every executive’s responsibilities. Bain & Company launched a multiyear research project to gather facts about the use and performance of management tools.[2]

Using the tools does not guarantee result improvement on its own. A competent manager makes high quality decisions (scientific based, practical, authoritarian, integrated, complete), using modern managerial tools as help. Thus, the managerial performances are numerous and have significant chances to be applied in firm’s management in order to create a certain competitive advantage.

The quality of manager’s decisions directly affects the success and profitability of new products, and, therefore, provides a competitive advantage to the firms. Complex managerial tools for improving manager's decisions have been developed, but most of the tools have not been adopted and applied by managers to support their decisions although they have been available for more than 25 years.

When looking for a reason why managerial tools were not accepted, we need to consider many factors, such as cost, profitability, time and feasibility all of which can affect the decision. Indeed, the decision might be positive when it is assessed from one factor point of view; however, it could be negative when evaluated from another. As the number of alternatives increases, the decision process becomes more complex.

Using managerial tools, particularly those aimed at decreasing the uncertainty (risk) associated with knowledge, will alleviate the cost of capital.

Multiple activities are being linked together through managerial tools as customer relationship management (CRM), supply chain management (SCM), and enterprise resource planning (ERP) systems. To obtain a "digital enterprise" on the market, managers must primarily focus on Internet

enhanced Supply Chain Planning (SCP) and Supply Chain Management (SCM), showing the advancement of Enterprise Resource Planning (ERP) vendors into the SCM market segment. It includes an insight on the Customer Resource Management (CRM) sector as well as a total view of all industrial Internet applications. The manager's focusing should change from managing an organizational unit to managing a network. There are many new considerations. This view spans the market from Internet enabled Manufacturing Execution Systems (MES), representing the lowest level of application, Web enabled Decision Support Systems (DSS) and security support technologies, up to the highest level of Web Presence Development Services (WPDS). The Internet and telecommunications infrastructures contribute to control mechanisms management systems through network structures and transaction services.[3]

The power of the Internet in the value chain, however, must be kept in perspective. While Internet applications have an important influence on the cost and quality of activities, they are neither the only nor the dominant influence. Conventional factors such as scale, the skills of personnel, product and process technology, and investments in physical assets also play prominent roles. The Internet is transformational in some respects, but many traditional sources of competitive advantage remain intact. While a new means of conducting business has become available, the fundamentals of competition remain unchanged. The next stage of the Internet's evolution will involve a shift in thinking from e-business to business, from e-strategy to strategy. Only by integrating the Internet into overall strategy will this powerful new technology become an equally powerful force for competitive advantage.

When information technology and processes become fully integrated, one can see the emergence of new business models for firms, "digital enterprises", i.e. fully integrated organizations, fully relying on information technology both for customer interaction and internal management. The Internet Shopping Network is example of such firm, where order taking, inventory & order management as well as financial systems are all tightly integrated.

The key point is that building any kind of electronic commerce system requires a strategy, i.e. a vision of the goal to achieve, a clear rationale of the business value with avoiding common pitfalls. This strategy should include an understanding of the impact of electronic commerce on an industry structure, the potential for new business models and the opportunities for competitive advantage.

4. CONCLUSION

In an increasingly competitive global marketplace for manufacturers, investing in Information & Communication Technologies is crucial in order to improve processes, make their partnerships more efficient, create smarter products which can be quickly adapted to changing demand and reduce environmental impacts. Almost all companies can benefit from adopting ICT, manufacturers are therefore turning to ICT to help them build and manage networks. Firms are integrating ICT further into their processes and products; improving quality control, creating a new generation of "smart products" and increasing efficiencies.

Furthermore, turning breakthrough ideas into action requires difficult decisions, which leadership teams may be unprepared to confront. Finally, the one-size-fits-all approach companies often take rarely yields the expected results. To succeed, management efforts must be targeted to only the most valuable strategies and tactics.

Applying efficient managerial tools and Internet can lead to cost savings and to increased quality and availability of services. In reality, a company's structure results in better performance only if it improves the organization's ability to make and execute key decisions better and faster than competitors.

5. REFERENCES

- [1] Smihily M., Storm H.: ICT usage in enterprises1 2009, Eurostat, http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-QA-10-001/EN/KS-QA-10-001-EN.PDF
- [2] Rigby D., Bilodeau B.: Management Tools and Trends 2009, Bain & Company, 2009. http://www.bain.com/management_tools/Management_Tools_and_Trends_2009_Global_Results.pdf
- [3] Gordon, L.: The Industrial Internet. Education at a Distance, June 2000, Vol.14 No.6, from http://www.usdla.org/html/journal/JUN00_Issue/story01.htm