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## 8 English Summary

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The background of this PhD dissertation is the commercialisation of the Internet during the last decade where nine out of out ten Danish firms has adopted the Internet-based information and communication technologies (Forskningsministeriet, 2000c). However, in spite of or maybe because of this rapid development, the research about the firms' use of e-business is still in its pioneer phase without traditional norms, routines and "main-stream" research, you can base your studies on. It's an area where research and praxis have rich possibilities to inspire and stimulate each other.

The goal of the dissertation is to understand in which routines of buying and selling, the Internet can be useful and how this usage can strengthen the globalisation process of the firm and thereby how it changes the understanding of reality in the firm.

### 8.1 What is the Problem?

Chapter one contains the problem analysis and formulation. In connection with this, the e-business situation in Denmark is described. It is pointed out that the condition for e-commerce are present. However the more binding and commitment-oriented e-commerce transactions are only used by Danish firms to a small extent. E-commerce is defined by the digitalisation of actors, processes and products (Whinston et al., 1997) and this process, where the company transforms its actors, processes and products from a physical state to a more digital state, changes the company from brick-and-mortar to click-and-mortar. This transformation-process gives the firm new possibilities in its globalisation-process. The Internet alters the perception of distances and thus directly influences a company's globalisation-process. Earlier, physical distances in time and space were key dimensions in defining what international business was all about – a company became international when it began to transact with customers across national borders. Today, even for companies that do not (or do not want to) do cross-border transactions, the reality of globalization is inescapable: the Web knows no boundaries. Furthermore, because collecting market information at a low cost is now feasible; knowledge about promising markets outside the home market is created, thereby leading to an increase in international

transactions. Distances, however, are not merely geographic. Cultural differences and differing national regulations also create “distances,” even when two countries are in geographic proximity (as in the case of USA and Mexico, or Italy and Slovenia). Such borders may not disappear as the Internet enters the scene. The psychological distances in terms of differences in language and cultural background and differences in political-economical contexts could continue to remain barriers to Internet-based internationalisation. Even in the age of the Internet, international actors have to understand such differences in order to manage the company’s internationalisation process. On the basis of these discussions the dissertation’s problem formulation is formulated as:

How can you understand the handling of distances in the transformation-process of buying and selling click-and-mortar companies that are using global industrial e-commerce?

- What products, actors and trade processes are influenced by global industrial e-commerce?
- What transformation processes go on in the firms who seek to use global industrial e-commerce?
- What are the motives and results of the transformation from brick-and-mortar to global click-and-mortar companies?

## 8.2 Theory of Science, Methodology and Techniques

Chapter two is the fundament of the dissertation in terms of theory of science, methodology and data generation techniques. The perspective is to see the world as a social construction. In connection with this, the Internet is understood as social technology in terms of human interaction instead of technical standards. The methodological standpoint is the hermeneutic approach to create understandings. In this approach the focus of the research process is on descriptions and interpretations. A method that contains three states: the pre-understanding, the understanding and the after-understanding is presented and used in the dissertation. The empirical background contains of a longitudinale study of an industrial firm that seeks to use the Internet for sales and marketing purposes. The data generation techniques used here is a combination of action research and interviews. The other part of the empirical background is interviews of 15 industrial firms that use the Internet for purchasing purposes.

## 8.3 Internet-based Sales and Marketing

Chapter three focuses on the sales and marketing areas of e-commerce in the firm’s internationalization process. A description is made of the transformation process as the firm creates the homepage in order to be the platform for international marketing and sales activities. This analysis indicates that such a process gives good results in terms of increased sales but also a lot of organizational challenges. To understand

this, several analyses are made. The first analysis focuses on the needed process behind three types of interaction for international marketing on the Web, which was the pre-understanding of international Web-marketing, namely the Brochure, the Manual, and the Store. The intensity of Web-based interaction between buyers and sellers varies across these three interaction types. Interactions at the Electronic Brochure type website are primarily based on giving information about the company and its products. With the Electronic Brochure strategy, the interaction ends when the current or potential buyer has read the information, unless the buyer chooses to contact the company. The Electronic Manual strategy is based upon guiding the buyers in solving their problems. The level of interaction intensity is higher than with the Electronic Brochure strategy, but not as complex as the Electronic Store strategy. Web-based guidance implies that buyers actually depend on the assistance provided by the company's website. If the explanations on the website are inadequate, then buyers' problems can get exacerbated. The Electronic Store has the highest intensity of interaction. Such interactions entail a very complex process to persuade and enable a customer to buy and/or use the product. The firm in focus used all three interaction types and the analysis showed that the higher intensity of interaction the firm persuaded, the more complex the process became and the bigger demands it gave to the way the firm organizes itself.

The second analysis focuses on the process. The suggestion to the managerial implications are to hire an e-business manager that on a continually basis can help the rest of the employees to handle the transformation process.

The third analysis take the approach to understand the transformation process as an internationalisation process where the conclusion is that it gives meaning to see the process as a learning process. However, this should not be understood in a traditional way, where the internationalisation process is traditionally seen as an incremental process of global expansion. In an incremental internationalisation process, the company decides how it should expand from being a local player to being a global player. Instead the perspective should be on the decremental process, where the firm has to decide how to from a global, all-encompassing position (represented by the first website) to a well-targeted, specific market position.

#### 8.4 Internet-based Procurement

In chapter four the analysis of the use of Internet in procurement are made on the basis of interviews and the related case-descriptions of 15 Danish industrial firms with a high degree of international procurement activities. The 15 firms are distinguished in proactive and reactive firms. The proactive firms are those who use Internet in the procurement function because they are aware of the possible integration with suppliers through the Internet and at the same time make demands to the suppliers about an integration by the Internet. On the basis of the created empirical material, which had a focus on subsuppliers IT-competencies, four themes was indicated, namely:

1. The use of Internet interfaces and transformation processes
2. Internet use in search and evaluation of suppliers
3. Internet increase the operational integration of suppliers
4. The Internet changes the understandings of distances

These four themes are supported by the literature, which is used to create indicators. These indicators are used to create a pattern-matching table that outlines the pattern of hits and misses in the case material. As seen from the overall number of hits, the expectations are well backed up by case findings.

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## 8.5 Conclusion

Chapter five contains the conclusion, managerial implications and implications for further research. Based upon the conclusions in chapter three and four, it is possible to set up the following table that gives answers to the problem formulated in chapter one. The left column shows the elements of the problem. The middle column shows the conclusions from chapter three and four. The right column summarizes these conclusions as a description of the new understanding of reality the firms experience and can be interpreted as the result of the transformations processes.

**Table 47: Transformation processes in buying (B) and selling (S) click-and-mortar companies in the transition to global industrial e-business.**

Elements of the problem	Findings in the studies of buying and selling firms in global industrial e-business	A new understand of reality evolves
Products	<p>B: The core of complex products does not change but the important communication and information around the customized product are digitalized.</p> <p>S: Products have a digital representation with detailed descriptions and drawings</p>	Products are no longer only physical because digital communication and information increase in importance
Actors	<p>B: Partners are digitalized in a certain degree when their homepages are being the digital agents and when operational integration by the Internet are in use</p> <p>S: Customers and the homepages as an digital agent are the actors</p>	The actors are not going to be digital agents only but the homepage and other Internet interfaces (extranet and e-mail) are necessary digital agents for the physical actor.
Trade processes	<p>B: Searching of potential partners homepages, evaluation by e-mail and integration by buyers/sellers extranet in inventory control and product development</p> <p>S: Face-to-face situations are supported by digital interfaces</p>	Digital interfaces are the starting point of trade processes with potential partners where the face-to-face situations are still necessary.
Handling of distances	<p>B: The understandings of distances are changed by the elimination of physical distances and new distances to digital agents evolves</p> <p>S: The web-master helps in creating a world without borders where fewer trade shows and business trips are needed</p>	Physical distances disappear and new types of distances to digital agents evolve.

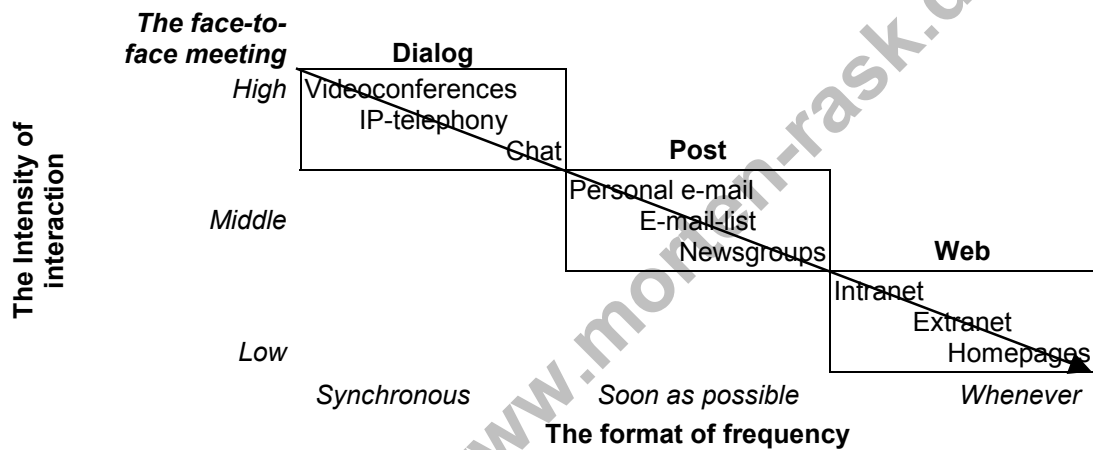
The managerial implications for the buying and selling companies related to above conclusion together with the methods used in the dissertation are discussed. The conclusion is finalized by suggest of three themes for further research:

- Internet as an information resource in the digitalization of trade processes
- Co-operation of physical actors and digital agents
- Physical products and services are digitalized

## 8.6 Perspectives

Chapter six puts the possible digitalisation of actors into perspective when digital interfaces are becoming the platform for interaction and can be used as the starting point for further research. Different types of interaction characteristics in dialog-, post and web-based interfaces are identified. It is shown that these types of interfaces have different distance to the face-to-face meeting.

**Illustration 15: The distances from Internet interfaces to face-to-face meetings**



The discussion of the interfaces implies that these interfaces are suitable for different activities. This can be summarized as follows:

**Table 48: Internet Interfaces and the characteristics of the interaction**

<i>Interface</i> → <i>The interaction characteristics</i> ↓	<i>Dialog</i>	<i>Post</i>	<i>Web</i>
Intensity	• High	• Middle	• Low
Frequency	• Synchronous	• Soon as possible	• Whenever
format			
Control	• Both parties	• Primary the sender • Secondary the receiver	• Initially the Web-creator • Subsequently the Web-user
Diversity	• One activity with limited numbers of involved actors	• Several activities with limited numbers of involved actors	• Unlimited numbers of activities and involved actors
Condition	• Previous knowledge or coincidence	• Search tools • Contact list on Web pages	• Search tools
Process	• Appointment or 24 hours readiness	• E-mail policy about documentation and the competencies of the employees and their privacy • Installation of security software	• Create knowledge about own and others working processes • Set out the processes explicitly • Simulate and describe the output and make use of the input • Create content and design
Motives	• New types of co-operation decrease the need of traveling • User contribute with contents on the homepage	• Displaced frequency format • Faster communication • Flexible type of communication	• Independent of time and space • Time-saving • New types of co-operation