

# **LAST MAN STANDING**

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**A study on business-to-business eMarkets**

**Masters Thesis in Marketing  
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December 2000**

## **Abstract**

*Business-to-business eMarkets are websites where buyers and suppliers come together to communicate, bid in auctions and conduct transactions. For buyers, eMarkets lower purchasing costs, while providing new suppliers. For suppliers, they lower sales cost while providing new customers. EMarkets offer participants market transparency and decrease search costs substantially.*

*Due to booming e-commerce forecasts, there has been a tremendous amount of eMarkets entering into different industries. These eMarkets compete in attracting buyers and suppliers to their respective eMarkets. In some industries where the benefits of eMarkets have proved to be more evident, the competition has become severe. This rivalry has in turn led to limited profits, forcing the industry into consolidation. Our prediction is that in each industry, the eMarket that can master the forces driving this consolidation will become the last man standing.*

*The purpose of this thesis is to find theories useful in explaining the existence and strategic behavior of eMarkets. We test the relevance of Network Theory, Efficient Markets, Transaction Costs Economics, Lock-in, and Five Forces Framework. No single theory is able to fully explain the existence and strategic behavior of eMarkets. However, in combination, they illuminate important parts of the observed phenomena. In addition to assessing the theories, we present six hypotheses, all generated from our analysis.*

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## **1 Introduction**

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Business-to-business e-commerce has gained a great deal of attention in world media during the last two years. This is primarily due to the fact that e-commerce is estimated to change the way of doing business in many industries. Another reason is the soaring growth predictions for business-to-business e-commerce. eMarkets enables this new form of trade and they are critical actors in the overall development. In this thesis we will try to give the reader an understanding of eMarkets by using economic theory. We will take an academic perspective when analyzing, and hope to offer some interesting findings as well as hypotheses for future research. In order to obtain accurate and first-hand knowledge we have met with some of the worlds leading eMarkets. These companies have shared information of great interest and we hope to present a thesis that will contribute to your knowledge on the topic.

### **1.1 Purpose of the study**

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The purpose of this thesis is to find theories useful in explaining the *existence* and the *strategic behavior* of eMarkets. Consequently, our mission will be to test the relevance of a number of economic theories. The analysis will ultimately provide us with the theories appropriate to explain the phenomena (the existence and strategic behavior of eMarkets). When applying these theories on eMarkets, our intention is also to generate a number of hypotheses regarding the phenomena. The empirical foundation for our analysis is explorative research in the form of extensive reading, interviews with industry experts and a quantitative survey.

### **1.2 Delimitations**

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In this section we will clarify the specific areas that will be dealt with in the study. The area that we have studied is vast and for that reason delimitations are of great importance in order to secure focus.

First of all, we have chosen to study the company *hosting* the market. We have not researched any of the companies trading on eMarkets, even though we realize that a complementing survey, addressed to these parties would have added additional depth to the study. The reason for not conducting such a survey is that these companies are hard to identify, as the eMarkets seldom agree to give away the identity of the trading parties. The major reason for our choice of focus on the hosting actor however, is that we found them to be more interesting. They are the actors behind the phenomena and they will keep forming its future.

In our research we are looking solely at *US* eMarkets. One of the reasons for this limitation is that it proved to be far easier to find information about these players. Also, the US population is more *complete* than the European, in the sense that it consists of all sizes of players, not only small and medium-size eMarkets, making it more interesting to observe. Another important aspect is that in reports from professional analysts, such as *Goldman Sachs* and *Merrill Lynch*, US eMarkets are

said to be 18 to 24 months ahead of their European counterparts.<sup>1</sup> When performing our initial research we were not able to find any material contradicting such statements. In order to be able to make interesting generalizations about the phenomena, we felt that it was important to examine companies on the cutting edge. European eMarkets tend to watch and learn from their US counterparts<sup>2</sup>, making it highly possible that they will evolve similarly as their counterparts overseas. Another reason was practicality. The US eMarkets are concentrated to clusters scattered around the country, making it possible for us to meet a set of interesting companies located reasonably close to each other. In order to conduct interviews with important actors in Europe we would have had to spend more time and funds traveling around the continent. In chapter 6 we have included a section on speculations, where we will give our thoughts on the implications for European eMarkets.

We have also decided to focus on *neutral eMarkets*, players that are not founded or managed by a buyer or seller, and primarily acting in the interests of that company. We found independent eMarkets more interesting, since they represent a totally new player, not just an existing actor changing the interface to its customers. These actors have emerged by themselves, aiming to capitalize on a current demand. This has been rewarded by extensive financing from venture capitalists. Also, these actors are in a critical situation as the industry giants begin to realize that they have to act fast in order to hold on to important parts of their business.

### **1.3 The research questions**

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We have formed two main research questions for this thesis. We will try to answer these questions throughout the thesis and the final answers will be presented in the conclusion. The research questions are stated as follows:

- *Which theories can help us to understand the existence and strategic behavior of eMarkets?*
- *What hypotheses can be generated concerning eMarkets?*

### **1.4 Outline of the thesis**

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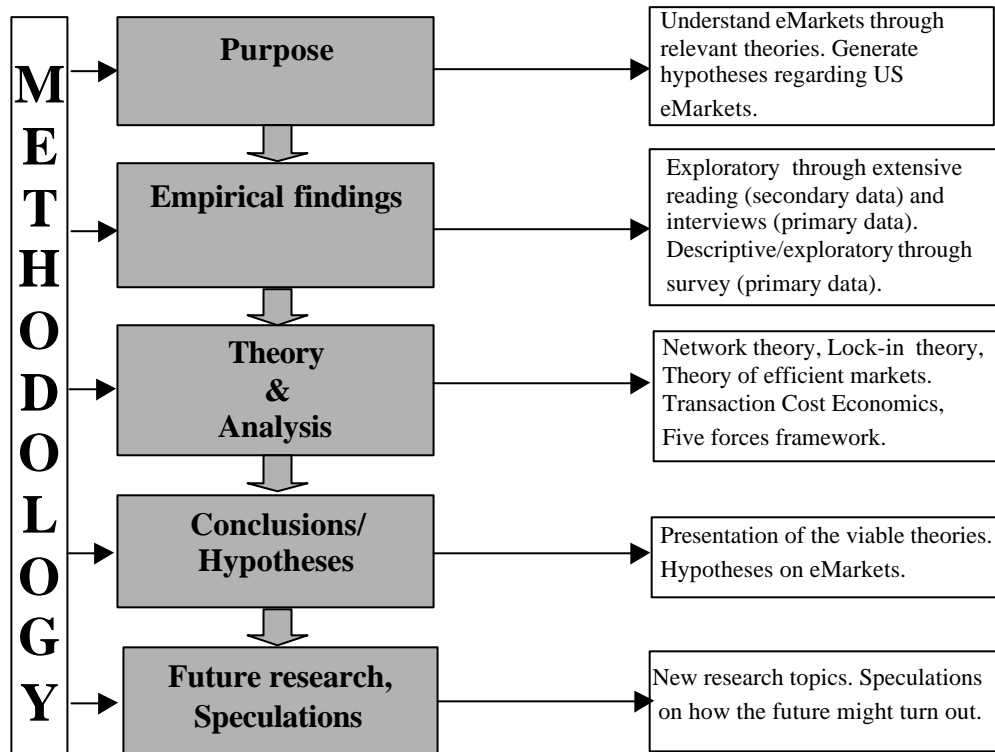
Having presented the purpose, delimitations and research questions, we will carry on by describing *the methodology* of the thesis in chapter two. In this section we will deal with the research strategy. The methodology will appear in all of the following chapters, as we describe our research approach and choice of method throughout the thesis. Moving on, we will present *the empirical findings* in chapters three and four. This part is divided into *historical background*, *description of eMarkets* and *survey results*. In chapter five, *theory* enters the thesis, as we discuss five economic frameworks and assess their ability to explain the phenomena. Subsequently, the appropriate theories will be used in order to analyze the phenomena. The outcome of the analysis will bring general *findings* and a number of hypotheses to be presented in

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<sup>1</sup>Forrester (1999), p.10

<sup>2</sup> Ibid

chapter six. Later in this chapter we will present *speculations* on the future of the industry, based on our research. Finally we will discuss some recommendations for future research. The outline is described visually in figure 1, found below.



*Figure 1: Outline of the thesis.*

## **2 Research methodology**

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This chapter describes how we chose to design the research that builds the framework for this thesis. The purpose is to give an understanding of how we have reasoned when conducting research, how the work is structured and also to show why the chosen methods were appropriate for the problem at hand. Initially, we will present a number of different research strategies in order to display the possible choices.

In the methodology section we will start by briefly describing and explaining the different methods and approaches in research. In the following section, we will present the chosen path. The third part deals with quality measurement and we proceed to discuss weaknesses of the chosen path in the last section of the chapter.

### **2.1 Approaches and methods in research**

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This section will deal with research approaches, such as the inductive and deductive approach. We will also comment on the general purpose of research and discuss different research designs and methods.

#### **2.1.1 Research approach**

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When conducting research, it often helps to structure the ongoing work into some sort of framework. The two approaches most commonly applied are the *inductive* and the *deductive* approach. They are both aiming at the same goal, which is to describe and comprehend reality with the assistance of analytical theories. However, the two approaches differ in starting points, as displayed in figure 2.<sup>3</sup>

The *deductive approach* suggests that the researcher generates hypotheses from a particular theoretical framework and then tests these by observing reality. The goal is to either reject or confirm the hypothesis. The deductive approach calls for a strong theoretical element in the research, since it has a theoretical starting point.<sup>4</sup>

The *inductive approach* is radically different. To induce is “to draw a conclusion from one or more particular facts or pieces of evidence.”<sup>5</sup> Often, more than one conclusion could be drawn from the facts that the researcher started out with<sup>6</sup>. For that reason the conclusion is frequently stated as hypotheses. When using an inductive approach the researcher starts out by examining reality and identifying a phenomenon. The researcher will then try to describe the phenomenon, using analytical tools such as theories. The analysis can give a new theoretical framework, or simply conclude that no meaningful generalizations can be made.<sup>7</sup>

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<sup>3</sup> Wiedersheim-Paul/Eriksson (1991), p. 150

<sup>4</sup> Ibid

<sup>5</sup> Cooper/Emery (1995), p. 151

<sup>6</sup> Ibid

<sup>7</sup> Wiedersheim-Paul/Eriksson (1991), p. 150

This approach is closely connected to *positive* perception of research, implying that reality is described without judgment.

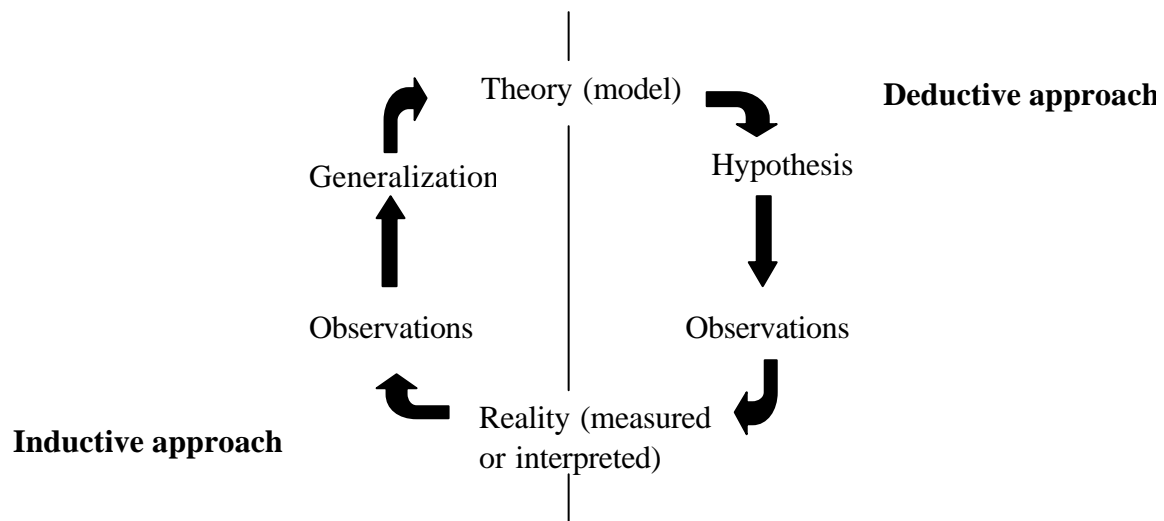


Figure 2 – Inductive and deductive research approach

## 2.1.2 The General purpose of research

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The aim of research is to discover valuable information and to structure that information, in order to conduct a thorough and valuable analysis. Research can be conducted with many different purposes, using a wide variety of methods. In order to decide which methods to use, it can be beneficial to categorize the different types of techniques and what sort of research they are most appropriate for. When conducting research, one can choose between *exploratory* and *conclusive* research designs, or a combination of the two. Conclusive research can be further divided into *descriptive* and *causal* types.<sup>8</sup> Before going in to more detailed descriptions one could say that exploratory research is less structured, and often includes the gathering of qualitative research, whereas conclusive research frequently involves quantitative methods with large, representative samples.<sup>9</sup>

The purpose of *exploratory* research is to investigate a specific problem or phenomenon. It is not intended to extract conclusive evidence from which to determine a particular cause of action.<sup>10</sup> The research is designed to allow an investigator to just look around with respect to some phenomenon, the aim being to develop suggestive ideas.<sup>11</sup> Often, exploratory research might help clarify a problem and identify information needed for future research. As the name implies, an exploratory approach is often used when the knowledge on the topic and prior

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<sup>8</sup> Zikmund (1994), p. 45

<sup>9</sup> Malhotra (1999), ch. 3

<sup>10</sup> Ibid

<sup>11</sup> Reynolds (1980), p. 51



research is very limited.<sup>12</sup> In explorative studies the problem is hard to define and it is difficult to decide on the choice of method, such as interviews or surveys.<sup>13</sup> Explorative studies are often followed by descriptive or causal studies in order to further examine the results from the initial research. An example of exploratory research is flexible and partially unstructured interviews with industry experts. The sample could be small and non-representative, since the aim is to generate a maximum of insights, rather than make generalizations.<sup>14</sup> The objective of descriptive research is to develop careful descriptions of patterns that were suspected in exploratory research. This can be done when the problem is quite well structured.<sup>15</sup> Descriptive research is usually attempted when the researcher knows what he wants to examine without knowing the answers. Many times different kinds of statistical methods are used for this type of research.<sup>16</sup>

*Descriptive designs* can be further divided into cross-sectional or longitudinal types. A cross-sectional design is typically when data is collected from a given sample on one single occasion. This can also be done from multiple samples, resulting in a *multiple* cross-sectional design. When the data is collected in a series of surveys from multiple samples, it is referred to as a cohort analysis.<sup>17</sup> A longitudinal design uses a fixed sample that is examined repeatedly, providing a picture of the situation and the changes during time.<sup>18</sup>

In *causal research* the major objective is to obtain evidence on cause-and-effect relationships. The preferred method for causal research is experiments, where the researcher manipulates one or more independent variables, while keeping the other variables constant. Obviously this kind of research demands that the researcher controls the variables.<sup>19</sup>

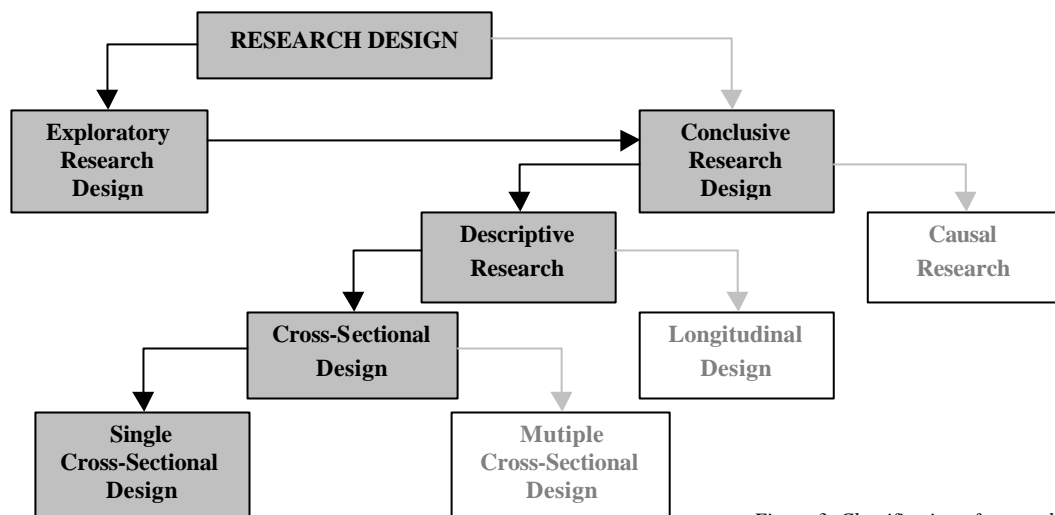


Figure 3. Classification of research designs. The path chosen by the authors in black.

<sup>12</sup> Zikmund (1994), p 25

<sup>13</sup> Widersheim-Paul/Eriksson (1991), p. 51

<sup>14</sup> Malhotra (1999), ch. 3

<sup>15</sup> Reynolds (1980), p. 52

<sup>16</sup> Zikmund (1994), p. 27

<sup>17</sup> Malhotra (1999), ch. 3

<sup>18</sup> Ibid

<sup>19</sup> Ibid

### 2.1.3 Research methods

There are a number of different techniques used when conducting research. The ones most frequently used, for the descriptive kind of research that is undertaken in this thesis, are surveys and case studies. However, there are many other techniques with different features and purposes available. When deciding upon the research technique to use, only *survey-* or *case study-techniques* seemed plausible, and for that reason those two techniques will be in focus. Other possible techniques are *experiment*, *archival analysis*, *history*, etc. Reasons for not dealing explicitly with those methods are that they are clearly not viable for the research in question. For example, they demand control over the actors (*experiment*) or historical information (*history*).<sup>20</sup>

The boundaries between the two survey- and case study-techniques are not distinct, as they cover some of the same ground and are sometimes viable in similar situations.<sup>21</sup> This fact makes the choice of method difficult as well as critical, since it will influence the characteristics of the work-process, as well as the results of the study.

The similarities between the two focused research methods are displayed in figure 4, where one can see that each strategy has its advantages and disadvantages, depending upon three conditions. (a) *The type of research question*, (b) *the control an investigator has over actual behavioral events*, and (c) *the focus on contemporary (as opposed to historical) phenomena*.<sup>22</sup>

| Method                   | Form of research question            | Requires control over behavioral events? | Focuses on contemporary events? |
|--------------------------|--------------------------------------|--|---------------------------------|
| <i>Experiment</i>        | How, why                             | Yes                                      | Yes                             |
| <i>Survey</i>            | Who, what, where, how many, how much | No                                       | Yes                             |
| <i>Archival analysis</i> | Who, what, where, how many, how much | No                                       | Yes/No                          |
| <i>History</i>           | How, why                             | No                                       | No                              |
| <i>Case-study</i>        | How, why                             | No                                       | Yes                             |

Figure 4 – Relevant situations for different research methods<sup>23</sup>.

<sup>20</sup> Yin (1994), p. 6

<sup>21</sup> Yin (1994), p. 4

<sup>22</sup> Ibid

<sup>23</sup> Yin (1994), p. 6

In Yin (1994) it is stated that “*who*”, “*where*” and “*what*” questions are likely to favor survey strategies. These strategies are advantageous when the research goal is to describe the *existence* of a phenomenon or when it is to be *predictive* about certain outcomes.<sup>24</sup>

In contrast, “*how*” and “*why*” questions are more *explanatory* and likely to lead to the use of case studies. The reason for this being that such questions deal with operational links needed to be traced over time, rather than mere frequencies or incidence.<sup>25</sup>

## **2.2 The chosen path of research**

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The purpose of this section is to summarize the choices that were made from the different methods and approaches, as described in the previous passages. At the same time we attempt to explain and validate the chosen path.

We chose an *inductive approach* as we observed a phenomenon that we wanted to examine more thoroughly. Lacking extensive academic background of eMarkets, we withheld ourselves from applying theories until we had examined the empirical findings. Our end-goal was to find suitable theories to explain the existence and the strategic behavior of eMarkets. We also wanted to generate hypotheses on the population of US eMarkets. When using an inductive approach it can be hard to validate the findings, sometimes making hypotheses a more viable result. The research started by observing reality, then attempting to describe it in theory. The reason for this is that we noticed eMarkets as a phenomenon that will greatly influence different industries. Thus, it was natural for us to start by studying the phenomena in order to get more information and then to find appropriate theories in order to explain the existence and strategic behavior of eMarkets. The choice of an inductive approach forced us to pose questions of a rather general nature, since the goal was to find applicable theories. For this reason the survey resulted in empirical results to be used in the analysis, rather than proving causality through statistical regressions etc.

Initially, some exploratory research was conducted through the reading of secondary material, such as *previous research, analyst’s reports* and *articles in business journals*. This research gave us an initial understanding of eMarkets and how they work. Also, it alerted us on some features of the evolution of eMarkets, such as the wider variety of surrounding services that some players offered their customers and the internationalization of neutral US eMarkets. In a second phase, industry experts were interviewed. We chose to talk to a sample of persons that appeared to be interested us since they were representatives of influential actors and/or had widespread industry knowledge. The interviews were partially unstructured in order to generate a maximum of insights. The findings from this initial exploratory research were used in the following survey study, descriptive and exploratory to its nature. A single cross-sectional design was chosen for the survey. The choice of partly descriptive research made the statistical survey-method a viable alternative.<sup>26</sup>

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<sup>24</sup> Yin (1994), p. 6

<sup>25</sup> Ibid

<sup>26</sup> Yin (1994), p. 8

Also, when looking at the three questions posed by Yin in *Case study research-design and methods*, survey was the most obvious alternative (figure 3). We had no control over behavioral events, the focus of the study is on contemporary events and the main research questions are “Which theories can help us to understand the existence and strategic behavior of eMarkets?” and “What hypotheses can be generated concerning eMarkets?”

A web-based survey format was used, making the process manageable for the respondents and ourselves. The proper recipients at around 160 different companies were identified, contacted by telephone and supplied with a survey. A listing of neutral eMarkets from the *Swedish Trade Council* was used in order to find the large number of recipients needed for the sample. When completing the survey questions, valuable input from academics at *SSE*, analysts from *Result Venture Knowledge International* and the Survey Research Manager at *VerticalNet Inc.* was used<sup>27</sup>. The survey was thoroughly tested before it was passed on to the recipients. The result of the survey phase was 76 responses that could be used in the next phase, when the material was analyzed in a computerized statistics program

## **2.3 Quality of the research**

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The purpose of this section is to display the quality of the research. We will do this by examining the possibility of *errors*, as well as the *validity and reliability* of our study.

### **2.3.1 Error**

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In order to minimize the risk of the respondent as an error source<sup>28</sup>, we have chosen respondents with similar positions in their respective company. Since we have talked to the companies beforehand, we have been able to assure that the appropriate persons have answered the questions in the survey. The respondents to the survey are all executives; *Founders, CEO's, CIO's, Chiefs of Marketing, or Chiefs of Business Development*. The interviewees were also found in similar positions.

The rigorous control and pre-testing of the survey has led us to believe that the risk for errors sourcing from the composition of the survey and its questions<sup>29</sup> is limited. In one case, however, we detected such error. A number of the respondents had misunderstood a question about the eMarket structure, forcing us to omit the results of that particular question from the results of the survey. The overall quality of the survey, however, has to be considered high. This has also been acknowledged by the respondents (see appendix).

For the interviews we used an interview guide in order to be able to compare the answers, supplying us with a general picture. However, as the aim was to extract a

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<sup>27</sup> F. Lange (SSE), J. Sonnelitter (Verticalnet), M. Gink (Result Venture Knowledge)

<sup>28</sup> Cooper/Emory (1995), p. 148

<sup>29</sup> Ibid

maximum of knowledge on a general topic, the interviewees were allowed to speak freely on the presented topics and other issues of interest.

### **2.3.2 Quality measurement**

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Whichever design chosen for the research, the investigator has to maximize the quality of the design by providing *validity*, *reliability* and *practicality*.<sup>30</sup> One can illustrate the relationship between validity and reliability with the simple example of a bathroom scale. If the scale measures your weight correctly, it is both reliable and valid. If it consistently overweighs you by six pounds it is reliable but not valid. If the scale measures erratically from time to time, then it is not reliable and therefore cannot be valid. Validity is said to be the most important of the measures, since a method can be reliable without being valid, but not the other way around.<sup>31</sup> *Practicality* is concerned with measures such as economy and convenience. We will not go further into practicality, but just conclude that it has to some extent influenced the chosen path of research. In the following section we will explain validity and reliability and show the reader what has been done in order to maximize the quality of the study, with respect to these two measurements.

#### **Validity**

This measurement is often divided into *external* and *internal* validity.<sup>32</sup> External validity can be described as “establishing the domain to which a study’s findings can be generalized”.<sup>33</sup> Internal validity is described as the instrument’s ability to measure what it is intended to measure.<sup>34</sup> The key to external validity is how the sample used in the survey was chosen and to what degree it can be generalized to the population as a whole. Also, the response rate of the survey is considered vital.

Internet surveys generally result in the poorest response rates of all survey types. The reason for this is the effort that the respondent has to put in.<sup>35</sup> Typically the response rates is somewhere in the regions of 10-15%.<sup>36</sup> The low percentage brings an overwhelming risk of *non-response bias*, meaning that only the ones interested in the topic<sup>37</sup>, or sharing some other characteristic, will answer the survey. Thus giving the responses similar features due to the similarities of the respondents. By using pre-calling, making the survey as user-friendly as possible and offering the respondents a summary of the findings, we managed to triple the normal response rate to approximately 48%, consequently diminishing the risk for non-response bias dramatically. Mail surveys with a return of about 30% are often considered satisfactory.<sup>38</sup>

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<sup>30</sup> Cooper/Emory (1995), p. 148

<sup>31</sup> Cooper/Emory(1995), p. 162

<sup>32</sup> Cooper/Emory (1995), p. 149

<sup>33</sup> Yin (1994), p. 33

<sup>34</sup> Cooper/Emory (1995), p. 149

<sup>35</sup> Malhotra (1999), ch. 3

<sup>36</sup> J. Sonnelitter, Verticalnet Inc.

<sup>37</sup> Malhotra (1999), ch. 3

<sup>38</sup> Cooper/Emory (1995), p. 282

The total population of neutral US eMarkets is not known. According to one expert in the area, the Swedish Trade Council, it is estimated to be somewhere in the regions of 1400.<sup>39</sup> Our sample frame, based on a list supplied by the Swedish Trade Council,<sup>40</sup> contained more than 400 companies. The list is continually updated and the companies not represented are most probably small, or have just emerged on the market. Consequently, we consider the sampling frame to be of very good quality and it is the most complete listing that we have seen. Every one of the elements in the sample frame has been contacted. Some were not possible to reach, despite numerous call-backs. Others would not agree to take the survey. Around 160 companies were supplied with the survey and 76 of these responded to it. This gives us a response-rate of about 47,5%, considerably higher than the minimum of 30% recommended in literature.<sup>41</sup> Given the reasonably complete and correct sample frame and a relatively high response-rate, we believe that the thesis is equipped with medium to high external validity. This measure gives us a possibility to generalize the survey results over the whole population of neutral US eMarkets.

Internal validity is further divided into *content* and *construct validity*. Content validity is achieved if the topic under study is adequately covered. We believe that this has been achieved in the thesis, due to the initial interviews, partly aimed at constructing a relevant survey and the fact that we have used input from several parties when putting the questionnaire together. Feed-back from respondents and advisors have made us confident that our content validity is high. Construct validity answers the question “what accounts for the variance in the measure?”. When examining construct validity, one attempts to identify the underlying constructs being measured and determine how well the test represents them.<sup>42</sup> To discover the different constructs that the respondents incorporate in each question is obviously very hard. We have attempted to pose questions that are hard to interpret in more than one way. Also, by choosing respondents with similar positions in the company, we believe that we have provided medium to high construct validity.

## **Reliability**

The main focus of *reliability* is to minimize the errors and biases in a study.<sup>43</sup> Reliability can in part be achieved by allowing for (theoretical) *repeatability*. To do this, the authors should demonstrate that the operations of a study – such as the data collection procedures, could be repeated by another researcher with the same results.<sup>44</sup>

There is no way to guarantee reliability. One way to make repeatability of the research possible is to provide a maximum of transparency. This can be achieved by displaying all the information that has been used to come to the conclusions in the study, and to describe thoroughly how the research was conducted. We hope to do this by documenting how the research has been undertaken, as done in the passage *The Chosen Path of Research*, and the visualization provided in figure 2. Also, we provide

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<sup>39</sup> L. Gunnarson, Swedish Trade Council

<sup>40</sup> [www.netmarketseVICES.com](http://www.netmarketseVICES.com)

<sup>41</sup> Cooper/Emory (1995), p. 282

<sup>42</sup> Cooper/Emory (1995), p. 151

<sup>43</sup> Yin (1994), p. 36

<sup>44</sup> *Ibid*

the reader with our interview-guide, as well as the survey that was used in the thesis. These documents can be found in the appendix together with a list of interviewees and respondents to the survey.

Since we are providing a snapshot of an extremely dynamic industry, we believe that practical repeatability is almost impossible to provide, thus making the measure less important.

### **Source validity**

The sources used for our initial exploratory research originate from the academic world as well as from the business community. We would like to acknowledge the fact that some of the reports used were produced by investment banks (Goldman Sachs, Merrill Lynch) and professional research firms (Forrester and Jupiter). These reports may contain biased elements, as their objectives are often different from strictly academic ones. We suspect that these analysts sometimes tend to over-estimate their figures. The reason for this may be that they want to present revolutionary information, a view that we found to stand in contrast to the purpose of research. For a vivid example, observe the market estimation in figure 5 in the upcoming chapter.

We have been aware of this problem when conducting our initial exploratory research. However, since the subject has not been thoroughly covered in academic research, we have been forced to use some of this material in our research. We have taken this into account and been cautious when using this material, trying to verify the information from alternative sources.

## **2.4 Weaknesses of the chosen path**

Obviously, the path that we chose was not the only viable research path. In a study of this size and with respect to the total number of players on the market, there is an inevitable trade-off between width and depth. It should be obvious from the previous discussion that we have gone for width rather than depth, choosing the survey approach and interviewees from a number of companies. First of all we wanted to be able to make generalizations about the phenomenon of neutral eMarkets. This result is certainly easier to provide by using a large sample of respondents. Having instead chosen a case study approach, we saw an obvious risk in ending up with material that would not be thorough enough. We deemed the chance of receiving the information we needed far greater if we only demanded 15 minutes from each company, rather than approaching many individuals in the same organization for in-depth interviews. The qualitative information that we were able to receive, when conducting the initial exploratory research, further convinced us that we had made the right decision. It was difficult enough to get the eight interviewed executives to set aside time for in-depth interviews.

The time restraint also kept us from undertaking a multiple cross-sectional or longitudinal design that would have equipped the masters thesis with an aspect of

change over time, making it dynamic. This, however, would be an interesting subject for future research.

We see that the external validity of the survey can be questioned with regards to the response rate. 47,5% is considered high for an Internet survey, but it still leaves a large part of the sample not responding to the survey. Furthermore, a large share of the sampling frame has not been given the survey. We believe that the greatest risk in connection to this fact is that many of the busiest executives have not responded to the survey, possibly omitting many companies under extreme strain or in rapid growth phases. However, we believe that all of these companies, and their executives, to some extent are in similar situations concerning their lack of time. We have been aware of this possible bias in the responses, even though we have found no signs of it. Our opinion, with regards to the relatively high response-rate, the good sample frame and the respondents chosen to take the survey, is that the study has medium to high validity, allowing the results to be generalized on the population of neutral US eMarkets.



## **3 Background Information**

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In this section we would like to give the reader a general picture of eMarkets. In order to describe the phenomena, we will start by giving a brief historic overlook, describing industry approaches, hosting structures and revenue models. We will also describe a current development that affects many eMarkets, an ongoing industry shake-out.

### **3.1 From EDI to eMarkets**

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We have divided the evolution into the three different stages: *EDI*, *basic business-to-business e-commerce* (electronic commerce) and *eMarkets*. The stages can be described as co-existent, as one stage has not ceased to exist as a new stage has been initiated on the market.

The evolution of business-to-business e-commerce originates from *Electronic Data Interchange (EDI)*. EDI allows businesses and their trading partners to conduct a standard set of transactions over *value-added-networks (VANs)*. A variety of systems are used in order to exchange information between the parties. EDI goes back over 25 years in time and has admitted a point-to-point connection between buyers and sellers. The system facilitates transactions such as *purchase orders, invoices, shipping notices* and a number of other documents. The EDI system is closed and thus exclusive to the parties connected to the network. Due to the fact that EDI runs over proprietary networks it is well regarded in terms of *reliability, security and performance*. While EDI has brought competitive advantages to its adopters, the system has some major constraints.<sup>45</sup>

As mentioned above, EDI has typically been conducted over proprietary networks, requiring significant *capital investment*. Second, EDI involves a distributed software solution, which is *expensive and complex*. Third, the system is *batch-oriented*, not permitting real time production, procurement and pricing. Moreover, EDI is difficult to change in a dynamic marketplace, where companies enter and leave the market frequently.<sup>46</sup>

The high investments required and the complexity of the software has limited the number of EDI users. Historically only large companies have afforded to invest in EDI technology. Many of the companies that have invested heavily in EDI have been anxious to see their investments pay off before betting money on new technology, a fact that has acted as a constraint in the evolution of business-to-business e-commerce. However, EDI has been a very important step towards the e-commerce of today, because of its basic idea to exchange information via an electronic network.<sup>47</sup>

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<sup>45</sup> Merrill Lynch (2000), p. 17

<sup>46</sup> Goldman Sachs (1999), p. 22

<sup>47</sup> Goldman Sachs (1999), pp. 22

### **3.1.1 Basic e-commerce**

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Internet based e-commerce has evolved rapidly over the last five years. We have seen quite a few companies moving their businesses online, aiming to benefit from the advantages that the Internet can offer. The most common approach at this stage is known as “Brochure Ware”, where buyers receive product information from the seller’s website while executing the purchase offline. Other companies offer web based product information as well as e-commerce solutions.

One example is *Dell*, whose *build-to-order direct sales model* has allowed the company to reduce inventory-carrying costs and avoid the mark-ups of resellers and distributors. While the majority of Dells sales are to large companies, its Internet sales are much more weighted toward small businesses. Applying this strategy, the company can more effectively reach different target audiences. Dells website has also proven to be valuable in terms of reducing service and support costs. This is just one example of how companies are using Internet to improve and expand their businesses.<sup>48</sup> This form of basic e-commerce most commonly uses a website with a product catalogue and a one-to-one selling technique (not providing auctions or exchanges).<sup>49</sup> In comparison with EDI, the low cost of engaging in Internet based e-commerce has permitted almost any company, irrespective of size or previous relationships, to use the method. Also, Internet based e-commerce, unlike EDI, can provide rich media support, aggregated information and speedy installation<sup>50</sup>. Most of these basic e-commerce solutions are open systems, making it possible for any company to take part in the trade.

### **3.1.2 Introducing eMarkets**

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Over the last couple of years eMarkets have emerged as a new phenomenon within business-to-business e-commerce. eMarkets are websites where buyers and sellers come together to communicate, exchange ideas, advertise, bid in auctions, conduct transactions, and co-ordinate inventory.<sup>51</sup> Many analysts believe that trading on eMarkets will soar during the upcoming years, moving a substantial amount of traditional trade to the Internet. According to *Jupiter Communications*, the market for business-to-business e-commerce will grow from \$ 25 billion in 2000 to over \$ 2,2 trillion by 2005 (Figure 5).<sup>52</sup>

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<sup>48</sup> Merrill Lynch (2000), pp. 19

<sup>49</sup> Morgan Stanley Dean Witter (2000), p. 89

<sup>50</sup> Bear Sterns (1999), p. 55

<sup>51</sup> Goldman Sachs (1999), p. 2

<sup>52</sup> [www.jup.com](http://www.jup.com)

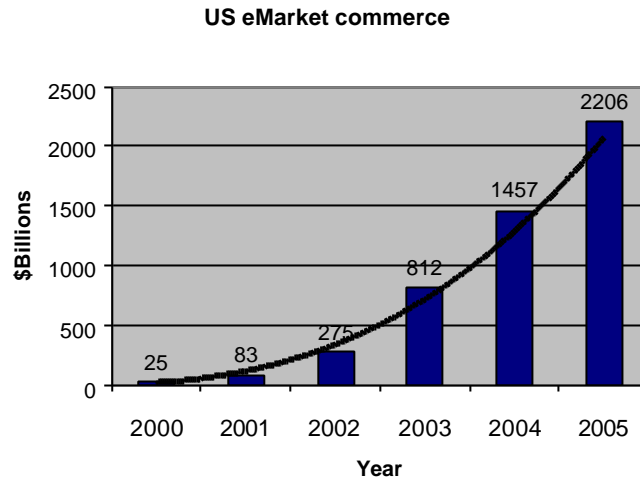


Figure 5. Estimated volumes traded on business-to-business eMarkets.

This massive estimated growth rate has brought a lot of attention to the industry. Many Venture Capital companies, for instance, have shifted investment focus from business-to-consumer to business-to-business. Another indication is that a large number of new entrants have started up eMarkets or other related services.<sup>53</sup> Even though growth figures should be revised due to the recent stagnation of new entrants, in face of corrections on Nasdaq and the decline in interest from investors that have followed, experts seem convinced that the trade volumes will soar. In the next section we would like to give a more thorough description of eMarkets, but first a quick overview of the evolution of business-to-business e-Commerce (Figure 6).

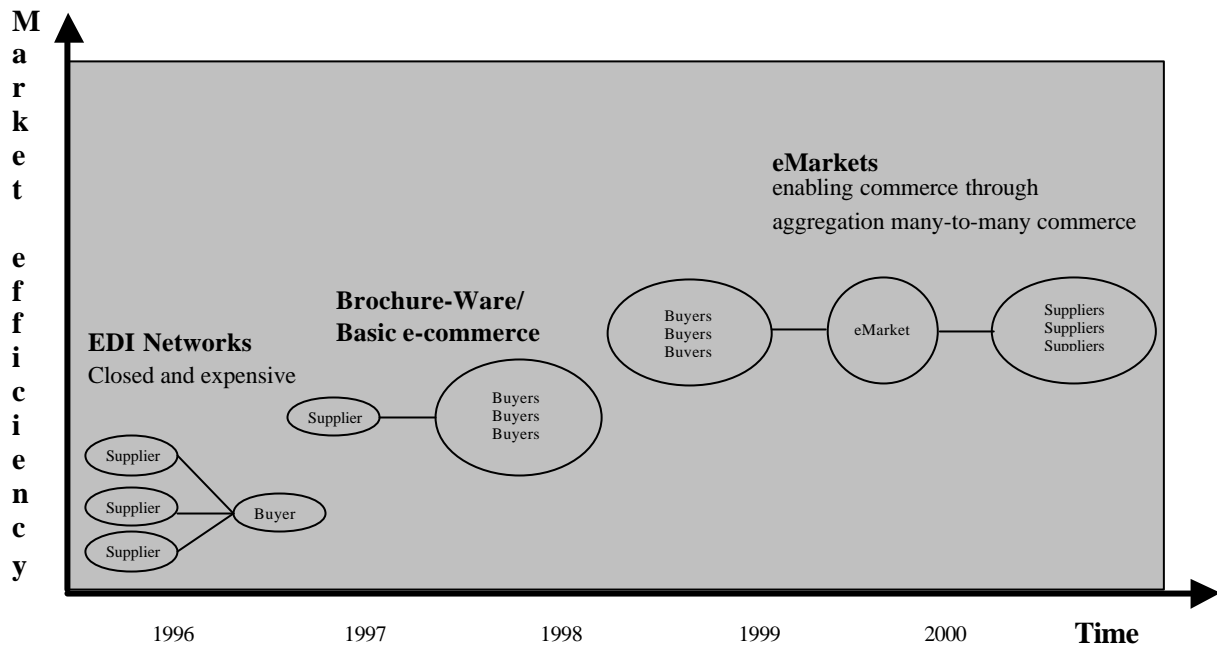


Figure 6. The evolution of eMarkets.<sup>54</sup>

<sup>53</sup> Equity Research (2000), p.1

<sup>54</sup> Morgan Stanley Dean Witter (2000), p. 8

## **3.2 eMarkets**

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The industry website *netmarketmakers.com*<sup>55</sup> describes eMarkets as:

“An online intermediary that connects fragmented buyers and sellers. Net markets eliminate inefficiencies by aggregating offerings from many sellers or by matching buyers and sellers in an exchange or auction. For buyers, they lower purchasing costs, while reaching new suppliers. For suppliers, they lower sales cost and reach new customers. A central hub where a trusted intermediary integrates both procedures and technology can save costs. Synonyms and expressions used to describe similar phenomena: *infomediary, metamediary, electronic markets, Internet markets, I-markets, vertical hubs, e-hubs, butterfly markets, vortex businesses, digital exchanges, online exchanges, fat butterfly*.”<sup>56</sup>

The *many-to-many connectivity* made possible by the Internet, enables buyers to link up with customers, suppliers and other members of their value chain in eMarkets, so that they can exchange information and trade products and services electronically. In this section, we will try to describe how the different types of eMarkets operate by dividing them into different, commonly used, categories. We are going to look at different industry approaches and hosting structures. Furthermore, we will describe the different revenue models and eMarket features.

### **3.2.1 Industry approach**

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An eMarket can either be organized *horizontally* or *vertically*. *Vertical eMarkets*, as the name suggests, serve a specific vertical industry, such as *chemicals, foods, telecommunications*, etc. These eMarkets focus on understanding industry practices and resolving industry constraints, that is, inefficiencies that lower margins. They try to automate vertical supply chains, in order to make the market more efficient. One common method is digitalizing and consolidating product catalogues. Another way of creating efficiency has been establishing various kinds of exchanges, enabling buyers and sellers to meet new actors and compare prices.<sup>57</sup> Often these kind of eMarkets have been started by persons with extensive experience from the focused industry.

One example of a vertical marketplace is *Arbinet*, which operates within the telecommunications industry. Traditionally, actors within telecommunications have negotiated prices and conditions when meeting at conferences etc. Hence, the market transparency has not been offered and the market trade has been somewhat inefficient. Arbinet has gathered carriers and service providers from all over the world to take part in their online exchange, where the participating actors buy and sell capacity on a spot market. The participants also have the opportunity to read and share all sorts of industry information. Arbinet has opened up the market by providing more efficient pricing.

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<sup>55</sup> [www.netmarketmakers.com](http://www.netmarketmakers.com)

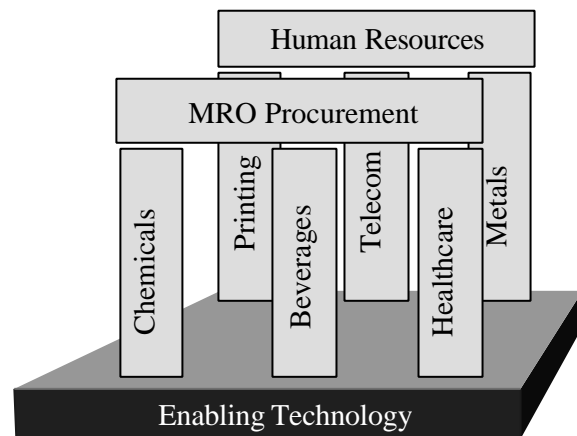
<sup>56</sup> [www.netmarketmakers.com](http://www.netmarketmakers.com)

<sup>57</sup> Dataquest (1999), p. 6

*Horizontal eMarkets* are focused on providing e-Commerce capabilities that are common to all industries, such as *maintenance, repair, operations procurement, web-based sales and marketing, human resource services*, etc. Horizontal eMarkets seek to make these processes more efficient, approaching participants from different industries. Often these horizontal players are an extension of enterprise software or service companies (such as procurement software or IT outsourcing services). Hence, the horizontal eMarkets frequently offer software solutions, such as procurement software, enabling users to conduct purchases more efficiently. Along with software products, the companies operate their own eMarket, which includes transaction capabilities and content services, such as industry news and reports.<sup>58</sup>

One example of a horizontal eMarket is *TradeOut.com*, which has created a marketplace for the market of *business surplus* (excess inventory and idle assets). TradeOut.com gathers qualified buyers and sellers, facilitating transactions and increasing efficiency. Sellers save administrative expenses such as warehousing, and surplus goods will be more accurately priced. Buyers access a global supply of business surplus, benefiting from shorter sales cycles and comparable product information. TradeOut.com offers surplus goods in a wide range of industries. Some examples are computer products, food and beverages, automotives and commercial transportation.<sup>59</sup>

Also, there are companies that provide the vertical and horizontal eMarkets with the technical platform. They have become known as *Application Service Providers (ASP:S)*, and examples are *TRADEX Technologies, The Sun/Netscape Alliance, Trading Dynamics*, etc. These companies are so known as “enablers” providing information-publishing tools, catalogue software, transactional capabilities, payment services, and customer relationship management functionality, etc.<sup>60</sup> (See figure 7 for an overview of the relationship between the different industry approaches.)



*Figure 7. Different eMarket approaches. Verticals presented vertically and Horizontals horizontally, with the Technology providers as the foundation.<sup>1</sup>*

<sup>58</sup> Equity Research (2000), p.10

<sup>59</sup> www.tradeout.com

<sup>60</sup> Dataquest (01/09-99), p. 6

### 3.2.2 Hosting structures

eMarkets have different hosting structures, meaning that they are either *buyer-managed*, *supplier-managed* or *neutral*. This thesis focuses solely on independent eMarkets, but in this section, as we try to provide an overview of the market, we find it necessary to describe the other structures as well. The different structures are presented in figure 8.

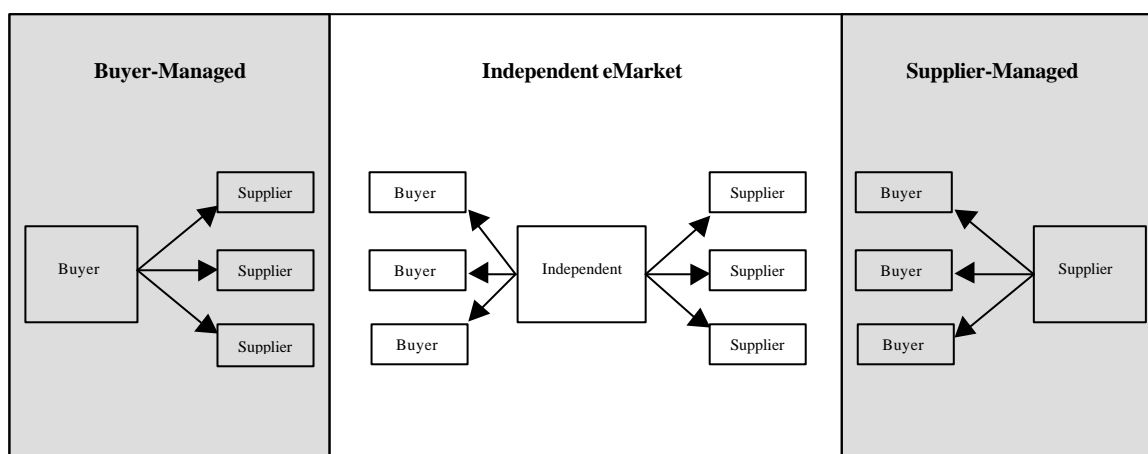


Figure 8. Three different eMarket structures.

A *buyer-managed* structure occurs when one or a few large buyers come together to build and manage an eMarket. The buyers are often industry giants, which in almost every case have long industry experience. In most instances, buyer-managed eMarkets are being set up as separate entities, in which the founding organizations attempting to recruit other leading buyers by offering equity ownership. The main purpose of building a buyer-managed eMarket is that procurement costs can be diminished as a result of the larger buyer power. Another major reason has been to drive waste out of the company's supply chains. These eMarkets are also looking to generate revenue from transaction fees that the suppliers will pay when executing transactions. One can see that this structure most often occurs within industries with relatively few large buyers, such as the American *auto- and medical* industries.<sup>61</sup> One obvious advantage for these industry managed players is the amount of trade that is guaranteed to be executed on the market. One example of a buyer-managed eMarket is *Broadline*, operating within the healthcare-industry. The eMarket originates from the two companies called *Tenant Healthcare* and *Ventro*, both realizing that their joint forces would create a more powerful buyer than they could ever do independently.<sup>62</sup>

Supplier-managed eMarkets often have similar backgrounds to the buyer-managed players. These eMarkets add value to their customers by lowering costs and offering smooth systems for ordering, payment and logistics.<sup>63</sup> These players also have the

<sup>61</sup> Equity Research (2000), p. 8

<sup>62</sup> Ibid

<sup>63</sup> F. Blom et al. (2000), p.24

advantage of existing relationships and secured trade prior to opening the eMarket. Five large suppliers to the health care industry, including *Johnson & Johnson*, *GE Medical Systems*, *Baxter International*, *Abbott Laboratories* and *Medtronic*, have recently formed a joint eMarket. This trading exchange will help healthcare providers make quicker, more efficient purchasing decisions, by simplifying business processes and providing a “single” source for customers healthcare purchases. This on-line enterprise will facilitate the exchange of information related to buying, selling and distributing medical equipment, devices and healthcare products and related services worldwide, and also provide access to clinical content.<sup>64</sup>

The final hosting structure and the one that is focused in this study is the neutral eMarket. On the Swedish chamber of commerce’s site on business-to-business eMarkets<sup>65</sup> it is stated that:

“...a neutral eMarket is open to any seller or buyer within the industry or region. It is a neutral arena for information and business transactions in an industry. The provider of the marketplace has the objective to match buyer and seller needs and to enable transactions.”

The eMarket tries to gather as many buyers and sellers as possible to be able to create liquidity in the market. The marketplace should be hosted by a trusted third party, in order to be viewed as neutral. That is, a company perceived as independent from buyers and sellers within the industry. Some eMarkets, however, have industry participants as investors. For these eMarkets to be viewed as neutral, the owner needs to be very clear on not interfering with the management of the marketplace in order to uphold its credibility. Any doubts that the eMarket is really neutral, will typically lead to large difficulties in attracting industry buyers and sellers to the marketplace due to lack of trust.

*BevAccess.com* is an independent eMarket providing an exchange for the trade of alcoholic beverages. The company is open to all US suppliers and buyers. Producers and sales agents represent the suppliers, and restaurants represent the buyers. The independent hosting structure fits this market very well because of its fragmented nature, with many small buyers and sellers. The eMarket provides the possibility to compare products and prices, making the market for alcoholic beverages more efficient than previously.

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<sup>64</sup> [www.baxter.com](http://www.baxter.com)

<sup>65</sup> [www.emarketservices.com](http://www.emarketservices.com)

### **3.2.3 Revenue models**

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Different eMarkets deploy different revenue models. Some companies have focused on a single revenue stream and others on multiple. These revenue streams are often connected to the trading systems offered by eMarkets. The most commonly used models are – *community, catalogue, auction and exchange*.<sup>66</sup> In this section we will describe the different models.

*Community market makers* offer buyers and sellers with common interests different content services. The content most commonly consists of industry reports, job listings, industry specific news, editorials, chat, message boards etc. Community market makers most commonly generate revenue from advertising (targeted towards industry buyers and sellers), sponsorship and membership fees.<sup>67</sup> Today communities are mostly offered as a function adding value to the eMarket, rather than an independent business model.

*Online Catalogues*, to this date the most widely used trading/matching mechanism, is a listing that contains structured information on buyers and suppliers including their products. In the catalogue, information from many different companies is aggregated in one place, creating a convenient one-stop-shop.<sup>68</sup> The service is most appropriate when the market is fragmented, geographically and in size. For instance, in an online catalogue, a US-based buyer can compare offerings from domestic vendors and European suppliers, possibly finding suppliers previously unknown to him. Catalogues have the ability to create transparency in the fragmented markets, thereby contributing in making the industries more efficient.<sup>69</sup> Instead of reading paper catalogues, that are often not up-to-date, and only represent a small part of the total market, the buyer can compare products from many different companies on various dimensions, such as price, availability, delivery dates, warranties, service information etc. According to the chief of marketing at one eMarket within the electronic component industry, large buyers often avoid purchasing through catalogues. The buyers realize that they will receive better prices and conditions if they negotiate on a volume basis. The list prices offered in the catalogue are usually fixed and do not permit negotiations. In this sense the catalogue mechanism can be seen as rigid.<sup>70</sup> The customers are usually small to medium-size firms that cannot negotiate to buy on volume, but sees that it can get better procurement by approaching a large number of buyers through an aggregated online catalogue. Online catalogues usually generate revenue from the combination of a percentage of gross transaction values (1-15%), as well as product listing and advertising fees from suppliers.<sup>71</sup>

*Auctions* in business-to-business eMarkets in many ways resemble to traditional auctions. Auction pricing is dynamic, as opposed to catalogue pricing. The competitive bidding process results in upward price movement. Sellers put out their

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<sup>66</sup> Merrill Lynch (2000), p. 8

<sup>67</sup> Merrill Lynch (2000), p. 7

<sup>68</sup> B2B (01/07-2000), p. 25

<sup>69</sup> Kohn (1994), p. 344

<sup>70</sup> B2B (01/07-2000), p. 26

<sup>71</sup> Merrill Lynch (2000), p. 8



products for sale and the buyers are free to make their bids. Just like in a normal auction, sellers are reluctant to sell their core products in this manner, since the price that they receive is totally out of their control.<sup>72</sup> For this reason the mechanism is more appropriate when a seller wants to liquidate surplus or used goods. An auction can also be conducted in a reverse manner. The reverse auction works the other way around; the buyers put out a request for a proposal and the sellers underbid each other in order to get the order. Auction eMarkets usually generate revenue through a combination of transaction fees (typically ranging from 10–20% of gross merchandise value), product listings and supplier advertising fees.<sup>73</sup> Some eMarkets offer more advanced functions such as *Proxy bidding* and *Dutch Auctions*<sup>74</sup>. We will not discuss these techniques further in the thesis.

*Exchanges* are probably the most advanced trading mechanism in use. The eMarket exchanges function like most commodity exchanges around the world. Normally, the traded goods are commodities such as power, oil, farm goods and telephone minutes. These markets are bid/ask, meaning that either side can suggest a price, and provide real-time pricing. Exchanges allow buyers and sellers to trade anonymously, which is an important element in this kind of trade. Being anonymous, the companies do not risk damaging their competitive position by revealing their lowest accepted price. The revenue of exchanges most often stems from *transaction fees* and *membership fees*. Transaction fees range from a spread of a few basis points, to a percentage spread (1–5%).<sup>75</sup> Even though this trading model is perceived as the most advanced, it has been criticized. The actual transaction cannot be said to contribute with much value, making it impossible to charge substantial fees. This fact has contributed to revising the profit estimates for actors using the model. A comparison has been made to the *New York Stock Exchange* (NYSE), a market with a multi-billion dollar turnover each year, but just barely making profit. For this reason the most advanced sites also offer forwards and other derivatives, making it possible for the participants to hedge against risk. This is an additional revenue stream for the exchanges and the eMarket can in most cases charge more for these services than for traditional exchange.<sup>76</sup>

Note that these different revenue models are not mutually exclusive. Frequently eMarkets offer a combination of the models and try to benefit from each of them. Community services are offered as value-added services by most eMarkets operating today. Often an eMarket can offer its customers additional value through more than one method of trading. Different methods can be viable for different products (surplus vs premium goods), as pointed out earlier. Figure 9 displays the different degrees of complexity and added value that the models represent.

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<sup>72</sup> Merrill Lynch (2000), p. 8

<sup>73</sup> Ibid

<sup>74</sup> www.ebay.com

<sup>75</sup> Merrill Lynch (2000), p. 8

<sup>76</sup> B2B (01/07-2000), p. 26

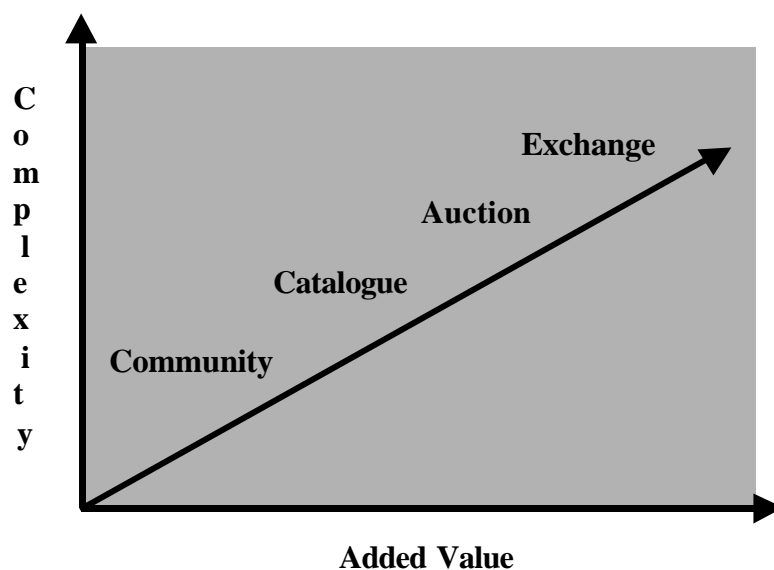


Figure 9. Complexity and added value offered by different trading systems, and the revenue models affiliated to them.<sup>77</sup>

### 3.3 Industry shake-out

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Recent industry reports, articles and executives that we interviewed, have brought up the fact that a substantial number of independent eMarkets are facing an uncertain future. They suggest that independent eMarkets using current business models will find it difficult to establish liquidity in their marketplaces. This becomes clear when noticing that there are a large number of eMarkets that have not yet performed a single transaction. Meanwhile new eMarkets emerge within industries characterized by heavy competition. Some examples of such recent startups are *pFreight* (commercial transportation) and *Transmission Exchange* (energy). As a result, analysts suggest that the more than 600 independent trading exchanges in operation today, will be winnowed to about 50 to 100 in 2001<sup>78</sup>. The common opinion, however, is that business-to-business e-commerce still will grow at a significant rate as stated in figure 5. The new assumption is that there will only be a few players within each industry accounting for a major part of the total industry volume<sup>79</sup>. This notion of an industry shake-out, which also has supplied the thesis with its title, has become clearer and more trustworthy as we have seen a few eMarkets cease to exist:

One example is *Aviation X*, who in the first quarter of 2000 tried to build an independent eMarket (*MyAircraft.com*) for aerospace parts and services. The company launched the site with \$1,6 million in funding. By proclaiming that they had a significant first mover advantage within the industry, *Aviation X* tried to attract buyers and sellers. The situation changed drastically as “brick-and-mortar” companies

<sup>77</sup> Morgan Stanley (2000), p. 15

<sup>78</sup> AMR research (01/04-2000). p 20

<sup>79</sup> www.redherring.com

such as *Boeing*, *Lockheed Martin*, *Raytheon* among others, announced that they were planning to start up an eMarket exchange. Though this was nothing but a statement in a press release, Aviation X realized that the new competitor, backed by these giants with their strong brands and industry experience, would become a superior competitor. Hence, Aviation X changed the company business model and decided to develop software instead of hosting an eMarket.<sup>80</sup>

Another eMarket that has closed down is *M-Xchange.com*. The company linked minority-owned suppliers with U.S. corporations in its marketplace. They experienced difficulties charging transaction fees and found investors reluctant to keep funding ventures based on transaction fees as the major revenue stream. There are quite a few articles stating that companies are not interested in participating in eMarkets were they have to pay transaction fees to do business with already existing partners.<sup>81</sup>

Our final example will be *IndustrialVortex*, which was liquidated during the summer. The company, active in the industrial automation products industry, at one point had more than 100 industrial-equipment suppliers enlisted, including some well-known names. The problem was that they did not have any buyers, due to competition from *AssetTrade*, *BigEquip.com* and others already present on the market. Obviously, this was a case where too many players went after too small a market. The list of eMarkets that suffer from severe losses and cease to exist is getting longer for every month and we will most certainly see many more examples of this kind.<sup>82</sup>

These examples show that merely a rumor can take away the market potential for an entrant, pointing to the power of incumbents in many industries and also towards the weaknesses of business models chosen by some eMarkets.

We have also experienced consolidation by the many eMarkets suffering from low market liquidity. Independent eMarkets are all aiming to obtain critical mass. This notion is defined as the point where the eMarket reaches the trade needed for break-even. The quickest way to reach this objective has been by merging with other related eMarkets or by acquiring them. The executives that we spoke to and industry articles suggest that this trend will continue and that eMarkets within the same industries will join forces in order to reach critical mass.<sup>83</sup> Not only does a merger provide the new player with more trade, it is also a way to get a hold of skilled personnel, another important constraint to many eMarkets.

From our initial exploratory research we received indications as to which eMarkets and business models would be most fit to survive an eMarket shake-out. By the term survive, we mean attaining sustainable profitability, either independently or jointly with another party (through merger/acquisition/alliance etc). From this information we concluded that eMarkets providing the participants with significantly more value than traditional (off-line) markets, would become the most qualified players. This can be done internally or through collaborative partnerships. This is explained by *Jeff Andrews*, CFO at *GoFish.com*, (a seafood exchange): "We want to bring value so that we're not just a bulletin board. I think that's probably where marketplaces are going,

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<sup>80</sup> PWC (01/07-2000), p. 55

<sup>81</sup> Ibid

<sup>82</sup> Ibid

<sup>83</sup> [www.redherring.com](http://www.redherring.com)

these kinds of value-added services<sup>84</sup>. We received indications that eMarkets differed greatly in these offerings and how they were supplied. The survey has been assembled partly with these questions in mind, as we wanted to describe these differences. Some questions were kept on a rather general level, since the survey was also partly explorative to its nature. This approach was necessary as we aimed to assess which theories would be appropriate explain the existence and strategic behavior of eMarkets.

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<sup>84</sup> The Industry Standard (24/7-2000)

## **4 Results from the survey**

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In order to get a more thorough and accurate picture of the industry, at the same time verifying some of the indications that we had received, we decided to conduct a survey study. We asked the executives about their service offerings, revenue streams, and strategic behavior.

### **4.1 Differences in service offerings**

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During the interviews we received indications that eMarkets differed regarding their service offerings. Consequently, we wanted to find information supporting and describing this notion. The respondents were questioned to whether these services were offered to the participants on the eMarket. Finding initial indications of differences, we conducted a statistical cluster analysis of the material. The point of this analysis is to form a number of groups that are as different to each other as possible, while being homogeneous within the groups, with regards to a number of cluster variables. The cluster variables were based on the following questions in the survey:

*“Please select the provider of the following services to buyers and suppliers connected to your eMarket.” [Yourself/Partner or Not provided]*

- Logistics
- Financing
- Insurance
- Buyer and supplier rating system
- Integration with supplier back-end system
- Comparative product analysis
- Product configuration
- Inventory availability
- Extensive customer support

The cluster analysis was conducted on 66 companies after missing values had been omitted. The analysis gave that the material could be divided in two groups of companies, showing the most significant differences in between them. The smaller of the two groups supplied participants with an extensive service offering. We will call this group the *Full Service Providers (FSP)*. The larger group offered fewer services, and we will call them *Transaction-Oriented Companies (TOC)*.

The TOC:s consisted of 40 companies, accounting for 61% of the sample. It consists of relatively young companies with a median age of 1,5 years. 75% of the group members did not originate from a “brick-and-mortar” company. 58% of these companies have international presence. The average company in this group had 500-1000 transactions per month, accounting for a yearly value of \$ 1-5 millions.

The FSP:s consisted of 26 companies accounting for 39% of the sample. The median age for these companies is 2 years and 85% does not originate from “brick-and-mortar” companies. 61% of these companies were represented abroad. The average

company in this group had 100-500 transactions per month, accounting for a yearly value of \$1-5 millions.

Although the groups have the same average turnover in USD, we can see that FSP:s have fewer monthly transactions. Thus indicating that this group has fewer but larger customers. The six-month age-difference may not seem substantial at first, but one has to take into account the fact that the industry is very young and rapidly evolving.

In figure 10 we will show the significant differences found between the two groups regarding their service offerings. In the table below we will see the share of each group providing the presented service. Note that all differences were statistically significant.

|  | <b>Services</b>   | <b>FSP</b>                                     | <b>TOC</b>                                     |
|--|---|--|--|
|  | For further explanations of the following services, please see glossary in appendix | Provided by the company or collaborative party | Provided by the company or collaborative party |
|  | <b>Logistics **</b>   | 73%  | 50%  |
|  | <b>Transportation***<br/>Management</b>   | 80%  | 38%  |
|  | <b>Tracking of goods**</b>  | 84%  | 60%  |
|  | <b>Forecasting***</b>   | 85%  | 45%  |
|  | <b>Purchase Profiles **</b>   | 92%  | 74%  |
|  | <b>Financing***</b>   | 85%  | 35%  |
|  | <b>Insurance***</b>   | 62%  | 15%  |
|  | <b>Derivative Instruments ***</b>   | 46%  | 5%   |
|  | <b>International Trade<br/>Logistics ***</b>  | 73%  | 20%  |
|  | <b>Supplier/Buyer Rating<br/>System***</b>  | 100%   | 25%  |
|  | <b>Integration with Supplier<br/>Back-end System***</b>                             | 92%  | 53%  |
|  | <b>Integration with Buyer<br/>Back-end System***</b>                                | 85%  | 45%  |
|  | <b>Segmentation Services ***</b>  | 65%  | 35%  |
|  | <b>Scheduling***</b>  | 73%  | 20%  |
|  | <b>Comparative Product<br/>Analysis***</b>  | 77%  | 15%  |
|  | <b>Reversed Logistics*</b>  | 62%  | 40%  |
|  | <b>Inventory Availability ***</b>   | 92%  | 55%  |

Figure 10. Differences in service offerings. \*=Significant on the 10%- level, \*\*=Significant on the-5% level, \*\*\*=Significant on the 1%- level.

Having studied the table above, it is clear that the FSP:s offer more services than the TOC:s. These services are all related to activities surrounding the actual transaction. We clearly see that FSP:s have realized the importance of providing value-added services, either by themselves or through collaborative partnerships. Later on, in the chapter on theory and analysis, we will try to understand why this smaller group have decided to take this strategic action.

## **4.2 Revenue streams**

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In this section we will try to give an overlook of the importance of different revenue models. We asked the companies about the importance of different revenue streams, now and in the expected future. Answers were provided on a scale from 1 to 7 (1 = not important. 7 = extremely important). This information gave us some indications on the revenue models used and how they could be expected to evolve in the future.

Not surprisingly, the TOC:s are dependent on transaction fees as a revenue stream (see figure 11). FSP:s, on the other hand, rely on both transaction fees and surrounding services. Multiple revenue streams can be seen as a means to obtain a lower business risk. We see that both groups to some extent have acknowledged this notion. FSP:s however, seems less reliant on one revenue stream, both currently and in the future.

We found overall differences between current and future importance of revenue streams. Also, both groups believed that a major part of the revenue streams would become more important in the future. In some cases, however, the degree of importance would stay unchanged (shown with \* in Figure 13 below). For instance, both groups believed that the importance of subscription fees would stay the same in the future.

*TOC:s* believe that content subscription will increasingly be more important in the future. The companies participating on the eMarket will for example, subscribe on newsletters where they will be able receive information on price-, demand- and supply- fluctuations. These newsletters will provide the participants with advanced information, tailored for the specific company. The eMarkets within this group are also convinced that services surrounding the actual transaction will be increasingly important. Although TOC:s within this group currently provide these services to a lower extent, they are aware of its future importance. Transaction fees are currently the most important revenue stream, according to the respondents. The importance will increase in the future, making it reach the highest level of importance stated about any revenue stream (Current importance = 4,56 Future importance = 5,69.)

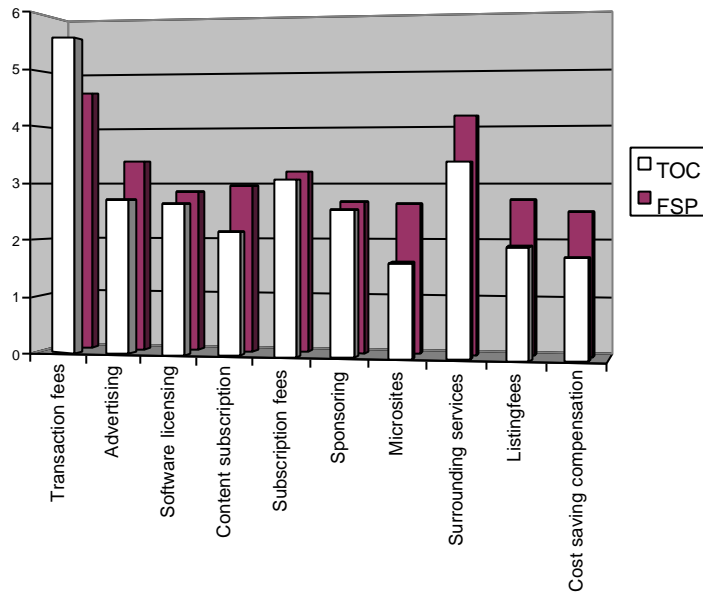
*FSP:s* believe that software licensing will become a more important revenue stream in the future (current importance = 2,84. Future importance = 4,15). We have not found a valid explanation for this fact, but one possible reason could be that the FSP:s to a larger extent have developed proprietary software, that they plan to lease to other players in the future. It is clear that FSP:s believe that the importance of services surrounding the transaction will increase. Although it currently has high importance, it will still increase in the future, (current importance = 4,19. Future importance =



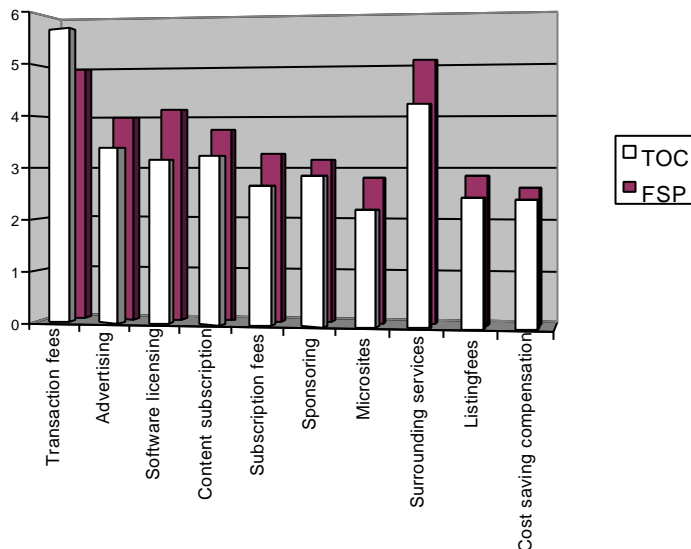
5,01). FSP:s do not believe that there will be any difference regarding the importance of transaction fees. The group may believe that their customers will not be willing to pay larger transaction fees in the future. We assume that this is due to the limited value that the actual transaction will provide the customers and because of competitive pricing. Still, transaction fees will remain one of the more important revenue streams in the future reaching a mean importance of 4,96.

In conclusion, there are differences between the two groups concerning revenue streams. It is clear that both are aiming to obtain multiple revenue streams, but TOC:s will mostly rely on transaction fees and FSP:s on services surrounding the transaction in combination with transaction fees.

**Figure 11: Current Revenue Streams**



**Figure 12: Future Revenue Streams**



*Figure 13. Differences in evolution of revenue streams. (Mean difference = Future Importance – Current Importance). The figures should be read as an increase on a scale from 1-7. All results are significant on the 5%-level. \*No significant difference between current and future importance of revenue stream.*

| <b>Revenue Stream</b>                           | <b>FSP<br/>Mean<br/>Difference</b> | <b>TOC<br/>Mean<br/>Difference</b> |
|---|------------------------------------|------------------------------------|
| <b>Transaction Fees</b>                         | *                                  | 0,77                               |
| <b>Advertising</b>                              | 0,64                               | 0,71                               |
| <b>Software licensing</b>                       | 1,4                                | *                                  |
| <b>Content Subscription</b>                     | *                                  | 1,21                               |
| <b>Subscription Fees</b>                        | *                                  | *                                  |
| <b>Sponsoring</b>                               | 0,33                               | *                                  |
| <b>Microsites</b>                               | *                                  | 0,50                               |
| <b>Services Surrounding<br/>the Transaction</b> | 0,84                               | 0,85                               |
| <b>Cost Saving<br/>Compensation</b>             | *                                  | 0,55                               |
| <b>Listing Fees</b>                             | *                                  | 0,47                               |
| <b>Mark-up on<br/>Transaction</b>               | *                                  | 0,69                               |

### **4.3 Strategic perceptions**

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We also asked the executives questions about some of the strategic issues faced by the companies. The results gave us some indications on how the executives were thinking, and how they perceived their environment. The results were relatively equal among the two groups, indicating that they have a common view on the degree of industry rivalry, market structure etc. The results are presented in figure 14.

| <b>Questions</b>  | <b>Mean</b> |
|---|-------------|
| Does your company experience light or fierce competition? (light =1, fierce=7)                        | 5.0         |
| Is your industry fragmented or consolidated? (1=fragmented, 7=consolidated)                           | 2.5         |
| Importance of being the largest player in the industry? (1=not important, 7=extremely important)      | 5.7         |
| Importance of being an early mover? (1=not important, 7=extremely important)                          | 6.1         |
| Does your industry supply standardized or differentiated products? (standardized=1, differentiated=7) | 5.0         |

*Figure 14. Strategy and market structure.*

As we can see from the table above, eMarkets experience a relatively high degree of competition. We believe that this is primarily due to the over-establishment of new eMarkets. This figure further reinforces the picture of the industry shake-out being in process. We can also see that most of the eMarkets are established in relatively fragmented industries. We believe that this is favourable and this notion will be discussed in further depth in the analysis section (five forces framework). Most companies believe that it is important to be a large player, indicating that niche strategies are not as attractive. Also, this indicates that eMarkets have recognized the importance of network externalities, to be discussed later on. The importance of being an early mover has received the overall highest mean. We believe that this is due to the fact that eMarkets believe that they can obtain a larger customer base by being first to market. Also, this conclusion was clearly indicated in several interviews.<sup>85</sup> Most of the eMarkets have been established in industries with relatively differentiated products. We have failed to find any direct conclusion of this result.

We found no significant differences between the two groups regarding their internationalization strategies. Therefore, in this section we will present some general results describing the total sample.

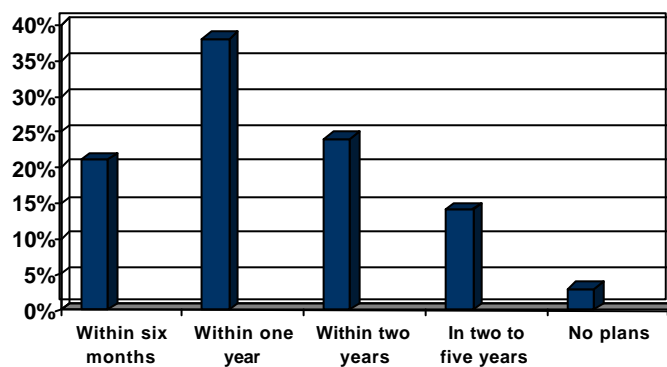
60% of the companies were represented outside the US. Out of these companies, 45% were represented in Europe, 26% in Asia and 27% in Non-US America. From

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<sup>85</sup> W. Barron (Part Miner), H. Miltch (Earthweb)

our interviews with eMarkets and internationalization consultants, we found that the European based companies were most often represented in London. The most frequently used methods when establishing the business abroad was Strategic Alliance (24%), Joint Venture (20%) and Starting an Independent Company (24%). Few of the companies chose acquisition/merger or franchise/licensing.

Companies not represented abroad, stated that the major reason for this to be that the company was not yet ready for internationalization (32%), or that they were currently planning/ working on an internationalization (36%). The companies also stated the time horizon to internationalize their business. 21% indicated that they would go international within six months, 38% were going within one year and 24% within two to five years. This development is described in figure 15.



*Figure 15. Expected internationalization of eMarkets.*

Concluding this section, we can say that a large part of the eMarkets will go international within the near future and that European eMarkets will experience an escalating degree of competition. Also, strategic alliances seem to be the preferred method when going abroad. This development will be dealt with in further depth in the speculations section, chapter 6.

We have now presented both descriptive empirical findings, as found in the section on surrounding services and research of a more exploratory nature, regarding the revenue streams and strategic perceptions of neutral US eMarkets.

## **5 Theory and analysis**

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Up until now, we have described the features of neutral US eMarkets, their offerings, revenue models and strategies. In this section of the thesis we will make an interpretation and analysis of the presented information. In order to make an academic interpretation, we need theory, which will help us structure the analysis and make the complex environment more understandable. We have chosen to interweave the theory and analysis in a very direct manner as will be explained below.

For this study we have chosen an *inductive approach*, meaning that our perspective has been to start by observing reality, then turning to theory in order to find explanations. This approach makes it viable for us to investigate a number of different theories, in order to distinguish between the ones that can help explaining the existing phenomena and those that are not suitable. Naturally, in this study, we can only investigate a small number of the total amount of possible theories. We have chosen to further investigate five different theories, which will be dealt with separately following a specified structure: We will start by briefly explaining each theory, in order to give the reader a general understanding of the framework. We will then analyze and assess the ability of the specific theory to explain the existence of eMarkets and their strategic behavior. If the theory is found valuable to explain the phenomena, not showing any obvious shortcomings, we will go further in-depth, trying to draw conclusions. Rounding up each section, the theory will be concluded and, if possible, hypotheses are formulated.

In “*Managing business relationships*” (Ford et al), three possible ways to co-ordinate business activities are described.<sup>86</sup> The first three theories described connect to these three paths:

The first path is described as *trading within a market, where buyers and sellers deal with each other on an anonymous basis with a low degree of commitment*.<sup>87</sup> Theory explaining this situation will be discussed in 6.1 under the title *Theory of Efficient Markets*. In section 6.2 we go on to investigate *Network Theory*, used to describe the situation when business is coordinated in long-term relationships. The third possibility described is when business takes place within the hierarchy of a company.<sup>88</sup> Theory describing this structure is found in *Transaction Cost Economics* and it will be dealt with in the section 6.3 of this chapter.

Two other theories will be described in sections 6.4 and 6.5. These are *Lock-in Theory* and *the Five forces framework for industry valuation*.

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<sup>86</sup> Ford et al. (1998), p. 59

<sup>87</sup> Ibid

<sup>88</sup> Ibid

## **5.1 Efficient markets**

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Many of the eMarkets that we have studied can be compared to commodity markets around the world. In some cases the company mission has been to provide the exact same service but located on the Internet, thus allowing for higher availability, giving a larger number of participants the opportunity to partake. For this reason, one might suspect that frameworks that are used to explain the existence and evaluate the efficiency of these markets could also be used to describe eMarkets. Such theory can be found in literature in the areas of microeconomic and finance. These theories will be useful primarily in those cases where eMarkets organize their trade according to the *exchange model*, as explained in chapter 3 (Background Information). This trading model is most widely used when trading commodities. When catalogues or auction procedures are utilized, often when trading more diversified products, the theory might not be directly applicable in the same fashion.

### **5.1.1 Efficient commodity markets**

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The main task for a commodity market is usually to establish an *equilibrium price*, a price where supply equals demand. If such a price can be established, inefficient situations of surplus or shortages can be avoided.<sup>89</sup> The primary gain for the actors is that transaction costs, specifically in the form of search costs, can be minimized. Instead of having to contact a large number of different buyers or sellers, one just has to turn to the commodity market in order to find the best offer. Efficiency in a marketplace depends on several factors that together act to build trust in the market.<sup>90</sup> These factors will be explained briefly below:<sup>91</sup>

*Neutrality.* All actors should be treated similarly. This implies that the sponsor (hosting company) can have no interest in the marketplace. Consequently, the sponsor needs to be neutral and should not interfere in the trade, unless very special circumstances occur.

*Competition through a large number of actors.* A large number of actors secure a fair price. If a majority of the players on a market for a product have been active in establishing a price, it has to be accepted by the market. Also, the possibility for an actor to influence the pricing diminishes with each additional actor on the marketplace. With a small number of actors, the gains in search costs might not even cover the cost for running the marketplace, thereby making it hard to justify its existence.

*Regulations.* There has to be clear and specified rules for how the marketplace should work. In terms of legal questions, authorities overlooking the regulations surrounding the trade, should supply these rules. More importantly the internal regulations upheld by the host of the marketplace should be clear, concise and comprehensive.

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<sup>89</sup> Bergman (1994), p. 46.

<sup>90</sup> J. Niemeyer, SSE

<sup>91</sup> OM-Group (1992), app. 2, Katz/Rosen (1996), pp. 345

*Information/Transparency.* One of the most important prerequisites is that all actors have access to the same information. Also, the amount of information available in the marketplace should be as great as possible. One important aspect is transparency, meaning that the actors should know who is bidding and selling, the current market price etc.

*Fees.* The fees to partake in trading should not be too high, this hindering the smaller actors to participate on the market.

*Liquidity.* This is probably the one most important aspect of efficiency. If the liquidity is good, there is a lower risk that an actor will not find a partner to trade with and the time that has to be allocated for the search process can be shortened. Liquidity has two important parts, *depth* and *width*. Good depth meaning that a very large quantity of a product can be sold without altering the market price significantly and width meaning that the spread between the buy and sell price is as low as possible.<sup>92</sup> Also, traders want to see an asset being traded in short intervals so that the current price can be said to reflect the real market price of that asset.

The market simply will not accept a marketplace lacking liquidity. When the marketplace does not have the confidence of the market, naturally it will not be able to attract the trading parties and eventually this spiral will lead to its closure. For this reason we have seen a race for critical mass.

### **5.1.2 Theory assessment**

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Can the theory of effective markets be used to explain the existence of the eMarkets? Yes, partly. Emarkets have primarily started with the perspective to lower search costs for the participants. Another important ambition has been to lower and determine the accurate price for a certain product, by collecting a large number of buyers and suppliers to the eMarket.

Can the theories also be used to decide the efficiency of a certain eMarket? Yes, with few exceptions the same factors can be used when evaluating eMarkets. However, one can see a trade-off between neutrality and liquidity. EMarkets have favored neutrality in front of liquidity. This has restricted them somewhat in trying to obtain critical mass rapidly, since they generally have to attract totally new customers to their market. Buyer- and supplier-managed eMarkets on the other hand, have gone solely for liquidity, with a sponsor that has interests in the market. This lack of neutrality can make it hard to attract other participants, but on the other hand liquidity is to some extent guaranteed. Also, transparency has not always been applied by the definition stated above. Rather, the buyers and sellers are rarely exposed until the trade has been executed, thus keeping the parties anonymous to the other participants.

Also, the theory of efficient markets can explain a few of the more specific features that we have noticed in our study. The forthcoming internationalization, described in the previous chapter, can partly be explained as triggered by the search for liquidity

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<sup>92</sup> J Niermayer, SSE

through more participants. Liquidity, is of course a driver of profitability, as transaction fees is the most important revenue stream for eMarkets.

We cannot use the theory to explain why some eMarkets chose to offer a wider range of surrounding services than others. In fact, the theory does not deal with relationships between the actors at all. Rather, it views trading as an *arms-length transaction*, i.e. when autonomous parties exchange goods or services with no formal agreement that the relationship will continue into the future. Examples thereof are transactions with non-strategic goods and services used by the eMarket, such as *office equipment, legal service, etc.* Also, the relationship between the eMarket-host and the buyer on the market, initially takes the form of arm's-length relationships with high transaction costs. These could be in the form of search costs, costs for learning to use the trading system and submitting information on the company, etc. The goal for eMarkets, however, has been to tie up the buyers to the market, since they are competing for volume that can be reached only with a significant number of loyal customers. Since the hosts often sponsor the initial costs in order to attract buyers and entrench them, as discussed in the upcoming section on *lock-in*, arm's-length relationships are not economically viable and therefore not focused by eMarkets

On an exchange- or auction based eMarket, the relationship between buyers and sellers on the market can be considered to be of arm's-length nature, since the buyers will most probably be trading with each other on an irregular basis. The role of eMarkets however, is to act as a middleman with relationships to both parties. Thus replacing the arm's-length transaction between buyer and seller into two separate relationships with the eMarket. These kind of links will be described in the next section on network theory.

*Having analyzed the theory of efficient markets, we conclude that it is useable to explain at least parts of the eMarket phenomena. On a general level, the existence of eMarkets can be explained by this theory, since they have emerged with the objective to decrease search costs, increase transparency and to secure a low and accurate market price. The strategic behavior of eMarkets can partly be explained by this theory. The fact that eMarkets have focused on obtaining critical mass and their internationalization can be attributed to the quest for liquidity, as explained in the theory. A shortcoming is that the theory is primarily suitable to explain eMarkets using one possible trading system, connected to a certain class of goods, namely the exchange model.*

*The theory of efficient markets is based on the notion of arm's-length relationships. These relationships exist between the buyers and suppliers participating on the eMarket. However, the relationship between the eMarket and the participants is generally the opposite. The fact that the theory does not recognize long-term relationships can be seen as another major shortcoming. We see this as a problem, since relations are a critical resource of most eMarkets, as explained in the next section. We conclude that the theory of efficient markets can explain the existence of some eMarkets (such as e-steel.com and PaperLink.com).the analysis has helped us in generating our first hypothesis:*

**Hypothesis 1:** *The existence of eMarkets trading in commodities can be explained by the theory of efficient markets.*



## **5.2 Network theory**

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Network theory has emerged during the last two decades, as a reaction on previous theories viewing the company more as a unit, in separation from the actors surrounding it. The theory formalizes the company's existence as part of a large network of relationships. As explained earlier this has been described as one of three possible ways to co-ordinate business activities.<sup>93</sup>

According to network theory, companies are dependent on their relationships to the actors in its environment. The relationships are described as the company's most valuable assets. They are actually of such importance that the company would cease to exist without them. However, relationships vary in a number of aspects, such as size, commitment, maturity etc., making some ties more important than others. In network theory, the company's major task is to *manage, acquire* and *develop* relationships in order to succeed (or survive, evolve etc).<sup>94</sup>

The strength of an enterprise can in part be measured by its *network position*. The network position consists of a company's portfolio of relationships and the activity links, resource ties and actor bonds that arise from them.<sup>95</sup> The network position of a company is dynamic, since it at least to a part, is determined by the other actors in the network.

Network Theory argues that a relationship view on business and strategy is viable for a number of reasons:<sup>96</sup>

1. Relationships are used in other settings in life, making the concepts of closeness in relations easily understandable and allowing for experience from other parts of life to be transferred to business.
2. Relationships are not theoretical concepts, but they exist in reality, making them tangible.
3. Relationships inevitably involve more than one party, allowing for the integration of thinking and acting of others. This might be the most critical and important advantage from a business point of view.

The network theory describes the environment as relationships/bonds between *actors, activities* and *resources*:<sup>97</sup>

Buyers, suppliers, enablers and public institutions could for example represent *actors* within a specific market. The bonds with other actors are one of the most important resources to a company. The different actors will invest in their relationships, increasing their knowledge and building trust between the two parties.

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<sup>93</sup> Ford et al. (1998), p. 59

<sup>94</sup> Ibid

<sup>95</sup> Ford et al. (1998), p. 49

<sup>96</sup> Ford et al. (1998), p. 59

<sup>97</sup> Ford et al. (1998), pp 42

Transportation, procurement and inventory handling are examples of *activities* that enterprises get involved in together with other companies. These three activities are the basis of ideas such as *Just-In-Time* and *Total Quality Management*. Links to the activities are, at least partly, beyond the company's control, since other parties are involved. This fact makes activity links important to manage.

*Resources* are assets within the company, whether they are physical, like labor or production facilities, or non-physical, like design skills or management capability. A company's resources however, are of little value if they are not activated through interaction with other companies. Through a relationship, the enterprise can make use of its resources and activate resources controlled by another company for its own benefit.

Every company sustains a number of relationships at any given time, all affecting each other. For this reason it is important to manage the *relationship portfolio* in an efficient manner. A manager has to know which relationships are vital to the company and allocate time and energy accordingly. Also, it is important to know when to end a relationship and when to initiate a new one.

### **5.2.1 Theory assessment**

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We recognize that many parts of the network theory can be used to describe the existence and strategic behavior of eMarkets. We see that eMarkets can be described as existing as a part of a network of relationships. Many times relationships can be viewed as the company's most important assets, since offering liquidity through tying up large participants, is the basis for a functioning eMarket. The thought of critical activities fits well into the description of the differences in offerings of value added services between different eMarkets. We cannot see any parts of the theory contradicting our view with the phenomenon at hand. As opposed to theory of efficient markets, network theory does not seem to be restricted to a certain good or trading model. With this in mind, we go on to further analyze how network theory can be used to describe the existence of eMarkets and their strategic behavior.

### **5.2.2 Analysis using network theory**

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Interviews with actors in the industry convinced us of the importance of relationships, which constitutes the essence in network theory. Furthermore, the importance of *acquiring, managing* and *developing* relationships in order to succeed, seems to describe the reality of many eMarkets well. This three-step process as applied by eMarkets, will be analyzed in the following passage, where we look at the different actors to which eMarkets have relationships.

## **Investors**

Initially, relationships need to be *acquired* with investors. Normally this relationship supplies the eMarkets with the capital that is needed for the start-up. Up to recently this market has been relatively favorable for business-to-business eMarkets. As we have already discussed, venture capitalists have been eager to sponsor these start-ups, especially since the electronic retailers, trading in consumer goods were not able to live up to the high expectations. Even though the market has been favorable, the establishment of relationships with investors is very time consuming. The reason for this, being that both parties are essentially dependent on each other for profitability and long-term survival.

Relationships with the investor have to be carefully *managed*, since a conflict between the two parties could mean the end for an eMarket, at least if it takes place in an early stage. Often these relationships are among the hardest to manage, since both parties are dependent on each other, while sometimes having goals that differ. Venture capitalists tend to have a shorter timeframe than the management of the company, occasionally pushing it to take actions that it is not ready for, such as rapid foreign expansion in order to increase the valuation in face of an IPO or other exit strategies.<sup>98</sup>

Sometimes the relationship can be *developed* beyond a mere investment, for example if the investors have valuable skills that can be shared with and used by the eMarket. Many investors want to use these skills, taking an active role in the company that they are working with. They view an active role in the company as an opportunity to ensure that the investment develops favorably. Obviously such a relationship demands more of the parties than when ownership is passive to its nature. The relationship with the investor is more focused on acquiring and managing than developing. The reason for this is that the relationship is normally limited in time. Most investors in eMarkets (venture capitalists) initiate an investment with the ambition to exit within some predefined time period.

## **Software and Technology providers**

The second party that an eMarket needs to develop ties to is the Software and Technology provider, building/supplying the platform and trading system. Since these solutions will very much affect the function of the eMarket, the relationship is decisive. There are an abundant number of players offering these systems and the critical task lies in finding the supplier that can provide the company with the perfect solution for its needs. *Acquiring* a relationship with a technically advanced player can be very complex. Many entrepreneurs initiating the start-ups, do not possess the technical expertise necessary to understand how their trading systems should be constructed. Thus, limiting their possibility to know what they should look for when buying the system.

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<sup>98</sup> Ibid

This relationship is also very important to *manage*, since the ability to service/upgrade the platform often is company specific, making it hard or impossible to switch to another supplier. This situation, referred to as lock-in, is further discussed in section 5.3. Relationships with the technology provider are seldom *developed* beyond upgrading the systems in co-operation.

### **Suppliers of eMarket goods and services**

The third group of actors to which the eMarket *acquires* relations, are the suppliers selling goods/services on the market. This is often a most crucial step, since it is of great importance that an eMarket can offer the largest suppliers with the most comprehensive assortment of products, or the ones with the best reputation. Sometimes the race to tie up suppliers to a market can be decisive for the competition on a specific market and therefore it may be considered the most important face in starting up an eMarket. Often one can spot a *domino-effect*, as the agreement from one important actor to participate, convinces a group of other suppliers to partake as well.

The *management* of these relationships can be decisive since they are not always regulated legally, but can take the shape of an oral agreement. Often they are *developed* as the parties grow trust in each other and want to connect back-end systems, be able to display the supplier's product availability, etc. The conclusion is that focus is on all three steps in the process, being equally important. The relationships will typically be driven and initiated by the eMarkets, since they are the newcomers in the industry. The suppliers are normally active on the market, with functioning ties to other distribution channels. The relationship to suppliers demands focus in both acquiring, managing and developing.

### **Suppliers of surrounding services**

The next group, to which the eMarket needs to establish relationships, is suppliers of surrounding services. These services are considered by the eMarket to be vital for the total offering, but they cannot be supplied by the eMarket itself, because it is not within its core competence, or it does not have the resources in-house. *Acquiring* these relationships is vital and as for the suppliers of trading goods, these partners need to be of highest quality since they reflect the perception that the customers get of the eMarket. Frequently only the most critical services, such as logistics or tracking, are offered in the first period of running the eMarket. Ties to additional suppliers are bound as the trading parties start to demand a wider spectrum of services. This process should be continuous with the goal to offer customers a maximum of value, making these relationships vital in the quest for liquidity.

Our opinion is that the *management* of these relationships is most important to eMarkets as we see these services as being a part of the competitive edge. Also, these relationships need to be *developed* consistently, in order to strive for perfection in the total offering to the customer.

## **Buyer of eMarket products and services**

Having tied initial relationships with the actors described above, the eMarket is now ready to start trading and relationships with the buyers on the marketplace need to be *acquired*. Naturally all the other relationships described are tied with these in mind, since the buyers are the foundation of revenue for the eMarket and through them, for all the other actors in the network. This is a process built on the notion of attracting leading customers. As always in these cases the very first customers are the toughest to attract. This process will be explained in detail when describing lock-in theory later in this chapter.

The relationships to buyers on the eMarket are *managed* by the eMarket, even though the other parties, such as suppliers of goods, or surrounding services, could be the ones actually trading with the buyer. For this reason relationships with those actors grow in importance, as explained earlier. The *development* of relationships with buyers is important, as it often means that they are taking a larger part of their business to the eMarket. Also, technical development such as the eMarket connecting to the buyer-back end system can be a possibility. These measures make it possible to further tie the buyers to the marketplace. Buyers being the most important relationship for the eMarket, all three steps in building the relationship should be in focus.

*From the discussion above we can conclude that network theory can be used when describing the strategic behavior of eMarkets, such as initiating relationships with other actors in the market. We will go in-depth with the relationship between eMarkets and one particular partner, the supplier of surrounding services. This analysis is based on the descriptive research extracted from the survey.*

In the following section we will examine how eMarkets use their network to obtain the resources necessary to supply critical activities to their customers. According to the theory, one important decision of companies within a network is to decide *who is to perform which activities*. This is normally referred to as the outsourcing decision of the company. Without examining this decision in detail it is expected from the company to concentrate in the areas of its core competences. When the company is clear on what it should do and what it wants others to do, it faces the task to find the partners needed to complement its business. The portfolio of relationships are a determinant of the company's network position and thereby a measure of its strength. In order to obtain the strongest network position possible, the company should establish relationships with critical actors, so that it can make use of the resources of these partners in order to supply its customers with maximum value.

The result of our survey shows that two groups of companies, the TOC:s and FSP:s differ substantially in their offerings, in that the latter group supply their participants with a wider offering. Since the companies in the two groups do not differ substantially in terms of size, we assume that they do not either differ in their ability to supply services internally. For this reason we conclude that much of the difference is made up of the fact that the FSP:s have concentrated on building relationships with partners. This assumption is also strengthened by their propensity to utilize partners as stated in figure 16. The percentages should be read as the share of companies in the group that supply a specific service through partnerships, as opposed to internally.

The total share of companies supplying the service is also stated. (This information can be found in a more comprehensive format in figure 10). As should be obvious from the figure, the FSP:s use partners to a larger extent, both in absolute terms and as a share of the total amount of services supplied.

| <b>Surrounding Services Offered</b>           | <b>Through Partners<br/>FSP</b> | <b>Through Partners<br/>TOC</b> | <b>Total<br/>(Partners<br/>+<br/>internal)<br/>FSP</b> | <b>Total<br/>(Partners<br/>+<br/>internal)<br/>TOC</b> |
|---|---------------------------------|---------------------------------|--|--|
| Logistics **                                  | 40%                             | 26%                             | 73%  | 50%  |
| Transportation Mgmt ***                       | 46 %                            | 20%                             | 80%  | 38%  |
| Tracking of Goods **                          | 35%                             | 20%                             | 84%  | 60%  |
| Forecasting ***                               | 32%                             | 10%                             | 85%  | 45%  |
| Purchase profiles**                           | 12%                             | 3%                              | 92%  | 74%  |
| Financing ***                                 | 54%                             | 18%                             | 85%  | 35%  |
| Insurance ***                                 | 42%                             | 10%                             | 62%  | 15%  |
| Derivatives ***                               | 24%                             | 3%                              | 46%  | 5%   |
| International Trade Logistics ***             | 44%                             | 10%                             | 73%  | 20%  |
| Buyer Supplier Rating System ***              | 15%                             | 8%                              | 100%   | 25%  |
| Integration with Supplier Back-end System *** | 31%                             | 10%                             | 92%  | 53%  |
| Integration with Buyer Back-end System ***    | 28%                             | 10%                             | 85%  | 45%  |
| Segmentation Services ***                     | 8%                              | 3%                              | 65%  | 35%  |
| Scheduling ***                                | 23%                             | 8%                              | 73%  | 20%  |
| Comparative Product Analysis ***              | 31%                             | 0%                              | 77%  | 15%  |
| Inventory Availability ***                    | 15%                             | 5%                              | 92%  | 55%  |

*Table 16. Surrounding Services offered by eMarkets through partnerships. \*\*\* denotes significant differences found on the 1%-level or less, \*\* on the 5%-level and \* on the 10%-level or less.*

From the research material analyzed through network theory, we conclude that some eMarkets use their network in order to offer their participants a wider variety of value-added services. It would have been helpful for us if we could have presented a survey where eMarket participants stated that the value is increased with the amount of surrounding services offered. Since we have delimited our study to cover the companies hosting the eMarket, we cannot produce such evidence. However, we can draw on the indications that we have received from interviews. New services are primarily added to the offering as participants on the market request them, thus assuring that they contribute with value to the offering. Also, one can argue that variety in an offer always adds value, providing that every participant is free to choose which parts of the offer he wants to utilize.

*The conclusion of the analysis is that network theory is useable, as it can explain the existence of eMarkets and important parts of their strategic behavior. Our analysis of the relationships to different actors concluded that participants, i.e. buyers and suppliers, were the most important, since only for those relationships were the three*

*actions of acquiring, managing and developing of ultimate importance. These actors need to meet in an efficient manner, something that eMarkets can enable. Providing this critical link in the network, justifies the existence of eMarkets. We have also been able to explain important parts of their strategic behavior, specifically the forming of relationships. Also, the theory has helped us to analyze one of the empirical findings from our survey and led us to form a hypothesis concerning that finding. The differences in offerings of surrounding services seem to a large extent attributable to the collaborative partnerships formed by the eMarket. We believe that through this use of relationships, a maximum of value can be supplied to the participants. Thereby partnerships become necessary in the quest for value-added. This hypothesis is formulated as follows:*

**Hypothesis 2:** *Partnerships with suppliers of surrounding services are essential in creating end-user value.*

### **5.3 Transaction cost theory**

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As the name implies, transaction cost economics focus on costs in connection to the transaction, such as *time and money spent finding a trading partner, transportation costs, contract costs, etc.*<sup>99</sup> The theory is viable when explaining situations where these costs are low, as well as substantial. The former situation has been assessed using theories of efficient markets and for this reason we will focus on when *high* transaction costs are present. In this environment, transaction cost theory can be used to describe the third possible way to co-ordinate business activities, as presented in the beginning of this chapter. By only focusing on a part of the theory we realize that it will not be fit to explain the existence of eMarkets on a general level. The framework of this theory will be explained briefly in the following passage.

*Transactions costs theory* is largely based on the thoughts of *Ronald Coase* and *Oliver Williamson*.<sup>100</sup> It predicts that:

“economic exchange will tend to be organized in ways that minimize the costs of those exchanges” [Coase 1937].<sup>101</sup>

Another conclusion that Coase comes to, is that *when transaction costs are large, bargaining may not take place*. This is one of the situations in which Coase’s famous theorem does not work. The theorem states that “*Assuming no bargaining costs, once ownership rights to a resource are established, individuals will bargain their way to an efficient use of their resource.*”<sup>102</sup>

Often, when transaction costs are high (due to contracting costs, asymmetric information, hold-up problems, etc.), the transactions are moved inside the firm. Example of an industry where this kind of vertical integration has taken place is *aluminium refining*. The problems with site-specificity, relation-specific investments,

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<sup>99</sup> Perloff (1999), p. 46

<sup>100</sup> Besanko et al (2000), p. 143

<sup>101</sup> Katz/Rosen (1998), p. 198

<sup>102</sup> Katz/Rosen (1998), p. 604

etc., have resulted in massive vertical integration in this industry.<sup>103</sup> Transaction costs can be lowered by vertical integration<sup>104</sup>, since there is less need to write contracts for in-house transactions and normally the long-term objectives of the transaction are common to both parties.

### **5.3.1 Theory assessment**

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*Given that we only utilize a limited part of transaction cost economics in this analysis, we do not see that it can be used to explain the general existence of eMarkets. However, in order to complement the theory of efficient markets, by also explaining situations when transaction costs are substantial, we have chosen to use the theory. The part of transaction cost theory explaining this situation can to a limited extent help us in understanding the strategic behavior of eMarkets. The theory suggests that when transaction costs are high, transactions will take place within the firm. We find this notion interesting since it can, at least in some cases, explain why eMarkets supply surrounding services through internal resources rather than through partnerships, even when the service is not part of the company's core competence. As the theory only to a minor part can explain the phenomena, we chose not go further with the analysis.*

*The theory has helped us to extract another hypothesis on the differences in offerings of eMarkets. This hypothesis is formulated as follows:*

**Hypothesis 3:**            *Transaction costs lead some eMarkets to offer surrounding services internally, even when the service is non-core.*

### **5.4 Lock-in theory**

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Lock-in theory describes how customers get locked into business relationships. Lock-in is accomplished when a buyer or supplier experiences insurmountable switching costs. Switching costs can be explained as the total costs associated with the buyer switching from one supplier to another. These switching costs can be expressed in non-monetary, as well as in monetary terms. The supplier strives to increase the customer switching costs and employs a number of strategies to do so. The supplier can for example deliver software tailored to customer needs and provide continuous upgrading. The customers cost of switching to another supplier can become severe, as he might fear transferring data from an old system to a new one. Also, the company might have made significant investments in the software and do not wish to reinvest in a new solution. The supplier might also be the only company on the market that is able to deliver the software that the customer requires. The supplier goal is to create a large base of locked in customers. When that is accomplished, the company must try to manage the locked in base, preventing the customers from switching to other

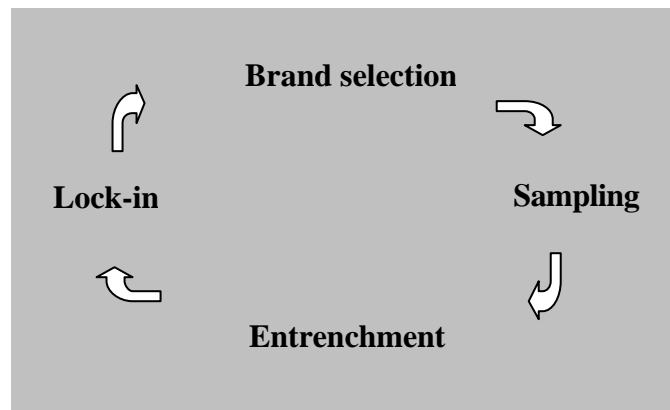
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<sup>103</sup> Besanko et al (2000), p. 143

<sup>104</sup> Katz/Rosen (1998), p. 604



suppliers. When managing lock-in one must closely examine the lock-in cycle, visualized in figure 17.<sup>105</sup>



*Figure 17. The lock -in cycle.*

The cycle is the process that the customer must travel through in order to get locked in. The first step is *brand selection*. In this phase the customer chooses a new brand. The new brand selection can for example be triggered by promotional activities or need identification. The first time a specific customer picks a brand, the customer will have no preferences from any one brand based on lock-in. You do not start out by being locked in, rather it is a result of the choices you make.

In *the sampling phase*, the customer uses the new brand and takes advantage of whatever inducements were made to give it a try. These premiums are intended as a means to get the customer to accept the fact and costs of future lock-in. The danger, however, is that the customer reaps the benefits from the promotional activities and then decides to leave the supplier for another one. This kind of unfaithful behavior can to some extent be prevented by clever strategy, but are in other cases inevitable.

Customers who decide to do more than just sampling, move on to *entrenchment*. This phase is where the customer develops preference for the brand over others. When the customer is entrenched it can move on to the final stage – *lock-in*. This is where the customer will experience insurmountable switching costs. The supplier must strive to prolong this phase, preventing the customer from starting over from the brand selection phase.

According to *Shapiro and Varian (1999)*, a supplier of information goods has a basic strategy for dealing with lock-in. The supplier can choose to *invest, entrench and leverage* the customer base.

Companies must *invest* to attract new customers and to make them loyal. If the company succeeds in attracting and keeping the customers, it will create an installed base of customers. In order to build a large customer base, the supplier must induce

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<sup>105</sup> Shapiro/Varian (1999), ch. 5

trial. When the customer has entered the cycle, the supplier strives to continuously increase the customer switching costs. Looking ahead at the whole lock-in cycle is an important part when investing. One must evaluate the profitability of each type of prospect customer over the lock-in cycle. Firms will lose money in attracting customers, and recoup these investments from profitable sales to locked in customers. Revenue from the locked in customers can be seen as the return on the investment that is made in them. The early adopting customers could, for example, spend more money over time compared to the late majority of customers. In that case it might be wise to use heavy promotional spending on the early adopters, while spending less on the late majority. One must also consider that attractive customers often are locked in to relationships and face high switching costs. The supplier must calculate if the efforts to attract these “hard-to-get” customers will pay off in the long term.

Encouraging customer *entrenchment* is about inducing the customers to become more and more committed to the company’s offering. The seller could for example encourage the buyer to make additional investments into the relationship. Another method is to introduce new, proprietary features in the products in order to raise switching costs.

“Another wonderful way to get your customers entrenched is to offer them more and more value-added information services”. [Shapiro/Varian, 1999]<sup>106</sup>

This method contributes to increasing customer dependence on the seller. Loyalty-programs are also a measure to keep customers and promote frequent usage. These programs can be organized in a number of ways. Some focus on the purchase volume and others on the number of transactions. All loyalty programs are not successful and they need appropriate structuring in order to create customer entrenchment.

If you have been successful in creating an installed base, the next step is to *leverage* the base by selling complementary products.

“If a rival can figure out more ways to generate profitable revenue streams from a new customer, that rival will likely outbid you to attract that customer.” [Shapiro/Varian, 1999]<sup>107</sup>

Hence it is important to continuously develop the company offering. If the seller does not have the ability or competence to provide complementary products, he can sell access to the customers to others. Other companies will offer new features and the revenue that is generated will be shared. Another way to leverage the base is to divide the market into segments and to offer different products to different customers. Preferences might differ among customers and some may be willing to pay more for certain services than others. The company might want to offer different prices to existing customers, the rivals installed base, and new customers. If differentiated pricing is possible, the company can extract maximum value from the customer base. Another way of leveraging the base is to prolong the lock-in cycle. This can be achieved by getting the customers to extend their contracts before those contracts expire.

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<sup>106</sup> Shapiro/Varian (1999), p 156

<sup>107</sup> Shapiro/Varian (1999), p. 159

### **5.4.1 Theory assessment**

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When studying lock-in, we found important elements that can be recognized in the strategic behavior of eMarkets. The theory cannot be used to explain the existence of eMarkets, since it does not contain any insights in this area. We have chosen to go further in-depth, trying to determine if there is a match between theory and our empirical findings (specifically value-added services), by analyzing the behavior of eMarkets in terms of lock-in.

### **5.4.2 Lock-in analysis**

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EMarket customers are represented by buyers and suppliers participating on the market. (The relationship between the eMarket and its participants has been described in depth in section 5.2). The eMarket needs to attract as many buyers and suppliers as possible in order to obtain critical mass, again, defined as the point where the trade volume executed on the marketplace is large enough for the eMarket to reach break-even. In order to attract participants, and create sustainable critical mass, the companies must consider managing the lock-in cycle. We will now go through the different steps in the lock-in cycle.

#### **Brand selection**

First of all eMarkets should induce potential participants to try the system (*brand selection phase*). This is commonly achieved by providing the service, free of charge, for some period. EMarkets also try to convince their potential customers by presenting their unique benefits. They could argue that they have significant liquidity on the marketplace, providing the customers with sufficient supply and demand. The eMarkets inform the potential participating buyers that they can compare prices and save overall purchasing costs. They tell the potential sellers that they can reach new customers and that the sales channel allows for significant cost reductions. As the potential participants are presented with a number of different brands they will compare features and pick the one whose offer is closest to their specific requirements.

Brand selection is also influenced by personal contacts. Many eMarkets are founded by people with previous experience from traditional, “brick-and-mortar” companies within the industry. These people have access to an existing network of contacts and these relationships might be with key persons at procurement and marketing departments. When a person working at a traditional company decides to start an independent eMarket, he naturally tries to influence existing contacts to join their online marketplace. The personal contact can be seen as a major asset when the buyer is considering a number of brands/companies. The relationship brings trust to the company and reduces the buyers perceived risk.

## **Sampling**

When the customer has agreed to start trading on a certain eMarket, it enters the *sampling phase*. The buyer starts out by comparing supplier prices and conditions. The buyer also looks for suppliers that provide totally new products and solutions. Some eMarkets offer test-auctions and exchanges that present the simplicity of online trading and the overall benefits compared to off-line trade. These features help an inexperienced customer in getting acquainted with on-line trade. Later on, the buyers will try to place smaller orders, testing if the system actually works as promised. As the buyer becomes more comfortable with the trading procedure he will increase the procurement volume and start using other features. Sellers that enter the sampling phase have similar behavior. They publish their product catalogue and present information on prices and conditions. At this point, some buyers and sellers come to the conclusion that the service does not meet up to their requirements. As participants experience low switching costs in this phase it is not a problem to leave the eMarket and try out another system.

## **Entrenchment**

If the customer is satisfied with the service and decides to stay, it will enter the *entrenchment* phase. In this phase of the lock-in cycle, the customers start to engage in a more substantial amount of trade. As the buyers and sellers get more comfortable with the system, they will start moving more and more of their traditional trade to the on-line market. Doing this the eMarket participants typically experience real benefits such as cost reduction in procurement and efficient pricing. When the eMarket is successful in helping companies enhance trade, the process automatically generates *positive feedback*: New participants will enter the eMarket as they perceive the liquidity as substantial and that current participants perceive real benefits. When industry specific eMarkets have attracted a larger part of the industry players, new potential participants become more or less forced to join the eMarket in order to take part in the industry trade.

As the number of participants increases, the perceived value of the eMarket increases to each participant. When the eMarket only has two participants, one buyer and one seller, the pricing is not efficient and the companies do not experience any benefits. However, as the number of participants increase, the eMarket becomes more valuable to each participant. A buyer appreciates the entry of every new supplier as it gives an increased opportunity to compare prices and conditions. A supplier appreciates the entry of every new buyer, as the increased demand gives an increased opportunity to sell the company's products. This phenomenon is often referred to as *network externalities*.<sup>108</sup> The greater the network externalities are, the greater the possibilities for the eMarket to create customer entrenchment.

Offering more and more value-added services is a wonderful way to get the customers *entrenched* (as earlier stated). EMarkets can offer a large set of value-added services, either by themselves or through collaborative partners. In figure 10 of chapter 4, a

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<sup>108</sup> Shapiro/Varian (1999). pp 183

number of these services have been presented. Some of the services are more important to the customers than others, but we believe that all of them help eMarkets strengthen their customer relationships. The value-added services are the services surrounding the actual transaction. One of the more strategic services is the offering of a fully-fledged logistics solution. In this case the eMarket, or its partner handles the transportation from the suppliers to the customers. Another example of a value-added service is forecasting. The participants are presented with data on fluctuations in demand and supply, which in turn helps them plan their internal production processes.

We believe that the FSP:s have recognized the importance of offering value-added services in order to create customer entrenchment. They have recognized that the participants have needs that reach beyond the actual transaction. In satisfying these needs, we believe that the FSP:s deliver more value to the customers and make them more dependent on the companys services. As the dependence increases, the customer will experience increasing switching costs. Due to this the FSP:s will naturally have greater possibilities in creating an installed base and achieving customer entrenchment.

### **Lock-in**

As the eMarket participants experience insurmountable switching costs, they become locked in. There is a wide range of activities that could contribute to this state. The participants could, for example, have integrated the eMarket into the companies back-end system, thereby perceiving the eMarket as part of their own company. They might have given up a large amount of their prior business relationships for new ones that only exist online. If the eMarket on which they participate hosts a great part of the total industry trade volume, they will experience difficulties in finding a comparable partner. Also, the participant may have built up a substantial amount of internal knowledge on how to use the specific systems and how to reap its benefits.

When eMarkets have obtained locked in customers they can start leveraging the base. For eMarkets, leveraging is about continuously offering complementary products.<sup>109</sup> The value-added services presented earlier, can be seen as such complementary products. Successful eMarkets will gather a substantial amount of information about their customers. This information will allow the company to segment the participants and offer different products to different customer segments. Some participants might for example want extensive information on trade traffic and others on industry trends. The customization that occurs will hopefully lead to increased customer satisfaction. The eMarket will also be able to extract a greater value from its participants. As the unique offerings get closer to the customer preferences, the eMarket also has the opportunity to charge a premium price.

The lock-in cycle does not end here and it is important that eMarkets continue to manage the installed base and predict the future of the cycle. This can be done by studying the behavior and competitive activities of the participants. Competing eMarkets might come up with revolutionary technology that will fundamentally decrease the customers switching costs. These kinds of threats can be hard to detect,

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<sup>109</sup> Shapiro/Varian (1999), p. 159

but still the eMarkets must continuously stay on their toes, guarding the installed base and preventing the customers from moving to brand selection.

*To conclude this section we find that lock-in theory can not be used to explain the existence of eMarkets. However, the theory helps us to understand the strategic behavior of some eMarkets. One can for example clearly identify the different steps in the lock-in cycle, as conveyed by some Markets. The theory suggests that a company should strive to create an installed base by managing the lock-in cycle. The ability to offer superior liquidity is important in every step of the cycle and this feature alone, can lead the customers to lock-in. The FSP:s have focused on offering value-added services. This measure is especially important in the entrenchment phase and we conclude that this will increase their possibilities in creating a base of locked in customers. By supplying these services, the FSP:s have a great opportunity to leverage the customer base by offering a greater amount of complementary products. The lock-in analysis has led us to generate a hypothesis formulated as follows:*

**Hypothesis 4:** *Given equal liquidity, the FSP:s will have a greater opportunity to create a locked in customer base, compared to the TOC:s.*

## **5.5 Five forces framework**

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The five forces framework is used in order to assess the viability of different industries and the structures existing within them. The theory was developed over 20 years ago and has been exposed to criticism lately. It has been said that important “forces”, such as regulations and relationships are ignored. The advantage of the theory is that it can be applied on many industries. This fact allows us to analyze eMarkets within different industries, using only one framework. Another obvious advantage is that the framework is widely accepted, allowing many readers to relate to its basic concepts.

We decided to test the five forces framework in order to examine whether its concepts could help us to explain the existence and strategic behavior of eMarkets. Even though it is often said that this static theory is not fit to describe dynamic markets, we believed the theory to be helpful to us, as it examines the industry as a whole. The five forces framework maps out the forces that are driving an industry, specifically looking at suppliers, buyers, substitutes, new entrants and industry competitors. As the relative power and industry contributions of these actors are studied, it is often possible to identify the most probable winners and losers within the industry.

In order to determine the degree of industry rivalry, one must investigate the number and size of companies competing within an industry. Other important characteristics to look at are product differences, exit barriers and the growth of the total industry. Furthermore, the threat of potential entrants is examined. The key aspect in analyzing the threat of entry is entry barriers, which act to prevent companies from entering an industry. Some common entry barriers are economies of scale, brand identity, capital requirements, switching costs and access to distribution. As an industry grows and becomes mature, companies have concurrently invested in technology and brand.

When investments become substantial, new entrants will experience increased difficulty in entering the market, due to high capital costs.<sup>110</sup>

Another threat is potential substitutes. These products satisfy the same basic need and can, in some cases, replace an existing product or market. If switching costs are low, substitutes can be a substantial threat. The threat is determined by the relative price performance of substitutes, switching costs and buyer propensity to substitute. Some substitutes are naturally closer to the actual product than others.<sup>111</sup>

Buyers can also enjoy a great degree of power within an industry. Their bargaining power is often determined by their concentration, procurement volume, switching costs, buyer information etc. *Ford, GM and Daimler-Chrysler* have revealed plans to put up a buyer-managed eMarket. As they are the world's largest buyers of automotive products, they experience large buyer power. The suppliers will place bids on the eMarket allowing the buyers to choose the most competitive ones. Industry analysts believe that this specific collaborative eMarket will lead to substantial savings in procurement for the car-manufacturers.<sup>112</sup>

Supplier power is the mirror image of buyer power. Hence, we look at the relative size and concentration of suppliers relative to industry participants. We also analyze the degree of differentiation in the inputs supplied. The ability to charge customers different prices in line with differences in the value created for each of those buyers usually indicates that the market is characterized by high supplier power.<sup>113</sup>

### **5.5.1 Theory assessment**

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The basic concepts of the five forces framework can be applied on the environment of eMarkets on a general level. We can clearly identify the buyers, suppliers, substitutes, new entrants and industry rivals in the eMarkets surroundings. The theory is most often used when shaping company strategy, as the forces of an industry gives implications for what areas a company should focus on. Being a strategy model, we assume that it can be of use in the further analysis of strategic behaviour. However, we cannot say if the theory specifically helps us explaining the existence of eMarkets. In order to find out if the theory is plausible, we will go further in-depth, analyzing the industry environment of eMarkets through the five forces framework.

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<sup>110</sup> Ghemawat (1999), pp. 25

<sup>111</sup> Ibid

<sup>112</sup> The Economist (26/6-99)

<sup>113</sup> Ghemawat (1999), pp. 25

## **5.5.2 Industry analysis**

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### **Buyers (participants)**

The participants are the eMarket customers. These participants could either be supplying or buying products on the eMarket. The eMarket host generates revenue from these participants through transaction- and subscription fees as well as other revenue models. The buyer characteristics vary from industry to industry. In some industries, where the market is very fragmented, the participants are small, numerous and scattered all over the world. In other industries there are only a couple of players that account for almost all of the industry's trading volume. Naturally, the more concentrated the buyers are, the more bargaining power they possess. One can also find skewness in certain industries, where the participating buyers are concentrated and suppliers are fragmented. We can see these characteristics in the automotive industry as well as in the aircraft manufacturing industry. Consequently, buyer power is dependent of the industry structure. As suggested earlier, in section 3.3 on industry shake-out, eMarkets within the airplane industry have experienced massive buyer power. Aviation X ceased to exist as the potential participants (buyers) decided to form their own eMarket. The airplane manufacturers are a concentrated group of companies and without their participation the eMarket would not be able to obtain critical mass.

In some industries it has been hard to attract participants due to buyer inertia. Buyers want to continue trading on the physical market, as they are used to this way of doing business. They might also be afraid of the uncertainties connected with online trade. Leading decision makers might also have an intrinsic fear of change. Traditionally, buyers have developed comprehensive relationships with key actors in its business environment. These relationships are often developed over a long period of time and result in strong personal contacts and joint investments. In some industries, competitive advantage is actually created through these kinds of collaborations. Naturally, a company that is engaged in such a comprehensive relationship will also find it hard to abandon it. To overcome the inertia, the benefits of moving to the eMarket must be substantial.

Given that a buyer has decided to move the company trade to an online market it initially experiences low switching costs. The buyer can try out the system and abandon it without any major difficulties. If the company becomes a frequent user and start moving a substantial amount of the trade to an online market, the switching costs will increase and the buyer power gradually decreases. The switching costs increase as a result of increased learning, investments and changes in business processes. This phenomenon was discussed in depth in the previous section on lock-in. To summarize the buyer power, one can say that it is substantially larger in industries with concentrated participants than in fragmented markets. Consequently, industries that are characterized by buyer or supplier concentration might not be suitable for independent eMarkets. These industries could instead benefit from starting up buyer- or supplier-managed eMarkets on their own.



## **Suppliers**

The eMarket suppliers are represented by a number of actors providing various inputs to the eMarket. The major suppliers are hard- and software-providers, personnel, eMarket participants supplying the goods or services traded and suppliers of surrounding services. In some cases eMarkets develop their own proprietary software and in other cases they use external suppliers. The software providers developing solutions for specific industries, also referred to as *enablers* (chapter 3), usually have a substantial degree of power. Once the software is installed and integrated into the business it is hard to replace. Employees develop system operational skills and spend significant amounts of time on learning how to manage the system. The software providers upgrade the software continuously and the users become increasingly entrenched.

Eventually the system will carry substantial amounts of information on the company's customers. This information includes transaction activities, brand preferences and other customer specific information. This source of information can be seen as a valuable asset to the eMarkets. Due to the value of the information and the risk of losing it when changing systems, eMarkets experience high switching costs. The providers of traditional computer hardware do not possess the same degree of power. Hardware has become more of a commodity, allowing it to be replaced by other suppliers. We conceive these suppliers as non-strategic.

When interviewing eMarket executives, we received the general impression that a major restraint for growth was problems in attracting skilled personnel. The eMarkets primarily experienced a need for personnel that possessed knowledge on computer programming, logistics and industry processes. They also looked for people with existing relations to customers<sup>114</sup>. People that fit into these categories are scarce, and eMarkets compete in order to attract them. Their attractiveness does not decrease as they start working for a company, and in order make them stay, eMarkets have offered challenging projects, financial benefits in form high salaries and options, as well as an enjoyable work environment. These incentives are of greatest importance as key persons have the bargaining power of moving to competitors or starting up their own companies. Their overall power is estimated to be high.

Although eMarket participants earlier were defined as buyers, they can also be seen as suppliers. The participants provide eMarkets with supply and demand. For this reason they can be seen as part of the offering. Their respective power as suppliers is equal to their power as buyers. It depends on their relative size.

Suppliers of surrounding services help eMarkets add services to their customers. As discussed in earlier sections, these companies provide services such as logistics and financing. Not all eMarkets offer third party services. However, the eMarkets that have realized the importance of offering these services have often developed comprehensive relationships with the suppliers of surrounding services. In most cases the end customer does not even realize that there is a third party involved. The customers believe that the eMarket offers the service independently as it is presented

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<sup>114</sup> Ibid

on the eMarket interface. As long as the services are adding value and the interface to the customer is secured, the brand of the eMarket will benefit from the third party services. As the company moves its focus from transaction-oriented offerings to broader offerings, including surrounding services, it will be increasingly dependent on suppliers of surrounding services. However, the relationship is to some extent symbiotic as the suppliers need the eMarkets in order to reach out to the end customers, and eMarkets need the suppliers of surrounding services in order to create a competitive offering.

## **Substitutes**

The most natural substitute to eMarkets are traditional/physical markets. The major advantages with traditional (physical) markets are connected to the companies wide experience of traditional trade. This experience reduces the perceived risk compared to online trade. Also, companies have shaped their business processes to fit the physical market. However, traditional markets can seldom offer the price transparency and product comparison that is offered on many eMarkets. As time goes by, more and more companies will become experienced eMarket users and the perceived risk will be reduced.

EDI (Electronic Data Interchange) can also be seen as a substitute to eMarkets. As explained in chapter 3, EDI is a one-to-one technology where companies conduct trade and exchange standardized information. Compared to eMarkets, EDI involves a number of limitations. First of all it requires significant investments in the technology. Second, the system does not permit multiple participants, thereby excluding price transparency and product comparison. The real threat associated with EDI is the fact that companies have made substantial amounts of investments in the technology, and that they want to see their investment pay off. Consequently, the large investments increase the customer switching costs. However, these companies might turn to eMarkets for non-strategic products (office equipment, advertising space etc) that are not included in the EDI network. Companies that have not yet invested in EDI are not likely to choose the technology, as it involves greater limitations and higher costs than eMarkets. Also, mid-sized firms cannot afford the investments associated, further reducing the threat of this substitute.

Buyer- and supplier-managed eMarkets are also substitutes. In some industries it is certainly more advantageous for participants to choose these substitutes. These industries often have a few concentrated buyers or suppliers that jointly have formed an eMarket. It is hard for neutral eMarkets to compete under these conditions as the major players only trade through their own systems. The threat is of such great nature that it will be almost impossible for eMarkets to establish liquidity (critical mass) in these industries. Consequently, we believe that neutral eMarkets must focus on fragmented industries.

## **New entrants**

Over the past six to twelve months, research firms have published information forecasting the substantial growth of business-to-business e-commerce.<sup>115</sup> These beliefs has attracted a variety of companies to enter the market. However, a large majority of the companies have experienced difficulties in attracting participants to their eMarkets. The difficulties of creating a profitable business have sent out signals to potential new entrants and the inflow of companies has decreased lately.

The major entry barriers are connected to industry knowledge and customer relationships. The industry is young and rapidly evolving. eMarkets that have been present over the last two years have created substantial knowledge on how to operate in this industry. It can be hard for a new entrant to catch up on this advantage. In the survey results we find that early mover advantage is perceived to be very important, reaching a mean of 6.1 out of 7 (see figure 14).

The most important entry barrier is customer relationships. Even present eMarkets have had problems with attracting customers due to inertia and competition. New entrants that lack brand and industry relationships will find it even harder to attract customers and create critical mass. However, new buyer- and supplier-managed eMarkets can pose a substantial threat. Given that they are substantial players within their specific industry, these companies have all the abilities to succeed. Often, they possess strong brands and have established industry relationships with customers and suppliers. In concentrated markets, these entrants can be seen as a fatal threat. Also, we do not see a likely strategy that could prevent these companies from entering. There are two factors that could possibly restrict these actors. The lack of neutrality could to some extent jeopardize market efficiency, preventing participants from joining. Also, joint projects between industry giants will be likely to experience problems, when the former rivals have to start co-operating. These problems could materialise as lack of trust, cultural differences and differences in objectives.

## **Industry rivalry**

Due to booming market forecasts there has been a tremendous amount of companies establishing eMarkets in many different industries. In some industries, where the benefits of eMarkets are more obvious, the competition has developed to become fierce. In the survey results we find that the eMarkets perceive the industry competition to be substantial, reaching a mean of 5.0 out of 7.0 (figure 14). Industries such as pulp and paper, steel and auto-parts have all experienced a great deal of rivalry. Since participants want to trade on eMarkets with high liquidity, the liquid eMarkets tend to become even more successful, while the unsuccessful ones will go in the opposite direction.

A second factor contributing to the degree of rivalry is industry growth. In many cases, industry growth allows for a greater number of competitors to enter the industry. In these scenarios a variety of companies differing in size and functions will exist. Typically, this will not be the case with eMarkets. Instead, we believe that most

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<sup>115</sup> [www.jup.com](http://www.jup.com)

eMarkets face a “winner-takes-it-all” situation and that there will only be room for a couple of players in each industry. The participants will experience most leverage on eMarkets where they can interact with as many other participants as possible. This idea has been described in section 5.1 on efficient markets.

One way for eMarkets to escape the fierce rivalry in an industry is to expand their scope by entering international markets. As noted earlier in chapter 1, European eMarkets are less developed, making competition less severe for US companies choosing to establish in this region. As indicated in the survey results, many eMarkets have followed this strategy.

### **Conclusion from applying the five forces framework**

*The five forces framework does not explain the existence of eMarkets. However, it can help us to understand strategic behavior, such as consolidation and internationalization.*

*The theory clearly helps us understand the general forces that are driving the industry. We see that the degree of industry concentration is decisive. We have found that eMarkets will experience greater difficulties in operating within concentrated industries than in fragmented. By studying the results from the survey, we find that the majority of eMarkets are positioned in fragmented industries (figure 14). In concentrated markets it is highly likely that buyer- or supplier-managed eMarkets will dominate. These companies can guarantee substantial liquidity, due to their size and existing relationships. They will succeed if the industry giants can learn to co-operate, gathering their trade on one market. This will not always be easy as they have been rivals in the past, sometimes making it hard for them to work together.*

*Participants want to trade on the eMarket offering the highest liquidity, driving out illiquid eMarkets. We suggest that eMarkets must continue to grow through consolidation in order to obtain liquidity, leaving a few large players with substantial trade volume. This goes for both concentrated and fragmented industries. This notion is also recognized in the survey results. As the respondents believe the importance of being the largest player to be 5.7 out of 7.*

*Another strategic behavior; internationalization, can also be explained as a way to migrate to markets with a lower degree of industry rivalry.*

*The analysis of five forces framework has helped us to generate two hypotheses. They are formulated as follows:*

**Hypothesis 5:** *EMarkets will experience greater success in fragmented markets than in concentrated markets.*

**Hypothesis 6:** *There will only be a few major eMarkets operating within each industry.*

## **6 Findings**

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We have assessed and analyzed five different theories, trying to conclude to which ones can explain the existence and strategic behavior of eMarkets. These are the findings in connection to the different theories:

### **Theory of efficient markets**

The existence of many eMarkets can be explained by the theory of efficient markets, since they have emerged with the objective to decrease search costs, increase transparency and secure a low and accurate market price. The strategic behavior of eMarkets can partly be explained by this theory. The fact that eMarkets have focused on obtaining critical mass and their internationalization can be attributed to the quest for liquidity, as explained in the theory. The major shortcoming is that the theory is primarily suitable to explain eMarkets using one trading system, connected to a certain class of goods, namely the exchange model.

The theory of efficient markets is based on the notion of arm's-length relationships. These relationships exist between the buyers and suppliers participating on the eMarket. However, the relationship between the eMarket and the participants is generally the opposite. The fact that the theory does not recognize long-term relationships can be seen as another major shortcoming.

*Hypothesis 1: The existence of eMarkets trading in commodities can be explained by the theory of efficient markets.*

### **Network theory**

The theory can explain the existence of eMarkets and parts of their strategic behavior. Our analysis of the relationships to different actors concluded that participants were of greatest importance. Reasons for this being that they are the basis of the eMarkets revenues. Consequently, for these relationships the three actions of *acquiring*, *managing* and *developing* proved to be of ultimate importance. These actors need to meet in an efficient manner, something that eMarkets can enable. Providing this critical link in the network, justifies the existence of eMarkets. We have also been able to explain important parts of their strategic behavior, specifically the forming of relationships. This is supported by the survey results. The differences in offerings of surrounding services seem to a large extent attributable to the collaborative partnerships formed by the eMarket. We believe that through this use of relationships, a maximum of value can be supplied to the participants. Thereby partnerships become necessary in adding superior value to the customer. Thus making these relationships of strategic importance.

*Hypothesis 2: Partnerships with suppliers of surrounding services are essential in creating end-user value.*

## **Transaction cost theory**

*We have restricted the use of transaction cost economics to act as a complement to the theory of efficient markets, examining situations where transaction costs are high. When doing this, the theory could not be utilized to explain the existence of eMarkets. However, we suggest that it can explain limited parts of their strategic behavior.*

*Hypothesis 3: Transaction costs lead some eMarkets to offer surrounding services internally, even when the service is non-core.*

## **Lock-in theory**

Lock-in theory helps us to understand the strategic behavior of some eMarkets. The different steps in the lock-in cycle, as conveyed by some eMarkets, can be observed. The theory suggests that a company should strive to create an installed base by managing the lock-in cycle. The ability to offer superior liquidity is important in every step of the cycle and this feature alone, can lead the customers to lock-in. The Full Service Providers (FSP:s) have focused on offering value-added services. We conclude that this will increase their possibilities in creating a base of locked in customers. By offering these services, the FSP:s have a great opportunity to leverage the customer base by offering a greater amount of complementary products.

*Hypothesis 4: Given equal liquidity, the FSP:s will have a greater opportunity to create a locked in customer base, compared to the TOC:s.*

## **Five forces framework**

The five forces framework does not explain the existence of eMarkets. However, it can help us to understand strategic behavior, such as consolidation. We see that the degree of industry concentration is decisive. We have found that eMarkets will experience greater difficulties in operating within concentrated industries than in fragmented. In concentrated markets it is highly likely that buyer- or supplier-managed eMarkets will dominate. They will succeed if the industry giants can learn to co-operate, gathering their trade on one market.

Participants want to trade on the eMarket offering the highest liquidity, driving out illiquid eMarkets. We suggest that eMarkets must continue to grow through consolidation in order to obtain liquidity, leaving a few large players with substantial trade volume.

*Hypothesis 5: EMarkets will experience greater success in fragmented markets than in concentrated markets.*

*Hypothesis 6: There will only be a few major eMarkets operating within each industry.*

## **Key issues**

Our research has allowed us to make a number of generalizations on the population of neutral US eMarkets: We have identified two groups of companies differing significantly in their strategic behavior. We have discovered one smaller group focusing on services surrounding the transaction, as proven by their current service offerings and revenue streams. The second group, constituting the majority of the market is to a higher degree focused on transactions.

In addition to these findings we conclude that no single theory can explain both the existence and strategic behavior of neutral US eMarkets. However, when combining the suggested theories we can understand this complex phenomenon. The theory of efficient markets and network theory explains the *existence* of eMarkets. To create a complete picture, we incorporate lock-in theory, the five forces framework and network theory to describe important parts of the *strategic behavior* of eMarkets.

The future most certainly holds many changes for these actors. One important transformation, affecting the market right now, is a complete industry shake-out. We believe that eMarkets mastering a consolidation strategy, thereby reaching critical mass in their respective industry, will be the **last man standing**.

## **6.1 Speculations**

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*In this section we will discuss the events that, based on our research and own thoughts, we find likely to affect eMarkets during the next couple of years. This chapter should be seen as initiated thoughts and speculations from the authors and we will not claim that they are based on a strong enough foundation to be called research. Rather than presenting research, the point of this passage is to share some of the less well-founded insights of this thesis, at the same time providing a background for the last section of the paper, called implications for future research.*

### **6.1.1 US eMarkets – immediate future**

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We expect the pace of new introductions to decrease rapidly within the next few months. From around a hundred new entrants per month during winter of 1999 and early spring of 2000, the number of start-ups will approach zero by early 2001. This trend has already started, as have the trend that some immature eMarkets close down. This consolidation of the market will work in the opposite direction of the growth in number of eMarkets. The most optimistic reports we have seen are estimating the number of US eMarkets (neutral and supplier-/buyer-driven) to be in excess of 10000 around 2005. The most pessimistic projections have stated that one, or a maximum of two players, will be active in each industry (farming equipment, beverages, auto parts, etc.). Our guess is that the future steady-state number of actors will be closer to the low estimate, even though we believe that it will differ from industry to industry. In some industries such as alcoholic beverages for example, legal reasons leave room for more than just a couple of players on the continent.

We see that a large number of eMarkets will close down for the same reasons having forced electronic retailers of business-to-consumer goods into liquidations and bankruptcy: Impatient owners stopping the supply of incoming funds long before the inwards cash flow has reached the levels projected for. We do not see any other ways these players can find new financing. The stock markets are no longer a likely option, due to risk aversion on the market. The only possible solutions will be to close down or merge with another player in order to obtain cost savings. With this in mind, we believe that a large part of the surviving eMarkets will be hosted by industry giants. These actors have already shown that they can compensate for the drawbacks of being late movers with industry expertise and ability to build critical mass rapidly. In concentrated markets the power of industry giants will be large enough to out-do any competitive advantage that eMarkets may have created. This is true regardless of whether the advantage stems from a comprehensive service offerings or early-mover advantage. We have seen examples of this in the for example aeronautical industry.



### **7.1.2 Implications for European eMarkets**

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As we have already pointed out, analysts and industry participants foresee a major shake-out among US eMarkets. We have found no reason to doubt that this will happen. The recent experience from the business-to-consumer market also leads us to believe that this is a plausible direction of future events. Furthermore, we have seen the first signs of this evolution, as the number of new entrants has started to decrease and a number of small players have already been ousted from the market.

At the same time we see that US eMarkets are far ahead of its European colleagues, sometimes as much as 24 months. This has allowed the US players to come further in their quest for critical mass and ultimately profitability. When the market situation becomes more unfavorable due to massive consolidation, we see a great possibility that US eMarkets will expand into Europe at a rapid pace. This could be done in a number of fashions, by acquisition, merger, strategic alliances etc, but no matter how it is executed, it will surely affect European eMarkets.

In our survey, we have also seen that many US eMarkets plan to internationalize within the nearest future. Of the 40% that are not yet represented abroad, 59% plans to internationalize within one year. Europe seems to be the first target when expanding from the US as 45% of internationalized companies are represented in this region. The fact that almost a quarter of the US population of neutral eMarket claims that they will be entering the region within a year might sound as a future threat to European eMarkets. However, one could reason that the largest, most developed players are already represented abroad, making the threat less terrifying. However, the fact that 27% of the US players, among them many of the more mature players, have already expanded into Europe, is threatening enough. When these players achieve momentum and start to focus more on overseas markets, recognizing less fierce competition, our prediction is that the European players will have a hard time competing with their larger and more experienced competitors. We see three possible scenarios for this development:

1. The US competitors could team up with their European counterparts in strategic alliances. This can be seen as a first step towards a merger of the parties that would supply the new and larger company with enough trade to assure critical mass. This will be an exit where both parties could benefit and therefore possibly the most plausible one. Also it has been indicated in our survey that this has, and will be, the preferred way for US eMarkets to go overseas as 24% of the international and 70% of the domestic eMarkets have chosen this entry-strategy.
2. The US eMarkets could acquire European competitors in order to gain trade and skilled personnel. These two inputs have been mentioned as the greatest challenge for any eMarket and buying companies could be the easiest way to overcome these particular challenges. Contradicting this is that few have indicated this method in our survey and the fact that acquisition is costly. With recently falling stock prices for these companies in mind, making it impossible to use highly valued shares to buy competitors and their obvious lack of cash

due to high initial costs and lower trade volumes than expected, we do not see this as very likely.

3. The third possible scenario is that US entrants compete head-to-head with their European rivals. We believe that this would be truly disastrous for the European eMarkets. The US companies that will have survived the domestic shake-out will be immensely strong in comparison even to the largest and most developed European actors, threatening to drive them away from the market.

We see that the first and third scenarios are the most plausible ones to occur. With this in mind our advice would be for European eMarkets to be open for and encourage offers to partner with US eMarkets. They should recognize that the new rivals are extremely strong in comparison and that trying to make it on their own will most probably result in important customers and suppliers abandoning the company to place their business with the more capable newcomers. The most important resource for the European companies will be their knowledge and intellectual capital, as well as the suppliers and buyers that have been tied up. In order to become a possible partnering or acquisition target for US eMarkets, they should concentrate on strengthening these resources within the company. If any European eMarket contemplates competing head-to-head with their US counterparts, they should concentrate on offering surrounding services, either through internal resources or through partnerships. If this can be done, the company might be able to lock-in their customers, thereby preventing them from taking their business elsewhere.

Some insight in what the European and US eMarkets could expect of the near future can be found in the book *“Inside the tornado”*.<sup>116</sup> The book deals with development in hypergrowth markets, which very much corresponds to the markets that these companies act upon. We have to think of every different vertical industry (steel, transport, energy) as one market in this example. The underlying theory is the *adaption curve* visualized in figure 18. The factor, causing the paradigm shift that starts a hypergrowth market, is technical change. In the case of eMarkets, this technical change is of course internet and the commercialization of the medium.

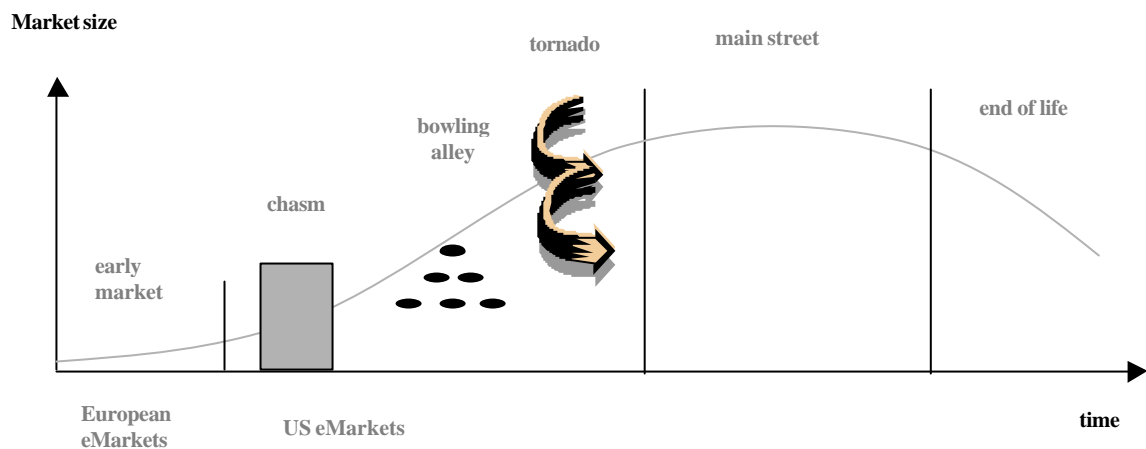


Figure 18 eMarkets and the adaptioncurve

<sup>116</sup> G.Moore, (1995).

Most European eMarkets have not yet passed the *early market*. They are still to a large extent searching for their first customers and trying to tie up suppliers. These participants are what would normally be referred to as *innovators* in terms of the adaption curve. The average US eMarket has already passed this stage, most of them being in the regions around the *chasm*. In this phase the theory states that companies should concentrate on niches of buyers, tailoring their products services to fit these customers. This is what we suggest that eMarkets do when they offer surrounding services, specifically tailored for the participants. One such niche could be technically demanding buyers asking for services such as back-end system integration and scheduling of goods, in order to facilitate efficient warehousing and production. These niches are found in the customer segment normally referred to as *early adopters*. When attracting a specific niche like this the eMarket gains its first significant number of buyers, allowing it to attract others due to the volumes traded.

In the *bowling alley* the companies need to strike different niches, explaining the comparison to the popular game. Once enough early adopters are trading, momentum can be achieved and the *early majority* can be targeted. This is where the *tornado* is initiated and the company will be experiencing a significantly higher demand than earlier. Many times this change can be hard to handle for the young business and especially the logistics will cause the company trouble. The whole company, and management in particular, is put under enormous strain. Often the management has to be changed from the entrepreneurs that have typically started the business, to more logistic- and production-oriented leaders. In this phase the shake-out will be at its peak. The few companies that have entered and learned to cope with the challenges of the tornado will leave the rest behind.

In the next phase, called *main street*, there will typically only be a few players left to reap the benefits of the mass-market. No company has yet passed the tornado and few, if any have yet entered it. The conclusion is that this business is very much a “winner-takes-it-all” business and also that eMarkets will still have to wait for prosperity. The mass-market does not seem to be just around the next corner and for that reason it will extremely important for the actors to endure financially while accumulating momentum.

## **6.2 Suggestions for future research**

The rapid evolution of eMarkets and their environment, supplies science with an abundance of phenomena to conduct research upon. By using a longitudinal design, the researcher could examine the change that has taken place from the time of our survey (August 2000) to now. As previously mentioned, it would be very interesting study eMarket participants; to find out how they use eMarkets and which offerings they find to be adding value.

A comprehensive study of buyer- and supplier-driven eMarkets would be another possible subject for research. An interesting perspective of this research will be to study how former competitors manage to collaborate. A geographic expansion of our research, including European eMarkets would be another way to go. These actors are probably in an even more difficult situation than their US counterparts.

The most obvious path for future research, and an implication of our chosen path of research, is of course to test our hypotheses. Another implication of the chosen path of research is that, when doing additional research, it would be possible to use a deductive approach as we have proposed and analyzed viable theories describing the phenomena.

Looking at the previous section on speculations we can find further ideas of future research. A case study of three leading eMarkets trying to assess their possibilities to succeed by applying the theory from this book could be interesting. This study could treat management, relationships, product development and corporate culture.

## **7 References**

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### ***eMarkets participating in the survey***

75 US-based eMarkets participated in the survey. We do not publish their names due to an agreement on confidentiality.

### ***Interviews***

We conducted interviews with seven eMarket executives. We do not publish their names and companies due to confidentiality agreements.

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[www.forrester.com](http://www.forrester.com)  
[www.thestandard.com](http://www.thestandard.com)  
[www.idg.com](http://www.idg.com)  
[www.gartnergroup.com](http://www.gartnergroup.com)  
[www.netb2b.com](http://www.netb2b.com)  
[www.cnn.com](http://www.cnn.com)  
[www.economist.com](http://www.economist.com)  
[www.afv.se](http://www.afv.se)

In addition to the sites stated above, we have studied all of the survey respondents' sites. Their respective addresses are presented in the list of participating eMarkets.

## **8 Appendix**

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### ***eMarket service glossary***

|  |  |
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| <b>Comparative product analysis</b>              | <i>Comparison of different product features</i>  |
| <b>Derivative instruments</b>                    | <i>Providing hedging through futures, forwards and options connected to the traded products.</i>                           |
| <b>Financing</b>                                 | <i>Providing credit for purchases</i>  |
| <b>Forecasting</b>                               | <i>Estimating future supply and demand.</i>  |
| <b>Insurance</b>                                 | <i>Providing trade insurance for both buyers and suppliers</i>   |
| <b>Integration with buyer back-end system</b>    | <i>Integrating the eMarket platform with the buyers administrative system.</i>   |
| <b>Integration with supplier back-end system</b> | <i>Integrating the eMarket platform with the suppliers administrative system.</i>  |
| <b>International trade logistics</b>             | <i>Transportation of products and goods internationally.</i>   |
| <b>Inventory Availability</b>                    | <i>Online presentation of the availability in the supplier inventory.</i>  |
| <b>Logistics</b>                                 | <i>Transportation of products and goods from supplier to buyer.</i>  |
| <b>Purchase profiles</b>                         | <i>Building profiles on each buyer behavior</i>  |
| <b>Reversed logistics</b>                        | <i>Handling logistics when returning products and goods.</i>   |
| <b>Scheduling</b>                                | <i>Handling the overall scheduling in order to facilitate resource management</i>  |
| <b>Segmentation services</b>                     | <i>Providing online possibilities to group buyers and suppliers according to a choice of variables (sales volume etc.)</i> |
| <b>Supplier/Buyer rating system</b>              | <i>Presenting an online rating system, including performance and credit rating.</i>  |
| <b>Tracking of goods/orders</b>                  | <i>Online system tracking the location of goods and services.</i>  |
| <b>Transportation management</b>                 | <i>Facilitating and making transports more efficient through co-ordination etc.</i>  |



## **Interview guide**

### **General questions:**

- Name the overall difference between the traditional marketplace and your eMarketplace.
- Some analysts suggest that buyer- and supplier managed eMarkets have better chances to succeed due to their infrastructure and existing relationships. What is your opinion?
- Is your industry fragmented or concentrated? How does the industry structure affect your company?
- Please describe the competitive environment?
- How do you assess the importance of early mover advantage? Size? Pre-screening of the trading parties?
- Name overall success-factors in your specific industry?

### **Questions on the services offered:**

- Do you handle the fulfillment of trades? If so, is it handled in-house or through partnerships?
- When offering buyer/supplier rating, how do you evaluate each customer?
- Do you offer any value-added services? Please describe them and how they are offered to the customer?

### **Question on internationalization:**

- What is your opinion on entering foreign markets?

### **Final question:**

- Which are your major short- and long-term challenges and obstacles?

*“Congratulations on a well put-together, easy to complete survey. I normally don't spend the time on these, but this was handled very professionally. I look forward to seeing the results.”*

*Director, Corporate Communications  
Commerx, Inc.*