

Logistics and Transport Management
Master Thesis No 2000:7

**KEY SUCCESS FACTORS FOR A
FUNCTIONING SUPPLY CHAIN
IN E-COMMERCE B2B**

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ABSTRACT

The Internet opens international business markets that previously were considered unreachable. Doing business globally brings entirely new obstacles for e-commerce Business-to-Business (B2B) as, barriers, tariffs, culture, and customs and regulations, which have to be overcome before a successful e-business can be completed. Today many logistic providers offer technologies that enable a company to make their products and services global. By providing different systems for payment processing and to automate an international supply chain, including supply and demand management, logistics, import and export and documentation. The trend of e-commerce is hard to ignore and obstacles that may occur on the way can represent large opportunities in the future.

When trying to understand companies that are acting on the B2B market, it is of greatest importance to realize how purchasing is managed and how logistic provider relationships are handled strategically. We are living in and doing business in a world where information and ideas are the new capital. The vital driver of this economic change is the Internet.

The result of our research shows that e-commerce B2B is predicted to develop more and faster in the future. Due to this development the demands on the logistic performance will increase and follow B2B's development. The logistic provider will become even more important dependent on the fact that B2B companies will focus harder on their core business and outsource further services.

Key words: E-commerce B2B, logistic provider, partnerships, Supply Chain Management, Hewlett Packard Company, Dell Computer Corporation

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1. DISPOSITION

In order to make it easier for the reader and for ourselves, we have done a disposition for the thesis, which presents and explains its outlook. The sections' background, purpose, problem analysis and delimitations, and method are our guidance to the result chapter. The result is then discussed and analysed and after that we have drawn conclusions from the analysis.

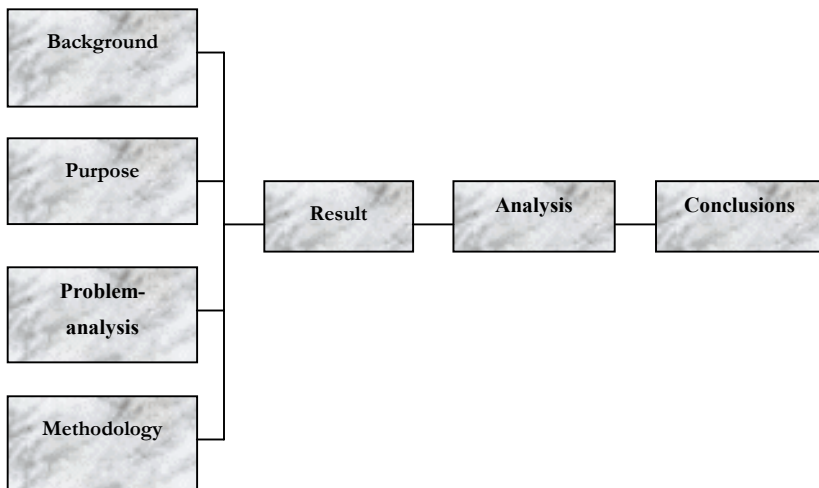


FIGURE 1. THE DISPOSITION OF THE THESIS

2. INTRODUCTION

In this chapter we will start with giving a background to the way we have chosen to investigate this subject. We describe our purpose with the thesis as well.

2.1 Background

The market business-to-business (B2B) is characterised by few customers who stand for a large part of the selling companies sales. However this doesn't mean that all markets are concentrated, there are naturally markets that are considered to be mass markets. The standpoint for B2B markets is that every customer is in fact unique and each customer plays a great role for the electronic commerce (e-commerce) company. Despite the uniqueness there are reasons to divide customers into different segments, which can be treated equally.¹

E-commerce is the sharing of business information, maintaining business relationships, and conducting business transactions by means of telecommunications networks². Figure 2 illustrates a supplier's e-store that promotes sales. This is a very popular type of electronic market place. There are also two other kinds of electronic market places. One where a buying company opens a bidding site to enhance its purchasing procedure and it is unique for B2B. Second there is intermediary-oriented where a third party opens up an e-store for buyers and sellers and it is open to both consumers and business customers.³

¹ Axelsson Björn, Professionell Marknadsföring

² Wholesaling, Retailing and Logistics Course, Lecture by Bengt Nordén, 2000-03-23

³ Turban Efraim & Lee Jae and others, Electronic Commerce – a managerial perspective

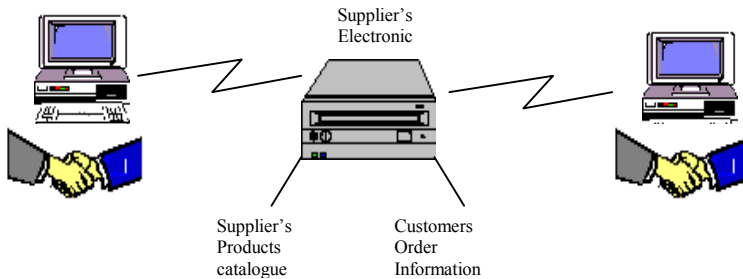


FIGURE 2. SUPPLIER-ORIENTED B2B MARKETPLACE ARCHITECTURE

Source: Turban Efrain & Lee Jae and others, *Electronic Commerce – a managerial perspective*, p 234

E-business can both be totally "virtual" and physical. If the company is virtually engaged in information and certain types of services, still the commerce requires some integration of virtual and physical distribution. In order to make e-commerce work, it requires thinking about every process and how it can benefit from network based integration of relevant information⁴.

E-business uses Internet's global architecture for new business relationships. The first wave of e-business was business-to-consumer (B2C) and the second wave was about B2B. This kind of e-commerce has revolutionised the value chain, markets are being put up on sites, and it is essential to have a well functioning system.

E-commerce today is in the early stage and it focuses on using the Internet to buy and sell products and services. A second stage often leads to internal efficiencies via intranets and knowledge management systems. The goal is to help the company achieve more effective support to knowledge workers and enable the company to learn faster than its competitors about markets, technologies and new business models. By removing barriers to internal communication and

⁴ Herman James, A rare moment in time, *Business Communications Review*

coordination essential factors are achieved and the company can be both innovative and quick. A web-based system also helps to keep costs down, which is necessary to remain competitive.⁵

B2B is expected to grow to \$1.330.9 billion by 2003 and continue to be the major share of the e-commerce market⁶. The leading items in B2B e-commerce are, computing electronics, utilities, shipping, warehousing, motor vehicles, petrochemicals, paper and office products, and food and agriculture products⁷.

Companies have to think about solutions and integration, billing systems, partner networks and supplier systems. The foundation for a successful e-business solution rests upon a customer focus where the shopping becomes personalised. The providers of e-business solutions are just beginning to understand the complexity of the solutions. The integration of the Internet with existing business processes represents a vital competitive tool, which can determine a provider's success or failure⁸.

2.2 Purpose

The purpose with our master thesis is to illustrate and describe key success factors for a functioning supply chain in e-commerce B2B. To attain our purpose we need to get more knowledge about the e-commerce business as a whole. The idea is to conduct case studies on two e-commerce companies and a mini case, in order to try to draw conclusions concerning the whole supply chain.

⁵ Herman James, The impact of E-business on Enterprise IT management, Business Communications Review

⁶ Turban Efraim & Lee Jae and others, Electronic Commerce – a managerial perspective

⁷ Ibid

⁸ Hom David, E-business portals ease end-users service creation, Telecommunications

3. PROBLEM ANALYSIS

The problem analysis aims to give an overview picture of the situation on the e-commerce market and to analyse suitable strategies to answer and solve different problems. The problem analysis is explained as one main problem that further can be divided into sub problems. Problem analysis should also contain links to the theory, which makes it easier to spot the main problem and the different sub problems. Theory connections make it clearer to identify the information that is needed to solve the problem. The problem analysis structure is built on the fact that the completeness of the problem situation becomes easier to analyse and illustrate, if you segregate the problem into smaller parts. Using this structure in an efficient way will lead to solving sub problems that almost certainly will cause the solving of the main problem.

3.1 Our problem

We started out with having the general e-commerce market as the main problem, where the supply chain only was a sub problem. During this process we discovered that the problem was too outsized to handle in the given timeframe. Since the supply chain was the sub problem that we were most interested in, we reorganised the model and made the supply chain our main problem. E-commerce supply chain is now our main problem. To understand the main problem we had to divide the dilemma into underlying sub problems.

Government

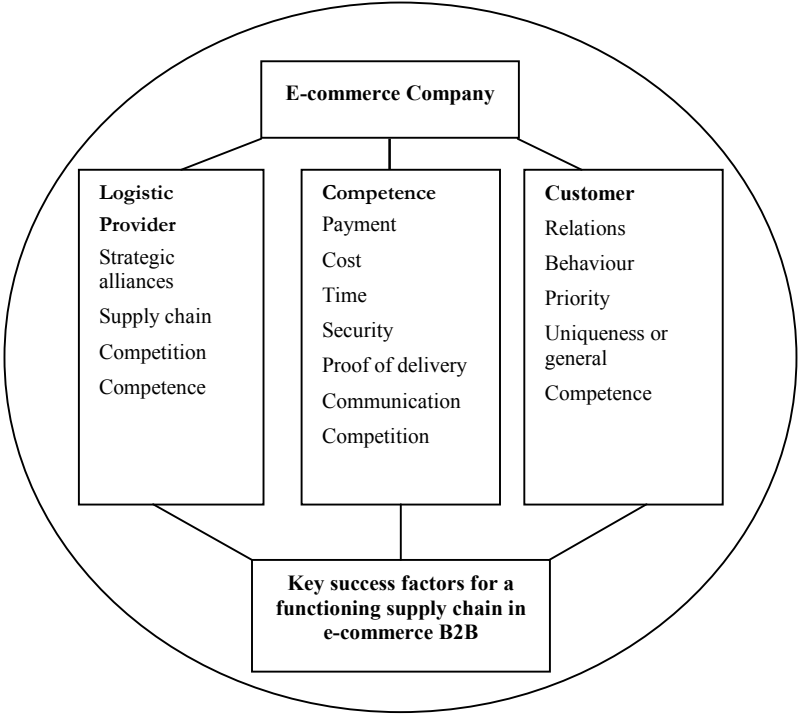


FIGURE 3.1. MODEL OF OUR MAIN- AND SUB PROBLEMS

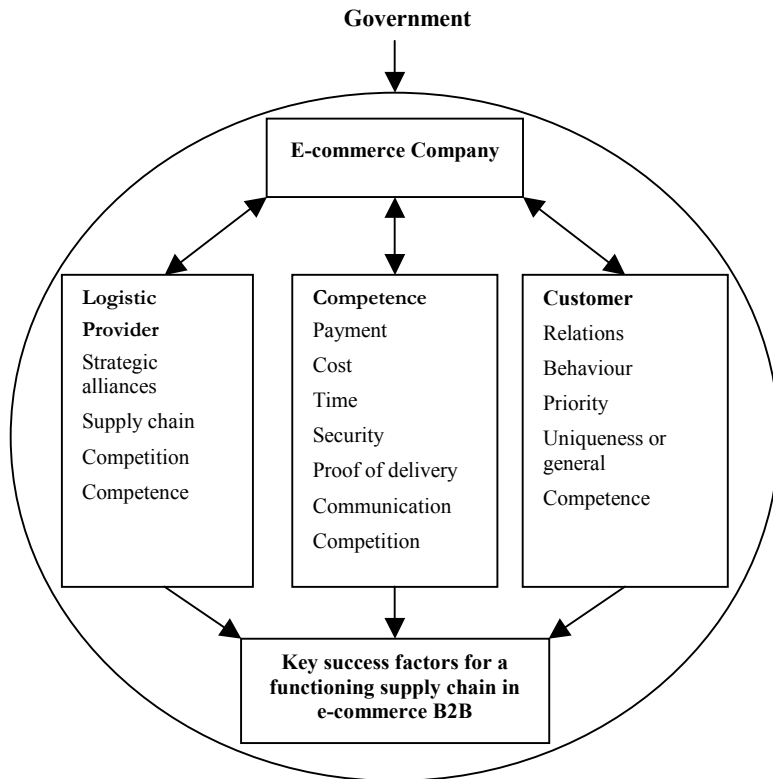


FIGURE 3.2. MODEL OF RELATIONS BETWEEN OUR MAIN- AND SUB PROBLEMS

3.2 Main problem - Key success factors for a functioning supply chain in e-commerce for B2B

Our main problem is to find out how to create a successful supply chain for B2B operations. A key to world-class supply chain is to achieve integration of both internal and external operations⁹. There are many reasons for that. One problem is that when orders are done on

⁹Bowersox Donald J & Closs David J, The integrated supply chain process

the Internet it is very easy and quick, this leads to many customers drawing the conclusion that it is likewise easy to perform the actual delivery of the goods.

3.3 Sub problem - Government

The government affects the e-commerce companies by laws, regulations, investments in the infrastructure and different restrictions. All these factors affect the development of e-commerce supply chain. The government is responsible for how well a country is developing to create a good environment for e-business. It is the government's actions that will give the country's businesses competitive advantage for today and for tomorrow. A company must always have good knowledge about what's new and changed in the government's policies to be able to perform in a suitable way for achieving the best commerce as possible. If the authorities wants the country to be a leader in e-commerce, it is very important that they understand what the need is for the e-commerce and what investments have to be made. If there is an understanding between the business and the authorities, e-commerce will have a large opportunity to develop in that country.

Important to understand are the laws and regulations that different countries have, when you communicate on the internet you don't feel the boundaries but when it comes to the physical distribution, one will directly meet the problems. Therefore it is very important that the e-commerce company know the countries or that they have a logistic provider that knows them, so that they can be prepared for complications in any part of the world. All these things are important for e-commerce companies and when they control this they will have compatible logistics that will give them big trust from their customers.

CMR regulations affect a transport that takes place outside domestic borders. CMR is the "Convention on the Contract for the International Carriage of Goods by Road" and it was established in May 1956, Geneva. Sweden entered into this convention and signed the conditions for the international carriage of goods by road, therefore CMR

regulations are in use. This Convention shall apply to every contract for the carriage of goods by road in vehicles for reward, when the place of taking over of the goods and the place designated for delivery, as specified in the contract, are situated in two different countries, of which at least one is a contracting country, irrespective of the place of residence and the nationality of the parties.¹⁰

Sweden is a part of the European Union (EU) and is therefore affected by different decisions made by the EU. Many of e-commerce B2B companies are merging these days. EU sees a risk of monopoly in this development; therefore EU will keep their eyes on the B2B business. So far the mergers between B2B companies aren't that common, but they can see a development towards this. EU has no experience of this kind of merger so they will have to judge case by case. In general EU has a positive view on the B2B, they believe it makes the market more foreseeable and that contributes to keeping the prices low. At the same time EU thinks that the large B2B companies strengthen their power at the market on the smaller companies' expense. EU also worries about the fact that large web sites can develop cartels. The web sites must not in any case be used to get around the ban of exchanging price information between companies. Therefore EU will assign a special workgroup that will investigate all the large B2B web sites that are opened by large companies.¹¹

One large problem that the e-commerce market must face is that EU: s local market is not functioning, as it should. There are several fee-barriers to get to the Swedish market. These fees must be overviewed so that the logistic and the trading can easier be completed.¹²

¹⁰ <http://www.jus.uio.no/lm/un.cmr.road.carriage.contract.convention.1956/index.html>
2000-10-30 time 15.10

¹¹ Lotsson Anders, E-handel mellan företag granskas, Computer Sweden

¹² Aschan Per, E-handel kan stärka svenska priser, Förenade Landsorts Tidningar

3.4 Sub problem - Logistic Provider

In a marketplace where companies find themselves under constant pressure to perform better, to deliver faster and create higher quality, companies have to turn to their supply chain partners for strength to enhance their competitive capabilities. During the past almost all business literature has been describing changes in production processes and organisational structures and how to implement reengineering techniques along with information and new communication. Today the focus is more on how to connect these different areas together and form new strategies that will provide companies with new opportunities and capabilities in their search for market advantages. Supply Chain Management (SCM) is the new term for achieving these advantages. The SCM is in complete responsibility for all logistics channel services including distributor strategy and management, physical distribution, internal distribution services, transport invoicing, credit and collections¹³. SCM is both dynamic and a competitive winning management approach to be successful in a business environment driven by global change and uncertainty¹⁴.

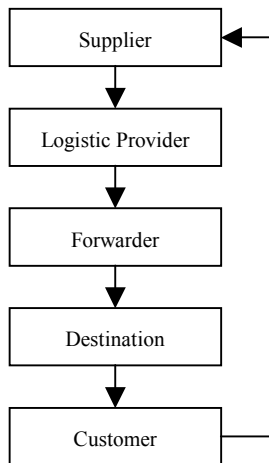


FIGURE 3.3 INTERACTIONS BETWEEN SUPPLIERS AND CHANNEL PARTNERS

¹³ Ross, Frederick David, *Competing Through Supply Chain Management*

¹⁴ *Ibid*

Figure 3.3 shows the interactions between the supplier and their channel partners. The supplier has a strong communication with their logistic provider. The supplier has no contract with the forwarder; instead they leave full responsibility to their logistic provider to work out the best solution for the physical distribution. The suppliers share information and have open communication with the logistic provider and their customers.

Today companies must look internally, building core competencies, reengineering, and external, alliances with supply chain partners, to gain access to sources of unique competence and physical resources. A definition of SCM is, “the strategic integration of trading partners in the Supply Chain Management concept”¹⁵. There are of course a lot of other definitions for SCM, however this is the one that is most applicable for our thesis. SCM is concerned with strategic matter, both when it comes to internal and external business processes, the development of linkages between channel partners and the management of products and information. It can also be applied for customer service, control of outbound and inbound flows of materials and information and the elimination of channel inefficiencies such as costs. A sound logistics strategy is a fundamental source of competitive advantage by creating value for the customer, driving costs down, and to still be flexible to differential needs. To built competitiveness in the distribution system, by means of an effective and skilful distribution. To control the distribution is one of the main resources and to control the market of one’s products.

Just in time (JIT) has the central mission to eliminate work in process inventory by restricting procurement and component manufacturing to the exact quantities required to complete the assembly production schedule. JIT is focused on moving materials and components in the exact quantity, at the exact time, to where they were required.¹⁶ JIT is

¹⁵ Ross, Frederick David, *Competing Through Supply Chain Management*

¹⁶ Bowersox Donald J& Closs David J, *Logistical Management – The Integrated Supply Chain Process*

very important when it comes to B2B if the customer has manufacturing using this principle. JIT delivery can be realized if the e-commerce company has a high delivery service and an inventory strategy. Many companies outsource this service, because of time and knowledge limitations. It is vital that the e-commerce company outsource the delivery to a dependable logistic provider and to make sure that the logistic provider can guarantee superior JIT delivery.

SCM includes operational activities such as inbound logistics, processing activities, outbound activities and support activities. In inbound logistics activities are sales forecasting, inventory planning and purchasing. Process activities are production, value-added processing, and inventory management and finished goods. The outbound activities include finished goods inventory, customer order management and intra company transportation. Finally the support activities contents are logistics planning system, logistics control and logistics engineering. Today's information and communication technology enables SCM and all its functions to operate in a flawless way. Technology also enables channel partners to be networked together, and that in its turn enables and enhances the decision-making process and the companies can focus on providing the best product and service alternatives to the customer.¹⁷

¹⁷ Ross, Frederick David, *Competing Through Supply Chain Management*

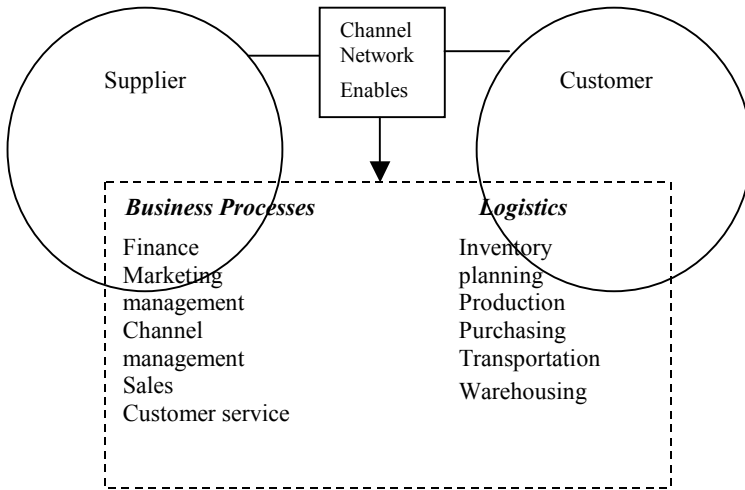


FIGURE 3.4. CHANNEL FUNCTIONS

Source: Ross, Frederick David, *Competing Through Supply Chain Management*, page 14

The logistic provider sees this as a large problem because the e-commerce companies put so much pressure on them though they can't deliver any faster than they do. What must happen is that the e-commerce companies and the logistic provider must find a way to understand each other and to cooperate in a better way, so that the customer doesn't come in the middle. It is up to the e-commerce companies to find the perfect solution with the logistic provider and help them so that the deliveries will be what you promise your customer. One thing e-commerce companies can do is to form strategic alliances or partnerships with one or several logistic providers and it can be one of several ways to improve the logistics.

Transaction based	Alliance based
<ul style="list-style-type: none">• Short-term relationships• Multiple suppliers• Adversarial relationships• Price dominates• Minimal investments from suppliers• Minimal information sharing• Companies are independent• Minimal interaction between respective functional areas	<ul style="list-style-type: none">• Long-term relationships• Fewer suppliers• Value added service dominates• High investment for both parties• Information sharing - high• Independent companies but with joint decisions• Large interaction between business separate functional areas

FIGURE 3.5. TRANSACTION VERSUS ALLIANCE BASED MANAGEMENT

Source: Ross, Frederick David, *Competing Through Supply Chain Management*, page 61

The objective with partnerships of different kinds is to assemble quickly focused skills and technologies to design, produce, deliver and service products that will provide decisive competitive advantage.¹⁸ To share information with all involved parties in the chain and to form strategic alliances is today important to survive in the competitive environment of e-business. To get leadership one can best find it in strategic alliances and relationships with others that possess competence and the resources that are necessary to uphold

¹⁸ Ross, Frederick David, *Competing Through Supply Chain Management*

competition. The goal with these types of relations is to speed up product development, decrease time to market and lower costs and at the same time try to exceed customer expectations. To achieve all this, it is essential to have an efficient logistics system. The definition of logistics by the Council of Logistics Management is stated below.

Definition of logistics:

Logistics is the process of planning, implementing, and controlling the efficient flow and storage of raw material, in-process inventory, finished goods, services, and related information from point of origin to point of consumption (including inbound, outbound, internal, and external movements) for the purpose of conforming to customer requirements.¹⁹

Logistics can be divided into two parts, material management and physical distribution management. The first relates to the incoming flow of information and materials and the second to the actual physical distribution of goods to customer.

¹⁹ Ross, Frederick David, Competing Through Supply Chain Management

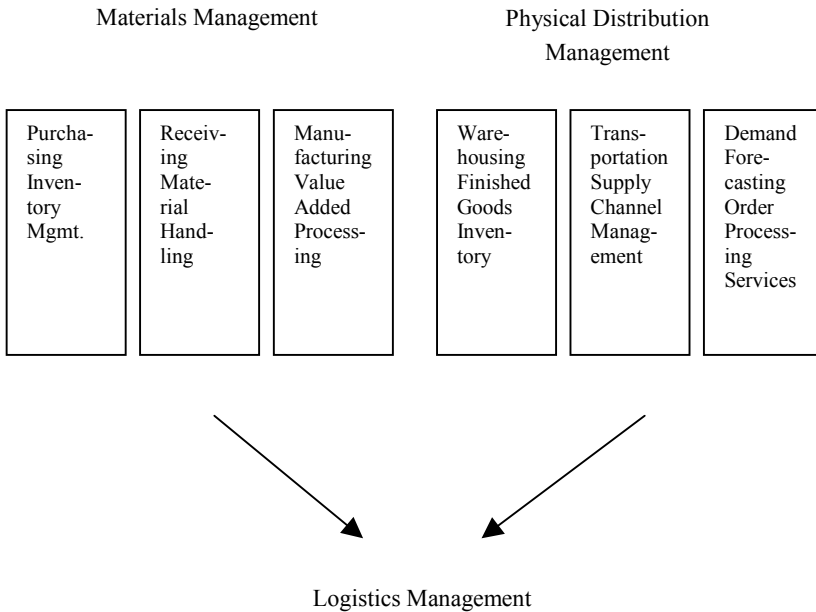


FIGURE 3.6. LOGISTICS MANAGEMENT

Source: Ross, Frederick David, *Competing Through Supply Chain Management*, page 26

Reasons behind the growth of alliances and partnerships may both be the new information infrastructure and the global market. To manage supply channels the growth of strategic alliances and partnerships have increased. This rather new concept is in contrast with earlier relationships between buyers and sellers. However one must not forget that working so close with different partners can make supply channels vulnerable to competition and they can easy be taken advantage of. By integrating businesses forming strategic alliances can reduce risks associated with product development, distribution and marketing, however the risks and benefits are shared within the partnership. Alliances can occur either on the same vertical marketplace or horizontally between businesses that sell to the same customers²⁰.

²⁰ Ross, Frederick David, *Competing Through Supply Chain Management*

Due to all of the potential benefits with e-commerce, it will most likely take over a large part of the total trade. If the e-commerce grows quickly, the logistics division must grow at equal speed and work in a perfect way. In order to do this the infrastructure has great demands to develop in turn to handle the shipments to customers. When customers purchase on the Internet they place higher demand on the logistics system. On the Internet the customers expect quick answers and direct response. Hence, the order process is done so quickly so the transport and distribution to customer should be done at the same speed, from the customers' point of view. A general role for Internet shopping is that delivery should be made the day after the order is placed, however, when it comes to goods that are purchased more seldom, the customer accepts longer delivery time.²¹

3.5 Sub problem - Competence

Competence is to have the necessary abilities to be qualified to achieve a certain goal or complete a project²². A company should have good competence and skills in time, cost, security, communication, competition and future. Competence is essential for an e-business in case of holding down the cost, right time delivery, high security, proof of delivery, good communication, to compete on the market and to understand and to be prepared for the future. For e-commerce it is important that the company's competence is high, because the e-business is a very dynamic industry. It is central to have functioning logistics in the e-commerce business, because the customer is very dependent on the delivery of the merchandise. Companies must have good competence and experience within logistics in order to have a functional logistics system. The logistics give competence and the competence provides good logistics.

Essential is that an e-commerce company have high competence all over their organization. It is also significant that their logistic provider and customers have high competence. If there is a high level of

²¹ Ström Per, Vinna eller försvinna i IT-åldern

²² <http://www.duke.edu/~charvey/Cclasses/wpg/bfglosc.htm#competence>

competence across the whole chain, the result will be significantly improved than if one part of the chain has lower competence.

Today there are many challenges for the e-commerce industry; one is that it is very important for the companies to keep down the operative costs. This is difficult since the cost is increasing because of the new technique and the needs for integrating the new system with the old databases. With a good competence a company can keep these costs down and be very efficient. An e-commerce company can also use their communication to create partners that will invest in the business. This they can do by showing the investors how good their competence is on the market and convincing them that to be involved in e-commerce is an advantage when it comes to competition. Many marketplaces are trying to do something that they don't have the knowledge about or are trying to handle several services at the same time and often fail. Companies that are focused and take care of their business will dominate their segment and have a future on the Internet.²³

Experienced e-commerce companies have found that it is possible to dramatically reduce costs by installing new measures designed for inventory tracking and control. The Internet allows the company to build to demand, which reduces the inventory to minimum. This strategy makes the manufacture's produce only as much as required by received orders. This eliminates the problem of overstocked warehouses and the result reduces tied up capital for both merchants and manufactures.

The global economy is the driving factor for channel dynamics and the development of channel distribution. Factors such as cost drivers and global cooperation are behind the growth of channels. Given that companies are always searching to extend their market shares and cut costs by scale economies. The global factors that drive the

²³ Wallström Martin, Glöm e-handel till konsument – nu gäller B2B, Computer Sweden

development are the explosions of information and communications systems, transportation systems that have made markets easier to reach. Due to fast speed of everything, more rapid introductions of products and services are possible and most of all they are possible simultaneously around the world.²⁴

E-commerce payment methods consist of credit card payments, electronic checks and digital currencies (smart cards and electronic money, or “e-cash”). Credit card information is transmitted as encrypted data over the computer network, although this still raises a number of concerns concerning privacy and security. Electronic checks (e-checks) are more comfortable than standard check payments, because the customer uses digital signatures that are transmitted between the company, the customer and the bank. Smart cards don’t just access finance accounts; they can also accumulate information concerning a purchaser’s priority and the buying pattern. Electronic money (e-money) or digital cash is stored in the customers’ computer direct to the company or transmitted through a third-party payment service. E-money needs some kind of bank certification in the direction of avoiding fraud or inadequate funds in the account. A few “start-up” e-commerce companies have entered the market to take care of electronic payments for e-commerce companies.²⁵

Security issues are one of the greatest concerns for online shoppers. In fact a number of analysts described security as one of the reason for that the e-commerce explosion will not be even greater. In the e-commerce situation, security is addressed as of two dimensions: the security of the Web site and to the company’s systems, and to the safekeeping and privacy of persons who interact through you. When bearing in mind security ask whether the information you transmit (credit card numbers and expiration dates, personal and financial information) is confidential and secure, or will other individuals or systems have the chance of accessing it. Security issues are a key concern when implementing intranets and extranet. For the reason that

²⁴ Ross, Frederick David, *Competing Through Supply Chain Management*

²⁵ Tiernan Bernadette, *e-tailing*

extremely private information as, financial data, product specifications and company projections is passed back and forth, and becomes hackers target.²⁶

A company can protect their networks from unauthorised right of entry to confidential information by encryption, firewalls and proxy servers²⁷. Encryption refers to the manipulation of data in order to prevent any but the intended recipient from reading it. Encryption forms the basis of network security. Cryptography is the study of techniques of secret writing, such as codes and ciphers. In terms of web security, cryptography makes it possible to keep data private, to check if an individual is really who he claims to be, to ensure the authenticity of transaction requests, and to determine if someone really received certain data. A good cryptographic algorithm is difficult to break the secret code because it contains no visible patterns or connections to the original message.

Firewalls separate a business' local area network from the Internet; access is given based on the owner's specifications. Firewalls can also include a proxy server that takes care of communications between a private network client and the open network server. Firewalls are similar to digital gatekeepers, providing security at the network level. Firewalls protect the company's private networks from unconfirmed access. They allow the company to control right of entry. Firewalls are programs that are located in servers' computers, at the network's end. Proxy servers provide user level verification. Passwords can be used to cut off specific sections of a company's server and permit only specific information to be available to authorised users. Security precautions are critical in dealing with all forms of digital and electronic currency, particularly e-cash. Merchants need systems that are designed for the reason to lessen the opportunity of fraud and security threats. Seeing

²⁶ Tiernan Bernadette, e-tailing

²⁷ Ibid

that it is a very practical matter the company will need to ensure that e-cash is supported by actual money.

Security protocols are transparent to the user, however they can make a system run less efficiently, mainly for the reason of the method involved in encryption. On the other hand, through correct use of security protocols companies and customers can connect in e-commerce, transmit sensitive data, and have personal communication over the Internet without violating the security.

A global system for electronic signatures is on the way to be reality. The systems name is Identrus and is really an organization consisting of a number of large banks and financial institutes. The organization wants to offer infrastructure for safe e-commerce for their customers. There are some problems with these kinds of B2B-solutions because electronic signatures don't have the same legal value as a handwritten one. Identrus business concept is to connect banks and companies together and is a system for a secure e-commerce and exchange of financial services. All the transactions will go through Identrus' security system. EU has earlier shown certain hesitancy towards this solution in case this would ease the creation of cartels. At the same time there is anxiety that the systems are not secure enough. The Swedish government made a proposal that an electronic signature will be equal to a manual signature. An electronic signature can appear different. One solution is "smart cards", that let the user know who is on the other side.²⁸

The critique is hard towards the e-commerce and the pessimism is in the worse case scenario risking delaying the quick and safe profit that can be related to the B2B, especially now that many companies are considering how to move forward. There are two sources in e-commerce where large savings can be made, first lower the item cost though steering the purchase volumes to chosen supplier of raw material and secondly lower the producing costs by simplifying the purchase work Internet-based purchase solutions to give companies

²⁸ Öhman Daniel, Dagens Nyheter ekonomi E-handel snart säker

access to a service and they only need to pay for using it. The efficient profit that exists in B2B is very large and companies who want to wait and see, risk getting ejected from the market by their competitors. Intranets and extranets can maintain the company and its suppliers in phase with the latest information (inventories, sales figures, marketing data, customer service issues, new policies, or organisation changes) as they occur. The company must transfer these standards of communication into the premature design of the supplier's system, allowing efficient flow of data from one business to another, when it comes to frequency volume, destination and type of information transmitted.²⁹

Due to the flow of data a good security program is needed. No loss or random modification to any transaction must take place within the e-commerce system. To keep up with other e-commerce companies on the market, it is important to have knowledgeable persons working in the organization.³⁰ The primary tool is to encrypt the data, which makes the data meaningless for all other parties than the planned receiver³¹.

If a company is going to allow customer configuration it is important that the company ensures that the mission is well developed. The company must decide who should have direct access to the inventory information: vendors, customers, salespeople, and distributors. It is likewise important to decide who should not have the right to enter. A company's security system must be designed in order to block information that can be accessible to some companies and that are off-limits to others.

²⁹ Lundström Lars, Dagens Industri Debatt: Fel att tveka om e-handel

³⁰ Cashin Jerry, E-commerce success, Building a global business architecture

³¹ York Stephen & Chia Ken, E-commerce a guide to the law of electronic business

3.6 Sub problem - Customer

It is vital for a company to define their customers. Who will most likely buy from you? Where is the market? What are you trying to sell to them? How can you reach them physically? As the company gains knowledge of their customers' behaviour they will understand them more and what they desire.³²

Customers need a special site for interaction that lets them create and update accounts, place orders, make inquiries and check order status continuously. A successful e-business solution should deliver, simplicity, intimacy, transparency and immediacy³³. Before the customers were focused on price as the central motivator for purchasing decisions, although today it is nothing less than advanced quality in products and services they seek³⁴. Hence, the customer always seeks better and higher quality in everything they purchase.

Simplicity relates to communication services such as, interfaces, convenience and ease of use. The entire process from placing an order to checking order status must be performed as simply as possible. Intimacy is when the e-commerce site is personalised to create one to one marketing. The e-business must recognize the registered user and tailor campaigns, special offers and support the customers' preferences and previous buying behaviour. The transparency is when an e-business speaks to customers in a language they can understand. Since the process of buying is already so complicated the e-business company has to protect the customers from all sorts of complex processes. Otherwise the customers may be confused and end up calling the customer service centre. The idea with e-commerce is that the customer should do everything themselves. Immediacy is when e-

³² Tiernan Bernadette, e-tailing

³³ Hom David, E-business portals ease end-users service creation, Telecommunications

³⁴ Ross, Frederick David, Competing Through Supply Chain Management

commerce sites reflect customers' actions immediately. Every process should have an instant access to current status at any time.³⁵

Prices for products and services has been a standard for setting the customer value and it used to be that customers had to accept higher prices when suppliers sought to protect their margins. However this has changed and the customer is constantly trying to renegotiate prices and suppliers find themselves reducing cost rather than increasing prices to keep their customers satisfied³⁶.

To manage customer service is about the ability to respond effectively to the needs and expectations the customer demands. This has become the dominant objective in almost all levels of the supply channel. The key to satisfying the customer is to understand and the whole time increase what the customer perceives as value. This puts a lot of pressure on the companies to offer flexible solutions. Due to this, companies in their turn put additional pressure on the supply channels to meet the high needs. Customers also see e-commerce as a modern and new opportunity to get the deliveries quickly without problems and this has caused the e-commerce business to still promises customer fast deliveries that they can't guarantee. Customers are more and more demanding to be treated as unique individuals and expect their suppliers to deliver customised and tailored products and services as their needs change.

The system for handling Customer Relationships Management CRM is the most important information technique in case of creating competitive advantages. The most positive effects from CRM are the access to new customers, more effective logistic, more trade from existing customers, easier to keep existing customers and better information- and knowledge management.³⁷

³⁵ Hom David, E-business portals ease end-users service creation, Telecommunications

³⁶ Ross, Frederick David, Competing Through Supply Chain Management

³⁷ Wallstrom Martin, Computer Sweden, Kundrelationssystem stärker konkurrenskraften

In order to keep customers satisfied the delivery time is very important. Time to delivery has become an essential concept; the customer no longer accepts stock outs, incomplete orders, and late shipments. This can be related to that time and availability are very essential for the customer. The customer also expects greater service and they want to do business with other businesses that can provide first and every time delivery with zero defects. The global market place of today requires only one thing, and that is to give the customer the service they require and they should perceive it as much higher than they expected.

It is central to have a good customer relationship and here the e-commerce companies can get help from different systems for handling the customer relations, customer relationship management. Many companies think that the relationship with the customer is the most important thing when it comes to competitive advantages.³⁸

A company that trades though Internet has a chance to lower the purchase costs by 10-25 %, through more effective purchasing. The amounts are enormous and the largest source to save money in e-commerce is to lower the unit prices through controlling the purchase volumes to selected suppliers. One can also lower the process costs by making the purchase work easier. The Internet based solutions gives the companies access to a service that they only need to pay for when they use it.³⁹

Company's customers need just as much attention in e-commerce as they do if you meet with them personally or speak with them on the phone. The primary factor in building up relationships and gathering loyalty is that the company lengthens the life of their business. The system must be able to receive and monitoring feedback from the customers constantly. The most excellent e-commerce sites encourage

³⁸ Wallstrom Martin, Computer Sweden, Kundrelationssystem stärker konkurrenskraften

³⁹Lundström Lars, Fel att tveka om e-handel, Dagens Industri

feedback from customers and work thoroughly to keep their customers. The company must update their customers with “news” about the business and to set up ways for customers to let the company know how and what they need for the moment. Track customers purchasing patterns and build up information on their past orders to make it easier for the customer with future buys. Listen to customers’ suggestions for improvement and enhancements, which makes it easier for the company to find out which part of the web site is inefficient or if it is too difficult to navigate.⁴⁰

In many cases companies prioritise different customers depending on how important they are for the business. Large and frequent customers are often prioritised and small and less frequent customer have subordinate priority, this is a necessary action for e-commerce companies, because they can’t handle all their customers’ at the same time. The weighing is easier said than done for companies; therefore it is vital that they have the skill and knowledge to evaluate their customers. Priority can be prices, time of delivery and security.

The technology enables the communication between the companies and gives the companies a possibility to improve customer service. It is at least 60% cheaper to handle customer relations over the Internet⁴¹. Other improvements that the Internet can give are, the service is always available, connection to internal systems and independence. To have the service available as means of prices, order processes, product information enables contact with the company⁴². To have a connection to internal systems makes it easier for customers to see actual delivery time, track and trace the goods, nevertheless, there is always a risk to allow others into your own system, therefore a firewall of some sort is to recommended or only giving access to certain parts of the system.

⁴⁰ Tiernan Bernadette, e-tailing

⁴¹ Ström Per, Vinna eller försvinna i IT-åldern

⁴² Ibid

3.7 Information needs

3.7.1 Sub problem 1-How the government affects the e-commerce logistics?

- EU's view on the development of the e-commerce B2B market?
- What laws and regulations exist today for the physical transportation?

3.7.2 Sub problem 2-How can the logistic provider and the e-commerce market go hand in hand?

- How does the cooperation look between logistic provider and e-commerce companies?
- How does the physical distribution appear?
- How will the contact between logistic provider and e-commerce companies develop in the future?
- How is the logistic provider involved in the supply chain

3.7.3 Sub problem 3 – What kind of competence should an e-commerce company B2B possess?

- How is the information shared between all involved in the supply chain?
- What kind of information is shared between all involved in the supply chain?
- What kind of security tools are used on the Internet to keep the information safe?

- How does the future appear between clients and the e-commerce company?

3.7.4 *Sub problem 4 – How is the customer involved in the value chain?*

- How is the customer relationship built up?
- How does the e-commerce company prioritise their customers?
- How does the e-commerce company wish to develop the e-commerce with their customers?

3.8 Delimitations

We have chosen to do a number of delimitations in our master thesis. The delimitations are of time, geographical obstacles and literature constraints. This paper only concerns B2B on the e-commerce market and we will just treat the logistics concerning supply chain operations. The most important is that, it's about businesses between companies and organisations, which means that the selling part is, as well as the buying part, an organisation or a company. We have chosen to concentrate on the Swedish market, but we will not include the Swedish government's view of the e-commerce B2B market because of the time constraints. We will only mention EU's view on the future development of the B2B market.

The thesis will describe the situation on the e-commerce market from a selling point of view and that automatically leads to exclude the customers view on the e-commerce company. We wanted to define this so there will be no misunderstandings. We will during the whole thesis mention the buying part as the customer and the E-commerce Company as the supplier or E-commerce Company.

We will not include the infrastructure of the Internet and not the one who is responsible for the designing the website. The software is going to be mention but not investigated. We feel it is necessary to delimit details about e-contracts, rights, finance and taxation, because our purpose doesn't include these factors.

In our thesis the selling company controls the market place on the Internet and the focus is on how they can provide the best logistics in order to compete and how they perform it. There are no intermediaries involved in the model for our case, since the control is at the providing company.

With the purpose of comparing the two, Dell Computer Corporation and Hewlett Packard, companies we had to draw up boundaries of the businesses to just concern the sale of personal computers (PC) via the Internet.

4. METHODOLOGY

In this chapter we describe how the research process was structured in order to reach the purpose of our thesis. We discuss alternative approaches that we have used during this thesis and how we have chosen the companies for our case studies. We also explain how we have collected secondary- and primary data. Out of this we criticised the secondary data and analysed the primary data. The chapter ends with a discussion about reliability and validity concerning the case studies and the different sources.

4.1 Our approach

In the literature concerning data collection there is a dividing up between quantitative and qualitative methods. In the quantitative method surveys or questionnaires are used, however in the qualitative method observations and interviews are applied. The qualitative methods are more structured, formalised and characterised by control and on the other hand the quantitative methods have a small grade of formalisation and more a understanding purpose. Our thesis is based on qualitative data, since we didn't perform any calculations. Qualitative research is when collecting, analysing and understanding data that can't be quantified, which means expressed in numbers. The qualitative research is often presented as case studies or surveys with small samples.⁴³ In figure 4.1 we illustrate our way to reach the final result.

⁴³ Lekvall Per & Wahlbin Clas, Information För Marknadsföringsbeslut

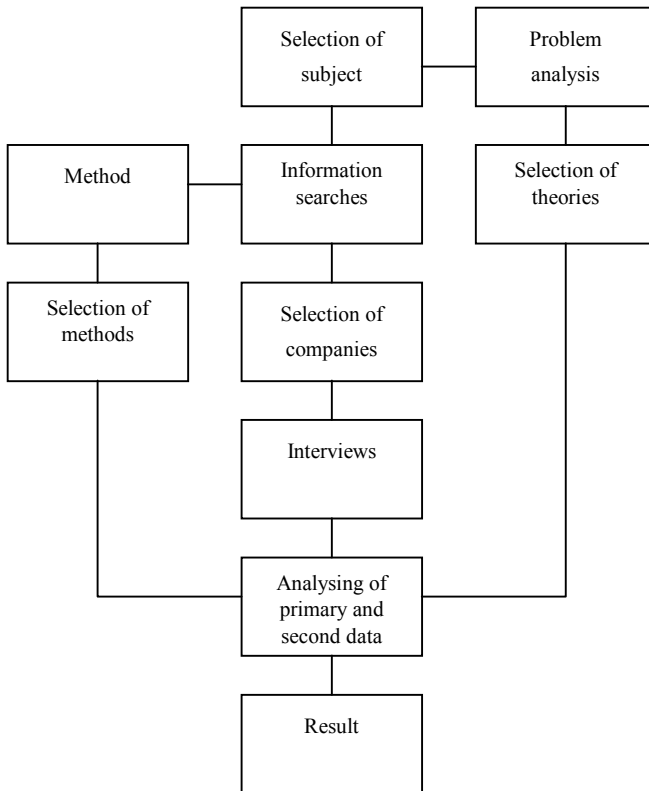


FIGURE 4.1. SCHEMATIC PICTURE OVER THE COLLECTION OF DATA

The qualitative data consists of interviews, case studies and printed material. The result is therefore presented in written form. We decided to utilize the qualitative method since it is difficult to use calculations to find key success factors for e-commerce logistics in B2B. We are familiar with the fact that it is possible to perform calculations on our sub-problems to discover changes to improvements in logistics. Our aim was to find different factors to success without calculations, by means of interviews and case studies.

4.2 Types of research

Research can be classified into three different types depending on where in the decision process you are. The classifications are exploratory, conclusive and performance monitoring research.

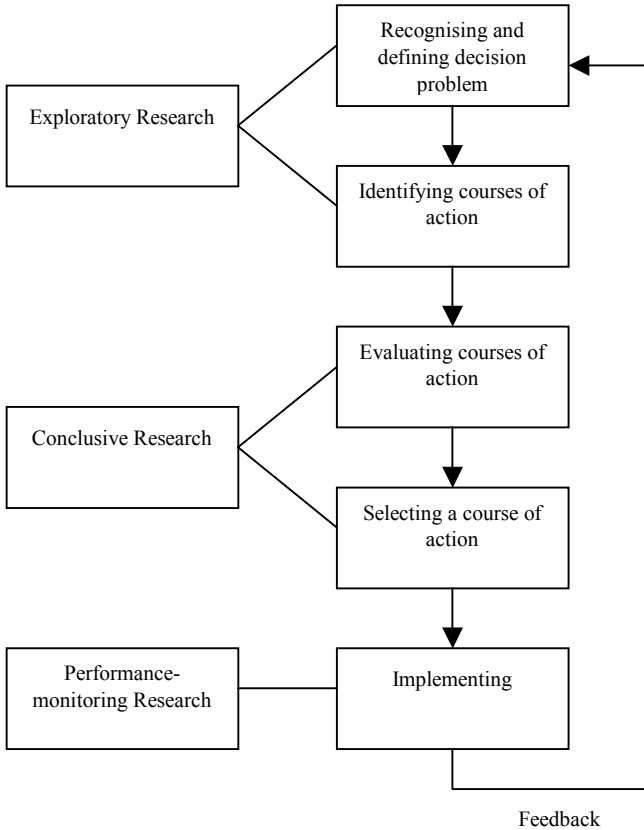


FIGURE 4.2. TYPES OF RESEARCH

Source: Kinnear Thomas C & Taylor James R, Marketing Research – an applied approach, page 127

4.2.1 *Exploratory research*

The first is exploratory research, this is suitable at the early stages and the cost and time consumption is relatively low. Characteristics for exploratory research are high flexibility and new angle and to come across unpredicted discoveries. The purpose with this type of research is to explore the different alternatives in order to reach the optimal solution.

In the beginning of the problem analysis we used exploratory research so we could structure and establish our problem. We looked at several models and theories to get as much influence as possible to our thesis.

4.2.2 *Conclusive research*

Conclusive research is helpful concerning evaluations and choice of action plans. A characteristic for conclusive research is formal research approach. A detailed questionnaire, question guide, surveys, experiments, observations and simulations with a clearly defined problem often have a formal research approach and it is necessary to have sample groups. This type of research can be divided into two different directions, *Descriptive research* and *Causal research*. The descriptive research method is used to describe the effect of marketing actions and in order to be effective the conditions are that the main problem, sub problem and the information needs are clearly defined. It is typical to use cross-sectional research design when using descriptive research. Cross-sectional design is to capture a sample of population elements at one point in time for example a question guide. The causal research method is used to enlighten cause and action of already registered information.⁴⁴

⁴⁴ Kinnear Thomas C & Taylor James R, Marketing Research – an applied approach

To go further it was necessary to use conclusive research approach with focus on descriptive research, since it made it easier to understand the characteristics of the market, determining in which grade variables are related and try to see occurrence regarding phenomena on the market. In our question guide we asked similar questions to different managers with different areas of expertise to get a wider perspective and to be aware of the market.

4.2.3 Performance- monitoring research

Monitoring research is necessary to follow up market changes and to control marketing programs in accordance with plans. The monitoring research can be done continuously or situationally for specific cases.⁴⁵ During the whole thesis we had continuous contact with different involved companies and kept ourselves informed through Internet in case of changes on the e-commerce market. Furthermore articles concerning e-commerce B2B have been a helping source.

4.3 Case studies

Case studies means to study one or few objects in a number of different respects. A survey of this kind gives knowledge in-depth about a delimited subject. The advantage with case studies is that they are carried out under real conditions and one obtains access to more detailed facts about the subject. A case study can be carried out on one specific occasion or over a longer period and it can be based on quantitative and qualitative, primary and secondary data.

Case studies are studies where the interest is pointed at more detailed and in-depth descriptions and analyses of specific cases. It is most suitable to utilize case studies when you want to accomplish a detailed perception of processes of different kinds. In addition when you don't

⁴⁵ Kinnear Thomas C & Taylor James R, Marketing Research – an applied approach

know in advance what is important to investigate and what is unimportant. You choose cases studies after certain criteria such as extremeness, type and availability.⁴⁶

When designing a case study it is essential to think of how many cases to conduct. There are differences between single case- and multiple case designs. In some fields, multiple-case studies have been considered a different “methodology” than single-case studies. There are both advantages and disadvantages when comparing single-cases-with multiple-case design but the multiple is seen as more robust. The disadvantages with multiple-cases are that it is time consuming and requires a lot of resources.⁴⁷ Each case must be cautiously selected so that it either predicts similar results or produces different results but for expected reasons⁴⁸. This sampling logic is that a number of respondent or subjects are assumed to represent a large pool of respondents or subjects. The data that is collected from the smaller sample of persons are assumed to represent the data that might have been collected from the entire pool. The logic of sampling is to perform a statistical procedure for selecting the specific subset of respondents to be surveyed. This is done because it is too time demanding and too expansive to survey the entire segment.⁴⁹

Each individual case study should consist of a whole study in which conclusions can be drawn. Then conclusions should be drawn cross case, after that this must go together to a single conclusion.⁵⁰ Next step is to decide how many cases ought be included in the study. Everything depends on how much certainty you want to have in your multiple-case result, more cases, fewer uncertainties.

⁴⁶ Lekvall Per & Wahlbin Clas, Information För Marknadsföringsbeslut

⁴⁷ Yin Robert K, Case Study Research –Design and Methods

⁴⁸ Ibid

⁴⁹ Ibid

⁵⁰ Ibid

We used the method multiple case study, with two different respondents. We wanted to explore two different companies in e-commerce B2B to see how their logistics worked. Our samples were one company that is well established and another that is a newcomer on the market. Reasons why we chose these two companies were to see unexpected similarities and dissimilarities. We knew that the sampling method perhaps doesn't represent the whole e-commerce market, however we thought that we could find some common factors that would affect the e-commerce logistics.

In order to understand the logistics functions we had to conduct a mini case for the company that distributes the e-commerce goods in Sweden for our two case study companies. This gave us a broader understanding of the whole supply chain when it comes to e-commerce B2B.

4.4 Data sources

The technical form of the collected data is divided into two areas, secondary- and primary data. Primary data is collected for a specific use and the secondary data is information that already exists in print.⁵¹

⁵¹ Kinnear Thomas C & Taylor James R, Marketing Research – an applied approach

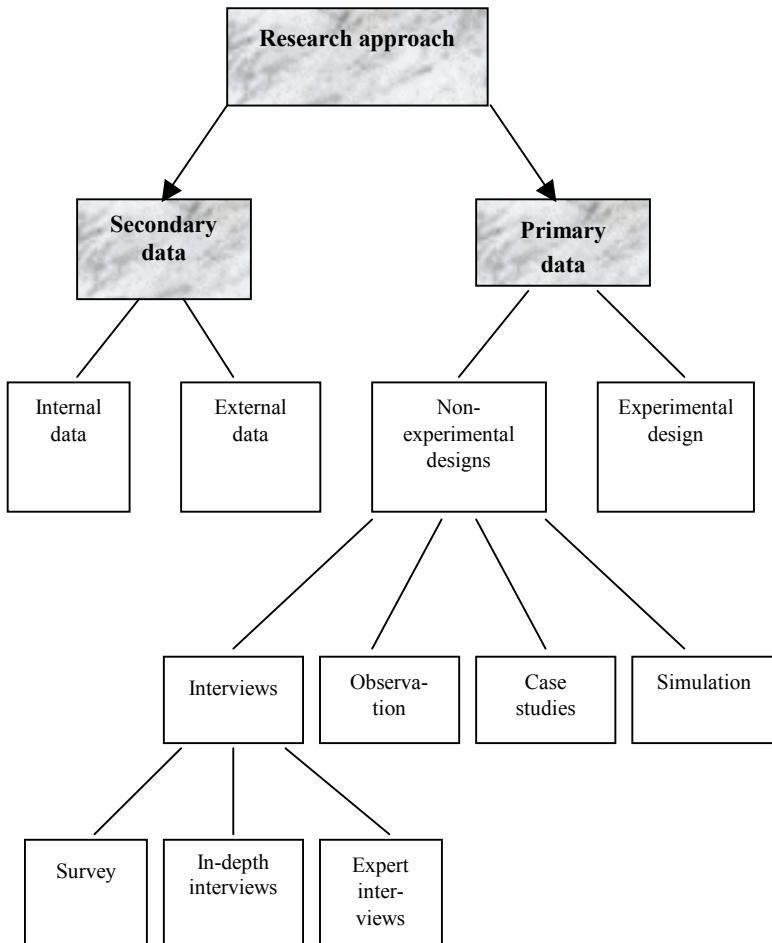


FIGURE 4.3 CLASSIFICATIONS

Source: Methodology course, Lecture 2000-06-02, Arne Jensen.

In figure 4.3 we illustrate those parts that affect our thesis and not the complete classification tree. To collect secondary data we searched in different databases in order to get literature, articles, scientific journals, and Internet and course literature. We used the theory and all literature reviews in our search for structure and ideas. We used literature, personnel interviews, one phone interview and case studies to get a broad understanding of the subject as a whole. The primary data in our case is from one phone interview and personal interviews.

Collecting data by using interviews is usually conducted after an agreement between the respondent and the interviewer. An interview can be unstructured but we tried to be as structured as possible by having our questions ready in advance. We tried to make the interviews go in-depth in order to achieve a better result. There are different kinds of interviews such as, personal interviews, phone interviews and field interviews. The last mentioned technique is neither theoretically or methodically recommended since the sample is non-random. The method we chose was personal interviews and phone interviews and with help of question guide it can be characterised as an expensive method that is necessary in order to get more satisfying answers with high quality⁵². Interviews as these always take a long time to complete, since the interview has to be proceed by a letter, e-mail or phone contact, where the purpose of the interview and a suitable time to do the interview is agreed. The advantages with personal interviews are that the questions can be both deeper and specific than by mail and uncertainties in the questions can easily be explained. The disadvantages are that it is expensive and it takes long time and there is always a risk that the interviewers affect the respondent in his or her answers. In our case we followed up and complemented both the phone interview and the personnel interviews with additional phone calls and e-mail.

⁵² Dahmström Karin, Från datainsamling till rapport – att göra en statistisk undersökning

To have a structured questionnaire, with multiple-choice answers, makes it easier to measure and see values within a specific area. The question guide, unstructured with no given answers, lets the respondent talk freely from his or her heart. Important is to formulate some kind of order in the questions where one first states the purpose with the interview. After that one can formulate questions consequently and areas that are important are covered. It is common to construct a question guide and not discover, until the adaptation, that the main question hasn't been answered. To avoid this mistake it helps to have a ready question guide before the interviews. In order to make the questions more precise the interviewer has to think about time and space, which make the question more meaningful and easier to analyse. An important demand for the questions are that they should be neutral and not lead the respondent to an answer and try to avoid words that are value-loaded and filled with prestige. To have the neutral questions in the beginning of the interview and a more sensitive approach to the more delicate questions is a general rule. This method is called funnel-technique.⁵³ Our aim was to be structured and carefully planned in our unstructured question guide to achieve high reliability. If the reliability is high it will give a better causality to the result.

4.5 Personal- and phone interviews

There are four ways of communication approaches available for obtaining data from respondents, first the personal interviews, second the phone interviews, thirdly the mail interviews and last the computer discs interview. The first three of these communication approaches have traditionally been widely used in marketing research. The use of computer disc is growing as computer availability increases at home and in the office.⁵⁴ We have only used personal and phone interviews in this thesis and will therefore only describe those methods.

The personal interviews have been carried out “face-to-face” with the suppliers, logistic manager, and e-commerce manager and marketing

⁵³ Dahmström Karin, Från datainsamling till rapport – att göra en statistisk undersökning

⁵⁴ Kinnear Thomas C & Taylor James R, Marketing Research – an applied approach

manager. It has been very important to discuss the subject with them personally, since it gives more full view of the e-commerce market.

The “face-to-face” interviewing process may cause respondents to favouritise their responses. It is a potential risk for introduction of bias into personal interview data because of the social motivation. The disadvantages with personal interviews are that it can be hard to reserve the right persons for an interview and the risk is high that an interview-effect will occur, what you ask is what you get.⁵⁵

Phone interviews are very common in communication media. The reasons for its popularity are that it is an efficient and economic measure and its application to a wide range of information needs. With the phone interview there is a lower degree of social interaction between the interviewer and the respondent and this reduces the potential for favouritism in comparison to personal interviews. The basic limits of the phone interviews are related to the limited quantity of data that can be obtained and the possible bias that can be a result from a received register of the target population.⁵⁶

We chose to use personal interviews in order to get a more private contact with our different case studies companies. All the interviews were taped in order to avoid misunderstandings. But we have also followed up the personal interviews with both telephone- and e-mail interviews to get an even more broadly and trustworthy thesis. In one situation we used a phone interview because the respondent didn't have time to meet us. In this case we used a speakerphone and taped the interview.

⁵⁵ Wiedersheim, Paul, F & Eriksson, L-T, Att utreda, forska och rapportera

⁵⁶ Ibid

4.6 Critique of sources

It is important to form an opinion about the truth and trustworthiness among different sources. The purpose with source critique is to “decide if the source measures up to what it is supposed to measure”, meaning if it is valid. Further if it is essential for the problem at hand, meaning if it is relevant. And finally, if it is free from systematic errors, intended if it is reliable.⁵⁷ The sources used should be judged after these criteria.

When criticising the sources, you judge the material that has been collected for the thesis to see if it is trustworthy, reliable, facts are truth and if the information is relevant for the thesis. The written sources that we have used have been of secondary character. We believe that the literature, articles and journals, which are the foundation of the thesis, is trustworthy. The interviews are also considered as trustworthy because the respondents represent companies involved in this specific area. The sources' reliability is considered as fulfilled. We have reviewed the material that has been used in this thesis and judge it from three criteria of critique⁵⁸:

- Up to date demand; if the source occurred in connection to the event
- Tendency critique; if the source-person is impartial to the question.
- Dependency critique, if the source is independent by the outside influence

We believe that the up to date demand is fulfilled because all of the material is collected from the 1990's and the year 2000.

⁵⁷ Wiedersheim-Paul F., Eriksson L. T., Att utreda, forska och rapportera

⁵⁸ Ibid

The question about tendency and impartiality, it has been hard to find any sources that not have been involved in the relations that the thesis describes. Nevertheless we have tried to interpret the answers from the interviews as impartially as possible. The companies and persons that we have connected are all dependent on each other because they all work in the same business and are connected. The information from the literature is also considered dependent by influences from the outside.

4.7 Analysis approach

A SWOT, strengths, weaknesses, opportunities and threats, analysis gives a summary of the strengths and weaknesses of the company together with the opportunities and threats it faces. The purpose of the analysis is to foresee significant developments that can have impact on the company. Strengths and weaknesses don't list all features of a company only those relating to critical success factors and they are relative not permanent. Opportunities are how the progress of the economic climate develops, market changes and new technology. Threats are how competitors develop new products and how the channel reacts to changes and how politics affects the market.⁵⁹

We have used the SWOT analysis approach for the two case studies and present them separately in each case. The reason for doing SWOT was that we wanted to analyse both companies so that we could easier draw conclusions for the whole e-commerce market.

4.8 Research evaluation

In this part we bring up the study's reliability and validity. These concepts are meaningful in aspect when we perform analysis of the result. Since we have selected to perform in-depth interviews with question guides, which are a tactic and based on non-chance method, makes this element particularly significant. Since we only have

⁵⁹ Kotler Philip, Armstrong Gary, Principles of Marketing

included two case studies and one mini case study for the e-commerce market, the credibility may be questioned though our aim is to draw conclusions for the whole e-commerce market B2B. We have tried to demonstrate the course of our research and described the ways we have taken to reach the conclusions and we also present the sources we have chosen to work with. Finally we try to account for our opinion of this research's reliability and validity.

4.8.1 Reliability

Reliability is a statistical expression for study trustworthiness where low reliability often depends on a random error. The reliability measures to what grade a measuring process is free from uncertainties. This means how reliable the result is from the study. In order for a study to have excellent reliability, random errors can't occupy a large part of the results of the study. The study should be possible to standardise in order to achieve the same result on another occasion.⁶⁰ The data that the observer collects should not only have high reliability it should also represent what you wanted to describe. As mentioned above, low reliability depends often on systematic errors in the statistical calculation that usually is done by the observer

The case studies we conducted were based on information from the in-depth interviews, Internet and annual reports from each company. We see these sources as reliable because the persons that we interviewed possess large competence and high positions in treated cases. There can be some misunderstandings in form of communication between the interviewed person and us, but in order to avoid that the asked persons have read the final report and approved the result, we have taped the interviews for the reason to obtain higher reliability.

⁶⁰ Kinnear T.C., Taylor J.R., Marketing Research - an applied approach

4.8.2 *Validity*

Validity is whether a survey's result is valid or not. This means that the survey should be without systematic and random errors to a large extent as possible and thereby brings information that is as close to the reality as possible.⁶¹ Further this means that it isn't enough with data that has been collected for the purpose to answer the problems, collected around a specific value, it needs to be collected in the right place in order to give the right answers.⁶²

Validity can be divided into inner and outer validity. The inner validity measures if the questions asked are right in proportion to the problem and what research report it rests upon. Outer validity is a measure of whether the answers obtained correlate well with the reality, which they intend to describe.⁶³ However a validity error is more serious than a reliability error when low validity can lead to one drawing the wrong conclusions.

The study we have done includes two case studies and one mini case study and interpretations are made from personal interviews, which make this thesis hard to copy. Even if someone is doing the same study, the situation can be different. The interviewed persons can have changed jobs or have quit and there can have been new research published concerning e-commerce B2B development. All the data collected through the thesis have been valid in case of time, place and right persons. In order to write the thesis we had to ask the right questions to the right people, which we did so the validity should be high. The answers from the interviewed persons did in fact as much as possible correlate with the reality that rules on the e-commerce B2B market.

⁶¹ Kinnear T.C., Taylor J.R., Marketing Research - an applied approach

⁶² Ibid

⁶³ Ibid

5. MINI CASE

In this chapter we treat the relation between forwarder, logistic provider and the e-commerce companies, Hewlett Packard and Dell Computer. All information is collected from interviews and web sites, if nothing else is stated.

5.1 Danzas ASG

ASG is an entirely owned subsidiary to Danzas and they changed name to Danzas ASG this October. The subsidiary ASG is responsible for the Baltic and the Nordic countries business market with full access to Danzas global network of transport and logistics services. Danzas is in their turn fully owned by Deutsche Post (DP) and DP owns in its turn 25% of the air transport company DHL. Here on Danzas ASG will only be referred to Danzas. Danzas perform business in three areas, Eurocargo, Solutions and Intercontinental. Eurocargo is land based national and international transports, parcel distribution, home delivery and “special” areas. Solutions are when Danzas provides integrated third party logistics (3PL), meaning to operate the whole chain from production to the end customer with the support of IT. Intercontinental is international air-, sea- and project transports where Danzas provides a total service supply of transport and logistics such as, customs, IT, financing, and SCM.

The integration into DP made it possible for Danzas to move forward into a new stage of its progress. It soon became obvious that the strategies of the two partners perfectly complemented each other. DP together with Danzas has become one of the most excellent logistics businesses worldwide.

In Sweden, Danzas main office is in Stockholm, they have 28 regional offices around Sweden. The office in Gothenburg is a regional office and it also functions as a hub for diffusion of goods in Sweden and the Nordic countries. There are about 50 regional offices for the Nordic

countries in total. Danzas aim is to focus on their processes, solutions of standard products and some optional services, 80-90% of the customers fit into these processes. There are customers who demand additional services that expand outside the standard processes that Danzas offers and those customers are included in a working area called “special”. Within “special” there are distribution service centres and the largest distribution service centre is situated in Gothenburg. A reason why Danzas distribution service centre is placed in Gothenburg is because Danzas are large and specialised in this type of specific responsibility.

Danzas distributes Hewlett Packard’s all e-commerce goods in Sweden and for Dell Computer they supply the whole Nordic region. The relations between Danzas-Hewlett Packard, -Dell Computer are illustrated in the figure 5.1.

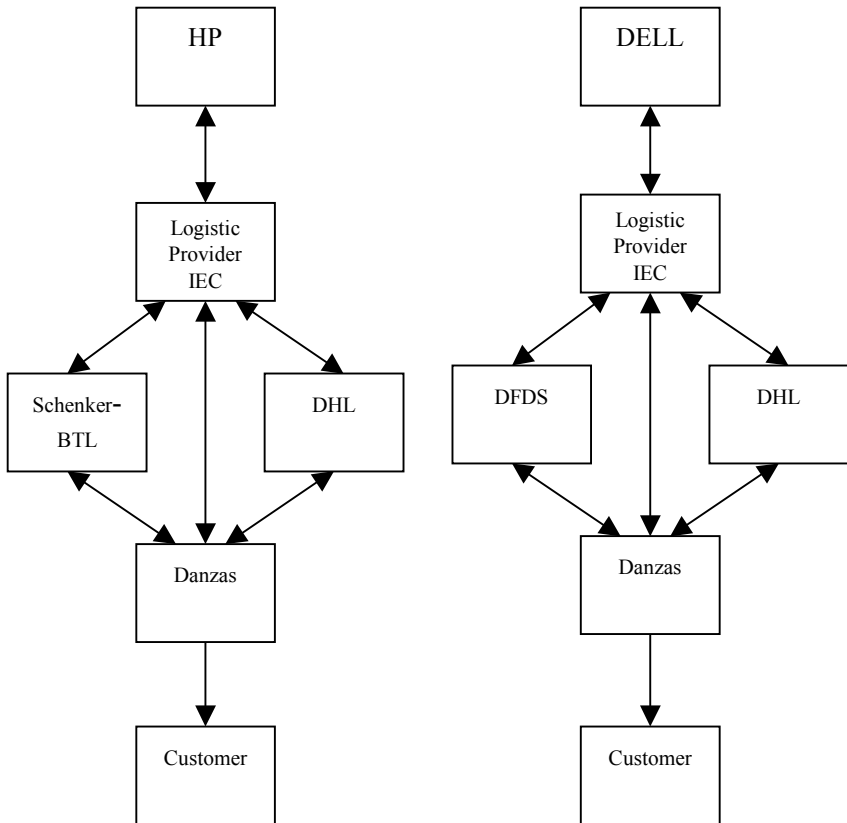


FIGURE 5.1 DANZAS RELATIONS WITH HP AND DELL

The figure shows that neither one of the companies has direct contact with Danzas, instead they have a strategic alliance with Irish Express Cargo (IEC) who administers the contact with Danzas. IEC has representatives in Danzas office in Gothenburg, two that work with Dell and one that works with HP. In HP's case Schenker-BTL (S-BTL) is acting on assignment from IEC to transport the e-commerce goods to Danzas terminal in Gothenburg. For Dell, **Det Forenede Dampskibs-Selskab** (The United Steamship Company), DFDS takes care of the transport to Danzas terminal in Gothenburg and it is performed by assignment from IEC. For urgent situations IEC and Danzas uses

Adrian Dalsey, Larry Hillblom and Robert Lynn (DHL) for the transportation. Both HP and Dell are included in Danzas “special” area. There are large flows of goods from the producing countries in Europe to Sweden. The goods, for e-commerce, arrive to Gothenburg, Danzas terminal, where the terminal also functions as a hub for diffusion of the goods.

Danzas is in a partnership with IEC and Danzas invest and tie-up large amount of capacity in these partnerships especially to the larger customers. Danzas sees IEC as their customer and when IEC place demands on Danzas, they will comply with those. The agreement between IEC and Danzas usually stretches over a three-year period and Danzas is very satisfied with having IEC as a customer. IEC spurs the development of transportation for valuable goods in view of the fact that they have specialised in this area.

HP’s and Dell’s goods are included in Danzas fixed line hauls and departures. The departures are in the evening and the routes cover all of Danzas regional offices in Sweden and the Nordic hubs. However, Danzas only distributes HP’s goods in Sweden. Both companies’ goods are consolidated with other goods while they are distributed.

When then a truck leaves HP’s or Dell’s manufacturing sites in Europe they send a confirmation to IEC and IEC forward it in the system Atlas to Danzas. The information contains weight and volume of the goods. A problem is that IEC does not utilise a similar data system as Danzas. Danzas works with EDIFACT and IEC works with a system called Atlas, since IEC have a partnership with Danzas and is a large customer to Danzas, Danzas have created a method to receive information in a modified way (text files). Atlas is a freight system that IEC alone has developed and created. Danzas uses the information to book available space on their fixed line hauls or to place in warehouse.

Danzas reaches 70% of their regional offices in one day, up to Sundsvall, and all destinations north of Sundsvall in two days. Before a

truck leaves the terminal Danzas scan the goods and both HP and Dell can see which goods are loaded and a “freight on delivery” document is issued. HP and Dell can monitor this information in their system Atlas. Proof Of Delivery (POD) is an additional service, which IEC has to order from Danzas, and it is the driver who issues the POD on his portable computer. In the assignment from IEC for Dell and HP, POD is included and other customers can order it as an additional service.

Danzas was the third company in the world that could serve their customer with “track and trace” on the Internet. The customer enters HP’s or Dell’s website for tracking the goods, called “track and trace”. The customer can follow the goods on both companies’ home pages as well as on Danzas home page.

If a shipment is delayed, Danzas sort out where in the chain and what the cause was and notify their customer; IEC, and they in their turn notify HP and Dell. According to Danzas their delivery precision is 99% and they don’t grant any guarantees. The customer’s demand for delivery precision is around 98.5% and that Danzas can manage. Danzas complete performance reports on their delivery precision where they go through what has happened with the 1% and what the cause of the delay was. Danzas presents this report to their customers.

In view of the fact that the goods Danzas distributes are extremely valuable, they are vulnerable to theft. The line hauls are being exposed to hi-jacking and attacks. Danzas is constantly working to oppose this trend. Actions that are tried out are to install surveillance cameras in the terminal and on the loading/unloading areas the problem is disappearing from the terminals, nevertheless the problems are transferred onto the drivers instead.

6. CASE STUDY - HEWLETT PACKARD COMPANY

This chapter concerns the company Hewlett Packard and their e-commerce logistics. We discuss issues such as partnerships, logistics, customers related to Hewlett Packard. The information this case study is based on is collected from interviews and web sites, if nothing else is stated.

6.1 The company

Hewlett Packard Company (HP) was started in 1939 by William Hewlett and David Packard. Since the start the business has grown and today HP is one of the leading providers of computer equipment, Internet solutions and communication products. HP is listed on the stock market and has a found and strong business culture, hence the early foundation. HP has a matrix organisation that ties together the company's different levels and entities. Management By Wandering Around (MBWA) is an informal practice at HP, which involves keeping up to date with individuals and activities through, informal or structured communication. Trust and respect for individuals are apparent when MBWA is used to recognize employees concerns and ideas. MBWA might appear similar to a manager consistently reserving time to walk through the department or be available for unplanned discussions, individuals networking across organization and coffee talks, communication lunches, and hallway conversation.

The number of employees for the whole group, HP company, is 82 000 and the turnover for 1998 was 47.1 billion dollars. HP has more than 600 sales and support offices and distributorships worldwide in more than 120 countries.

Management By Objectives (MBO) is when individuals at each level contribute to company goals by developing objectives, which are integrated with their manager's and objectives at other parts of HP. Flexibility and innovation in recognizing alternative approaches to

meeting objectives provides an effective means of meeting customer needs. MBO is reflected in written plans, which guide and create accountability throughout the organization. The Open Door Policy (ODP) is to assure that no adverse consequences should result from responsibly raising issues with management or the workforce. Trust and integrity are also important parts of the ODP. ODP may be used to share feelings and frustrations in a constructive manner and to gain a clearer understanding of alternatives and also to discuss career options. HP's open communication is believed to build strong teamwork with employees, customers and others. The company's mission statement is to use their knowledge of government to help shape public policies and HP's business decisions to enhance HP's ability to achieve its objectives.

The business concept of HP is to have long-term business relations and to contribute and enhance customers' efficiency and competitiveness. HP has different objectives for specific business areas and the corporate objective is realistic, clear and understood by everyone according to HP. The objectives are:

- ✓ Profit – to reach sufficient profit in order to be able to finance the growth of the company
- ✓ Customers – to offer products and services of superior quality and to greatest value for their customers and thereby gaining and holding their respect and loyalty
- ✓ Markets – to be active in markets where HP can build on their own technologies and competencies
- ✓ Growth – to only let growth be limited by their own ability and profits
- ✓ Employees – to help their own staff to take part in the company's success and to give employment security based on result and to present a sound working environment
- ✓ Management – to encourage initiative and creativity by allowing the individuals great freedom of action to reach well-defined objectives

- ✓ Citizenship – to fulfil obligations to the society by being economical, intellectual and a social asset to each country and each community where HP is operative

Assortment is the key driver of HP's success and their personal leadership fuels it. HP's diversity is woven into the structure of their company and it is a key contributor to fulfilling their vision, as a winning e-company. HP's organizational values and their commitment to meeting corporate objectives shape their strategies and practices. Their traditional practices as MBWA, MBO and ODP help them with providing the competitive edge they need in a global environment.

HP's business is divided into four areas. The first area is computer systems, which is everything from individual products to total solutions. Secondly there are computer products such as supplies, which are sold by resellers only. Thirdly services and support, meaning HP will provide planning, implementing and consultation for the customers convenience. And finally, they provide consultant services for total solutions such as analysis, design and implementation for advanced IT solutions.

In Sweden HP is an independent subsidiary to the headquarters in Palo Alto, California, in the US. HP started out 1967, in Sweden, and the main office is in Stockholm, Kista and regional offices with sales and technical support are situated in Gothenburg and Malmö. In addition there are service offices in Örebro, Umeå, Växjö, Kalmar, Västerås and Linköping. The number of employees in Sweden for 1999 was approximately 575 and the total turnover was 4.4 billion SEK. Managing Director (MD) for the Swedish market is Lars-Olof Zetterlund. Since the business started in Sweden all four business areas, computer systems, computer products, services and support and consultant services, are represented, however there is no production. In Sweden HP has had a steady growth during the last few years, especially since 1994. The turnover has increased by nearly 200% from 2.244 billion SEK to 4.4 billion SEK.

Financial strength is one power of HP and profitability has always been a number one goal. The solidity, meaning the equity in relation to total assets, was 50% for 1998. A reason for the high figure is that HP doesn't acquire any loans and due to the fact that HP manages to finance its own development from their profit. HP transfers funds on a yearly basis to research and development (R&D) to ensure that HP remains a safe investment.

In November last year, 1999, HP was divided into two companies Agilent Technologies (AT) and HP invent. AT consists of business areas such as test- and measuring instruments, components and chemical analysis systems. Today HP consists of printers, personal computers and mainframes.

6.2 Markets and Customers

At HP there is no segmentation between business customers, the only small segmentation existing, is the one for education and governments. They are separated from ordinary business customers and are treated separately. HP believes that small businesses, which don't have a pure purchasing department or processes for purchasing, are the winning customers when purchasing over the Internet. This situation is often when the purchaser and the user is the same person and the purchase is often unstructured.

Contracts customers purchase through HP's web site for the reason to make the purchase more efficient. Today there are no customized pages at HP due to the fact that there is no segmentation. HP completes the segmentation for government and education. Furthermore, for customers to be able to perform this streamlining it will reduce their costs for purchase processes. A further issue according to HP is, in order to have these customized pages, HP has to integrate with the customer in some sort of procurement system and that is an additional investment. The question for HP is if the customer is willing to complete that investment.

Customer Relationship Management (CRM) for HP is something everybody talks about but not actually accomplishes. At HP there is no clear statement about CRM, instead they use traditional customer care. For HP to achieve this traditional customer care, they don't need systematic tools or any systems, which are needed for completing CRM. HP's customers expect products and services to be of highest quality and providing a lasting value. To realize this, HP must be the leaders who generate this value and respond to customer requirements.

HP has a close relationship to its customers and makes regular visits to their retailers. HP follows up quality of delivery and asks the customers what they want. An example of how significant the customer's opinion is, was when HP designed the new delivery document, HP then asked their customers first what type of information they wanted and then designed it.

HP considers its close relationships to their customers a large advantage and their strength as an e-commerce company. The relationship is on a daily basis and HP has employees who only work with logistics towards their customers. According to HP, the customers consider this close relationship as strength as well. Since a year and a half ago HP has centralised the office for order receiving to Germany, however there are local service offices in all countries in order to encompass this close relationship. Contract customers are treated identically and they can either be small or large enterprises. Among contract customers there is no prioritising and the HP has a delivery precision of 98-99%.

Prices for customers are based on contract prices and if the volume exceeds an assured amount there is a certain reduction in percentage. A large customer who undertakes to buy for a specific quantity during a year acquires an assured percentage in reduction, however if they don't purchase for that quantity the reduction will be smaller. When HP sells a solution, the customer buys the teamwork between supplier of

software and hardware. HP uses several suppliers for different components, software and hardware to complete the finished product.

6.3 E-Commerce

About a year ago HP started with e-commerce for consumers and later they launched it to include business customers. Therefore it's a relatively new area within HP. The idea of e-commerce is growing, and logistics activities will obtain an even greater position than it has today. HP's largest competitor, according to them is Dell Computer Corporation. The strategy of how to perform business has changed at HP since they introduced e-commerce. They had to adjust to new competitors and new situations of competition.

Of the total turnover in Sweden the e-commerce sales stand for a relatively low part. The turnover for 1999 was 4.4 billion SEK and 0.5% were sales from e-commerce, which is an approximate sale of 22 million SEK. Moreover, this area is new to HP and according to them the e-commerce sales are relatively low. HP started with e-commerce towards consumers and the development was somewhat slow. During the year 2000 HP has introduced e-commerce to business customers and it is progressing gradually, although in the right direction. HP themselves consider that they haven't really promoted their e-commerce, which is a reason for the low response. The logistic provider for e-commerce is IEC and HP has a contract with them for the whole of Europe. IEC in its turn has a partnership with Danzas for the distribution on the Swedish market. Sweden and England were the first two European countries to utilize HP's e-commerce service, as second European countries came Germany and France. From the beginning e-commerce was introduced in the US, because HP was founded there.

HP owns its market place on Internet and all business customers have to purchase through the official web site of HP, since there are no unique customer pages. However the future plan is to complete such customised pages for the traditional customers. When customers have

such pages it makes it easier for HP to complete discounts compared to completing those on the official web site. Customers' who will obtain a customized page are those that have a large contract with HP today, and have had a traditional relationship with HP for a longer time period.

IEC administer HP's entire e-commerce distribution throughout Europe and into the warehouse, at Danzas terminal in Gothenburg, Sweden. IEC and HP's relation is based on a partnership and IEC complete HP's entire logistics service. The logistic provider IEC in its turn takes in the forwarder S-BTL for executing the logistic services. S-BTL performs the transportation from the manufacturing sites in Europe to the local warehouse in Gothenburg. The flows of goods from HP's manufacturing sites in Europe to Sweden are executed by S-BTL on assignment from IEC. HP's e-commerce goods arrive to Gothenburg and are transported to Danzas terminal. The terminal functions as a hub for diffusion of the goods to the Swedish market.

The warehouse for finished products in Gothenburg is rather small compared to HP measures and e-commerce is still on a trial period, since it is a small business. The meaning is not to have large a warehouse for the reason that the products become out of date and new products are held up by old ones. HP has no number on how fast their warehouse turnover is, other than, that they had to return some products to the manufacturing sites, because they were out of date. For HP this situation is not satisfying, since the development of PC is very rapid. For a computer manufacturer as HP, they have to maintain a certain supply of products and volume and out of date products in the warehouse turn out to be very expensive. The B2B market needs constant supply of new products and to have a warehouse is demanding and a dilemma for HP, hence the expenses for manufacturing to warehouse instead of customer order. An additional cost for HP is that they own the product the entire way from manufacturing until the customers has received it.

The warehouse consists of all products that HP sells on-line. The single function Danzas execute is to hold the warehouse in their terminal and IEC and HP organize all other activities regarding the warehouse. HP evaluates decisions about how much and what kind of products should be kept in the warehouse. The warehouse at the terminal serves the local market in Sweden. According to Danzas the e-commerce in Sweden was a test and the warehouse size was not adjusted to local market and therefore the warehouse is rather large with low turnover. If the test had turned out well the warehouse would have supplied the whole Nordic market. HP has not taken this step yet. When Danzas prepared the deal with IEC and HP to hold the warehouse, HP allowed their head office in Germany to complete the deal and for that reason the distribution and size of the warehouse was not adjusted to the local market.

The order receiving is completed by electronic means and is centralised to Germany for the whole of Europe. Ordering by phone is also possible and order receiving is situated on Gotland, an island on Sweden's east coast. HP does not perform the service ordering by phone, a company that operates on an assignment from HP completes it. The traditional approach of doing business "face-to-face" is applied besides the e-commerce with large contract customers.

Orders aren't transferred to manufacturers on a daily basis, because HP is producing towards inventory. All products come from their own warehouse and in order to have enough in stock they work with forecasting. The forecasting is based on HP's feelings and to some extent on how competitors act and not so much on how previous years sales went.

It is not possible to obtain a customised product when ordering from the Internet in view of the fact that there are only predefined options to choose from. In order to get a customised solution a customer has to go through a retailer and the lead-time is then between 7-10 days and the product is made to order. The lead-time for e-commerce is shorter

than the traditional lead-time given that it's done electronically and the product is taken from the warehouse in Gothenburg.

When a truck arrives at Gothenburg the goods are scanned and then placed in the warehouse. Scanning is carried out in several steps, at arrival, unloading, in terminal, and as a result the customer can obtain real time status of the goods. As soon as HP sells a product on-line they take it from their finished goods warehouse in Gothenburg and Danzas distributes it throughout Sweden. When a shipment departs, the goods are scanned and HP can see which goods are loaded and a "freight on delivery" document is issued. HP can monitor this information in their system Atlas. HP's shipments are relatively low about 10 packages per day and around 70 per week. The customer can "track and trace" a shipment on the Internet. The customer either enters HP's website or Danzas to trace the goods.

At HP's Internet store business customers can acquire products, supplies and accessories for their businesses. For governments and education there are special purchase arrangements, further HP has divided business customers into different segments depending on the size of the business.

To customise a product on the Internet is not possible today, but it will be. HP has chosen to position on the e-commerce market without the possibility to configure products. This may contribute to longer lead times. Instead HP has chosen to sell on short delivery time, which means that they ought to have a regional warehouse that can provide this short delivery time. Even though HP has e-commerce they say they need retailers and can't eliminate them, since they stand for about 90% of the total sales. All HP's products won't be available for sale on the Internet, because it would contribute to large warehouses and too much tied up capital and out of date products. On the other hand, when the customisation is reality the manufacturing process must change to, made to order instead of made to warehouse. The product HP sells

most of on the Internet is portable computers, notebooks and not their largest product, printers.

Products with the purpose to be sold on-line are desktops and workstations, mobile products and printing and digital imaging. The services HP provides are e-services, personal services and business services. A personal service is an instant delivery of software, meaning downloading programs from HP's web site. Customers browse from the beginning to the end of the catalogue and download required software in a few minutes. HP's business services have the purpose of providing support tools to its customers or partners. The support can be of different kinds such as maintenance, training, education, planning, design, and implementation.

To track an order and make out order status on-line the customer has to become a member, which means registering as a user on HP's web page. In order to make use of this service the customer has to obtain a username and a password. This can be completed on HP's home page. Required information for becoming a user is to fill out personal information, company information, and registered value-added tax (VAT) number, and invoice address and delivery address. A customer can "track and trace" the goods through Danzas web page and HP's in order to make out where the order is in the flow. The web search can either be on purchase order, HP's order number, or product number. Contract customers can utilise a unique system named "connect on-line" where they can distinguish actual status on their own orders and this system is provided by HP.

To purchase on-line is easy for the customer. Every product is publicized under a general title, such as information storage, personal computers and printers, where price and information about the product is made known. The only thing the purchaser has to perform is to select how many of each item he desires and place it in the shopping basket. The products, which are publicized on HP's home page for Sweden, will not be delivered outside Sweden. HP offers two different

ways of delivery, standard and express. The standard delivery is free of charge and the fee for express delivery, including tax, depends on the value of the goods.

Order value (SEK)	Standard (SEK)	Express (SEK)
0 - 1.500	0.00	219
1.501 - 4.000	0.00	239
4.001 - 8.000	0.00	529
8.001 - 12.000	0.00	679
12.000 +	0.00	679

FIGURE 6.1 PRICE EXAMPLES

Source: [http:// HPstore.HP.se/](http://HPstore.HP.se/) 2000-10-24 time 13.40pm

If the customer chooses a standard delivery, the goods ought to be delivered in three days after the order was confirmed at HP. Deliveries from HP are executed Mondays to Fridays between 8am–5pm. In the north of Sweden, and on islands without a fixed link to mainland, and in the archipelagos HP only offers standard delivery. The express delivery is delivered the following day if the order was received at HP the day before at 4pm the latest. Payment for the goods can either be completed by credit card or invoice. Within HP there are employees that only perform credit checks on both consumers and business customers. This service HP had to obtain due to earlier bad debtors.

In Sweden there are no businesses that complete payments via credit card. The payments are completed the traditional way, by invoices. The meaning with having payment options is for the reason that HP started with e-commerce to consumers and in that field most payments are completed through credit card. On the other hand, in England there are about 50% of all business customers who complete payments by credit card.

Product prices aren't identical at retailers as they are on the Internet. The products, which are sold on the Internet, have a price that has been set by an estimated market price adapted purely for sales by means of Internet. The market place Internet is to some extent different from the traditional market place. At retailers the prices may differ from the Internet prices, since they set their own prices. The prices can both be lower and higher than on the Internet market.

A price on the Internet is not identical in those countries that have e-commerce. Prices vary between countries that have possibilities to purchase over Internet and the variation is not due to different currencies. It is only five countries that have access to buy over the Internet and they are, Sweden, England, the US, France and Germany. HP is fundamentally a US company and there is a global pricing that the US applies and that pricing is adjusted to each and every country's own level of competition. Therefore the prices aren't the same.

6.4 Logistics and partnerships

Manufacturing of PCs, printers and monitors is done in the Netherlands and France. Production of printers is completed in France, Germany, Spain and Hungary. Notebooks and power books are flown in from Taiwan and Singapore where the production is.

HP's partnership with IEC covers the whole European market. S-BTL carries out HP's e-commerce logistics on assignment from IEC. It has resulted in a partnership and HP finds the communication between them and their partners to be extremely open and direct. HP always states that before entering a partnership, that openness is a directive and not an option, because they are sharing very vital information. HP stresses the issue of knowing how their logistics provider calculates freight rates in detail and HP believes when entering a partnership one does it for a long-term perspective. Using this approach HP can place quality first and price becomes a secondary concern. HP will pay a higher price if they acquire the quality they are asking for. This differs from having an agreement for short-term perspective where the only

motive is the price, the quality is not a primary concern when entering this sort of agreement. HP values logistic providers, which can present quality in their transport.

The trust between HP and its partners is very high according to HP. In order to have a functioning logistics service, the sharing of essential information is vital. When HP opens up in a partnership there is a risk that they might become exposed and be taken advantage of, and for that reason they consider the trust to be vital in partnerships.

6.5 Laws and Regulations

Links to third party web sites from HP's site are provided solely as a convenience to their customers. HP doesn't take any responsibility when you are leaving their web site. Ownership and risk for loss or damaged goods is transferred to the customers on the delivery day. If the receiver of the goods hasn't within seven days pointed out to HP that a mistake exists in the delivery the receiver is considered to have approved the delivery. Sales by the use of Internet are completed in Sweden, which is why the Swedish laws apply.

However, the Swedish laws are affected by the CMR regulations and that's why HP has the CMR function included in the contract with its partner IEC. HP doesn't negotiate any additional insurance policies than those included in the contract because they are more expensive in premium than what HP has in losses.

HP is dedicated to respecting and protecting customers' privacy. HP has structured its web sites so that customers can visit without identifying themselves or revealing any personal information. Once a customer chooses to share personally identifiable information with HP, any information by which you can be identified, a customer ought to trust that it will only be used to support their customer relationship with HP.

HP is committed to ensure the security of a customer's information. To prevent unauthorized access or disclosure, maintain data accuracy, and ensure the appropriate use of information, HP has put in place appropriate physical, electronic, and managerial procedures to safeguard and secure the information they collect on-line. When collecting or transferring sensitive data such as credit card information, HP uses encryption. To prevent credit card fraud, it is important to protect a customer's personal financial data security. HP is bound by both contractual and confidentiality agreements.

6.6 Future

In the contract between HP and its logistic provider there is a part that only deals with the future and how it should progress. Each year the steering committee gets together and discusses strategic future directions on a monthly basis and there is a summit on how the partnership is progressing. Discussions of improvements and developments are also done on a monthly basis.

In the future HP will complete capital investments in their e-commerce. Today their e-commerce is in an initial stage and in order to be ready for the future they will perform further investments. The reasons for investing are to maximize HP's sales in every area they operate in and to enhance their competitiveness. HP sees these unique customer pages as a fulfillment service and some customers may perhaps demand to have such a page in the future.

The time perspective for full establishment on the e-commerce market is by 2002-2003. However, no one knows how the market will appear then. The most important thing for HP is to have a steady business and to bring money into their business. Therefore they know that they need volume on their e-commerce sales compared to what they have today. Their strategy for the future is aggressive and that's all they would say.

HP believes that B2B will keep on growing faster than B2C, since that is the market which moves forward quicker and products are being tested and it is a natural development.

6.7 Analysis of Hewlett Packard Company

Due to the early foundation of HP they have a strong brand name and business culture. This gives advantages such as, customers know that the goods they acquire from HP are of high quality and that HP's label is well known worldwide. HP has e-commerce presence in several large and important markets as England, the US, Germany, Sweden and France which is essential. An additional strength is their cooperation with software providers for completing their products and that is a competitive advantage over their rivals. Further, HP's size and growth comes from their own profits, which enables them to develop and invest for the future. The management style applied at the organisation produces informality and it is appreciated both by employees and customers and it enhances strong teamwork between HP and their customers and partners. Both the objectives and business concept are produced with the customers in focus. This leads to that customers can enhance their own efficiency and competitiveness by having long-term partnerships with HP. HP started with e-commerce to consumers and developed it more to include business customers and for that reason HP has the knowledge of how trade via the Internet should be performed.

Currently HP has a strong relationship with its customers and providers and they see it as a strength. For HP to maintain this close relationship and at the same develop e-commerce demands great efforts from HP. To enforce this grade of closeness, HP has service offices in each country they operate in while they have centralised the order handling to Germany. This is a way of saving costs however in an efficient way and still maintaining a high service level. The "face-to-face" contact is still extremely important for HP and it contributes to strengthening their relationships with customers and providers.

HP's concern for its customer is in a sincere way, they make no difference between contract customers or transaction customers. This is a strong point and according to them they will continue to practise it

like this. HP don't use tools as CRM instead they use traditional customer care. Meaning, what the customers' needs are and that they will try to achieve them, since they know customers expect certain value and quality when purchasing from HP. HP owns its own web site and it is a large advantage. The strength in that lays in that HP is able to display all products available in their assortment, since the assortment is a key driver for their success.

Each customer has to purchase through HP's official web page because they don't have any customised pages. A reason for not having customised pages is HP's philosophy of no customer segmentation. However, this can be seen as a weakness because customers want to be treated as unique. For the future it may become a threat when competitors have these customised pages and HP doesn't.

HP isn't the largest e-commerce supplier of PC's and they don't focus all their efforts to increase e-commerce sales. They perceive their e-commerce to still be in a trial period. An explanation of the slow development and response of their e-commerce can be related to their broad range of products and that the whole assortment is available on-line and that there has not been any advertising of their e-commerce. For HP who wants to reach new markets where they can build on their technologies and competencies it would seem good. Besides the new market reach a weak point is when a new market area as e-commerce at HP doesn't obtain the right advertising and promotion budget to keep on growing.

Today HP's wide range of products and narrow selection of models on the Internet is for instance that they only have predetermined PC packages and these packages cannot be changed according to the preferences of the customer. HP's focus is to reach new market areas with their full assortment and it becomes a weakness seeing as they need full manufacturing skills in every area. Today they serve the Swedish market from a regional warehouse in Gothenburg and to have a warehouse where the products is sold on-line is unproductive. The

warehouse is held by Danzas and IEC administers it in cooperation with HP. A large weakness is that the warehouse isn't adjusted to the local market in Sweden and the deal was decided through their head office in Germany. However, by having this regional warehouse HP can deliver the product the next day, which they couldn't perform if they didn't encompass this warehouse. HP has to weigh advantages and disadvantages for holding this warehouse. It can both be a weakness and a strong point. For the customer the advantage is fast delivery with the disadvantage of not being able to customise the computer. For HP the advantage is that they can deliver at all times and the disadvantages are increased costs and out of date products that hinder new technology from entering the market. A weakness of always having products in store, for HP as a supplier of PCs, is that they need to keep volume and new products coming since the new technology spurs.

Furthermore the warehouse size is not adjusted to the local market in Sweden and its needs. The head office in Germany made the agreement with IEC, and they in their turn hired Danzas to encompass this service, and determined the size and distribution. This is a large weakness for HP in Sweden. The thought from the beginning was that this regional warehouse should supply the Nordic market, but HP doesn't have e-commerce in any of the Nordic countries yet, besides Sweden. Nevertheless in a longer perspective if HP introduces e-commerce in other Nordic countries, the warehouse may have a higher turnover than it has today and have a more vital function and strength in the future.

If the e-commerce market is to develop more in the future, it is important for HP to create customised pages, since the customers always search for uniqueness and for HP it will be easier to complete discounts and price reductions. The economic climate is in general improving and businesses are purchasing more and want to have the latest technology. Therefore it is important for HP to be present and offer potential customers customised pages and their know-how. HP have opportunities in the future due to their constant investment in

R&D and that they will keep adjusting their strategy for this new marketplace, e-commerce.

Another opportunity for the future lies in their assortment and the ability to configure the PC packages. To achieve such opportunity HP has to change manufacturing processes and this will give more possibilities for the customer than the predetermined options that exist today.

The problem with the logistics for e-commerce as HP sees it is that it is so vulnerable. Today HP purchases a solution for their entire network throughout Europe from one single provider, IEC. It doesn't matter if that agreement covers their whole distribution, it always comes down to the small distributor and their service engagement. IEC hires in forwarders as S-BTL for carrying the goods to Gothenburg and Danzas terminal where the goods are stored. Danzas assignment from IEC is to diffuse the goods in Sweden. The reason for choosing IEC, according to HP, for the contract is that IEC are the most excellent in this area and are specialised in transporting computing goods, even if they aren't the ones performing them. HP believes that the service level at small distributors is not always too satisfactory. The shifting service level is something HP dislikes and what they want is customer responsibility and quality all the way. HP desires more quality in their transportation network. To tie up all transport with reference to goods sold on the Internet to one provider can both have advantages and disadvantages. Benefits are that HP has a partnership with IEC and work very closely with them. This means that HP becomes a larger customer to IEC and is able to influence. A disadvantage is that HP doesn't know which forwarders IEC brings in and how their service engagement is. HP states that as long as it is functioning we don't get in the way.

A threat in the future is that the possibility to obtain a customised PC may not be possible. Today HP sells on short lead-time and the customer cannot obtain a customised PC. In the future this will be a threat if HP doesn't change this approach and make it possible to configure a product. It is always a weighing factor between selling

with short lead times or customised products. This is a decision HP has to take for the future.

Payment over the Internet can be completed by two means, which is a large advantage for the customer to have an option. However there is always a risk in paying over the Internet as we have stated in the security chapter and that is a weakness and a threat every e-commerce company has. This issue has to be solved if future payments should be completed via Internet.

The fact that prices for the same product are not the same at retailers as they are on the Internet has its explanation in that retailer may alter prices to fit their surrounding competition. This is strength for the retailer and a threat to the e-commerce. The e-commerce is a whole separate market and the competition is somewhat different than the traditional market and prices may differ from country to country. Therefore sale strategies have to be altered and prices may be higher or lower than at the retailers, nevertheless it doesn't make a difference if you place the order in another country, seeing as HP don't deliver outside country borders. Because most of HP sales come from retailers, this is a threat that the prices differ.

7. CASE STUDY - DELL COMPUTER CORPORATION

In this chapter we present the company Dell Computer Corporation and describe its markets and different functions. In the end of the chapter we present an analysis for this specific case study. All information is collected from interviews and web sites, if nothing else is stated.

7.1 The company

Dell (Dell Computer Corporation) was founded 16 years ago by a medical student name Michael Dell. He began to purchase his own computer spares because he thought it was too expensive to by a whole computer from IBM. After a while he started to sell computers from his student room to his friends and the business developed into one of the ten largest PC companies in the world. 1994 Dell started to use Internet as information source and 1996 they started with business through Internet. The reason for starting to use Internet was that Dell saw the opportunities like it is easier to communicate with all the involved parties, less costs for transactions and improved customer relationship. Dell headquarters is located in Round Rock, Texas, in the US. Dells first factory was built in Austin Texas, second in Limerick and it provides Europe, Middle East and Africa with computers. Today they are also established in China. They opened a factory in Brazil but in the beginning they only used the factory for getting the computers though the border avoiding taxes, however the markets of South America grew strong so they started to manufacture in Brazil. Dell's computers are manufactured one at a time, as ordered at facilities in Austin, Texas; Nashville, Tennessee, Eldorado do Sul, Brazil; Limerick, Ireland; Penang, Malaysia; and Xiamen, China. The factory in Huston is the only factory that deals with consumer products. Dell is today the second largest PC-manufacturer with 11-12% of the global market after Compaq. Dell is now growing faster than the total market, which means that they get larger market shares. The profitability is today around 10% of the working capital.

Dell sells for 350 million SEK per day and have sales offices in 35 different countries and in 140 countries they use sales agents, totally they sell computers in 175 countries. They have 36000 employees all over the world. Today 50% of the total revenue is from e-commerce. At the moment the e-commerce division has a turnover of 300 million SEK per day over the whole world. The total turnover in 1998 was 150 billions SEK and in Sweden the same year 400 million SEK. The Swedish office with sales functions and the Nordic back office functions are located in Upplands Väsby 25 km north of Stockholm.

Dell had one year of loss, 1993, the cause was that they produced a note book collection that was finished too late and the technology was behind the competitors, consequently they were forced to withdraw the launching of the product. Otherwise 1993 was a good year for Dell both the growth and the profitability was excellent but they invested too much capital and as a result they had no liquidity to afford the wages. After this Dell put their focus on growth, profitability and liquidity and made them their three parameters. Today they always ensure they have a balance between these three and none should gain or win over the other.

Dell's Vision is "Whatever changes the future may bring, our vision"

Dell's mission is to be the most successful computer company in the world at delivering the best customer experience in markets they serve. In doing so, Dell will meet customer expectations of:

- Highest quality
- Leading technology
- Competitive pricing
- Individual and company accountability
- Best-in-class service and support
- Flexible customisation capability
- Superior corporate citizenship
- Financial stability

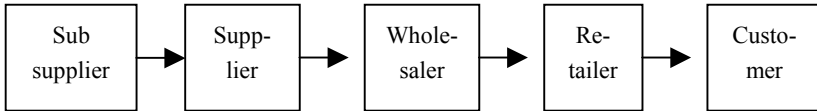
At the heart of that performance is Dell's unique direct-to-customer business model. "Direct" refers to the company's relationships with its customers, from home-PC users to the world's largest corporations. There are no retailers or other resellers adding unnecessary time and cost, or declining Dell's understanding of customer expectations.

They repair the computers themselves, the reason for that is that they know their own computer best. They never have anything in stock. It cost to have parts or computers in stock and the computer is always at the wrong place and must travel a long way to get to the buyers and this is not profitable. If a computer breaks down and must be repaired in the field, Dell has outsourced this service, but they instruct the service person exactly what is wrong and how he should repair it. Dell bases their business upon five fundamental characteristics: *direct sells, add the right stock, add the right cost, and make to customer order and own support.*

7.2 Markets and customers

Dell is not using retailers or resellers because all orders are completed through the Internet. The reason for choosing Internet as a market was that it is simple to communicate and brings low costs. The call centre for Scandinavia is based in Copenhagen and they handle all questions regarding the computers and the deliveries. Dell's business is not focused on consumers, but they have some sales to consumers that are second time buyers and know what they want. Dell works like this because they don't use stock, they buy direct from their sub-suppliers when they receive the order from the customer. Dell uses Internet in everything they do, not only for the sales. Information that customers provide will be kept confidential and will be used only to support their relationship with Dell and it will not be disclosed or sold to any outside organization. Prices on the Internet are given excluding transport cost and insurance to customer. The risk for the goods is transferred on the delivery day. If Dell has delivered the wrong product the customer has to return the product within seven days from the delivery day. Customers have to pay if they return ordered goods.

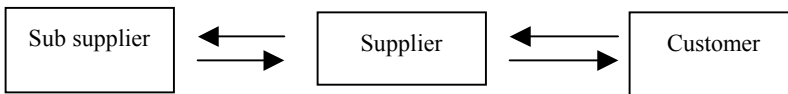
Before Dell had vertical integration, which means they had stock, physical assets, minimal cooperation with their partners. Minimal cooperation means that you use wholesaler and retailers and they aren't so interested in cooperation, more in selling. The producer misses the information of how the customers reacts and thinks about the computer.



Information flow

FIGURE 7.1 VERTICAL INTEGRATION

Today Dell works with virtual integration, which means that they concentrate on information sharing, intellectual assets and strong cooperation with their partners. They use forecasting, historical information, about the sales of each month from previous years so they will be prepared for how and what the customers will buy. All information is transferred to their sub-suppliers so that they are ready to receive orders from Dell when they occur. The cooperation with their sub-suppliers, logistic providers and customers is very strong and is built on trust. They think it is more vital to invest in intellectual assets than in physical assets. Competent staff is very vital for a company as Dell. Virtual integration gives benefits like direct contact with their customer, so if something is wrong, the customer notifies Dell direct and doesn't turn to a retailer.



Information flow

FIGURE 7.2 VIRTUAL INTEGRATION

Customer Relationship Management (CRM) is essential for Dell and the whole business functions out from this. Their total turnover from the beginning is 32 million dollars. Through virtual integration they have succeeded in remaining on the top in PC-industry. Virtual integration is; market segmenting and balance accounting. It is important that Dell and the employees understand their virtual integration and what it stands for. The virtual integration gives Dell many advantages, such as; direct work, core business, cooperation and technique to reduce transference losses. Dell gets power from virtual integration like closeness to customers, strong alliances and other potential partners that want to cooperate with them.

The more the logistic provider knows about Dell's customers the better service they can offer both Dell and Dell's customers. The trust is essential for both Dell and the logistic provider, they know much in relation to each other and can easily be impaired if information leaks out. Cooperation with all the partners in the flow is important and the higher the speed the better the feedback of information goes and the better the product flows forward. More improved feedback on information the more enhanced the transportation of goods will turn out and the more improved the factories will get.

Dells market:

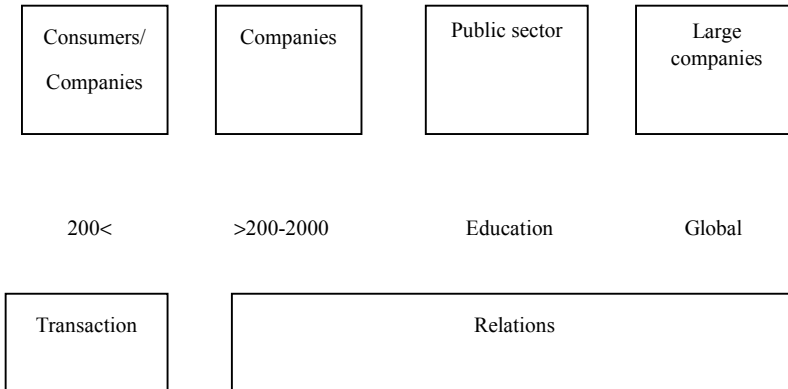


FIGURE 7.3 DELLS MARKET

Sorce: Thomas Rundin, 2000-10-17

- Consumers and small companies (experienced) that know what they want and don't have the time to have sales people running around. They want to handle the purchase without any visits. Dell has indoors-sales people that have good skills in computers and the market and can influence the buyer to buy more. Here the advertising is done with help of magazines and newspapers.
- Companies (200–2000 employees) demand more service and here customer relationship are important. Most of these customers aren't in need of personal visits, but they do want to have one person as their contact, so that a relationship can be built. The salesman has a few companies that act on the same market and are similar. Market knowledge is very important in the case of handling the customer the right way and understanding his needs.
- For the Public sector it's the state office agreement that is valid. Dell has specialists in every county council over the whole of Sweden. Dell is the largest supplier of computers to the Swedish government.
- Global companies that act in several different countries and very large companies. Here it is important that the salesman knows the different markets and all the differences between them, with help

of international trade law. Because one company wants the agreement to be valid in every country they have business in. Then the salesman builds an agreement on these criteria and can sell the same computer for same price all over the world.

The reason for segmenting is to ease the view of the market and to get the knowledge about each and every part of it. The knowledge is especially vital when it comes to service and customer relationship. Another reason is that it gives a more structured picture of the market and it reveals opportunities and challenges on the market. Dell can also see what kind of personnel they must have on the different segments. To segment the market makes it easier for Dell to use Management By Objectives (MBO) and that gives reduced costs. For example when you want to sell a product you send out an offer to many different customers, instead of sending out 100 offers to random customers and in the end only do business with three of them, you can send out three offers and do business with all three. This is possible if you use MBO.

According to Dell, target steering is to use as little money as possible and to sell as much as it is achievable. If you know your market and your customers, it is possible to use less money and to earn more. Every market is different and varies a lot from time to time depending on what kind of segment it is. So if you know your customer, you will also know when it is low verses high season for computers. At the same time Dell can control where they should place their order, processing staff just for that time.

Many of Dell's competitors have begun to broaden their business and started to sell other services. Dell sees this as a benefit since they can concentrate on their core business and be more focused than their competitors. The more different business a company gets involved in, the easier you lose market shares on a specific product, this Dell can take advantage of.

Dell has several salesmen in the offices, in the field and at the order process in each office. According to Dell, is not so important with “face-to-face” contact with the customer, because the customers don’t have the time for personal meetings, but if the customer requires personal visits, Dell supplies that. At the same time a salesman can handle three visits on one day, while an indoor salesman can handle 60 customers in one day. It is more efficient for both Dell and for their customers to create business online. But still Dell has meetings with their customers; in form of gathering several customers at one place where also the sub-suppliers take part. Many of the large customers copy Internet ideas from Dell, but this is not a problem because they have opened information sharing with all their customers. If they buy Dell computers there is no problem if the customers copy Dell’s information on the Internet.

On the market Dell works a lot with price information, since the price is continuously changing. If they have special offers, they know which customers are potential and via e-mail they send the offers. The potential customers for a special offer have a special code that fits just for their demands. The customer can always get a quotation from the Internet. Every computer has its own personal identification. If the customer enters Dell’s website and writes in the personal number, all information about that computer will show on the screen. For example if the customer wants to upgrade his computer, he can see exactly what his options are.

It is important to be quick with volume concerning new technology. Higher demands from the customers and that the users gets better and better forces Dell to release improved techniques all the time. To have a chance to compete on the computer market, the producers must be very quick out with new technology. The customer can follow the development of new product on the Internet.

When you get out with new volume there are always old products in the way but Dell can avoid this since they don’t have any finished

products in stock that can get in the way of the new products. This is the reason for why Dell quickly can enter the market with new technology. This brings Dell high inventory turnover and low tied up capital. Dell sees those competitors that sit on stock for 20-30 days as harmful since they have a lot of tied up capital in stock.

7.3 E-commerce

Customers and small companies purchase through Dell's home site. On the public Internet customers can buy everything that Dell offers. In order to buy a product from Dell's on line store, the only thing a purchaser has to do is to choose a item, configure the product so it meet his needs and then buy the product. The larger companies and the public sector have their own customer-designed site. Dell has 40000 unique customer designed sites. In this segment Dell concentrates mostly on building up a good costumer relationship. Dell has order receiving in every country. Dell divides the market into different groups; this they do to obtain a structure of the market, also to decrease costs, increase gain on tied up capital and it also reveals possibilities and challenges.

Every county council has its special site where they can order and on this site the range is only what they have decided to buy. Every site is equipped with passwords and large customers have their own password. If there is a global company they first enter the site on the company name, then they must chose country. When they have chosen country the information and the price is shown in their language and currency. The price is the same all over the world for a company. Dell has centralised the logistics and manufacturing but the sale is local. Dell must comply with different cultures that affect the way they do business in certain countries, so it is very important to have competent salespersons that know the countries traditions'. Dell own their marketplaces on the Internet and the salesmen must update the customer-designed pages and he is fully responsibility for the site. They use Internet for information sharing with their suppliers and customers. The information that a customer shares with Dell via

Internet is kept private and secure. Security has a top priority at Dell and their safety regulations help Dell to protect the customers' information. The Dell store applies encryption of sensitive data such as, name, address and credit card number. Encryption is a process by which Dell use software to scramble sensitive information while it is in transit to them.

Dell offers three different kinds of payment options. They are, credit card, advance payment and invoice. When paying with credit card the amount is withdrawn prior to the delivery and for invoicing the payment conditions are 10 days net. Dell confirms a customer order in writing.

On the computers Dell has three different identifications; order number, purchase number and a name. If the buyer places two of these identifications on the Internet he can see exactly where in the production the product is, when it is finished and when he will receive the merchandise. This is called online order status. Dell collect all data so they can see what the customer has bought historically and they can also see what a global customer has bought in all different countries; all this information is available for the customer.

Dell doesn't have any payment via Internet they only use invoices. The banks stand for the security when the payment is done by credit card on the Internet. They do have net prices on the public site, these prices are always followed. Large customers still follow the net prices but they can get a discount or an offer if they buy large quantities.

7.4 Logistics and partnership

The business model for Dell appears like this; they only have direct sell no middlemen between, they handle everything. The production is produced to customer order and they have support 24 hours a day. Today their profit on own capital is 294% for the reason that they own the product for 6 days and the customers pay on average after 15 days

all over the world (cash customers pay direct and invoice customers pay in 30days). This result is that Dell only has to pay the interest for 21 days at the same time that Dell has 30 days to pay their sub-suppliers. This leads to that Dell can have the sub-supplier's money for 9 days and earn the interest before paying. If Dell just ran the business without margins, it would still bring them interest revenue. This is why they have such high profit percentage on their own capital.

Traditional distribution means a lot of transportation and that means long lead-time. Dell gets the parts from the sub-supplier puts the computer together and then distributes it to customer. To change from traditional distribution to the today's distribution decreased their lead-time by 80%. Before one person made the same part of the computer at one place, today three persons build the computer together at the same place, on this Dell earns 4 minutes on each computer. The logistics is Dell strength and they see themselves as the best in the world on e-commerce logistics for B2B.

A customer can place an order in three different ways. The first is to enter Internet and Dell's home page and place the order and it goes directly to Dells factory. Secondly the customer can place an order to a salesman at one of the sales offices, voice-to-voice, and thirdly the order can be done "face-to-face" in the field with help of a salesman.

The factory gets orders two times per 24 hours. Dell's sub-suppliers receive the information about the order at the same time Dell's factory gets it so they know exactly what Dell is going to request. This information collected in documents called "the traveller" it tells exactly what parts the computer should exist of. The part where Dell puts the computer together takes only 5 minutes. The total time for a product in the factory is 3 days and the reason for this is that they test all computers before they distribute them to their customers. The total lead-time, from customer order to customer receives the computer, is 6 days. Dell placed their European factory in Limerick (Ireland) for the reason that there were a lot of educated persons that were unemployed.

Before they transported the merchandise from Ireland-England-France-Holland-Germany-Denmark and finally to Gothenburg, Sweden. This trip took about 60 hours and required 6 marshalling which brought low security and high damage risk. Today the transport route begins in Ireland further to England and from there directly to Gothenburg by ferry. The trip still takes 60 hours but this transport method brings less marshalling and only one driver is necessary. With this solution Dell saves 4 dollars per packaging and one computer consists of 3 parts, the saving is 12 dollars per computer. All consolidation for each country is done in Limerick in Ireland.

All the computer parts that are manufactured for the Swedish market and that are not manufactured in Ireland are transported direct to Gothenburg, for example the computer screen that Dell purchases from Nokia comes direct from Hungary to Gothenburg. Then all the different parts are marshalled into different trucks that have the same location.

Dell's logistic provider is Irish Express Cargo (IEC) and they have a strong strategic alliance with Dell for the whole of Europe. In Sweden it is Danzas that is responsible for the deliveries since they have a partnership with IEC. Therefore, when Dell has a shipment, their contract is with IEC who in its turn takes in DFDS for the transport from Ireland to Gothenburg. IEC is a transport company situated in Ireland, who has specialised in transporting of computer goods. Dell is a parcel customer to Danzas and is relatively large, however, in turnover, Dell is not the largest. Furthermore parcels are the most inexpensive product to transport in comparison to large shipment, part goods; on pallets and it is the smallest of services Danzas offers. The only time when Dell has full truckloads is into the terminal in Gothenburg from Ireland.

The truck is loaded several times with different components from the sub-supplier and the reason for this is to fill up the truck as much as possible. When then the truck leaves Dells factory in Limerick they

send via their system Atlas to IEC all information about the load and IEC then forwards the confirmation to Danzas, which includes how many goods are on the way. The Atlas file is received at Danzas 36 hours before the goods arrive. Danzas has a deadline for booking space on the fixed line haul at 12.00am. The booking can be executed with help of the file, which contains volume and weight measures of the goods and Danzas can from that information do an approximate booking on the line haul. If the booked capacity isn't enough they will bring additional capacity, although it is hard to obtain, since there is a boom on the transport market and Danzas is forced to decline some customers. In the Nordic countries Danzas distributes Dell computers to 32 different areas.

The goods flow does not appear the same every day, during the weekend a lot of goods arrives and are then distributed on Monday and Tuesday, Wednesday there are no goods at all because that day represents a Sunday in Ireland and on Sundays it is closed. Some days there are a lot of goods and some there is not a single one. This leads to Danzas having a very uneven flow of goods from Dell. There are totally 70 employees at Danzas who works with service centre and Dell's is a large part of that and during the slow periods, when there aren't any goods from Dell, Danzas has a lot of available capacity.

If a shipment is delayed, Danzas sort out where in the chain and what the cause was and notifies IEC. Danzas has demands on DFDS for delivering the goods at a specific time in order to be able to deliver within their time window.

Dell has a spare part inventory at Danzas terminal in Gothenburg to fulfil the service agreements they undertake with their customers. There are around 2500 parts/articles Danzas store for Dell. These parts are often flown to customers when breakdowns occur in order to be in place the day after. Various agreements with customers are that service will be provided in 24 hours; therefore the service department at Danzas, operated for Dell, is always opened.

Dell has 250 sub-suppliers that supply Dell with 5000 different parts. Dell doesn't have any stock they buy first from the sub-supplier when they receive the order from customer. To handle all the different deliveries in Limerick that come in they have 32 loading docks where they can pick the spare parts. On the other side of the factory stand new trucks ready to leave with finished computers. Dell sees it like this, it is the customer that orders what they want and Dell just put it together. To consolidate the parts Dell have forced their sub-suppliers to consolidate before they arrive to Dells factory, otherwise it would be too much traffic. The customer can follow his goods on the Internet the whole way with help of "track and trace". This is possible because every package has a personal barcode that is connected with the computer system. The customer enters Dell's website and types the personal number and after that all information about his/her computer/s will show on the display. In some cases Dell uses air transportation but that is only when the customer demands it and is prepared to pay.

Dell evaluates the e-commerce market frequently; the reason is to know their competitors' position and how the market is developing. Dell thinks that they have the power over their logistic provider and they check up on IEC regularly. The reason for this is to see how they manage the delivery time and if the service is what they requested. Dell always has a new logistic provider ready since one must always have several options if something fails.

Dell's production is based on forecasting. The forecast can go wrong with maximum 10 % and is done 12 months in advance. Every subsidiary must report the forecast every month to the parent company. All the different forecasts from different countries are collected in the factory, one for each region and then the factory draws up a major production plan from the different forecasts. Then Dell send a request to the logistic provider of how they think the future will be. Then they place purchase orders and when they want to purchase, they send a confirmation via the web. The confirmation and the customer order are done at the same time. If they lose a truck on the way they have to order the computers again and the delay will be approximately three

days. The local sub-suppliers own their parts until Dell takes them from their truck. The total stock value for Dell is when the merchandise is in production and when they are transported to the customer. Days of sale inventory are a measure that Dell uses to see how much tied up capital they have. Today the tied up capital value is the same as before but the sales have grown. In percentage the tied up capital has decreased in comparison to the sale. Nowadays Dell is counting how many hours they can earn, instead of days of sale inventory, it can be like this if they can save 5 hours maybe Intel's price is lower, because now they can purchase the product earlier.

7.5 Laws and Regulations

It is difficult for a global company like Dell to know all the different laws and regulations in the world. To make this easier they have specialists that only deal with laws and regulations. Dell split the world into three different areas where different regulations are valid. The first one is English law for Europe, American law for United States and Singapore law for Asia. According to these areas they negotiate and create contracts with their customers. The public sector is the laws and regulations decided by the EU that are valid and at the same time there are different regulations for different councils, which makes it important to have one sales person on each and every council that knows the regulations.

Since the production of PCs is located in Ireland, Dell crosses international borders therefore all physical distributions are carried out under CMR regulations.

7.6 Future

The next factory that Dell probably will build is going to be placed in Eastern Europe; the reason is to get closer to the component factories. Dell want to maximise their type of fast stock so they can be even more efficient, force down the lead-time and get better delivery precision. All their local sub-suppliers work with JIT and Dell wants to

automate as much as possible considering booking plans between Dell and their sub-suppliers. In the future Dell will not have to place a certain order, instead the sub-supplier can just look at Dell's order traffic. If there are sub-suppliers that are very good at this and have their own efficient programs then Dell is very interesting in joining up with them and their system. Dell will design all their factories in order to optimise the material flow.

Dell is not afraid of trying new ways of working; they try every day just so that the optimal solution will be found one day. Several large analysis companies analyse the e-commerce market and they can see that the currency-effects will influence the declining demand on the market but only for a short time. Dell is counting on a strong growth the nearest 3-5 years. They think that they will be twice as large in five years, due to the fast development of new technology in the Nordic countries. The development of e-commerce, year 2003 is expected to be larger in Europe than in the United States.

The global expansion of PC has grown 10-15% every year since 5-10 years back and this growth is expected to continue. More and more important gets the design and smaller sizes. PCs and notebooks that are carry friendly and you can bring anywhere gets more popular. Considering that wireless connections are entering the market the buyer can get rid of all the cords. Powerful PCs that control e-commerce are entering the market to a larger extent and Dell has already started to sell small hand computers and is planning on introducing an own developed version in the future. Dell sees a slow development of hand computers and that is due to new types of storing servers that can offer more services and larger geographical expansion.

Dell is constantly refining its direct approach to manufacturing, selling and servicing PC systems. The company is extending the advantages inherent in what is already the industry's most efficient business model. Existing Dell initiatives include moving even larger volumes of product sales, service and support to the Internet. They are using the

Internet to develop the competence of Dell's procurement, manufacturing and distribution process. Dell supplementary expanding an already broad ranges of value-added services, particularly those that will assist customers to construct an online attendance. Dell services are focused on enhancing computing solutions and simplifying the system trade decisions for current and potential customers. The growing market for future factories manufacturing computer parts are Eastern Europe mostly Poland and Hungary.

Regardless of the fact that the PC market has expanded drastically since the 1970s; Dell believes the industries greatest days are forthcoming, for two reasons. First, the flow of software and hardware improvement in the IT industry is rapid and strong, and continues to produce improved system performance and to reduce the relative cost of computing. Second, at the same time as computer performance is going up, the relative cost of computing has progressively declined, encouraging new computer users and more rapid PC replacement. Customers in their turn are using those savings to purchase even more powerful, more richly configured systems.

7.7 Analysis of Dell Computer Corporation

For the time being, the Internet is becoming more integrated into daily life, businesses rely on the Internet for commerce and real-time information exchange. Customers use Internet to go online and shop, perform banking errands and conduct personal communication and students from grade schools through college utilize the Internet as an educational tool. From servers that power the Internet connection, to desktops and notebooks that efficiently and effectively provide the interface, to workstations used to developing digital content, the ability to provide products and services that enable Internet access, enhance the online experience and help businesses and institutions build an online presence that will be vital for companies in the computer systems industry.

Dell's largest strength is that they have well-developed logistic and good cooperation with their sub-suppliers and logistic providers. Dell is well known globally and has access to world leading distributors. Dell is the largest distributor to Sweden's public sector. Educated sellers for each market that have special knowledge that fits for just that contact. They have strong alliances with their logistic provider and they have the full responsibility to make the distribution work, one supplier on each world market (US, Asian and Europe), which gives Dell the strength to concentrate on their core business. The distribution and it is adjusted to fit each of the three different areas, US market, Asian market and Europe market. "Track and trace" gives the customer opportunity to follow the goods all the way from the factory to the receiving.

Dell is the second largest PC distributor in the world and that gives them strengths like well-known brand, globally known and loyal customers. When presenting a new technology on the market they are very quick, since they don't have any products in store and that gives them competitive advantages. Dell is focused on their core business and they don't try to enter new businesses areas, which gives them less time and money to develop already existing products. Customer designed web sites make Dell's customers feel prioritised and it is easy and efficient to place an order for the customer. They only own the product for six days but still they own the money for 15 days, which gives high profit on their own capital. Dell sees one of their strengths in that they know their computers inside out since they build them; if something breaks they buy spare parts from their sub-suppliers.

The direct customer relationship allows the information to reach all the involved parts without any obstacles. To place an order on the Internet is easy and not time consuming for all parties involved in the transaction. The customer order production gives Dell competitive advantages in relation to their competitors, since the customer designs its own computer on the Internet and gets exactly what he requests.

The direct-to-customer business model gives Dell closeness to their customers, which in turn give loyal customers. Dell creates strong

alliances with their logistic providers and that gives them advantages for future cooperation. They involve their partners through the whole business chain and this creates strong partnership.

A weakness is that they are number two in the world and not number one. They also see their small companies and consumers only as transaction customers. Their factory is located on Ireland and has a long and dangerous transportation ahead before reaching Gothenburg, such as bad weather. A distributor should try to avoid waterways as much as possible because it is the hardest way for them to distribute. They are very dependent on their sub-suppliers and cannot function without them because they have no storage or safety stock. Another problem is that information and payment not is 100% protected on the Internet, though they try to find new solutions each day. Because most of the information is shared on the Internet Dell loses the “face-to-face” contact with their customers. Everything is based on forecast from the last year so drastic changes can cause problems for Dell and their sub-suppliers because they have customer order production.

One opportunity is that Dell is going to develop factories in Eastern Europe, which gives them advantages like shorter distribution for the whole of Europe, low investment costs and can avoid water ways. Faster distribution with help of even better communication and cooperation with their logistic providers gives them new market opportunities. A positive economic climate development can be an opportunity for e-commerce because the business is very dependent on the economic health. More companies get more dependent on PCs and this is an occasion for Dell to exploit. New technologies will emerge in forms like note books that have the same function as the PC, but are easier to handle and more practical. Many customers see it as very important to have the newest technology and they are important to hook up to your company.

Threats that Dell probably will face are competitors that will compete on the same conditions; companies can always copy a good business

and do it even better. Dell may focus too much on their large customers and lose the smaller ones due to the fact that they should reassess the market and see all customers large or small as important for the development of the company in the future. The market is always a problem you can never know how it will react to new technology and how the economy will develop for different countries.

The competitive activity is very strong on the PC market, one threat is that a large company just announced that they will introduce a new technology and Dell is not ready with their new product and suddenly they introduce the computer first as second company on the market. In this business it is very important to be first and to have a well developed product before presenting it on the market. Another threat is a new product doesn't have a long time on the market to prove its competence and skill, therefore it is central that a new product gets acceptance immediately.

8. CONCLUSIONS

In this last part of the thesis we present our opinions and conclusions about the e-commerce supply chain and our aim is to put forward the key success factors. This will be based on our problem analysis and the performed case studies that are presented in the paper.

8.1 The success factors

Both Dell and HP have legal knowledge about the countries they are active in and this has made it easier for them to break through barriers. EU is keeping their eyes on the B2B market for the reason that it can easily create mergers between large and well-positioned companies at the small companies' expense. This means that the level of competition decreases and price cartels between B2B may occur. We think that EU must counteract these mergers at an early stage and should not wait to evaluate the situation after a merger is completed. If EU today sets the rules and regulation for B2B mergers they can save time, money and keep up the level of competition. Since both Dell and HP use road transportation, the CMR regulation is applied. We think this is good because all carriers then compete on the same conditions on Swedish market. Future law and regulation for the Swedish market was difficult to obtain, since the companies involved in the thesis didn't have the knowledge and we didn't investigate the government's role in-depth because we were limited by time.

The case studies show that the cooperation between the e-commerce companies and their logistic provider are open and direct. This we see as an advantage concerning the development of the existing and the future supply chain. Since it gives all involved parties access to information about what customers need and this demand controls the whole flow from raw material to the end customer. Despite this advantages we observe that this can be a disadvantage as when the openness is large the vulnerability is also huge if a partner leaves the partnership. The leaving partner has large knowledge about the whole supply chain and can leak information to sources that are unauthorised

and this can damage all involved parties. Before a company enters a partnership it is important that everything is discussed and that all parties agree. A partnership should be based on; equal investment, share all risks, individual excellence, mutual understanding, share information, trust, openness, long term and interact frequently. Even if the partnership is functioning well the e-commerce company must evaluate other potential logistic providers in case the cooperation fails. If company has channel dynamics they can more easily meet differential needs from customers and have quick response delivery. The quick response is also possible since the international logistics infrastructure and communication technology is so well developed.

The physical distribution almost appears the same for Dell and HP. The differences are that Dell has their factory in Ireland and that forces them to use mostly waterways in order to reach Gothenburg, we find that Dell's transport method is insecure with large risks and delays. Dell should try to avoid the waterway as distribution channel and instead focuses on establish their factory in the Eastern Europe. If they do they only have to use the waterways in some cases, this will decrease the risk to the transport and make it more secure when it comes to time and damages. Due to the fact that HP has manufacturing in many countries it gives them closeness to the market and a good distribution system throughout the whole Europe. Both Dell and HP use Danzas as a distributor of e-commerce goods in Sweden because Danzas offers this special service. We think that the logistic provider will get a more significant role in future partnerships, due to the fact that more and more responsibility is transferred to them. This will create a more balanced partnership where both parties involved become equally important. The direct contact has to be more efficient and even more open than today in order to have a successful partnership. We see it as important that all the involved parties in the chain have high competence for the reason that it will give the chain a better flow, which will lead to a faster communication and less misinterpretations.

Through different software, information is shared between all involved parties. A problem we see is that the software that supplies information

about deliveries must be harmonised and more basic, but at the same time the security concerning unauthorised users must be improved.

We see that security is still a dominant concern in the expansion of e-commerce. Defined as freedom from damage and risk will create a new meaning in e-commerce. The dangers on the Internet relate to possible financial loss, data damage, customer mix-up, or publication of trade secrets. As e-commerce grows exponentially, so does the potential for major security failures. On the optimistic part there is today a more aggressive search for improvement of security software, systems, and hardware. The prime challenge is to assure security at all levels of e-commerce, beginning with complex corporate configurations ending with individual customer transactions. The upcoming challenge is to make sure that technological security system developers will be at least one step in front of those who seek their failure.

If an e-commerce company has a well functioning supply chain on all levels, they can reduce costs and improve their competitiveness on the B2B market. One dilemma that we have come upon is the high operative costs that run away in consequence of new techniques that need to be integrated with new systems and the old databases. If the B2B market should have a chance to compete with the regular market, the e-commerce marketplaces must lower their operative costs. Those who try to handle several services on the Internet will probably fail, but those who focus and can handle their stake, will dominate their segment.

The customer is a very significant issue when it comes to key success factors. If the customers are satisfied with the logistics and feel like a member of the supply chain, they will stay as customers. It is very essential to have an open communication with the customer and as a result there will be an understanding between the partners. If the dialogue is open, it is easier for both partners to improve themselves and to avoid misunderstandings.

When it comes to customer relationship we have found out that our case study companies use different approaches. We believe that mix of the different approaches is the best solution for a successful customer relationship. Large frequent customers should have customised pages and strong relationships with their personal salesman. We believe that “face-to-face” contact is vital because it makes the customer feel prioritised, appreciated and the customer becomes loyal to the e-commerce company. We also see that small companies shouldn’t be considered as just a transaction, instead we believe that customer relationship is equally important with them.

Prioritising among customers exists on the e-commerce market. Our studies show that prices differ between customers depending on how much and how frequently they purchase. We find this price prioritising to be valid when large customers bring larger amounts of capital to the e-commerce companies. None of the case study companies prioritises between customers when it comes to time and security. The e-commerce companies want to develop a more open communication with their customers to improve customer service and to allow the customer to follow products through the whole chain.

The logistics has during the last years developed and there is really no perfect solution. We believe that e-commerce is a perfect functioning supply chain. It isn’t the impressive web page that decide who is going to be successful or not. We consider that it is the basics such as payment and delivery that decides if an e-commerce company will be successful. The e-commerce will be as much as the logistics capability will perform. Hence, what the logistic can deliver, and it will be more than today, will be the future e-commerce.

Key success factors

- E-commerce is logistics
- Payment must be easy and safe
- Delivery must be on time and performed securely
- E-commerce will be as much as the logistics capability will perform
- Tie the whole supply chain together with help of information exchange and open communication
- Lower operative costs so that the e-commerce market will have a chance to compete with the traditional market
- Concentrate on the core business and avoid carrying out several services at the same time
- “Face-to-face” contact to a larger extent – make the customer more loyal to the e-commerce company
- Strong customer relationship
- All involved parties must possess high competence through the whole supply chain
- Increased responsibility for the logistic provider
- All involved in the supply chain are equally responsible for the e-commerce B2B success

8.2 Further investigations

During the thesis writing we have noticed that the customer’s view of how the e-commerce supply chain is vital for the whole picture. Therefore it is important to investigate customers’ opinions on how they see their suppliers and if they are satisfied with the service they receive. It is also vital to get the customer’s view on the service in order to get a more objective view of the e-commerce B2B market. In order to understand the future market one should investigate how customers see the e-commerce market in comparison to the traditional market. If we had had the time to investigate this further, we would

have included this in the thesis. Therefore we would recommend further investigations on customers' view of the e-commerce B2B market.

We want to recommend investigating government issues further and to look at how the Swedish government affects the e-commerce B2B situation on market, both today and tomorrow, this in order to see how the future appears for the B2B. It is also vital to investigate how the society affects the e-commerce market and how sensitive the PC business is regarding economic perspectives.

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APPENDIX I

Question guide for Hewlett Packard Company and Dell Computer Corporation. The questions asked only concern the Swedish market and they refer to the B2B market.

1. What does e-commerce mean to you?
2. Tell us about your work and what you are responsible for?
3. For how long have you been working with e-commerce?
4. What does e-commerce stand for today and how much time and money do you invest in e-commerce?
5. What are the purposes with the investments and which are the goals you want to achieve?
6. How has the e-commerce developed since the introduction?
7. How large a part of the total turnover is the e-commerce responsible for?
8. Do you co-operate with any forwarders and in that case how does it work?
9. Advantages and disadvantages with strategic alliances?
10. Which partners have been affected by the e-commerce, and if they have how and in what way?
11. How do you see the future for e-commerce?
12. How do laws and regulations affect your e-commerce and how does the future look when it comes to this?
13. How does your physical distribution work?

Key Success Factors for a functioning Supply Chain in E-commerce in B2B

14. How will and how do you want your contact with your suppliers to develop in the future?
15. What kind of information do you share with your partners, if so how much do you distribute?
16. How will the information sharing look in the future?
17. What does your customer relationship look like and how did you build it up?
18. Do you in any way prioritise between your customers, in that case how and why?
19. Depending on customers do you use fixed- or negotiated prices?
20. How does the payment from customer work?
21. How do you secure data transferences when it comes to payment and information?
22. What does your customer service look like, does it get better or worse when using e-commerce?
23. Do you lose customers when you lose "face-to-face" contact?
24. How do you want to develop the e-commerce with your customers?
25. Name your largest competitors on the e-commerce market B2B?
26. How do you market your e-commerce business?
27. How has e-commerce affected your profit, competitive advantages and your product development?
28. Do you have any special Internet-strategies; in that case how do they work?
29. In which level of the organization do you discuss the strategy?

30. Does your company have a special department that only focuses on e-commerce and if that's the case do they push for development?
31. Have there been any problems when you have implemented new technology concerning e-commerce?
32. How do you see the development for e-commerce and where do you see the largest profits?
33. Do you own your own market place? If not then who does?
34. Do you manufacture the computers to customer orders or do you take the computers from the shelf?
35. How long is the lead-time? (From customer order until he gets the merchandise)
36. Can the customer follow their goods though "track and trace" on the Internet?
37. How do you know when the customer has received their merchandise?
38. How do you inform the customer that the product is on its way?
39. Do you use raw material stock or/and warehouse? If not, is this service is outsourced?
40. Which type of inventory-principles do you use?
41. How much do you have in tied-up capital in relation to the total turnover?
42. Do you think that e-commerce and logistics will develop more together? Who must follow whom?

APPENDIX II

Question guide for Danzas ASG and the questions asked only concern the Swedish B2B market and Hewlett Packard Company.

1. How does the ownership appear for ASG?
2. What role does Irish Express play in the partnership?
3. Tell us about ASG's cooperation with HP?
4. How does the integration seem between HP and ASG?
5. How is the trust between ASG and HP?
6. Do you have open communication with HP?
7. How large is HP as a customer?
8. How long have ASG had a partnership with HP?
9. Is this partnership based on equal terms or is it power based?
10. What laws and regulations are there for ASG when transporting for HP?
11. How does the delivery security appear?
12. Can ASG handle the delivery demands that HP put up? If not, what happens?
13. How will the partnership evolve in the future?
14. Advantages and disadvantages with strategic alliances?

15. What type of information does ASG share with its partners and how much?
16. How will the futures information sharing appear?
17. How do you notify the customer that the goods are on the way?
18. How long do ASG have to complete a delivery?
19. Do ASG store any products for customers?
20. How is the transport performed?
21. Is pick up and delivery scheduled?
22. How does the order receiving appear?
23. Do ASG receive a forecast from HP with information about sales and how do ASG use it?
24. How do ASG confirm that an order has been shipped?
25. Do ASG notify the customer that the order is on the way?
26. Can the customer follow their goods through track and trace?
27. Do ASG think that e-commerce and logistics will develop more together? Who must follow whom?

APPENDIX III

Question guide for Danzas ASG and the questions asked only concern the Swedish B2B market and Dell Computer Corporation.

1. How does the ownership appear for ASG?
2. What role does Irish Express play in the partnership?
3. Tell us about ASG's cooperation with Dell?
4. How does the integration seem between Dell and ASG?
5. How is the trust between ASG and Dell?
6. Do you have open communication with Dell?
7. How large is Dell as a customer?
8. How long have ASG had a partnership with Dell?
9. Is this partnership based on equal terms or is it power based?
10. What laws and regulations are there for ASG when transporting for Dell?
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25. Do ASG notify the customer that the order is on the way?
26. Can the customer follow their goods through track and trace?
27. Do ASG think that e-commerce and logistics will develop more together? Who must follow whom?

APPENDIX IV

Question guide to Erik Garsten at Hewlett Packard Company and the questions asked only concern the Swedish B2B market.

1. Is there any segmentation between your business customers who purchase through the Internet? If so, why and how does it appear?
2. Why do your customers choose to purchase on the Internet?
3. How much does the transport for e-commerce cost?
4. How much of HP's revenue is from the e-commerce sales?
5. How do the transport routes appear? Is there any marshalling?
6. Which logistic provider supplies HP regarding e-commerce?
7. Can the logistics be improved concerning the e-commerce transport?
8. Can a customer order a customized computer via your e-store? If not, why?
9. How do your future investments appear for e-commerce?
10. Which of your business areas sells most via Internet?
11. How large, both in volume and value, is the warehouse in Gothenburg?
12. Who owns the products during transport and when does the ownership turn over to the customer?
13. Are the prices the same on the Internet as at resellers, if so why?

14. Are the prices the same world wide when selling via Internet?
15. Why are standard deliveries free of charge?
16. What are the prices based on?
17. When did you introduce e-commerce to business customers?
18. Which part of e-commerce is growing fastest, business customers or consumers?
19. Why don't you manufacture towards customer order for e-commerce?
20. What is the lead time when purchasing on the Internet?
21. How does the order receiving appear?
22. How often do you transfer orders to your manufacturing sites?
23. Do your contract customers purchase via the Internet?
24. Are customer relations important to you and how do you maintain them?
25. How is payment completed?
26. How do you market your e-commerce?
27. Has the e-commerce affected your profit, competitiveness and product development?
28. Do you have a specific Internet strategy?
29. How do you think e-commerce will develop and where will the largest profits be?

30. Do you have possession of your own market place? If not, who does?
31. Since the products are produced towards warehouse and not towards customer order, do you have some kind of forecasting and what is that based on?
32. What is demanded from the customer to obtain a custom made and unique page for purchasing on the Internet?
33. Will e-commerce and logistics finally develop more together? Who must adjust to whom?