

Customer value in the high-tech and pharmaceutical transportation industry

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In the transportation industry there has been a shift concerning the pharmaceuticals and high-tech products, the market share Dutch companies hold might have to be defended. Knowing what customers value and using this to create a competitive advantage can help defend market share. The research question this study wants to answer is: “what do shippers and forwarders value in the services provided by the transportation industry when shipping pharmaceuticals and high-tech products?”. This knowledge can then be used to write good value propositions to attract market share. Woodruff’s value hierarchy model was used to operationalize customer value and eight semi-structured interviews were conducted, four concerning the pharmaceutical sector and four concerning the high-tech sector, to collect data on what customers value in these industries. These results were then coded according to this operationalization and analyzed. It was found that services are only chosen because their aspects help a customer reach a particular goal, in this case either cutting cost or improving/maintaining quality. To attain these end-goals the different industries preferred different aspects to reach the same goal, so companies should write different value propositions when wanting to attract pharmaceutical and/or high-tech market share. It showed that for the pharmaceutical industry quality, in terms of good temperature management, was a very important aspect, since their product often needs specialized circumstances to safeguard product integrity. Recently companies have also started focusing more on price to keep costs down. In the high-tech industry quality was important in terms of speedy and reliable delivery. However, these aspects were often seen as prerequisites. Here a low price was mentioned as the main denominator for why services were chosen. The value hierarchy model used during this research was proven to be a useful tool to measure customer value in Business-to-Business markets.

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Keywords

Customer value, customer value proposition, transportation industry, high-tech products, pharmaceutical products, value hierarchy model

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1. INTRODUCTION

This chapter will give a detailed explanation of the research that has been conducted. It will explain the problem description and relevance of this study. Secondly it will discuss the purpose of the study and research question. Thirdly it will discuss the theoretical positioning. Next it will discuss the research strategy and data. Following it will explain the practical and then theoretical implications. Finally, the outline of the thesis is provided.

1.1.1 Problem description and relevance

In the transportation industry there seems to be a shift concerning the high-tech and pharmaceutical goods. Between the years 2005 and 2013 the Netherlands gained market share in pharmaceuticals and high-tech products concerning air traffic flows, but relatively little in comparison to other countries (Seabury Group 2015, p8).

This means that Dutch transportation providers will have to increase (or create) competitive advantage in order to increase market share and defend or increase the market share concerning these product groups. So far companies have mainly looked inwards when trying to enhance performance. However, nowadays it seems that product innovation and quality are no longer the basis for a competitive advantage, and the next source to attain a competitive advantage “will most likely come from a more outward orientation towards customers“ (Woodruff 1997, p 139). Meaning that it is ever so important to attain knowledge over what it is that customer’s value, so services provided can be adjusted accordingly and a competitive advantage can be created. However, little research has been done concerning customer value in the transportation industry concerning the shipment of pharmaceutical or high-tech products, so little knowledge is available that can be used to create competitive advantage based on customer value.

1.1.2 Purpose of the study and research question

The purpose of this study is to find what shippers and forwarders value in the services provided by the transportation industry when shipping pharmaceuticals and high-tech products, so businesses can use this knowledge to create competitive advantage. The main research question this study will try to answer is:

What do shippers¹ and forwarders² value in the services provided by the transportation industry when shipping pharmaceuticals and high-tech products?

1.1.3 Theoretical positioning

This study will be conducted using the perspective of an organization’s customers: “considering what they want and believe that they get from buying and using a seller’s product” (Woodruff 1997, p 140). In order to find out what customers value when shipping high-tech or pharmaceuticals, we need to know what customer value is.

Customer value was perceived in the earlier years as having to do with the exchange of goods, while recently there has been a new perspective stating that people “exchange to acquire the benefits of specialized competences or services” (Vargo & Lusch 2004, p7). Vargo & Lusch explained this to be value-in-use, believing that value can only be experienced when using a product/service; Woodruff added to this that the attributes of services or products are only valuable because they lead to consequences that help the user reach a certain end goal (Woodruff 1997).

Anderson, Narus and Van Rossum (2014) added that it is essential to know what customers value, so they can be persuaded with a compelling customer value proposition to choose certain service providers over others. Since, according to them, a good value proposition can determine who the customer chooses to do business with.

1.1.4 Research strategy and data

Eight semi-structured interviews will be conducted with four persons active in the pharmaceutical transportation industry and four persons active in the high-tech transportation industry. They will consist of exploratory questions on a semi-structural basis to find out what they value, and why they value this. The qualitative data will be collected by conducting these interviews either over the phone or in person. These interviews will be recorded, transcribed and coded according to what the attributes-consequences and end-goals of the customers are, so comparison is possible.

1.1.5 Practical relevance

This study aims to examine why and what it is that customers value when shipping pharmaceutical or high-tech goods. This data will be used to increase the knowledge of customer value in the transportation industry concerning these two goods, so business can use this knowledge to create a powerful value proposition and so increase market share.

1.1.6 Theoretical relevance

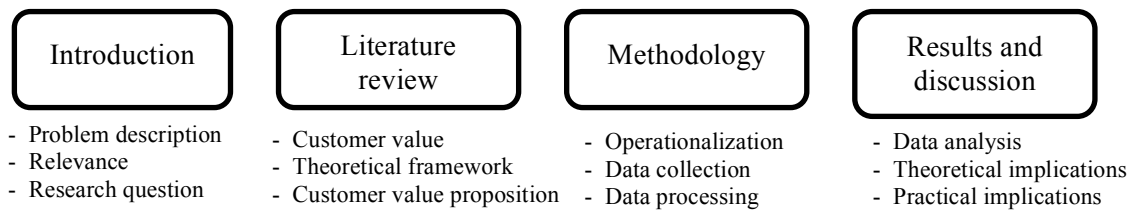
So far the means-end approach that will be used in this study to examine the customer value in the transportation sector is being neglected in Business-to-Business (BtoB) studies, while widely used in Business-to-Consumer (BtoC) markets (Klanac 2013, p27). In this study a means-end framework will be used, the value hierarchy constructed by Woodruff, to see if this framework for operationalizing customer value is useful and can also be useful in BtoB markets.

¹ Shipper: a person or company that needs products to be transported by sea, land or air.

² Forwarder: a person or organization that arranges the transportation of goods for shippers.

1.1.7 Outline of the thesis

Figure 1 shows what is examined in each section of the thesis.



- Figure 1: Outline of the thesis

2. LITERATURE REVIEW

2.1.1 Customer value

In order to find out what customers value in the transportation industry when wanting to ship pharmaceuticals or high-tech products, first customer value needs to be defined. Customer value is a very broad concept that takes the perspective of an organization's customers to see what they value in services offered to them, and has a large diversity in definitions of customer value by different writers (Woodruff 1997). In the literary world there is much deviation in the definition of customer value. It ranges from more simplistic definitions such as "value is what buyers are willing to pay" (Porter, 1998 p.3) to more elaborated statements as "value in business markets is the worth in monetary terms of the technical, economic, service, and social benefits a customer company receives in exchange for the price it pays for a market offering" (Anderson & Narus 1998 p3). There seem to be some areas of agreement on what customer value is, namely that value is something perceived by the customer, a trade-off between benefits and sacrifices and is inherent or linked through the use of a product. (Woodruff 1997)

One of the things that influenced the way we see customer value is the shift in the way we view goods. Before the 19th century customer value was mainly based in a Goods-Centered Model of Exchange focusing on the more tangible manufactured goods, in conformance with people such as Adam Smith who believed "wealth consisted of tangible goods, not the use made of them" (Dixon 1990, p340). The value then was derived in exchange, focusing on resources on which an operation or act is performed. However, this view shifted during the 21st century to a more Service-Centered Model of Exchange, focusing on the intangibles and effects produced by these goods. Here value was co-created and determined by the user during the "consumption" process (Vargo & Lusch 2004).

Overall there are three main widely accepted approaches to customer value, namely the benefit-sacrifice, means-end and the experimental approach.

The benefit-sacrifice approach focuses mainly on how customers perceive the value provided by an object and what they believe they have to give up to experience this value, rather than how the object is used to create and achieve value. Believing that "consumer's overall assessment of the utility of a product (is) based on perception of what is received and what is given" (Zeithamel 1998, p14).

The means-end approach adds to this, stating that using the benefit-sacrifice approach alone is not enough since it does not distinguish between attributes (products' characteristics) and the consequences to which they lead, which are either beneficial or involve sacrifice. This approach states that attributes are only wanted because they lead to certain consequences, which are used to attain certain goals. For example: high quality is not beneficial by itself, the consequences (e.g. less broken products in transit) leads to less loss of value. Value is stated to be "a customer's perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer's goals and purpose in use situations" (Woodruff 1997, p142) So the means-end model believes there should be a distinction between consequences (benefits or sacrifices) and attributes. It adds, in contrast to the benefit-sacrifice approach, that customer value is not based only on the perceived value received or given by a product, but also on the actual experience of using the product. What is important is the desired and perceived value. Desired value is what customers believe they value in a product, perceived value is the value they experienced when using a product (Woodruff 1997).

This addition of Woodruff, that value is also concerned with how the customers use a product's attributes to serve an end goal, is influenced by the idea presented by Vargo & Lusch, namely that when the focus in the economy shifted from goods to services, that customer value was transforming "from a focus on resources on which an operation or act is performed (operand resources) to resources that produce effects (operant resources)" (Vargo & Lusch 2004 p4). Therefore value is "defined by and co-created with the consumer rather than embedded in the output" (Vargo & Lusch 2004, p6). They stated value to be "value-in-use" meaning that "value was considered the comparative appreciation of reciprocal skills or services that are exchanged to obtain utility" (Vargo & Lusch 2004, p7). Therefore, value can only exist when the products are purchased, used and satisfy the customers' wants and desires. However the value-in-use model of Vargo & Lusch does not provide a good framework for operationalizing value-in-use and remains a rather abstract idea that Woodruff operationalized.

Woodruff (1997) used this idea of value-in-use and operationalized it into a means-end value chain, namely: attribute-consequence-goals. The operationalization Woodruff (1997) provides is based on a framework by Gurman's (182, p62) idea that products are means to an end: "people buy goods because owning, experiencing and displaying them gives them a certain amount of satisfaction greater than solely the basic functions of those products." (Woodruff 1997, p9)

Where both the benefit-sacrifice and means-end model believe people are rational beings thinking about what they want to buy and why, the experimental approach does not believe so and believes customer value to be "an interactive, relativistic, and preference experience" that results from the evaluation of using products (Holbrook 1999, p5). The experimental approach doesn't observe customer value using questionnaires or interviews, as the other two approaches do, but relies on observations of how people do and feel. However it is very hard to observe clients, since this takes a lot of time and this can hardly be done without people knowing they are being observed, meaning they can adjust their behavior according to the presence of the observer. The experimental perspective does not take into account multiple levels of abstractions in customer value, as Woodruff's means-end model does and it does not take into account what end goals drive customers to purchase certain products, which is essential when wanting to formulate a good value proposition.

2.1.2 Theoretical framework

This customer value hierarchy "suggests that desired value is composed of preference for specific and measurable dimensions: the attributes, attribute performances, and consequences linked to goals for use situations" (Woodruff 1997, p143). It breaks down the rather abstract notion of value-in-use mentioned by Vargo & Lusch into measurable components that can be abstracted from interviews. This approach is also very practical, since understanding all three levels of this hierarchy should lead to better marketing strategies focused on providing customers with certain attributes that will allow them to reach their eventual goal. For all the reason mentioned above Woodruff's value hierarchy model was chosen as theoretical framework for this study, using the definition of customer value to be "taking the perspective of an organization's customers, considering what they want and believe that they get from buying and using a seller's product" (Woodruff 1997, p140). As stated above, Woodruff built on the idea of value-in-use of Vargo & Lusch and created a framework to operationalize value. This means-end model is created to find out why customers value certain attributes, what the consequences are of these attributes and what goal they eventually serve. This model comprises of three levels:

1. Customers' goals and purposes
2. Desired consequences in use situations
3. Desired product attributes and attribute performance

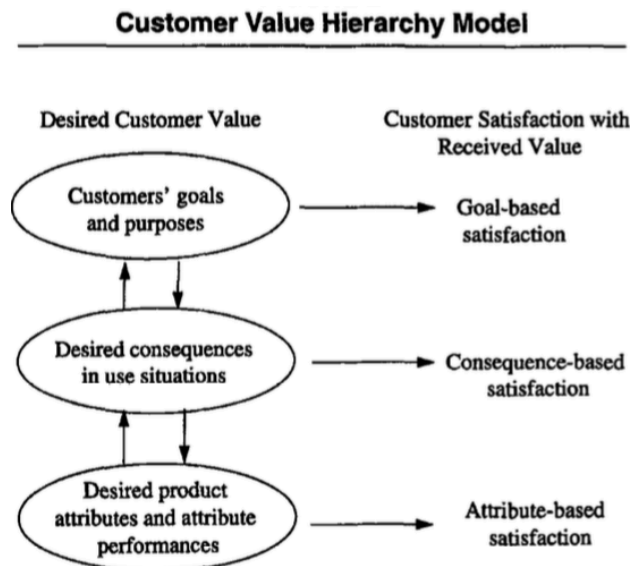


Figure 2: Woodruff's Customer Value Hierarchy Model

Using the different abstraction levels of the value hierarchy model different interview questions were designed, which can be found in Appendix 1, to try and answer the question: what do customers shipping pharmaceutical and high-tech products value in transportation services from forwarders and carriers?

2.1.3 Value propositions

When it is known what customers value, it is important that this knowledge can be conveyed to the customers that what is offered is valuable to them. According to Anderson, van Rossum & Narus (2014) it is important for business, if they want to get paid the premium price for the services they offer, to write a good value proposition, and to do so knowledge is required about what customers value, so offers can be adjusted and used to add value to their business. Anderson, van Rossum & Narus (2014) believe the best value propositions have a resonating focus: to focus on a few aspects that are the most important to target customers. These are either points that differ from competitors and add substantial value to customer's business or point of parity to ensure the customer that services

offered are not outperformed by competition. Anderson, Van Rossum & Narus state that in order for customers to believe superior value is offered to them (i.e. in comparison to competitors) a company has to “demonstrate and document that claim, {otherwise} a customer manager will likely dismiss it as a marketing puffery” (Anderson, van Rossum & Narus 2014, p.2). Therefore knowledge about which consequences arise from certain aspects is very valuable: once known what effects services have on the customer’s products or production process this can be used to demonstrate why this service should be chosen.

3. RESEARCH METHODOLOGY

In the previous section customer value was discussed and it was concluded that Woodruff’s value hierarchy was to be a useful framework for operationalizing customer value to discover what it is that customers value in the services provided in the transportation industry. This chapter will explain in detail the operationalization of Woodruff’s value hierarchy, the research process and how the data will be collected and analyzed.

3.1.1 Operationalization

Using Woodruff’s value hierarchy model, as described in the previous section, attributes-consequences-goals need to be operationalized into measurable variables so they can be extracted once data has been gathered:

- Attributes: will be operationalized as the aspects of services provided by the transportation industry
- Consequences: will be operationalized as the effect that this attribute has on the customer’s service/product/process
- Goals: what the customer eventually tries to achieve by choosing these attributes, what the consequences lead to.

3.1.2 Research process

This research will be a qualitative research conducted in an exploratory setting, finding out in-depth information about what it is that customers value in the transportation industry when shipping pharmaceuticals and high-tech goods and whether or not Woodruff’s value hierarchy model is shown to be an effective tool for operationalizing customer value in BtoB markets.

The sample from which interviewees are selected are all customers, or customer experts, active in the pharmaceutical or high-tech transportation industry, shippers as well as forwarders, that enlist the services of either logistic providers or carriers.

3.1.3 Data collection

Eight semi-structured interviews will be conducted with four people active in the high-tech transportation industry and four people active in the pharmaceutical industry. These interviews will consist of exploratory questions concerning what they value in the services offered to them, why they value this and which aspects of those services are important to them, and will be structured according to Woodruff’s value hierarchy model. The language in which the interviews will be conducted differs between English and Dutch, depending on the preferences of the interviewee. The order in which the questions will be asked is the same, however flexibility is needed to allow follow up questions to gather in-depth knowledge. The questions that will be asked to each of the interviewees can be found in Appendix 1.

3.1.4 Data analysis

The interviews will be recorded and transcribed in order to make coding possible. Each interview will be coded in different colors to address what the specific attributes are, the consequences of those attributes and the eventual goal that customers are trying to reach. These attributes, consequences and goals will then be summarized in one table per interview. This will be compared with the data collected from other interviews in the same sector to conclude what attributes are valued the most in services provided. The tables can be found in the upcoming section. Raw data is available upon request.

4. RESULTS AND DISCUSSION

After conducting eight interviews with forwarders, shippers and customer experts on what they value when shipping high-tech and pharmaceutical products, the data was categorized according to the value hierarchy model developed by Woodruff (1997) as stated above. The results will be analyzed first based on the category of goods, and then used to see if generalizations can be made across the industry. Lastly the theoretical and practical implications will be discussed.

4.1.1 High-tech transportation results

First the results of what customers value when shipping high-tech will be analyzed, the results can be seen below:

Interview	High-tech 1				High-tech 2		
Attributes	Low price	Reliability of delivery	Customization by forwarder	Trustworthiness	Personal communication	Low price	Low price
Consequences	Less transportation cost	Less safety stock is needed	Allows for late customization	You will not be involved in criminal activities	More situation-specific information	Less transportation costs	We can ask our customers to pay less
Goal	Higher profit margin	Keep stocking cost down & easier to flush products	Increases flexibility by increasing the variety of our products	No costs and reputation damage followed by criminal activities	People feel more satisfied	Higher product margins	Differentiate on price

Interview	High-tech 3			High-tech 4			
Attributes	Reliability of delivery	Speed of delivery	Low price	Low price	Reliable delivery	Reliable delivery	Speed of delivery
Consequences	Keeping our promise to our customers	The goods get to our customers fast	Less transportation cost	Less transportation cost	Keep promise to customers	Less safety stock is needed for the customer	Goods get to the customer fast
Goal	Building/Retaining our good reputation	Product has a short shelf life, make it as profitable as possible	Higher profit margins	Higher profit margins	Build a trustworthy reputation	Lower stocking costs and factories of the customers can keep producing	Product has a short shelf life, it loses value over time so sell as soon as possible

Figure 3: Results High-tech Transportation Industry

As can be seen in the table: price, reliability of delivery and speed of delivery are the most mentioned attributes. People in the high-tech industry state it is all about price: *“people might tell you that quality is more important, but in practice price is all that matters”*. But as shown in the above table, many more aspects apart from price are taken into consideration, however it seems that certain attributes are prerequisites, and so many companies fulfill these criteria that they don’t take these into consideration as being “noticeable” anymore.

One of the attributes not mentioned, specifically, as often is trustworthiness. However customers seem to believe this is a prerequisite for companies to be considered when they want to do business: *“You choose a party that can deliver your products injury-free and on time, which has to do with trust, but when that step is taken you choose the party that costs the least”*. Only one time trust was mentioned as being important, since when transporting goods often the shipper or forwarder is liable for the goods being transported, meaning that when drugs or people are smuggled together with their goods they are liable and suffer the consequences.

In the high-tech industry it also depends very much on whether they are shipping innovative high-tech products with shorter lead times, or products that are less innovative with longer lead times. Products with longer lead times are shipped by sea, the most cost-efficient shipping method, and also tend to be less valuable. More valuable products are shipped by air, since companies cannot afford to have that much capital in transit for multiple weeks. High-value products with a short lead-time are shipped most often through air and are accompanied with the most demands. When shipping the latter product group customers want speedy deliveries, secure shipment and reliable deliveries and put much more focus on these aspects than when shipping lower value goods. In this industry innovation occurs so fast that products are outdated very quickly, meaning they lose value every day they are in

transit, and so they try to minimize transit time. Here money is spent on more expensive, but fast, shipping methods, as it would cost more to keep products in transit for a longer time.

Everyone agreed on one specific attribute: low price. This is a rather straightforward attribute: a low price creates higher profit margins, either because companies sell products differentiated on price or because companies are trying to keep their own cost down as to make more profit.

Reliability of delivery is a more diverse attribute, and has several consequences. Reliable delivery allows the customer to keep less safety stock so they can use a just-in-time inventory policy and keep costs down. Also less safety stock means that when they want to introduce new products to the market it is easier to sell old products, since there are less of them than when a large safety stock is needed. Reliable delivery is also important so companies can keep their promise to their clients, to build a reputation as a trustworthy brand that delivers ordered goods on time.

4.1.2 Pharmaceutical transportation results

Interview	Pharma 1				Pharma 2		
Attributes	Good temperature management	Low price	Good temperature control	No split shipments (reliable delivery)	No split shipments (reliable delivery)	Specialization in pharma	Reliability of delivery
Consequences	Product stays in the same temperature condition	Less transportation cost	Customer has information about temperature deviations	Temperature lockers placed may be dispersed so right temperature is not guaranteed	Disrupts production flow	More experience with pharma shipment, know-how of rules and regulations	Easier to control temperature
Goal	Safeguard product integrity; safe to use product; good reputation	Higher product margins	No defect products on market without their awareness	Safeguard product integrity; safe to use products: good reputation	Keep optimal, continuous production flow	Ship goods safely/properly	Goods arrive safely on shore - safe for use

Interview	Pharma 3			Pharma 4			
Attributes	Specialization	Quality certifications	Low price	Specialization	Quality certifications	Transparency of processes	Lower price
Consequences	Everything we invest, we invest in pharma/ undivided attention	More proof of experience with transporting the product safely	Less transportation cost	More experience	Proof of quality compliance	Have knowledge about temperature deviations	Less transportation cost
Goal	Find the best solutions fast	Solve CEO's headache of unsafe products	(Higher) profit margins	Higher quality standards, safeguard product integrity	Safeguard product integrity	Safeguard product integrity	Higher product margin

Figure 4: Results Pharmaceutical Transportation Industry

As can be seen in the table above, high-quality attributes are mentioned most when asking what customers value in this industry. Pharmaceuticals are a product concerning human safety and this can be traced back to what they state they value in services. As was mentioned: “*quality complaints are the number 1 headache of the CEO's, so we as a logistic provider need to take away that worry*”. As can be seen by looking at the goals of certain attributes, they are either affiliated with safeguarding their product integrity, making sure their product arrives safely, or with lowering cost to keep their product profitable.

To ensure high quality customers will look for different attributes. Temperature seems to be the main focus concerning quality when shipping pharmaceutical goods, namely when the right temperature is not preserved throughout the transportation process products either need to be tested again or thrown away since they are not safe to use anymore. If the temperature process is not controlled well and pharmaceutical shippers do not know this and it hits the market and makes someone ill, this is the worst that can happen. Attributes customers are looking for to ensure temperature is controlled well:

- Track and trace, so they know at what temperature the package has been during the entire transportation process.
- Temperature management meaning the active engaging of forwarders/carriers to keep the temperature right.
- Reliable delivery. Customers do not want split shipments since they place temperature lockers in their packages and when split they can be dispersed and not function well. Also: the longer products are on the loading dock, the longer they are away from active cooling and temperature deviations may occur.

There are different ways of proving to clients that the services offered to them live up to these standards, and to fulfill the customer's need: *"The way we position ourselves is that we are 100% dedicated to healthcare, the only thing we do is healthcare logistics or solutions, this makes us unique. Every euro we invest, we invest in know-how, IT, in people, assets that are 100% dedicated to the health-care industry. This gives customers the idea that we know what we are doing"*.

Also other quality standards, such as being Good-Distribution-Practices (GDP) certified or compliant, a universally accepted quality standard for shipping quality goods, are important but becoming more a pre-requisite rather than a bonus for shippers. This because there have been more and more government rules and import restrictions they have to oblige to.

A new trend in the pharmaceutical industry, according to multiple interviewees, is that they are starting to focus more and more on price. Governments are cutting healthcare budgets so in response insurance companies have to cut costs. This causes two movements, the first is that medication has to become cheaper in order to "fit" in the budget; an easy cost to cut is transportation costs and so customers start focusing on price when shipping goods. Secondly patients have to pay a larger part of their medication themselves, meaning they will do more research (online) to what medications they want, putting more focus on price as well as quality, since no one will buy pharmaceutical products with a bad reputation, also enhancing quality standards.

4.1.3 Conclusion

What do shippers and forwarders value in the services provided by the transportation industry when shipping pharmaceuticals or high-tech products? Overall this study makes clear that there are the same end-goals for which customers select attributes as well in the high-tech transportation industry as in the pharmaceutical industry, namely cutting cost and improving/maintaining quality. However, the attributes they choose to attain that goal and therefore what they need from suppliers is different. Pharmaceutical customers want ultimate control over the transportation process since this is essential to safeguard product integrity, and need specialized circumstances (temperature controlled environment) for this to take place. Customers in the pharmaceutical shipping industry are willing to pay more to receive more quality, although there has been a recent trend of trying to cut prices. In the high-tech industry people see quality and reliability as a prerequisite and price as the main denominator.

4.1.4 Theoretical implications

During this research Woodruff's value hierarchy was used to find out what customers value in the transportation industry so this could be used to write a good value proposition (Woodruff 1997). This research was a confirmation that Woodruff's model is very useful for determining what attributes are needed for customers in a BtoB market, in this case the specific industry of shipping pharmaceutical and high-tech product, to reach certain goals. Also it shows that attributes are not chosen at random, but chosen to serve an ultimate goal, since none of the attributes were mentioned without a specific purpose.

Different attributes that serve the same goal, or identical attributes used to serve different goals were chosen only because they served that specific goal. Shippers only value certain services provided by the transportation industry because they add value to their own supply chain when using the attributes of these services, in agreement with the statement that "value is considered the comparative appreciation of reciprocal skills or services that are exchanged to obtain utility" (Vargo & Lusch 2004, p7).

4.1.5 Practical implications

In practice these results show that companies should provide different value proposition statements to customers from the pharmaceutical or high-tech industry, and what should be in these value propositions. As Anderson, Van Rossum & Narus also state, it is important to explain how clients are helped to achieve their ultimate goals, otherwise it is just considered a "marketing puffery".(Anderson, van Rossum, Narus 2014, p2). This research showed how certain services can help customers reach their end goal.

This study showed that when competing in the high-tech industry, attributes such as ensuring speedy delivery means the shippers will have to keep less safety stock and although they might have to pay a little more in transportation costs, they could save on inventory costs. Less safety stock also means that when introducing a new product less old products are in storage, making it easier to flush old products, meaning less value loss.

In the pharmaceutical industry speed is also important, but for different reasons. Speed is important because the shorter a product is in transit; the easier it is to control temperature. Also reliable delivery is important, but this because they don't want shipments to be split since temperature trackers might be dispersed and not function well, not in first place because they want to keep less safety stock.

When formulating a value proposition for customers in the pharmaceutical industry it should be stressed that the quality of the product is their main concern, and they can accomplish this by engaging in active temperature control, temperature management, giving them transparency into their processes etc.

Although their eventual goals seem alike, namely cutting cost or increasing/maintaining quality, they go about this in different ways and this should be acknowledged when trying to serve them. Also more is known after conducting this study on which end goals customers are trying to serve, and how they choose to do this. This means that when offering certain services forwarders and carriers now have a broader understanding of why these customers need these services and can use this to enhance their offerings.

5. LIMITATIONS

One limitation of this research is that I have only conducted eight interviews, four in the pharmaceutical transportation industry and four in the high-tech transportation industry during a six week period. In order to see if my findings are valid for the entire high-tech and pharmaceutical transportation industries more interviews with customers in these branches have to be conducted and also over a longer period of time in order to measure whether these customer values are universal in these industries.

In addition I also have no empirical proof to back up the statements made by the people being interviewed. They might just say that they care about quality certifications to make a good name but in the end always choose the cheaper option, or the other way around. Further research should focus on the obtain shipper-forwarder or shipper-carrier contracts as to back up the statements made by people.

Although semi-structured interviews were used and they were recorded so full attention could be given to the interviewee, as to increase validity, they were conducted in an exploratory setting and dialogue was needed to find out what the customer really valued. An open conversation was needed and different questions were asked to follow up on certain answers given, so no two interviews were identical. Also, certain interviews were held over the phone while others were face-to-face. These different settings and follow-up questions make it more difficult to compare.

6. CONCLUSION

While conducting this research the main question was: what do shippers and forwarders value in the services offered by the transportation industry regarding pharmaceutical and high-tech products. Customer value being “a customer’s perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer’s goals and purpose in use situations” (Woodruff 1997, p142).

After conducting the interviews it was found that although pharmaceutical and high-tech customers mainly choose attributes to serve one of two goals: either lowering costs and/or maintaining quality, they went about this in different ways and needed different services to uphold this.

For the pharmaceutical industry temperature control and management were of utmost importance since their product, when damaged, can be dangerous for public health. Transportation carriers promising reliable deliveries, management and active control of temperature, transparency of processes and quality certifications were preferred over their competition. Keeping cost down has become a recent trend in this industry, however quality is still number one.

In the high-tech industry costs are the main concern and a standard level of quality has become more of a prerequisite, especially for low-value products. High value high-tech products cannot be in transit too long since that will cause them to lose value and therefore speed of delivery is important. Speedy and reliable delivery also ensures the customer can keep cost down by upholding the just-in-time policy on inventory.

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9. APPENDIX

9.1 Interview questions

Below the interview questions that were asked during this study can be found, the questions were sorted according to the profession of the interviewee.

9.1.1 Shipper

1. Could you briefly explain the process that occurs when you want to ship goods?

If chosen a forwarder

1. What are you looking for in a forwarder?
2. What do you value in the services offered by a forwarder? What aspects are important?
3. What are the consequences (negative or positive) in practice?
4. Once chosen a forwarder, does it matter to you how they get your products from point A to point B?
5. Who is responsible when products are broken in transit?
6. How does your firm achieve a competitive advantage?

If not chosen a forwarder:

1. Why did you choose to work without a forwarder?
2. Do you have your own distribution center? If not, what are you looking for when deciding what distribution center to use?
3. How do you decide what means of transportation to use?
4. How do you decide which carrier to use?
5. What do you value in a carrier? What do you value in the services offered by the carrier? What are the consequences (negative or positive) in practice? (What are the end goals)
6. Who is responsible when products are broken in transit?
7. How does your firm achieve a competitive advantage?

9.1.2 Forwarder

1. Could you briefly explain how you target new clients?
2. How do you achieve a competitive advantage over your competitors?
3. Do you make the decision about how to transport the goods (means of transportation), or does your client decide that?
4. How do you decide what means of transportation to use?
5. How do you decide which carrier to use?
 - a. Different depending on the client?
6. What do you value in a carrier? What aspects are important of the service offered? What are the consequences (negative or positive) in practice? (What are the end goals?)
7. Who is responsible when products are broken in transit?

9.1.3 Customer Experts

1. Why do you believe shippers hire forwarders?
2. How do you believe clients decide what means of transportation to use?
3. How do you believe clients decide what carrier to use?
4. What do you believe customers value in a carrier? Why?
5. What do customers value in the services offered to them? What aspects are important?
6. What are the consequences (negative or positive) in practice?
7. What are the end goals a customer wants to achieve using that service?