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Bridging the Supply and Demand Gap:

Growing the Demand of a Cartonboard Product in the Chinese Market

Master's Thesis in the Master's Program Supply Chain Management

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Abstract

A company, in this report, referred to as Global Forest is a leading supplier of cartonboard that recently initiated operations of a new cartonboard mill in China. The new machine will produce a mix of five products and will drastically increase the company's supply of board products in the Chinese market. One of the five products is called Eucalyptus, this product is the focus of the master's thesis. The Chinese market for the product group of Eucalyptus is small and inexperienced compared to other markets globally. The main reason for the lack of market adoption of Eucalyptus is believed to be caused by a unique feature of the product's appearance. The recently increased supply of Eucalyptus and the low market adoption has resulted in a supply and demand gap. The total cartonboard market is characterized by a general oversupply which further increases the supply and demand gap of Eucalyptus. Due to operational constraints of the mill the supply of the product is assumed to be constant for the coming years. Efforts to bridge the supply and demand gap can thus mainly be performed on the demand side, why the market strategy for demand creation needs to be assessed.

In order to increase the demand for the product the current market situation needs to be understood. This was performed in the study by conducting a market opportunity analysis. Based on the outcome of the analysis a business model was designed where target segments, value propositions, channels and customer relationships were outlined. It is believed that large growth can be generated by entering new application areas in the market. A driver for value creation lies in a natural trend observed in their market. The share of direct business needs to be increased in order to reduce dependency on merchants and to ensure visibility and control in the value chain of Eucalyptus. Furthermore the company should focus on establishing relationships with brand owners as this offers Global Forest insights in consumer preferences and market feedback.

The process of growing demand is challenging for many companies and the structured approach presented in the case of Global Forest can be used as a reference case for other companies facing similar challenges.

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Terminology

Brand owner	The brand owners manage brands to create value for the consumer market. The brand owners are the customers of the converters, the firms in need of packaging.
Converter	The actor in the the value chain of packaging material that converts the cartonboards from reels or sheets into boxes, baskets, sweeps or other forms of packaging. The converters also do printing of the cartonboard.
Fiber based material	Materials that are made from fibers from trees.
Food safe	Means that the board is certified to be used as primary packaging for food, meaning direct contact between the food and the cartonbaord is safe for the consumer.
Merchant	Merchants are middle-men between the cartonboard supplier and the converters. They provide services such as storage, sheeting and express lead times.
Recycled board	Refers to the cartonboard where recycled fibers are partly used.
Sheeting	The process of cutting cartonboard delivered on reels (large rolls) into smaller sheets to be stored on pallets.
Virgin fiber board	The fiber comes from new trees, meaning there are no recycled fibers.
Yield advantage	The concept of cost saving from a board that is bulky meaning it has low weight per area providing the same thickness and strength as that of a heavier board.

1 Introduction

Bridging the supply and demand gap has traditionally been a challenge for manufacturing industries to overcome. A sector where this challenge is of particular interest to study is the paper and cartonboard industry due to the operational characteristics of large paper and board mills. The investment in a paper or board mill is highly capital intensive and to be profitable the machines are in operation 24 hours a day almost 365 days a year. The cartonboard volume supplied from a board machine is therefore large and nearly constant. Efforts to bridge the supply and demand gap can thus mainly be performed on the demand side why the market strategy for demand creation is crucial for these companies to assess.

A Nordic forest company, in this report referred to as Global Forest, is one of the largest global producers of paper, cartonboard, biomaterials and wood products. The production facilities have until now mainly consisted of paper and board mills located in the Nordic countries but in 2016 the company expanded its production footprint by initiating operations of a new cartonboard mill in China. The new machine will cause a drastic increase in supply resulting in a supply and demand gap. The new board machine will produce a mix of five products that have all previously been produced in the Nordic mills and sold to the Chinese market through export to a limited extent.

The five products that will be produced in the new machine differ in terms of technical characteristics, appearance and their feasibility for certain application areas. All of the products can be classified into larger product groups where the names of the product groups are commonly used terminology in the industry. One of the five products produced at the new mill, referred to as Eucalyptus in this report, is the focus of this master's thesis. Eucalyptus belongs to a product group of products with similar characteristics. Compared to the other four products produced in the mill this product as well as the whole product group has previously only been used to a limited extent in the Chinese market. Global Forest thus want to increase their knowledge about the market potential of Eucalyptus specifically. The so far limited market size is believed to be caused by certain unique characteristics of the product that have not been accepted by consumers to the same extent as consumers in Europe and North America. Because of this, Eucalyptus can only be found in one application area in the consumer market while it is used for several different application areas in Europe and North America. A second reason is believed to be that there has been no domestic supplier producing the product before. The new board machine, therefore, presents an opportunity for the company to offer this niche product to the Chinese market as the only domestic supplier.

As mentioned above the current market size of Eucalyptus and its product group is very limited in China. The new board machine will increase the supply heavily which will lead to a large gap between supply and current domestic demand. The company aims to bridge this gap in order to succeed in the market. The supply for the coming years has been determined in long term production plans and is therefore assumed to be constant for this thesis. The main task then lies in expanding the demand for the product, which implies that a strategy for how to grow the market needs to be outlined.

1.1 Purpose

The purpose of the master's thesis is to *design a business model for how Global Forest can grow the demand for the product Eucalyptus in the Chinese market in order to bridge the supply and demand gap.*

1.2 Delimitations

The project focus is on the specific case of Eucalyptus produced at the company's mill in China. Hence, other products manufactured at the mill and sold in the Chinese market are not analyzed, neither has the production of the product in the European mills been taken into consideration. The business model that has been developed is aimed towards the Chinese market, and other country markets are therefore not reviewed in the project. The export volumes of the Chinese mill are currently small and believed not to have any impact on the conclusions of the paper, why they are left out from analysis in this thesis.

Since the master's thesis presents sensitive information regarding the company's market strategy certain names and terms have been renamed or left out in the report. No detailed information on market sizes and prices will be presented due to confidentiality reasons.

1.3 Problem Formulation and Research Questions

This section aims at breaking down the purpose of the thesis into a problem formulation with related research questions. The frameworks used for answering the research questions are also presented briefly.

Global Forest faces the challenge of growing the demand for Eucalyptus in China. One reason for this is because of the small market size of the product. Another reason for this is caused by a current situation of oversupply of virgin cartonboard in China. Owing to a previous situation of undersupply of virgin cartonboard in China, a large number of cartonboard suppliers decided to enter the market at the same time. This new market situation makes the process of growing demand even more challenging for the company. Sales and marketing activities performed by the company will therefore be of large relevance for succeeding with this why it is necessary to understand and investigate them further. Kuada (2008) states that to understand which marketing activities are important for a company to undertake, insights on current and future customer needs are crucial to possess.

According to the author this information is most efficiently collected by performing a market analysis. Kuada (2008) has proposed several steps for how to perform a market analysis where the process of conducting a Market Opportunity Analysis is of importance in this case. This analysis will investigate four different components that together form a description of the current situation. This base can later be used to design the business model upon and is crucial to do as a first step to gain insights about the current market situation. Accordingly, the first research question has been formulated as:

- What are the current characteristics of the market for the product group that Eucalyptus belongs to?

The challenge for the company to succeed in the Chinese market with Eucalyptus lies in being able to grow the demand. The process of creating demand is closely linked to the process of creating value and is therefore crucial for companies to determine in order to succeed in the market. A business model can be utilized to describe and outline value creation.

Osterwalder and Pigneur (2010) define a business model as "the rationale of how an organization creates, delivers and captures value" (p. 14). A business model is therefore a relevant model to use for any company wishing to create value and by that demand. To understand and decide on how the business model should be designed, based on the market analysis performed earlier, is thus an important part of the master's thesis project. Because of this a second research question for the thesis has been formulated as:

- How should the business model for Eucalyptus on the Chinese Market be designed in order to increase demand?
 - Which are the target segments and target application areas for Eucalyptus?
 - How should the value proposition for Eucalyptus and its market be formulated?
 - Through which distribution and communication channels are the market most effectively reached?
 - What types of customer relationships should be established to achieve a desired position in the value chain?

2 Theoretical Framework

According to Kuada (2008) there is a general agreement among marketing scholars that market information and knowledge is crucial to possess in order to achieve effective management of a firm. To gain understanding of which marketing activities are necessary for a firm to pursue in order to achieve goals managers need insight in current and future customer needs. This information can be collected through performing a market analysis and Kuada (2008) has therefore suggested the following nine steps for companies to undertake in their value creation and delivery processes:

1. Deciding on the product design
2. Setting marketing objectives for the product
3. Conducting a Market Opportunity Analysis
4. Selecting target markets
5. Analyzing marketing strategy options
6. Assessing reactions of business environment to the different strategy options
7. Ranking the strategy options in terms of goal attainment index
8. Making suggestions and recommendations
9. Designing an implementation plan

Of the mentioned steps above the two first are already decided on in the case of Global Forest and are therefore not relevant to analyze further for this study. The third step, conducting Market Opportunity Analysis, is of fundamental relevance when analyzing current knowledge about the market and will therefore be the main model used to answer the first research question of the thesis. Steps four to six will in this study be performed by using Osterwalder and Pigneur's (2010) Business Model Canvas, which aims to answer the second research question of the thesis. Steps seven to nine will be performed in collaboration with the company in the final stage of the project. The theoretical framework is structured around the two main theoretical models mentioned above, namely Market Opportunity Analysis and Business Model Canvas.

2.1 Market Opportunity Analysis

Kuada (2008) describes that "market opportunity depends not only on the size of the potential demand but also on how well demand is already being served by other firms, foreign or local" (p. 81). Because of this it is of importance not only to address the market size but also marketing activities required to satisfy market needs as well as the quality of competitors marketing strategies (ibid). Kuada (2008) has proposed a framework for conducting a Market Opportunity Analysis illustrating four components of analysis as well as three components that will form the outcome of analysis, illustrated in Figure 1 followed by a more detailed description.

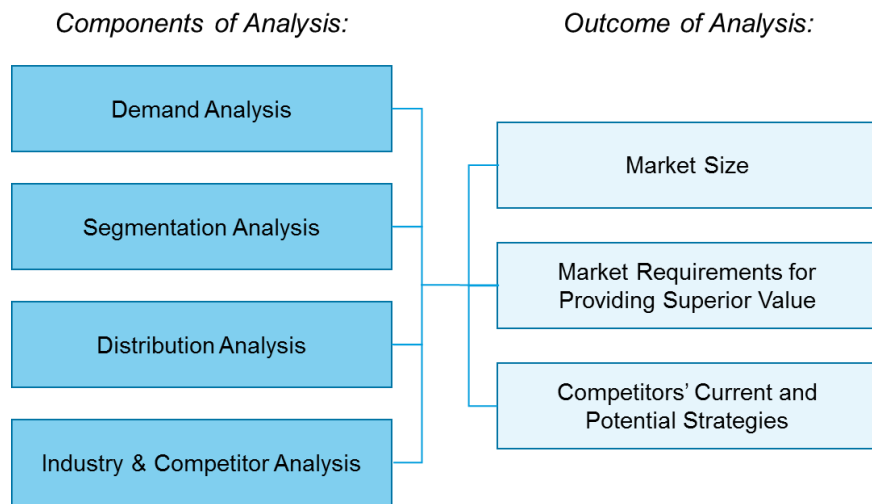


Figure 1 Model for structuring of a Market Opportunity Analysis by Kuada (2008)

2.1.1 Demand Analysis

A basis for consideration when assessing the opportunity of new markets is the estimated size of demand (Kuada, 2008). When considering the market size the assessments should also be made with regard to the expected profit margin of the product sold. To grasp the opportunity in a new market it is important to understand the different parts of the suggested market, starting with the potential market. The *potential market* is the set of customers who have in some way shown an interest in the product or service. However, not all of these customers may have the willingness to pay for the product. The part of the market that has both the interest and have the sufficient financial prerequisites is called the *available market*. Based on internal strategy the company can then choose a *target market* which is the part of the available market that the company chooses to target.

When assessing the potential market it is important to consider the following categories of demand: *incipient demand*, *latent demand* and *current demand* (Kuada, 2008). Incipient demand refers to the expected demand of the future. The latent market demand refers to an untapped demand where there is a need but no company has discovered it and offered a solution. The current demand is the existing market demand, made up of the customers willing to pay the price the selling firm is charging for the product or service. When assessing demand it is also of interest to understand the original source for the demand and how it correlates by other types of demand. Doyle (2016) describes the term derived demand as the mechanism where demand for industrial goods is derived from the consumer market demand. Because of this it is of high importance for companies to understand the relationship between different types of demands since the consumer market indirectly will be the driver of demand in their respective industry (ibid).

2.1.2 Segmentation Analysis

According to Kuada (2008) segmentation refers to the division of a heterogeneous market into smaller segments with more distinct features. The aim of segmentation is to find distinct groups of customers that behave in a similar way and will respond alike to marketing efforts. The segmentation analysis might lead to the selection of a few segments based on the growth rate and potential growth within the segments as well as the degree of competition within the segment.

Traditionally, marketing in business-to-business environments has focused on two stages; multiple suppliers that compete for multiple customers. When taking a third stage into consideration, the customer of the customer, it becomes a multistage market and complexity is added as it becomes more difficult for the firm to align the marketing strategies necessary to reach the different stages (Robert, 2016). In a multistage market the buying firm can be referred to as the first-order customer while the customer of the buying firm is referred to as the second-order customer. In the case of business-to-business market segmentation the segmentation of direct customers is valuable. However, in cases where

there is intense competition managers are required to go beyond the direct customer. By considering the customer's customers or even the end consumers, new market opportunities can be identified (ibid).

Robert (2016) suggests adopting a three-dimensional approach to market segmentation in multistage business-to-business markets. The approach considers the following three elements:

- Purchasing behavior and characteristics of the buying firm (first-order customer)
- The objectives of the buying firm or the benefits the firm receives from selling the product
- Characteristics, needs, attitudes and behaviors of the buying firm's customer (second-order customer)

2.1.3 Distribution Analysis

Kuada (2008) emphasizes distribution analysis to understand through which channels the market is being reached and what opportunities are being missed by not having established presence in certain distribution channels. Dent (2008) states that for any company to be able to reach its targeted customers and grow their market share they need to outline a distribution model. Dent (2008) stresses that this distribution model needs to be aligned with the rest of the business model and be suitable for both the supplier itself but also the intermediaries needed to reach the market.

According to Gadde (2004) technical developments in production, transportation and information systems have resulted in new distribution channel setups. Due to larger activity interdependence between firms and reliance on resources controlled by other actors, companies are today more integrated than before. Gadde (2004) describes this trend as a development of channel relationships from a transactional approach towards collaborative relationships relying on trust and information sharing. Many distribution setups can more accurately be viewed as networks rather than single channels. One aspect of the networks that is more complex to understand than earlier is, as described by Dent (2008), the ability to calculate costs and profits of different routes within the distribution network. According to the author very few companies today can accurately describe the economic impact of different routes. Companies that succeed in doing this will have the opportunity to reduce the costs of the distribution setup greatly. To accurately be able to measure the cost for different routes helps to design an efficient distribution model that will increase the competitive advantage of the company.

Apart from deciding on logistical setup when designing the distribution network it is also important to outline which actors should be collaborated with. According to Rose and Shoham (2002) manufacturers benefit from maintaining and building relationships with a few selected actors rather than maintaining a large network of weak connections to actors. This highlights the importance of carefully designing the distribution network and selecting which actors to collaborate closer with than others.

2.1.4 Industry and Competitor Analysis

To perform the industry and competitor analysis Kuada (2008) suggests using Porter's (1979) five forces as a basis. The framework presented by Porter includes five forces that need to be understood by a firm in order to cope with competition in its industry and is illustrated in Figure 2.

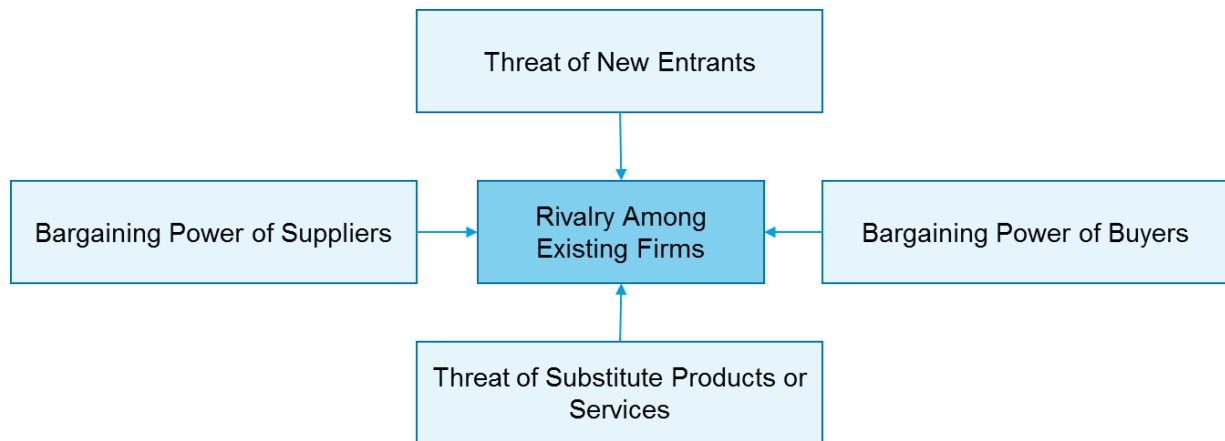


Figure 2 Porter's (1979) five forces

The first force described by Porter (1979) is the rivalry among existing firms. The degree of rivalry depends on how different tactics related to for example pricing and product introductions are usually performed in the industry. These tactics are in turn dependent on the current market situation in terms of number and size of actors, industry growth and ratio between fixed and variable costs. The rivalry among firms is usually higher in mature industries.

The second force presented is the threat of new entrants. Porter (1979) describes that the threat of new entrants depends on the level of entry barriers in the industry. New entrants bring new capacity, a desire to gain market shares as well as substantial resources which can upset the current balance in the market.

The third and fourth forces relate to the bargaining power of buyers and suppliers in the market. For a company it is important to understand how both of these forces will affect the firm since they will be exposed to this both up- and downstream in the value chain. Porter (1979) describes that a company's suppliers can exert their power by either increasing prices or by reducing quality. In the same way customers can either force suppliers to a reduction of prices, demand higher quality or additional services. When actors are exploiting their power in these different ways they can squeeze the profitability in the value chain leading to eroding margins for other actors. Powerful suppliers are usually large and supply unique or differentiated products while powerful customers usually buy standardized products.

The fifth and final force described by Porter (1979) is the threat of substitute products or services. A shift to substitute products can often occur rapidly and usually leads to price reductions or demand for improved performance in the industry. Two types of products that are of certain threat to a firm are products that are improving the price performance tradeoff or products produced by companies earning high profits.

2.1.5 Outcome of Market Opportunity Analysis

A Market Opportunity Analysis will result in an understanding of three things of interest and relevance for managers. According to Kuada (2008) these are:

- The country market's size and growth potential
- Market requirements for providing superior value
- Competitors' current and potential strategies

These elements will provide necessary knowledge of current market conditions and needs of customers to move forward with designing a market strategy to reach the desired market.

2.2 Business Model Canvas

The following chapter will describe the design of a business model. This is done through the framework of the Business Model Canvas by Osterwalder and Pigneur (2010). The aim with using the model is to create a common understanding of how a company intends to create profits. The model consists of nine building blocks, illustrated in Figure 3.

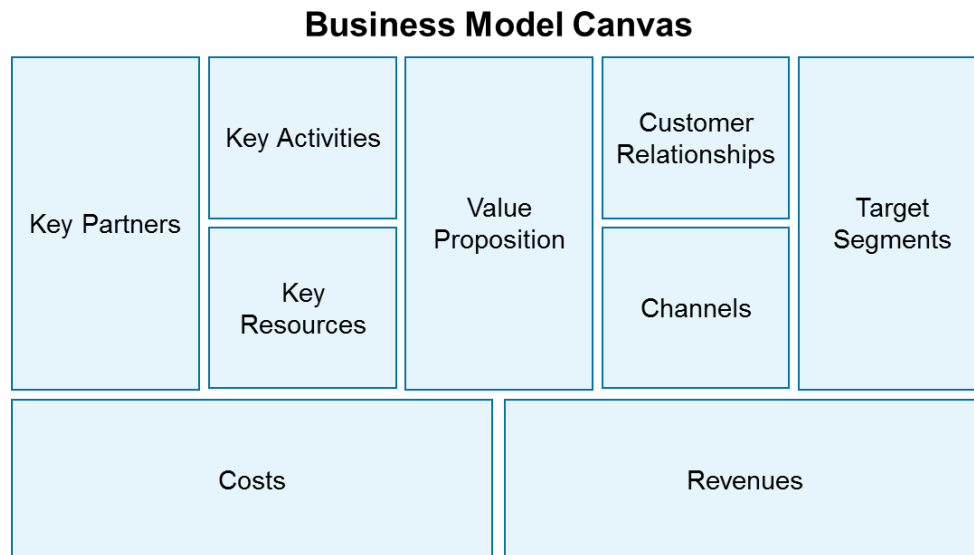


Figure 3 Business Model Canvas framework by Osterwalder and Pigneur (2010)

Except for designing the business model through the nine building blocks, Osterwalder and Pigneur (2010) propose to perform continuous environmental scanning. This has become increasingly important because of the growing complexity of the economic landscape, greater demand uncertainty and severe market disruptions. To understand and account for context specific constraints the authors suggest different areas that should be mapped and analyzed. These are: market forces, industry forces, key trends and macroeconomic forces. The first two areas are similar to the components included in the market opportunity analysis and will hence not be brought up further in this section. For the third factor, key trends, Osterwalder and Pigneur (2010) name four trends to analyze. These are: technology trends, regulatory trends, socioeconomic trends and societal and cultural trends. The purpose of the analysis is to identify how for example demographics, local tax regulations and technology trends will affect the business model. The last factor, macroeconomic forces, is outside the scope of this thesis and will be excluded from further analysis.

2.2.1 Building Blocks of The Business Model Canvas

The core of the Business Model Canvas consists of nine different building blocks presented below. The chapter is based on theories presented by Osterwalder and Pigneur (2010).

2.2.1.1 Target Segments

In the target segments building block the group or groups targeted by the enterprise are defined. The segments the enterprise aims to reach and serve can be defined according to common needs or behavior, be served through the same channel, have similar relationships to the enterprise or have the same profitability for the enterprise. Without the ability to effectively reach and maintain their customers no enterprise can survive in a long term perspective. A business model may define one large segment or several small and similar segments. After having decided what segments to target the canvas can be designed around these customer groups. The customers constitute the most central part of the Business Model Canvas.

According to Evans and Webster (2007) segmentation is also a way of distinguishing between customers with different price sensitivity. Based on price sensitivity different offers can be designed to effectively

reach the target group. For example, a company might offer a basic product as well as a premium product to satisfy the different segments.

2.2.1.2 Value Proposition

A value proposition describes the product and/or service and how it will create value for the targeted customer segment. The value proposition explains how a need can be satisfied or a problem solved, it simply states why a customer would turn to one company over another. According to Anderson et al. (2006) the term value proposition has become one of the most widely used terms in business markets, yet there is usually no general agreement within a company or industry of what a value proposition clearly should consist of. In a study carried out by Frow and Payne (2011) it was shown that while most companies use the term value proposition in everyday discussions only ten percent formally develop, communicate and use their value propositions. A second study performed by Frow and Payne (2014) studied how the process of designing value propositions in large firms and showed that the involvement of the marketing function is of high importance to successfully communicate the value proposition to the market.

The value of the value proposition can, according to Osterwalder and Pigneur (2010), be expressed in either quantitative terms (for example price or speed of delivery) or qualitative terms (for example design or user experience). The value proposition may also offer newness to the customer, which will solve a problem or fulfill a need that the customer previously did not know of. Value is commonly created by improving the performance of a product or a service and can thus create a growth in customer demand. Some demands are individual and require a very specific solution and in these cases value is created through customization.

2.2.1.3 Channels

The different channels explain how a company will communicate with and reach their target segments in order to deliver their value proposition. The channels constitute the interface with the customers for communication, distribution and sales. The five main functions as well as five distinct stages of the channels are:

1. To raise *awareness* of the product and/or service
2. To help customers *evaluate* the value proposition
3. To allow customers to *purchase* the specific product and/or service
4. To *deliver* the value proposition to the customers
5. To provide *post-purchase* (after sales) support to the customer

A channel can either be direct or indirect for example through a merchant. It can also be either owned by the company itself or delivered through a partner where the latter alternative is often the case when an indirect channel is used. There are benefits and drawbacks of the different options and it is important to find the right balance and mix between channels in order to deliver the value proposition to the customers in an efficient way. When deciding on the appropriate channel or when designing the channels there are several questions that need to be answered. For example, there needs to be an understanding of how the customers want to be reached, how they are being reached today, if and how the channels are integrated and which of the current channels that is the most cost-efficient.

2.2.1.4 Customer Relationships

The customer relationships block of the business model describes the type of relationship the company aims to establish with each customer segment. It is important to clarify the type of relationship since this will have a fundamental impact on the overall customer experience. The choice of customer relationship is generally driven by three different motives. They are: the acquisition of new customers, customer retention or the boosting of sales. The choice of relationship is somewhat dependent on the

maturity of the market. As in the case of channels it is important to have an understanding of what the customers expect from a relationship, what the relationship looks like in the current setup, which relationships are the most costly to maintain and if there is some level of integration between the channels.

2.2.1.5 Revenue Streams

The revenue streams block represents how cash is generated from each customer segment. The company needs to understand what the different customer segments are willing to pay for the value proposition the customer is being offered. By answering this question accurately the company can optimize their revenue creation. Other important questions to answer are what are the customers paying today, how is the payment made, how would the customer prefer to pay and how are the different streams contributing to overall revenues. There can be several revenue streams from a single channel or from one customer segment. In broad terms there are two types of revenue streams. These are transactional revenues from a one-time payment or recurring revenues from ongoing payments.

2.2.1.6 Key Resources

The key resources block describes the most important assets needed in order to make the business model function. The resources are required to create and offer the value proposition, to reach the targeted customer segments, maintain relationships with suppliers and customers and to generate revenues. The resources can be divided in the following four main categories: physical, financial, intellectual or human. The resources can either be owned, leased or acquired through partners.

2.2.1.7 Key Activities

The key activities block describes the activities that are required for the company to perform in order to operate successfully and to create value through their business model. Like the key resources the key activities are needed to create and offer the value proposition, to reach the targeted customer segments, maintain relationships with suppliers and customers and to generate revenue streams. To fulfill this the company needs to understand what activities are required for enabling distribution through selected channels and how to establish adequate customer relationships and revenue streams.

2.2.1.8 Key Partnerships

The key partnerships block of the business model describes the network of suppliers and partners that enable successful operation of the business model. The reason for forming partnerships is to optimize the business model, reduce the risks associated and to acquire key resources that are not available in-house. The authors, Osterwalder and Pigneur (2010) have identified four main types of partnerships, which are:

- *Strategic alliances* between non-competitors
- *Coopetition*, strategic partnerships between competitors
- *Joint ventures* to develop new business
- *Buyer-supplier relationships* to assure reliable supplies

2.2.1.9 Cost Structure

This building block describes all costs incurred while operating the business model. The activities of creating and delivering a value proposition, maintaining customer relationships and generating revenue all give rise to costs. By identifying the key activities, resources and partners the costs can be estimated.

According to Osterwalder and Pigneur (2010) there are two main types of cost structures of business models. The cost structure can be defined either as a cost-driven or a value-driven cost structure. In a cost-driven business model there is a focus on reducing the costs where it is possible. A value-driven business model focuses instead more on creating value for its customers and less on the costs of operating the business model.

2.3 Business Model Implementation Process

When market information has been collected, understood and a business model has been designed the next step is to implement and manage the business model (Osterwalder and Pigneur, 2010). The activities related to implementation and managing phases are described below.

The implementation phase refers to the execution of the business model that has been decided upon in the previous process. In order to implement the model, related projects need to be defined and milestones decided upon that will guide the business plan of the implementation project. It is particularly important to manage the uncertainties associated with implementation. To hedge against risks there needs to be mechanisms in the organization that quickly adapt to feedback from customers and other stakeholders.

The final phase of the business model generation process is managing. This refers to adapting and modifying the business model in accordance with the reactions of the market. There should be continuous evaluation of the business model to understand how it is affected by external forces and changing environments in the long term.

3 Method

The following chapter describes the method of the research by first introducing the research approach and research strategy of the thesis. Second, it describes how primary and secondary data has been collected through interviews, site visits and market reports. The third and fourth sections describe how the analysis of the data was performed as well as how quality assurance of the study was assessed.

3.1 Research Approach

According to Patel and Davidson (2003) there are two main approaches to conducting a research project: either an inductive or a deductive approach. In areas where there is a lack of conducted investigations and the amount of collected information is scarce, an inductive approach is to be preferred. Taking an inductive approach will build a basis for future studies in the same area. A deductive approach on the other hand utilizes existing information within an area to conduct further research within the same area. This approach presents the opportunity to expand or dig deeper into a specific area.

The research work performed for this report was based on an inductive approach. Empirical studies of Eucalyptus in the Chinese market were conducted to gain understanding of which customers and what application areas the company should target. This was due to the fact that the product previously only had been imported and sold in the Chinese market in small quantities. Thus, there was limited knowledge about its potential for different application areas.

3.2 Research Strategy

Bryman and Bell (2011) divide research strategy into two main types defined as quantitative and qualitative. Quantitative research is conducted when the project at hand demands data that has to be of a measurable character. Qualitative research is more suitable for example when there is a need to understand incentives, beliefs or motives. Decision on what strategy to pursue depends on the kind of data the project needs.

In the case of the market expansion of the product Eucalyptus in China a qualitative research strategy was proposed as the main strategy. The qualitative approach was applied when identifying which application areas and customer segments to target and also used when pursuing to understand how the business model of the product should be outlined. The design of the business model was based on thorough collection of opinions, views and preferences of key actors in the Chinese market.

3.3 Data Collection

Yin (2014) states that it is of importance to have several sources of data when performing a research study. Multiple sources should be utilized in order to eliminate the possibility of subjective viewing. In the market study performed several sources of information were therefore used as a basis for further analysis. Two main types of data have been collected: primary data through interviews and site visits and secondary data through market reports and internet based information sources. Primary data refers to information collected for the sole purpose of a research project (Eriksson and Wiedersheim-Paul, 2008). This implies that the data collection and type of data collected can be tailored to the research needs. The largest disadvantage lies in the often time consuming and expensive process of collecting the data (ibid). Secondary data refers to data collected by other researchers or institutions for other purposes (Bryman and Bell, 2011). Most often it offers high quality data in a time efficient manner. There are also some risks associated with the use of secondary data, these are lack of familiarity of the data, complexity of the data and insufficient control of data quality (ibid). The data collection approaches are described in more detail in the following section.

3.3.1 Primary Data

The main research strategy of the master's thesis was qualitative and the majority of the requested data was collected through interviews. The interviews that were conducted in the study were held in a semi-structured nature. A semi-structured interview refers to the context where the interviewers have a series of question to ask according to a predefined interview schedule but the order of the questions is allowed to vary (Bryman and Bell, 2011). Interviews have been held both internally at the company and with external actors and serve different purposes for the study, these are described below.

Interviews with employees at Global Forest were conducted in order to gain understanding of the product, how it has been used in other markets and what challenges were faced during the initial introduction of the product to other markets. The interviews were carried out through video conference or face to face at the Global Forest offices in Sweden or China. The interviewees at the company held the positions of Segment Sales Director, Regional Sales Manager, Product Manager, Logistics Director, Supply Chain Manager, Technical Service and Quality Manager as well as Customer Service Manager.

Within the company, the Chinese market is divided into four main regions. These are: North, East, South and West. Interviews with different actors in the value chain were carried out in all four regions. Locations and type of actor interviewed are illustrated in Figure 4.

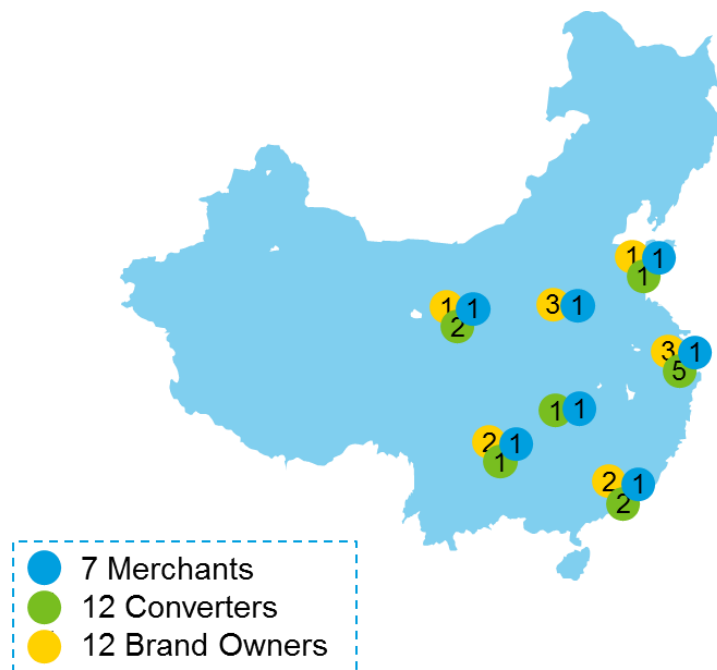


Figure 4 Locations of interviewed actors in China

The actors interviewed are the three key actors in the value chain of Global Forest, namely merchants, converters and brand owners. The role of these are described in more detail in Chapter 4.3 Distribution Analysis. Both existing and potential customers were interviewed. The interviewees generally held positions within purchasing, packaging engineering, marketing, research and development or quality. About half of the interviews were held in English while the remaining interviews were conducted using a translator that was well informed and knowledgeable about the market study. The questions that were asked during these interviews mainly regarded the perception of the product, technical constraints, market needs, service requirements and market trends (see Appendix for interview questions). In total 31 interviews were conducted, seven with merchants, twelve with converters and twelve with brand owners. All interviewed actors are illustrated in Figure 5 where they are grouped into regions and four segments that will be presented in Chapter 5.

	East	West	North	South
Merchants	✓ Merchant 1	✓ Merchant 2 ✓ Merchant 3 ✓ Merchant 4	✓ Merchant 5 ✓ Merchant 6	✓ Merchant 7
	Target Segment A	Target Segment B	Target Segment C	Target Segment D
Converters	✓ Converter 1 ✓ Converter 2 ✓ Converter 3	✓ Converter 4 ✓ Converter 5 ✓ Converter 6	✓ Converter 7 ✓ Converter 8 ✓ Converter 9	✓ Converter 10 ✓ Converter 11 ✓ Converter 12
Brand Owners	✓ Brand Owner 1 ✓ Brand Owner 2	✓ Brand Owner 3 ✓ Brand Owner 4 ✓ Brand Owner 5 ✓ Brand Owner 6 ✓ Brand Owner 7	✓ Brand Owner 8 ✓ Brand Owner 9	✓ Brand Owner 10 ✓ Brand Owner 11 ✓ Brand Owner 12

Figure 5 Mapping of interviewed actors in different regions and segments

In conjunction with the interviews several site visit took place. The observations made during these visits have served as clarifications to the interviews as well as added complementary information about practical constraints and opportunities. A visit to the company's Chinese cartonboard mill was also conducted and brought deeper understanding of the manufacturing environment.

3.3.2 Secondary Data

The collection of secondary data has served as a complement to the primary data collection. This data has mainly consisted of market and industry reports from consultancy companies specializing on the forest industry. Secondary data also consisted of data regarding market sizes, market shares and how cartonboard is used in different application areas from the global market intelligence publisher Euromonitor. This data provided insight on consumer and segment statistics specific for the Chinese market. The information gained through secondary data was used as basis to map the current market state and to give information about the competitors since it is difficult to collect this kind of information regarding competitors through interviews.

One issue that was found when analyzing secondary data presenting market sizes was that translation between different units was difficult to perform. Traditionally in the cartonboard industry market sizes are expressed in volume of cartonboard as tons. The data collected from Euromonitor only measures the monetary value of goods sold in a specific application area. Because of this the market sizes collected from Euromonitor could only serve as a guidance for how large the consumer market is in China and not present the exact size of the cartonboard market for the respective application area.

3.4 Data Analysis

In parallel to the data collection, the data has also been analyzed according to the methods described above. The theoretical models presented in Chapter 2 have been used to structure both collection and analysis of data. The data collection and data analysis were conducted iteratively so that learnings from earlier work could be applied in later stages of the process.

Since over 30 interviews were performed during the study, there was a large amount of input data to process for the design of the business model. To structure the findings, graphs and tables were created for the type of questions that had generated short answers. For example this could be done for questions such as, "do you prefer to purchase cartonboard in reels or sheets?". By illustrating the data in this way it was easy to understand the characteristics and preferences of the interviewed companies. For questions and answers that were more complex and could not be illustrated as graphs or tables, key points were written to summarize the most important aspects.

During the project several internal workshops and presentations were held at Global Forest as part of the data analysis. As a first part of the workshop, insights and data from performed visits were presented to create a common understanding of the situation. By doing this, data was verified continuously by experienced managers that could confirm or dismiss different hypotheses. As a second part of the workshop, exercises and discussion on selected topics were organized in order to gain deeper understanding of the current situation as well as to generate ideas for how the company should fulfill customer needs identified during interviews.

As a last part of the project, an implementation plan for how to move forward with the conclusions was made. This was created together with company during a final presentation and workshop session. The implementation plan will be put into practice by the company themselves.

3.5 Quality Assurance

Yin (2014) describes the term triangulation as using several different sources of information that proves the same point. This leads to higher reliability of the research made. Yin (2014) also states that triangulation can be made for the method which is performed by combining qualitative and quantitative studies. This will assure high quality of the conclusions since a hypothesis can be proved independent of which research strategy that is used. Another dimension to review when assessing the quality of research is the process of respondent validation (Manuel, 2004). This means that interviewees receive a summary of the given answers after the interview and can by that correct the information if needed. This will eliminate misunderstandings and ensure high quality of the collected data.

To evaluate the quality of the research conducted in the study of Eucalyptus several aspects of the process need to be assessed. An aspect to evaluate is that the study has only included qualitative studies and findings could thus not be confirmed with quantitative studies as recommended by Yin (2014). However, since more than 30 interviews were held it is believed that the information base collected is large enough to bring reliable input to the report. To exclude the risk of collecting subjective data, multiple interviews were performed for each type of actor in the value chain as well as for each of the four target segments described in Chapter 5. An overview of the interviews performed can be seen in Figure 5 presented earlier. Assumptions based on collected data were also dismissed or confirmed by comparing primary and secondary data in the analysis.

The process of respondent validation described by Manuel (2004) was not applied to the project due to language barriers. However a form of respondent validation was instead performed through the internal workshops and presentations that were held during the project. These sessions helped verify the collected data and gave insights on how to continue the work ahead. Apart from these sessions, weekly meetings were held with several internal stakeholders of the project in the company to align the work with other internal divisions. It is therefore believed that the research strategy and methods used assure high quality of the research performed.

4 Market Opportunity Analysis

This chapter describes the Market Opportunity Analysis that was performed in the study. The analysis will answer the first research question formulated as “What are the current characteristics of the market for the product group that Eucalyptus belongs to?”. The market analysis follows the structure of Kuada’s (2008) Market Opportunity Analysis and presents market information through the four parts: demand analysis, segmentation analysis, distribution analysis and industry and competitor analysis. The last section of the chapter will conclude the outcome of the market opportunity analysis by briefly describing the three elements market size, market requirements for providing superior value and competitors current and potential strategies.

4.1 Demand Analysis

As described by Kuada (2008) the demand analysis aims to create an understanding of the current size of demand as well as how it is estimated to grow or decline in the future. Traditionally the cartonboard market can be divided into two parts, either virgin fiber board, which is board produced from new fibers only, or recycled fiber board. The product Eucalyptus is made of virgin fibers why it is of relevance to study the total cartonboard market in general but the total virgin cartonboard market in particular.

Market sizes were collected from a market report generated by a consultancy company specializing in the forest industry, the information is thus deemed to be reliable. The total market size of cartonboard is usually expressed in number of tons and for the Chinese market this resulted in a number of million tons of cartonboard annually. The virgin cartonboard market is about half the size of the total cartonboard market. The product group Eucalyptus belongs to makes up approximately two percent of the virgin cartonboard market in China, whereas this number is 10-20 percent of market share in Europe or North America (Pöyry, 2016). The numbers confirm the belief of Global Forest that the market is small and has limited knowledge and experience of using products from Eucalyptus’ product group.

Eucalyptus has some distinct product features that affect the demand of the product. The product has high strength, stiffness and is lightweight meaning that the thickness of the board is high in relation to the weight of the board. As the cost of the board is calculated per ton, a board with lower weight per area providing the same thickness and strength as that of a heavier board will lead to cost savings for customers. This is referred to as *yield advantage*. The appearance of the board is unique offering customers the opportunity to stand out from competition. Apart from this Eucalyptus has high moisture resistance and is food safe, which makes it feasible for other application areas in the consumer market.

A reason for why the current market size of the product group of Eucalyptus is limited is due to the fact that the product has only been used for one application area in the Chinese market. The different application areas are discussed in more detail in the next chapter. The reason for this is believed to be caused by one of the unique features of appearance of the board. In Europe and North America the product group can be found in five or more of the application areas which again confirms that the Chinese market has not yet adopted the product fully. The incipient demand relates to the future demand of the one application area where the product group is currently used, while the potential demand from other application areas can be described as latent demand in the market.

The fact that the product group is only used for one application area will affect the growth estimations. Growth numbers found in market reports are based on the estimated growth of the application area and implies that the product group will only grow in the same pace as the end use product will grow. This growth is estimated to be a few percent annually. This type of growth is a result of derived demand described by Doyle (2016) where the demand depends on the growth of another product. However, in the case of Eucalyptus it is likely that large growth can be generated by substituting other cartonboard types by entering new application areas as the market for the product group is not yet mature. To conclude it is therefore deemed possible for the company to drive the growth of the product by entering new application areas rather than waiting for the current application area to grow. To understand how the company could enter other application areas with the product by replacing other types of packaging material, the potential and available market need to be assessed which is further described below.

As described by Kuada (2008) the market can be described as potential market and available market based on interest and willingness to pay for the product or service. These dimensions are relevant to study for the case of Eucalyptus to understand where in the market Eucalyptus has the largest competitive advantage. The first dimension, expressing interest in the product includes all type of products in need of packaging and makes up the available market. To assess the second dimension, expressing if willingness to pay is sufficient, different types of packaging materials have been listed in order of estimated cost per package which can be said to also describe if the product is perceived as either low or high end. The type of packaging material is a relevant factor to use to describe the available and potential market. Based on data collected in interviews the choice of packaging material is often closely linked to the willingness to pay for it.

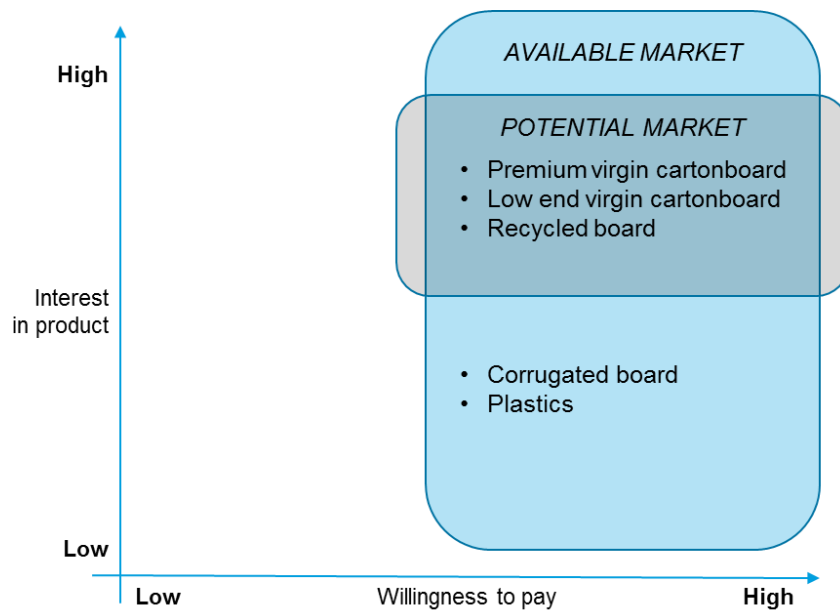


Figure 6 Potential and available markets for Eucalyptus

As can be seen in Figure 6 the potential market mainly consists of the market where other virgin cartonboards are used. In a long term perspective it is possible to extend the potential market to also include low cost packaging materials such as plastics. Global Forest aims to position Eucalyptus as a premium product and the price is relatively high compared to other fiber boards and much higher compared to low end packaging materials such as recycled board and plastics. The highest market potential thus lies in growing the market for Eucalyptus by replacing other virgin cartonboards. A potential consequence of this is cannibalization on Global Forest's other products. Though this is not of a large concern for the company as Eucalyptus is more profitable than the products risking cannibalization. Furthermore, Eucalyptus has been determined to be one of the long term strategic products of the Chinese mill.

To summarize the demand analysis it is clear that the market for the product group is limited in China compared to other country markets. The experience and knowledge of the product is low. Since the market for packaging material is mature and the demand growth is derived from the consumer market, there is an opportunity for the company to speed up the growth by entering new application areas by substituting other packaging materials. The potential market for Eucalyptus consists of at least the market for virgin cartonboard materials and potentially also partly the market for recycled material.

4.2 Segmentation Analysis

As described by Kuada (2008) market segmentation is the division of a heterogeneous market into smaller segments with more distinct features. In the cartonboard industry there is a commonly used

definition and grouping of application areas. This segmentation was found in market reports and was verified by the interviewed actors in the industry. Since this grouping is based on a final application level it mainly takes the characteristics, needs and attitudes of the second-order customers, namely the brand owners, into consideration. In accordance with the approach to multistage marketing suggested by Roberts (2016) all three elements of characteristics of the buying firm, objectives of the buying firm and characteristics of the second-order customers, need to be taken into consideration for analysis. These three elements have all been investigated thoroughly in the study through interviews performed with key actors, both first- and second-order customers.

Based on the data gathered from market reports, visits to retail stores and interviews, eleven possible application areas of Eucalyptus were listed. Based on what type of packaging material is currently dominating the application area they were categorized into three main categories. These were named: Establish, Switch and Grow. Establish refers to application areas where plastics currently are the main packaging material, thus fiber based materials such as Eucalyptus can be introduced to this application area. Switch refers to application areas where other fiber based materials are the main packaging material, the customers can switch from other cartonboard products to Eucalyptus. Grow refers to the application area where other cartonboard products belonging to the product group of Eucalyptus are already used to a large extent. In this group the use of Eucalyptus can be increased further by replacing competitors' products. According to Evans and Webster (2007) it is relevant to distinguish between price sensitivity of customer segments which can be illustrated with the three groups as the cost of packaging material increases from the category establish to the category grow. The categorization made gives an indication of the market acceptance of Eucalyptus within the respective application areas where the acceptance is low for application areas in the Establish category and high in the Grow category. This was also further confirmed in interviews with both first- and second-order customers.

The eleven application areas and their categorization are presented in Figure 7. The real names of the application areas are not presented in the report owing to confidentiality reasons. To give the reader an understanding of the characteristics of an application area, one example of an application area is "Dry Food".

		ESTABLISH <i>Plastics --> Fiber</i>	SWITCH <i>Fiber --> Eucalyptus</i>	GROW <i>Product Group of Eucalyptus --> Eucalyptus</i>	Packaging type: Type 1 Type 2 Type 3
Group X	Application Area 1				
	Application Area 2				
	Application Area 3				
	Application Area 4				
	Application Area 5				
Group Y	Application Area 6				
	Application Area 7				
	Application Area 8				
Group Z	Application Area 9				
	Application Area 10				
	Application Area 11				

Figure 7 Categorization of application areas based on packaging materials used

After the initial segmentation, data on the overall Chinese market size of the respective application areas was collected from Euromonitor. Data on the expected market growth of the respective markets was also collected. The aim of this data collection was to give an understanding for which of the application areas provide the largest opportunity based on market size and forecasted growth.

From the segmentation analysis it was found that division of the market into more homogenous groups is possible. The segmentation is based on factors such as current acceptance of similar cartonboards in the application area and what technical performance is required of the cartonboard. Currently only one application area has adopted Eucalyptus and other cartonboards in the product group to a larger extent. For the other identified application areas the product needs to be established or grown further through switching from other cartonboard products.

4.3 Distribution Analysis

The current distribution setup and value chain of Global Forest's China operation is no single distribution channel but more resembles a network as described by Gadde (2004). Figure 8 gives a simplified illustration of the value chain downstream of Global Forest and the different types of actors within it. The main actors present in the chain are Global Forest who is the packaging material supplier, merchants that provide value-adding services to facilitate the sales process, converters who print and produce the package from cartonboard and brand owners that use the packaging for their consumer goods products.

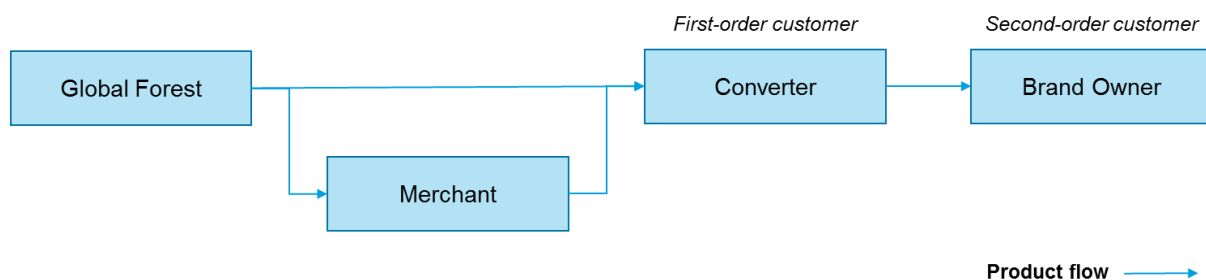


Figure 8 Value chain of Global Forest

Global Forest's sales and distribution channels are either direct to the converter or indirect via a merchant that will buy the material from Global Forest and sell it to the converter at a later time. Many converters state that they prefer buying material directly from cartonboard suppliers when possible. However, certain services from the cartonboard suppliers need to be in place for a direct purchase to be possible. Many of the converters name these requirements as short lead times, the possibility of external storage, long payment terms and allowance of credit payment as well as sheeting services. Sheeting service is the process when large cartonboard reels are cut into smaller sheets to be delivered on pallets. This is needed since Global Forest does not have internal sheeting operations and only sell their cartonboard in reels. As most of the converters print on sheets the cartonboard has to be sheeted somewhere along the value chain which usually takes place at the merchants when needed. A majority of the interviewed converters had the ability to do sheeting in-house but mentioned they appreciate the possibility of purchasing board material directly in sheets.

Due to the operational characteristics of large cartonboard mills, inflexibility in the production and distribution processes occurs. The merchants can help reach the market more efficiently and add flexibility by providing services that the mill is not able to provide itself or has not established yet. These services are, as described above, related to lead times, storage, payment and sheeting. This indirect business will therefore erode the margin for Global Forest but the merchant also provides a value to the company as a business facilitator. The role of business facilitator is very important in certain regions of China where the merchants are key partners in relating new connections for the cartonboard suppliers. Their knowledge of the local market is of great importance which is different from when Global Forest do business in for example Europe. However, the merchants role offer some additional problems apart

from the eroding profit margins compared to direct business. When selling through a merchant it becomes more difficult for Global Forest to map how their products are being used by the second order customers. This results in that control further down in the value chain is lost and the brand visibility of Global Forest is also being deteriorated.

The converters in the value chain are the first-order customers of Global Forest. Global Forest aims to establish direct deals with them when the volume sold is large enough to ensure cost efficient deliveries. If a converter needs smaller batches or other service requirements a merchant is appointed as service provider. When the material is delivered to the converters, they convert the cartonboard to different types of packaging and perform value adding activities such as printing and folding. Generally a converter will specify their production to a few selected application areas. The converter's customers are brand owners. Most converters can offer their customers services such as structural and graphical design. Most converters are also very knowledgeable of cartonboard in general and are important influencers for selling the board to the brand owners.

The brand owners are the second-order customers of Global Forest. For larger global brand owners it is not uncommon that they have internal design and packaging departments that provide detailed product specifications for the converters to work with. When this is the case there is no need for the design services that the converters can offer. Smaller brand owners more often state that they are in need of the design services that the converters offer. Depending on what industry the brand owner is active in they will require very different performance of the cartonboard package they are purchasing. In most cases it is the brand owner that will make the final decision on which specific cartonboard to use. A general description of the process is:

1. A brand owner gives a wide specification of the board with regard to appearance and performance to a converter
2. The converter will select two to three alternatives amongst the cartonboards available to them and recommend to the brand owner
3. The brand owner will make the final decision on which cartonboard to use

The effect the decision making process has for Global Forest is that they need to perform marketing activities focused on both first- and second-order customers since the decision is taken in the interface between them.

As Global Forest's cartonboard mill in China only recently was taken into operation the logistic services and customer service center operations of the mill are still under development. This development for example aims at shortening lead times and ensuring stable supply to the market. Currently the Chinese market is served using flatbeds where it is the most cost efficient alternative. Otherwise the cartonboard reels are ransported by sea to later be transferred to flatbeds closer to the customer.

4.4 Industry and Competitor Analysis

The industry and competitor analysis was performed through the framework of Porter's (1979) five forces. The findings of the analysis are presented in the order of rivalry among existing firms, threat of new entrants, bargaining power of buyers and suppliers and threats from substituting products.

4.4.1 Rivalry Among Existing Firms

The first force of the framework consists of the rivalry among existing firms in the market. By studying market reports and performing interviews with key actors in the market the rivalry is deemed to be relatively high. There are two main reasons for this where the first one relates to the current situation of oversupply of virgin cartonboard in China. A second reason leading to large rivalry among competitors is the fact that cartonboard is a generic and standardized product. Customers have many different suppliers to choose from and the difference between offered products is fairly low. Because of this the

producers need to compete with price and try to be as cost efficient as possible to ensure profitability or to complement the product offering with different services. The oversupply in the market is estimated by market analysts (Pöyry, 2016) to last at least five to ten years and the rivalry is therefore likely to remain high until then.

For the case of Global Forest they have chosen to position themselves as a premium cartonboard supplier. There are a few other suppliers that have a similar strategy and in this end of the market there is lower price competition but more focus on quality and service. Though the rivalry is deemed lower in the high end segment, Global Forest is a new and small player in the Chinese market and needs to grab market shares from others in order to grow the demand for their products. The entry of Global Forest will most likely lead to higher rivalry than before in the virgin fiber cartonboard market.

Globally there are three other large cartonboard suppliers that have products that can compete with Eucalyptus in terms of quality of the board and product type. These are American and Nordic cartonboard suppliers. There are some Chinese suppliers that have the capacity to produce the board, however they have not established a regular production schedule for the board but only produce in small and order based batches. Because of this, they are not considered main competitors for the purpose of this study. It is nonetheless of importance for Global Forest to include these producers in market surveillance in case they start regular production of the product.

Compared to competitors Global Forest has a relatively unique position in the market as the only domestic supplier of the product group that Eucalyptus belongs to. Customers that wish to buy the product and need short delivery times thus only have one option, why the level of competition is reduced. This unique position provides a large opportunity for Global Forest and Eucalyptus. Two of the main competitors are so called solution providers, meaning they sell their board in a bundled solution with packaging machines. The packaging machines are used to fill the cartonboard packages with the products they will protect. Global Forest is currently not providing packaging machines, nor do they have any plans to introduce packaging machines to their offering in the near future.

4.4.2 Threat of New Entrants

The second force describes the threat of new entrants in the market. This aspect is of large importance for the cartonboard industry due to characteristics of a cartonboard or paper mill. The capacity of a cartonboard mill is usually several hundred of thousands of tons annually and a single new entrant can upset the supply and demand balance alone. In the case of Global Forest the new mill has the capacity to produce more than the total size of of the current market of the product group that Eucalyptus belongs to. New entrants in the same product group is therefore a large threat for the company and need to be monitored closely.

Another characteristic of the cartonboard industry is the high entry barriers to the market. The first aspect of this is that the investment is extremely capital intensive which limits the probability that new mills are built. The second aspect is that once the decision to invest in a new mill is taken the time to design and build the mill is long, sometimes up to ten years. To conclude there are high entry barriers and if the decision is taken to enter the other actors have time to consider how the entry will affect them. However the effect from a new entrant can be severe and it is thus necessary to be prepared to take actions when this occurs. Due to the present situation of oversupply there are currently no official plans for new mills in the market by any company.

4.4.3 Bargaining Power of Buyers

The third force brought up in the framework is the bargaining power of buyers. As described by Porter (1979) this power is often larger in markets where the product sold is standardized. This implies that the bargaining power of customers in the cartonboard industry should be fairly large. In the case of Global Forest's customer base it consists of relatively small actors, converters, that provide the final packaging to large, global brand owners. Global Forest has established relationships with both actors and the bargaining power differs depending on which actor in the value chain they are negotiating the deal with.

Converters are usually small players in the market and because of their size they are less powerful than large cartonboard suppliers as Global Forest. However, they have several options to choose from and the product is standardized which implies that they still have some bargaining power they can exert on their suppliers. When instead assessing brand owners they are believed to be much more powerful since they are both large players in the market as well as purchasing standardized products. Furthermore, cartonboard suppliers are usually eager to collaborate with strong consumer brands to increase their visibility in the market which leads to increased power of brand owners. The bargaining power of buyers in the cartonboard industry can therefore be described as high in general and believed to be particularly high in the Chinese market due to the current situation of oversupply.

4.4.4 Bargaining Power of Suppliers

The fourth force brought up by Porter (1979) is the bargaining power of suppliers. The most important suppliers to study in the cartonboard industry are the pulp suppliers since pulp is the main raw material needed for production. A cartonboard producer can either choose to purchase the pulp from independent suppliers or integrate pulp production in their operations and instead source round wood. For the Chinese mill, there is no integrated pulp production and Global Forest needs to source the pulp from the open market.

Wood pulp is a very generic product and the price is therefore usually determined by the market situation and its supply and demand balance. A company not producing pulp itself is therefore highly dependant on the market development and can usually not affect these prices to a large extent. The costs for producing cartonboard will vary depending on market situation and affect the profitability of the cartonboard producer. To conclude, the bargaining power of suppliers in the industry varies depending on market situation and since Global Forest do not have integrated pulp production they will be more exposed to this market force.

4.4.5 Threat of Substitute Products

The fifth and last force of the framework describes the threat of substitute products. A first aspect to mention is the risk of substitution of other types of virgin cartonboard. Even though each cartonboard type has varying suitability for different application areas there is an overlap between the different product groups. This implies that Eucalyptus not only competes with other products in its product group but also with products in other product groups, including those produced at Global Forest's mill. Eucalyptus is a premium product and the price is high compared to other product groups used for similar application areas. There is therefore a risk of customers being willing to lower quality and technical performance of packaging material in order to find less costly solutions by choosing other virgin fiber board materials.

When investigating the packaging materials market it is also clear that for example plastic packaging material is a large competitor to fiber based material. However the current trend in the market seems to be driving the shift from fossil based materials, such as plastics, towards renewable materials, such as cartonboard, due to environmental concerns. The trend can be related to trends mentioned by Osterwalder and Pigneur (2010) as a societal and cultural trend affecting the context of a business model. The trends can be favorable for the market development of Eucalyptus and can be leveraged upon in marketing activities to create larger demand.

To conclude there are some opportunities for Eucalyptus to grow demand through substitution but the high cost of the product can also result in substitution to low cost alternatives for customers that are not willing to buy premium packaging material.

4.5 Outcome of the Market Opportunity Analysis

The market opportunity analysis shows that the current market size is small. The market share of the product group is about one percent of the total cartonboard market and the market for Eucalyptus' product group is only expected to grow with a few percent annually based on the growth of mainly one application area. Today the market has very limited experience of using similar products in other application areas. However, the technical performance and appearance of Eucalyptus makes it suitable in other application areas, many of which have been proven in European markets. These new application areas would lead to higher growth of the market through substitution of other product such as other virgin cartonboards and recycled board. The potential market of Eucalyptus consists of the current market for the product group and some application areas of virgin fiber board, recycled board and long term potentially also other packaging materials, such as plastics.

In order to take a large share of the market in the mentioned potential application areas Global Forest has to provide superior value to its customers. As the packaging materials market for application areas where Eucalyptus could substitute other boards is mature and there currently is oversupply in the cartonboard market Global Forest needs to deliver either lower price or better quality, thus improving the price performance tradeoff described by Porter (1979). The fact that Global Forest is the only domestic supplier provides value by for example offering shorter lead times than for imported material. This domestic presence can be leveraged upon to attract more customers. Compared to products in the recycled board product group Eucalyptus generally offers superior technical performance and quality, especially if used for products within the food industry. Within its own product group Eucalyptus can offer cost savings through yield advantage.

In developing and pursuing a strategy for Eucalyptus Global Forest also need to assess their competitor's current and potential strategies. Currently there are no other domestic suppliers of similar products. The main competitors are generally positioned in the high-end market and import their board to China. They focus mainly on the application area where the product group is already established. Two of the large competitors are solution providers for the main application area which means that they also offer machinery equipment to use with the packaging material. If Global Forest would like to offer the same service they would have to collaborate with a third party to offer a packaging solution.

5 Business Model Design

This chapter aims at answering the second research question: “How should the business model for Eucalyptus on the Chinese Market be designed in order to increase demand?”. The proposed business model will be described by using the four blocks of: target segments, value propositions, channels and customer relationships of the Business Model Canvas framework. These four blocks were selected for detailed analysis because they are the fundamentals of a business model. Elements of interest within the other blocks have been related to the components of the four selected blocks. Based on the purpose of a specific market analysis different blocks will prove more relevant to study. The remaining blocks are outside the scope of the master’s thesis. The design of the business model is based on the outcome of the Market Opportunity Analysis presented in Chapter 4. An illustration of the theoretical model and description of the four different blocks is given in Figure 9.

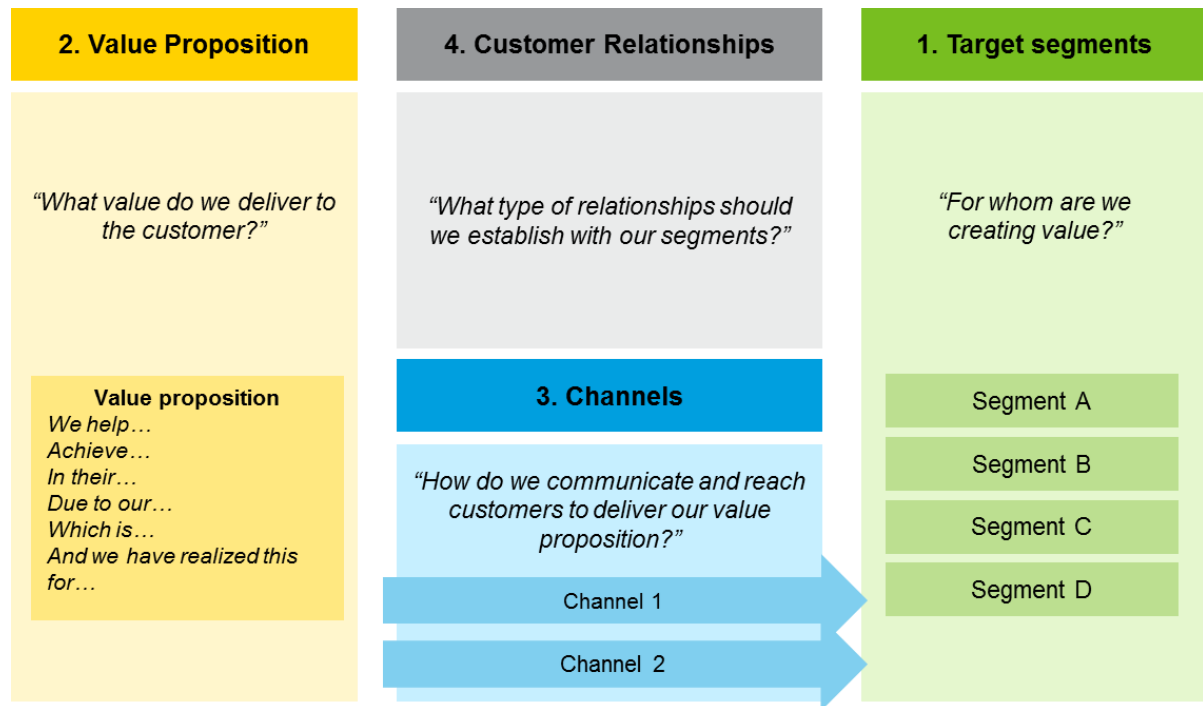


Figure 9 Structural model used for design of Eucalyptus’ business model

5.1 Target Segments

Target segments have been defined based on the needs of the second-order customers. Many of the converters are specialized in certain application areas, which motivates why the segmentation should be done based on application areas of the second-order customers. It is therefore believed that this segmentation captures the overall needs of both first- and second-order customers.

Based on the input from the segmentation analysis described earlier and insights from interviews with converters and brand owners the eleven application areas of interest for Eucalyptus application were grouped into four distinct target segments. The needs in terms of technical performance and appearance of the board that are especially valued are the same within each group. The market acceptance and adoption of Eucalyptus and other fiber based packaging materials have also been a key factor for the segmentation. The four target segments are shown in Figure 10.

		ESTABLISH <i>Plastics --> Fiber</i>	SWITCH <i>Fiber --> Eucalyptus</i>	GROW <i>Product Group of Eucalyptus --> Eucalyptus</i>	Packaging type: Type 1 Type 2 Type 3
Group X	Application Area 1		Target Segment A		
	Application Area 2				
	Application Area 3				
	Application Area 4				
	Application Area 5				
Group Y	Application Area 6			Target Segment C	
	Application Area 7				
	Application Area 8				
Group Z	Application Area 9				
	Application Area 10				
	Application Area 11				

Figure 10 Grouping of application areas into target segments

In Segment A Eucalyptus has already been used for promotional products with positive feedback from consumers. This means there is already some knowledge about the product amongst brand owners in this application area and the market acceptance of the board within this area is considered to be fairly high. The fact that Eucalyptus is food safe is of great importance to customers in this application area. The product can also help the brand owners build a brand image that has been expressed as desirable by interviewees. The unique appearance and perceived premiumness of the cartonboard are key features to achieve the desired brand image. The main barrier for adoption in this segment is concerns regarding the printing performance on the reverse side of the board. By offering assistance from technical customer service managers this barrier can be overcome.

The brand owners active in Segment B have limited experience of Eucalyptus. These application areas are to a large extent dominated by plastics as the main packaging material. As can be seen in Figure 10 fiber based packaging material needs to be established in this segment. The main strength of Eucalyptus in this segment is the strength and stiffness it can offer in combination with yield advantage, good moisture resistance and food safety. This will provide the brand owners with a robust packaging that can cope with many different conditions. A concern about the unique appearance of the board has been expressed in interviews with customers in the segment. This segment is thus considered to have the lowest market acceptance of the board. Another barrier to adoption that needs to be overcome is concerns expressed about the gluing performance in low temperatures. The gluing performance of similar products has not been satisfactory and in order to prove this is not valid for Eucalyptus samples need to be created and trials conducted.

Segment C represents the application area where products in the product group of Eucalyptus have already been used to a large extent. Many brand owners and converters already have experience of working with similar products and many have used Eucalyptus for some time. The value that Eucalyptus brings to this segment is high strength and stiffness, good moisture resistance and yield advantage compared to competing products. As Eucalyptus is the only domestic supply of this kind of product the lead times are considerably shorter than those for the products of the competitors. As products in the product group of Eucalyptus are the dominating packaging material in the segment the shorter lead time is an important strength. The main competitors in this segment are solution providers. This is, as mentioned, something that Global Forest is not providing. In order to compete with these solution providers Global Forest needs to partner with a third party if requested by the customer.

The application areas in Segment D all use cartonboard as a main packaging material. The characteristics and technical performance of Eucalyptus make it suitable for these applications as well and the current material can thus be switched for Eucalyptus. The value Eucalyptus offers in the final segment is mainly superior strength and yield advantage. For certain applications good moisture resistance is also an important factor. Several interviewees also mention that the unique appearance of the product offers the opportunity for brand owners to differentiate from their competition. Depending on if the customer wants a premium package or not, the comparatively high cost of Eucalyptus can be seen as a barrier to adoption. By effectively communicating the cost savings through yield advantage these barriers can be reduced.

One potential criteria for segmentation mentioned by Osterwalder and Pigneur (2010) is that the customers in the segments can all be served through the same channel. This is not the case for segmentation of potential Eucalyptus customers. The channels used by Global Forest are indirect through a merchant or direct to the converter. The needs of the second-order customers vary more than can be defined within these two channels. Osterwalder and Pigneur (2010) emphasize that one of the reasons for segmenting is to ensure that all customers can be reached in a more efficient way. It is believed that by segmenting according to application areas and needs of the second-order customers, efficiency of the communication and marketing channels can be improved. By focusing on the needs in the four segments the marketing material can be differentiated to better communicate how Eucalyptus can create value within the segment.

The target segments make out the most central part of the Business Model Canvas and the remaining blocks of the business model are designed around the identified segments. What value Eucalyptus offers to the different segments is formulated in the next block, value propositions.

5.2 Value Propositions

The value propositions aim to explain what value Global Forest can offer the respective segments through their product and services in a summarized manner. Since the perceived value of the product differs between the four described target segments it was decided internally at a workshop that four different value propositions should be formulated. The propositions are mainly based on the views of the second-order customers of Global Forest since this is where the different aspects of the product create the largest value. By using the value propositions as a base, the sales organization of Global Forest can better adapt their sales material to communicate what value Eucalyptus can offer the potential customer.

As described by Anderson et al. (2006), there is no commonly agreed upon method for how a value proposition should be formulated. The purpose of the value proposition is to create a common understanding of how the value of the product should be leveraged upon why it is important to use a model that internally can be understood easily. The sales department at the company has recently been trained in how to perform sales and marketing activities more effectively where a certain model for formulating value propositions was introduced. The model is developed by a consultancy company and builds on a logic of six different phrases that together make up the value proposition. Since the model was already established at the company the same framework was used for formulation for Eucalyptus value propositions as well.

The model used consists of the six different phrases mentioned above. Each of the six phrases are introduced by a few words that are followed by one specific element. The elements are: ideal customer characteristics, cost savings, cost driver, differentiator, delta to competition and reference cases.

Based on the model the value proposition presented below was formulated for one of the four target segments of Eucalyptus. Due to confidentiality reasons the type of brand owner, one unique feature of Eucalyptus and company name of a customer have been left out.

*We help _____ brand owners present in the Chinese market
Achieve robust and lightweight packaging
In their distribution and handling processes
Due to our strong and _____ cartonboard
Which is food safe and 20 percent more lightweight than other products from the product group
And we have realized this for _____.*

The main difference between the four different target segments lies in which technical aspects and factors of appearance that bring the largest value to the customer. As described in the target segments the aspect of food safety is for example a key feature for application areas in direct food contact while not valued as important when used for other application areas. In two of the segments there are some concerns regarding the technical performance of the board. In order to overcome these concerns and prove the technical performance of the board tests and samples have to be made and potential quality issues resolved.

Another difference between the value propositions relate to the element delta to competition. Based on the three categories Establish, Switch and Grow, presented earlier, it was shown that the competing packaging material differs for the groups. Because of this the formulated value propositions differs in this element. This can help the sales team to better understand which type of competition they need to outperform in order to win the business.

To conclude, the four different value propositions help the company to understand and described value adding aspects of the product for each of the four target segments. By leveraging on the most important aspects of the product for each application a more tailored sales and marketing material can be achieved resulting in a more efficient sales process.

5.3 Channels

The channels of the business model aim at describing how the company should reach and communicate with its customers. In the current situation, Global Forest sells the majority of their volumes through an indirect channel via merchants as well as a small part of the volumes directly to converters. In Europe, Global Forest instead sell the majority of their products directly to converters. Since this model leaves a larger part of the margin for the company and has proven successful in other ways there is a wish from top management in Europe that larger part of the business in China go through direct channels as well. To understand how the shift from indirect business towards direct business can be realized, converters' requirements from Global Forest for direct deliveries were listed. Direct business is possible to establish when the converter accepts:

- Long lead times, weeks rather than days
- 30 days cash payment
- Cartonboard delivered in reels

For all cases where the three prerequisites above are fulfilled the company should establish a direct deal with the converter. This is for example feasible with larger key accounts where the business is stable and recurs every month. Smaller and more infrequent orders takes more resources for the company to perform and cost calculations for handling the order themselves versus forwarding them to a merchant could therefore serve as a guidance for decision in these situations.

For the indirect business channel a similar list was created to understand in which situations a merchant would be needed. Merchants should be appointed as service providers when converters need:

- Short lead times, days rather than weeks
- More than 30 days payment terms and or credit option
- Possibility to purchase cartonboard delivered in sheets
- Warehousing

The list above illustrates which services the merchants provide for the converters that Global Forest currently cannot fulfill. Since the mill has recently started operations in China the logistic and supply chain operations are, as mentioned, not yet fully developed. However, internally at the company there is a plan to develop an own service model to be able to fulfill customers' service requirements to a larger extent and by that decrease dependency on merchants. To design the service model the company would need more detailed input data on customers' service needs than achieved through this study. However the list above can be used as a basis for initiating the development of the model. Another factor to take into account is the cost for the different service channels. As described by Dent (2008) it is usually very complex to accurately calculate these costs but if possible this will serve as valuable information to base decisions on.

Another reason for why the service model has not yet been developed is that the customer base is still not clearly defined. To be able to meet the lead times that are required for direct business it is likely that Global Forest will need to keep stocks of cartonboard closer to the customers. In order to determine which products, basis weights and widths of reels that should be kept in the stock demand data needs to be collected. This implies that own service operations can first be designed and established when the company has grown the market for Eucalyptus. Another conclusion drawn from internal interviews was that the service model should be designed not only for Eucalyptus, but also cover the other products produced at the mill. In this way fixed costs from warehousing can be carried by other product groups as well.

Apart from investigating prerequisites for doing business with first-order customers, converters, the service needs from second-order customers, the brand owners, were also assessed. To establish direct business with brand owners is not possible to do with the current business setup and is neither something the company plans to develop in a long term perspective. However the input data from the interviews can be used to tailor the offerings to the brand owners and instead third parties can be appointed to fulfill the needs. The two main services asked for were:

- Packaging design
- Packing machines, to fill the packaging with the product

Interviews with converters showed that the two services mentioned above are often offered by converters and there is therefore no need for Global Forest to offer these services themselves. To conclude the company should instead focus on developing faster deliveries, extend payment terms, offer warehousing possibility and sheeting service. Long term the company should aim at developing its own service model, but until the company can fulfill necessary service requirements themselves they can appoint merchants to perform the activities for them.

5.4 Customer Relationships

This section describes which type of relationships the company should aim to establish with its customers. The key actors in the chain are as mentioned: merchants, converters and brand owners. The desired relationships with them are described below.

First of all, the role of the merchant needs to be defined strategically by Global Forest in order to strengthen the position of Global Forest in the value chain. During the study two different types of merchants were identified. The first type are merchants willing to partner with Global Forest which implied larger information sharing and a willingness to adapt their operations and equipment for Global Forest's products. The second type are merchants having extensive collaborations with other cartonboard suppliers and prioritize their own brand visibility in the value chain over Global Forest's. One example of this was that the merchant added their own logo to the pallets after sheeting operations were done. In this way, the visibility and control in the value chain is decreased for Global Forest when collaborating with the second type of merchant while potentially increased when collaborating with the first type.

During an internal workshop held at Global Forest it was discussed and concluded that the company should consolidate the merchant base and aim for collaborations with the first type of merchants described. For the current merchant base this will result in some accounts being selected for closer collaboration while others will be phased out. By doing this, less resources are needed from the sales force to maintain the relationships and the brand visibility can be strengthened. This initiative is in line with the theory presented by Rose and Shoham (2002) of developing stronger relations to few actors rather than maintaining a large network with weak connections. To offer the products through fewer merchants can also add some exclusivity and help the company achieve the premium position they aim to achieve in the market. The process and criteria for selection as well as design of collaborative terms will be decided upon by the sales team.

The second relationship to outline is the relationship with the converters. The relationship is of high importance to Global Forest since this is where the deal usually is made. As described earlier, the decision making process includes both converters and brand owners. The converter thus plays a key role in recommending certain options to the brand owner. To educate the converters and provide them with marketing material as well as samples is therefore something the company should focus on when building relationships.

The last relationship to define is the one with brand owners. it is believed that a larger focus should be spent on building stronger relationships with this actor. According to interviews with brand owners they usually do not have any direct contact with packaging material suppliers but only communicate with converters. However, the approach from Global Forest has been appreciated by the brand owners as the brand owners feel they can access deeper knowledge of the products by direct communication. The benefits from this relationship are also large for Global Forest since they can access market feedback almost directly from the end user. Understanding of how their products are used and also which value it can bring to consumers can in this way be achieved. To conclude, building relationships with brand owners thus presents an opportunity for Global Forest to gain larger market understanding while also building a type of relationship that most of their competitors do not have. The market feedback is especially important in the early market stage that the company is in since the market perception of Eucalyptus is not yet fully known.

To summarize, the company's primary focus for sales and marketing activities should be directed towards converters and brand owners in order to gain market feedback and to be able to affect the outcome of the decision making process. A consolidated merchant base will help the company to more resource efficiently maintain the relationships and also increase visibility and control by enhancing collaboration with merchants that are willing to partner with Global Forest.

5.5 Implementation of the Business Model

The business model generation process includes steps four to six of the process suggested by Kuada (2008) for companies to undertake in their pursuit of value creation and delivery processes. The result of the business model generation process is summarized in Figure 11.

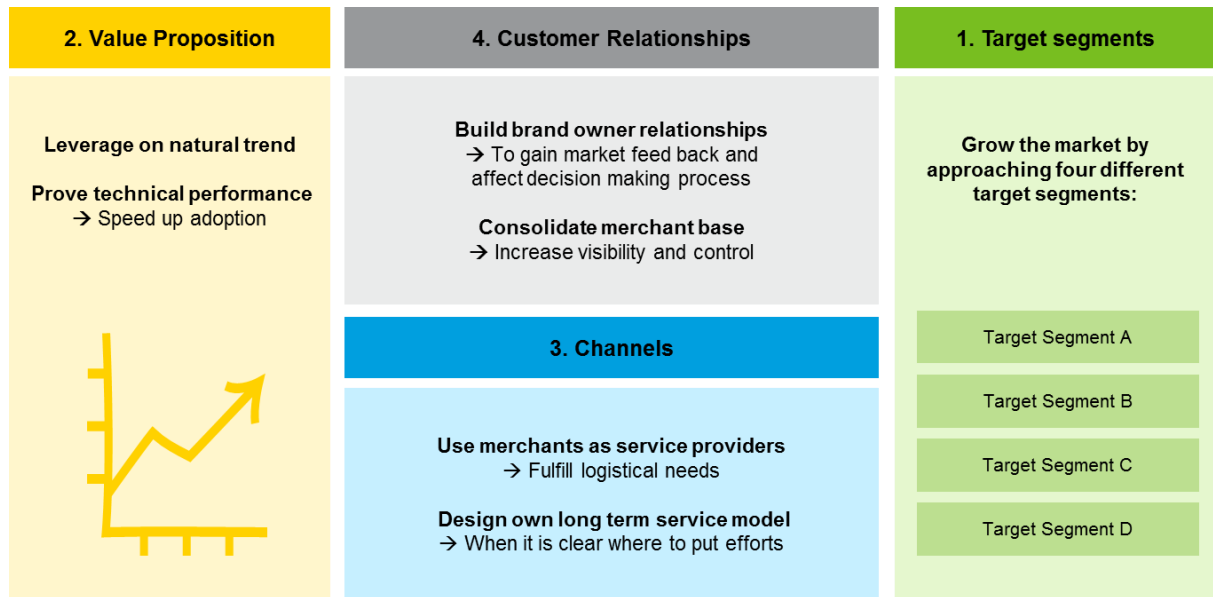


Figure 11 Outcome of business model design

The following steps, steps seven to nine are:

6. Ranking the strategy options in terms of goal attainment index
7. Making suggestions and recommendations
8. Designing an implementation plan

These steps were performed in an internal workshop at Global Forest where the sales force of Global Forest China and other internal stakeholders of the project participated. Based on the seven main conclusions in the figure above key actions were identified as a way of translating the business model into tangible tasks. The tasks were ranked according to their level of urgency and a project owner was identified for each task, as well as which department or function within the company responsible for performing it. Key performance indicators were also identified for the company to be able to measure progress of the implementation. These were designed to cover the main conclusions of the business model for example by measuring development of sales volume and number of new application areas in the market.

6 Discussion and Conclusions

This section will discuss and conclude the findings of the master's thesis. The first part will reflect upon the results of the study and discuss how these can be used by other companies or stakeholders. The second part will present conclusions drawn for the case of Global Forest.

6.1 Discussion of Findings

The findings of the report and the business model generated are developed specifically for the case of Global Forest and the product Eucalyptus in the Chinese market. The suggestions made should not be seen as a general recommendation for other products or companies. However, the methods used and the structured approach of the market analysis and the business model design are applicable for other companies and organizations facing similar issues.

The purpose of the master's thesis, to design a business model for how Global Forest can grow the demand for the product Eucalyptus in the Chinese market in order to bridge the supply and demand gap, was at the start of the project translated into research questions. These questions have been addressed and answered in the report and the answers are summarized in the next section. The purpose of the master's thesis is therefore regarded as fulfilled.

In the master's thesis the case of bridging a supply and demand gap has been studied. Company-specific characteristics of Global Forest, with the nearly constant supply of the product, lead to the focus of studying the demand side of the market. Because of this four blocks of the business model canvas framework specifically focusing on market and demand aspects were chosen for the project. Other studies, also considering the supply side, may need to select different blocks and alter the models used to include aspects relevant to that case.

The proposed business model for the company includes recommendations for how to grow the demand for the product Eucalyptus. The demand is estimated to increase if these suggestions are followed and implemented. However, it is difficult to estimate exactly how large market size it is possible to reach due to external and internal factors. Externally, if Global Forest can succeed in leveraging the trends and enablers for market adoption large growth can be achieved in a short term perspective. Internally, the progress of the implementation depends on how well the company can align internal divisions to deliver the business model. The degree of internal alignment and resources allocated for the implementation will determine the time needed to achieve the targeted volume of Eucalyptus.

6.2 Conclusions

In the case of Global Forest and the product Eucalyptus, the supply is nearly constant why the company actively needs to grow the demand of the product. The current market situation in China presents both challenges and opportunities for the company. The fact that the current market is small, inexperienced and characterized by oversupply of virgin cartonboard are obstacles that create further challenges for the company. However, Global Forest has achieved a unique position with their Eucalyptus product as they currently are the only domestic supplier within the product group. This provides a large advantage over the main competitors who import their board to the Chinese market. The product has so far only been adopted to a large extent within one application area. However, the technical performance and appearance of the cartonboard makes it suitable for application within other areas as well. These other application areas make out the potential market for Eucalyptus.

The growth of Eucalyptus needs to be realized by substituting other packaging materials from already mature markets. If Global Forest succeeds in doing this it is estimated that the cumulative annual growth rate of the product group will greatly surpass the forecasted growth rate of a few percent. To conclude, creating a demand large enough to fill the supply and demand gap is possible through substitution.

To be able to capture the latent demand identified through the market opportunity analysis, a business model was designed for the product. The business model includes four selected blocks from the framework of the Business Model Canvas. Four target segments were identified. Defining them on an

application area level was feasible for the study and also stresses the fact that the company needs to expand their sales and marketing activities to other types of brand owners than previously targeted. By targeting these segments Global Forest can increase the number of applications and by that increase the demand of Eucalyptus. The initial customer feedback regarding the product and its features has shown positive attitudes towards Eucalyptus and the value and uniqueness it offers to customers.

One value proposition per segment was formulated in order to capture the value the product can offer to the specific segment. The main driver for value creation of Eucalyptus lies in the unique appearance which is further enhanced by a natural trend observed in the market. The main barrier for Global Forest to be able to communicate the value of Eucalyptus consists of concerns about technical performance. It is believed these barriers can be overcome by providing samples and reference cases of successful applications in the market.

For the channels of the proposed business model it is suggested to strengthen the direct business and by that decrease dependency on merchants. Direct sales are desirable since they leave a larger profit margin for Global Forest and help increase their visibility and control in the value chain. By developing services such as shorter lead times, extended payment terms and evaluating warehousing and sheeting service the company can increase the share of direct business. Until the company has developed the necessary service model to fulfill converters' requirements merchants should be appointed as service providers.

To further strengthen Global Forest's position in the market the relationships with key actors need to be strategically outlined. The merchant base should be consolidated to only include selected merchants willing to adapt to collaboration terms set by Global Forest. This closer collaboration will benefit both parties since processes can jointly be improved and developed. The primary target for sales and marketing activities should be aimed towards converters and brand owners as they are the key decision makers and thus crucial to convince to be able to grow demand. The brand owner relationships also offer Global Forest unique insights in consumer preferences and feedback which few competitors access currently.

To summarize, it is believed that the proposed business model provides the company with a market strategy that can generate the demand growth needed for Eucalyptus in the Chinese market. By expanding the applications of Eucalyptus into new application areas Global Forest can gain a larger market share within the product group and lead the growth of the market. The study provides an example of how a company in the manufacturing industry can bridge the supply and demand gap and is thereby relevant to assess for companies that face similar challenges. The two models used form a basis for how to structure such projects and can be further adapted to company specific characteristics.

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Appendix

The Appendix shows interview schedules used during the interviews with merchants, converters and brand owners. The interviews were held in a semi-structured manner, thus they did not follow the exact order of the interview schedule.

A. Interview questions for converters and merchants

General Information

1. How large is your firm?
 - a. Annual tons purchased per year?
 - b. Are you a small/medium/large player?
 - c. Annual turnover?
 - d. Number of employees?
 - e. Capacity of production? Printing capacity? Number of machines?
2. What type of company? Shareholder, private or state owned?
3. Does the company have a long history or is it newly established?
4. What services do you offer?
5. Which are the main end-uses your company serves?
 - a. Which grades are used for which end-use?
 - b. What different carton board grades do you mainly use and why?
6. Do you buy reels or sheets?
7. Do you have a sheeter?
8. Are you independent or bonded?

Eucalyptus Specific

1. Are you familiar with the product Eucalyptus?
 - a. What is your perception of Eucalyptus compared to other grades in the product group?

2. In which situation would your company consider switching from one grade to another?
 - a. What would be required in terms of service for you to consider switching to Eucalyptus?
 - b. What are the required product specifications for you to consider switching to Eucalyptus?
 - c. When was the last time you tried a new material in your production?
3. Which are the most important technical parameters of a grade?
 - a. Grammage, width?
 - b. Technical benefits and drawbacks of using Eucalyptus?
4. How does your company gather information about different carton board grades? (Through fairs, seminars, sales meetings etc.)
5. What potential application areas do you see for Eucalyptus?

Brand Owner Relations (Customer Relation)

1. What services are brand owners demanding from you?
2. Who would you say is your typical customer?
 - a. Size?
 - b. Relationship? (Long term, transactional)
3. Which brand owners do you collaborate with?
4. What are your brand owner's impressions about Eucalyptus?
 - a. Appearance, color?
 - b. Most positive aspect?
 - c. Most negative aspect?
5. What value do you gain from using Eucalyptus in your own production?
6. What value of Eucalyptus can you transfer to the brand owner? (What is the value proposition?)
7. How do brand owners get information about the grades?

8. What are the brand owner requirements for the product?
9. What activities do you perform to influence the brand owners?
10. Who are your main competitors?

Purchasing Process (Supplier Relation)

1. Do you purchase directly from mills or from merchants?
 - a. If merchants, what services do they provide?
2. Do you utilize long term supply agreements or do you buy as you need?
3. Do you keep stock or order Just-In-Time?
4. How long are the lead times when you order carton board?
5. What is your perception of carton board produced in China?
6. Have you used carton board produced outside of China?
 - a. Why? How did it work etc.?
7. What service do you expect from your suppliers?
 - a. Lead times? Technical support? Quality?
8. Which factors are most important when choosing suppliers?
9. Do you have single, dual or multiple sourcing of similar products?
10. If there has been a shortage situation with lack of supply from your suppliers, how is this handled?
11. Who in the supply chain is specifying the product?
 - a. What does the process of decision-making look like?

Service Model / Business Model

1. How could your supplier facilitate for you to help meet demands from brand owners and end users?
 - a. What services do you value? Flexible batch sizes, express lead times etc.
2. Who delivers the best service and what is world-class service in your industry?

3. Who delivers the best product?
4. What are the largest risks associated with switching to Eucalyptus?
5. What are the largest opportunities associated with switching to Eucalyptus?
6. What do you think are the driving forces of Eucalyptus?
 - a. Quality, cost, performance, application area, demand, supply?
7. Where is the decision of what grade to use made?

B. Interview questions for brand owners

General Information

1. How large is your firm?
 - a. Annual tons purchased per year?
 - b. Are you a small/medium/large player?
 - c. Annual turnover?
 - d. Number of employees?
2. What type of company? Shareholder, private or state owned?
3. Does the company have a long history or is it newly established?
4. What products do you offer?

Packaging

1. How important is packaging for you?
 - a. What aspects of packaging do your customers and the end-customers value?
2. What are the benefits of using cardboard instead of plastic?
3. What are the product requirements when choosing cardboard?
4. What is your perception of carton board produced in China?
5. Have you used carton board produced outside of China?
6. What product areas have cardboard packaging today?
 - a. What grades are used for these?
 - b. What potential application areas do you see for cardboard packaging in your product offer?

Eucalyptus Specific

1. Are you familiar with the product Eucalyptus?
 - a. What is your perception of Eucalyptus compared to other packaging material?
 - i. Appearance, color?

- ii. Most positive aspect?
 - iii. Most negative aspect?
- 2. In which situation would your company consider switching from one grade to another?
 - a. What are the required product specifications for you to consider switching Eucalyptus?
 - b. When was the last time you tried a new packaging material?
- 3. Which are the most important technical parameters of a grade?
 - a. Grammage, width, strength?
 - b. Technical benefits and drawbacks of using Eucalyptus?
- 4. What value do you gain from using Eucalyptus for your products?
- 5. How does your company gather information about different carton board grades? (Through fairs, seminars, sales meetings etc.)

Purchasing Process (Supplier Relation)

- 1. What service do you expect from your suppliers?
 - a. Lead times? Technical support? Quality? Etc.
- 2. Do you utilize long term supply agreements or do you buy as you need?
- 3. Which factors are most important when choosing suppliers?
- 4. Do you have single, dual or multiple sourcing?
- 5. If there has been a shortage situation with lack of supply from your suppliers, how is this handled?
- 6. Who makes the decision on what cardboard grade to use?
 - a. Do you make the final decision?
 - b. Is the decision based on the available grades of the converter?
 - c. Does the converter make the decision / influence?
- 7. Do you have any relationships with cardboard suppliers today?

- a. Do you see any benefits of closer relationships with cardboard suppliers?
- b. What value could this offer?
- c. What services would you like from a cardboard supplier?

Business / Service Model

- 1. How can your supplier facilitate for you to help meet demands from end users?
 - a. What services do you value? Flexible batch sizes, express lead times etc.
- 2. Who delivers the best service and what is world-class service in your industry (with regard to cardboard packaging)?
- 3. Who delivers the best product?
- 4. How do you see the development of packaging material in the future?
 - a. What are driving forces for cardboard packaging in the future?
 - b. Quality, cost, performance, application area, demand, supply, environmental factors, sustainability?
- 5. What are the largest risks associated with switching to Eucalyptus?
- 6. What are the largest opportunities associated with switching to Eucalyptus?
- 7. What do you think are the driving forces of Eucalyptus?

