SSE Riga Student Research Papers
2012: 8 (147)

CREATING VALUE THROUGH CUSTOMIZED FLEXIBLE PACKAGING SOLUTIONS TO FOOD INDUSTRY IN LATVIA AND LITHUANIA

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ISSN 1691-4643
ISBN 978-9984-842-63-9

November 2012
Riga

CREATING VALUE THROUGH CUSTOMIZED FLEXIBLE PACKAGING SOLUTIONS TO FOOD INDUSTRY IN LATVIA AND LITHUANIA

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May 2012
Riga

Abstract

The master's thesis in "Creating value through customized flexible packaging solutions to food industry in Latvia and Lithuania" was chosen to study the customer's value creation approach in flexible packaging industry.

The research questions were posed to induce the focused study of two main fields – the value proposition drivers for flexible packaging industry and the way to increase the performance against these drivers; and how the proposed customized flexible packaging solutions can help leverage value creation within the food industry.

The global competition, changing markets and technologies open the new way of reinventing value. The boarders between physical creation of goods and services become indistinct.

In the empirical part the work has analysed the relevant value driving factors that were explored during the multiple-case studies in Latvia and Lithuania. By highlighting the important factors from the customer's point of view the supplier can look for ways to increase the total value of the product – flexible packaging films. The study discovers the range of values that the food industry expects from the supplier of flexible packaging materials. The work's findings reveal the gap in the current offer.

The customization of flexible packaging materials is well accepted by food industry but is delayed by intermediate companies that control the supply market. That in its turn prevents innovation that could be offered to food processing companies by fast growing flexible packaging industry.

Keywords: Customized products, flexible packaging, food industry, barrier film, value creation, value drivers, value innovation, strategy canvas, disintermediation

Acknowledgements

First and foremost I would like to thank my thesis advisor professor Andris Strazds who has shown the great and consistent interest in the project. His constructive comments and provided literature have substantially improved the work. Undoubtedly many thanks to my family. They have showed a great deal of endurance and patience.

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1. Introduction

1.1. Background and Justification of the Problem

Our company started operating in 1993. In 2001, we made our first steps in production and soon it resulted in opening the company Baltic Polymers that was purely dedicated to manufacturing. The investment project that we started in 2010 in cooperation with the Investment and Development Agency of Latvia in the program „Innovations" has allowed us to accelerate a complex but high added-value manufacturing project in flexible packaging. As industry experts in the blown film production, our main concern was to continue investing into development of current production by increasing our potential in exports and converting R&D results into sophisticated technical solutions.

The concept of technical and skill intensive production solutions was put into our project for the complete line of high performance barrier, collation-shrink and stretch hood film production for food and non-food industries.

The project was started in the summer of 2010 in our company Baltic Polymers. The project itself is interesting at least from two points of view. First, complexity of the alignment for the production solutions – 5 layer blown film extrusion, 8 colour flexographic printing, laminating and a lot of other peripheral equipment with significant investment in the manufacturing sector and secondly, it is B-to-B model and therefore much more appreciated by high performance standards compared to B-to-C model where the price component has the highest value as it is dictated in the market by chain store dominance.

Certain technical prescriptions were developed after initial exploration of the customer's base in the targeted markets. The findings, defined by the size of the domestic and neighbouring markets and its certain requirements, consequently designed the production line. The line is built for short to mid-runs. The set-up is justified by the relatively fragmented regional market and intention to serve it in the most effective way. However mid-size orders and runs can be taken and performed with almost equal cost effectiveness to short-runs. The long-runs are not the priority and therefore the design of the machineries has been set accordingly.

'Smart' investments in the skill intensive and technically advanced manufacturing sector are a crucial turning point for the economy of Latvia. "The development of industrial

manufacturing for countries with limited resources and small internal markets may lie in so-called flexible systems of production, technically advanced and skill intensive industries which make customized products" (Cohen and Zysman 1988) The concept itself is not something new for empirical researchers. The skill intensive and technically advanced production opens great possibilities for supporting customized solutions which in their turn lock the client's attention to your specific offer. The fusion of all of these three components makes it difficult to replicate your product or service and therefore creates a competitive advantage compared to the rival's proposal. From this point of view "… the only way to respond to low-cost standardized items from abroad is to offer broad variety of technologically superior products aimed at specific market niches." (Donald Gerwin 1993)

1.2. Purpose of the Project

The diploma project aim though is designed to study the customer's value proposition drivers. By understanding and working on our client's requirements and preferences, aligning them with our advanced technical solutions, we are looking for different ways of creating competitive advantage to our product – flexible packaging, as well as support our customer's value proposition to the end-user.

In my research work I am going to identify value drivers for our product – flexible packaging as well as overall value creating factors for our customer's products. The purpose of the project is to describe the importance of value driving factors from the point of view of the target customer and give suggestions on how to improve the performance against these drivers for flexible packaging industry in general and our company in particular.

By identifying and measuring the customer's value proposition drivers and preferences I will try to propose the business strategy model that might allow outperforming the rivals and their existing product offer. At this point I will study the factors that according to approached industry representatives' impact on the overall value of their current product proposition to the end-customer. Plotting these factors on the strategy canvas I will try to reconstruct the standpoint of the industry and give the suggestions for increasing principal value driving factors as well as highlight those factors that are not relevant and therefore performance against them should be diminished or eliminated for the sake of cost reduction.

The markets that are being studied are controlled by 5 to 6 intermediate companies and 3 converting companies. The product offer therefore is limited by the lack of any producing companies of the main packaging material in food industry – barrier film. Our strategy formulation should give the suggestions for value innovation to the market by increasing and creating the drivers that are limited or not offered by intermediates, however, there is a demand for them, and reducing or eliminating any of the drivers, if found, that have been taken for granted and do not bring any additional value and moreover, increase the cost that in its turn negatively influences our customer's value proposition to the consumer.

Further in my research work I am going to look beyond the flexible packaging industry and refer to products manufactured by food industry. I will analyse how the defined value drivers can influence the end-product quality, cost efficiency, visual attractiveness and product shelf time. By this, I will try to prove the superior competitive advantage that is given to food product manufacturers by increasing the relevant value drivers to one of their product components – flexible packaging. Customized flexible packaging solutions are therefore regarded in my research work as a 'smart' packaging solution that may bring additional value to our client's products.

As the research method for identifying the range of value driving factors that industry currently is competing on I will use the in-depth qualitative multiple-case study.

1.3. Research Questions

The research work is designed as a case study which is the most appropriate method for my work as explained in more detail in the methodology part. It should allow me to investigate the social phenomenon and describe it from different angles without limitations that may derive from other possible research methods like, for example, survey. The research questions are as follows:

- ✓ **What are the customer's value proposition drivers for flexible packaging industry and how to increase the performance against these drivers?**
- ✓ **How customized flexible packaging solutions can leverage value creation to food industry?**

2. Literature Review

The literature reviewed for this subject is based on books and articles that explore the theories and empirical suggestions in creating competitive advantage through diverse customers' value proposition. In my research I would like to stress the importance of the strategic framework in creating superior competitive advantage.

2.1. Value Innovation

One of the proposed theoretical backgrounds for my study is value innovation, the strategy that drives down costs while simultaneously drives up value for your customer as illustrated in Figure 1.

To execute this strategy I must first reveal customer's value driving factors. In order to do so, I am going to approach and study current value proposition to explored food industry companies. After revealing the value driving factors and their supporting functions I will evaluate their importance in building the overall customer's product competitiveness and suggest what functions should be eliminated and which are those to be improved or even created.

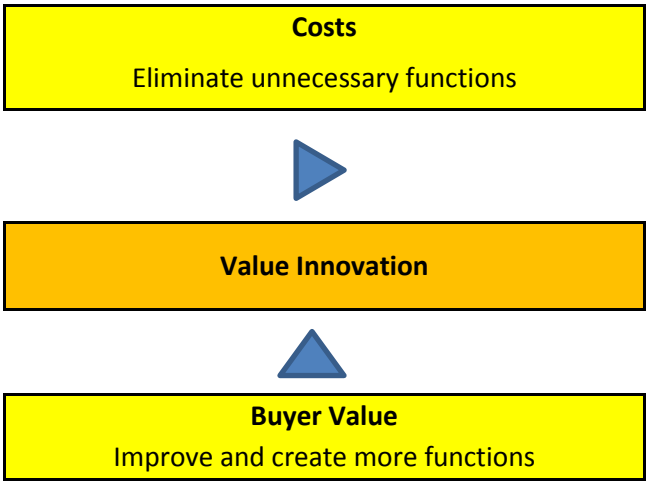

Figure 1 Value Innovation (Kim & Mauborgne, 2005)

The value innovation then is achieved by reconstructing the value driving factors according to their functional importance in building exceptional competitive advantage. The chosen theoretical background proposes the "four action framework" in creating "a new value curve" (Kim & Mauborgne, 2005) in order to achieve value innovation.

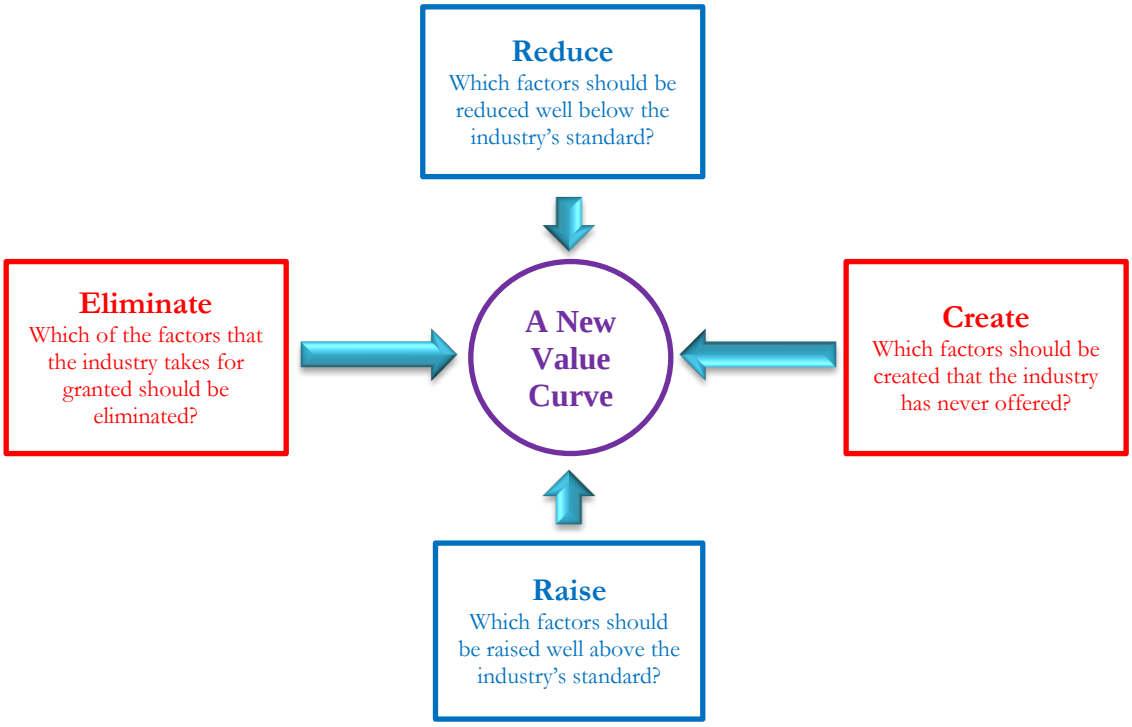

Figure 2 the Four Actions Framework (Kim & Mauborgne, 2005)

The four action framework depicted in Figure 2 creates a new value curve that I am going to plot on the strategy canvas. The strategy canvas will display the main value driving factors from the customer perspective. I will range the factors according to their importance to industry representatives. A "Low" score means that currently the industry does not appreciate this factor as important and therefore overinvesting into this function will increase the cost of the product but will not bring any additional value to your customer. Reducing or even eliminating this function may not influence attractiveness of your product but certainly will scale down your costs. A "High" score means that industry considers the factor as value driving and therefore the function of this factor should be raised or if it is not yet present in your current offer – created.

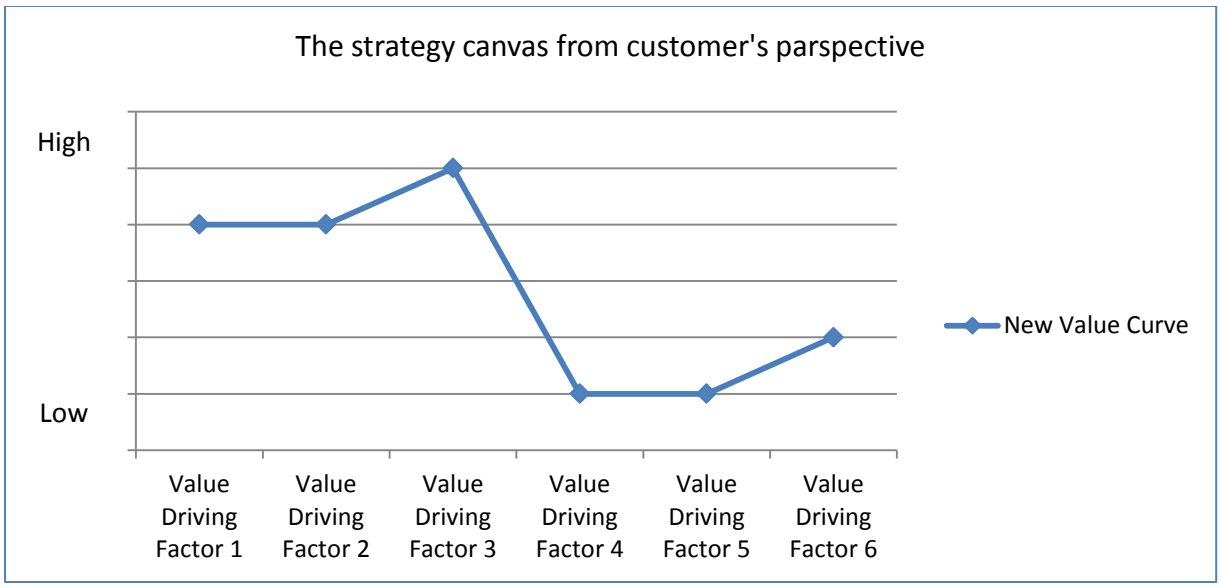

Figure 3 The Strategy Canvas from customer's perspective (Kim & Mauborgne, 2005)

An example of strategy canvas is provided in Figure 3. The strategy canvas should allow charting your future strategy and focus on the big picture. It also specifies what are the current and the future factors which affects competition within your industry. Using the strategy canvas technique I will look at competitive factors from the customer's perspective.

2.2. Porter's Value Activities in Creating Competitive Advantage

According to Michael Porter's value chain theory, "every firm is a collection of activities that are performed to design, produce, deliver, market and support its products" (Porter, 1985). Company's value chain consists of nine types of value creating activities that in its turn are divided in primary and support activities as can be seen in Figure 4. The activities are the building blocks in creating products and services valuable to customers.

In pursuing competitive advantage it is important to define a company's value chain for specific industry. The value chain then must be disaggregated to the necessary level of activities. Each activity is a unit of analysis for its potential impact on product differentiation or to what degree it influences the cost of a product.

The value activities are not just isolated blocks. They are connected between themselves by linkages within the value chain of a company. The coordination and optimization of linkages may enhance competitive advantage. However, management of linkages is often disregarded by focusing on value activities only.

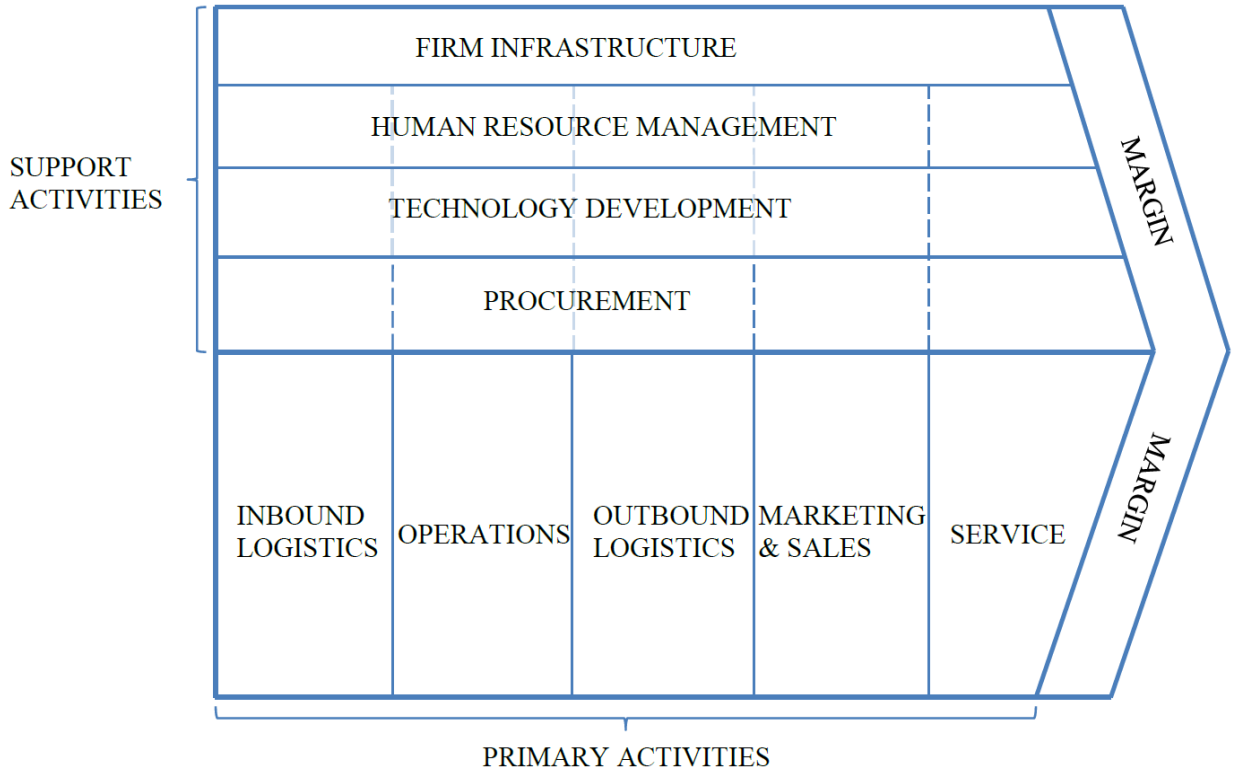

Figure 4 Porter's generic value chain (Porter, 1985)

Linkages are the important part of a firm's value chain. They exist not only within the value chain of a company. The vertical linkages represent the relationships between the company's value chain and the value chain of the supplier, channel and customer. The vertical linkages also represent the opportunity to enhance a competitive advantage. By smoothing the relationship between two companies, for example the supplier and its customer, it is possible to decrease the cost of order handling and transportation or frequent deliveries may reduce inventory on hand. Therefore, many company's activities may interact with some of suppliers, channels and customers activities. Each of these access points are the source of increasing competitive advantage of a company.

Within my study I am looking for interaction access points to customer's activities. A company's approach to a customer cannot just end by the offer of products from a sales department to a client. By offering customized packaging solutions we should establish relationships through sales and logistics but more over through competence of customized offers. Our know-how and technical assistance is the source for exceptional value to a customer.

2.3. Co-creation in Leveraging Customer's Value Creating Activities

In today's highly competitive environment companies cannot solely concentrate on the value creating activities limited by the technologies and competencies within a single stage of the complex value chain. Therefore, it may not be enough just to create value to your direct customer. A company's strategic task is to look beyond the boundaries and limitations of a single stage in the value creating process. It has to re-arrange its relationships with suppliers, partners, customers, employees, other stake-holders and the whole business system itself in order to respond and to conceive the entire value creating system. Your suppliers therefore may become your customers and your customers at some stage appear to be your employees. The value creation is not just a matter of a single value chain. It is a co-creation and reciprocation in the entire value creation space.

"In a world where value occurs not in sequential chains but in complex constellations, the goal of business is not so much to make or do something of value for customers as it is to mobilize customers to take advantage of proffered density and create value for themselves." (Normann & Ramirez 1993)

The customized offer of flexible packaging materials to food processing companies opens the space for co-creation of products that best fit the entire supply chain. The co-creation as the process of cooperation therefore will involve not only us as the producer of flexible packaging materials and our customer, food processing company, but it will also involve our supplier as the access of new raw materials, paints and additives. Our customer's product know-how opens the vast field for further customization of film properties to meet wholesale, retail and moreover end-user best expectations.

This complex value creation process ruins the very fundamental perception of the distinction between physical products and intangible services. In which stage and who then creates product and where the service as the value begins? In today's business environment it is rather difficult to draw a distinct line. Therefore, we as the participants of a complex system should take an advantage of this complexity and form the centre in the constellation of physical goods, services, technologies, management and customer relationships. Looking beyond our supplier's abilities and competencies we should be able to find new raw materials and create new recipes to meet the "hidden needs" of our customer's clients. The value innovation as the process therefore is not just creating a new physical product, something that was not available in the market before. The value innovation is the complex on-going value creating activities that embraces the entire value creating space within ones industry and stretches far beyond its frontiers.

2.4. Disintermediation

The term "supply chain management" formed in 1980s and was widely used in 1990s. "A supply chain is the alignment of firms that bring products or services to market." (Lambert et al., 1998) By excluding the intermediate company we are shortening the supply chain and at the same time decreasing the cost of the product and increasing communication quality between the producer of the high performance flexible packaging barrier film and the user of this product - food production companies. Therefore, by shortening the supply chain we are bringing several advantages to the market:

1) Lower cost;
2) Increasing communication quality;
3) Shorter and clear feedback;
4) Potentials for creating new products - innovation;
5) Development of customized products;
6) Operational advantages in logistics and customer service.

3. Method

3.1. Case Study as the Research Method for the Contemporary set of Events

There are several methods for doing qualitative research – experiment, survey, archival, analysis, history and case study. My research for identifying the important value creating drivers within the flexible packaging industry is designed as a case study. I have chosen the case study approach as the most appropriate methodology for the in-depth analysis of the contemporary set of events. It is an empirical inquiry that investigates any given phenomenon within the real-life context and I, as an investigator, may have very little or even no control over the events that I was going to analyse.

The case study was designed as the logical sequence that derived from the formulated research questions connected further with the empirical data collection methods, ultimate analysis and consequent conclusions.

In designing the case study approach I was seeking sufficient access to the potential data. That was arranged through interviewing representatives of chosen companies, making observations in the "field" where accessible and reviewing collected documents, specifications and records. These activities are the set of tools to seek the answers to the proposed research questions.

3.2. Defining the Unit of Analysis

The unit of analysis in my case study research work is defined as the "case". Each "case" is the certain company that was approached with the set of prearranged questions to help me and my colleagues in addressing the representatives of the companies.

Within my case study I had to be aware of the fact that choosing the correct unit of analysis is an important task in keeping the focus on the formulated research questions and subsequent findings. A company as an entity could be the vast field for study with countless

layers for deeper analysis. My task though was to focus only on the formulated research questions.

3.3. Multiple-Case Study Design

Case studies can cover multiple cases and then draw a single set of 'cross-case' conclusions.

Within our company I have formed the team for the purpose of conducting the multiple-case study. The priority was given to the multiple-case study against the single-case study based on the requirement set by this research work and posed Research Questions. We have approached 8 food manufacturing companies in Latvia and Lithuania and made an in-depth qualitative interview analyses. "The evidence from multiple cases is often considered more compelling, and the overall study is therefore regarded as being more robust." (Herriott & Firestone, 1983) In my work I have identified the set of value drivers and how they are perceived and ranged by different food producers in Latvia and Lithuania.

3.4. Pilot Case Study

Prior to the profound multiple-case study it was decided to conduct the pilot case study for two companies. This decision came after a careful examination of the case study questions that formed the preliminary protocol. It was clear that existing set of questions should be broadened and sharpened to associate them with the study field as close as possible. It would have been rather thoughtless if we had approached our potential clients without certain preparations taken place beforehand.

For the pilot case study I have chosen two companies – "Forevers" Ltd. and "Alantikstars" Ltd. We had approached these two companies earlier and therefore the access to the case could be made easily thanks to prior personal contacts. Besides, both companies are located geographically close and both are using the flexible packaging but each in its own field. "Forevers" is the meat processing company and "Atlantikstars" is the fish processing company. Both companies use automatic and semi-automatic production lines that could provide us with

the wider range of existing flexible packaging product solutions for examination during the pilot case studies.

After the pilot cases had been conducted, I reshaped the case protocol questions in order to help me and my team point out the most important gaps in the existing offer. The protocol questions were formed with the intention to force the members of the team not to lose track of the case study guidelines. However, the case study is not the interview and the guidelines may allow some divergences in the investigation to support the in-depth research.

3.5. The Protocol

The case study protocol has some similarities to survey questionnaire. Both are oriented to the single data point – single case or a single respondent. But there are certain distinctions between two of these instruments. The protocol is more of a tool for guiding the researcher. It contains the questions that are oriented mainly to the researcher. "The protocol is a major way of increasing the *reliability* of case study research and is intended to guide the investigator in carrying out the data collection from a single case (even if the single case is one of several in a multiple-case study)." (Yin, 2009)

The case study protocol in my research work contains the following sections:

- An overview of the case study project (the case study issue),
- Field procedures (presentation of credentials, access to the case study sites, source of data, procedural reminders),
- Case study questions,
- Guide for the case study report (findings, artefacts, conclusions).

The protocol is the instrument that helps a team be targeted on the case study's main issue – form the in-depth answers to posed research questions. It is designed to structure our research and to keep each single case within the multiple case studies on a separate "shelf" with its unique and important information. Furthermore, protocol is the source of original record files that helps form the 'cross-case' conclusions within the multiple case study research.

3.6. Quality Criteria for Case Study Research Design

- **Construct validity**: To comply with the criteria set by construct validity I used multiple sources of evidence during my data collecting phase. The multiple sources of evidence in my case studies are documentations, interviews, direct observations, participant observation and physical artefacts. All the data, interviews and artefacts were properly collected and stored in order to meet any references and maintain the chain of evidence.
- **Internal validity**: It concerns inferences. Not all events during our study could be directly observed. Therefore, we inferred that particular events had resulted from some earlier circumstances.
- **External validity**: During the multiple case studies I prepared the "cross-case" conclusions that allowed me to draw some generalized findings. I presumed that identified value drivers for the explored region that is Latvia and Lithuania are similar to the whole industry. Deviations though may exist from region to region.
- **Reliability:** To allow an investigator to repeat our case studies or even do the same work by our team over again we have documented the procedures and utilized the case study protocol.

3.7. Constraints and Delimitations

In my research work I am still limited by certain boundaries to address the research questions further:

1) **Time period**. There is certain time limit for my research work, Dec. 1, 2011 till April 1, 2012;
2) **Organizations**. My team and I approached 8 preliminary chosen companies. The eight cases are sufficient "replication" to support a general phenomenon. "The ability to conduct 6 to 10 case studies is analogous to the ability to conduct 6 to 10 experiments. A few cases – 2 or 3 would be literal replication, whereas a few other cases (4 to 6) might be designed to pursue two different patterns of theoretical replications. If all the cases

turn out as predicted, these 6 to 10 cases, in the aggregate, would have provided compelling support for the initial set of propositions." (Yin, 2009)

3) **Geographic area (region)**. Our activities were planned just for the Baltic States – Latvia and Lithuania;
4) **The type of evidence collected**. There is certain array of evidence that the researcher might be able to collect during studies. They are sample materials, artefacts, documents, interviews, observations. However, it should be made clear though that not all companies have allowed us to have access to the full set of evidence named above.
5) **The priorities for data collection and analysis**. The scope of companies included into the research work was deliberately made of different sizes in terms of production outputs. However, my priority was to look at middle to large companies for the chosen region. The regional "large" food producers though are still considered small to middle size compared to the average European companies.

4. Analysis of Data

4.1. Pilot Cases

4.1.1. Meat processing company "Forevers". For the pilot cases I have chosen two companies. It was decided to study food processing companies but each in its own field of production. The first was "Forevers" Ltd. We had contacted the company in some prior business engagements. "Forevers" is a meat processing company that mostly operates on the domestic market, which is Latvia. The production site is located in Riga, 9a Granitu Str. The discussion of the issues was made in the office of the company. The processing is located in the same building but we were not allowed to overview the process of production. However, the discussion itself was in-depth and very open minded.

- ✓ ***Product.*** At present, "Forevers" mostly uses two barrier film widths – 422 mm, 140 micron thick for thermoforming the base pack and 415 mm, 60 micron thick for lidding the thermoformed base pack. The consumed volume per month for both sizes is more than enough to produce these films under specific customer's needs even if the current volumes are further fragmented. Here I should recall why it was decided to design the film production line to meet the requirements for short runs. The approximate volumes accordingly are 4,000kg and 2,000kg of these films per month. Regarding printed films, there are very few products that are packed into printed films as of now. According to Mr Nazarenko the head of production division, there are limitations in volumes that the current suppliers of films are ready to print. The most of the products are supplied by intermediates and the films are imported from abroad, the printing is the question of minimum orders and information and design circulation. Instead of printing, the production uses paper labels. Mr Nazarenko has noted that there were many discussions within the company to switch to printed films for upper layer – the lidding, but there are some constraints and limitations for that. The first, it was already mentioned – the minimum film volume for printing. The quantities are too small for current supplier to print. The second is the design and related information exchange that may take place at least once in three months for one product. There is a large variety of products that would make in sum the crowded information flow from the customer to the film producer via the intermediate and that in its turn will bring up mistakes and defective films. On the other hand, there are lot of advantages for the

printed designs. The printing allows excluding paper labels. Paper labels are especially undesirable for products that are kept in the refrigerators below zero. Paper labels tend to stick to the fridge walls and that damages the label or the information on it. Printed designs are always laminated by additional film layer that prevents printing from damages. The printed design also is much nicer itself. The printing allows seeing the product through the packaging whereas the label may cover the product. There is also the cost issue that has to be considered prior to decision making. Paper labelling is additional cost. It is more convenient to use printed film instead of plain film and additional paper label. But there is the set up cost for printing which is cliché. From our own production experience where we are dealing with up to 80 product packaging, 300kg is the sufficient volume to consider the printed film instead of plain film with paper labelling.

- ✓ ***Quality – Cost trade off.*** The quality – cost matter was discussed to the greater extent. At the beginning of the discussion the quality issue was raised moderately. The cost was noted as the most significant factor for choosing the supplier. However, during a deeper discussion the trade-off between cost and quality came up to signal that cost increase is acceptable for better and stable quality. The quality of the film came up in front of all other factors as the most valuable and significant. The acceptance was shown clearly to have higher quality with moderate cost increase against competitors lower cost with lower quality offer. The film as direct variable cost in the total cost of the product may have the significant portion that ranges from 5% to up to 30% according Mr Nazarenko. For some products like sliced salami the film cost especially with paper label may have very high portion of cost in the total cost of the product. But the most significant issues are the way film behaves during the processing of products in packaging phase and how well it preserves the product from oxygen penetration during shelf-life and after goods have come to the customer's possession.
- ✓ ***Disintermediation.*** During the discussion, the head of "Forevers" production has noted the importance of a direct relationship with the manufacturer of flexible packaging products. In his opinion, this disadvantage of the domestic market creates two problems. Firstly, the relationships with the current suppliers, intermediate companies, delay the development of existing products and prevent from any innovation in the packaging field. He noted the obvious problem with paper labelling not even mentioning new materials with greater range of useful

features. Secondly, it is the cost structure. Mr Nazarenko expects lower cost as the explicit advantage in dealing directly with the manufacturer.

- ✓ ***Value chain and co-creation.*** The implicit understanding of benefits through cooperation between two manufacturers and exclusion of the intermediate company was the issue that persistently went through the whole meeting with "Forevers" representative. Shortening the supply chain may open the greater cooperation possibilities between the manufacturer of flexible packaging films and food processing company. By exchanging information in terms of experiences, problems and technical solutions and interlacing them with the cost efficiency and functionality of materials used in product packaging, both value chains can benefit from co-creation in perpetual development of appropriate packaging materials that secures necessary features for product packaging, preserving, shelf time and overall visual appearance. That in its turn increases product acceptance by the end-user. The meeting with "Forevers" representative showed the desire and maturity for engaging into co-creation that is based on improvement of production processes and product appeal to the customer.
- ✓ ***Customer service.*** The new issue for us was "Forevers" request to have possibilities to contact the supplier's technician as well as the supplier's film product specialists. In my opinion, it once again signals the quality importance, desire for having undisturbed production layout and interest in product developments. It is essential to have a prompt reply from the supplier's customer service to meet any operational challenges that may appear during production phase. The technical and film product expert assistance was stressed during the pilot case meeting with "Forevers".
- ✓ ***Logistics.*** To some minor extent the logistics was discussed. As proved out later, the most of the food processing companies have year-length agreements with 2 or 3 suppliers simultaneously. The supplier must keep a month stock and deliver all the flexible packaging materials once a week or once in two weeks. The intensity of supplies is rather low compared to supplies we are facing today in collaboration with chain stores where 2 to 3 times a week is accepted practice.
- ✓ ***Payment terms.*** During the discussion with "Forevers" it was found out that the payment terms are a much flexible issue compared to the business that we are engaged at the moment with chain stores where 60 to 90 days accounts payable practice is generally accepted. 14 days to 30 days were named as the normal practice for the payment terms.

✓ ***Conclusion.*** The meeting proved to be very fruitful in terms of sharpening the knowledge about the food processing business itself as well as the main factors and value drivers that were highlighted in the preliminary protocol. Concerning the flexible packaging, the most critical issues for food processing company are quality of the film for two reasons – smooth and undisturbed packaging process and product preservation. There are a few general issues that we brought out of this discussion. According to Vladimirs Nazarenko, 1) the flexible packaging market in Latvia is controlled to a great extent by a few intermediate companies – "Creavac", "PS Komerc" SIA, "Basko Food Technologies" SIA and "Plus Pack" AS. 2) There are also 3 main converters of barrier film – "Polipaks" SIA in Latvia, "Lietpacks" UAB in Lithuania and "Estiko Plastar" AS in Estonia. These converters also import the barrier films and convert these films at their own production facilities. Converting means flexographic printing, laminating, and cutting. 3) The barrier films offered to the market are produced mainly in three countries – Germany, Finland and Ukraine. 4) The variety of the barrier films offered to the market is very limited due to intermediates and converters, however, the possibilities for greater customization of the barrier film properties for different applications are wide. Such features as peel effect for better package opening, anti-fog, anti-condensation, increasing or decreasing overall thickness according to the customer's special needs, increasing transparency, decreasing the converting temperatures during the end-product processing by adding certain ingredients to the outer layers of the film, increasing the shelf time of the product where necessary by increasing the barrier properties, all these additional features are limited for the overviewed markets.

4.1.2. Fish processing company "Atlantikstars". The second company that I have chosen for the pilot case study was "Atlantikstars" – fish product processing company. "Atlantikstars" delivers its goods to the domestic market as well as exports to Nordic countries and Russia. The main product is artificial crab's sticks made of fish meat. The information that we have gathered was not as rich as it was from "Forevers" but this time we had the chance to observe the production in the process.

✓ ***Product.*** During this meeting I learned that this company instead of film uses vacuum bags. Same material – film with barrier properties but the film is already converted into bags. This information appeared to be true for many smaller producers in Latvia and Lithuania that we had met during the following three month. The production process itself is semi-automatic. The

fish mass that is imported from Far-East is prepared by adding the necessary ingredients to form the product that we know as crab's sticks. Each stick then is packed into separate high density polyethylene transparent film and then few sticks – 6, 10 or other quantities are packed by hands into the group packaging, printed or labelled vacuum bag made of barrier film. The company is producing the limited product line that is crab's sticks and some additional artificial crab's meat for salads. The variety of products is very limited. There are few sizes of vacuum bags that company uses for packaging starting from 150 by 200 (mm) and up to 300 by 400 (mm) bags. Both printed and plain bags are used. About 60% of bags are printed, the rest are labelled with paper labels. In total, production uses up to 300,000 vacuum bags a month.

- ✓ ***Suppliers.*** The current suppliers are two wholesale intermediate companies – "PakMarkas" UAB and "Ikam" SIA. The representative of the company was asked to comment on the most valuable factors in choosing the supplier for the company. We received the following answers – very competitive price offer, long payment terms, quality and order processing and delivery time. The company is happy with current suppliers that are intermediates. Dealing with the producer of flexible packaging materials was not regarded as something that may create advantage for the company but still could be looked at in future.
- ✓ ***Customer service.*** Customer service and technicians' availability was not noted as the preference but still was named as "good to have".
- ✓ ***Payment terms.*** The cash flow situation of the company does not appear to be in good condition. From some earlier engagements we have learned that company is looking for long payment terms – 60 days and more.
- ✓ ***Conclusion.*** The meeting showed us some gaps that we had in terms of additional converting processes that should be added. Further inquiries from our potential customers have proved the necessity for at least one more machine that should be added to extend our line of production to vacuum bags. The participants of the food processing market are small to mid-size companies that are not just looking for small quantities of films but also use a lot of bags made out of barrier film for semi-automatic packaging. For the small size producers the cost and payment terms are the main factors to be addressed.

4.1.3. Overall conclusions for pilot case studies. Both pilot case study companies are located in 15 minutes' drive from the place where our office is located and both companies were

contacted in earlier business matters. This made approaching and gathering maximum information with some extent of reliability easier for us. The time period spent on approaching these companies was reasonably short.

The pilot case studies gave me the idea for further elaborations on the set of the questions prepared for multiple-case in-depth study. During these studies we approached two different companies. The information gathered from "Forevers" was rich in terms of products, revealed the quality-cost relationship, conditions in choosing the supplier and what is expected from the supplier of packaging materials. This case has clearly showed the gap in current cooperation between the supplier of packaging materials and processing company. The value chain of processing company does not fully benefit from the existing linkages with the supplier's value chain. The vertical linkages between two value chains are damaged and cannot fully serve to "Forevers" best interests. Limited product availability, higher costs, next to nothing in terms of innovations and low technical assistance are factors that may negatively influence "Forevers" competitive advantage against other producers. The named factors are essential value drivers which if improved in future may increase company's competitive advantage and be appreciated by end-customers.

The second pilot case study did not bring much of useful information. Besides some new packaging material product list, we encountered limited access to company's strategic view of the current and preferable situation in terms of cooperation and co-creation to increase efficiency and overall output of company's value chain. The company's main concern was the cost and payment terms that may certainly signal to its cost leadership strategy. However, the concern for payment terms was expressed at a great extent and that rather could be taken for financial problems of the company.

4.2. Multiple-Case study – Snap Shot of the Industry Representatives

4.2.1. Companies chosen for multiple-case study. For multiple-case study I have chosen six companies. Those are:

1) "Balttur-R" Ltd. – producer of mayonnaise and ketchup under TM 'Francis' in Latvia;

2) "Cido Group" – juice, water and beer processor under TM 'Cido', 'Mangaļi', 'Lačplesis' and 'Līvu' in Latvia;

3) "Venden" Ltd. – drinking water refilling, supply and wholesale in Latvia;

4) "Spilva" Ltd. – producer of mayonnaise, dressings, ketchup etc. under TM 'Spilva' in Latvia;

5) "Samsonas" UAB – meat product processor under TM 'Samsono' in Lithuania;

6) "Vičiūnai Group" – fish product processor under TM 'Vici' in Lithuania.

All these six companies were visited during December, 2011 – March, 2012. The flexible packaging materials used in these companies should be divided in three groups. The first group is flexible packaging films with barrier properties that are used for food packaging. The second group is collation-shrink films. Collation-shrink films are used for product group packaging in food and non-food industries. The third group is films that are used to unitize pallet loads – stretch and stretch hood films.

4.2.2. Barrier film as the packaging material. In my study, the companies are also divided in two groups. The first group (**Table 1**) – "Balttur-R", "Samsonas" and "Vičiūnai Group" utilize the flexible packaging films for food packaging, thus in direct contact with food products. The barrier films of different structures (extruded, cast, laminated) and properties are predominant in this type of packaging.

The suppliers of these films to food processors are wholesale or converting companies. All barrier films are imported from four countries – Germany, Israel, Finland and Ukraine. Only in the case of "Balttur-R", the company utilizes 3 layer that is PET (polyester) 12 micron + Al (aluminium) 8 micron + PE (polyethylene) 110 micron laminated film with barrier properties.

All three studied companies also utilize the stretch film for unitizing pallet loads. But in the case of these three companies this type of packaging was not analysed.

	Balttur-R	**Samsonas**	**Vičiūnai Group**
Business / production field	Producer of mayonnaise and ketchup	Meat processing	Sea food processing
Main flexible packaging materials utilized	Films with barrier properties PET(12)+Al(8)+PE(110)	Films with barrier properties PE+tie+PolyAmide (PA)+tie+PE, laminated structures: PE+Tie+PA	Films with barrier properties 1)PE+tie+Polyamide+tie+PE 2)PE+tie+EVOH+tie+PE, laminated structures
Sizes (Width)	300 and 500 (mm)	405, 415, 422 (mm)	A large variety of width, starting from 300 mm and up to 750 mm
Sizes (Thickness)	70 & 130 microns	Base pack - 125, 150, 160 microns; lidding - 60 & 70 microns	Base pack - 130, 170, 200 microns; lidding - 60 & 70 microns
Printing / paper labelling	Printed film (5 colour design)	Paper labelling	Paper labelling/printing

Table 1

4.2.3. Collation-shrink and stretch films. The second group of companies – "Cido Group", "Venden" and "Spilva" utilizes collation-shrink films and stretch films. The (**Table 2)** shows the variety of films applied in production processes. The collation-shrink films are utilized for group packaging. The group packaging examples are 6 bottles, 12 jars etc.

For this group of companies the stretch film is regarded as the field of interest. Not surprisingly the stretch film came out here as the main concern for two of the companies from this group. The quantities of the stretch film utilized in unitizing the pallet loads are huge. The concern was expressed by "Cido Group" and "Spilva".

	Cido Group	**Venden**	**Spilva**
Business / production field	Juice, water and beer processing & refilling	Refilling & supplying of drinking water	Producer of mayonnaise, dressings, ketchup etc.
Main flexible packaging materials utilized	1)Collation-shrink film 2)Stretch films for unitizing pallet loads	1)Collation-shrink film 2)Stretch films for unitizing pallet loads	1)Collation-shrink film 2)Stretch films for unitizing pallet loads
Collation-shrink film size (Width)	400 and 500 (mm) for beers; 300, 450 and 700 for bottled water group packaging	370, 420 and 450 (mm) for bottled water group packaging	280, 320 and 380 (mm) for jars and bottles, group packaging
Collation-shrink film size (Thickness)	60/50/55 microns	60 microns for all films	50 microns for all films
Stretch film size (Width)	500 (mm) for mechanical and hand wrapping	500 (mm) for mechanical and hand wrapping	500 (mm) for mechanical and hand wrapping
Stretch film size (Thickness)	20 and 23 microns	20 and 23 microns	17 and 23 microns
Printing / paper labelling	Without printing or labelling	Without printing or labelling	Without printing or labelling

Table 2

4.2.4. Analyses of current supplies for barrier film. As the pilot case study already showed there are few wholesale/converting companies that import barrier film and supply it to the industry. The profile of the current supplier, delivery terms and payment terms are presented in (**Table 3**). The case study showed the same pattern of business relationships that the earlier pilot cases revealed. The food processing companies are not satisfied with the current supplier however not in all cases this discontent was explicitly showed.

	Balttur-R	**Samsonas**	**Vičiūnai Group**
Current supplier	Importer/wholesaler	Importer/wholesaler	Importer/converter
Logistics	Deliveries once in two week	Deliveries once a week	Deliveries once a week
Payment terms	21 days	14 to 21 days	21 to 30 days
Problems in dealing with intermediate company(ies)	Technical assistance and information exchange, but wants to deal with regional company only	Especially stressed lack of technical assistance and competences in materials	Lack of technical and customer service assistance for current supplier

Table 3

The most significant signs of dissatisfaction were disclosed when the technical assistance and overall availability and quality of materials supplied were discussed. The interviewing company representatives stressed the lack of competence in materials. The representatives emphasized the need for assistance in the production field when using the supplied films and overall customer service that is neglected for the current business relationships.

4.2.5. Analyses of current supplies for collation-shrink and stretch film. These two items are produced in the region by few film manufacturers. The quality, material diversity and supply regularity are not regarded as the problem to the industry. There are plenty of producers for collation-shrink films. For stretch film there is one large producer in Lithuania that satisfies the need of the region. The (**Table 4)** shows the current snap shot of the business relationships and supplies to three studied companies.

	Cido Group	Venden	Spilva
Current supplier	Producer	Importer/wholesaler	Producer
Logistics	Deliveries once a week	Deliveries once a week	Deliveries once a month
Payment terms	60 to 90 days	30 days	30 to 45 days
Problems in dealing with production/wholesale company(ies)	No problems noted	Lack of technical assistance	No problems noted
Alternative materials	Interest showed for stretch hood films	Noted but minor interest showed	Great concern showed for huge stretch consumption and interest showed for stretch hood films

Table 4

4.2.6. Stretch hood sleeve as alternative material for unitizing pallet loads. During the study of "Cido Group" and especially "Spilva" the significant gap appeared that was not noticed during pilot case studies. It can be explained by the size of the production company overlooked during the multiple-case study. The significance of the problem emerged during visiting "Spilva" production field. There are 500 to 800 pallets that should be unitized during the working week. The volume of stretch films used is the great concern for the company's management. They have tried different internal controlling activities but so far haven't succeeded in diminishing the consumption of the stretch film. According to the management, during the peak season the consumption per pallet increases steadily.

As mentioned earlier, one of the products that we are going to produce is the stretch hood film. For 5 layer film the thickness is set as 60 to 80 microns depending on weight it needs to unitize on the pallet. The advantage of the stretch hood film against conventional stretch films are as follows:

1) More than 30% cost reduction (less material utilized)
2) Control over film utilization
3) Higher holding force, even at higher temperatures
4) Outstanding display properties

5) Pallet load stability
6) Tear and puncture resistance
7) Excellent seal strength
8) Fewer damaged/returned goods
9) No need to use natural gas or open flame in case of shrink films or covers

Utilization of the conventional stretch film during the high flow of ready to ship goods is difficult to control and very ineffective. Unlike the stretch film, the stretch hood film is portioned to each pallet and is pulled on the pallet by the mechanic means. The consumption also is lower because of smaller diameters of film sleeve that is stretched to pull on to the pallet load and released to overlap the load. The mechanical features of 5 layers film allows to stretch it to a certain degree without tearing with excellent reflexive properties.

The characteristics of stretch hood film VS conventional stretch film were very appealing to both "Cido Group" and "Spilva" management that are fighting for cost efficiency on every level of production and sales activities to increase the overall competitive advantage of their products on domestic and export markets.

4.2.7. Uncovering important value drivers for studied pilot and multiple cases. After conducting the pilot and following case studies, the chain of factors that explicitly or implicitly were named or discussed with each company is ranged in the (**Table 5 and Table 6)**. The factors intentionally are divided in two groups. The first group is the factors that from the point of view of the company's representatives are important and explicitly drives value of the end-product (Table 5). These value driving factors were evident for encountered management representatives and pointed at the beginning of the discussion as the most important. The second group is implicit factors (Table 6). They were uncovered after deeper and elaborated questioning.

The ranking in terms of high, mid, low or needless is set as valuation of each value driving factor effecting the product and company's overall competitive advantage, where high gives the highest mark for the value driving factor and low means the lowest mark of the factor influencing the product's competitive advantage. Needless means the factor, according to the company's representative, does not make any perceptible effect on the product value.

The valuation is made as summary conclusions from the whole case study. It is important to note here that the beginning of all discussions and questionings had one overall driving value

factor – low cost. This bias diminished after going into deeper discussion for all concerning perspectives.

✓ ***Film quality***. The film quality has the highest value for food processing companies that utilize the barrier film as packaging material in direct contact with food products. Less important for companies like "Cido Group" and "Venden" that are using collation-shrink films and stretch films for unitizing the pallet loads. "Spilva" also utilizes collation-shrink films and stretch films and the most of their products are packed in glass jars and glass bottles. The film quality and durability are important in holding the pallet loads for "Spilva" but less important for "Cido" and "Venden" as their products are packed into laminated paper tetra packs (juice), PET bottles (drinking water) and for some minor extent into glass bottles (beer).

	Forevers	**Atlantikstars**	**Balttur-R**	**Samsonas**	**Vičiūnai**	**Cido**	**Venden**	**Spilva**
Film quality	High	Mid	High	High	High	Mid	Mid	High
Design and printing quality	High	Mid	High	High	High	Low	Low	Low
Film appearance (transparency & colouring)	Mid	Mid	Mid	High	High	Low	Low	Low
Film cost	Mid	High	Mid	Mid	Mid	High	High	High
Supply/logistics	High	Mid	Low	Mid	High	High	Mid	Mid
Payment terms	Low	High	Mid	Mid	Mid	High	High	High

Table 5

✓ ***Design and printing quality.*** This value driving factor is important for the most of food processing companies. Design and printing gives attractive look to the product as well as saves the cost of film VS paper labeling. It is almost unimportant for group packaging to "Cido",

"Venden" and "Spilva". These companies do not see any additional value in printed design on collation-shrink films. They rather regard it as unnecessary cost increase of the product. Some western companies like "Evian" prints also on the group packaging – 4 or 6 bottles of spring water in printed collation shrink film. Besides "Evian" water there are 4 cans of beer in printed collation shrink film supplied to the market by "Cesu" beer which means the printing of collation shrink films still may appear as the preferable features for beer and water producers.

- ✓ ***Film appearance (transparency & coloring).*** Also regarded by food processing companies as increasing the appeal of the product to the consumer. No importance for group packaging and unitizing of pallet loads.
- ✓ ***Film cost.*** For all food processing companies that utilize the barrier film the cost is the important factor to be regarded however the increase of quality and some other significant features of the film properties may approve the cost increase. Some additional film properties are valued more than cost driver for some extent. The properties like increasing the product shelf time, printing quality and undisturbed processing allows the increase of the film cost for great extent.

However, for companies that utilize the stretch film and collation-shrink film the low cost plays the most important part.

- ✓ ***Supply/Logistics.*** It is valued by most of companies that utilize the barrier and collation shrink films with very few exceptions. As example, "Balltur-R" is trying to have high stock that was explained by some bad experience in the past.
- ✓ ***Payment terms.*** The payment term conditions are different. In general, food processing companies that utilize barrier film are more flexible. They accept earlier payments against excellent performance of other, from their point of view more important factors. It is completely different with companies that utilize the films for group and pallet packaging. The product is very standardized and the bigger the company the longer the payment terms. In case with "Cido Group"

60 to 90 days is normal practice.

- ✓ ***End-product shelf time increase***. This was very sensitive topic in general for almost all studied food processing companies using barrier films. Even 2 to 3 day increase is important and was regarded as the major improvement for their products. Exception was only "Atlantikstars"

that pasteurize its product before further packaging. Pasteurization already increases the shelf time for the product.

✓ ***Product (packaging) diversity***. In general, the highest mark for packaging diversity was given by food processing companies that utilize the barrier films. Through diversity, the food processing companies see larger varieties of materials and their physical-mechanical features.

	Forevers	**Atlantikstars**	**Balttur-R**	**Samsonas**	**Vičiūnai**	**Cido**	**Venden**	**Spilva**
End-product shelf time increase	High	Mid	High	High	High	Needless	Needless	Needless
Product (packaging) diversity	High	Low	Mid	High	High	Mid	Low	Mid
Direct relationship with producer – Disintermediation	High	Low	Mid	High	High	High	High	Mid
Additional film quality features (peel effect, anti-fog, etc.)	High	Low	Mid	High	High	Needless	Needless	Needless
Flexible packaging development perspective & customization	High	Mid	High	High	High	Mid	Low	High
Customer service (technical assistance)	High	Mid	High	High	High	High	Mid	Mid

Table 6

✓ ***Direct relationship with producer – disintermediation.*** Here also the general trend for high marking and therefore regarding this as important factor was observed with larger companies. Larger companies therefore prefer to work with manufacturers of packaging materials. In case of "Atlanticstar" the long payment terms were regarded as much more important issue VS direct relationships. "Spilva" also concluded that cost component for them is more important than direct relationship with the producer by that stressing possibility to work with intermediates.

✓ ***Additional film quality features (peel effect, anti-fog, etc.).*** All larger users of the barrier film stressed the importance of additional functions and features of flexible packaging materials to increase overall functionality and attractiveness of their products.

✓ ***Flexible packaging development perspective & customization.*** Again, this value driving factor was regarded as interesting to barrier film utilizing companies. Increasing barrier properties, innovation in materials, printed designs and printing quality, lowering product packaging processing temperatures and other features that may impact the cost and overall visual attractiveness of the end-product were mentioned as welcomed.

Companies like "Cido Group" and "Spilva" that are interested in lowering the increasing costs for group packaging films also expressed the interest for development perspectives.

✓ ***Customer service (technical assistance).*** The customer service and technical assistance was one of the major concerns for larger food processing companies that utilize significant quantities of barrier films. It was evident that technical assistance is not the service that is provided by the current suppliers however the need for that was more than obvious. It was mentioned in almost all of the meetings with food processing companies and was raised as important as increasing the shelf time for the end-product. "Cido Group", "Venden" and "Spilva" also regarded this factor as important, however "Cido Group" was more appealing in its concern.

5. Discussion of Results

5.1. Customer's Value Proposition Drivers for Flexible Packaging Industry

During the pilot case and multiple case studies my team approached 8 food processing companies. The team was prepared for face to face questioning of company's representatives as well as where possible, exploring the production facilities and processes. The protocol – the set of prepared and pre-discussed questions for in-depth qualitative analysis was the main tool in assisting the exploration activities.

After gathering and analyzing the data, I decided to prepare two separate strategy canvases for four flexible packaging products that are mainly consumed by food processing companies. The exploration of the multiple cases revealed two separate product groups. The first group is barrier films. To represent the barrier films, I have chosen 4 companies – "Forevers", "Balttur-R", "Samsonas" and "Vičiūnai". These four companies have compelling "cross-case" similarities. I have excluded "Atlantikstars" as it stands apart from other four companies.

The second group represents the collation shrink and the pallet packaging films – stretch and stretch hood films. For this group, I have chosen three other companies – "Cido Group", "Venden" and "Spilva". All three companies have showed compelling similarities in testing them against value driving factors. I averaged data for each of product groups.

5.1.1. Barrier films. The further customization is well appreciated by the food industry for barrier films. (**Table 7)** reveals the value driving factors which are ***film quality***, ***design and printing***, ***shelf time increase*** as well as new and improved flexible ***packaging material development and customization.*** The ***technical assistance*** is an important factor that was stressed during companies' studies. It is obvious that highlighted value driving factors should be raised well above the industry's current standards and form the flexible packaging manufacturer's value package in approaching the food processing companies in regional market. The developments of new materials that may increase the shelf time of products as well as technical assistance are the factors that could be named as those to be created.

The strategy canvas and multiple case studies revealed also those value drivers, the performance against which could be reduced to some extent. These factors are ***supply regularity, payment terms*** and ***film cost***. The studied companies revealed the opportunities in lowering overall costs for these factors. The reasonable film cost increase, comparatively seldom deliveries and short payment terms are accepted by the industry.

The barrier films are products that certainly have the room for further customization. The overall film quality, printing, increasing shelf time, accordingly designed technical solutions that are oriented for short to mid runs may allow competing with low cost limited property films from Germany, Finland and Ukraine. By working on these specific value driving factors we may create exceptional advantage to our company's manufactured products.

Table 7 Strategy canvas for barrier films, customer's perspective

5.1.2. Collation shrink, stretch and stretch hood films. It is a rather different picture as regards to the shrink and stretch films (see Table 8). The main value driving factors here are ***film cost***, ***payment terms*** and ***disintermediation***. However, the industry is already served by manufacturers of these films. The discovery here is potential entrance of the stretch hood film that may significantly lower the cost of disposable flexible packaging materials for unitizing the pallet loads. Here we should seek the focused market segment that has comparatively large volumes of unitized pallet loads to invest into equipment that allows switching from the stretch film to the stretch hood film. As already shown, the stretch hood film VS stretch film has lower variable cost per pallet and greater mechanical properties but has high fixed cost of special equipment that pays off at comparatively large volumes. From studied cases only two companies may benefit from investment into this type of pallet wrapping – "Cido Group" and "Spilva". Surely there are more companies in the market that we can address. New ***packaging material developments*** is therefore the factor that should be addressed and may open space for further customization.

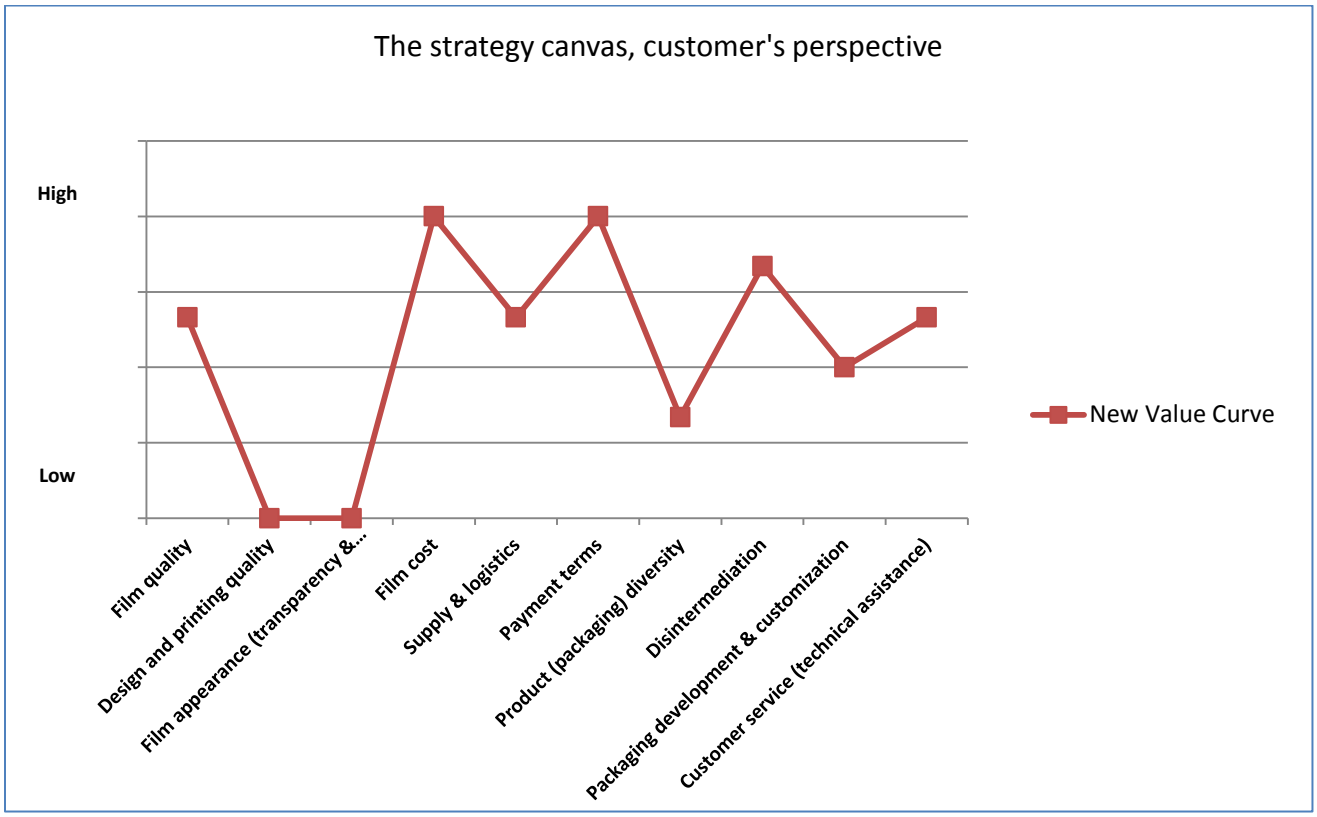

Table 8 Strategy canvas for collation-shrink, stretch and stretch-hood films

5.2. Leveraging Customer Value Creation

The flexible packaging materials are not just regarded as “simple” packaging. The case studies showed the importance that was given to flexible packaging solutions in the product flow through the whole supply chain to the end-customer. The food processing companies were concerned with the range of advantages that could be given to their product through customized packaging.

The packaging follows the product at every step. Starting with inbound logistics then handling and storing, processing, outbound logistics and product exposure in retail chains and finally preserving product properties when goods reach the customer. All these activities depend on “smart” packaging solutions.

Using our knowledge in film blowing and combining it with the new technologies and customer relationships cultivated in almost 20 years of experience we are offering competence to our client’s base to leverage customer’s value creation. Through customized barrier film offer our target is not just to create value to our company and profit from this creation but also offer our experience and modern technological solutions to our customer’s that in its turn increases the competitive advantage of their products. By offering the barrier film properties that were not available to the regional market before – customized film features, short runs, printings, wider film qualities, engaging into creation of packaging materials that fits best to customer’s needs, we are joining our competences in co-production to leverage value creation. Both pilot cases and case studies of regional companies revealed willingness to participate in creating new packaging solutions for all kinds of food products.

Shortening the supply chain by excluding the intermediates we are bringing lower cost and wider offer to the market. The competences that come from the manufacturer of flexible films directly to food processing companies are more accurate in its form and deeper in its content.

6. Conclusions and Recommendations for Further Research

Within my study work I have explored 8 food processing companies in Latvia and Lithuania. As the producer of flexible packaging materials I was interested to study the current offer of this product to the industry and what regional market expects from the supplier of flexible packaging materials. Furthermore I had an interest to discover gaps in the current offer of the product and learn how to increase the value proposition to food industry and outperform the existing rivals.

I have started with studying the current offer and what are the important value driving factors for flexible packaging materials to food processing companies. By exploring the industries' representatives I have learnt that the main flexible packaging product – the barrier film is supplied to the industry by intermediate companies or converters for some extent. The supply of the product is limited in terms of available qualities, printing possibilities, sizes and film properties however there is a great interest from food processors to expand these features. The important value driving factors for barrier films are also product shelf time increase and technical assistance. The study has shown opportunities that could be taken by working on the important value driving factors and create customized offer to food processing companies.

By deeper engagement into the study I have learnt that explored companies are willing to cooperate in smoothing the current offer and participate into further film customization. Interviews and negotiations revealed the lack of collaboration between intermediates and food processing firms. The existing offer is limited and there are no signs for improvements to current products. However, the flexible packaging industry is a fast growing business field with innovations in film blowing, flexographic printing and lamination technologies not even mentioning huge diversity of applied materials for flexible film production.

A bit different situation opened up for other flexible packaging products – the collation shrink film, stretch and stretch hood films. There are many regional producers for collation shrink film and stretch film and therefore, current offer satisfies the most customers. However, the innovation and cost effectiveness could be reached here through technological improvements by introducing the stretch hood film that can decrease the cost of disposable packaging materials significantly. This offer should be focused on large industry representatives where the production volume exceeds the certain level.

The food processing companies showed a great interest for barrier films and the opportunities that emerged by improving the film properties and overall appearance. The range of features like increased transparency of layers, decrease of processing temperatures, peel off, printing quality diversity, short order runs and increasing product shelf time for even 2 to 3 days proved to be the important and innovative approach that certainly increases the product value proposition to the end-customer. By working on these features and involving food processing companies in co-creation of film properties we are leveraging the value creation to food industry.

Within my master's thesis I have studied our potential customers – food processing companies. For me as the producer and product supplier to the market it is important to understand the needs and problems of my potential clients. During this study, I also had a chance to overlook the offer made by my potential competitors. The competitors' offer to the market I was able to analyse implicitly by approaching and studying our clients and their discontent that was expressed with the current offers. It would be rather interesting to make a deeper study of the competitors, their advantages and disadvantages, their supply channels, product offer, marketing and sales activities. Such study would uncover the wider snap shot of the industry and could give a researcher the answers on why some of value driving factors have not been currently offered or served properly to meet the demand from the market.

However, analysing your competitors may have brought up more limitations and constraints in building the whole picture of competing field. Most likely the information gathered during the study of relevant competitors may result in great deal of assumptions. But that is the case for further studies of flexible packaging industry in the overlooked region.

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Appendix 1. Protocol

The protocol was created as the guiding tool to focus investigator's attention on carrying out the data collection from a single case.

A. Introduction to the case study and purpose of protocol
    1. Proposed case study questions
    2. Theoretical framework
B. Data collection procedures
    1. Name of sites to be visited, including contact persons.
    2. Data collection plan. Who to be interviewed, events to be observed, samples and artefacts to be gathered.
    3. Expected preparation prior to site visits.
C. Detailed case study questions
    1. Operationalization (case study measurements)
        a) Business field?
        b) What kind of flexible packaging materials (composition) are used in production?
        c) Size (width/length), thickness?
        d) Films – plain or printed, labelling, transparent/colouring, thermoforming?
        e) What products are packed?
        f) Variety of products packed per size of packaging material?
        g) Quantities for each product or size unit per month/year?
        h) Delivery and payment terms?
        i) Current supplier – producer, wholesaler, importer, foreign supplier or else?
        j) What are the operational/supply problems in dealing through wholesaler (in case there is intermediate company in supply chain)?
        k) Current pricing where possible?
        l) Any factors/value drivers that needed to be Raised/Reduced/Eliminated/Created from current state?

Hint! (please, note degree High/Mid/Low/Needless):

1) Film quality?
2) Printing & design quality?
3) Film appearance (transparency & colouring)?
4) Film cost?
5) End-product shelf time (increasing barrier properties)?
6) Product (flexible packaging) availability?
7) Direct relationship with manufacturer (disintermediation)?
8) Additional film quality features (peel effect, anti-fog, etc.)?
9) Flexible packaging product development and customization?
10) Customer service (prompt feedback and technical assistance)?
11) Supply/logistics?
12) Payment terms?
13) Special requirements (have to be noted)?

m) Notes

2. Evaluation
   a) Short evaluation of the meeting and general description of the case.
   b) What are the most critical factors/value drivers that were stressed during the visit of the site and questioning the responsible person(s)?
   c) Is there any cross-case similarities noted during the case study?
   d) Are there any cross-case discrepancies that emerged during the case study?
   e) What are the lessons learned after conducting the case study?

Table 9 Case study protocol

Appendix 2. Company visits

No.	Date of the visit	Company's name	Address	Field of production	Trade Mark	Name of the Interviewed person	Position
1.	18.01.2012	Forevers Ltd.	9a Granita str., Riga, Latvia	Meat processing	"Forevers"	Vladimirs Nazarenko	Head of production division
2.	19.01.2012	Atlantikstars Ltd.	"Surimi", Mucenieki Ropazu novads, Riga region, Latvia	Fish processing, surimi and seafood products	"Atlantika"	Vadims Dargelis	Board member
3.	23.01.2012	Balttur-R	69 Slokas str., Riga Latvia	Producer of mayonnaise and ketchup	"Francis"	Jelena Vishnikova	Head of production division
4.	12.03.2012	Cido Group Ltd.	4 Ostas str., Riga Latvia	Juice, water and beer processing	"Cido", "Mangali", "Lacplesa", "Livu"	Svetlana Bedike	Purchase manager
5.	17.02.2012	Venden Ltd.	33 Ganibu Dambis Latvia	Drinking water refilling, supply and wholesale	"Venden"	Adolfs Locans	Managing director for supplies and materials
6.	20.03.2012	Spilva Ltd.	1 Zvaigznu str., Spilve Babite parish, Latvia	Producer of mayonnaise, dressings, ketchup etc.	"Spilva"	Olga Bleidere	Materials purchasing coordinator
7.	25.01.2012	Samsonas UAB	89 Europas pr., Kaunas Lithuania	Meat processing	"Samsono"	Gediminas Akelaitis	Production engineer
8.	26.01.2012	Viciunai ir partneriai UAB	50 Birutes str., Plunge Lithuania	Fish processing, surimi and seafood products	"Vici"	Edite Pikturniene	Packaging category Purchasing manager

Table 10 Company' contacts, schedules etc.

Definitions and Abbreviations

Customized products – product and service design to meet customer's best needs & demands;
Competitive advantage – an advantage that allows an organization to develop attributes to outperform its rivals;
Flexible packaging – flexible film production for diverse packaging needs;
Barrier film – multi-layer film with gas barrier properties;
Collation-shrink film – the plastic film that collapses by heating around the objects (beverages, food, industrial products etc.) and holds the single packs together;
Stretch film – used for unitize pallet loads but may be used for bundling smaller loads, most common material used for production of stretch film is linear low density polyethylene;
Stretch hood film – multi-layer film with increased durability that is mechanically stretch to overlap pallet loads;
Food industries - food product like meat, fish and cheese producers and converters;
Non-food industries – here, the industries (like wood-processing or other packaging industries) that consumes collation-shrink films[5];
5 layer blown film extrusion – extrusion technology to produce multi-layer films;
8 colour flexographic printing – 8 colour printing unit which utilizes a flexible relief plates;
Laminating – uniting two or more layers together by means of gluing under pressing process;
Other peripheral equipment – additional equipment for film processing;
Business to Business - describes commerce transactions between businesses;
Business to Customer - describes commerce transaction between business and end-user;
Value driver – a factor that adds value to the product or service in the perception of the consumer and therefore creates value for a producer of the product;
End-user – consumer or person who uses the product;
Strategy canvas – here is, the graphic form that shows the current state of competition in a known market place. It highlights what drivers or factors the industry currently competes on in terms of products, services and delivery (Kim, Renee, 2005);
Multiple-case studies – defined in Methodology part of this work;

Intermediary companies – here, companies that serve as the link between producers of goods (flexible packaging) and users (or consumers) of these goods, food and non-food production companies;

Value innovation – here is, strategy for simultaneous pursuit of differentiation & low cost. Value innovation is created in the region where a company's actions favorably affect both its cost structure and its value proposition to buyers.

End-product – here, the result of a completed series of processes or changes in manufacturing;

Value curve – here is, the tool to show visually the strategic works in relation to close competitor. It is drawn up to show the picture of how a company invests in factors of competition now and in the future;

Supply chain – alignment of firms that bring products or services to market (Lambert et al., 1998);

Disintermediation – removal of intermediaries from supply chain.