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A CASE STUDY EVALUATING EXPORT OF ENVIRONMENTAL-FRIENDLY PRODUCTS INTO NORWAY

by

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EXECUTIVE SUMMARY

The market for environmental friendly products in Norway is increasing. New research and increased focus on environmental effects are among the largest drivers of demand. Customers who are concerned about environmental effects are willing to pay premium prices on products proven to have better environmental quality.

However, exporting environmental friendly products from California to Norway can be demanding. Customer segmentation abroad is challenging, rules and regulations on import to Norway are quite comprehensive, and sociocultural differences make demands for extra marketing efforts.

Industrial analyses identify a potential to differentiate from competitors, offering a more environmental-friendly product, and a product that can be tailored according to customers' demands. Resource-based analyses confirm that the company is in position of resources to make this possible. Both external and internal elements are reasons why direct export through an agent is the recommend entry mode.

The company represents a green brand, which will be important to promote. Selective media is what the company is yearning for, and it is recommended to make use of existing channels of information, in marketing.

A total net present value of NOK seven million over the fifteen next years, if investing approximately NOK one million today, is estimated.

PREFACE

The idea of writing a master thesis on this subject was developed while studying at Monterey Institute of International Studies in California, as a part of the exchange program at the Norwegian School of Business and Administration (NHH). The Monterey Institute specializes in Sustainable Business Practices and Environmental Policy. California is among the world leaders when it comes to introducing environmental friendly products, and one of my professors at MIIS asked what difficulties I saw when it came to introducing some of the Californian products in Norway. We discussed this further and he told me he had been working as a consultant for a few companies that would be interested in introducing their products in Scandinavia. I told him about my education from NHH and we started discussing the possibility of writing the thesis on this subject.

My own motivation is partly the growing interest for environmental-friendly business in Scandinavia, and the huge future potential in this market. The other reason for this particular thesis is the possibility of working on a real life project. This thesis has allowed me to cooperate with people, from the leading-edge within the field of both environmental friendly businesses and entrepreneurship / establishment of new businesses, from Silicon Valley.

I would like to thank my supervisor, professor dr. oecon Øyvind Helgesen, for support, feedback and contribution. I would also like to thank the people working at WISE Solutions (WS), especially VP of business development Daniel Robin, for support and help along the way.

Bergen, June 2010

Martin Lund

CONTENTS

1 INTRODUCTION

In later years environmental effects have been acknowledged as important when customers, both individual and industrial, evaluate potential purchases. There has been a tendency for more and more businesses to work on improving production-technology in order to meet new environmental demands. Businesses who think they succeed in producing a superior product, when it comes to environmental friendliness, have also seen possibilities in using this in marketing campaigns, building a green image. The trend for more environmental focus among customers is seen in most European countries, including Norway. However, some areas have seen a faster and larger progress when it comes to production of such products than others. Exporting products, superior when it comes to environmental effects, from these areas into Norway, could therefore be a potential market. The aim of this thesis is to evaluate this potential and describe how to potentially exploit it.

A Californian company, called WISE Solutions (referred to as WS) and the issues WS face when evaluating whether or not to enter the Norwegian market, are used as the base for all discussions. WS makes and sells premium quality, next generation green cleaners and bio-lubricant products for settings where these products are in high risk of coming in direct contact with people or nature. Marketing focus has so far been on industrial segments in North America. WS is now planning to introduce their products to some industrial countries in Europe. The intention of this study is to provide useful information when evaluating the potential of export to Norway, and the problem to be addressed is:

Can WS create profit in the Norwegian market?

When evaluating market potential, elements of interest are often the same elements found in general business plans. A business plan is a tool that systematically helps the entrepreneur further developing a business idea, and making it presentable for potential investors (McKinsey&Company, 2007). This thesis, however, is not meant to be a general business plan presented to potential investors or others outside the company. Instead, it is meant to provide decision making support for whether or not to enter the Norwegian market. This thesis will therefore emphasize on a few of the elements usually found in business plans.

The case study comes close to the layout of a consulting report. But, it cannot be regarded as a general consulting report either. Being a master thesis in business and administration, it is written in a more formal style and expanded to include more discussions on theoretical aspects than what one normally finds in consulting reports.

As the table of contents show, all chapters are based on one question that should be answered over the following sections. The meaning of this is to make it easier for the reader to see what the purpose of the chapter is. By reading all the main headings, the reader is also guided through the content of the thesis as a whole. The first part of this thesis presents and evaluates strategic considerations if entering the Norwegian market. Questions of importance in that matter are:

- Ch.2 - What is WS?
- Ch.3 – Which customers should WS serve?
- Ch.4 – What are the institutional based considerations?
- Ch.5 - What are the external strategic considerations?
- Ch.6 – What are the resources of WS?
- Ch.7 - How should WS position themselves in the market?

The next part of the thesis presents a recommendation of strategy in order to enter the Norwegian market. Questions of importance are:

- Ch.8 –What entry mode to use in the Norwegian market?
- Ch.9 – Is the product more than chemicals?
- Ch.10 – How should the products be promoted?
- Ch.11 - How should the products be priced?

The last part of the thesis will translate the strategic perspectives into financial forecasts. The question in relation to this is:

- Ch.12 - How much profit can WS expect?

Figure 1 is an illustration of the structure:

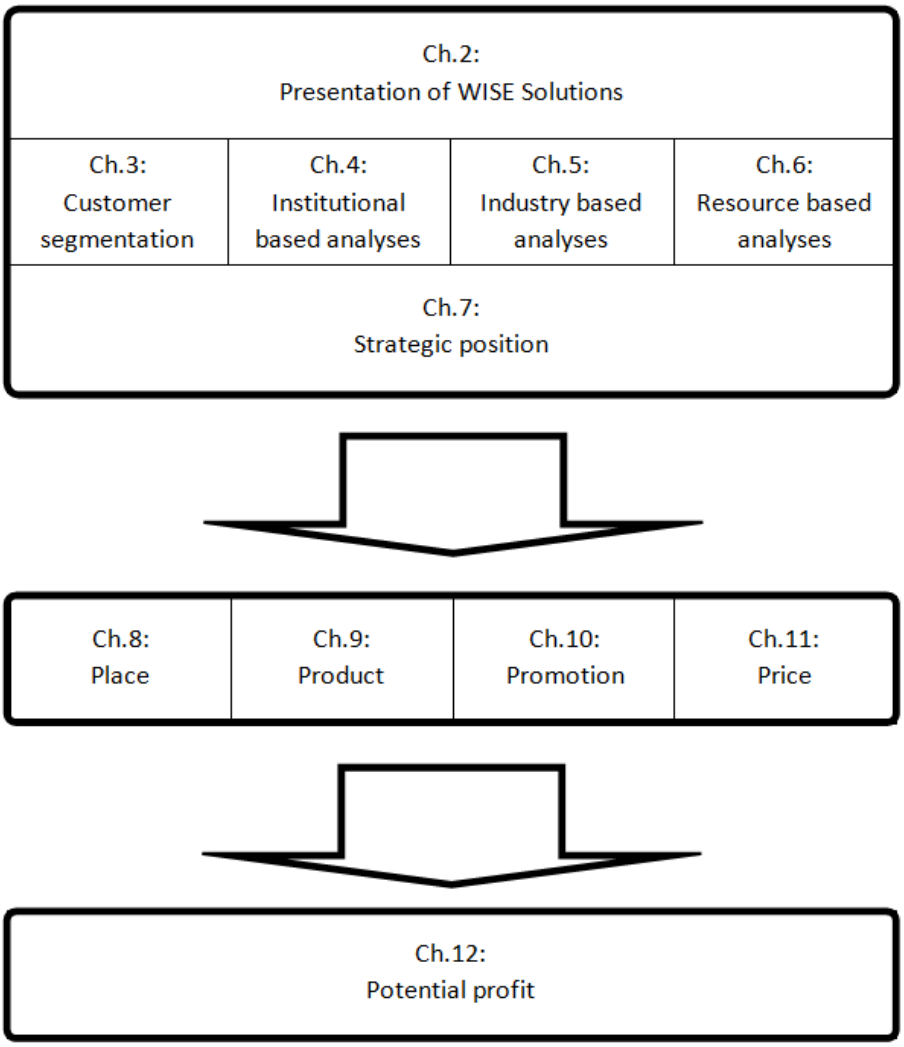

FIGURE 1: STRUCTURE OF THESIS

2 WHAT IS WISE SOLUTIONS?

WS, located in northern California, was established in 2006. WS enjoys close collaboration with technical partners, with whom WS has secured the know-how and rights to formulate, manufacture and sell under their own label. WS is currently raising capital to establish a new manufacturing facility, thus producing more products from scratch themselves.

WS sells two synergistic product lines – green cleaners and bio-lubricants. The products are formulated using green chemistry principles and renewable ingredients. These products have been tested and proven to outperform other bio-based green formulas (Robin, 2009). The goal is to replace more toxic materials, especially substances made of petroleum. The products decrease carbon footprints, but will also cut handling, usage and disposal costs for many applications (Robin, 2009).

"The products meet or exceed the functional performance of toxic chemicals, but without relying on fossil petroleum or chlorinated ingredients and their inherent risks and downsides" (Robin, 2009, p. 1)

Table 1 shows all products offered by WS in the US market as of today. Which customers the respective products are offered to are marked with crosses.

TABLE 1: PRODUCTS AND MARKETS IN THE US

Markets / Products	Agriculture	Beverage-processing	Dairy	Food-processing	Medical & Dental Equipment (OEM)	Pharmaceutical Drugs	Skincare, cosmetics & Beauty	Supplements & Herbal Medicine	Water treatment & Marine	Wine &Vineyard
General Cleaners										
All purpose cleaner Degreaser	X	X	X	X	X	X	X	X		X
Bio Mold away	X	X	X	X	X	X	X	X	X	X
Bio Odor Away	X	X	X	X	X	X	X	X	X	X
Bio Odor Away (Soy Based)	X	X	X	X	X	X	X	X		X
Heavy Duty Cleaner	X	X	X	X	X	X	X	X	X	X
Tank & Pipe Cleaner			X			X	X			X
Food-processing Cleaner		X		X						X
Weed and Pest Control										
Botrytis Control										X
Colloidal Bio-Insect Control	X		X	X						X
WISE Up! Bio Weed Control	X									X
General Lubricants										
Food Grade Air Tool Lubricant	X	X	X	X	X	X	X	X		X
Food Grade General Purpose Lubricant	X	X	X	X	X	X	X	X		X
TCW 2-Cycle Engine-oil									X	
TCW3 2-Cycle Engine-oil									X	
Gear Oils										
Food Grade Gear Oil	X	X	X	X	X	X	X	X	X	X
80W90 Gear Oil									X	
E.P. Gear Oil									X	
Grease										
Food Grade Extreme Pressure Grease	X	X	X	X	X	X	X	X	X	X
High Temperature E.P. Greases									X	
Chain Oils										
Food Grade Ultra High Temperature Chain Lubricant	X	X	X	X	X	X	X	X		X
Bar and Chain Oil	X								X	
Hydraulic Fluids										
Food Grade Hydraulic Lubricant	X	X	X	X	X	X	X	X		X
Bio -1000 & Bio-2000 Hydraulic Fluids	X								X	
Penetrating Lubricants										
WISE Penetrating Lubricant (WPL)	X								X	
Food Grade Penetrating Lubricant		X	X	X	X	X	X	X		X
Blast Penetrate	X								X	
WPL Plus Tack (Penetrating Lubricant)									X	
WPL Plus Moly + (Penetrating Lubricant)									X	
WPL Plus Moly (Penetrating Lubricant)									X	
Diesel & Diesel Fuel Conditioners										
Diesel Fuel	X								X	
Diesel Fuel Conditioners (Summer & Winter Formulas)	X								X	
Lubricants for Turbines										
Turbine Rust and Oxidation Fluids									X	
Boat Wash										
Bio Bilge Wash									X	
Bio Boat Wash									X	
Bio Canvas and Vinyl Cleaner									X	
Salt Halt									X	

As table 1 shows WS sells a wide range of chemical products. Within the two synergistic product lines mentioned earlier one find products such as: General Cleaners, Weed and Pest control, General Lubricants, Gear Oils, Grease, Chain Oils, Hydraulic Fluids, Penetrating Lubricants, Diesel and Fuel Conditioners, Lubricants for Turbines, and Boat Wash. Marketing focus has so far been on industrial segments in North America where chemicals or other substances can come in contact with products, people, protected lands, water supplies or workplace settings. Even though the products are offered to ten different customer segments in the US, the focus has been on food- and beverage- processing industry, water-/marine- sector and agriculture industries (Robin, 2009). WS has mostly sold its products directly to in-house accounts, through manufacturers' representatives, wholesalers/distributors and retailers (Robin, 2009) .

In addition to price/performance, headlines such as water quality, fluctuating petroleum prices, and a myriad of other concerns drive demand for WS' products. Global chemical production continues to grow at about three percent a year with many markets seeking safer, more sustainable alternatives, especially in the EU (Ridenour, 2009). Fear of further environmental decline and health and safety risks caused by wasteful practices and over-consumption of natural resources are driving governments and industries to question the practices used.

2.1 KEY EMPLOYEES

WS was founded in 2006 by the experienced entrepreneur and brand-builder *Jeremiah Ridenour*, one of the founders and former CEO of Wildwood Natural Foods Inc. Additional key staff consists of (Robin, 2009):

- *Daniel Robin*, VP of business development, specializes in commercializing advanced biorenewable materials, with more than 20 years experience in the field.
- *Fabio Rizza*, VP sales and marketing, 15 years of experience in international chemical marketing.
- *Don Brown*, operations manager and sales team leader, with 15 years experience in retail chemicals and M&A.
- See appendix section 1 for listing of additional advisors.

2.2 FINANCIAL SITUATION

The overall goal for WS is to grow at least $100 million - $300 million annual revenue in roughly seven to ten years, with a gross margin up to 55-60 percent (Robin, 2009). The later years, however, could easily produce double the projected volumes with the right marketing, investment in staff and strategic partnerships (Robin, 2009).

To date WS has more than $ 850,000 in angel funding (Robin, 2009). Angel funding is a form of equity. It is almost the same as venture capital, but the investors are not seen as professional investors, in the same way one see venture investors (McKinsey&Company, 2007) .

With this money the company has secured initial customers, more than 1 million gallons of annual capacity in a full suite of products and gained extensive application and formulation knowledge (Robin, 2009). The company is currently seeking more capital and will have a total of $1.2 million additional funding after the current investment period (Robin, 2009). Full year break-even is projected to be achieved in 2011 (Robin, 2009).

2.3 HISTORY

From June 2006 until present WS has (Robin, 2009):

- Completed business-, operation- and marketing- plans
- Secured distributor position in eight western pacific states
- Gained rights to formulate and blend chemicals on the West Coast and sublicense to sell anywhere in the world
- Raised first round outside capital from angel investors
- Built web site
- Established reference accounts and initial sales
- Arranged multiple commercial trials

With the new capital, currently being raised, WS will establish a manufacturing facility in California, expand sales and marketing staff and convert prospects to customers (Ridenour, 2009).

3 WHICH CUSTOMERS SHOULD WS SERVE?

In most markets it is not possible to satisfy all customers with just one product. Different customers have different needs and demands. This leads to an offer of different product-lines for different customer-groups. In order to identify differences among potential customers, markets are divided into segments. The company may choose to serve all segments or just focus on a few (Helgesen, 2006).

When splitting the market into segments, one has to keep in mind that one should be able to exploit a market-strategy towards the segment. The following criteria are interesting in that matter (Kotler, 1992; Lambin, 1993):

- Distinct differences
- Adequate size
- Possible to measure the size
- Accessibility
- Feasibility

A segmentation of markets is normally done in two phases (Helgesen, 2006): 1) Macro-segmentation and 2) micro-segmentation. The goal of the macro segmentation is to achieve an overview of possible markets. In the micro-segmentation one looks closer at possible macro-segments, to identify the segments one wish to serve.

3.1 MACRO SEGMENTATION

Abell (1980) uses three dimensions in the macro segmentation, as illustrated in figure 2. Functions or needs characterize the meaning of the product for its customers. Technologies describe alternative ways a function or a need can be met. While customers are described according to different criteria like: Geography, demography, individual consumers versus industrial consumers, and so on. For a macro-segmentation only rough descriptions are used, so as to form a picture of the possibilities in the market.

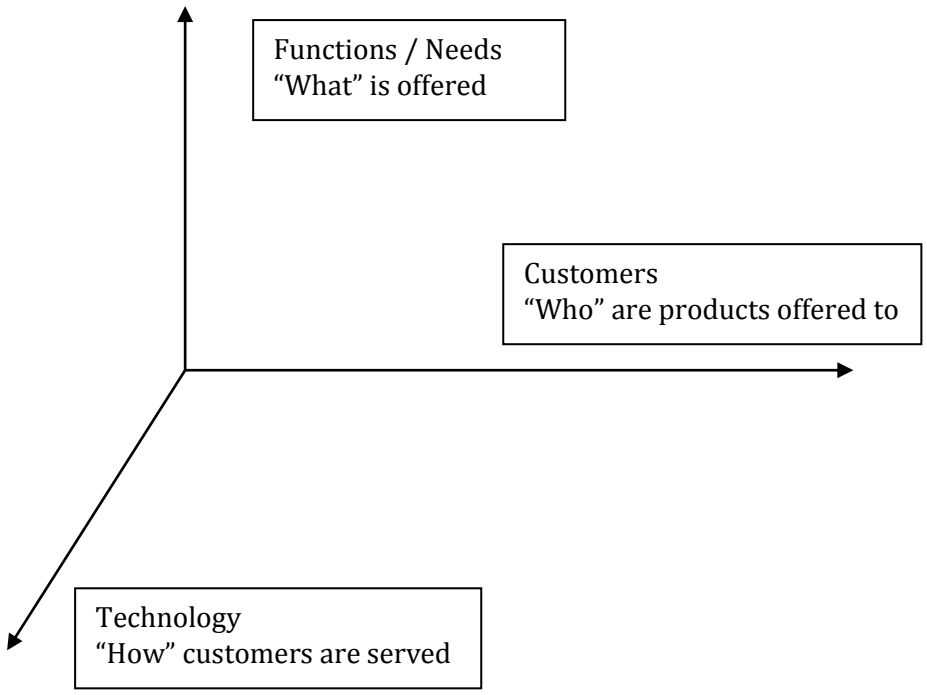

FIGURE 2: MACRO-SEGMENTATION

This framework also helps to separate between a product-market, a market and an industry (Helgesen, 2006):

- A product-market can be defined as a specific group of customers' need for a function or solving of a problem.
- A market can be defined according to the coverage of a function or need for a certain group of customers, but including all technologies that may cover this.
- An industry is based on a certain technology, but can cover different functions of needs for several customers.

The definition of an industry is supply-oriented and not market-oriented. For marketers this categorization is too wide. However, statistics are often built on industry characterizations and such characterizations are therefore useful when gathering data. Within the market definition there is a focus on the fact that substitutes or other technologies may satisfy the same needs. The definition of a product market is the most market-oriented. The coverage of needs and functions for a specific group of customers is central.

After defining possible profitable macro-segments, these segments are analyzed further. The aim is to find possibilities and estimate volumes, potential growth and market shares. The

analyses include both served and un-served markets. The overall goal is to find what segments one will emphasize on in a micro-segmentation.

3.2 MICRO SEGMENTATION

The goal of micro segmentation is to analyze customers' differences in demand in more detail. One wants to identify customers having the same problems, or seeking the same attributes to products (Helgesen, 2006). The company may then form a differentiation strategy by satisfying customer's needs in a better way.

Micro-segmentation may be performed in various ways. First, one must therefore decide what criteria will be used for segmentation. For industrial customers some common criteria are (Helgesen, 2006):

- Organization-demographic criteria
    - industry/branch, geographical localization, size, place in value chain
- Operative variables
    - technology, competence
- Purchase routines
    - power-structure, co-operations, purchase policies, purchase criteria
- Situation factors
    - time pressure, size of orders
- Personal characteristics
    - the relationship between buyer and seller, attitudes towards risks, purchase-behavior

3.3 MACRO SEGMENTATION FOR WS' NORWEGIAN OPERATION

The theory presented, on how to do customer-segmentation is now used in the case of WS' Norwegian operation. Section 3.3 performs a macro-segmentation, whereas section 3.4 will perform a micro-segmentation.

3.3.1 INDUSTRY CHARACTERISTICS

In larger and less diversified industries it is easier to identify industry characteristics than in smaller and diversified ones. In the first case the borders of each component forming the market landscape are better known. The competitors know each other well, the customers

are pretty easy to identify, and so on. However, the situation in this thesis is a company that operates within several industries; the two largest ones are sales of lubricants and sales of cleaners. Several of the competitors in these industries also operate within other industries, to separate the effects for just the two industries of interest are therefore challenging.

In advance the author of this thesis knew little concerning the cleaners industry. There also seems to be less statistics available to the public on this industry compared to the lubricants industry. This challenge was dealt with in three steps. First, the author carried out a search online for possible competitors, branch organizations, et cetera. The purpose of this was to get an overview of the industry and possible competitors. Specific sales data was not found due to individual agreements on prices and lack of statistics on volumes. Second, some of the largest competitors and possible customers were contacted. Suppliers were asked for sale statistics and customers for which suppliers they used and what sort of products they need in their production. Not all were interested in sharing this information, and they all particularly guarded their sales prices and volumes. But at least this step confirmed who the major competitors are, in addition to establish contact with some industry-experts. In the third step there was done a more specific search on the web for key financial information on the identified major competitors, which made it possible to make rough estimates of market shares. Some of the industry contacts were willing to validate these estimates and confirm the findings.

A major difference between the two industries is that the largest competitors in sales of lubricants are large petroleum companies, and the sale of lubricants is only a small portion of their total sales of all products, compared to the cleaners industry where cleaners normally is the largest portion of total sales. For petroleum products there are more statistics produced and made available. In this thesis there was especially made use of statistics from “Norsk Petroleumsinstitutt”.

Figure 3 and 4 show the largest competitors in the Norwegian market for cleaners and lubricants respectively. Market shares are presented based on financial information the various competitors have presented in their annual reports. Please note that figures presented are sales to all customer-markets served by the competitors in Norway, and not just sales to customers of interest for WS. Also note that market shares for lubricants alone

were not found, and figures presented for this industry are percentage market-shares for the sum of all products sold (www.np.no). Total sale of lubricants, was found to be 71 million liters in Norway last year (www.np.no).

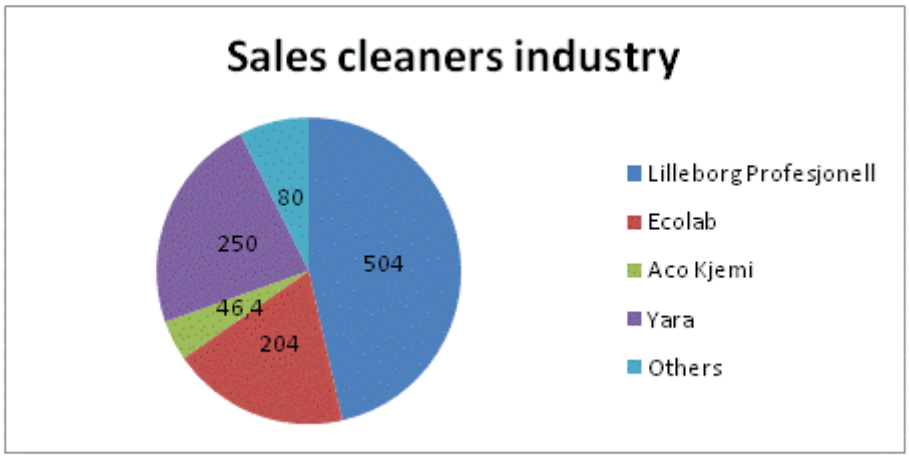

FIGURE 3: SALES IN MILLIONS, MARKET FOR CLEANERS

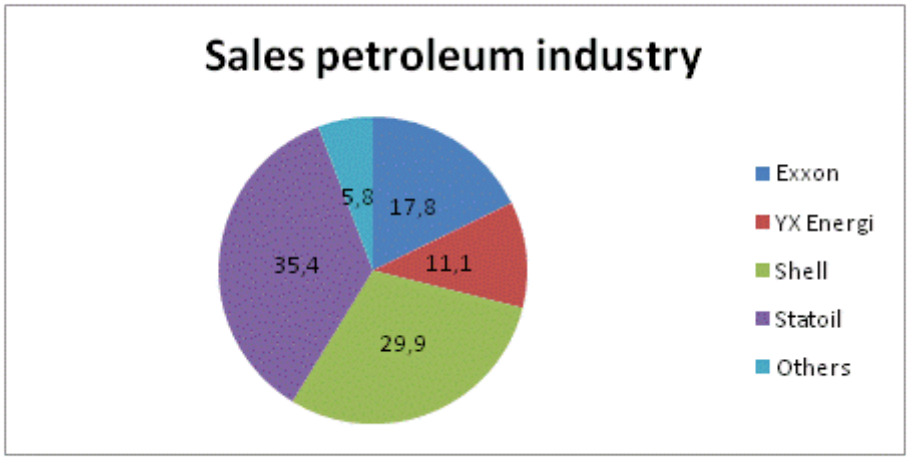

FIGURE 4: MARKET SHARES, ALL PETROLEUM PRODUCTS

Figure 3 and 4 prove that both industries are characterized by a few large competitors. There are three to four large companies in both markets, who supplies more than 90 percent of the markets. Market shares are generally evenly divided among the four largest in the market for lubricants, whereas “Lilleborg Profesjonell” sells somewhat more than the competitors in the cleaners industry.

3.3.2 MARKET CHARACTERISTICS

Competitors within the market for cleaners and lubricants serve different customers. This is especially true for the suppliers of lubricants, where much of the sales are sales to customers outside of WS' focus groups, like for example: road transportation, sea transportation, construction and building, private homes, cars, public sector activities, et cetera.

WS offers products to ten different customer-markets in the US, though their primary focus remains food- and beverage- processing, water-/marine- sector and agriculture industry. To do thorough analyses on ten groups of customers will be too comprehensive for this thesis. Neither is it reasonable to believe that WS will be able to get a foothold within ten different customer-groups in the first years of operation. WS will have to concentrate on some customer-groups.

> We know that the SMB's (small and medium sized businesses) limited resources put severe restrictions on its international marketing: The need for long term market development and postponed payback is hard to live up to. And the need for maintaining a competitive edge via advanced problem solving is also a strain on profitability. The only way around these problems is a particularly high degree of selectivity in the SMB's market coverage (Bakka, 1990, p. 128).

WS will therefore have to do a selection of what customers to focus on in the first phase of export to Norway. In the beginning of this chapter there were presented some criteria, that might make the segment interesting for further analyses, some of these criteria will be used in the selection of interesting markets for WS in Norway.

Starting with the agriculture industry; table 1 showed that this industry uses a wide variety of products offered by WS. Moreover, the agricultural industry is fairly big in Norway. This industry could therefore be a customer-market of potential.

Some of the products offered to the agricultural industry could also be offered to the forest industry, which is also relatively large in Norway. WS has not been focusing that much on this industry in the US, though the California Department of Forestry is a WS reference customer. However, given the size of this market in Norway and the synergies with the agricultural market when it comes to product sharing, this could be the second potential customer-market for WS' products in Norway.

The beverage-processing-, dairy- and food-processing- industries are all customer-markets expected to have potential in Norway, given their size and the fact that they share many products.

Norway has a long coastline and boats are used both for transportation and leisure. It could therefore be interesting to look into the potential of the marine products. The market for lubricants in turbines could also be of special interest, because of the number of hydro electric power plants in Norway and the concern in Norway for these plants' effect on the environment.

The reason for not focusing on customer-markets within the skincare-, cosmetics- & beauty-industry, the dietary supplements- & herbal medicine- industry or the wine industry, is that none of these industries are that big in Norway. When it comes to medical and dental equipment- and pharmaceutical drug- industries, both of these industries are highly regulated and there also exists large economies of scale for suppliers. This does not mean that there could not be possible product-market for WS within some of these customer-markets as well. However, the customer-markets chosen were the ones expected to be of greatest importance to WS in Norway. In that sense it is important for WS to know the potential profits in these markets before any potential entry. The analyses conducted on the markets selected will also serve as a guide to how analyses should be carried out in different market-segments as well later on.

3.3.3 PRODUCT-MARKETS

The agriculture industry, the forestry industry, the food-processing industry, the beverage-processing industry, and water and marine industry are the customer-markets identified to be interesting so far. The products have only been described as belonging to the lubricants- and cleaners- industry. This section will try to explain more in detail the function or the need of different kinds of products from these two industries to the five customer-markets of interest. The goal is to find what product-markets in Norway to focus on in the micro-segmentation.

> The Business Idea will be more interesting for some customers than others, depending on the needs of the customers. Within the total market one have to find the group of customers that will have the most use of your products, that are easiest to get to, and should be willing to pay for what you offer. That's why you have to

start with a description of the total market, before moving over to describing the group of target customers (McKinsey&Company, 2007, p.67).

The agricultural industry

As already mentioned; the agricultural industry uses a wide variety of the products offered by WS. It is estimated that total use of lubricants in the agriculture industry is about 17 million liters and use of cleaners is about 1.6 million liters concentrate. See appendix section 2 for how use of products is estimated. Table 2 provides estimations on demand in thousand liters of each product market within the agricultural market.

TABLE 2: POSSIBLE PRODUCT MARKETS WITHIN THE AGRICULTURAL MARKET

	Engine oil	**Combi oil**	**Hydraulic fluids**	**Gear oil**	**Grease**	**Heavy duty cleaners**	**Cleaners for barns & pens**	**Cleaners for milking systems**
Yearly potential sales volume (1000 liters)	2 900	13 000	225	60	500	750	15	860

When it comes to cleaners, one large source of demand is cleaning-chemicals for milking systems, where one normally has to use a mix of alkaline and acid. Demand within this product-market is estimated to be about 3.4 liters concentrate a year per milking cow. In addition all farms with animals use some sort of general cleaners for general equipments, pens and houses. Demand within this product-market is estimated to be about 0.5 liters per farm with animals in Norway.

On the other hand, farms without animals will only use cleaners for machinery and cultivation tools. An approximation for this is 15 liters concentrate a year per farm. There will of course be differences when it comes to the mix-ratios of concentrates and water.

Besides cleaners, all machinery will need different kinds of lubricants. Tractors today normally need two kinds of oils. The first one is the oil that is filled in the front of the tractor, namely the engine-oil for the engine, the amount is approximately 20 liters. The second kind of oil is the oil that is filled in the back of the tractor, for hydraulic systems and gears. On

older tractors one would split the hydraulic and gear oils, but this is not that common nowadays. The total amount of this kind of oil is about 100 liters. Both kinds of oil are normally changed once a year. All in all a normal use of oil per tractor would then be 120 liters a year.

Harvesters split between hydraulic and gear oils, and uses approximately fifteen and four liters a year of the respective oils. The amount of engine-oil is approximately 20 liters. The threshing machine in the harvester will also need grease, an approximation is five kg (five liters) a year. It is worth mentioning that newer harvesters will need less grease than older ones, because they have several self-lubricating mechanisms. Total use of lubricants a year will then be about 45 liters a year for a harvester.

Cultivation tools will need lubricants for ball-bearings, et cetera. The mean use was estimated to be approximately ten kg (ten liters) grease per farm a year.

Note that WS offers some other specialty products for the agricultural market, in addition to lubricants and cleaners like for example botrytis and insect control. But issues like expected demand and products synergies across different markets, makes it more profitable to concentrate on lubricants and cleaners.

The food-processing industry

Total use of lubricants in the food-processing industry is estimated to be about one million liters and use of cleaners is estimated to be about 12.5 million liters concentrate. See appendix section 3 for more details on how use of products is calculated. Table 3 presents the potential sales volumes of the product-markets within the food-processing market.

TABLE 3: POSSIBLE PRODUCT MARKETS WITHIN THE FOOD-PROCESSING MARKET

	Engine oil	Hydraulic fluids	Grease	Surface cleaners	Tank & Pipe cleaners
Yearly potential sales volume (1 000 liters)	140	690	170	3 900	8 600

In general the food industry uses two kinds of cleaners, namely surface cleaners and tank & pipe cleaners. There are of course a wide variety of specialized products within each of these two categories, but these categories were chosen in order to keep it simple. The task of

forecasting potential sales volumes is difficult, because of the vast differences in production size and operation methods. However, the author was able to get information from some contacts within different branches and compare their use of chemicals according to the size of their production. Vidar Rønningen, Section Leader within ISS Cleaning Services, and Johan Heggland, Director of Quality within Kavli Norway, were especially of help in this matter. To make it simple, an approximation of four liters use of concentrate per day for companies using surface cleaners, and a ratio of 0.5 percent concentrate per liter of production for the tank & pipe cleaners, are assumed.

For lubricants it is simply assumed that each firm has at least two machines using the same amount of lubricants as a tractor engine, approximately 20 liters engine oil and 100 liter hydraulic fluids per engine. Additionally the machines will need grease, an approximation was sat to 25 liters a year per machine.

The forestry industry

The forest industry mainly uses two kinds of machinery, logging-machines and personal chain-saws. They will both need lubricants. In addition, the logging-machines will use heavy duty cleaners to remove dirt. It is estimated that total use of lubricants in the forest industry is about 600 thousand liters and use of cleaners is about 3 thousand liters concentrate. See appendix section 4 for how use of products is calculated. Although the forestry industry uses the same products that are used in other industries, especially in the agriculture industry, the smaller potential sales volumes makes these product-markets less interesting for WS.

The beverage-processing industry

The beverage industry uses the same products as the food industry, but probably more of the tank and pipe cleaners, and less of the surface cleaners. It is estimated that total use of lubricants in the beverage-processing industry is about 40 thousand liters and use of cleaners is about 3.4 million liters concentrate. Although a substantial amount, these product-markets are not among the largest potential product-markets for WS in Norway. See appendix section 4 for more details on how use of products was calculated.

Water & Marine customers

Marine customers will need cleaners for their boats. Cleaners that can remove salt are desired products among customers with boats used at seas. Additionally the engines of the

boats will need general lubricants, grease and diesel. Another large product-market is the market for lubricants in turbines. Even though, all these product-markets could prove to be large, the product-markets are very different from the rest of the interesting product-markets. Lack of synergies and product sharing are therefore reasons why these product-markets not are the focus in this thesis.

3.3.4 SUMMING UP MACRO SEGMENTATION

Distinct differences and lack of product sharing / synergies make the water and marine segment less feasible. Smaller potential sales volumes were the main reason why the forestry industry and the beverage industry not are analyzed in a micro-segmentation. The product-markets within these markets could, however, be interesting product-markets to look closer into in later potential markets studies on WS' Norwegian operation.

The remaining product-markets are found within the agriculture and the food-processing industry. In the agriculture industry a total of eight different product-markets have been presented, whereas in the food industry five product-markets were presented. These products markets are therefore analyzed closer in the micro-segmentation.

3.4 MICRO SEGMENTATION FOR WS NORWEGIAN OPERATION

In the theoretical presentation in start of this chapter several criteria commonly used when industrial products are evaluated, were presented. Some of these criteria will be more interesting for the case in this thesis than others. Examples of interesting issues within the organization-demographic variables are geographic location and market size. Interesting issues within the operative variables are for example; identification of the most environmental-friendly production methods and purchase routines, such as the criteria these customers use when evaluating potential purchases of lubricants and cleaners.

3.4.1 ORGANIZATION-DEMOGRAPHIC CRITERIA

Geographic location

Norway has a total of 10.3 million decares used for agricultural purposes (www.ssb.no). This is about three percent of the total area of Norway. With that low a percentage of the total area, it is given that the geographic aspect of where to find the farmers is important. Figure

5 shows the percentage of total areas used for agricultural purposes in Norway (www.ssb.no). It shows that most of the agricultural areas are found in the south-east, additionally some areas are found in mid part of the country.

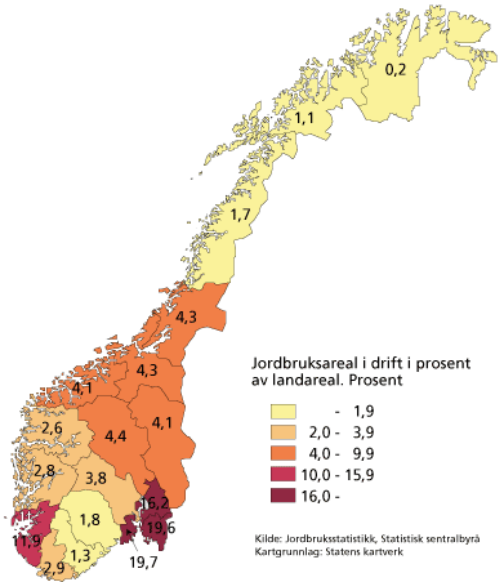

FIGURE 5: WHERE TO FIND THE AGRICULTURE INDUSTRY

The food industry is fairly big in Norway and the factories are scattered all over the country. This means WS do not have to worry about geographical aspect to the same extend as for the agricultural- and forest- markets.

Market size

The food-processing industry is much more diversified than the agriculture industry. For the product-markets within the food industry it will therefore be useful to have some knowledge on the size of the sub-categories of branches within the food industry. To do this it was found to be a good idea to use the public branch category register. All Norwegian enterprises have to register with a governmental controlled register in order to operate. Upon registering the enterprise is given a number and categorized into a branch. All branches are hierarchical built up and given specific numbers. For example the code for the whole food branch is 10 000, whereas the code for the beverage-processing industry is 11 000. Within the food branch there are nine different subsidiary branches given codes of 10100 – 10900. Visma Bizweb is a search engine which is able to find key information in this

register. Table 4 shows the number of firms this search-engine found under each sub-category in the food-processing industry.

TABLE 4: STATISTICS ON THE FOOD INDUSTRY

Food Industry	**Registered firms**
10100 – Meat	551
10200 – Fish & shellfish	714
10300 – Fruit & Vegetables	127
10400 – Vegetable- and Animal- oils & fats	63
10500 – Dairies	169
10600 – Grain	77
10700 – Bakery and Pasta	1250
10800 – Other Food	326
10900 – Feed	177

Although there are total of 3 447 registered firms under the food industry label, a lot of the firms have the same owners. The number of parent companies registered is 131. Like table 4 shows, the largest markets are within the meat-, fish & shellfish- and bakeries & pasta-branches.

3.4.2 OPERATIVE VARIABLES

The agriculture industry and food-processing industry are in fact parts in the same value chain, namely food-production. The agriculture industry will be the first part of this chain, whereas the food-processing industry the part that uses products from the agriculture industry and process it to products sold to customers.

For WS it will be important to know if some product-markets within the food-processing value chain are more concerned with environmental effects than others. Ecological production is interesting in this sense. Ecological food is food produced as much as possible according to nature's premises (www.matportalen.no). Ecological producers use as little artificial additives as possible and take all possible cautions when producing (www.debio.no). Different countries use different descriptions on what in Norway is called ecological products. The definition is pretty similar in Germany, Denmark and Sweden, whereas Great Britain and the US use the word "organic" instead when labeling the products (www.debio.no).

In total there were 439 862 decares used for ecological agricultural production in 2009 (www.debio.no). This number is about four percent of total areas used for agricultural purposes. The number of farms registered as ecological producers was 2 851 in 2009 (www.debio.no). The geographical differences follow pretty much the same pattern as the total agricultural production, presented earlier in this chapter. Table 5 describes the number of animals within ecological production in Norway.

TABLE 5: TOTAL NUMBER OF ANIMALS IN ECOLOGICAL PRODUCTION

Production	**Number animals**	**Growth**
Milking cows	7 622	803
Cows & bulls meat production	16 241	2 679
Pigs	2 486	318
Sheep	42 534	1 302
Chickens	33 039	0
Laying hens	170 409	0
Turkeys	14 253	0

Ecological production in the agriculture industry is increasing and when it comes to areas the growth was 8.9 percent from 2008 (www.debio.no). The growth among producers was large in 2007 and 2008, but stagnated somewhat in 2009 (www.debio.no). In total there are 809 producers of ecological food (www.debio.no). Table 6 describes the branches where one finds ecological food-producers and where these producers are located. The most relevant branches for WS will be dairies, slaughterhouses, bakeries, mills and other processing firms.

TABLE 6: REGISTERED ECOLOGICAL FIRMS

County / Branch	Dairies	Slaughterhouses	Bakeries	Mills	Other processing	Farmer processing	Service	Import	Wholesalers	Packing	Grocery shops	Storage	Others	Abroad
Østfold		2	3	7	7	8	3	1		3	5	6		
Akershus		1	4	3	8	7	11	1	11	1	5	9	3	
Oslo	1	1	11		9		15	15	16	2	10	14	3	
Hedmark	3	2	1	6	8	10	2	1	3	5		4	2	
Oppland	3	2	1	2	2	9	7			5		1	2	
Buskerud	3	1	5	4	5	7	8	1	2	4	1	5	1	
Vestfold	1	1	6	4	8	2	5		4	1	4	6	1	
Telemark			1	1	1	6	4		1	1		2	2	
Aust-Agder	1	1	2		4	2	1					2	1	
Vest-Agder	1		3	1	3	2	3	1			2			
Rogaland	1	5	5	3	8	8	13	1	1	5	2	7	1	
Hordaland	2	1	9	2	9	14	13	1	3	1	2	5	4	
Sogn og Fj.		3	3		3	7	5			2		2		
Møre og R.	1	3	2	3	8	13	8		1		1	6		
Sør-Tr.	6	4	7	4	7	13	14		3	2	3	4	1	
Nord-Tr.		5	4	4	4	7	5		1	3				
Nordland	1	3			1	4	5					2		
Troms	1	2	2		2	2	5		1		1	5		
Finnmark			1			1								
Sum	25	37	70	44	97	122	127	22	47	35	36	30	21	40

Notice that there are no firms within the beverage industry in table 6. This is not because there is no focus on environmental effects within the beverage industry. However, the industry lacks the standards one finds in the food industry. For this reason WS cannot expect the same level of environmental concern or the same possible willingness to pay more for environmental friendly products, as within the food industry. Something that supports the decision on not to include this market in the micro-segmentation.

3.4.3 PURCHASE ROUTINES

How agricultural and food-processing customers evaluate cleaners and lubricants before making the decision of what products to buy, could be valuable for WS to know. Especially what symbols customers look for, when evaluating how harmful products are to the environment, is important to know if WS wants to be perceived as a better brand on this subject.

Purchase criteria when evaluating lubricants

The main functions of lubricants are: To transfer power or heat, cool or isolate, loosen contamination, and reduce corrosion. The lubricants must have different attributes to perform within its area of application. Hydraulic fluids for outdoor use must be able to endure temperature variations, for instance, this is not that import for hydraulic fluids that are used inside. The extremity on one side is the lubricants for heavy working gears, whereas on the other side of the scale one find mere process-oils (www.statoil.no)

How often the oil should be changed differs for different kinds of engines and different kinds of use. It could be mentioned that for a car it is normal to shift oil every 5 000km (www.nrk.no). Some engines, especially older ones, consume some oil as well and must therefore be refilled at regular intervals. Newer engines should normally have synthetical oil, whereas older enginges may use mineral oil.

The different lubricants contain 70-100 percent of a base-oil with different degrees of different additives (www.miljøinnkjøp.no). Traditionally one uses some sort of mineral-oil, containing different organic connections as base oil. These are for example different naphtenes and aromatics that could be dangerous both for the human health and the environment. Despites the disadvantages, the low price contributes to the large amount used of the mineral-oils. Synthetic oils are made of raw materials from petroleum, vegetable oils or animal grease. These oils are in general considered to have better lubricating quality, last longer and in general to be better for the environment. The disadvantage is the higher price.

The two different base-oils are mixed with different additives to get the wanted qualities for different areas of use. The quantities of additives vary from 5– 30 percent. Some examples of different attributes are (www.miljøinnkjøp.no): Antioxidizing, viscosity increasing, bacteria

destroying, yield point downgrading, dirt removing, corrosion destroying, emulsification and foam minimizing.

How traditional quality is measured when evaluating lubricants

The customers normally look for different kinds of viscosity when choosing oils for different purposes. Viscosity is a measure of the resistance of a fluid which is being deformed by either shear stress or tensional stress. In everyday terms viscosity is "thickness" (www.wikipedia.org). For motors that need to perform outdoors under different temperatures, the viscosity is often given both for cold and warm conditions. There are different scales to measure the viscosity, but the one that is most used overall is the SAE-scale (Society of Automotive Engineers), where a higher number means higher viscosity. For industrial oils the ISO-VG system tends to be more used (www.nlck.toyota.no). This system te C, the higher the number the higher the viscosity.

API (American Petroleum Institute) is an American classification system for the quality of engine-oils. There is one system for petrol motors, marked with "S", and one system for diesel engines, marked with "C". The character behind the "C" or the "S" describes the quality, the further from the letter "A" the better the quality (www.statoil.no). ACEA is the scale of the European car producer – organization. This is a more complicated scale, but in general one can say that the further from the letter "A" the larger the engine and the higher the number behind the letter, the better the quality (www.statoil.no).

The SAE-system for gear oils is built up in the same way as for engine-oils, but the viscosity classes have higher numbers. A "SAE 75W" gear oil corresponds to an "SAE 10W" engine-oil. Note that the "W" stands for winter, or cold conditions. The API classification system gives the quality in the order of "GL-1, GL-4, GL-5". "GL" stands for Gear Lubricant, whereas the number tells you the amount of EP (extreme pressure) additive (www.statoil.no).

To rank grease one look at a NLGI-number, base-oil viscosity, and the main additive being used to get it thicker. Grease of the NLGI-class 1,2 and 3 are used in roller bearings. In central lubricant-stations there is often used a softer grease, from class "NLGI 2" to "NLGI 000". A rule of thumb is that grease with high viscosity is used for slow moving bearings, while grease with low viscosity is used for faster moving bearings (www.statoil.no).

How environmental quality is measured when evaluating lubricants

About 40 percent of the lubricants disappear when used, about 40 percent are taken care of as hazardous waste and the remaining 20 percent find its way out in nature (www.miljøinnkjøp.no).

"Miljøverndepartmentet" is the name of the authority with the main responsibility of executing the Governments environmental- and climate policy in Norway. They have several subsidiary organizations with different areas of responsibilities. The subsidiaries cooperate when it comes to defining criteria one should consider when buying products that may affect the environment. They have helped build portals where one finds information on such aspects. One of them is a web-site called "Miljøinnkjøp.no". This site gives thorough descriptions on aspects to consider when making purchasing decisions. The following list presents the recommendations on this site, when it comes to lubricants:

The following *shall not* be bought:

- Chain oils based on mineral oil
- Lubricants with the following additives: Chlorine paraffin, nonylphenol ethoxylate (NFE), and lead connections.

The following *should not* be bought:

- Hydraulic fluids based on mineral oil
- Chemicals marked as "dangerous to the environment" in the Norwegian authorities' list of chemicals

What one should look for:

- Products approved by an environmental label
- Lubricants based on renewable materials, not fossil fuels
- Products with lower danger-classifications in the Norwegian authorities' marking system
- Are the products classified and marked according to the rules and regulations?
- Does the packaging include information on environmental effects of use and what to do after using the products?
- The packaging should not contain heavy metals, PVC or other chemicals classified as "dangerous to the environment"

- The packaging should be recyclable

Purchase criteria when evaluating cleaners

The technical requirements of cleaners are varying depending on areas of use. There exist a lot of specialized products for different segments of the market, some examples are: Tank and pipe cleaners, general agricultural cleaners, alkaline circulation system cleaners, acid circulation system cleaners, membrane cleaners for circulation systems, anti-foam cleaners, disinfection cleaners, conveyor belt cleaners, foam cleaners, rinsing agents, gel-foam cleaners, and other general cleaners.

How traditional quality is measured

Cleaners are used in a many different areas and the liquids used will therefore contain different mixtures. In general, most cleaners contains some sort of mix of: Tensides, softeners, alkali, preserving agents, perfume, solvents and emulsifying agents, bleach and disinfecting liquids (www.miljøinnkjøp.no). Despite the different areas of use, cleaners have basically one job; to remove dirt and bacteria. There are therefore not that many technical rankings as for lubricants. Cleaners are rather evaluated on claimed effect for the task, reputation, experience and product synergies. Price is always an important factor. Besides prices for cleaners themselves, industrial users will also evaluate effectiveness and possible savings when it comes to electricity use and water consumption.

The main difference between machines for private use and for industrial use is that the dishwashers in industrial use have much shorter washing time and the liquids used are therefore much stronger (www.miljøinnkjøp.no). It is therefore of extra importance that industries are aware of the consequences for nature when they make their buying decisions.

How environmental quality is measured

The modern society uses large amounts of cleaners of all sorts. These cleaners end up in the sewer system or directly into nature. The cleaning process in the sewage disposals and the rinsing effect may be negatively affected by chemicals from cleaners (www.miljøinnkjøp.no). Some of the chemicals are not properly broken down in the sewage disposals and therefore released into the rivers or ends up in the mud. The mud should according to nature's circulation be brought back to the agricultural fields. It is therefore import that the mud contains as little heavy metals and chemicals as possible. The parts that stay in the rivers are

dangerous for water-leaving-organism. In addition there are emissions into the air from different solvents. And some chemicals can cause different allergies upon contact with the skin or eyes. Perfume liquids, preserving agents, disinfecting liquids and bleach or colors added are especially known to cause allergies (www.miljøinnkjøp.no).

To minimize the negative effects on nature it is therefore important that products that are easy degradable and products that contains as little toxic chemicals as possible are bought. However, the wide variety of products makes it difficult to compare them. "Miljøinnkjøp.no" give consumers some guidelines, they emphasize on the following when it come to cleaners:

Chemicals that *should not* be used are presented in a list at their website. See complete list in the appendix section 5.

The following *should not be* bought:

- products classified as "dangerous to the environment" (N)
- products classified as "injurious to health" (Xn)
- products classified as "very toxic" (T+) or "toxic"(T)
- products classified as "carcinogenesis, mutagenicity or reproductive destructive"
- products classified as "corrosive" (C)

What one should look for:

- Are the products approved by any environmental labels?
- Do the products contain information on right use?
- Do the suppliers make demands to their subcontractors when it comes to environmental issues?
- Is the packaging free of PVC?
- Can the packaging be recycled? Is this marked?
- Are the products available in refill-models?

Figure 6 summarizes evaluation criteria used by customers when buying cleaners and lubricants.

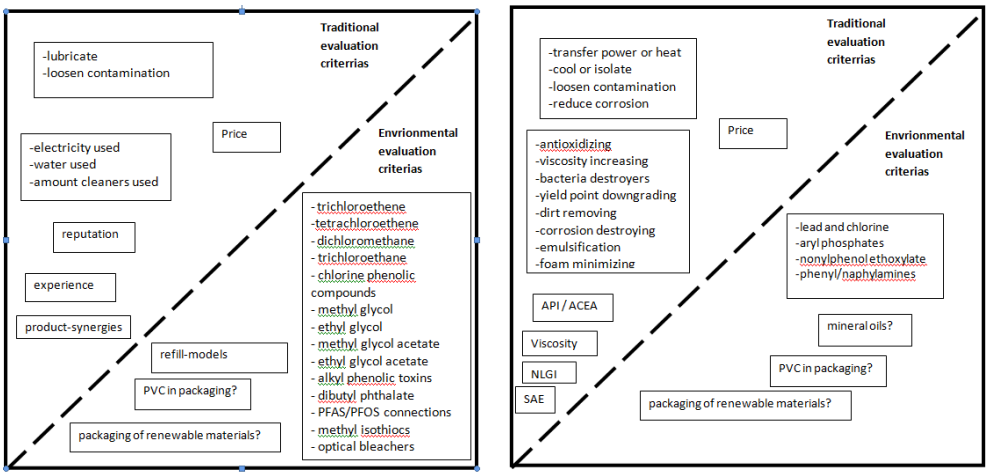

FIGURE 6: EVALUATION CRITERIA

3.5 SUMMING UP MICRO-SEGMENTATION

This chapter has shown that agricultural customers are mainly found in the south-east and mid part of Norway, whereas the food-processing industry is scattered all around the country. The food industry is diversified, something that may create a need for tailoring products to different categories of customers.

The ecological producers are one group of customers that may be potential target customers, given their concerns for environmental effects of products used in production. The last section identified some purchase criteria target customers probably will use when evaluating what products to buy. WS must make use of these symbols when marketing their products.

4 WHAT ARE THE INSTITUTION BASED CONSIDERATIONS?

The issues discussed in this chapter will form a basis on what the demands are on a mere practical level for how to bring the products of WS into Norway, in addition to shed some light on advantageous / disadvantageous on import of goods from the US vs. other countries.

4.1 TRADE COOPERATION

The main regulations on Norwegian trade are found in the EFTA and EEA co-operations. The main reason for the EFTA agreement has been to achieve the same conditions as the EU-countries when it comes to foreign trading (www.regjeringen.no). The EU is one custom- and monetary- union, while EFTA is a trade association where each member have their own national trade politics towards other countries. In later years the EFTA countries have extended their strategy to push more for agreements they see as valuable or prestigious for their own politics. Issues Norway has emphasized on have for example been: human-rights, labor legislation, the environment, cultural diversity, corporation's social responsibility and a well functioning public administration (www.regjeringen.no). Norway, Island, Lichtenstein and Switzerland are the countries that take part in EFTA today.

Despite the sovereignty in trade politics the EFTA countries share some trade agreements. Norway's official connection to the EU is through the EEA agreement. All EFTA countries except Switzerland take part in the EEA agreement. This agreement gives Norway the same rights and privileges as the EU countries in commodity trading, investments, banking services, studies abroad and living abroad, and is built on common rules for issues such as: approval of products, competition, subsidies, tariffs and trade barriers (www.regjeringen.no). However, the EEA-agreement does not apply for the EU-arrangements when it comes to customs and joint trade-politics towards countries outside the EU (www.regjeringen.no). Cases of special political interest for Norway, where there has been made other agreements outside the EEA-agreement, are found within trade of agricultural- and fishery- products (www.regjeringen.no).

Norway can negotiate its own bilateral trade agreements, but most of the existing agreements are negotiated through EFTA (www.regjeringen.no). One example of an individual agreement is the system where developing countries get preferential customs (www.bedin.no). Figure 7 shows the different trade agreements Norway is participating in as of February 2010.

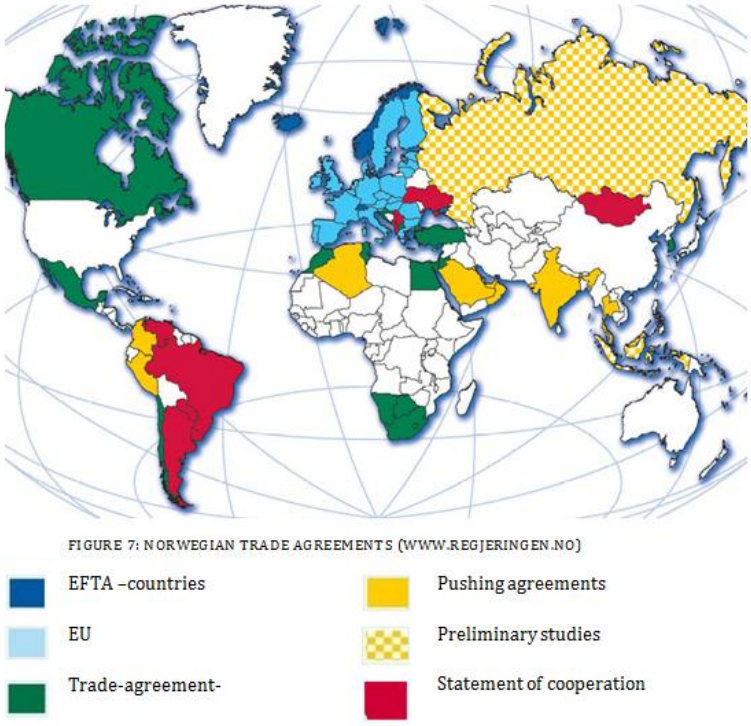

FIGURE 7: NORWEGIAN TRADE AGREEMENTS (WWW.REGJERINGEN.NO)

4.2 NORWEGIAN CUSTOMS

Goods have to go through customs when entering the Norwegian border. The importer has to provide a declaration that states the content being imported. In addition he or she has to provide bills, documents of origin and licenses or approvals for goods that have special regulations (www.bedin.no).

With the exception of goods coming from countries with special agreements, an importer has to pay value added tax (VAT) on the goods he is bringing into the country. The statutory basis for this is a law called “Merverdiavgiftloven kap.XVI”. This tax is a sales-charge calculated on all levels in value chain. All companies selling for more than NOK 50 000 must register in a register called “Merverdiavgiftsregisteret” (www.bedin.no), and they are

obliged to keep accounts for all purchases made which one has to pay valued added tax on and for all sales made where one has to charge value added tax from customers. The incoming purchases can then be subtracted in the value added tax settlement, which is six times a year (www.bedin.no). The deadline is one month and ten days after the period in question is over (www.bedin.no). The general level of this tax is 25 percent of the value of the goods (www.bedin.no). There are some exceptions and not all products are charged 25 percent. For the products of focus in this thesis, however, 25 percent will be the tax level.

In addition to value added tax, there are some products having special charges. The Norwegian authorities charges NOK 1.80 per liter of lubricants imported (www.toll.no). Cleaners are also often charged extra for some chemicals. The list of chemicals charged extra is presented on the Norwegian Customs web-site: www.toll.no.

The importer of goods from countries outside the EU/EEA may be economically responsible for damages caused by dangerous goods according to "Produktansvarsloven" (www.bedin.no). It is therefore especially important for importers from these countries to be aware of the demands of documentation and all existing regulations.

4.3 LAWS AND REGULATIONS

Norway is obliged, through the EEA, to follow the EU laws for chemicals (www.miljøstatus.no). In addition there are some distinctive Norwegian regulations. Precautionary principals are important for the Norwegian authorities when it comes to regulations on chemicals (www.miljøstatus.no). This means that the authorities may take action based on suspicion that a certain chemical is a serious threat to human health or the environment, even though the scientific proof of this is lacking.

4.3.1 REACH

The EU instructions on chemicals, called REACH, imply a joint registration and regulation of chemicals. REACH consists of four parts:

(1) Registration and pre-registration

All chemicals that are imported or produced in the amount of one ton or larger a year must be registered in ECHA, the EU chemical bureau (www.miljøstatus.no). This must be done

even if the chemicals are liable to classification or not. The registration should include information on the characteristics of the chemicals, classification and labeling, exposure, safety measure and suggestions for additional testing (www.miljøstatus.no).

(2) Evaluation

ECHA must evaluate chemicals that are registered in amounts larger than 100 ton a year in cooperation with national authorities (www.miljøstatus.no). Examples of issues the national authorities will evaluate are: the need for more data, more testing, information on exposure, need for follow-up or other actions.

(3) Authorization

Production or import of chemicals is not allowed if not approved by ECHA. In the future all chemicals have to be approved, but in the first few years of REACH one has decided to make a list on the chemicals that needs immediate approval. This list includes the following (www.miljøstatus.no):

- Chemicals that are carcinogenic, dangerous for genes or reproduction
- Chemicals that are persistent, bio-accumulative or toxic
- Other chemicals that are hormone affective or possible hazardous to human health or the environment

When producers or importers deliver an application, they should also include a list of possible alternative chemicals (www.miljøstatus.no). Approved chemicals will be reevaluated after a certain time, varying from case to case.

(4) Restrictions

Chemicals known to be hazardous to human health or the environment or chemicals where one do not know enough about the risk will not be approved.

Consequences for Norway

Inducing REACH in Norway is costly. But there are great benefits as well. The possible largest ones are:

- Better control and risk management
- More effective removal of the most dangerous chemicals
- Better knowledge on alternative, less harmful substitutes

- Seen in a longer time perspective REACH will reduce the damage both to human health and the environment

4.3.2 NORWEGIAN REGULATIONS

It is the law of pollution, "Forurensningsloven", and the law of product-control, "Produktkontrolloven", that regulates chemicals in Norway. In addition to registering the chemicals with REACH the chemicals have to be registered in the Norwegian register for chemicals, "Produktregisteret" (www.miljøstatus.no). The Norwegian laws are based on the EU-laws, with a few exceptions. In particular there are four specific chemicals having more severe measures in Norway than in the EU (www.klif.no):

- *Triclosan*; a germicidal that is especially toxic for water-leaving organisms
- *Cadmium-sulphide and benzoin pyrene*; both known to be carcinogenic
- *Benzylbutylphtalate*; dangerous for human reproduction and the environment

Producers, importers and sellers of chemicals are responsible for labeling products according to Norwegian classifications (www.miljøstatus.no). Classification implies to evaluate the chemical's health-, environmental-, fire- and explosion – dangers. This evaluation is the basis for placing the chemical within a certain danger-group. A lot of chemicals are already evaluated by the Norwegian authorities, and been given classification in Norway and the EU. These chemicals are listed in a list called "Stofflisten". The classification in "Stofflisten" is binding and must be used (www.miljøstatus.no). New chemicals have to be evaluated by the supplier themselves. The classification is the basis for what danger-symbols, danger-codes and warnings that must be labeled on the packaging. This labeling is necessary to make sure the users of the chemicals take the necessary precautions to protect themselves and others when using the chemicals. Dangerous chemicals should be labeled in Norwegian. Other requirements when it comes to labeling are (www.miljøstatus.no) :

- Name, address of phone-number of the supplier within the EEA
- Label should be easy to see
- Label should consist of risk-description, danger-symbols and danger-classification
- Description of "right"-use

The classification may make extra demands on the packaging. Some chemicals must have child proofing and/or tangible warnings for blind and weak-sighted people, for example. In addition there is often demand for handling the disposal of the most dangerous chemicals. Chemicals within lower danger-classifications are easier to sell and there are also less demands when it comes to handling the disposal, such issues are often the main reasons why suppliers choose to substitute some ingredients.

A new global system for classification and labeling was passed in the UN in 2003, this implies we will soon get a common global labeling for the chemicals physical-, chemical-, health-related- and environmental- qualities (www.miljøstatus.no). Norway is working to induce this system within the EEA as soon as possible (www.miljøstatus.no). The system was induced in January 2009 in the EU (www.miljøstatus.no).

4.4 SOCIOCULTURAL ASPECTS

When introducing WS in chapter 2, the major drive of demand was described the following way:

> In addition to price/performance, headlines issues such as water quality, fluctuating petroleum prices, and a myriad of other concerns drive demand for WS' products. Global chemical production continues to grow at about 3 percent a year with many markets seeking safer, more sustainable alternatives. Fear of further environmental decline and health & safety risks caused by wasteful practices and over-consumption of natural resources are driving governments and industries to question the practices used.

Indeed one may say there is a growing interest for buying environmental friendly products in Norway, just as in California. However, it might be important to remind oneself that the home-base of WS, California, is probably among the world leaders when it comes to taking environmental friendly precautions. One must therefore take into account that the green label does not necessary sell itself the same way overseas as in the home-market.

One big difference between the US and Norway when it comes sociocultural aspects, is that the US has a tradition of thinking more in terms of people being solely responsible for their own success, whereas Scandinavians tends to be more influenced by a more socialistically way of thinking. Consequences of this could imply that more Norwegians seem to think the government is the one responsible for protecting the consumers against products that could be harmful to the environment. This could be one of the reasons why there are more laws

and regulations in Norway compared to the US. Although this merely is positive for environmental friendly products in the first stage of bringing the products into the country, passing the regulations, et cetera, it could be a disadvantage when it comes to actual sales. Firstly; competitors may have already been forced by the government to introduce more environmental-friendly products, thereby decreasing the potential market share. Secondly, the consumers become less aware of product differences, and might think all products allowed by the government are good enough. In that case, price becomes more important when choosing product.

4.5 CURRENCY RISK

Currency risks stems from unfavorable movements of the currencies in which firms are exposed. In response to this risk, the firm may speculate or hedge. Speculation involves commitments to stable currencies. However, this is risky in case of wrong bets of currency movements. Hedging means to spread out activities in a number of countries in different currency zones, in order to offset the currency losses in certain regions through gains in other regions (Peng, 2009). Over the last couple of years there have been huge swings in the exchange rate between Norwegian kroner and US Dollar, ranging from a low 4.97 to a high 7.11 (www.e24.no). Figure 8 shows how the currency has fluctuated over the last five years. Judging by the swings shown in this figure, speculating or hedging could be something to consider for WS, and WS will have to take the currency risk into account when forecasting potential profits.

FIGURE 8: USD/NOK (WWW.E24.NO)

4.6 SUMMING UP INSTITUTION-BASED CONSIDERATIONS

Norway has no trade-agreements with US favoring import of products from US to Norway. The importer has to provide documentation on products when entering the Norwegian border. Within one month and ten days the importer has to pay value added tax to Norwegian authorities. This tax is 25 percent of the sales price. The same tax will, however, be charged from customers again when receiving payment for products. In addition to this tax, chemicals are charged an extra fee, when entering the Norwegian border.

Norway is obliged through the EEA agreement to follow the EU laws on chemicals. This implies registering of products in the EU register on chemicals. Additionally; chemicals have to be registered in a Norwegian register, and use of some chemicals are stricter in Norway than in the EU. Products also have to be labeled and packaged according to Norwegian regulations.

Sociocultural aspects and currency fluctuations are other challenges WS might face when exporting to Norway.

5 WHAT ARE THE EXTERNAL STRATEGIC CONSIDERATIONS?

The purpose of this chapter is to graph out the competition-landscape, which will help explain why and where WS should find its competitive position. In chapter 3 it was established that cleaners and lubricants to the agricultural industry and the food-processing industry are the product-markets of interest. These product-markets will therefore be analyzed in the following sections, with the goal of discovering potential advantageous and pitfalls in competition with other suppliers of the same products.

5.1 PRESENTATION OF PORTERS 5 FORCES

When analyzing the external environment in this thesis, there will be made use of Porter's five forces framework, described in his book Competitive Strategy from 1980. The model is illustrated in figure 9. The model is based on five components that together describe the intensity of competition. The stronger each component is, the less the opportunity for increasing profit through for example price increase. A strong component is therefore a threat to profits, whereas a weak component indicates larger possibilities for profits.

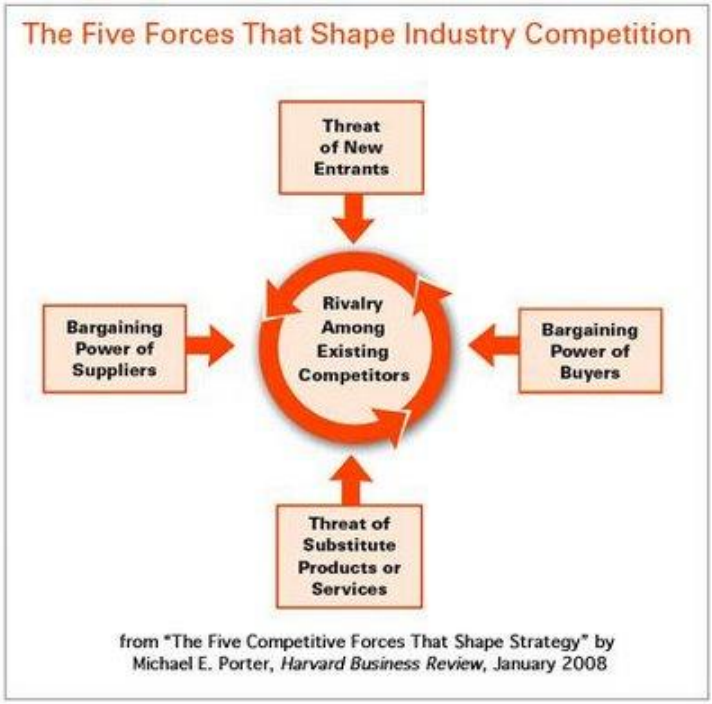

FIGURE 9: PORTER'S FIVE FORCES

The customers in figure 9 will be the farmers and food producers, whereas rivals will be competitors operating within the same product-markets as WS. When describing the cleaners and lubricant industry in the macro-segmentation in chapter 3, it was explained that the rivals in these industries offer several product lines for several customers. Both "more environmental-friendly" and "less environmental-friendly" products are often offered by the same suppliers. In this chapter it was therefore chosen not to exclude any suppliers from the market boundaries, but instead use a wide market categorization. This means the analyses will be less sensible to the categorization of suppliers, but at the same time perhaps less precise. An effect of this is seen in the fact that substitutes not will be a relevant topic since all producers are considered rivals instead.

Neither the threat of suppliers is considered that important since most of the rivals produce their own raw materials. There are, however, some competitors in the cleaners that buy finished products from subcontractors. The same is true for some of the smaller suppliers of lubricants. WS already knows the potential power of their suppliers, and a discussion on the power of WS's suppliers will therefore not be done in this thesis. It will, however, be interesting to compare differences stemming from potential vertical integration among competitors in the Norwegian market. A short description of value chains is therefore given under the "economies of scale" discussion.

Porter (1980) analyzes each force depending on the existence of certain elements. Findings on these elements are described in smaller blocks. Each of these blocks starts with a theoretical description of the relevant element, before the text turns more into an evaluative writing style when discussing the actual situation for the product-markets this thesis is focusing on.

5.2 INTENSITY OF RIVALRY AMONG EXISTING COMPETITORS

Rivalry among existing competitors takes the familiar form of jockeying for position –using tactics like price competition, advertising battles, product introductions, and increased customer service or warranties (Porter, 1980). Market concentration, market growth and strategic stakes are the elements Porter focus on when describing the rivalry.

The rivals will be the same in the product-markets found within both customer-groups, because companies supplying the farmers with cleaners are pretty much the same that supplies the food producers with cleaners, the same is true for lubricants.

5.2.1 MARKET CONCENTRATION

When firms are numerous, the likelihood of mavericks is great and some firms may habitually believe they can make tactical moves without being noticed. Even where there are relatively few firms, if they are relatively balanced in terms of size and perceived resources, it creates instability because they may be prone to fight each other and have the resources for sustained and vigorous retaliation. When the industry is highly concentrated or dominated by one or a few large firms, on the other hand, then there is little mistaking relative strength, and the leader or leaders can impose discipline as well as play a coordinative role in the industry through devices like price leadership (Porter, 1980).

Evidence of potential price competition proved hard to find, because most prices are negotiated in individual agreements and therefore not available to the public. Both the lubricant-industry and the cleaners-industry are characterized by a few large suppliers, as described in the macro-segmentation. This market structure gives reason to expect some degree of price competition.

5.2.2 INDUSTRY GROWTH

Slow industry growth, or even worse declining industries could be a signal of harder competition for market shares in these markets (Porter, 1980).

The number of competitive rivals in the supply segment has not changed that much over the last years. In the market for cleaners there have been a few new establishments, but none that have been able to challenge the market shares of the largest suppliers. Lack of growth in customer-markets could be an explanation why one does not see any growth in product-markets. The food industry has kept a stable production during the last years, whereas the agricultural industry is declining (www.ssb.no).

5.2.3 HIGH STRATEGIC STAKES

Rivalry among competitors is likely to increase the more important the strategic stakes are for the competitors (Porter, 1980).

The rivals in the market for lubricants all have a broader platform of products compared to the suppliers of cleaners. This means the suppliers of cleaners probably will be more vulnerable if competition increases. The implication of this for WS may be to expect more aggressive behavior from the other suppliers of cleaners than from the other suppliers of lubricants.

5.3 THREAT OF ENTRY

New entrants to an industry bring new capacity, the desire to gain market share, and often substantial resources. Prices can be bid down or incumbents' costs inflated as a result, reducing profitability (Porter, 1980).

For WS this discussion is relevant in two meanings. First it shows what competition WS can expect to meet if WS start exporting to Norway. Secondly, it shows how likely it is that competition will increase in the future. Michael Porter lists several major sources of barriers to entry in his book, Competitive Strategy. Underneath is a discussion of the ones found most relevant for the product-markets of focus.

5.3.1 ECONOMICS OF SCALE

Economics of scale will deter entry by forcing the entrant to come in at large scale and risk strong reaction from existing firms or come in at a small scale and accept a cost disadvantage, both undesirable options. However, large scale and hence lower costs may also involve trade-offs with other potentially valuable barriers to entry such as product differentiation or the ability to develop proprietary technology rapidly (Porter, 1980). Economies of vertical integration are often mentioned in the same category as economies of scale. This is particular seen in markets with longer value chains. The meaning of the expression is that an entrant must enter integrated, or face a cost disadvantage as well as possible foreclosure of inputs for its products, if most established competitors are integrated (Porter, 1980).

Both supplier industries are characterized by a few large players, something that could be evidence of economics of scale. In other words; there could be advantages in manufacturing, purchasing, sales operations, research and development, marketing, et cetera, due to large scale production.

Like described in the introduction to this chapter, it could be useful for WS to know what the value chain of the main competitors look like, because competitors could have competitive advantageous due to for example economies of vertical integration. The value chains of the suppliers of cleaners are mostly consisting of two or three parts. “Yara” and “Ecolab” both produce and deliver the chemicals, whereas “Aco Kjemi” and “Lilleborg Profesjonell” buy some of their products from subcontractors, the same is true for the companies under the “others” category. The value chain of petroleum producers is usually much longer. The main parts of such a value chain are shown in figure 10. Trade takes place on several stages of the value chain, so the largest producer is not necessary the largest seller of end-products. All the large petroleum companies make use of economies of vertical integration except for “YX Energi”, which buy products at step number four in figure 10, before marketing and distribution takes place.

FIGURE 10: VERTICAL INTEGRATION OF PETROLEUM COMPANIES

5.3.2 PRODUCT DIFFERENTIATION

Product differentiation means that established firms have brand identification and customer loyalties, which stem from past advertising, customer service, product differences, or simply being first into the industry. Differentiation creates a barrier to entry by forcing entrants to spend heavily to overcome existing customer loyalties (Porter, 1980).

The traditional view on differentiation on both lubricant- and cleaning- products used to be that products had different qualities when it comes to technical quality of use. However, with the growing concern for environmental-effects lately, another form of differentiation has emerged, namely having environmental-friendly products. That is why the competitors in both supplier industries have introduced green product lines in addition to their regular products.

> Brand management seems to have a big impact on customer preferences and attitudes, at least in the US. In other words the value of (especially green) brands is more perception than fact. The customers for WISE will appreciate the brand and what it stands for. Technical merit isn't as important as we'd like to think, although WISE has a very impressive story to tell (Robin, 2010).

The fact that the large suppliers of cleaners and lubricants already are offering green product-lines makes WS' products less attractive, and this is therefore a potential barrier to entry. The large companies do, however, have both "environmental-friendly" and "less-environmental" friendly products in their portfolios, and this makes their credibility less than the potential credibility of a new completely green supplier.

Additionally WS are able to tailor their products according to customers' wishes, something that makes them able to differentiate themselves as a more "specialized" supplier than what the competitors are able to do.

5.3.3 ACCESS TO DISTRIBUTION CHANNELS

A barrier to entry can be created by the new entrant's need to secure distribution for its products. To the extent that logical distribution channels for the product have already been served by established firms, the new firm must persuade the channels to accept its product (Porter, 1980).

The micro-segmentation in chapter 3 described how some parent companies controlled several other companies within the food industry in Norway. It is reasonable to assume that these companies may make use of a stronger bargaining power towards their suppliers when buying products that can be used in several of the subsidiaries. In relation to this it is worth mentioning that the largest supplier of cleaners, "Lilleborg Profesjonell", is owned by a company called "Orkla", and "Orkla" owns several companies within both the food- and beverage- processing industry. The agricultural industry, on the other hand, is more

diversified with several smaller customers. However, most of the agricultural customers buy their products through some of the large specialist retailers handling agricultural equipment and this puts restrictions on the access to distribution channels for this market as well.

The agricultural industry is most likely to follow the left part of figure 11, going through wholesalers and retailers before reaching the farmers. Whereas the food-processing industry is more likely to follow the right side of figure 11, having a shorter channel of distribution.

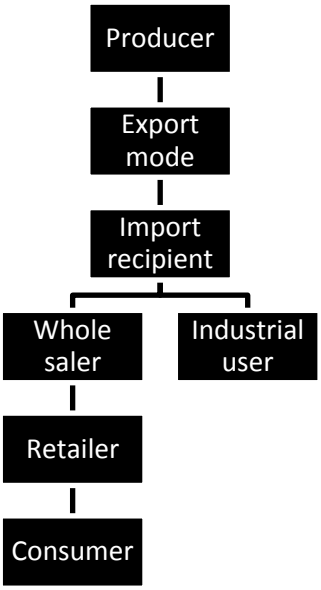

FIGURE 11: DISTIRUBUTION CHANNELS

For the agricultural market it will therefore be interesting to know which retailers farmers use when buying lubricants and cleaners. Visma Bizweb, the same search engine made use of when looking into number of registered firms within each branch, is helpful in relation to this. This search engine allows you to specify both branch and sales. 7 shows the search for the branch of general farmers equipment, "46210 - Engroshandel med korn, råtobakk, såvarer og fôrvarer", with sales larger than NOK 100 000 000.

TABLE 7: "46210 - ENGROSHANDEL MED KORN, RÅTOBAKK, SÅVARER OG FÔRVARER", SALES LARGER THAN NOK 1 000 000 000

Firm	**Address**	**Postnr**	**Location**	**Telephone**	**Fax**
Degernes Landbrukslag	Haldenv	1892	Degernes	69226440	69226460
Felleskjøpet Agri BA	Flyporten	2060	Gardermoen	03520	64820701
Felleskjøpet Nordmøre og Romsdal BA	Fannestran dvegen 63	6415	Molde	48169100	71245580

"Felleskjøpet" is the overall largest supplier of general farmer's equipment in Norway, as table 7 shows "Felleskjøpet" is the owner of two of the three largest retailers in this branch. There are some smaller, independent suppliers, "Degernes Landbrukslag" is the largest of these, but none that can compare themselves to "Felleskjøpet".

Lubricants for the agricultural industry can also be sold through another group of retailers, dealing with machinery. Table 8 presents firms within this branch, called "46610 - Engroshandel med maskiner og utstyr til jordbruk og skogbruk", with sales larger than NOK 200 000 000.

TABLE 8: "46610 - ENGROSHANDEL MED MASKINER OG UTSTYR TIL JORDBRUK OG SKOGBRUK", SALES LARGER THAN NOK 200 000 000

Firm	Adress	Postnr	Location	Telephone	Fax
A-K Maskiner AS	Dyrskueveien 10	2040	Kløfta	63940600	63981980
Akershus Traktor A/S	Industrivegen 16	2050	Jessheim	63948580	63948581
Delaval AS	Industriv 3	1400	Ski	64858500	64872117
Eikmaskin AS	Gjerdrums Vei 11	0486	Oslo	23007400	23007401
Felleskjøpet Nordmøre og Romsdal BA	Fannestrand vegen 63	6415	Molde	48169100	71245580
Lantmännen Maskin AS	Industriveien 16	2051	Jessheim	66752000	63971512

"Felleskjøpet" is among the largest suppliers here as well, but have more competition from other companies.

5.3.4 LEARNING OR EXPERIENCE

Another entry barrier could be learning or experience curves. This is seen if there is an observed tendency for unit costs to decline as the firm gains more cumulative experience when producing a product (Porter, 1980).

In the cleaners-industry both "Lilleborg" and "Yara" are old Norwegian companies, who have operated in the industry for many years. "Ecolab" and "Aco" are younger companies, but they have also probably gained some market experience. The youngest company in the lubricant industry is "YX Energi". The company was established in 2006, but is in fact the

same company as the company called “Hydro Texaco” who has operated in Norway for many years. This means that all the large competitors in the Norwegian market for lubricants has gained experience. Although there are some fairly new companies in the “other category” in both industries, most of these companies may have an advantage being mainly Norwegian companies and therefore be in position of more market knowledge than WS. With that being said, WS probably got just as much, perhaps even more, knowledge on solely environmental friendly products.

5.3.5 CAPITAL REQUIREMENTS

Capital requirements creates barrier to entry because funding is expensive and often hard to find (Porter, 1980).

WS will face some capital requirements when starting export from the US to Norway, but looking at their financial situation today and discussing this with the people at WS, they do not see this as any major obstacle.

5.4 BARGAINING POWER OF BUYERS

Buyers compete with the industry by forcing down prices, bargaining for higher quality or more services, and playing competitors against each other – all at the expense of industry profitability. A buyer group is powerful if the elements mentioned underneath hold true (Porter, 1980).

5.4.1 VOLUMES RELATIVE TO SELLER SALES

If a large portion of sales is purchased by a given buyer this raises the importance of the buyer’s business in results. Large-volume buyers are particular potent if heavy fixed costs characterize the industry and raise the stakes to keep capacity fixed (Porter, 1980).

As already mentioned the petroleum companies sells a wide variety of products and do not have the same strategic stakes as the suppliers of cleaners. Volumes ordered by lubricant-buyers are not the largest drivers of profits for these companies. However, the food-processing industry is fairly concentrated and there are some large corporations probably using their potential large orders to put pressure on suppliers in this market. The same is true for the agricultural market, taking the few but large sales channels into account.

5.4.2 PURCHASES' FRACTION OF BUYER'S TOTAL COSTS

When the product sold by the industry in question is a small fraction of buyers' costs, buyers are usually much less price sensitive (Porter, 1980).

Even though the quantities ordered of lubricants and cleaners to the agricultural distribution centers and to the food producers often are pretty large, they are probably not the largest drivers of costs for the buyers.

5.4.3 BUYER'S INFORMATION

If the buyer has full information it is easier to compare prices and terms of delivery. This yields the buyer greater bargaining leverage than when information is poor (Porter, 1980).

There are not that many competitors in the market for lubricants and cleaners, something that makes it easier to grasp the whole picture. When doing this market research, however, it soon was found to be difficult to find concrete information on terms and conditions of delivery, something that may imply individual agreements / negotiations. Lubricants are most often sold through large petroleum corporations, offering a wide variety of products. To find exact information for just one specific market is therefore challenging. The suppliers of cleaners are generally smaller than the suppliers of lubricants. However, they too offer several products for several markets, something that complicates the market research. All in all, information is not easy available, but by finding the right contacts and doing some rough estimations one can find satisfactory information for a good evaluation of what to expect in negotiations in all product-markets.

5.4.4 BUYER'S PROFIT

If the buyers earn low profits one would expect them to be tougher in price negotiations. Highly profitable buyers, however, are generally less price sensitive. That is, of course, if the item does not represent a large fraction of their costs (Porter, 1980).

The product-markets earning the least profits are probably found within the agricultural industry. But the fact that most sales go through large and profitable sales channels probably outweigh some of this effect. The food-processing industry is generally seen as profitable.

5.5.5 SWITCHING COSTS

If the potential buyer will face costs from switching supplier, a barrier to entry will be what is called switching costs (Porter, 1980).

As already explained both the cleaners industry and the lubricant industry consists of several smaller product-markets. Specialized products for special purposes may therefore create switching costs for customers if they have to adjust production methods and / or learn how to use other products. WS is, however, a small company, able to tailor product-orders to the customer's demands. This is something WS should be able to make use of in their marketing efforts. WS can in fact make arguments for negative switching costs, that companies switching will get a product that performs better and a product that benefits both humans and the environment.

5.5 SUMMING UP INDUSTRIAL ANALYSES

Table 9, on the following page, presents the most important conclusions of the elements discussed in this chapter.

TABLE 9: SUMMARIZING INDUSTRIAL ANALYSES

Force	Element	Take away for WS
Rivalry	Market concentration	Expected to increase rivalry
	Industry growth	Expected to increase rivalry
	Strategic stakes	Most important for suppliers of cleaners, one can therefore expect to be met by harder competition from these suppliers
Threat of entry	Economies of scale	Competitors probably enjoy this and this could be one barrier to entry
	Product differentiation	Possible to differentiate as a completely green supplier and a "specialized" supplier
	Access to distribution channels	Creating barrier to entry
	Learning & experience	Creating barrier to entry
	Capital requirements	Probably not the worst barrier to entry
Bargaining power of buyers	Large volumes relative to seller sales	Pretty concentrated customer markets, increasing bargaining power
	Fraction of buyers total costs	Cleaners and lubricants is probably not the largest fraction, thereby not creating extra incentives for buyers to be tough in negations
	Full information	Not available, thereby decreasing bargaining power
	Buyers profit	Generally profitable, thereby not creating extra incentives for buyers to be tough in negations
	Switching costs	Possibility to create negative switching costs

6 WHAT RESOURCES DO WS HAVE?

The five forces framework looked at different categories of outside influences that may create competitive advantages. However, profitability does not only vary across industries. It also varies within a particular industry, even over longer periods of time (Besanko, 2000). When a firm earns a higher rate of economic profit than the average rate of economic profit of other firms competing within the same market, the firm has a competitive advantage in that market (Besanko, 2000). A firm creates more value than its competitors only by performing some or all activities better than others. However, to do this the firm must possess resources and capabilities that its competitors lack; otherwise, the competitors could immediately copy any strategy for creating superior value (Besanko, 2000). Internal analyses are therefore normally done either on the activities a firm does, the capabilities, or on the resources a firm possess. Activities can be defined as the qualities of the way one firm do things better than another, whereas resources is something the firm possess that could create a competitive advantage (Besanko, 2000).

Different textbooks make use of different models when testing for strategic core competence. This thesis has chosen to make use of the VRIO framework when discussing this issue. The VRIO framework is pretty easy to understand and seems to be one of the most used models in American textbooks. Regarding WS' home base in California, this model therefore seems like a natural choice. VRIO is an acronym for the four question framework you ask about a resource or capability to determine its competitive potential: the question of Value, the question of Rarity, the question of Imitability, and the question of Organization (Peng, 2009).

Value: "Is the firm able to exploit an opportunity or neutralize an external threat with the resource/capability?"

Rarity: "Is control of the resource/capability in the hands of a relative few?"

Imitability: "Is it difficult to imitate, and will there be significant cost disadvantage to a firm trying to obtain, develop, or duplicate the resource/capability?"

Organization: "Is the firm organized, ready, and able to exploit the resource / capability?"

Overall, only valuable, rare, and hard-to-imitate resources / capabilities that are organizationally embedded and exploited can possibly lead to sustained competitive advantage and persistently above-average performance (Peng, 2009).

WS base their business model more on having resources that cannot be matched by competitors, rather than doing activities different than the competitors. The following statement taken from their business plan is proof of just this: "Our business model leverages unique formulations that truly perform and protect, for applications that have regulatory issues, giving customers compelling reasons to buy" (Ridenour, 2009, p.1). Focus in this thesis will therefore be on resources rather than activities. The resources were identified with the help of the people working at WS. Some aspects are therefore based on direct statements from these conversations.

6.1 TECHNOLOGICAL KNOWLEDGE

The following statement from Daniel Robin illustrates what is meant by technological knowledge:

> WS use best-in-class, proprietary technology to turn renewable materials into premium performance "green chemistry" products. WISE colloidal products are radically innovative and disruptive solutions compared to the conventional methods. Formulas are based on cutting-edge chemistry that sets a high bar for competitors and establishes new best practices for customers (Robin, 2009, p.1)

Value

The technology, of producing a product that performs well in addition to not being harmful to the environment, is the basic argument WS uses when approaching customers. Based on this, technological knowledge is seen as valuable for WS.

Rarity

In the industrial analyses it was pointed out that some of the competitors sell green product lines besides other products. However, many of the new green products are failing performance tests and are more expensive (Robin, 2009). "*We hear comments like*: '*Yes, Clorox and other newcomers now have so-called green product lines, but they don't work,' which allows us a significant opportunity with our highly effective, affordable, and innovative*

technologies" (Robin, 2009, p.2). The technological knowledge WS posses can therefore be seen as rare.

Imitability

"WISE erects fundamental barriers to entry by would-be competitors through protected formulas, industry-specific regulatory approvals and trough application-specific innovation" (Robin, 2009). Although one has patents, imitators may be able to copy the technology. In the book Gaining and Sustaining Competitive Advantage, the author Jay B. Barney, states that imitators may in general copy a technology for only 65 percent of the costs of the original producer. Furthermore he claims that 60 percent of all patents are copied within four years without violating the laws (Barney, 2007).

Organization

WS enjoys close collaboration with two technical partners, with whom WS has secured the know-how and rights to formulate, manufacture and sell under their own brand as well as to sell under private label (Robin, 2009).

Conclusion

The technological knowledge is valuable and rare. However there is reason to expect others to be able to copy the technology sometime not too long into the future. The conclusion will therefore be that this resource is a source of temporary competitive advantage.

6.2 GREEN BRAND

Here is how Daniel Robin explained how he looks at a green brand:

> Brand marketing seems to have a big impact on customer preferences and attitudes, at least in the US. In other words, the value of (especially green) brands is more perception than fact. The best customers for WISE will appreciate the brand and what it stands for (Robin, 2010, p.1).

Value

Value when it comes to brands, means that customers have to be willing to pay more for a product because of the brand name. Although WS has managed to build itself a name as a green alternative in the US, their products are still unknown in Norway, and one would therefore have to build the trust from scratch. Despite this, there is probably lots of

knowledge one can take away from how WS has done this in the US. The thesis will go more into details on this in following chapters, for now it is confined to stating that having a green brand can be a valuable resource.

Rarity

"Our brand represent something the large petroleum, multinational and chemical companies are currently struggling to regain: trust to faithfully act as stewards of the environment (let alone as responsible corporate citizens)" (Robin, 2009, p.2). Mr. Robin is probably right when claiming that the brand-name has a distinctive character, because most competitors produce / sells products known to be harmful to the environment besides their green product-lines, and will therefore have more trouble building the same trust for their brands.

Imitability

Competitors may copy the brand name, logo or other elements meant to differentiate the product. It is therefore important to protect these elements. Even though it is possible to take patent on names and logos, it might be possible for others to exploit another brand's acquired value if it easy to copy the logo. When developing names and logos the complexity which makes it harder to copy should be weighted versus the simplicity which makes it easier for customers to remember (Keller, 2003). In the eyes of the author of this thesis; the logo of WS falls into to the latter category, being pretty simple and easy to remember. Despite this, direct copies are not claimed to be any urgent threat to WS' profits. Like described in the industrial analysis, the market is characterized by a few large rivals. All these suppliers have established their own brands, and their focus is not just environmental. With that being said, there is little doubt that focusing on environmental aspects is something that one will see more of in the future, and there will most probably come new competitors into the market with a green-profile. Even if new competitors do not try to make direct copies of the brand, it is likely to see more competitors selling under a completely green brand.

Organization

Daniel Robin, VP of business development, has more than 20 years business experience to his work as a business analyst, investor and venture catalyst, with clients in diverse Fortune 500 and "Future 500" industries (www.in3inc.com). In addition WS has help on this subject

from the advisors of Beam Inc. This firm is a San Francisco based international consulting firm dedicated to supporting the creative, positive changes that are emerging in all sectors of society (www.beaminc.com). In order to take full advantage of a green brand in Norway, there could however be a requirement for consulting with Norwegian experts regarding how to do promote the brand in Norway.

Conclusion

A green brand name is most likely something that could be a source of competitive advantage in the competition in the Norwegian market. When shaping a strategy for the Norwegian market it will be important to consider how to build the brand in Norway.

6.3 HUMAN CAPITAL / NETWORK

Progress in international markets depends upon several factors. The most important ones are often found in the company's internal engagement and support of the internationalization-process. With engagement one will gradual get the necessary knowledge about international ventures, and be able to develop ones resources (Solberg, 2009). The knowledge Solberg talks about is illustrated in figure 12.

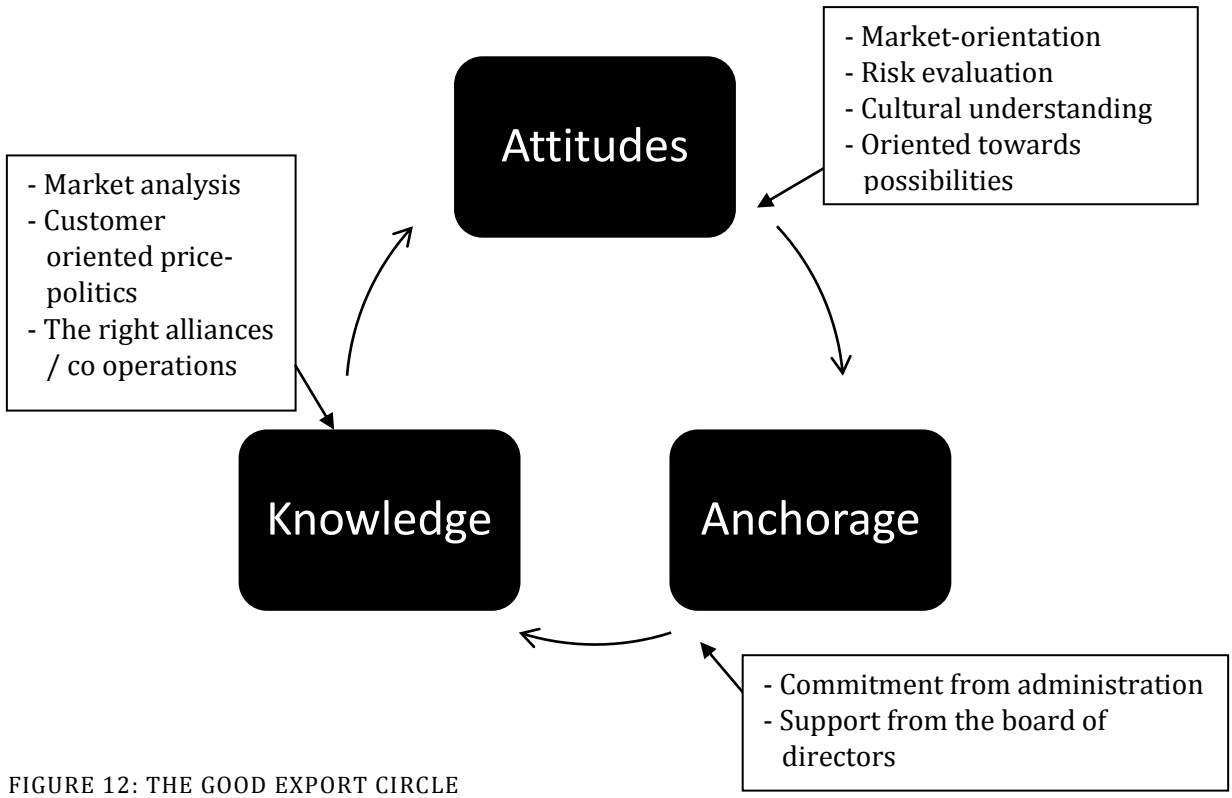

FIGURE 12: THE GOOD EXPORT CIRCLE

WS was founded by the experienced entrepreneur and brand-builder Jeremiah Ridenour. Mr. Ridenour brings deep business-operations and brand-building experience as well as knowledge of contracting for large-scale specialty agricultural crops, specialty distribution, co-packing and private label manufacturing (Robin, 2009). With this strong background in manufacturing and the perishable- and organic- products industry, Mr.Ridenour brings a keen awareness of the preferences and attitudes of channel partners, early adopters, commercial/industrial customers and retail consumers (Robin, 2009). Beside Mr. Ridenour one finds Daniel Robin, Fabio Rizza and Don Brown, all with 15-20 years of experience in the field of business development (Robin, 2009).

Value

There has been done a lot of research on the topic of what makes some exporters successful and others less successful. The main conclusion from this research is that progress in international markets is due to an active home administration in the export development (Solberg, 2009). Competitors can hire consultants to cover own lack of knowledge, but this will be costly, and like Solberg (2009) describes the managements own engagement is crucial for international success.

Rarity

Competitors will probably also have hard working staffs, and many of them probably much larger staffs than WS. However, the market for environmental friendly products can be seen as a new/emerging market, and there are probably not many rivals in the Norwegian market that can match the experience of the WS staff on this subject. In addition WS is based in Silicon Valley, probably seen as the global leader of innovations / new business developments. The home-base network is therefore also something that can be useful for WS when starting export.

Imitability

Gaining experience takes time, and this resource is therefore not something others just can copy.

Organization

Like earlier described; resources will not be a source of persistent competitive advantage, unless organizationally embedded and exploited. How the company should organize the export to Norway in order to take advantage of this resource is one of the questions answered in chapter 8, which deals with entry modes.

Conclusion

WS' human capital and network can be a source of competitive advantage, if fully organizationally exploited.

6.4 SUMMING UP RESOURCES

Table 10 summarizes the findings in this chapter. The technological knowledge is valuable and rare. However there is reason to expect others to be able to copy the technology sometime not too long into the future. The green brand is not direct imitable, at least not seen in a shorter time period, and is seen as a potential source of competitive advantage. The same is true for human capital /network, assuming WS will be able to organizationally exploit this resource in Norway.

TABLE 10: RESOURCES

Resource	Valuable	Rare	Imitable	Organized
Technology	x	x		
Green brand	x	x	x	x
Human capital / Network	x	x	x	x

7 WHAT COMPETITIVE POSITION SHOULD WS STRIVE FOR?

This chapter sums up the first part of this thesis. It will make use of the analyses conducted so far, when describing a desirable competitive position for WS in the Norwegian market.

Strategic positioning is about choosing the customers to serve, and identifying reasons why these customers shall choose your products over competitors' products (Lien, 2008). The choice of positioning will mark out the course for all future decisions made (Johansen, 2008). Generic strategies are often divided into three general categories (Porter, 1980):

- cost leadership
- differentiation
- focus

In their US business plan WS describes their strategy the following way: *"Our sales and marketing focus is on the industries that have a compelling need for these products – those with "high loss / high risk" issues* (Robin, 2009, p.1). A strive towards a special customer or product segment, like WS has done in the US, will fall into the category Porter describes as a focus strategy.

7.1 MARKET POSITION OF WS IN NORWAY

> Why should a potential customer buy your product and not the products offered by the competitors? Because your product offers a larger value added than the products offered by competitors, put differently; it's better on a technical or emotional level for the customers. The marketing of this is that you have developed a unique offer for your customers (McKinsey&Company, 2007, p.69).

Chapter 3 on customer segmentation, identified agricultural- and food processing-customers as the most interesting customers for WS in Norway. Within these customer groups the micro segmentation identified ecological producers as potential target customers, given their concerns for environmental effects of products used in production. Chapter 5 described external strategic considerations in potential product-markets. In general a fairly high degree of rivalry among competitors was described. There exists several barriers to entry, but a possibility to differentiate oneself as a green supplier and a

"specialized" supplier were identified. The green brand and the human capital / network were identified as resources that could bring maintained competitive advantages.

In general customers expects higher quality to cost more (Robin, 2010). Additionally, differentiation and "tailored" product-offers normally cost more to deliver. A strategy based on cost leadership is therefore out of the question.

The environmental aspects are what differentiate the products of WS from the competitors. Although the competitors claim to take environmental effects into account when developing products, all products have some sort of substances that are dangerous to the environment. WS' industrial products achieve Ultimate Biodegradability, ASTM D5864 Pw1, the highest standard (www.wisesolutions.net). Others claim their products are biodegradable, but unless they include their specific standard, this claim is meaningless. Everything and everyone is biodegradable eventually. Although WS' products are functionally comparable or superior to their petrochemical and synthetic counterparts (Robin, 2010), the environmental-quality is what really distinguish WS from others. This has to be reflected when striving for market position. WS has to get to the customers that values environmental criteria as one of the most, if not the most important, aspect to consider when buying cleaners and lubricants. Hence, the customer segmentation identified the potential of focusing on ecological producers. The selections done in the customers segmentations, makes it difficult for WS to claim to follow a general differentiation strategy. A focus on special customer groups and some product markets will instead fall under the category of a focus strategy, like the US strategy also does.

The four following sentences clarify the positioning recommended for WS in the Norwegian market:

1. WS will serve ***the market for ecological production.***
2. The customers will choose WS' products because of ***the superior environmental quality.***
3. The company creates superior value to the customers because of ***WS' technological knowledge, green brand and human capital / network.***
4. The competitive advantage may be kept because WS has ***resources that are valuable, rare, hard-to-imitate and organizational embedded.***

8 WHAT ENTRY MODE TO USE IN THE NORWEGIAN MARKET?

The purpose of this chapter is to come up with a recommendation for how WS should arrange delivery of their products to the Norwegian customers. This discussion starts by presenting the different alternative entry modes, to make sure the reader is fully aware of all alternatives and concepts discussed in the sections to follow. An illustration of the modes discussed is shown in figure 13.

8.1 POSSIBLE ENTRY MODES

Non equity versus equity mode

The first and largest boarder is drawn between equity and non-equity modes. This choice tends to reflect the size of the export operation. Non-equity modes tend to reflect relatively smaller commitments to overseas markets, whereas equity modes are indicative of relatively lager and harder-to-reverse commitments (Peng, 2009). Within non-equity mode the arrangements are categorized as either export- or contractual- arrangements, whereas within equity-mode the arrangements are some sort of joint venture or a wholly owned subsidiary.

Although having an impressive US start-up history, WS does not have the resources, either financially or otherwise, to establish ownership abroad today. This thesis will therefore not dwell any more on this question, but rather focus on the choices within the non-equity modes. If the reader wants to know more about the alternatives within equity modes, something that could be relevant for WS at later times, such arrangements are described in the appendix section 6.

Non equity – Export arrangements

Exports can be handled several ways, the most common arrangements are either direct export, where the exporter handles the export himself, or indirect export, where the products are handed over to some sort of intermediary firm.

All export arrangements may capitalize on economies of scale in production concentrated in the home country. If the export volume gets too large, however, it may be difficult to handle

direct export. This is especially true if the firm needs to be close, both physically and psychologically, to its customers (Peng, 2009).

The primary reason for choosing intermediaries is because of information asymmetries concerning risks and uncertainties associated with foreign markets. But this also means that if the exporter is interested in learning more about overseas markets, ***indirect exports*** will not provide great opportunities for such learning. Indirect export will also have some drawbacks because of the introduction of third parties, such as export trading companies with their own agendas and objectives that are not necessarily the same as the exporter's (Peng, 2009).

Non-equity – Contractual arrangements

Licensing/franchising, turnkey projects, R&D (research and development) contracts and co-marketing are the most common forms of contractual agreements (Peng, 2009).

In a ***licensing/franchising***- agreement, the licensor/franchisor sells the rights to intellectual property such as patents and know-how to the licensee/franchisee for a royalty fee. The licensor/franchisor, thus, does not have to bear the full costs and risks associated with foreign expansion. On the other hand the licensor/franchisor does not have tight control over production and marketing.

Turnkey projects refer to projects in which clients pay contractors to design and construct new facilities and train personnel. The advantages entail the ability to earn returns from process technology in countries where foreign direct investments are restricted (Peng, 2009). However, there are some drawbacks as well. Firstly, if foreign clients are competitors, selling them state-of-the-art technology through turnkey projects may boost their competitiveness. Secondly, turnkey projects do not allow for a long-term presence after the "key" is handed to clients.

R&D contracts refer to outsourcing agreements in research and development between firms. They allow firms to tap into the best locations for certain innovations at relatively low costs. But these arrangements may also bring some drawbacks. Firstly, given the uncertain and multidimensional nature of R&D, these contracts are often difficult to negotiate and enforce (Peng, 2009). While delivery time and costs are relatively easy to negotiate, quality is

often difficult to assess. Secondly, such contracts may nurture competitors. Thirdly, firms that rely on outsiders to perform R&D may, in the long run, lose some of their core R&D capabilities.

Co-marketing refers to efforts among a number of firms to jointly market their products and services. The advantages are the ability to reach more customers. The drawbacks center on limited control and coordination.

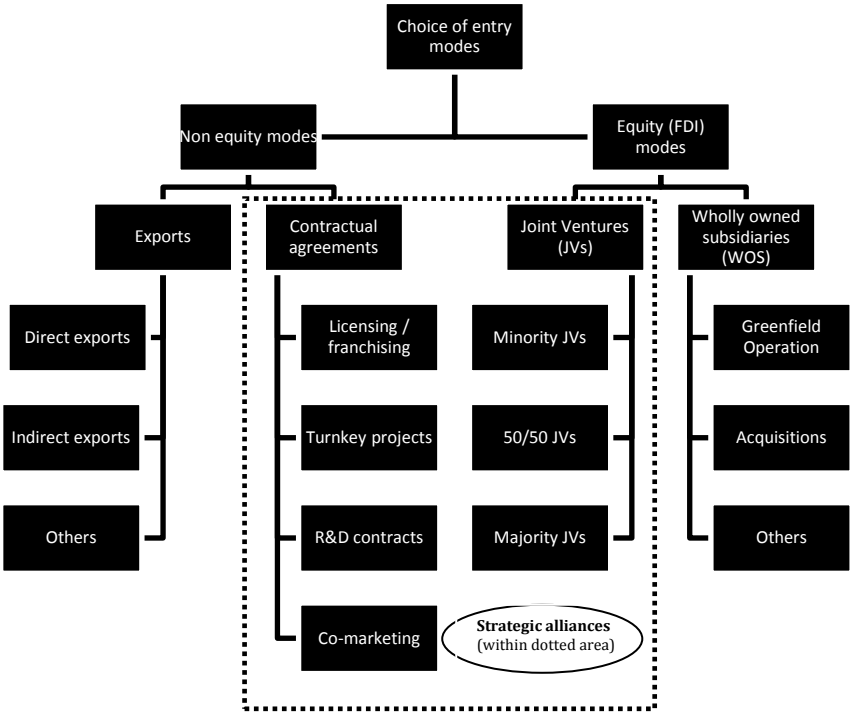

FIGURE 13: ENTRY MODES

8.2 HOW TO CHOOSE ENTRY MODE

When making the choice of entry mode, it is essential to take the findings of the analyses done in the first part of this thesis into account. This section will give a theoretical description of how to evaluate the importance of some these findings. Whereas section 8.3 makes use of a more evaluating writing style, when discussing the theory presented in relation to WS' operation in Norway.

8.2.1 INTERNAL RESOURCES

When it comes to internal resources, this is often a matter of products with new technology. Solberg (2009) lists some important points that could be important for the exporter in that matter:

- Have control over marketing and later product development
- Have "foothold" before the competitors, both when it comes to market shares and timing
- Have resources, defined as both attitudes/knowledge/foundation, and financial resources

When deciding entry strategy, there is often a discussion on having control over your own market development and having the necessary resources, especially resources in the form of knowledge of foreign markets. In a study of three of the most common forms of entry modes chosen by small and medium enterprises, done by Solberg and Nes in 2002, the control was found to be best when exporting through your own sales departments, thereafter through an agent, while the level of control where the lowest for export with the help of a distributor (Solberg, 2009).

8.2.2 EXTERNAL CONDITIONS

When Solberg (2009) evaluates the best form of entry strategy with respect to the external conditions, he emphasizes on the following aspects:

(1) The customer and the negotiation structure

- How many customers does one find in the market?
  If there are just a few large customers, the company may want to find a representative who can process these customers directly.
- How do the customers make their buying decisions?
  Which people make the decisions? Will one be able to get access to central people in the markets without using local representatives?
- Are there any developed customer – supplier – relations? If so, how deep are these relations?

If there exists long term co operations with different connections on several levels it might be necessary to have long term relationships and support from local people who know their way around in the local environment.

(2) The competition

In a situation with a few big competitors, these competitors will often have a dominating position when it comes to distribution channels. This will give them both the power and the ability to squeeze out new competitors. A possibility in this situation could be to identify small niches in the market, or to gently move into the market (Solberg, 2009). Later on when you have established your position, you could start taking over new customers from the competitors. In cases like this, the company would have different needs when it comes to the agent / distributor in the start-up versus later on. In the start a smaller representation could be sufficient to serve marginal customers, whereas when competition increases one may need larger networks.

In some cases it could be necessary to find an ally, through some sort of joint venture. When considering alliances, the company has to evaluate the trade-off between long term control and a quicker market penetration (Solberg, 2009). If the competition is more fragmented, with several smaller competitors, one will have more choices when entering a new market. Other factors like, internal goals and resources will then be of more importance (Solberg, 2009).

(3) Other external conditions

Solberg (2009) puts all other conditions one would have to analyze individually for each country in this last category. Elements discussed in this category often involve local laws and regulations in addition to political risks in the foreign country.

8.2.3 THEORETICAL ASPECTS

In addition to the more practical aspects mentioned so far, it is useful to be aware of more theoretical aspects as well. Solberg (2009) base this discussion on two important questions:

1) To what extend does the company have the necessary resources to make sure their products are sold to the price and with the profile they want in the market, and how should this control be implemented?
2) To what extent is there economies of scale in the marketing, and in case there is; who should take away the economic benefits from the scale advantage?

The principal – agent- theory illustrates the danger of representatives, allies and agents acting to benefit themselves more than the exporter (Solberg, 2009). There are different

ways of controlling the behavior of your foreign representative, and several traditional management theories discuss just this issue. Besides principal – agent- theory, other common theories are: transaction-cost-theory, resource-dependency-theory and international-investments-theory.

(1) The level of integration

Transaction-cost theory predicts that the higher the level of specific investments, the more the business will seek towards integration with the local market, meaning keeping the benefit of economies of scale themselves (Solberg, 2009). The theory further predicts that the same is true, the more often transactions are being done or the higher the value of the transactions. One would expect wholly owned subsidiaries to always be the ones you most easily could control, however this has proven not to always be correct (Prahalad & Doz, 1981; Ghauri, 1990). Solberg (1988) has also proven that the level of integration do not explain the results in the foreign markets, the results are rather coming from the engagement of the leaders (Solberg, 2009).

According to resource dependency theory, a company that is very dependent of sale in a particular market will seek to integrate with this market to have full control over the marketing (Solberg, 2009). This resource dependency will not just influence the choice of entry strategy, but also the choice of concrete partners. In other cases, other aspects are more important; for example in a market where quick market penetration is feasible it may be important to find partners that has a broad network (Solberg, 2009).

(2) Selecting a partner

Changing partners is often something that could be quite expensive, because of specific investments that are made in for example education, joint profiling, et cetera. It is therefore important to find a good partner already from the start-up. When choosing partners one must consider the principal-agent theory earlier discussed, and try to find a partner one feel has the right intentions and the right position in the market.

(3) Controlling the partner

In what is called unilateral control, one wish to find mechanisms that makes the agent behave in line with the principals' goals and wishes (Solberg, 2009). This is normally done by controlling the results, for example on sales-volumes, market shares, sales-increases, profits,

et cetera. Another way of controlling the agent is to use some sort of behavior control. This is often seen in market plans, status-reports and information-systems. Geographical and cultural distances can make this sort of control challenging.

Normally one will use both types of control, when cooperating with foreign representatives (Solberg, 2009). But all form of control will cost, and this is one reason why it is so important to evaluate the valuable resources of the exporter and the wanted level of control. Entry strategies where it is expensive to control the partner will be difficult for smaller companies, first of all because of the lack of money but also because of the lack of experience from operating abroad (Solberg, 2009).

8.3 RECOMMENDATION OF ENTRY MODE FOR WS

This section will make use of theory presented in the former sections to come up with a recommendation for how WS should enter the Norwegian market. Like explained in the start of this chapter; the focus will be on the choices within non-equity modes.

8.3.1 INTERNAL ASPECTS

In chapter 6; the resources, thought to be most important for WS when going abroad, were identified. The technology was described as valuable and rare, but there could be reason to expect increased competition on green chemistry. The former section described how control over marketing and later product development is important to protect technology. There was also presented a study showing that this control normally is best when arranging export as direct export. Direct export would also be the arrangement that would best utilize the resources of human capital based in California.

Contractual agreements, at least licensing/franchising and R&D contracts would involve a danger of losing the technological advantage, and turnkey projects would probably be too expensive for a start-up company like WS. Co-marketing on the other hand is something that could be interesting at first glance because of the possibility to share costs and reach more customers. However, WS would lose some control, and there is therefore a risk of losing the green-label advantage.

8.3.2 EXTERNAL ASPECTS

When it comes to external considerations, the importance of customer and negotiation structure has been emphasized. In the analyses in chapter 5 most markets were identified to be pretty concentrated, and several of the potential customers have the same owners. Based on this, the argument for need of local representatives in order to get to the people making the supplier decisions is raised. This argument finds further support when considering the fact that most competitors have operated in the markets for several years, and therefore probably have established deeper customer-supplier-relationships.

Furthermore, the institutional-based analysis in chapter 4 identified some laws and regulations one has to take into account when exporting to Norway. A local representative would probably be better equipped to find his way through the formalities in Norway than people at the home-office in California.

The large companies controlling the market for cleaners and lubricants in Norway will probably have the power and ability to squeeze out new competitors. Solberg (2009) presented the idea of a finding a niche in market to avoid direct competition, in such cases. When dealing with niche-markets, smaller representations are often just as good as larger and more expensive ones (Solberg, 2009). All in all the external aspects brings arguments for some sort of small local representative in Norway.

8.3.3 THEORETICAL ASPECTS

Within the more theoretical approach to choice of entry, two questions of utterly importance were mentioned, concerning control of resources control over economies of scale benefits.

One of the major resources of WS is the experience of its employees, which is something one wants to make sure to exploit in the Norwegian market as well. Although control over own resources would best in direct exports, the external market conditions points to a need for some sort local representation / co operation. The economies of scale were described as potential barriers to entry, and the benefits of vertical integration are especially known to be advantageous for larger competitors.

Based on the answers to these two questions and the external aspects, the conclusion is that there is need for local assistance. When having representatives and allies abroad one will certainly face new challenges, the principal-agent-theory is only one example. However, there are ways to control some of these pitfalls, like the controls described in section 8.2.3.

8.3.4 WHAT SORT OF LOCAL REPRESENTATIVE?

Indirect export where one uses an independent organization to take the products abroad is probably the most worry-free form of arrangement, and one may take advantage of information asymmetries concerning risks and uncertainties associated with foreign markets. However, this would also mean having less control over ones products from the point where they are handed over to the representative taking them abroad. Intermediaries may repackage the products under their own brand for example, and WS would not be able to further develop their green-label-advantage. WS would neither be able to exploit the already existing knowledge and experience of the employees.

Direct exports can be handled through foreign based agents or distributors. Unlike agents, distributors will take title to the goods. (Hollesen, 2007). Distributors are paid according to the difference between the buying and selling prices, whereas agents normally are paid by commission. One good reason for choosing to use distributors could be cases where after sales service is necessary, because they are often more likely to possess more resources than an agent. The value chain of WS pretty much ends when the products are delivered to the customers. This fact, the fact that it often could be easier to control an agent, and the fact that an agent could be cheaper as he do not possess the same resources and therefore do not have the same negotiating position when it comes to payment, are some reasons why this thesis will recommend WS to export their products to Norway through an agent. Agents may be exclusive, where the agent has exclusive rights to specific sales territories; semi-exclusive, where the agent sells the exporter's goods along with other non-competing goods from other companies; or non exclusive, where the agent sells a variety of goods, including some that may compete with the exporter's products. (Hollesen, 2007).

In selecting a particular intermediary the exporter needs to examine each candidate firm's knowledge of the products and local markets, experience and expertise, required margins, credit ratings, customer care facilities and ability to promote the exporter's products in an

effective and attractive manner (Hollesen, 2007). Some of the most important aspects for WS when it comes to setting up the contract with the agent will be sole or exclusive rights, competitive lines and termination of the agreement (Hollesen, 2007). It should also be mentioned that use of agents operating in Norway are regulated in a law called “LOV 1992-06-19 nr 56: Lov om handelsagenter og handelsreisende”.

When it comes to transportation the most common thing would be that the exporter ships the merchandise directly to the customers, and all arrangements on financing, credit, promotion, et cetera, are made between the exporter and the buyers. Alternatively the agent could be used as a negotiator, between the two parts, and could be paid for this through a higher commission. The biggest Norwegian based transporter is named Bring. This company offers both national and international freights and also storage opportunities. Alternatively WS could use one transporter to transport the goods into Norway and a different transporter inside Norway; this could imply need for intermediate storage. Another alternative would be to hire a transportation company for each order, this could be most appealing if orders are only coming from a few large customers with their own storage facilities.

8.4 SUMMING UP ENTRY MODE

This chapter has presented some of the choices when it comes to arrangements of delivery of products from California to the customers in Norway. Internal, external and theoretical aspects should all be considered when making this decision. Based on the analyses done in the first part of the thesis on such aspects, this thesis recommends to hire a Norwegian agent. The agent can then handle both sales and practical arrangements on behalf of WS in Norway.

9 IS THE PRODUCT MORE THAN CHEMICALS?

When creating an acceptable product offer for international markets it is necessary to examine what contributes to the total product offer (Hollesen, 2007). So far, the products have been described as cleaning- and lubricant-chemicals. In order for an effective promotion of products it is necessary to know what customers are looking for. The resources WS posses make it possible to differentiate on being more environmental friendly than competitors. However, having the right resources are of small value unless one can transform these resources into a product-offer that match the competitive position one is striving for. It is likely thay the green customers are looking for something more than just the chemicals themselves. Identification of such extra product-elements is the core of this chapter.

Kotler is one of the most referenced researchers on the topic of total product offer. Figure 14 presents a simplified version of one of his models, presenting different product levels.

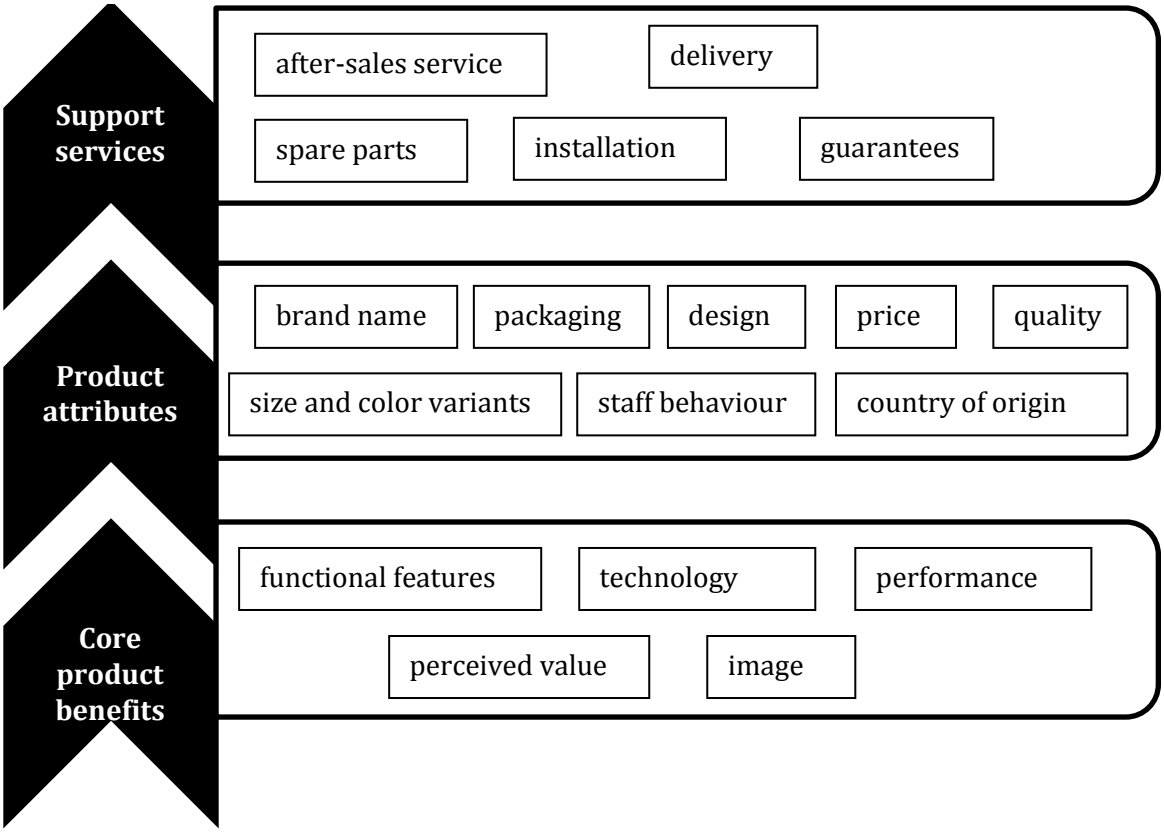

FIGURE 14: PRODUCT LEVELS

The core product benefits are the main functions of the product, or the needs it will fulfill. On the next level one finds different product attributes connected to buying just that product instead of another. The top level consists of support services.

For WS the ***core product benefits*** are the content inside the packaging, namely the lubes- and cleaning-chemicals themselves. Examples of ***product attributes*** is everything else building a picture of the products, such as the sales-agents, packaging, et cetera. Typical examples of ***support services*** within WS' branches are advisory and coursing in what products to use for what purposes. In addition to expanding the perception of the received product, this may also boost sales because of the ability to brag about the benefits of your products. Other examples within the three product levels are shown in figure 14.

Being a mere environmental substitute is the main point of differentiation from competitors. Customers shall choose WS not just because of superior quality, but also because the brand the products represent. The statement from Daniel Robin, presented in section 6.2 is proof of just this: "*The best customers for WISE will appreciate the brand and what it stands for."* WS has to convince its customers about the value of their main product attribute; their brand. This thesis will therefore concentrate on describing product-attributes to consider in order for customer to perceive WS as a more environmental-friendly brand.

9.1 BRAND

A brand can be defined as a product with dimensions that differentiates it from other products, fulfilling the same needs (Keller, 2003). A brand is found in the consumer's head, because it is their behavior that establishes the value and power of the brand. Brand-marketing is about building value in the consumer's mind, perception of a value larger than physical observed value of the product, and in this way differentiate it (Supphellen, 2000).

Customers may develop associations to the brand, for example superior quality, leading to a willingness to pay more for the product. This leads to a competitive advantage and more profit. Customers will also often be more loyal towards products with a well known brand, coming back to buy the same product. When customers are familiar with the brand; the evaluation process, concerning what the producer delivers and how the quality is, becomes easier and the perceived risk of buying decreases. A brand can also state the identity of

customers seeking special identities (Mittal, 1994), like customers who wants to be seen as environmental-friendly.

Brand equity is the differentiation effect knowledge of the brand will have to consumers' response to further marketing of the brand (Keller, 2003). A brand will have a positive value when customers reacts positive to more marketing of the product, by being less price-sensitive and more likely to accept expansions of the product-line. However, one has to be aware that a brand may create negative value as well. Keller (2003) use consumers tastings as an example; consumers will react differently towards tests if they know the brand. That is brand equity.

9.1.1 AWARNESS AND ASSOCIATIONS

Keller (2003) use awareness and associations as central elements when discussing brand value. An association can be defined as a result of attention, related to feelings and circumstances (Keller, 2003). The awareness can be measured by evaluating the depth and width of consumer knowledge of the brand (Keller, 2003).

The FCB-matrix, developed by the American advertising agency Foote Cone and Belding in co operation with Professor Ratchford from New York State University, illustrated in figure 15, shows four different ways of information processing when purchases are made. On the horizontal axis purchases are evaluated on how rational the decision is, on the vertical axis one evaluate purchases on how involved the customer is in the decision.

Industrial products will normally be high-involvement and "think-first" - products (learn→like→purchase) (Solberg, 2009). Reasons for this are for example the fact that products are bought in larger quantities and customers often have employees with special responsibility of making the purchasing decisions. It is assumed that the more involved the customer is in the buying process the more comprehensive is the processing of information about the product. . Whereas "top of mind" awareness is more likely to be more important when it comes to purchases with a lower degree of involvement (Solberg, 2009).

For WS it will therefore not be sufficient to built awareness of the brand, there has be created strong, positive and unique associations to their products.

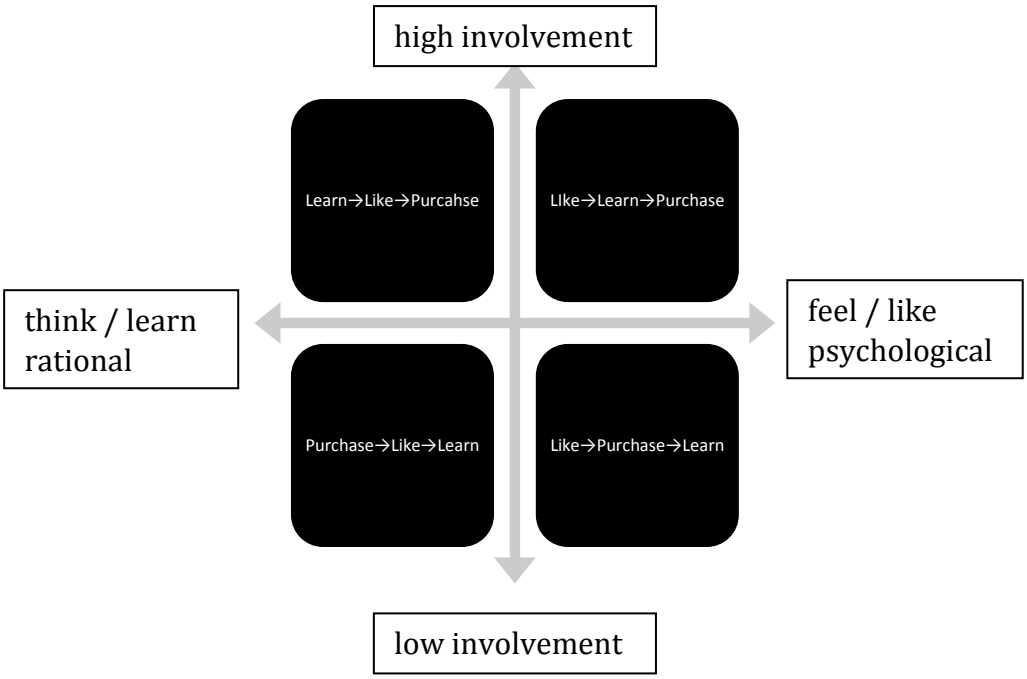

FIGURE 15: THE FCB MATRIX

9.2 BRAND ELEMENTS CREATING GREEN ASSOCIATIONS

If associations are positive or negative will first of all depend on how the product is able to deliver the benefits and attributes the customer is looking for. But several other aspects may also contribute in forming our associations of products. Associations can, for example, be tied directly to a brand through information and brand elements (Keller, 2003). Typical examples of brand elements are name, packaging, labels, web sites, slogans and brand personality. The sections underneath presents the brand elements found most valuable for WS when exporting to Norway.

9.2.1 PACKAGING

The packaging is everything from the paper wrapped around the products, to the containers carrying the freight. In addition to protecting the products, the packaging is a way to get the customers' attention and identifying the brand. Packaging is a cost-effective mean to built brands, especially in an introduction-phase (Keller, 2003). Good packaging will inform the customer of the content inside, and why it should be bought. The packaging may increase the awareness, and therefore be of extra importance, especially for low-involvement

purchases. Packaging will also create associations from structural and visible elements, like for example: the logo, colors, typing, pictures, description, et cetera.

All products offered by WS are packaged at their headquarters in California, this makes it easier for them to control this process, and the company should therefore be able to fully exploit this product attribute.

9.2.2 USE OF LABELS

Ingredients

If the consumers know the value of a special ingredient, a product containing this ingredient may create positive associations for customers. One example of this is hair-products where certain customers have preferences for jojoba oils (Solheim-Grønnevik, 2006).

When it comes to lubricants and cleaners, and environmental concerns connected to use of these products, it is more likely that customers will look for lack of certain ingredients. Customers in Norway will then typically look for chemicals not allowed by REACH, in addition; the four chemicals having more strict regulations in Norway, described in section 4.3.2. Ingredients described under environmental aspects in section 3.4.3 are of course also of interest.

Hallmarks

Positive associations may also be created if using a special hallmark. These hallmarks communicate certain standards of quality, production-methods or other criteria. A good example is chewing-gums that are recommended by dentists (Solheim-Grønnevik, 2006).

When it comes to environmental labeling in Norway, the most known hallmark is probably “Svanemerket”, a co operation between the Nordic countries established a few years ago. A “Svanemerke” means that the product fulfills the criteria for not being harmful to the environment. In addition to the product itself, there are requirements to the packaging. The criteria are evaluated continuously as one get new knowledge. The producers have to apply for a “Svanemerke” with a standardization-committee (www.miljøinnkjøp.no).

Examples of other environmental-friendly labels often seen in Norway are (www.miljøinnkjøp.no): The EU-flower, Bra Miljøval (Falken), KRAV, Forest Stewardship

Council (FSC), The Blue Angel, World Wildlife Fund (WWF), Returpiler, and more. Details on the different labels are described in the appendix section 7.

Co-branding

Co-branding means to tie two brands together to exploit the positive associations towards each of the brands (Keller, 2003).

This thesis has already recommended WS to differentiate themselves from the other brands in Norway. A co-branding with possible competitors would therefore probably do more damage than good. But it could be an idea to find other allies. Environmental friendly organizations have good credibility, and typing the brand of some of these organizations on products could be valuable in marketing.

Country of origin

Typing of the country of production on products is often done because our perception of the quality of a product will be influenced by the country of origin (Solberg, 2009). There are differences between nationalities when it comes to reputation within certain qualifications. Engineers from France are known to be innovative, but not very user-friendly oriented, for example (Solberg, 2009).

Silicon Valley is generally thought of as one of the most innovative places on earth. Additionally the state of California has also received praises in the media for their focus on the environment. This has not been the case with the rest of the US. Instead of typing country of origin on products, it could therefore be an idea for WS to type “state of origin” on their products.

9.2.3 BRAND PERSONALITY

Brand personality is the human characteristics one associate with a brand (Aaker, 1997). This is the theory which explains why some brands have personified the brand in a living character. Marlboro will for example experience customers describing the handsome cowboy if anyone asks them to describe the brand as a person (Fournier, 1995). When such a figure is tied to a product or brand this may create awareness and lead attention to the brand. Aaker (1997) explains the need for customers to identify themselves through buying

the brands that gives the wanted brand-personality. By using a brand, customers can tell the world around them who they are.

Marketing personality may be tied directly to people that are associated to the brand, like users or company leaders. By tying human qualities to products of WS, customers will choose products if the image match their own values. If this is successful new customers will choose WS' products over other's, because they want to be seen as environmental friendly themselves.

9.2.4 ADVERTISEMENT MATERIALS

All channels of advertisement are building the image of the seller in customer heads, it is therefore crucial to be aware of the image one is trying to build. Examples of materials used in advertisement are: posters, flyers, TV-commercials, web sites and so on. In order to differentiate WS as a green brand, offering a different product offer, it is important to be consistent and precise in advertisement materials used across all channels.

9.3 SUMMING UP PRODUCT OFFER

WS is not just offering lubricant- and cleaning- chemicals, WS is offering a green brand. Customers will buy WS' products not just because of claimed effect for the task, but just as much because of the brand the products represent. In order to promote a green brand, consistent and precise use of brand elements like packaging, labels, brand personality and advertisement material is important.

10 HOW SHOULD THE PRODUCTS BE PROMOTED?

Market-communication involves all efforts used by the company to increase demand for products (Solberg, 2009). Communication is established already when choosing competitive position, entry strategy, price, and so on. However, these actions will all contribute to the development of the more specific marketing. Through marketing the company gains what one can call its "personality" in the eyes of the customers (Solberg, 2009). Because one associates something special about the company, the company gains an identity beyond the pure satisfaction of requirements (Solberg, 2009).

This chapter is important because it gives a recommendation for how WS can reach potential customers in the Norwegian market. Without promotion there will be no sales.

10.1 COMMUNICATION PLANNING

When discussing promotion, the goal is to reach some conclusions on what messages to send and how to send those messages to the target market. It is therefore useful to base the discussions on a general communication-model. There exist several such models. The one chosen in this thesis is the same as used by Bakka (1990), when he discuss communication abroad. The model, illustrated in figure 16, explains how communication takes place over four steps.

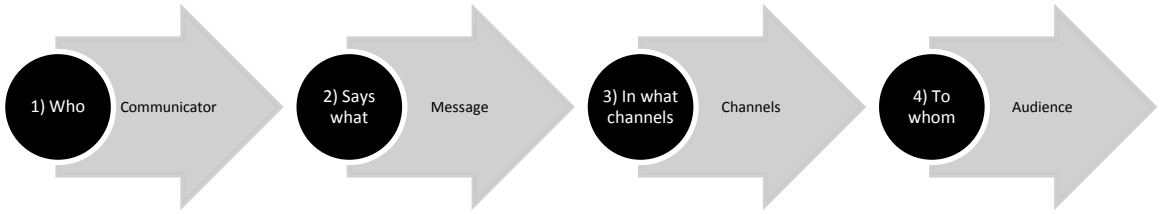

FIGURE 16: COMMUNICATION MODEL

If the company has a dominant position in its target group, or possess some new and unique technology, it may be productive to start with the sender. However, this may lead into the well known trap of excessive product orientation and ethnocentric attitudes toward foreign

markets. As a rule one is, therefore, well advised to start with the target groups and keep their interest in mind throughout the analysis (Bakka, 1990).

4) Audience

Within the defined target group, one must check what one know about the audience's needs and wants, information in-take, buying habits, use behavior, et cetera (Bakka, 1990). What additional knowledge does one want? And, most important, what do the company want to achieve with their campaign?

3) Channels

Some channels are excluded because of coverage, costs and maybe atmosphere. The remaining ones should as far as possible be compared on a quantitative and qualitative basis (Bakka, 1990).

2) Message

What should be the content of the message? What psychological appeal should be used to influence the audience in your favor? What presentation could best convey your message, a hard-selling news-approach or a more soft-spoken and informative style?

1) Sender

Who can mobilize the most relevant, professional reputation, credibility, prestige, or even popularity vis-à-vis the target groups? In short, who can give your offer the most supportive sender effect?

10.2 THE RECEIVERS

What will the promotion attempt to achieve?

When entering a new market, the first challenge is that customers do not have knowledge of the products offered (Solberg, 2009). They start at the bottom of what Colley (1961) calls the effect-hierarchy, shown in figure 17. The model describes an assumed process buyers go through when making a purchase. In the start it will be necessary to teach the market, providing facts of the company and its products. As the market becomes aware of the product, the communication will take more for granted that the customers know the company and its products, and can therefore make use of different marketing tools. The preferences are not always following the same steps, for some products it is possible to

create preferences using simple messages. Put differently; the customers make purchases directly after seeing a commercial. This is more normal for low-involvement products, relative cheap products often bought on routine (Solberg, 2009).

FIGURE 17: THE EFFECT HIERARCHY

Based on the effect-hierarchy-model, a first goal for WS will be to create awareness of their products' benefits and teach the market of the environmental consequences from use of alternative products. This model takes up the lead from the former chapter on products, where awareness and associations were described. It was said: "*For WISE it will not be sufficient to build awareness of the brand there has be created strong, positive and unique associations to WISE's products".* Chapter 9 described the product-aspects to consider to build such associations. This chapter on promotion is more about creating awareness of the products and communicating the wanted associations.

Need to know

Even though you might be able to bring awareness of the products to potential customers, you will also have to break into relations and established customer-supplier-connections in the market. Relationships like this, is of special importance when it comes to industrial-products, where one often finds few buyers having direct contact with supplier-sellers. It is therefore of utterly importance to get to know how potential customers makes their purchasing decisions. Some of the questions that need answering are (Solberg, 2009):

- To what extent are the purchase decisions made from recommendations from experts, opinion-leaders and other potential outside-groups?
- What motives do the channels of influence have, and how should one convince them?
- How well is the supplier known with the customer or recommender? And how are decisions influenced by this?

- What magazines & newspapers are read, what fairs are visited, and how big is the influence of each channel?

Implications for WS

How customers evaluate lubricants and cleaners was described in the micro-segmentation in chapter 3. These criteria are the first aspects to take into account when shaping the message to send to potential customers. But one will also need to know more about questions like the ones Solberg mentions, on buying patterns, channels of information, and so on.

When describing channels of information it often gets quite confusing with all the names, and one lose track of who is who. There have already been mentioned quite a few names in the first part of this thesis, it could therefore be beneficial to draw up all names influencing WS in Norway, illustrated in figure 18. How the different objects in this figure influence decisions made by potential customers is explained underneath.

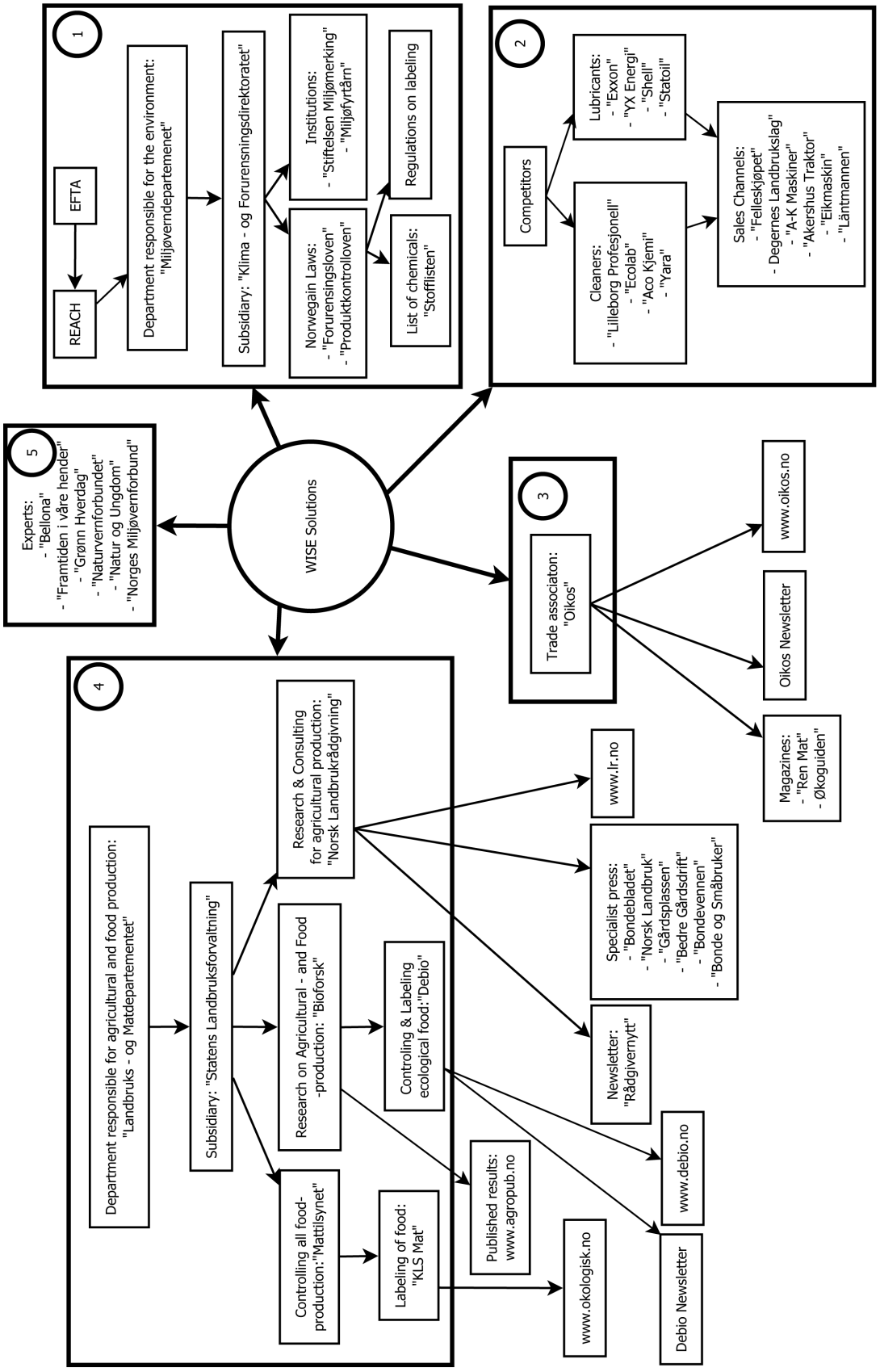

FIGURE 18: WS' SURROUNDINGS IN NORWAY

Frame 1

These are the organizations setting the premises for the institutional based-considerations, described in chapter 4. They do not have any direct influence over purchase decisions made in the target market, but some of these organizations may have a more indirect influence. Through EFTA Norway is obliged to follow the REACH-regulations on chemicals. The department responsible for environmental issues and its subsidiary are setting the premises of competition, based on Norwegian laws and regulations.

When describing how customers evaluate cleaners and lubricants, there was made use of guidance from a web-site called "miljøinnkjøp.no". Sites like this are published with the help of institutions specializing on evaluating products on environmental effects. "Stiftelsen miljømerking" is responsible for "Svanemerket", mentioned as an important product label in chapter 9. WS will therefore have to deal with this institution when applying for this label. The institution called "Miljøfyrtårn" provides environmental labeling for potential customers. Businesses can apply for this label and will then be evaluated on environmental issues, like production-methods, waste-management, purchase of raw materials, et cetera. "Miljøfyrtårn" also helps the company build a plan on how to become even more environmental-friendly. The consultants at "Miljøfyrtårn" could therefore be a group of special interest for WS, considering their potential influence on purchase decisions made by potential customers.

Frame 2

The names in frame 2 were mentioned in chapter 5. These are WS' competitors in the Norwegian market. When it comes to marketing, it will be important for WS to observe what the competitors are doing, how they react to WS' establishment, how they conduct the marketing of their own products, and so on. The sales channels described in chapter 4 are relevant in the same way as direct competitors.

Frame 3

"Oikos" in frame 3 is the first new name. This is a trade association for ecological food production, both farmers and food-processing industry. This organization is working to promote the goals and ideas of ecological production in Norway. The number of members as of 2009 was approximately 2 000 (www.oikos.no). "Oikos" has three channels of information

to WS' target customers. Firstly, their web-site offers news and information. Secondly, they publish a newsletter to the target market. And thirdly, they publish two printed magazines for target customers.

Frame 4

Just like frame 1 described the organizations setting the premises on environmental issues, frame 4 describes the organizations setting the premises on ecological production. They are important for WS, because they contribute to forming potential customer preferences, for example preferences on supply of cleaners and lubricants.

Underneath the department responsible for agricultural and food production and its subsidiary one find three important organizations. The first one is "Mattilsynet", responsible for controlling all food production in Norway. Their subsidiary "KLS Mat" is responsible for the communication to producers and consumers. They publish a web-site called "okologisk.no" which provides information on ecological production.

In order to help boost ecological production "Mattilsynet" has also established a separate subsidiary just dealing with the ecological producers, called "Debio". "Debio" controls production and provides a label as proof of pure ecological products. Their web-site is of course a potential channel to WS' target market, and they also publish a newsletter to the producers of ecological food.

"Bioforsk" was established by the governments to conduct research on agricultural production in Norway. A proof of the qualities of WS' products from this organization will potentially convince potential customers of WS' credibility. "Bioforsk" publish research-results on ecological agricultural production on their web-site called "agropub".

"Norsk Landbruksrådgivning" is another center of agricultural research and consulting services. This organization is an interest group, and not established by the government. However, this organization must also follow the regulations given by "Statens Landbruksforvaltning". A recommendation from "Norsk Landbruksrådgivning" would be proof of quality in the same way as a recommendation from "Bioforsk". The benefits could in fact in be even greater, because "Norsk Landbruksrådgivning" keep close contact with much of the "specialist press", within the agricultural industry. A story in some of these papers,

would be cheap and good advertisement for WS. Other channels of information are their web-site, in addition to a newsletter called “Rådgivernytt”.

Frame 5

Frame 5 consists of interest groups working to promote environmental concern in Norway. The reason for including these groups is that they could be profitable to cooperate with, when it comes to free-advertisement. There is little doubt that these organizations have much credibility, and to able to say your products are recommended over other products, from one or several of these groups could be very profitable, referring to co-branding described in chapter 9.

10.3 CHANNELS OF INFLUENCE

There are a lot of potential channels the SMB may make use of when promoting its products, and these channels are described in various textbooks. However, there are not that many textbooks taking into account that marketing-budget for smaller companies often are strict, and some forms of advertisement can be pretty expensive. This section will therefore not only concentrate on the channels found to be of relevance, but the channels must also be financially possible to make use of for WS.

10.3.1 PERSONAL SALES

In sales of industrial goods, personal sales play a dominant role, whilst advertising is a more secondary instrument (Bakka, 1990). For consumer goods, it tends to be the other way around. Why is this?

> In industrial marketing, each transaction tends to be complex, involve large sums of money and have wide economic consequence. The exchange process tends to be prolonged, covering everything from need clarification to installation and starting up. Personal interaction is needed all the way and personal confidence is, in fact, a vital part of the value created. Under such circumstances, advertising can only do a modest part of the exchange job, building some company image and giving some background information. Also from an economic point of view, advertising would be questionable. The target group is simply too limited to carry high costs of advertising creation and circulation (Bakka, 1990, p.165.)

Personal selling involves interaction between people. Consequently, compared with other parts of the promotion mix, personal selling is more human, flexible, and dynamic (Bernhard, 1986). The salesperson can tailor the communication to fit the prospective customer’s

needs, expressions, and overall behavior. Most consumers are hesitant to change from old, familiar products or ways of doing things. Someone must communicate the advantages and demonstrate the new products before they are accepted. In addition personal sellers can sense the needs and desires of the marketplace and provide their firms with data that eventually can be converted into goods and services.

There are a lot of strategies an agent can make use of in personal sales, in fact it is often necessary to use combinations of several approaches. A key in all personal sales is to find the needs of the customer, what he is looking for and how he evaluates the products. The sales agent must therefore make use of the criteria described in the micro segmentation in chapter 3 on how customers evaluate cleaners and lubricants, and explain how WS' total product offer, described in chapter 9, match these criteria.

10.3.2 MAGALOG

Newsletters, magazines, regular mailings and surveys suggest that a company wants both to give and to receive information, enhance value, and keep its name in front of the public (Marconi, 2000). It goes without saying, that selective media is what the SMB is yearning for, and the more specialized, the better. They enable him to avoid spilling advertising on irrelevant groups and convey his message in a supportive atmosphere (Bakka, 1990). An outcome of this fact is the evolution of the magalog, a combination of a magazine and a catalog (Marconi, 2000). The magalog format allows the sender to present more detailed information about the brand, further setting it apart from its competitors.

The newsletters and magazines offered to target customers, described under information channels in the former section, are good channels WS can make use of for this kind of advertisement. Combining a storyline on environmental concerns with product benefits, will both give awareness of products, give associations to credible products and be a cheap form of marketing.

One can argue that parts of WS' target market, especially some of the farmers and forestry producers, are partly old-fashioned people, not to familiar with using the web to find information. And printed materials in specialist press or magazines will therefore be more effective. However, an argument against this could be that the fact that ecological production is a fairly new concept. And if you had the willingness to change your production

from traditional to ecological, it proves the people are “up to date” and probably keen on following the newest development within in their branch online as well. One finds support for this argument considering the vast amount of information on ecological farming versus traditional farming online.

10.3.3 INDUSTRIAL FAIRS

Many SMBs consider industrial fairs their most important channel of information and influence.

> For many SMB’s the fairs are their main international rendezvous where they for once can feel visible, become part of a pulsating network and get access to the branch’s global grapevine. Clients are courted, products demonstrated, competitors spied upon, distributors pampered, and so on (Bakka, 1990, p.171).

A good place to start for WS is again by using the identified channels of information. The trade associations, research centers and suppliers are, in fact, often co operating on arranging industrial fairs. Additionally, there are some organizations in Norway working to help new established businesses, by for example arranging industrial fairs. The largest organization on this area in Norway is called ”Innovasjon Norge”.

10.3.4 EXPERTS’ STATEMENTS

Expert channels are typically independent persons or institutions that are considered by the SMB’s target groups to possess a special competence (Bakka, 1990). Social channels derive their standing not so much from expertise as from their standing as prestigious members of a society, profession, central positions in business associations or media exposure for some other positive reason (Bakka, 1990). Prestigious reference orders are good examples. Experts may be a direct channel of influence because of the word-of-mouth effect. It is widely accepted that word-of-mouth advertising is perhaps the most effective type of advertising and loyal brand users make excellent endorsers (Marconi, 2000).

When being used as references; the statements have to be brought to target customer through other channels. Labeling on packages is one way of doing this, another way is to include short statements in advertisement materials. Some examples of experts were pointed out earlier in this chapter. WS actually use a lot of statements from experts and prestigious customers in their home-based marketing. It might be obvious, but it should be mentioned, that the Norwegian market does not have the same relations to the same

experts. WS will therefore have to gain connections to new Norwegian experts to present to potential Norwegian customers. It is also important that WS evaluate the potential experts, thinking of the total image being communicated and the importance of the experts when brand personality is formed in customers' minds.

10.4 THE MESSAGE & THE SENDER

Instead of mentioning several standardized elements for how communication should take place, this thesis has chosen to focus on the cultural aspects related to what messages to send. When exporting to a foreign country one will face some extra challenges due to cultural differences. These differences may be an extra barrier one must overcome to convince potential customers that your product offer is the best available.

In 1994 there was done a study in Germany, Holland and Norway on the respective countries' industrial-profiles (Nes 1995). 534 engineers from the three countries gave their impressions of the countries' qualities. There was consensus on the following characteristics on Norway:

Quality - Norwegian products are generally of good quality.

Technology - Norwegian technology and innovation ability are seen as poorer than others.

The environment - The study confirms that Norwegians are concerned about environmental effects. This is seen in politics, consumer attitudes and production routines on plants.

Relations - The study asked for the supplier's ability to deliver products on time, build relations and promote reliability and long term market effort. The score here is good.

First of all this study shows that Norwegian exporters should use an informative communication-strategy, what concerns price and technological level, in addition to emphasize country of origin when it comes to questions on environmental aspects as well as relationships. However, importers of products into Norway may also take some learning from this study. WS may draw the following conclusions: The higher general price-level in Norway, means there may not be the same need for arguments on why WS's products are expensive. Neither should there be large problems when it comes to technological-trust, coming from Silicon Valley, generally seen as more innovative than Norway. However, one may need to be extra convincing on the environmental aspects. Firstly, the environmental

concerns among Norwegians indicate a market potential for WS' products, but it could also mean a larger degree of both competition and demands on proof of arguments.

Roth (1995) has also looked into country of origin effects, more specifically; the effect of different forms of advertisement in different countries. He concluded that functional messages are working best in countries with lower income, whereas emotional messages have better effect in countries with higher income (Solberg, 2009). Norway is among the richest countries in the world, and Roth's study supports the arguments for stressing environmental issues in the marketing.

A third argument for extra marketing effort on environmental issues is found in the sociocultural analyses in chapter 4. It was argued that green labels does not necessary sell itself the same way as in California, because of the more socialistically way of thinking in Norway.

In the eyes of the author; Norwegians are good at building reliable relationships, like the study done by Nes (1995) concluded, and WS should therefore not have problems establishing contacts. However, this will also mean it can be harder to break the already established connections between suppliers and customers. It has already been explained that the personal sales force should be Norwegian. In the same way as this representative will get access to customers more easily than people from the US, it will probably be easier for a local representative to find his way through much of the media just explained as important channels of information to the target market

10.5 SUMMING UP PROMOTION

According to the effect-hierarchy-model, a first goal for WS will be to create awareness of their products' benefits and teach the market of the environmental consequences from use of alternative products. Personal sales, magalogs, industrial fairs and expert's statements are important channels to make use when promoting products. Cultural differences can make promoting challenging. Environmental arguments does not necessary sell itself as in California, and WS has to be prepared to be extra convincing on this issue.

11 HOW SHOULD PRODUCTS BE PRICED?

Price setting is highly complex for management decision-making, even in the home market. General principles can be laid down for margin goals, pricing strategies, and application- or product-level pricing tactics, but the number of variables to be considered remains confusingly high (Bakka, 1990). When the company goes international, pricing becomes even more challenging.

To deal with this situation there has to be made some simplifications. The value of this chapter might therefore be more qualitative than quantitative for WS. The principles discussed and the overall process of how to the make price decisions are what is important. The actual prices this thesis suggests might need revisions, as one gain new insight. Even though inaccurate and difficult to make, estimations on both prices and sales volumes are important. After all, the main question on whether to start operating in Norway or not, will be if there are any potential profit to gain in this market.

Prices must reflect the strategic considerations of the firm. That is why one normally starts a discussion on pricing, by looking at it from a strategic point of view (Fjell, 2008). Market structure, competitor's pricing and price elasticity are examples of issues discussed relating to this. However, strategies are just stating the general principles of how to do it. Some more practical aspects in WS' pricing policy towards Norwegian customers will therefore be considered in later sections.

11.1 STRATEGIC PRICING

The goal of strategic pricing is to see pricing in a larger perspective. A normal procedure is to start by looking at industrial concerns, and thereafter shape a price strategy on the bases of these concerns. Questions like "What is the relevant market?", "What are barriers to entry?", "What is the market structure?" and so on, are important in this context (Fjell, 2008). This section will therefore use the results from analyses in former chapters of this thesis.

11.1.1 MARKET STRUCTURE

Market structure can be divided into four categories; ranging from perfect competition to monopoly, depending on the company's degree of market power. To be able to identify the market structure applicable for WS in Norway, table 11 summarizes the main differences between the four different market structures.

TABLE 11: MARKET STUCTURES

Low market power ⟷ High market power

Perfect competition	Monopolistic competition	Oligopoly	Monopoly
- Large number of buyers - Large number of sellers - No significant barriers to entry/exit - Identical or near-identical products - Perfect factor-mobility - Perfect customer-mobility - Perfect information	- Large number of buyers - Large number of sellers - Product differentiation	- Few sellers - Barriers to entry/exit -Identical or differentiated products - Strategic customer-seller dependency	- One seller - Large barriers to entry/exit

The extreme points, perfect competition and monopoly, are rarely seen in real life, and most markets tend to be one of the middle-categories. Lack of differentiation, not that many sellers and strategic customer-dependency, all described in the industrial analyses in chapter 5, are reasons for describing WS' target markets in Norway as markets with the characterizations of an oligopoly. For the development of a pricing policy, this means one can expect WS to be able to price their products well above marginal costs.

11.1.2 COMPETITORS' PRICING

In setting price, a firm must consider the characteristics and behavior of its competitors. Exact cost-data in the market are not possible to obtain. But it will be reasonable to assume the competitors to have cost-advantages, due to economies of scale and less transportation costs.

Competitors' exact prices are also difficult to find, due to individual agreements between suppliers and customers. Some predictions can, however, be done based on the industrial analyses in chapter 5. When analyzing the rivalry among firms, the product-markets were described as fairly concentrated. This could be because of the lack of growth in customer-markets. In this scenario, products are fairly standardized or even commoditized, something that adds to the rivalry.

For cleaners; high strategic stakes was described as a potential additional factor, having a similar effect. However, WS' cleaners are specialized for higher risk applications such as where contamination of products being manufactured, as in food and beverage-processing, or contact with sensitive environments – ranging from agricultural land, water supplies or enclosed workplaces. These applications usually require special regulatory approvals and restriction of ingredients to those known to be safe. This may differentiate the brand, act as somewhat of a barrier to competition, and strengthen the product's oligopoly status in the market.

Although prices not are public, competitors will probably follow each other's movements closely. For industrial products it is not uncommon for the customers to gather information from several suppliers, and perhaps invite to smaller "price-wars" in bidding-rounds. However, prices are not expected to be pressed as far down as to marginal costs. This is first of all due to information not being easy available, as described in chapter 5.

11.1.3 PRICE ELASTICITY BY APPLICATION

None of the competitors were eager to share information on pricing. Information on prices, therefore, had to be found through other channels. The sales channels used to serve the agricultural market were an alternative. The hope was that it could be easier

for them to share information on prices and demand, because they sell a large assortment of goods and this specific information is probably therefore not that sensible to them. “Felleskjøpet”, the largest sales channel to the agricultural market, was so kind to share some information on both cleaners and lubricants.

As earlier mentioned, “Felleskjøpet” sells a wide variety of products. The first challenge was therefore to find close substitutes within both cleaners and lubricants, to see how much demand and price varied between these products. For cleaners, products within cleaning of milking systems by two different suppliers were found to be pretty close substitutes. One alkaline product and one acidic product from both suppliers were compared to each other. Another challenge was the fact that products are sold in different amounts and the mix-ratio is different, price per liter of finished mixture and total yearly sales volumes of the respective products, were therefore used as variables in the analyses.

For lubricants, there was not found products from different suppliers. But two different categories of products, each with two products that could be possible substitutes, were found. The difference within the products of each category is the price and the expected quality. All lubricant-products were sold in the amounts of 10 liters - the price presented for lubricants are therefore the price per liter when sold in amounts of 10 liters. All results are presented in figure 19. The data for these calculations are found in the appendix section 8.

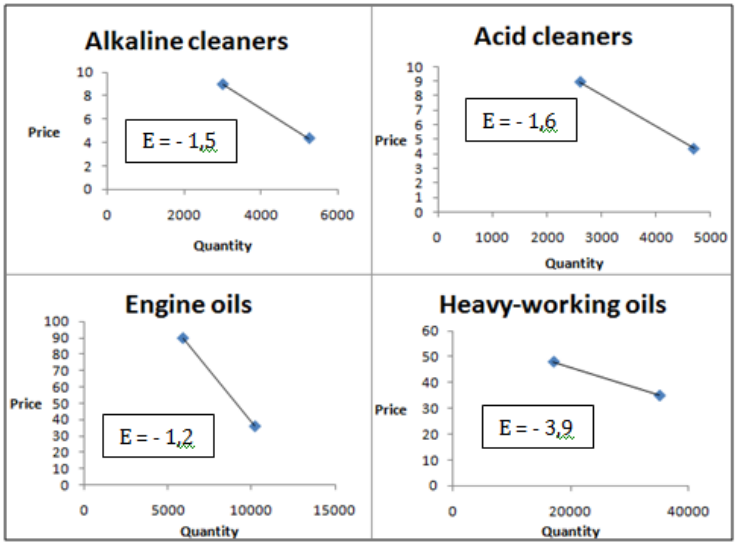

FIGURE 19: PRICE ELASTICITY

The price elasticity of demand is defined as the percentage change in quantity demanded relative to the percentage change made in price (Bernhard, 1986). In situations where total revenue generated after a price decrease is smaller than original total revenue, the product is said to be price inelastic. This is reflected in a calculated elasticity of demand of less than one, and is typically portrayed by a demand curve that is close to vertical.

It would be dangerous to draw too dogmatic conclusions based on the findings here. Sales could very well be affected by other factors, like for example differences in perceived quality or safety, differences in marketing effort, differences in sales promotion, et cetera. The largest difference is of course found regarding the products sold. WS' cleaning technology, for example, is neither caustic alkaline nor acidic; it works using a different paradigm. "Colloidal green chemistry" breaks down organic substances at the molecular level at room temperature. This makes pricing comparisons even more complex, as the true value of such an approach goes beyond the cost of the product and includes worker safety – no risk of burns or toxic side-effects and protective equipment is no longer needed - storage and disposal hazards, energy savings from cleaning at lower temperatures, and so on. Direct product pricing comparisons are therefore misleading. The true operational cost of cleaning includes these environmental, risk abatement, and resource efficiency benefits.

With that being said, based on the findings in this section, one may at least say that both the market for cleaners of milking systems and the market for general lubricants seem to be elastic. In other words; customers evaluate price as important when making purchase decisions.

11.2 PRICE STRATEGY

The normal procedure is to design a price strategy based on the issues analyzed so far. However, when dealing with export pricing, one will also have to take pricing strategy in the home-country into account, making sure not to undercut prices in foreign markets, and thus steal customers the headquarter could serve directly themselves. Further down is a description on the pricing strategy WS has followed in the US; you will see that this strategy is closest to what in theory is called a skimming strategy. Table 12 presents the main differences between this kind of price strategy and the other most common price strategies (Fjell, 2008).

TABLE 12: PRICE STRATEGIES

High price ◄——————————————————————► Low price

Skimming	Market pricing	Penetration pricing
- High price relative to the economic value for the customers - Used when it is most valuable to serve the "upper" customer-segment than the mass-market - Customers have low price-sensitivity - Customers value special product-characteristics - Profitable if variable costs are large, and if a small price increase will make a large difference in contribution margin - Often used in markets where one can avoid competition - Vulnerable to aggressive local competition - Requires competitive advantages	- Choose a price-level eliminating price as a criteria when customers chooses products - Requires thorough knowledge of product costs and markets	- Low price relative to the economic value for the customers - Used to take advantage of high market shares or low marketing costs for price-sensitive customers - Customers are in general price-sensitive - Profitable if economies of scale in production - Have to have competitive advantages, making it impossible for competitors to "out-price" you - Could work if large customers do not bother squeeze small competitors - Profitable if important to quickly achieve economies of scale

Here is what Daniel Robin, VP of Business Development, said about WS' price strategy when discussing pricing with the author of this thesis:

> Margins will be a key consideration, and the market prices of products vs. our costs, including import to your territory and any tariffs or taxes, will be an interesting reality check. With REACH, we believe these chemicals have a premium price that the market will bear (Robin, 2010).

Mr. Robin gives several reasons for this:

- First of all consumers expect green solutions to cost a bit more. This expectation is across all sectors. What varies is the sensitivity to price premiums. Some

sectors, such as organic food and other commodities typically charges up to 30 percent more.

- Business to business and industrial pricing is generally more price sensitive, meaning less willingness to pay a premium. But to not charge a premium for a green product that truly performs and delivers clear environmental and social safety advantages, would amount to "leaving money on the table".

In the US WS normally charges at least 40-50 percent markup depending on the product/line, package size, sales-channel and customer expectations.

Product

WS' margin expectations depend in part on the product itself and how much work, labor and materials, is involved in delivering that product. For example, for biolubricants packaged in industrial sizes, in the US typically 5 gallons and above, one simply processes the order, add the WS label, arrange shipment methods and payment and send it on. With the colloidal products, however, one typically formulates or blends from one or more concentrates. This is more work, and more value add via careful quality assurance, et cetera, and depending on the amount of dilution from blender's concentrate, could potentially earn WS higher margins.

Package size

In both scenarios above, when one package in smaller sizes, such as pints, quarts, or gallons, it takes more work and thus can again expect higher margins. To date, WS has sold very few products in the smaller package sizes, deliberately avoiding selling at retail to individual consumers due to the logistical challenges of smaller package sizes and appropriate labeling. Instead their "food / water / agricultural" focus has been on larger industrial customers that will buy in bulk sizes.

Channel

It is important for WS to avoid channel conflict, so the Norwegian division wants to be careful not to undercut any distribution partners that US headquarters could also serve directly.

Customers' expectations

Most importantly; what is the customer's ability to pay and expect price point? Above all else, WS tends to be pragmatic – basing the pricing on what the competition might charge plus an incremental premium to reflect the value add of "being WISE". To stimulate trial and win the initial order, WS will often discount down from the list price by 10-15 percent depending on the size of the order and size of the customer- that is, the future potential of the account. In other words, with all these variables, margins can vary widely.

11.2.1 BASE PRICE

Underneath are approximations on base prices for WS' products. WS sells a wide variety of products and will therefore face different cost structures. However, the figures underneath are a mean of the costs structure for the lubricants and cleaners. As already mentioned deviations from the base price are common, after justifying the assumptions underneath table 13, there is therefore a section on discount pricing.

TABLE 13: PRICE CALCULATIONS

Product	**Lubricants (NOK per liter)**	**Cleaners (NOK per liter)**
Production costs	10	15
Transportation costs (inclusive all documentation, insurance, et cetera.)	1.5	1.5
Government dues Norway	1.8	1.0
Storage Norway	0.5	0.5
Tax US	0	0
Total variable cost per liter	**13.8**	**18**
Total fixed cost per liter (2.5 + 7.5)	**10**	**10**
Total cost per liter	**23.8**	**28**
Margin	100%	100%
Price before tax and sales commission	**47.6**	**56**
Sales commission (10%)	4.76	5.6
Price before value added tax	**52.36**	**61.6**
Value added tax (25%)	13.09	15.4
Price including value added tax	**65.45**	**77**

Production costs – Production costs vary depending on product and packaging, like explained in the former section. With the help of Mr. Ridenour, this was estimated to NOK 10 per liter

produced for lubricants and NOK 15 for the cleaners. The difference is due to the more processing work for cleaners.

Transportation costs - Like described in chapter 8, there are several ways of arranging transportation of products into Norway. In the start of a new operation, there is much uncertainty regarding sales volumes. The most common arrangement under such circumstances is shipping ad-hoc bulk portions. Prices for this sort of transportation have therefore been used in the calculations done in this thesis. Several elements, like for example clearance charges, postage charges, disposal fees, harbor dues and other export charges, are often added to the transportation costs itself. "JetCarrier" is a company specializing in transportation between Norway and the US, and their pricing policy makes the estimation on transportation costs somewhat easier because they offer prices that include all these charges. Freight by sea in quantities over 3 000 liters, will be the cheapest, costing NOK 1.50 per liter.

Government dues – Like explained in chapter 4 on Norwegian customs, the Norwegian authorities charges NOK 1.80 per liter imported of lubricants. Some cleaners are also charged extra, the charge will vary depending on the products and ingredients. NOK 1.00 per liter is used as an approximation in this thesis.

Storage costs – In order to be able to ship in larger quantities, which is cheaper, and in order for WS not to have too long delivery time on their products, WS will need some sort of central storage in Norway. McKinsey&Company (2007) presents some approximations on leasing costs. Assuming you can store 1 000 liters on one square meter, industrial storage cost will be approximately NOK 0.5 per liter.

US-tax – In addition to paying sales taxes to Norwegian authorities, something that will be more thoroughly discussed when forecasting potential profits, exporters must sometimes pay taxes to the home-base. Double-taxation, like this, is in fact one of the main reasons for trade co operations, like explained in the institutional based analyses in chapter 4. However, the state of California does not charge taxes for goods sold outside of the state, even though products are exported from the state (Robin, 2010).

Other fixed costs - It will also be natural to include other costs like R&D, management compensation, depreciation costs, and financial costs in the price calculations. These costs will typically be fixed seen in shorter length of time. If these costs are not included in a price calculation, one risks not charging enough for ones products to cover all costs on a long term basis. Being fixed, the cost per liter will naturally depend on sales volume. However, the largest volumes will be sold to the US markets, which means calculations becomes less sensible for sales volumes sold in the Norwegian market. With the help of Mr. Ridenour NOK 2.5 per liter produced was set as an approximation to cover fixed costs in the US for both products.

Among the reasons for recommending direct export through an agent was the fact that this arrangement would need lesser investments. Some fixed investments in Norway are, however, needed. The greatest, and probably most important, is salary for the Norwegian agent. Finding a good agent might demand a fixed base salary in addition to a sales commission. By paying well; WS could also be able to outsource some of the traditional management jobs to the agent, like for example to hire bookkeepers and managing advertisement. WS will depend on the local agent to do much of the marketing, described in chapter 10 on promotion of products. Marketing costs will also be included in fixed expenses in Norway. NOK 7.5 per liter was used as an approximation for total fixed costs Norway. It should be mentioned that because of the lesser sales volumes in the Norwegian market, this assumption is much more sensitive to changes in sales volumes than the assumption for fixed costs US. Total coverage for fixed costs will be NOK 10 per liter produced for both products.

Margin – In the US the margin is generally around 50 percent (Ridenour, 2010). Margins on cleaners and lubricants in Norway tends to be somewhat higher, from 70-100 percent (Lund, 2010). Taking into account the strategy of selling a higher quality products, which generally are higher priced, and the higher risks of entering a new market, a marign of 100 percent was chosen when calculating base price.

Sales commission – According to Hollensen (2007) agent commissions are typically in the range five to ten percent of sales. The importance of a good agent who can break

established supplier-customers relations have been stressed through-out this thesis, and a commission of ten percent of sales are therefore used.

Value added tax – The general value added tax in Norway is 25 percent, as described in chapter 4.

11.2.2 DISCOUNT PRICING

Quantum discounts, bonus benefits and price discounts are often used to give potential buyers an extra incentive to make the buy. This could be of extra importance in an introduction phase, because customers will perceive extra risk by not knowing the products and therefore might have a lower willingness to pay. Quantum discounts can also be given if larger quantities give the seller benefits, like for example less transportation costs.

A common question when it comes to price– and product-differentiation is if each product should be priced separately or as part of a product line. The latter is often used when one wish to promote certain products as "flagships". These products can then be allowed to be under-priced because they bring PR to the whole product line (Solberg, 2009). On the other hand individual pricing may give more flexibility, something that could benefit local sales representatives when meeting potential customers for example. Flexibility in pricing can also make it easier to respond to competitors' price changes.

Mr. Robin, VP of business development, informed that a common practice in the US has been to lead the market introduction with the cleaners. Experience has proven that it seems to be easier to enter in this market versus in the lubricant-market. One cannot direct conclude that this would be the situation in Norwegian market as well. However, there is no reason not to suspect the same pattern. The crucial question when potentially giving discounts on this "flagship" will be how much of other products an order on cleaners brings in. WS has experienced customers to look into other products as well after their first purchase of cleaners, and have therefore been able to offer discounts on the cleaners. However, this will be dangerous if customers decide to just stick with the cleaners and not make purchases of other products as well.

When dealing with discount pricing it is crucial that the company are well aware of the total effects of price changes. Questions on price elasticity of demand, how a price change will

influence total profits, how competitors will react to price changes, et cetera, is therefore crucial to know.

11.3 SUMMING UP PRICING

WS will most likely compete in markets with the characterizations of an oligopoly, which means WS can expect to be able to price their products well above marginal costs. Base prices of NOK 65.5 and NOK 77 per liter of lubricants and cleaners respectively are proposed. Price-negotiations are common, and quantum discounts, bonus benefits and price discounts are often seen in both industries. The suggested prices are therefore likely to vary in real life.

12 WHAT WILL PROFITS BE?

Up until now the focus has been on developing strategic perspectives. These perspectives will now be translated into financial forecasts for WS' operation in Norway. The first section will present some theory on how to do this "translation", whereas the following sections will make use of the theory.

12.1 CREATION OF VALUE FOR OWNERS

There exist several models, concepts, and analyzing-methods within strategic literature. However, a lot of the literature tends to be conceptual and abstract, something that can make it difficult to make use of in a practical case. This is often due to a missing link from strategy to business economics. Helgesen (1997) gathers available methods from both subjects, and discuss how to include elements from business economics in traditional strategic thinking, thereby building a bridge between the two subject areas. This thesis will make use of some of the concepts described by Helgesen (1997). However, it is worth mentioning that he make use of theory presented by other contributors as well. Among the most referenced contributors in his report are Alfred Rappaport (1979, 1981, 1986, 1987 and 1992) and Tom Copeland, Tim Coller and Jack Murrin (1996).

12.1.1 STRATEGY AND VALUE CREATION

The strategic decisions are divided into three main categories: Operational-, financing- and investment- activities (Helgesen, 1997). Operational activities are the activities that enter into a value chain, financing activities describe how the company finds the money to finance its operation, whereas investments are purchases and sales of assets that are not a direct part of the product's value chain.

Different strategies will create different estimates of generic value-drivers within these three categories (Ellis & Williams, 1993). Examples of such value drivers are: Length of growth, growth in sales, margin, taxes, growth net working capital, growth net fixed investments, and cost of capital. These value-drivers are what in turn lead to different estimates on the value of a business. Figure 20 illustrates how a strategy will influence the value drivers which again influence the valuation of the business (Ellis & Williams, 1993).

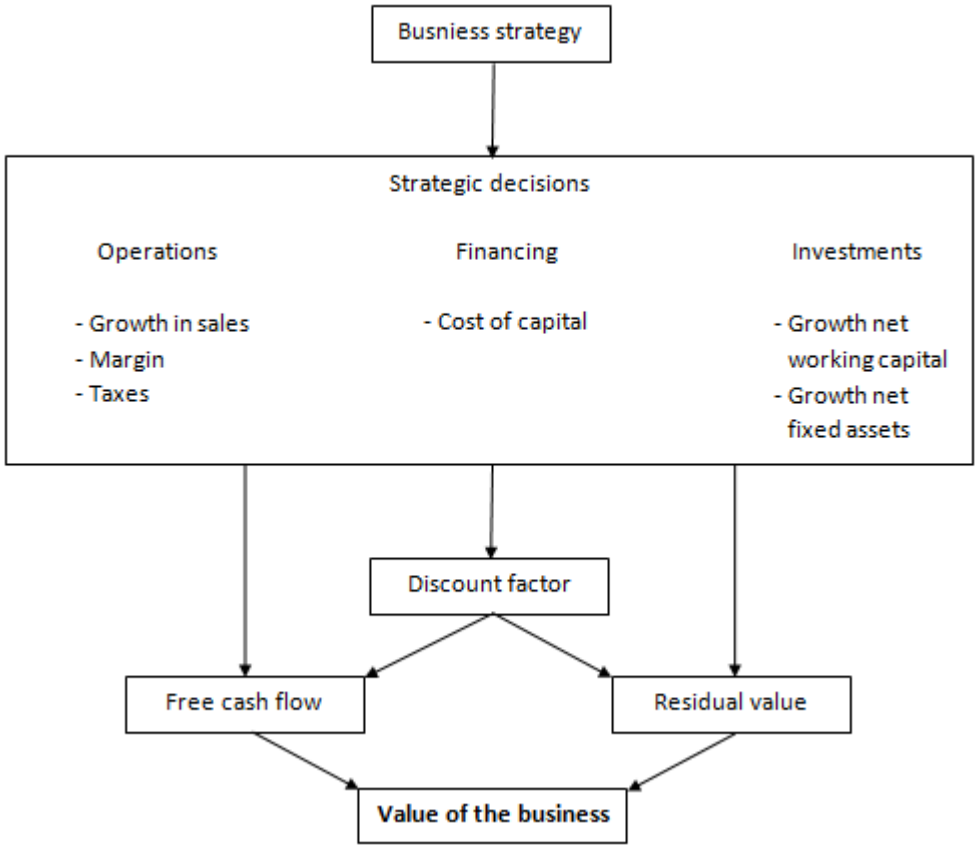

FIGURE 20: STRATEGIC DECISIONS' INFLUENCE ON THE VALUE OF A BUSINESS

The first components when evaluating the value of a company will be the money generated from operational-, financing- and investments- activities, together with the length of the value creating period, all influencing the free cash flow and the residual value. The other component will be a discount rate based on an estimate of the cost of capital. A value generating strategy is a strategy that generates free cash flows beyond the cost of capital (Shapiro, 1985).

12.1.2 HOW TO MEASURE THE VALUE

The statement of cash flows is by many considered the most important tool for new establishments (McKinsey&Company, 2007). It shows the entrepreneur and the investor how liquidity is used and what liquidity that are tied up in the business over a certain period. In this way the cash flow becomes a measurement on how much money the business generates compared to its expenses. The cash flow can be calculated *directly* from the

company's incomes and expenses, or *indirectly* by looking at changes in the balance sheet and the income statement. For new establishments a period of negative cash flows are often common, due to expenses to production, transportation, labor, et cetera. Even though high profits in the end are calculated, the company might have to find money to cover initial expenses before payments are received. Cash flow statements are normally presented in three parts; operational activities, investment activities and financial activities. The two latter parts will mainly be used by the US headquarters, whereas the most important part for the Norwegian operation will be the cash flow from operational activities.

The free cash flow method uses the estimated cash flows as a base, and discounts these figures by a discount rate. The free cash flow is found as net capital investments and net working capital subtracted from the cash generated from operations (Copeland & al., 1996). A normal procedure is to develop an explicit forecast for a number of years, followed by a simplified formulaic approach to valuing the remaining life of the company (McKinsey&Company, 2000). All continuing value approaches are based on an assumption of steady state performance. The explicit forecast period must be long enough so that the company has reached a steady state by the end of this period. McKinsey&Company (2007) defines the steady state as follows:

- the company earns a constant rate of return on all new capital invested during the continuing value period
- the company earns a constant return on its base level of invested capital
- the company grows at a constant rate and reinvests a constant proportion of its operating profits in the business each year

Using a short forecast period will typically result in the significant under-evaluation of a company or require heroic long-term growth assumptions in the continuing value. But a long forecast period raises its own issues. Forecasting is predicting the future, which most of us cannot do, especially not 10 to 15 years removed. In this thesis it was therefore chosen to focus on the first five years of operation and using an extra ten years when calculating the residual value.

12.2 GENERIC VALUE DRIVERS FOR WS IN NORWAY

> The financial figures do not have to be accurate, given the fact that prognoses always will be uncertain, especially when it comes to new establishments. Professional investors will base their evaluations on a few, but well supported key figures (McKinsey&Company, 2007).

It will, however, be important to know what assumptions these key figures are based on. Especially when dealing with a new establishment, and its uncertainty and approximations.

Direct export through an agent is the entry mode recommended in this thesis. The agent can be seen as a consultant hired by WS for a fixed cost of NOK 300 000 plus a sales commission of ten percent. The agent himself will be responsible for following taxation-, labor-, and all other rules and regulations on services provided by agents in Norway.

A Norwegian division has to be established as an intermediary between customers and the US headquarters to ease issues such as communication, regulations, currency-differences, et cetera. It will, for example, be natural to expect Norwegian customers to want to pay to a Norwegian account and it will be easier for WS to pay for services in Norway with Norwegian Kroner instead of US Dollars. Managing the Norwegian accounts from the US headquarters can be difficult, and it is therefore recommended to give the Norwegian agent the responsibility of controlling the Norwegian accounts on behalf of WS.

In principle WS will benefit from an arrangement where all expenses are paid for by US headquarters and all income is transferred back to US headquarters. This means the Norwegian division will have a profit of zero, and not be liable to pay taxes on income to Norwegian authorities. Although profits are zero in the end, the Norwegian division will have need for working capital and some fixed investments. Distribution of profit between Norway and US will, however, raise some questions regarding regulations of internal prices and taxation. This issue and the other assumptions behind the other value drivers, found in the top box of figure 20, are described underneath.

12.2.1 SALES FORECASTS AND GROWTH

In the customer-segmentation in chapter 3 the product-markets of interest were identified to be within the agricultural- and food-processing markets. Potential sales volumes were described in table 2 and table 3. However, in the micro-segmentation it was described how

the products probably will be of more interest for some customers than others. Ecological producers were described as potential target customers.

Table 14 and 15 present the sizes of product-markets for solely target customers. Section 9 in the appendix explains how calculations were done. As the tables show; total yearly sales potential is estimated to be about 950 thousand liters lubricants and 70 thousand liters cleaners concentrate to agricultural customers, and about 80 thousand liters lubricants and 560 liters cleaners concentrate to food-processing customers. This means a total sale of about 1 million liters lubricants and 600 thousand liters cleaners concentrate.

TABLE 14: PRODUCT-MARKETS TARGET CUSTOMERS WITHIN AGRICULTURAL INDUSTRY

	Engine oil	**Combi oil**	**Hydraulic fluids**	**Gear oil**	**Grease**	**Heavy duty cleaners**	**Cleaners for barns & pens**	**Cleaners for milking systems**
Yearly potential sales volume product-markets (1 000 liters)	165	741	13	4	33	43	2	26
Yearly sales volumes industries (1 000 liters)	956					71		

TABLE 15: PRODUCT-MARKETS TARGET CUSTOMERS WITHIN FOOD-PROCESSING INDUSTRY

	Engine oil	**Hydraulic fluids**	**Grease**	**Surface cleaners**	**Tank & Pipe cleaners**
Yearly potential sales volume product markets (1 000 liters)	11	55	14	298	259
Yearly sales volumes industries (1 000 liters)	80			557	

Market shares

One also has to take into account that WS probably not will be able to capture the whole sales potential to target customers themselves. The question remaining is then what market share is realistic for WS within the identified sales potential.

Again, one will have to use one's own assessment and make some assumptions. The first thought was to look at what market share WS have been able to capture in the US. But the problem when using this kind of a method, are all the differences between the Norwegian and the US market. The company will face totally different competitors and there are probably differences in customer attitudes as well, like the sociocultural issues discussed in chapter 4.

It could be interesting to compare potentials with sales statistics from other smaller companies within the same branches. As explained in the industry analyses in chapter 4, both markets are characterized by a few large suppliers. However, there are some smaller ones also. When it comes to cleaners a comparison is made difficult, because most of these smaller companies sell many other products in addition to cleaners, and financial information on just the cleaning part of sales is therefore not available. But within the lubricant market, potentially better benchmark partners were found. Table 16 presents the sales of a company called "ProNor" and a company called "Fuchs" in the Norwegian market, found by using "Visma Bizweb". "ProNor" specializes in environmental friendly lubricants and was established in 1998 (www.pronor.no). "Fuchs" was also established in 1998 in Norway, but originally established in Germany in 1931 (www.fuchs.no). Fuchs sells different varieties of lubricants, including some more environmental friendly ones.

TABLE 16: SALES COMPETITORS

Year / Company	2008	2007	2006	2005
ProNor	2 086 000	1 057 000	1 410 000	941 000
Fuchs	4 464 000	4 304 000	4 395 000	3202 000

Like explained in chapter 8 on pricing, there are differences when it comes to prices. Both "ProNor" and "Fuchs" are focusing on quality in their marketing and quality lubricants

normally charge premium prices. In fact high quality lubricants are often charged as much as NOK 60-70 per liter (Lund, 2010).

The mean sales over the four years for the two companies together, are approximately NOK 3 million. If assuming a price of NOK 60 per liter, sales volume will be about 50 000 liters. 50 000 liters of the sales potential means a market share of about five percent.

There will of course be many potential sources for errors by using this sort of calculations. First of all products are different and have different qualities. The sales potential facing the benchmarking companies is probably different than the sales potential calculated for WS. There are differences in marketing efforts. And many, many more factors to take into account. However, such simple calculations may be used to make approximations.

To start with, a sales potential of 2.5 percent were therefore chosen as a reasonable goal for WS in the Norwegian market. 2.5 percent of calculated sales potential leads to a sales forecast of 25 000 liters lubricants and 15 000 liters cleaners concentrate in the Norwegian market for the first year of operation.

Growth

There is reason to expect growth in sales as the company finds foothold in the market. Experience, contacts, word of mouth effects, et cetera, will hopefully make marketing effort easier along the way. Looking at the benchmark partners again, they have both experienced growth over the last years. The mean growth for the two of them together has been about 25 percent over the four years. Again, one has to cram the risk of drawing conclusions on the basis of this information. The length of time presented, 4 years, is a bit short. There may also be other factors influencing the sales like for example differences in prices, marketing efforts, state of the economy in general, and so on.

A market share of 7.5 percent after five years of operation could be a realistic goal for WS. This means a yearly growth of 12 500 liters lubricants and 7 500 liters of cleaners. Such a goal is a pretty bold goal, and presupposes among other things: finding the right sales agent, use of the right marketing tools and a steady general economy.

12.2.2 MARGIN

When calculating base price a margin of 100 percent was used. This is certainly one element WS is able to adjust and the effects of this will be analyzed later on in this thesis.

12.2.3 TAX

Foreign persons or companies operating in Norway are liable to pay taxes on profits from their Norwegian operation to Norwegian authorities, according to a principle called "kildeprinsippet" in Norwegian rules on taxation. This is explained as just because the income is in strong conjunction with the country, even though the person or the company is not (www.regjeringen.no).

However, in studies of internal prices and international profit distribution it is assumed that companies allocate profits to the country who are charging lowest taxes, by adjusting the prices on internal deliveries of goods and services across country-borders (Berntsen, 2008).

According to OECD (Organisation for Economic Co-operation and Development), where both Norway and the US are members, should international companies follow the arm's length principle when it comes to internal prices in order to maintain fair international taxation and avoid double taxation (www.oecd.org). OECD explains this principle the following way:

> Where
> a) an enterprise of a Contracting State participates directly or indirectly in the management, control or capital of an enterprise of the other Contracting State, or
> b) the same persons participate directly or indirectly in the management, control or capital of an enterprise of a Contracting State and an enterprise of the other Contracting State,
>
> and in either case conditions are made or imposed between the two enterprises in their commercial or financial relations which differ from those which would be made between independent enterprises, then any profits which would, but for those conditions, have accrued to one of the enterprises, but, by reason of those conditions, have not so accrued, may be included in the profits of that enterprise and taxed accordingly. (OECD's articles of the model convention with respect to taxes on income and on capital, article 9.1)

With increasing mobility of capital and increasing international focus on internal prices, several countries, including Norway, have established new guidelines on increased demands on documentation on how internal prices are calculated. There are different methods to make use of when controlling if transactions are within the arm's length principle. Some of

the most common methods are explained in OECD 95 and in the American Tax Reform Act from 1986 (Bjerke, 1997). A general technique is to compare internal prices with what prices from external suppliers would have been, in addition to include elements like what the resale price is, what costs are added, what value is added, how profits are divided, et cetera (Berntsen, 2008).

As the empirical evidence points to; WS will probably be able to justify an internal price which is close to eliminating profits in the Norwegian division. Comparison with external prices is made difficult because of the different product qualities, emphasized earlier in this thesis. Although WS might not succeed in a complete elimination of profits in the Norwegian division in a real life scenario, this was used as an assumption to keep it simple in this thesis.

12.2.4 COST OF CAPITAL

Both creditors and shareholders expect to be compensated for the opportunity cost of investing their funds in one particular business instead of others with equivalent risk.
A certain rate for the cost of capital is therefore needed for calculating key figures. The cost of capital will of course depend on the ability to find and the cost of raising capital. Additional issues that may create differences when it comes to the expectations on return on investment are (McKinsey&Company, 2000): Size and type of risk, size of investment, juridical aspects, especially tax issues, time perspective, the investor's influence over the business, et cetera.

Demands on return will vary for different investors. But generally it is not uncommon that demands are higher for venture capital, because of the extra risk (McKinsey&Company, 2007). Secondly, the cost of capital will vary depending on the branch of operation. The industrial analyses are of help in this matter. Both the market for lubricants and the market for cleaners were described as pretty established markets, and there is no reason to expect additional costs for the risk of operating within these branches. Normal rates for costs of capital tend to average from 10 – 15 percent (McKinsey&Company, 2000). A cost of capital of 15 percent therefore seems reasonable, taking into account the risk from being a new establishment.

12.2.5 GROWTH NET WORKING CAPITAL

Inventory

Shipping from US to Norway takes time and WS must be prepared to hold inventory to reduce waiting time for delivery of their products. It is assumed that the Norwegian division must be prepared to have ten percent excess inventory at any time.

The value of this inventory will be the cost of bringing the products to the storage facility in Norway. Looking at table 13 on prices and costs, this means variable costs of NOK 13.8 and the fixed costs US of NOK 2.5 are included, whereas sales commission and fixed expenses in Norway not are included.

As sales volumes grow inventory will increase accordingly, until the sales volumes flatten out in year five, given correct sales forecasts. In real life, inventory volumes will probably be adjusted according to sales volumes throughout the year. This was simplified and adjustments assumed to be done at the start of the year for all years.

Accounts receivable

Neither will it be reasonable to expect to receive payment immediately after receiving customer orders. Bills are normally due 30 days after orders are received for goods like cleaners and lubricants (Lund, 2010). With one month delayed payment, it means 1/12 of the yearly sales will not be received at any time.

Debt VAT

As chapter 4 explained; WS must pay value added tax when products are imported to Norway, but the charge is refunded when charging the same tax from customers. The implication for WS is that they might have need for liquidity to pay this tax before payment is received from customers. WS must also keep both paid and received value added tax on separate accounts in their books, according to Norwegian accounting regulations.

WS has to hold on to value added tax for one month and ten days before it is paid to the Norwegian authorities. Because customers have a credit time of one month, it means WS will have a debt of ten days of value added tax at any time. This assumes that goods are not kept in storage more than one month and ten day, if so WS would have to pay value added tax before receiving it from customers.

Other

WS might have to face extra time and perhaps some costs transferring money from their Norwegian accounts to their US balances. To keep it simple it was chosen not to include this in the estimates done in this thesis.

12.2.6 GROWTH NET FIXED INVESTMENTS

Because the focus in this thesis is on cash flow and calculations of net present value, expenses for fixed investments are treated as cash pay-outs. NOK 800 000 was used as an assumption for total fixed investments in Norway. NOK 300 000 of this is budgeted as salary to the agent, in addition to his sales commission. The rest is to cover other fixed expenses, like for example: Marketing, attendance to fairs, transport, insurance, bookkeepers, et cetera.

A reasonable assumption would be that these costs increase as sales volumes increase. But some economies of scale could also be expected, hence, the growth in costs will probably decrease as volumes increase. A yearly 15 percent increase from start year cost for the first three years of operation and thereafter ten percent increase were the assumptions taken here.

Note that first year's sales volumes were estimated to be 25 000 and 15 000 liters, and with a ratio of NOK 7.5 per liter in the base price calculations, only NOK 300 000 of fixed expenses will be covered. This gap will, however, decrease as sales volumes increases, assuming the increase in sales volumes are larger than the increase in fixed costs. The margin of 100 percent will also be more than sufficient to cover any gaps for the first years of operation.

Additionally; the Norwegian operation will need money to cover the first shipment of inventory. From year two on; cash from operations is sufficient to cover increase in inventory, assuming the forecasts are correct.

It could be argued that WS should increase the invested equity to have excess cash to cover unforeseen expenses. It was, however, chosen to stick with the minimum demands on investments, in order to keep the decision-foundation on a potential Norwegian entry as clean as possible.

12.2.7 TIME PERSPECTIVE

Section 12.1.1 described how operational-, financing- and investments- activities, together with the length of the value creating period are all influencing the free cash flow.

In the sales forecast; sales were expected to grow until year five. For the residual value year five figures are used, but one has to add the change in inventory in year five because there will be no further increase in sales volumes from this year on.

Some years into the future one will have to expect the market to have changed so much, there is probably need for new analyses. McKinsey&Company (2007) recommends using a forecasting period up to ten to 15 years for most companies. The residual value presented in this thesis is therefore the value of operating in Norway from year six to year 15.

12.3 POTENTIAL PROFIT OF EXPORT TO NORWAY

Free cash flow is presented in table 17. All figures are in NOK. Details on calculations are presented in the appendix section 10.

Future cash flow is discounted by the cost of capital each year. Note that elements within the same accounting year are discounted differently depending on whether the transaction finds place at the start or the end of the year.

As table 18 shows, the estimations done in this thesis projects a net present value of NOK 6.7 million, or $ 1 100 with an exchange rate of NOK 6 per $ 1 US dollar, for the first 15 years of operation. This NPV presuppose an investment of NOK 871 000 when establishing the business. Thereafter the Norwegian division finances itself, assuming estimations and forecasts are correct.

TABLE 17: CASH FLOW STATEMENT

Period	Start year 1	End year 1	Start year 2	End year 2	Start year 3	End year 3	Start year 4	End year 4	Start year 5	End year 5
Contribution margin	0	1 315 000	0	1 942 050	0	2 589 400	0	3 236 750	0	3 884 100
Change inventory excl. VAT	71 500	0	35 750	0	35 750	0	35 750	0	35 750	0
Change accounts rec. excl. VAT	0	186 083	0	93 042	0	279 125	0	186 083	0	372 167
Fixed expenses Norway	800 000	0	920 000	0	1 040 000	0	1 120 000	0	1 200 000	0
Change debt VAT	0	15 352	0	7 676	0	7 676	0	7 676	0	7 676
Total cash flow	**-871 500**	**1 144 269**	**-955 750**	**1 856 684**	**-1 075 750**	**2 317 951**	**-1 155 750**	**3 058 343**	**-1 235 750**	**3 519 609**

TABLE 18: NET PRESENT VALUE

Period	Start year 1	End year 1	Start year 2	End year 2	Start year 3	End year 3	Start year 4	End year 4	Start year 5	End year 5
NPV	-871 500	995 016	-831 087	1 403 920	-813 422	1 646 443	-759 924	1 801 814	-706 544	1 888 642
Total NPV per year	123 516		572 833		833 022		1 041 890		1 182 098	
Total NPV five first years	3 753 359									
Residual value	3 038 793									
Total NPV 15 first years	**6 792 152**									

Complete calculations on income statements and balance sheets are presented in section 11 in the appendix.

13 RISKS AND CONCLUSION

Chapter 12 translated the strategic perspectives analyzed and discussed in this thesis into a financial forecast. The decision on whether or not to actually start export to Norway cannot be based just on this forecast. Although the assumptions behind the financial forecast have been presented, the decision-makers will probably ask for a more detailed risk evaluation. This chapter will therefore present some scenario analyses, in addition to a brief conclusion on the findings in this thesis.

13.1 RISKS & SCENARIO ANALYSES

All businesses, and especially new ventures, have risk. As an entrepreneur one share this risk with one's investors. By evaluating the risks you show the investors that your business plan is thought-through. If you do not present the risks, the investors will assume that you are too optimistic in your evaluations of the business (McKinsey&Company, 2007).

When doing estimations in this thesis approximately, not accuracy, has been emphasized. All analyzes done are therefore based on the general principle: "It is better to be approximate right, than exact wrong". Accurate forecasts only exist in fairytales and there is therefore always the risk of making wrong estimations. This risk has been decreased as much as possible by making use of McKinsey & Company's (2007) advices when doing sales forecasts:

1) Use known facts – Much will be unknown, but if you base your assumptions on some certain figures, you get a better basis for conclusions.
2) Think logical – You have to be able to provide logical reasons for your assumptions.
3) Compare sources – Control information from several channels and different interviews.
4) Be creative – Doing forecasting is not simple. There is a good chance you are missing necessary facts. If so, you have to come up with "work-arounds" for the missing links.

When one evaluate risks one look into the future. There is no way of knowing the exact risks and one will therefore have to evaluate the risk by using assumptions (McKinsey&Company, 2007). These assumptions are often presented in models, "scenarios", that states the development under different presumptions. The normal way of doing it is to use three different scenarios (McKinsey&Company, 2007):

1) Normal case scenario – the most likely case, based on what you know.
2) Best case scenario – the company succeed in accomplishing most of its potential.
3) Worst case scenario – the company fails to achieve a lot of its potential.

One can make analyses by changing every variable influencing profit. The ones chosen to focus on here are the ones expected to have the largest impact on results.

13.1.1 SALES VOLUMES

According to "Norsk Petroleumsinstitutt" there was sold a total of approximately 70 million liters of lubricants in Norway last year (www.np.no). There are several large consumers of lubricants not included in the calculations in this thesis, like for example road transportation, sea transportation, construction and building, private homes, cars, public sector activities, et cetera. With the calculations here, one can explain about 30 percent of total sales of lubricants, which seems reasonable taking into account the groups not included.

The total amount of cleaners used each year in Norway is approximately 130 million liters (www.dinside.no). With the calculations here, a total market potential of almost 18 million liters was estimated, consequently 14 percent of total use. This number may seem a bit low at first sight. However, one has to remember the large amount of cleaners used in other industries and most importantly the amount of cleaners used by personal consumers. In addition the mix for industrial use is probably much stronger than the mix for personal use. When one take these facts into account, the conclusions does not seem all that bad.

Although the estimates seem reasonable, it will be interesting to know how changes in sales volumes will affect potential profit. Figure 21 presents the net present value of the Norwegian operation in a normal-, best- and worst- case scenario when it comes to achieved market shares. The figures assume no change in other variables.

Because changes in inventory are largest the first year of operation, NPV has the steepest increase from year one to two. The increase from year two to three will be somewhat lower than the increase from year four on, because of the decrease in growth of fixed Norwegian expenses from year four on. However, the use of a discount rate hides this effect and the line is showing a falling trend.

If WS only achieves one percent market share the first year of operation, break even is not achieved until just after the second year of operation. The NPV in NOK per year will be: - 430 000, - 14 000, 322 000, 598 000 and 796 000 for year one to five respectively. This adds up to a total NPV of approximately NOK 1.2 million for the five first years of operation.

If WS achieves 2.5 percent market share the first year of operation, like estimated in chapter 12, NPV in NOK per year will be: 124 000, 573 000, 833 000, 1 041 000 and 1 182 000 for year one to five respectively. This adds up to a total NPV of approximately NOK 3.8 million for the five first years of operation, like table 18 also showed.

If WS achieves five percent market share the first year of operation; NPV in NOK per year will be: 1 047 000, 1 551 000, 1 684 000, 1 782 000 and 1 825 000 for year one to five respectively. This adds up to a total NPV of approximately NOK 7.9 million for the five first years of operation.

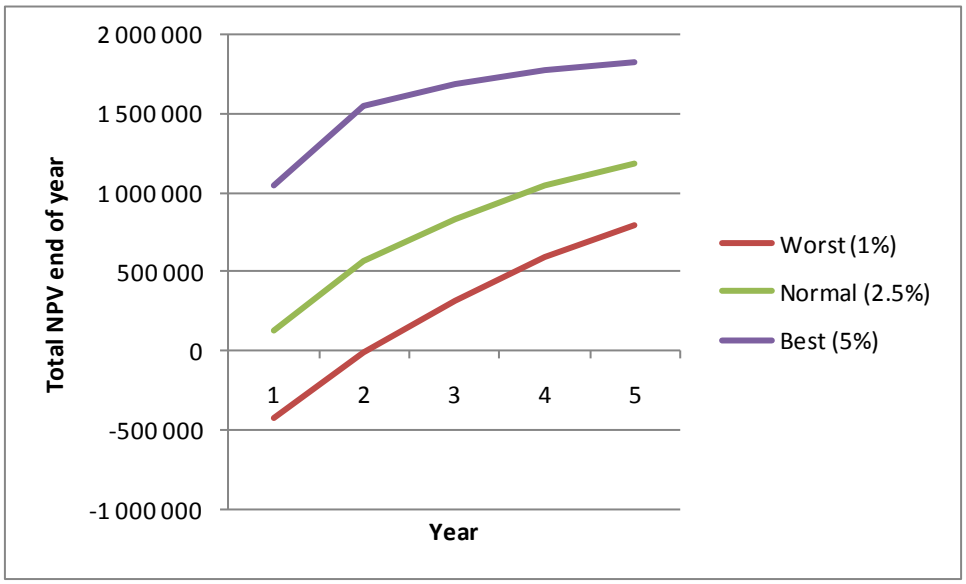

FIGURE 21: CHANGE IN MARKET SHARES

13.1.2 GROWTH

In chapter 12 a growth of 12 500 liters lubricants and 7 500 liters cleaners each year, reaching a market share of 7.5 percent in year five, were estimated. Figure 22 presents NPV if growth is 25 percent better or worse than expected each of the first five years.

If the growth is 25 percent worse than expected; NPV in NOK per year will be: 124 000, 474 000, 641 000, 782 000 and 876 000 for year one to five respectively. This adds up to a total NPV of approximately NOK 2.9 million for the five first years of operation.

If growth are 12 500 liters lubricants and 7 500 liters cleaners each year, like assumed in chapter 12, NPV in NOK per year will be: 124 000, 573 000, 833 000, 1 041 and 1 182 for year one to five respectively. This adds up to a total NPV of approximately NOK 3.8 million for the five first years of operation.

If growth is 25 percent better than anticipated; NPV in NOK per year will be: 124 000, 671 000, 1 025, 1 301 and 1 488 for year one to five respectively. This adds up to a total NPV of approximately NOK 4.6 million for the five first years of operation.

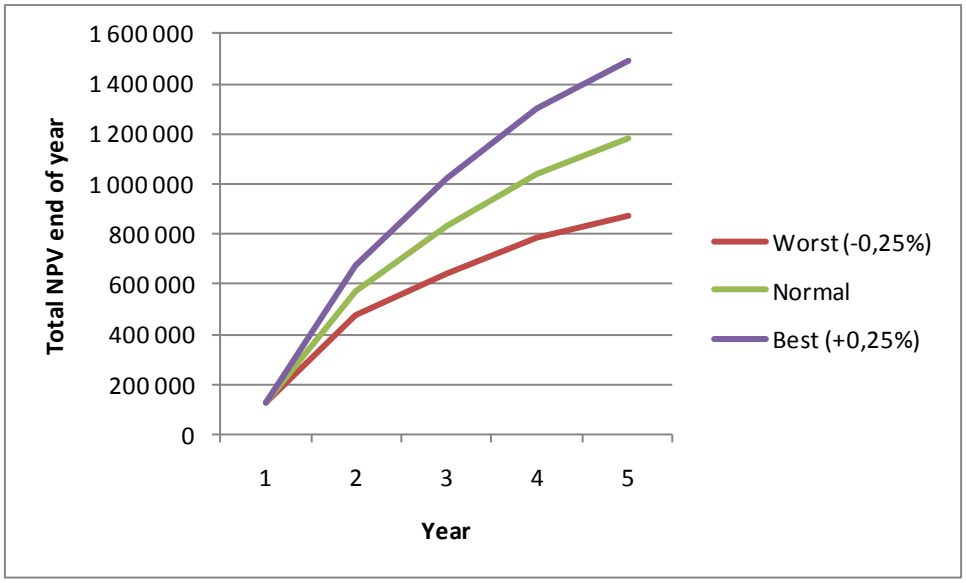

FIGURE 22: CHANGE IN GROWTH

13.1.3 SALES PRICES

In the chapter on prices it was explained how prices often are negotiated in individual agreements. Currency fluctuations may also create price differences over time. To see how NPV vary according to price is therefore interesting. Results for a 25 percent increase or decrease from base prices are shown in figure 23.

If prices on average are 25 percent lower than the estimated base prices, break even is not achieved until the second year of operation. Total NPV in NOK per year will be: - 281 000, 19 000, 186 000, 336 000 and 443 000 for year one to five respectively. This adds up to a total NPV of approximately NOK 703 000 for the five first years of operation.

If prices on average equal the estimated base prices; NPV in NOK per year will be: 124 000, 573 000, 833 000, 1 041 000 and 1 182 000 for year one to five respectively. This adds up to a total NPV of approximately NOK 3.8 million for the five first years of operation.

If prices on average are 25 percent higher than the estimated base prices; total NPV in NOK per year will be: 528 000, 1 127 000, 1 480 000, 1 748 000 and 1 921 000 for year one to five respectively. This adds up to a total NPV of approximately NOK 6.8 million for the five first years of operation.

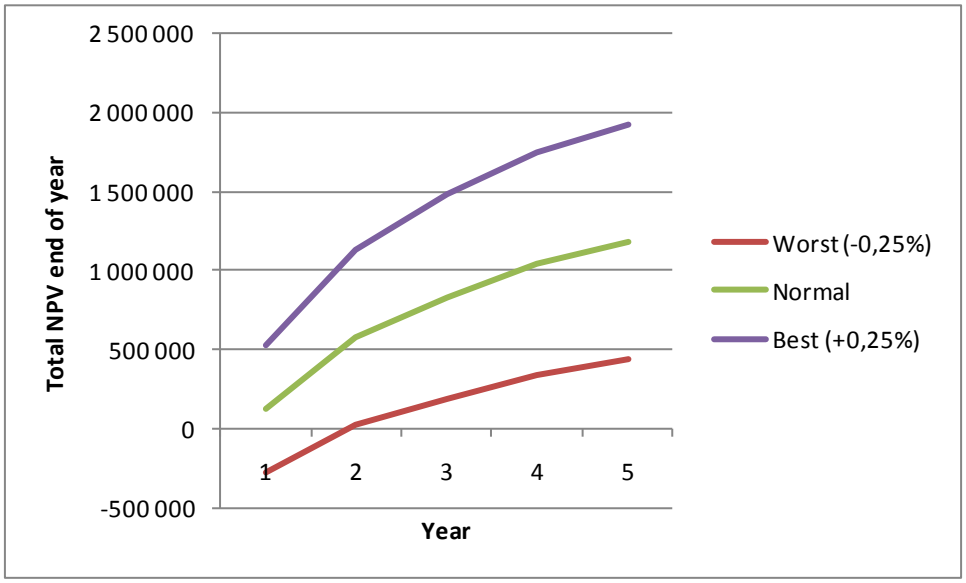

FIGURE 23: CHANGE IN SALES PRICES

13.2 CONCLUSION

The analyses done in this thesis have shown positive returns, for most years of operation. Actual results are quite sensitive to changes in the different variables. In most scenarios break-even is estimated to be achieved already during the first year of operation. However, for some worst case scenarios break-even is achieved in year two. It was estimated that if everything turns out as projected in this thesis, WS may earn a profit of almost NOK seven million over the next 15 years, by investing approximately NOK one million today, as table 18 shows.

When deciding whether or not to start export to the Norwegian market WS must compare the potentials in the Norwegian market with other potential markets. Even though there is excess capacity in US production, WS will have alternative costs from using the capacity to serve the Norwegian market instead of other markets. The decision on whether or not to start import will therefore depend whether the alternative cost is positive or negative.

The problem to be addressed in this thesis was if WS can create profit in the Norwegian market. There are many elements to take into account in a decision process on whether or not to actually start export to Norway. The author of this thesis does not possess enough information on such elements. WS is therefore recommended to investigate opportunities and threats of export to other countries as well, and compare the results with the findings in this thesis.

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APPENDICES

SECTION 1 – ADVISORS

- Market trends researcher *Paul Ray* PhD.
- Branding and marketing advisors *Beam Inc*.
- Attorneys *Ian Edvaldson and Randy Lewis* of Silicon Valley law firm Wilson Sonsini Goodrich & Rosati
- Financial analysis, operations and tax planning services of *Michael Blas,* CPA.

SECTION 2 - POTENTIAL SALES VOLUME AGRICULTURE INDUSTRY

Lubricants and heavy duty cleaners for the agricultural market

For lubricants and the heavy duty cleaners a mean measurement of use per type of machinery a year was used. The mean amount of use for each kind of machinery was estimated with the help of Arne Lund, sales representative for Felleskjøpet, the largest sales channel to the agricultural market.

Usage ratios

Tractors today normally need two kinds of oils. The first one is the oil that is filled in the front of the tractor, namely the engine-oil for the engine, the amount is approximately 20 liters. The second kind of oil is the oil that is filled in the back of the tractor, for hydraulic systems and gears. On older tractors one would split the hydraulic and gear oils, but this is not that common nowadays. The total amount of this kind of oil is about 100 liters. Both kinds of oil are normally changed once a year. All in all a normal use of oil per tractor would then be 120 liters a year.

Harvesters splits between hydraulic and gear oils, and uses approximately 15 and 4 liters a year of the respective oils. The amount of engine-oil is approximately 20 liters. The threshing machine in the harvester will also need grease, an approximation is 5kg (5 liters) a year. It is worth mentioning that newer harvesters will need less grease than older ones, because they have several self-lubricating mechanisms. Total use of lubricants a year will be about 45 liters a year for a harvester.

Cultivation tools will need lubricants for ball-bearings, et cetera. With the help of Mr. Lund the mean of this was sat to approximately 10kg (10 liters) grease per farm a year.

All machinery, including tractors and harvesters, will also need cleaners to remove dirt. As an approximation for this 15 liters concentrate a year per farm where used. There will of course be differences when it comes to the mix-ratios of concentrates and water, however, it was chosen to use 15 liters concentrate per farm to keep things simple.

Yearly multiplier total market potential

The usage ratios chosen where then multiplied with the number of registered tractors and harvesters in Norway, which is 130 000 (www.tlif.no) and 15 000 (www.ssb.no) respectively. When it comes to use of lubricants and cleaners on cultivation tools and other equipment found on a farm, the usage ratio was multiplied by the number of farms, found to be 49 800 (www.ssb.no).

Cleaners for milking systems and cleaners for barns & pens

For cleaners of milking systems another method of estimating demands were chosen. The author was able to find information on how much cleaners the largest supplier, Felleskjøpet, sold last year, a total of 600 000 liters concentrate. Here there will also be an increased margin of error, due to different mixing ratios. But by assuming a certain market share for Felleskjøpet, it is possible to estimate total market demand. Explicit market share for cleaners of milking systems were not available, however Mr. Lund explained that a market share of about 70 percent probably was reasonable. This leads to a total market demand of about 850 000 liters. Total market demand where then divided by the number of milking cows, identified as 253 200 (www.ssb.no), to find the use of cleaners per milking cow, which then is about 3.4 liters concentrate a year per milking cow.

The same procedure was used for cleaners for barns & pens, using Felleskjøpet's sales as a basis. Felleskjøpet sold a total of 17 500 liters of these cleaners last year, with a market share of 70 percent, this adds up to a yearly market potential of 25 000 liters or approximately 0.5 liters per farm in Norway.

SECTION 3 - POTENTIAL SALES VOLUME FOOD INDUSTRY AND BEVERAGE INDUSTRY

Lubricants in food-processing & beverage industry

Usage ratios

The use of products by different firms within the food industry proved out to be very hard to estimate, because of the many variables influencing the use. For lubricants it is simply assumed that each firm has at least two machines using the same amount of lubricants as a tractor engine, approximately 20 liters engine oil and 100 liter hydraulic fluids per engine. Additionally the machines will need grease, an approximation was sat to 25 liters a year per machine.

For cleaners the task was even more difficult, because of the vast differences in production sizes and operation methods. However, the author was able to get information from some contacts within different branches and compare their use of chemicals according to the size of their production. Vidar Rønningen, Section Leader within ISS Cleaning Services, and Johan Heggland, Director of Quality with Kavli Norway, were especially of help in this matter. To make it simple an approximation of 4 liters use of concentrate per day for companies using surface cleaners was assumed. If one assume 300 working days a year, yearly use of surface cleaners, will then be 1 200 liters a year. There are differences when it comes to working days, some producers operate seven days a week, 365 days a year, whereas others follow the normal schedule of 230 working days a year. 300 days a year was chosen as a mean here. As an approximation for the tank & pipe cleaners the ratio was set to 0.5 percent concentrate per liter of production.

Yearly multiplier total market potential

Section 3.4.1 identified the number of firms within the food branch to be 3 447 firms. This number included the dairy firms. Since dairy firms will use mostly tank & pipe cleaners these, 169, firms were excluded when calculating the amount of surface cleaners, consequently using 3 278 firms.

One milking cow produces about 6 800 liters of milk a year in Norway (www.ssb.no). With 253 200 milking cows, this means a mean production of 1 721 million liters milk a year. If 0.5 percent of this is the amount of cleaners concentrate used, it means there is used about 8.6

million liters of concentrate cleaners sold to dairies each year. Adding this to the use of surface cleaners, one end up with a demand of about 12,5 million liters concentrate of cleaners a year.

Cleaners and lubricants for the beverage industry

The total beverage production was approximately 683 million liters in 2008 (www.ssb.no). If there is used 0.5 percent cleaners per liter produced, total market potential within beverage production will be about 3,5 million liters concentrate of cleaners a year. If the 162 registered firms, identified in section 3.4.1 within the beverage branch uses 240 liters lubricants each per year, total market potential for lubricants is about 0.4 million liters.

SECTION 4 - POTENTIAL SALES VOLUME FORESTRY INDUSTRY

Cleaners and lubricants for logging machines

Usage ratios

For the logging-machines a certain amount use of lubricants a year per machine was assumed, like done for tractors and harvesters. The engine itself on this sort of machinery is almost like a tractor, and one can therefore assume the same use of lubricants. However, the rocker arm systems of the machinery will probably use more hydraulic fluids and bar chain oils than a normal tractor (Lund, 2010). As an approximation 200 liters hydraulic fluid a year in addition to 100 liters to cover chain oil and grease were chosen. A logging machine is normally working together with a tractor-transporter to bring the timber out of the forest, which also will use the same amount of hydraulic fluid for its rocker arm, in addition to engine-oil. Total use of lubricants for a pair of these two machines together per year will then be approximately 650 liters. The same use of cleaners per pair, as used per farm, namely 15 liters a year, was assumed.

Yearly multiplier

The author did not succeed finding statistics on the exact number of logging machines in Norway. However, there was found information telling that one machine normally is able to cut about 150 cubic a day (www.mjosen.no). Assuming 300 working days a year and logging of 8,1million cubic totally in Norway for one year (www.ssb.no), one may assume there are about 200 logging machines in Norway. It is reasonable that the owners of logging machines

will try to keep the machines in use as many working days as possible, however transportation and weather conditions may decrease the number of days. Wet summers will for example make it more difficult to use the machinery.

Chain oil for chain saws

Personal chain saws are more common on a private basis, and the use of chain oil, will among other things depend on effectiveness in use. A lot of the forestry properties in Norway are held of farmers, and it will therefore be ok to assume that most of the chain saw oil purchased for personal chains saws will be sold through the same sales channels as other agricultural equipment. The same procedure, as with the cleaners for milking systems, using Felleskjøpet's sales statistics and assuming a market share of 70 percent, was therefore used. Felleskjøpet sold approximately 300 000 liters bar chain oil last year, total market potential will then be about 430 000 liters. If assumed each owner of productive forest in Norway has one chain saw, and there is 119 699 owners (www.ssb.no), the use per chain saw will be about 4 liters per owner.

SECTION 5 – LIST OF CLEANING CHEMICALS THAT ARE HARMFUL TO THE ENVIRONMENT

- trichloroethene
- tetrachloroethene
- dichloromethane
- trichloroethane
- chlorine phenolic compounds
- methyl glycol
- ethyl glycol
- methyl glycol acetate
- ethyl glycol acetate
- alkyl phenolic toxins
- dibutyl phthalate
- PFAS/PFOS connections
- methyl isothiocs
- optical bleachers

SECTION 6 – EQUITY MODES

Equity – Joint ventures

A joint venture is a "corporate child" – a new entity given birth and jointly owned by two or more parent companies (Peng, 2009). It has three principal forms. In a **minority JV** the company controls less than 50 percent of the equity, in a **50/50 JV** the company controls half of the equity, whereas in a **majority JV** the company controls more than 50 percent of the equity.

All joint ventures have three advantages (Peng, 2009). Firstly, the company can share costs, risks and profits with a local partner, possessing a certain degree of control while limiting risk exposure. Secondly, the company gains access to knowledge about the host country. Thirdly, joint ventures may be politically more acceptable.

In terms of disadvantages; joint ventures often involve partners from different backgrounds and goals – so conflicts are natural. Secondly, the nature of the joint venture may not give a multinational enterprise the tight control over a foreign subsidiary that it may need for global coordination (Peng, 2009).

All sorts of non-equity based contractual agreements and equity-based joint ventures can be broadly considered as **strategic alliances,** within the dotted area of figure 13.

Equity – Wholly owned subsidiaries

A wholly owned subsidiary are normally set up either as a greenfield operation or as an acquisition. The latter are the most common, representing approximately 70 percent of worldwide foreign direct investments (Peng, 2009).

A ***greenfield*** operation means essentially to build everything from scratch. The greatest advantage is probably full control, which makes it easier to secure any proprietary technology for example. However, a greenfield operation tends to be expensive and risky, both financially and politically (Peng, 2009). The conspicuous foreignness embodied in such a arrangement may become a target for nationalistic sentiments (Peng, 2009). Another drawback is that greenfield operations takes longer time, and entry speed will therefore be slower, compared to an acquisition.

Additionally, an ***acquisition*** will build no new capacity to an industry, therefore not making a possible competitive industry even more crowdy. Both political and financial barriers, however, may be large in acquisitions as well. Besides this there is also the risk of post acquisition integration problems.

SECTION 7 – ENVIRONMENTAL-FRIENDLY HALLMARKS

- ***The EU-flower***

  According to the EEA-agreement, the EU-flower is also applicable in Norway.

- ***Bra miljøval (Falken)***

  The association for preservation of natural resources in Sweden is responsible for this label, but the label is also often seen in Norway.

- ***KRAV***

  This is a label for food products and textiles.

- ***Forest Stewardship Council (FSC)***

  FSC is an international organ established in 1993 with initiatives from 25 different countries. The goal is to work for a sustainable forest industry in all parts of the world, through establishment of general rules for forestry and control of companies.

- ***The Blue Angel***

  This is originally Germany's "Svanemerke". It was the first form of environmental label, when established in 1977.

- ***Rättvismäkning***

  A co-operation to increase the conditions of small and medium enterprises in global competition.

- ***World Wildlife Fun***

  WWF's panda is not an environmental friendly label, but a proof that the company has contributed money to preserve nature.

- ***"Returpiler"***

These signs are not an environmental friendly label, but are used of producers that works with recyclable materials. The symbols means different things on different products.

SECTION 8 – PRICE ELASTICITY

The data for calculating price elasticity is presented underneath.

Alkaline cleaners	*Sales volume*	*Price per liter finish mix incl. taxes*	*Elasticity*
MIM Kombi Micro Flytende 10l	3000	8,96	
Alkal 10l (Desinfeksjon)	5250	4,36	
			-1,46

Acid cleaners	*Sales volume*	*Price per liter finish mix incl. taxes*	*Elasticity*
MI Syre Micro Flytende 10l	2600	8,96	
CID Non 10l	4700	4,36	
			-1,57

Engine oils	*Sales volume*	*Price per liter incl. taxes*	*Elasticity*
Super Synthetic 10l	5900	89,9	
SS Engine Oil 10l	10200	35,9	-1,21

Heavy working oils	*Sales volume*	*Price per liter*	*Elasticity*
		incl. taxes	
Kombi Oil 10l	35000	34,9	
Super Turbo Oil 10l	17000	47,9	-3,90

SECTION 9 – POTENTIAL SALES VOLUME TARGET CUSTOMERS

When estimating sales potential for these customers, one want to find the number of machines within just ecological farming, which there is no specific statistics on. The method used where therefore the mean number of machines per farm, found by using the number of machinery and number of farms total, identified in section 2 in the appendix , which gave 2,6 tractors and 0,3 harvesters per farm. These numbers where then multiplied with the number of ecological farms, found to be 2 851 chapter 5.

Table 6 in chapter 3 presented registered ecological firms in Norway, the number of dairies, slaughterhouses, bakeries, mills, and other processing are the categorizes of special interest. In total there are 273 registered firms in these categories, 25 of these are dairies using only tank and pipe cleaners.

SECTION 10 – CALCULATION OF FREE CASH FLOW

Section 12.1.2 explained the free cash flow as net capital investments and net working capital subtracted from the cash generated from operations. Year one calculations is explained to illustrate how calculations were done.

Start year one

There are no cash generated from operations and the free cash flow at this time will equal the net fixed investment, just described.

The first year's inventory will be ten percent of 25 000 liters lubricants and ten percent of 15 000 liters cleaners, 2 500 liters and 1 500 liters respectively. Combining this with table 13, one finds the following estimates:

Expense lubricants inventory start year one =2 500 * (13.8 + 2.5) = 40 750

Expense cleaners inventory start year one = 1 500 * (18 + 2.5) = 30 750

Total expense inventory start year one = 40 750 + 30 750 = 71 500

Fixed expenses Norway was estimated to be 800 000 paid at the start of year one.

Total needed capital at the start of year one is therefore = 71 500 + 800 000 = 871 500

End year one

Cash generated from operations, the contribution margin, is found the following way: Total payment received minus value added tax, sales commission, variable costs, and fixed costs US. Table 13 combined with estimated sales volumes gives the following estimations for this in year one:

Lubricants year one= (65.45 – 13.09 – 4.76 - 13.8 – 2.5) * 25 000 = 782 500

Cleaners year one= (77 – 15.4 – 5.6 – 18 – 2.5) * 15 000 = 532 500

Total contribution margin year one = 782 500 + 532 500 = 1 315 000

Changes in net working capital consist of changes in accounts receivable, changes in debt VAT and changes in inventory. Inventory is, however, changed by the start of the year.

Customers are given 30 days credit, which means one have to 1/12 of yearly sales when calculating cash by the end of year one. Table 13 and the estimated sales volumes give the following figures:

Accounts receivable lubricants end year one = 52.36 * 25 000 * (1/12) = 109 083

Accounts receivable cleaners end year one = 61.6 * 15 000 * (1/12) = 77 000

Total value accounts receivable end year one = 109 083 + 77 000 = 186 083

The received value added tax, charged from customers, is returned to the Norwegian authorities after one month and ten days, whereas customers are given one month credit time. This means WS is holding 0.33 months of received value added tax, not yet forwarded to authorities. Calculations for the end of year one will be:

Debt VAT lubricants = 52.36 *25 000 *0.25 * (0.33/12) = 8 999

Debt VAT cleaners = 61.6 * 15 000 * 0.25 * (0.33/12) = 6 353

Total debt VAT = 8 999 + 6 353 = 15 352

SECTION 11 – FINANICAL ANALYSES

Income statements, balance sheets and cash flow calculations are presented on the next pages.

Please note; none of these statements are presented as they will be in final statements delivered to accountants. The laws and regulations within this subject are pretty comprehensive, and it is therefore recommended to hire a Norwegian bookkeeper. In order to make the decision on whether or not to enter the Norwegian market, WS must, however, know potential profits and demands on liquidity. These figures are therefore the focus in the calculations.

	A	B	C	D	E	F	G	H	I	J	K
1	**Period**	**Start year 1**		**End year 1**		**Start year 2**		**End year 2**		**Start year 3**	
2	**Product**	**Lubricants**	**Cleaners**	**Lubricants**	**Cleaners**	**Lubricants**	**Cleaners**	**Lubricants**	**Cleaners**	**Lubricants**	**Cleaners**
3											
4	**Variables:**										
5	Sales volume			25 000,00	15 000,00			37 500,00	22 500,00		
6	Price incl. value added tax			65,50	77,00			65,50	77,00		
7	Price excl. value added tax			52,36	61,60			52,36	61,60		
8	Price before value added tax and sales commission			47,60	56,00			47,60	56,00		
9	Sales commission			0,10	0,10			0,10	0,10		
10	Variable costs			13,80	18,00			13,80	18,00		
11	Fixed costs US (calculated as variable cost)			2,50	2,50			2,50	2,50		
12	Inventory level			0,10	0,10			0,10	0,10		
13	Credit time customers			0,08	0,08			0,08	0,08		
14	Value added tax			0,25	0,25			0,25	0,25		
15	Credit time value added tax			0,11	0,11			0,11	0,11		
16	Fixed costs Norway			800 000,00				920 000,00			
17	Cost of capital			0,15				0,15			
18											
19	**Calculations for income statement:**										
20											
21	Sales excl. value added tax			1 309 000	924 000			1 963 500	1 386 000		
22	*Value added tax import*			*327 250*	*231 000*			*490 875*	*346 500*		
23	Sales incl. value added tax			1 636 250	1 155 000			2 454 375	1 732 500		
24											
25	*Sales commision*			*119 000*	*84 000*			*196 350*	*138 600*		
26	*Variable costs*			*345 000*	*270 000*			*517 500*	*405 000*		
27	*Fixed costs US*			*62 500*	*37 500*			*93 750*	*56 250*		
28	Total variable cost			526 500	391 500			807 600	599 850		
29											
30	*Contribution margin*			*782 500*	*532 500*			*1 155 900*	*786 150*		
31	Total contribution margin			1 315 000				1 942 050			
32	Fixed costs Norway			800 000				920 000			
33											
34	**Total profit**			**515 000**				**1 022 050**			
35											
36											

	A	L	M	N	O	P	Q	R	S	T	U
1	**Period**	**End year 3**		**Start year 4**		**End year 4**		**Start year 5**		**End year 5**	
2	**Product**	**Lubricants**	**Cleaners**	**Lubricants**	**Cleaners**	**Lubricants**	**Cleaners**	**Lubricants**	**Cleaners**	**Lubricants**	**Cleaners**
3											
4	**Variables:**										
5	Sales volume	50 000,00	30 000,00			62 500,00	37 500,00			75 000,00	45 000,00
6	Price incl. value added tax	65,50	77,00			65,50	77,00			65,50	77,00
7	Price excl. value added tax	52,36	61,60			52,36	61,60			52,36	61,60
8	Price before value added tax and sales commission	47,60	56,00			47,60	56,00			47,60	56,00
9	Sales commission	0,10	0,10			0,10	0,10			0,10	0,10
10	Variable costs	13,80	18,00			13,80	18,00			13,80	18,00
11	Fixed costs US (calculated as variable cost)	2,50	2,50			2,50	2,50			2,50	2,50
12	Inventory level	0,10	0,10			0,10	0,10			0,10	0,10
13	Credit time customers	0,08	0,08			0,08	0,08			0,08	0,08
14	Value added tax	0,25	0,25			0,25	0,25			0,25	0,25
15	Credit time value added tax	0,11	0,11			0,11	0,11			0,11	0,11
16	Fixed costs Norway	1 040 000,00				1 120 000,00				1 200 000,00	
17	Cost of capital	0,15				0,15				0,15	
18											
19	**Calculations for income statement:**										
20											
21	Sales excl. value added tax	2 618 000	1 848 000			3 272 500	2 310 000			3 927 000	2 772 000
22	*Value added tax import*	*654 500*	*462 000*			*818 125*	*577 500*			*981 750*	*693 000*
23	Sales incl. value added tax	3 272 500	2 310 000			4 090 625	2 887 500			4 908 750	3 465 000
24											
25	*Sales commision*	*261 800*	*184 800*			*327 250*	*231 000*			*392 700*	*277 200*
26	*Variable costs*	*690 000*	*540 000*			*862 500*	*675 000*			*1 035 000*	*810 000*
27	*Fixed costs US*	*125 000*	*75 000*			*156 250*	*93 750*			*187 500*	*112 500*
28	Total variable cost	1 076 800	799 800			1 346 000	999 750			1 615 200	1 199 700
29											
30	*Contribution margin*	*1 541 200*	*1 048 200*			*1 926 500*	*1 310 250*			*2 311 800*	*1 572 300*
31	Total contribution margin	2 589 400				3 236 750				3 884 100	
32	Fixed costs Norway	1 040 000				1 120 000				1 200 000	
33											
34	**Total profit**	**1 549 400**				**2 116 750**				**2 684 100**	
35											
36											

	A	B	C	D	E	F	G	H	I	J	K
1	**Period**	**Start year 1**		**End year 1**		**Start year 2**		**End year 2**		**Start year 3**	
2	**Product**	**Lubricants**	**Cleaners**	**Lubricants**	**Cleaners**	**Lubricants**	**Cleaners**	**Lubricants**	**Cleaners**	**Lubricants**	**Cleaners**
44	**Calculations for balance sheet:**										
45											
46	*Inventory volume*	*2 500*	*1 500*	*2 500*	*1 500*	*3 750*	*2 250*	*3 750*	*2 250*	*5 000*	*3 000*
47	*Value inventory*	*40 750*	*30 750*	*40 750*	*30 750*	*61 125*	*46 125*	*61 125*	*46 125*	*81 500*	*61 500*
48	Total value inventory excl. value added tax	71 500		71 500		107 250		107 250		143 000	
49											
50	*Accounts receivable excl. value added tax*			*109 083*	*77 000*	*109 083*	*77 000*	*163 625*	*115 500*	*163 625*	*115 500*
51	Total accounts receivable excl. value added tax			186 083		186 083		279 125		279 125	
52											
53	Cash			1 144 269		188 519		2 045 203		969 453	
54											
55	Prepaid fixed expenses Norway	800 000				920 000				1 040 000	
56	**Sum left side balance**	**871 500**		**1 401 852**		**1 401 852**		**2 431 578**		**2 431 578**	
57											
58											
59	Retained earnings			515 000		515 000		1 537 050		1 537 050	
60											
61	Invested equity	871 500		871 500		871 500		871 500		871 500	
62											
63	*Debt VAT*			*8 999*	*6 353*	*8 999*	*6 353*	*13 499*	*9 529*	*13 499*	*9 529*
64	Total debt VAT			15 352		15 352		23 028		23 028	
65											
66	**Sum right side balance**	**871 500**		**1 401 852**		**1 401 852**		**2 431 578**		**2 431 578**	
67											
68	**Cash flow**										
69											
70	Contribution margin			1 315 000				1 942 050			
71											
72	Change inventory excl. VAT	71 500				35 750				35 750	
73											
74	Change accounts rec. excl. VAT			186 083				93 042			
75											
76	Fixed expenses Norway	800 000				920 000				1 040 000	
77											
78	Change debt VAT			15 352		0		7 676		0	
79											
80	**Total cash flow**	**-871 500**		**1 144 269**		**-955 750**		**1 856 684**		**-1 075 750**	
81	*Control*	*0*		*0*		*0*		*0*		*0*	
82											
83	*Total yearly cash flow*	**272 769**				**900 934**				**1 428 284**	
84	*Change total yearly cash flow*					**628 166**				**527 350**	

	A	L	M	N	O	P	Q	R	S	T	U
1	**Period**	**End year 3**		**Start year 4**		**End year 4**		**Start year 5**		**End year 5**	
2	**Product**	**Lubricants**	**Cleaners**	**Lubricants**	**Cleaners**	**Lubricants**	**Cleaners**	**Lubricants**	**Cleaners**	**Lubricants**	**Cleaners**
44	**Calculations for balance sheet:**										
45											
46	*Inventory volume*	*5 000*	*3 000*	*6 250*	*3 750*	*6 250*	*3 750*	*7 500*	*4 500*	*7 500*	*4 500*
47	*Value inventory*	*81 500*	*61 500*	*101 875*	*76 875*	*101 875*	*76 875*	*122 250*	*92 250*	*122 250*	*92 250*
48	Total value inventory excl. value added tax	143 000		178 750		178 750		214 500		214 500	
49											
50	*Accounts receivable excl. value added tax*	*218 167*	*154 000*	*218 167*	*154 000*	*272 708*	*192 500*	*272 708*	*192 500*	*327 250*	*231 000*
51	Total accounts receivable excl. value added tax	372 167		372 167		465 208		465 208		558 250	
52											
53	Cash	3 473 487		2 317 737		5 469 121		4 233 371		8 032 106	
54											
55	Prepaid fixed expenses Norway			1 120 000				1 200 000			
56	**Sum left side balance**	**3 988 654**		**3 988 654**		**6 113 080**		**6 113 080**		**8 804 856**	
57											
58											
59	Retained earnings	3 086 450		3 086 450		5 203 200		5 203 200		7 887 300	
60											
61	Invested equity	871 500		871 500		871 500		871 500		871 500	
62											
63	*Debt VAT*	*17 999*	*12 705*	*17 999*	*12 705*	*22 498*	*15 881*	*22 498*	*15 881*	*26 998*	*19 058*
64	Total debt VAT	30 704		30 704		38 380		38 380		46 056	
65											
66	**Sum right side balance**	**3 988 654**		**3 988 654**		**6 113 080**		**6 113 080**		**8 804 856**	
67											
68	**Cash flow**										
69											
70	Contribution margin	2 589 400				3 236 750				3 884 100	
71											
72	Change inventory excl. VAT			35 750				35 750			
73											
74	Change accounts rec. excl. VAT	93 042				93 042				93 042	
75											
76	Fixed expenses Norway			1 120 000				1 200 000			
77											
78	Change debt VAT	7 676		0		7 676		0		7 676	
79											
80	**Total cash flow**	**2 504 034**		**-1 155 750**		**3 151 384**		**-1 235 750**		**3 798 734**	
81	*Control*	*0*		*0*		*0*		*0*		*0*	
82											
83	*Total yearly cash flow*			**1 995 634**				**2 562 984**			
84	*Change total yearly cash flow*			**567 350**				**567 350**			