



MARKET RESEARCH ON LED PRODUCTS IN FINLAND

Case: Z-Sen Automatic Electric Co. Ltd.

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Contents

1. INTRODUCTION	5
2. BACKGROUND OF THE RESEARCH.....	6
2.1. Choosing the subject	6
2.2. Purpose of the research	7
2.4. Research methods	7
2.4.1. Qualitative or quantitative research?.....	7
2.4.2. Personal interview	10
2.4.3. Questionnaire by email –method	10
2.5. Limitations of the research.....	10
2.6. Reliability and validity of the research	11
3. Z-SEN AUTOMATIC ELECTRIC CO. LTD.....	13
3.1. About the Company	13
3.2. Why to start exporting in Finland?	13
3.3. SWOT	14
4. LED-LIGHTS	16
4.1. What is led?.....	16
4.2. Benefits of LED-lights	16
4.3. Possibilities to use.....	16
4.4. Future upsights.....	19
5. GOING INTERNATIONAL BUSINESS	22
5.1. Methods for export-import.....	22
5.1.1. Export-import trade:.....	23

5.1.2.	Assembly operations:.....	26
5.1.3.	Contract manufacturing.....	27
5.1.4.	Licensing agreement:.....	28
5.1.5.	Joint ventures.....	28
5.1.6.	Strategic alliance.....	29
6.	MARKETS.....	30
6.1.	Target of the market research.....	30
6.2.	Marketing environment.....	30
6.3.	Market behavior.....	31
6.3.1.	Purchasers buying behavior.....	31
6.3.2.	B2B buying process.....	33
7.	RESULTS OF THE RESEARCH.....	37
7.1.	LED-light markets In Finland.....	37
7.1.1.	Competitors and possible affiliates.....	37
7.1.2.	Development of the led-markets.....	37
7.1.3.	Which sectors are developing the most?.....	39
7.1.4.	Buying behavior.....	41
8.	CONCLUSIONS.....	43
9.	REFERENCES.....	45
10.	APPENDIXES.....	48

ABSTRACT

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As green values are becoming more and more important day by day, there are lots of developments in many areas of energy saving. In recent years, the lighting industry has developed a lot, and this trend is set to continue. LED products are one solution to energy saving in the lighting sector, but in Finland LED lighting products are not that popular yet. Z-Sen Automatic Electric Co. Ltd., which is based in Shanghai, China, wanted me to conduct research about the present markets in Finland and to find some potential co-operation partners for it at the same time. Z-Sen Automatic Electric Co. Ltd. wants to start export-import trade with Finland in different kinds of LED products.

The theoretical part of this thesis discusses international business methods, buying behavior, buying processes and markets in general. The empirical section of the thesis consists of interviews with professionals in this specific field of business, and reports their opinions, company experiences, and the visions they have about the subject.

Interviewing experts is a qualitative research method. The interview method was the best solution because there wasn't any comprehensive understanding about the Finnish market for LED products. Based on the results, some valuable information was obtained for Z-Sen Automatic Electric Co. Ltd. about buying behavior, and what qualities are important for companies operating in the LED lighting sector. Also, some perspectives were gained into both present and upcoming markets. The results also showed that Z-Sen Automatic Electric Co. Ltd. has to plan well and consider carefully what they would offer to Finnish companies.

Key words: Market research, Led-markets, buying behavior, international business

1. INTRODUCTION

When a new company enters in to a whole new market venue, in to a whole new country, there has to be done some ground research about the markets, competitors and affiliates, demands, cultural differences, costs, price levels, etc.

We decided that this research approaches existing companies in Finland and what they think of present and future demand about LED-lights in Finland

LED-lights are more durable and energy saving solution for lighting. LED means light-emitting diode. LED energy saving lamp is using high light light-emitting diode as lighting source. It has some features as: high lighting effect, low power consumption, long life, easy control, non- maintainability, safety and environment protection. No flash direct current; a new generation solid cold light source.

It can be applied in very different purposes, such as: households, vehicles, markets, banks, hospitals, hotels, restaurants and in other public places for long time lighting.

While the technology and the markets develops the prices of the products lowers while new technology comes out. In China factories can make these products very cheaply, so Z-Sen Automatic Electric wants to survey some European markets and in this case, Finnish market.

Z-Sen Automatic Electric wants to focus on companies which already sell these LED-products. Find companies that are willing to widen their range of products and give them possibly new ideas for their markets.

2. BACKGROUND OF THE RESEARCH

2.1. Choosing the subject

It all comes down to my exchange program in Shanghai, China. During my travel in China, I met one of Z-Sen Automatic Electric Co. Ltd employees in Shanghai. We started to think about exporting some products to Finland and finally decided to make a research as in my thesis from specific area in which Z-Sen Automatic Electrics' employee is professional.

My own interests are also highly rated because I am planning to move in Shanghai, and therefore I could be the link between China and Finland if the results are positive enough.

After deciding that making a research of this subject I started to walk through the path what the figure 1 describes. Recognizing the main problem was the first big step because Z-Sen Automatic Electric was still considering whether to make the survey among end-users or possible becoming affiliates. Final decision was to focus on customers.

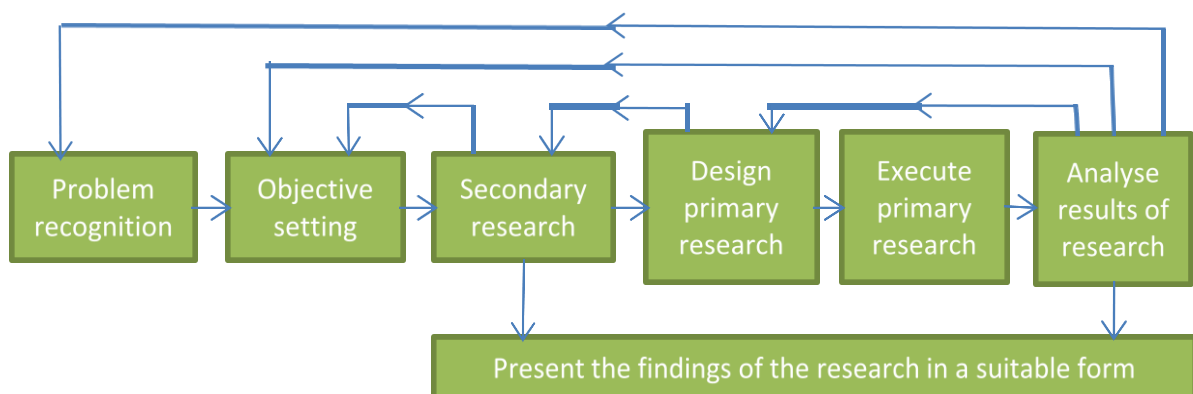


Figure 1. Market research process. (Blythe, 2008, 98)

2.2. Purpose of the research

Purpose of the research is to **survey existing companies who sell and resell LED-lights** (LED=Light emitting diod) that do they want to start cooperation with Z-Sen (exporting new products or do it more sufficiently and financially more profitable way). Execute a customer research generally in Finland asking from wholesalers and resellers about their opinion of past, present and future markets.

So, supporting questions are: **Why would they want to start buying from Z-Sen Automatic Electric, how they can buy from Z-Sen and how led-product markets behave now and in future.**

With the given results Z-Sen Automatic Electric is meaning to do a solution whether it would or would not be profitable to start more comprehensive research and after that exporting these products to Finland.

Z-Sen Automatic Electric doesn't know much of Finnish markets or culture right now but we decided not to concentrate on presenting Finnish cultural manners, customs or behaviorism. Only to existing markets, companies and range of products what are already at the markets. At the time when those matters are researched, can Z-Sen start researching more comprehensively demands and find segments where to specialize.

2.4. Research methods

2.4.1. Qualitative or quantitative research?

In this case both research methods are valid and good to use. In qualitative research we can have very important answers from reselling and importing companies and competitors. In quantitative research we could ask more from the end-users to gain perspective in where they are willing and wanting to use those products.

About qualitative and quantitative research. Both methods are maybe equally good and there are lots of debates which one should be used in different situations. But as described in very shortly in experiment-resources.com, quantitative research generates numerical data or information that can be converted into numbers. Qualitative generates non-numerical data focusing on gathering mainly verbal data rather than measurements. Gathered information is then analyzed in an interpretative manner, subjective, impressionistic or even diagnostic. (experiment-resources.com, 2008-2011).

Quantitative gives more wider and comprehensive understanding about the problem because it usually has large number of data. Malhotra suggests that it should be used as a recommendation a final course of action (Figure 1). Therefore qualitative research is usually used as a pre-research meaning to guarantee that it's adequate to execute more comprehensive quantitative study in the future (Hirsjärvi, Remes, Sajavaara, 2009, 136).

Qualitative goes into deeper understanding of the problem with commonly used depth interviews and gives more open and wider answers from the interviewee about the subject. Its purpose is to develop richer understanding of the problem for further studies, according to Malhotra and also Hirsjärvi, Remes, Sajavaara. Now, when Z-Sen Automatic Electric is in very early stage in importing to Finland, target is only to survey possibilities and limit present product range among sellers. That gives to Z-Sen Automatic Electric a leverage to offer new products.

In quantitative research has to be careful when making the questions for questionnaire. If using wrong perspective in the questionnaire it can lead to wrong decisions, like Malhotra illustrated in Coca Cola Co. -case. Coca Cola Co. made an extensive quantitative research for the decision whether to change Coke to new formula New Coke. Their results indicated in the research that the new formula was better than the old one, so they made decision to replace Coke with New Coke. They hit in to a strong consumer backlash. Loyal customers didn't like the new brand, the New Coke. Researchers focused too strongly to the taste rather than the brand which was obviously more important in consumers' minds (Malhotra, 2009, 181). Referring to that occasion, in this thesis it's no use to be rapid and jump making quantitative research when not knowing much of the concerning markets.

Used methods in this thesis are depth and phone interviews because we want to understand more of those present companies that how they behave and what they think about the markets now or in the future. Making qualitative research using depth interviews we try to gain as much information we can from the companies, trying to be comprehensive with the given questions in interviews. Try to be careful not to leave any important question asked. If the questions would be too limited while not knowing enough of the markets behavior it can outline something important and vital for the future business. And according to Malhotra (2009), quantitative research should be used as a final course of action (Table 3). This is very early phase for Company X and no knowledge about customer or markets. There wouldn't be any ground to base on quantitative research at this point and quantitative questionnaire-method would be too restricted and therefore might be too constricted. And company wants mainly to gain understanding about present led-markets so therefore quantitative research isn't the right solution for that purpose.

In this research qualitative is the first thing to execute because I or the Z-Sen doesn't know any facts about present markets in Finland and it is in the very early phase. After the qualitative depth interviews and analysis we can decide whether to start executing quantitative research, searching which products might have the best demand in the market or are there some products that don't yet even exist in stores. And this point when we don't have any clear understanding about the concerning markets in Finland.

	Qualitative research	Quantitative research
Objective	To gain a qualitative understanding of the underlying reasons and motivations	To quantify the data and generalize the results from the sample to the population of interest
Sample	Small numbers of nonrepresentative cases	Large number of representative cases
Data collection	Unstructured	Structured

Data analysis	Nonstatistical	Statistical
Outcome	Developed a richer understanding	Recommend a final course of action

Figure 2. *Qualitative versus quantitative research (Malhotra, 2009,180)*

2.4.2. Personal interview

I had 4 interviews in total and with each respondent it lasted from 25 minutes to more than 1 hour. Because of the nature of being more casual-like interviews, the questions that I asked differed with the respondents and therefore interview periods weren't the same length. Being more casual interviews, rather than being stricter, it gave more productive conversations and more comprehensive answers which was my goal. Though those interviews were more casual, I wanted to have answers to certain areas which were: opinions about present and future led-markets, companies' developments in led-markets, which markets might develop the most and knowledge about their buying behavior.

2.4.3. Questionnaire by email –method

I made an e-mail questionnaire alongside with the personal interviews as a test, to show how uncomprehensive it would be comparing to interviews. I send out that questionnaire form to 20 companies and I got 2 answers, so 10% of total amount. Also the answers to the questions were very short and those didn't give even nearly enough comprehensive understanding comparing to personal interviews. It gave only a scratch of each company's actions and opinions.

2.5. Limitations of the research

This thesis limited to quite specific range of studies because Z-Sen Automatic Electric

has not any information before about Finnish lighting industry and therefore it was reasonable to start from surveying the existing market base and future demand.

In interviews there are limitations concerning about the representative of the company to whom I interviewed. They maybe cannot give some certain information about their company's actions or procedures which might affect the final results. Companies that were interviewed also had different kinds of business models, as in wholesalers and resellers. That can affect in some certain objectives but overall visions about the markets stayed the same.

Limited timetable with interviewees gave certain limitation because in 1 hour time is rather challenging to "dig deep" to new specific branch and knowing all the right answers that exact moment which need to be asked.

Being so early phase in knowing about Finnish lighting industry markets it displaced more or less the opportunity to make quantitative research. Qualitative research, interviews, gave much more information and more comprehensive understanding of markets from the interviewees. Well, people usually want to talk about themselves and be listened to rather than write comprehensive answers to a survey which take just their own time and effort all by themselves.

2.6. Reliability and validity of the research

Deciding to start this research there was few things that affected making it reasonable to do. At first, as a born Finnish citizen I could do this research with my mother language making it much easier to execute. Second, the companies interest towards Finnish markets in led-lights. I also have good basis about Chinese culture when being there almost half a year.

To make qualitative research good, it needs to be able to help us to: "understand a situation that would otherwise be enigmatic or confusing" (Eisner, 1991, p. 58)¹. And according to Golashani (2003) that "relates to the concept of a good quality research when reliability is a concept to evaluate quality in quantitative study with a "purpose of ex-

plaining” while quality concept in qualitative study has the purpose of “generating understanding” (Stenbacka, 2001, p. 551). The difference in purposes of evaluating the quality of studies in quantitative and quantitative research is one of the reasons that the concept of reliability is irrelevant in qualitative research.¹” In this research there wasn’t any clear understanding about the subject.

And according to Joppe (2000)¹ “the extent to which results are consistent over time and accurate representation of the total population under study is referred to as reliability and is the results of a study can be reproduces under a similar methodology, then the research instrument is considered to be reliable.” That applies well to quantitative research but in qualitative research have to consider the personality and mood changes and observation skills between interviewer and interviewee which may effect to results. Besides those matters, this research can be judged as a reliable work.

There was supposed to be at least 5 interviews but one of them cancelled. Four interviews although showed a good understanding about past, present and becoming trends of lighting industry.

About validity, according to Päivi Kinnunen² “Qualitative research doesn’t pursue generalization of results (some qualitative researchers don’t even believe that universal explanations for how people act exist/are attainable). Instead qualitative research strives for rich description of some phenomenon/group of people. (Kinnunen Päivi, validity in quantitative research)”. And according to Golashani’s¹ research, many researchers have developed their own concepts of validity and have often generated or adopted what they consider to be more appropriate terms, such as, quality, rigor and trustworthiness.

What comes to this thesis, it is valid, although the differences between interviews because of the nature of conversation. It has personal opinions which haven’t been manipulated or changed. As a researcher I tried to be as neutral as possible during interviews trying not to effect opinions with my personal aspects towards the subject.

¹ Understanding Reliability and Validity in Qualitative Research. Nahid Golafshani. 4.12.2003. Volume: 8, Issue: 4, Publisher: Nova Southeastern University. Read 4.12.2011. <http://www.mendeley.com/research/understanding-reliability-validity-qualitative-research/#>

² Päivi Kinnunen, dia-serie of Validity in qualitative research. Methods and results in Computing Education Research. http://scholar.googleusercontent.com/scholar?q=cache:HZhymAKfTi4J:scholar.google.com/&hl=en&as_sdt=0,5&as_viss=1

3. Z-SEN AUTOMATIC ELECTRIC CO. LTD.

3.1. About the Company

Z-Sen Automatic Electric Co. Ltd. is a starting exporting company in Shanghai, China. It has many connections to different factories that manufacture LED-products and components in Shanghai. It can provide many solutions for companies widely abroad, but in this case focus is in Finnish companies. Right now it still doesn't have any European affiliates so far, Finland would be the first one. Reason why, is simple. I was the first Finnish person to suggest that kind of proposal and Z-Sen company representative got interested.

Before company started to think about starting to export, they have done electrical installations and systems for different companies and big buildings.

3.2. Why to start exporting in Finland?

Manufacturing costs in China are much lower comparing to European countries. Many companies have started to import products from Asia in the past decades to overseas. Statistics Finland tells that already in the year 2007 importing from China grew still rapidly to more than 2,6 billion euro in total. All of high end-technology importing to Finland, China hold a slice amount of 28%. And from whole share of importing from Asia to Finland, the part was around 50%. (Katsaus: Korkean teknologian ulkomaankauppa 2007, 2008).³ In 2010, China still hold a share which was more than 25% of whole import. (Korkean teknologian ulkomaankauppa vuonna 2010, 2011)

Markets are changing and new products coming up all the time. Earlier years also show that importing from China has a strong, stable, share in Finland. (Korkean teknologian ulkomaankauppa vuonna 2010, 2011). Z-Sen Automatic Electric wants to explore and give new financially profitable ideas to upcoming and growing markets in Finland in LED-product sector.

³Translated from Finnish text. Article was about high-end technology trade markets in 2007.

3.3. SWOT

SWOT-analysis, as in “fourfold table-analysis”, is a *strategic planning method used to evaluate the Strengths, Weaknesses/Limitations, Opportunities, and Threats involved in a project or in a business venture. It involves specifying the objective of the business venture or project and identifying the internal and external factors that are favorable and unfavorable to achieve that objective.* (SWOT analysis. Wikipedia.org, 2011.).

Favorable objects to which company can affect are strengths and weaknesses. Strengths are positive internal factors in the company which help company to success and implement one’s goals and aims that are set up. Weaknesses have the opposite affect by blocking to make success. External factors to which company can’t affect are opportunities and threads. Exploiting opportunities can make company to success better and if the threads come true the whole business might be in danger to have any success or even being existent.

But however this method is popular analysis tool, it might be left undone properly, unfinished, not analyzed enough. Through this research I can make SWOT-analysis below later more thorough because right now I know only half of it, strengths and weaknesses.

Figure 3. Swot analysis about Z-Sen doing export/import to Finland (up of the table)

<p>Strengths</p> <ul style="list-style-type: none"> - Native and local suppliers working in China - Professional staff who know the upcoming products and markets in China - Lot of connections to make and find the best solutions for affiliates - Quick delivery - Being in very central place of manufacturing (China). 	<p>Weaknesses</p> <ul style="list-style-type: none"> - Lack of knowledge in Finnish culture - Not finding the right segments - Company X doesn't offer anything special comparing other exporting companies - Prices and products are not competitive enough / not different enough - If the delivery isn't efficient enough
<p>Opportunities</p> <ul style="list-style-type: none"> - To give up to date solutions to Finnish companies - To find whole market area - Gain leading market spot in Finland - LED-light markets are developing fast 	<p>Threats</p> <ul style="list-style-type: none"> - Other companies that offer similar products - Not enough demand in Finland for LED-products - Currency revaluation - Prices go higher in China

4. LED-LIGHTS

4.1. What is led?

*A **light-emitting diode (LED)** is a semiconductor light source. LEDs are used as indicator lamps in many devices and are increasingly used for other lighting. Introduced as a practical electronic component in 1962, early LEDs emitted low-intensity red light, but modern versions are available across the visible, ultraviolet and infrared wavelengths, with very high brightness. (wikipedia.com, 2011)*

4.2. Benefits of LED-lights

According to an article in led1.fi, professor Aulis Tuominen (2007) also, among many others, lists as benefits LED-lights have comparing to normal light bulbs. Those are:

- Energy saving solutions
- Long lasting
- More fire safe than normal bulbs. Doesn't warm up that much
- Benefits from cold weather. Burns up brighter
- More carefree
- Ability to produce colorful light without any filters

(candeeffect.com, hella.com, led1.com, 2011)

It's more carefree, long lasting and small lighting source what makes it possible to make various designs around it and large range of targets where to use it.

4.3. Possibilities to use

There is a wide range of possibilities to use LED-lights, from phone TV-screens to big building lightings. Also in various purposes, such as: Art galleries (led-lights aren't that harsh for paintings), greenhouses, basic office and house lighting, to emphasize different kind of objects and fruits (doesn't contain UV or IR-radiation), advertising, public, or entertainment, etc. Different kinds of purposes are developing all the time. Also small

size of led-light gives infinite solutions to design forms and frames for it. (Ledit ja valaistuksen tulevaisuus, fagerhult.com, 2011)

Here are few purposes where is used led-lighting:



Picture 1. From Semy Xia, 2011.



Picture 2. Using led-products in a dress. ecouterre.com, 2010

<http://www.ecouterre.com/katy-perry-wears-glowing-led-gown-to-met-costume-gala/>



Picture 3. Taken by Toni Halonen, Shanghai, 2011



Picture 4. Taken by Toni Halonen, Shanghai, 2011



Picture 5. Taken by Toni Halonen, Shanghai, 2011



Picture 6. New led-lighting bolt. talouselama.fi, 2011

<http://www.talouselama.fi/uutiset/maailman+mahtavin+lamppu+on+syttynyt/a652162?s=l&wtm=talouselama/-09082011>

Products have gotten more advanced in energy-saving and being smarter. For example, there are LED-products that can anticipate the need of using light. In Oulu, Finland, Neste Oil Express- gas station got installed an intelligent led-lighting system which can save up 80% of energy comparing the normal lighting solution. The system brightens up automatically when a customer comes to fuel up his/her car. System also foresees how much lighting is needed (Kaleva.fi, Intelligent led-lights save energy, 15.6.2011)⁴. That was the first kind in Finland.

4.4. Future upsights

Future for led-lights seems to be very bright at the moment. There is going many development projects in many fields concerning energy saving led-lights, for example there are developing some led-lighting for greenhouses in Finland, Led Finland Oy.

There are next some opinions about upcoming trends in led-light industry from Semy Xia, who is a professional in electronics. (Electronic engineer at Z-Sen Automatic Electric Co.Ltd. 12.10.2011).

⁴Article was wrote in Finnish telling about new led-system that was first kind in Finland, <http://www.kaleva.fi/uutiset/alykkaat-led-valot-pihistavat-sahkoa/903106>

Led markets generally:

The first of the activation lighting market is outdoor lighting, such as street lamp, billboard lamp, etc. Indoor lighting must activated will be long-term lighting applications first, including tunnel, supermarket, factory buildings, shopping malls, office buildings. LED indoor and outdoor lighting replace energy-saving lamp becomes a necessary tendency. (Electronic engineer at Z-Sen Automatic Electric Co.Ltd. 12.10.2011).

Compared with the traditional lighting products, in the future for a certain time period, the LED industry development pattern will be remaining stable, which is the trend of the development of the light industry. Find right segments of the market means the terminal. Although there are some problem on the drive and cooling technology, but in the future, outdoor lighting, LED which as a green light source, replace common energy-saving lamp becomes a necessary tendency. (Electronic engineer at Z-Sen Automatic Electric Co.Ltd. 12.10.2011).

LED outdoor lighting will become more and more popular in China:

LED has no stroboscopic, no ultraviolet light, no electromagnetic wave radiation, low heat radiation , such as light and applicate diffusion eliminate glare technology, make it become the real health light source, as a new generation of environmental light source, as the new industry, its value is not reproach. LED products have advantage in its long life, energy saving, safety and green, it reduces cost. As we have learned, in China, outdoor lighting of the buildings using LED lighting market scale more than 20 billion RMB, street lamp market every year has more than 40-50 billion RMB market demand. (Electronic engineer at Z-Sen Automatic Electric Co.Ltd. 12.10.2011).

Technology progress year by year:

Experts predict that in the next five years, LED lights will improve its technology (price down), so it will be popular in household markets. This also showed that the LED outdoor floodlight will instead of energy-saving lamps. (Electronic engineer at Z-Sen Automatic Electric Co.Ltd. 12.10.2011).

Chinas government policy of using LED subsidies:

Chinas government support, encourage people using LED products, which is good for LED products promotion.

With the development of world economy, the people have more consciousness at environmental protection, no ultraviolet ray and low heat, green lighting source LED will be in more favor in upcoming years.

The Experts predict LED in the coming decade, is still the leading role in the whole lighting industry, with its light source energy saving, reliable, long life, light colors varied, simple and low pollution, lightly, and other advantages, so it will be the first place among whole outdoor lights. (Electronic engineer at Z-Sen Automatic Electric Co.Ltd. 12.10.2011).

According to the people I interviewed they all agreed that led-markets are growing rapidly in these upcoming years in every sector and especially in public and industrial lighting. (Ruopio, P. Rajala, J. Eskelinen, J. 2011). Although right now, in Finland, there is still some trust issues about the products because there aren't enough experiences yet among usage. (Ruopio, P. Rajala, J. Eskelinen, J. 2011).

5. GOING INTERNATIONAL BUSINESS

5.1. Methods for export-import

These days there are many ways to start international business. From doing-all-by-yourself –methods to tagging along with another export company who does all that exporting for you, though they take some money for doing it of course. Next I'll introduce mostly known methods for doing international business. There are only methods that I think which are useful and practical to use for Z-Sen Automatic Electric Co. Ltd. Some methods were at this point too comprehensive, unreasonable and demand certain criteria's to be fulfilled, like having a famous brand which I didn't brought up.

There are methods such as:

- Export-import trade
 - Indirect exporting
 - Overseas sales by means of a domestic buying department
 - Export Management Companies (EMCs)
 - Piggyback operations
 - Direct exporting
- Assembly operations
- Contract manufacturing
- Licensing agreements
- Joint ventures
- Strategic alliance

There are two categories in making export-import trade; indirect and direct exporting as in shown up. In indirect export it's a more risk free and low-cost solution for companies that are starting business overseas.

5.1.1. Export-import trade:

Indirect export:

In form of: **overseas sales by means of a domestic buying department.** In that kind of case some companies buying department makes an approach towards the overseas manufactures wholesaling or retailing organization to start exporting those products to their mainland or other countries. (Kazi, dia 3, 2011).

Export Management Companies (EMCs) acts as an export agent on the behalf of, usually inexperienced, a client company. They take some commission for doing the export and in return they find export customers on behalf of the client firm, negotiate terms of sale and arrange the international shipping. Some EMC's also makes wide networks that they can in some cases get those exported products directly in sale to foreign markets. (Cavusgil, Knight, Riesenberger, 2008, 78-79.).

But though it's quite easy way to start a exporting overseas and has fewer risks, there lies a risk for the manufacturer. The manufacturer might have no idea how their products are sold in target country or distributed, which could affect to their brand and image internationally. Brand and image could have positive or negative impact because manufacturer can't control those actions in any way. (Cavusgil, Knight, Riesenberger, 2008, 78-79.).

Piggyback operations mean that companies make alliances and one of them sell others products alongside their own. They are making use of each other's strengths, and maybe can find a new market venue. Piggybacker (the rider), who rides along with the host company (the carrier), don't need to find new customers immediately because they are using the carriers' already existing customers and market venue. (Czinkota, Ronkainen, 2007, 302. Kazi, Lecture 2, dia 6).

Piggybacking can be explained easily with shopping mall example, like Paul B. Brown did in his article in Inc.com. Shopping malls have lots of different shops where you can buy many different things. Usually shopping malls are thought as a big shopping centers but Brown gives a thought that they can also be a big supermarkets which has many different brands inside it, small shops. Those places just have "rented" the big "supermar-

kets” space in form that they give some of the money to the host when products are purchased, some percentage of revenue. Stockmann supermarket can be imagined as one.

They rely on that thought like in big shopping malls where is lots of shops and lot of different kind of people with different needs to purchase something. If somebody needs some socket wrench to fix their bicycle, they might as well look at the new bikes (as in bike and socket wrench suppliers are different companies), using each other’s customers.

Brown also gives some good guidelines and things to remember if wanting to make some piggybacking with your business. There is some six points from him which are:

- *Other company’ (the hosts) customers are also your company’s customers*
 - Because you are setting up within someone else's shop. Some customers already exist. There is no need to find your own customers right away.
- *Rents are low*
 - -- at least at first -- and you don't waste time identifying prospects. Your host has already done it for you.
- *Go where the people are*
 - Main thing is to sell in places where goes a lot of people. If your profits aren't good enough on each product you sale, then would need a lot of volume. Therefore would need many places to sell the products.
- *Be compatible with your host*
 - While trying to get your host's customers to be your customers, there should be some kind of common ground between products. If not, reconsider the place.
- *Bring something to the party.*
 - *Just as you are counting on your host's customers coming to you, your host is counting on you to increase traffic.*
- *Remember, you are beholden.*
 - The host decides when the place is open. If weekends are good selling time and the place is only open on weekdays or so, it should be reconsidered. (Brown, inc.com, 1988.).

Direct export:

In direct export company needs to do all of the background work by themselves – such as building up contracts, conducting market research, and arranging the documentation and physical distribution, as well as establishing the pricing and branding.

Laurel Delaney has made a very good summary about direct export, its advantages and disadvantages in chapter 8 from his book that is presented in scribd.com.

The advantages of this method are:

- *Your potential profits are greater because you are eliminating intermediaries.*
- *You have a greater degree of control over all aspects of the transaction.*
- *You know who your customers are.*
- *Your customers know who you are. They feel more secure in doing business directly with you.*
- *Your business trips are much more efficient and effective because you can meet directly with the customer responsible for selling your product.*
- *You know whom to contact if something isn't working.*
- *Your customers provide faster and more direct feedback on your product and its performance in the marketplace.*
- *You get slightly better protection for your trademarks, patents and copyrights.*
- *You present yourself as fully committed and engaged in the export process.*
- *You develop a better understanding of the marketplace.*
- *As your business develops in the foreign market, you have greater flexibility to improve or redirect your marketing efforts.*

The disadvantages:

- *It takes more time, energy and money than you may be able to afford.*
- *It requires more "people power" to cultivate a customer base.*
- *Servicing the business will demand more responsibility from every level of your organization.*
- *You are held accountable for whatever happens. There is no buffer zone.*
- *You may not be able to respond to customer communications as quickly as a local agent can.*
- *You have to handle all the logistics of the transaction.*
- *If you have a technological product, you must be prepared to respond to technical questions, and to provide on-site start-up training and ongoing support services. (scribd.com, Delaney, 2008)*

5.1.2. Assembly operations:

Assembly operations method mean that company transports some or most of the products to another country after manufacturing their products in domestic country. Then those products are used to assemble the final product in target exported country. In this strategy its purpose is to gain each country's comparative advantage. (Shaw, Onkvisit, 2009, 307-308). Everyone benefits. Assembly operations method is commonly used for example in auto-industry. Motors are manufactured elsewhere and the rest of the car in another country.

In our case this kind of method is also very usable when factors in China can make the led-components and export those in Finland where Finnish companies can make the final product. Like some advertising billboards from led-lights (picture 1).



Picture 7. Made out of led-lights. Led-video screen. Taken in Shanghai Auto Expo – trade fair. Halonen Toni, 2011.

5.1.3. Contract manufacturing

In contract manufacturing client has some demand for manufacturing some products when being unable to produce the whole products or its packaging by themselves. At that point it's more efficient to make contract manufacturing agreement with another company that can provide those wanted products. In one word contract manufacturing is: outsourcing. In pharmaceutical industry this kind of procedure is commonly used. (What is contract manufacturing?, 2003-2011.).

Advantages of contract manufacturing for the manufacturer are that it can guarantee steady work when making a contract for certain period of time, i.e. 2 years. *For the client, there is no need to purchase or rent production facilities, buy equipment, purchase raw materials, or hire and train employees to produce the goods.* Everything in production has been outsourced, so there isn't also any problems or worries concerning equipments, training employees to do that certain job if not competent, etc. (What is contract manufacturing?, 2003-2011.).

5.1.4. Licensing agreement:

Czinkota and Ronkainen (2007) defines that in a licensing agreement *one firm (the licensor) permits another firm (the licensee) to use its intellectual property in exchange for compensation designated as a royalty*. This is a good method for persons/companies who have some idea which they want to execute but don't have the know-how or possibilities to manufacture it. Licensing agreement is also good to use when: Trade barriers makes importing impossible or too expensive, as in import restrictions discourage direct entry or when capital is scarce or when a country is sensitive to foreign ownership. (Shaw, Onkvisit, 2009.).

Licensing agreement allows a quick access to foreign markets and licensor doesn't have to own factories in target country so it makes it more low-risk investment. Licensor can benefit from licensees making their marketing and advertising the products, so it's free marketing. Also the know-how in licensee's company can extend the existing product to new categories making new products if the licensee has some expertise which the licensor doesn't. (Shaw, Onkvisit, 2009, 296-299.).

Downsides are reduced profits, possibility to nurture future competitor if not made fool-proof contracts and licensee's poor performance also can be a burden for licensor.

5.1.5. Joint ventures

Joint ventures *are collaborations of two or more organizations for more than a transitory period*. (Czinkota, Ronkainen, 2007, 300). Partnership at corporate level. In joint ventures partners share risks, assets and profits. Given knowledge for the joint venture also may differ widely between funds, technology, know-how, sales organizations, or plant and equipment.

Advantages of the joint ventures:

According to Czinkota and Ronkainen (2007) the two main reasons to make a joint venture are governmental and commercial. Governmental reason means that if government wants some restrictions to reduce the extent of control that foreign firms can exercise

over local operations. Meaning that over time the foreign company, which holds a minor ownership might gain control of the local firm and start influencing the enterprise. At the same time other countries might recognize benefits of foreign direct investment and start to gain more control over local firms. (Czinkota, Ronkainen, 2007, 300-301.). In commercial benefits both companies can pool their resources as in one greater resource. If another one has some specialty that another doesn't they benefit from each other's resources. Also market penetration in one's country through joint ventures is much easier because there are ready distribution channels. (Czinkota, Ronkainen, 2007, 300-301.).

Disadvantages of joint ventures:

There can be some problems in areas such as, implementing the concept, maintaining the relationship. Also conflicts of interest, sharing sensitive information and disagreements how profits are shared can arouse as problems before and in future. (Czinkota, Ronkainen, 2007, 301.).

5.1.6. Strategic alliance

Strategic alliance consists of partnerships where two or more companies have common business objectives and pursue agreed goals while they still can be remained individual organizations. Strategic alliances can be made in fields, such as products, distribution channels, manufacturing capability, project funding, capital equipment, knowledge, expertise, or intellectual property. (Czinkota, Ronkainen, 2007, 301. Wikipedia, 2011).

6. MARKETS

6.1. Target of the market research

Target of the market research is usually to gain new information about competitors, demands, environment, suppliers, products, customer satisfaction or something that company wants to gain knowledge about. To improve own company's operation, make it more efficient. In this case there is need to explore existing suppliers, what do they think about market demand and what kind of customers do they have, because they already have that knowledge.

6.2. Marketing environment

Marketing environment can be observed as in two categories which are macro and micro environment. Macro environment consist of factors that forms for the company worldwide environment to which company can't affect. Factors in micro environment are things that are very close to the company and its operations to which company has a chance to affect but not to control. Micro environment forms frames for the company where marketing are executed.

In micro environment, the focus is to observe the company's close range environmental matters that in day-to-day basis are involved in decision making.

Figure 4 therefore gave a good base for how did I approach the companies in the questionnaire.



Figure 4. Marketing environment. As in so called PESTEC-analysis (political, economical, social, technological, ecological, cultural) which can be used to analyze company's operational environment and its changes in future. (Bergström, Leppänen, 2009, 49).

6.3. Market behavior

6.3.1. Purchasers buying behavior

Organizations buy merchandises because they need those for their actions or to resell them forward or to produce and manufacture new products. Organizations as in private and public companies, communities, societies and institutions that have bought merchandises are raw material, technical products and services and as well as partially the same merchandises which the final consumers buy. For example paper products or led-lights.

Special features of organizational buying:

Consumption needs to which organizations buy merchandises are usually more rational than comparing to consumers. Basis in buying behavior inside companies are mostly the same kind than consumers. Different things are bought to different kind of needs and motives for why to buy, can differ. Organizational buying is also constant problem solv-

ing to which marketer should be able to answer. (Bergström, Leppänen, 2009, 145-146.).

Practically organizational buying has been seen as a more systematical as consumers behaviors. Large parts of consumption needs are predicted before and buying has been a sum of precise calculations. Usually in companies there is separate buying-organization with professionals who act inside in a certain frame which has been given them. Risks concerning to purchasing merchandises affect among other things to the length of buying process and structure of buying organization. And because organizations buying's are often expensive it can be harmful for whole business. (Bergström, Leppänen, 2009, 145-146.).

Usually there is many people who effect on organizational buying. Actual buyers deal with the buying occasion but products end-users (who might be the initiators for buying process), and other experts and effectors (from whom can have some guidelines or recommendations) have influence to that decision. To add in there is of course the final decision makers who approve the supplier and product. But though buyers have the authority to make decisions in most cases, can the top management come to involve doing the final decision depending on companies' course of actions and importance of the buying. So called gatekeepers can also be affecting in the buying. Those are for example technical department, secretaries and switchboard in company who guide information to others. Buying participants person that are involved in purchasing situation are dealing with the buying from different aspects. To get the marketing message right for the buying company it has to be focused right for right persons. Marketer have to be in some way familiar of the surroundings and ways how the company acts. (Bergström, Leppänen, 2009, 145-146.).

In the point of marketer there's usually not that many buying organizations, so instead of mass marketing, individualized business-to-business- marketing and networking are fundamental ways to act. Often product and marketing concept attached to that, a solution organizations problem, are tailored to every customer individually. Because organizations buyers are professionals in buying, or should be, they can use different kind of negotiation tactics' which seller should be familiar with. From small companies to public sector buying department, those buying methods differ quite a lot. For example pub-

lic sector usually has to tender all the procurements. Defining what kind of buying behavior that exact company uses or has could be decisive matter, that selling company can offer for the company right solutions and act the right way.

(Bergström, Leppänen, 2009, 145-146.).

6.3.2. B2B buying process

Next chapter I'm going to observe organizational (business to business, B2B) buying because marketing solutions are usually done by mirroring customers buying behavior. So when the marketer knows the markets like his own pockets, the better ground it will be based to success. That is because there is many factors that affect to organizations buying. (Rope 1998, 17.)

Rope (1998) limits down four different aspects that effect on organizations buying utilities; those are (3. Table):

- Product
- Competitors that already are operating in present markets and overall competition
- Buying organization
- Situation of buying

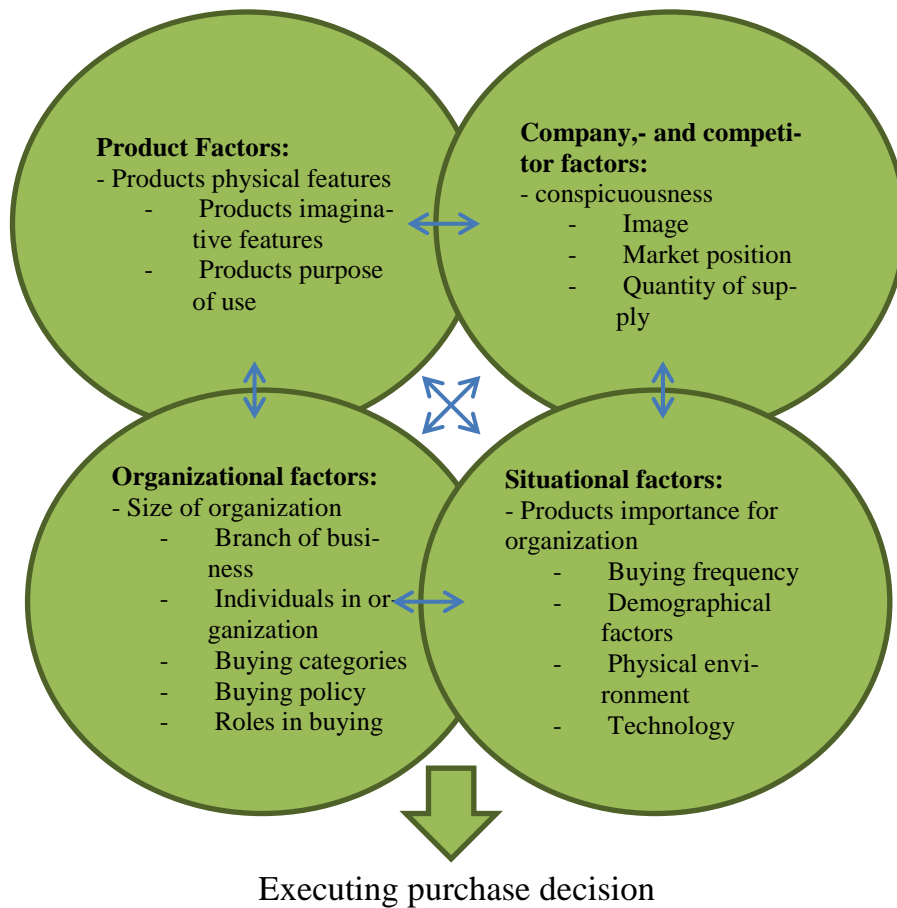


Figure 5. Factors that effect on organizations buying utilities, (Rope,1998)

Factors that the figure 3 describes affects altogether in the final decision which the operational section in the company makes. According to that table, there are a lot of environmental situations that affect in organizational buying, for example recess or new technology coming to markets, etc. Also changes or problems and aspects inside the companies affect into the buying behavior of companies. (Rope, 1998).

Attendee Buying process	User	Influencer	Buyer	Decision maker	Coordinator
Recognizing and defining needs	x	x		(x)	
Finding optional solutions	(x)	x	(x)		(x)
Finding purchasing sources		x	x		(x)
Evaluating options		x	x	(x)	(x)
a) Decision		(x)	(x)	x	
b) Buying		(x)	x	(x)	
Experiences	x	x	x	x	(x)

Figure 6. Describing organizational buying process and who do attend into it in different roles. (Rope, 1998, 19).

Figure 5 above gives a good basic understanding how organizations behave in buying process and how many people might affect in that occasion. Bergström and Leppänen also mention that organizations and consumers buying have many similarities in their processes (Bergström, Leppänen, 2009, 147). Relating to that diagram, in this thesis I want to concentrate mostly into the first section, recognizing and defining needs in those companies that sell or need led-products.

Looking at the figure three and four, those could be compared and see how they are very closely related to each other's. Markets behavior affects to organizations buying and organizational behavior affect in environments possibilities to buy (depending on companies marketing strategies).

After doing the research in that first section we can move into offering the solutions for companies and concentrate what markets demands are.

7. RESULTS OF THE RESEARCH

7.1. LED-light markets In Finland

7.1.1. Competitors and possible affiliates

After some searching in the internet I found many kinds of resellers and wholesale companies who sell led-products to businesses and customers, as in end-users. In whole Finland according to Rajala (2011) there are only around 200 professionals working on lighting industry offering lighting-products, so very small amount.

Their customers are mostly (three out of four companies that I interviewed) other companies (business-to-business) to whom they offer professional lighting products which were electrical designers who make the final concepts for the end users and companies who want to make different kinds of lighting advertisements.

7.1.2. Development of the led-markets

Those are, if we are talking about just within SLO, led markets are very rising branch all the time. And if talking about led-lights, there are coming frequently new replacing products which replace those old solutions like fluorescent lamps. According to my own comprehension it feels like that this market situation is about to explode in hands. Led is going to conquer the markets in short period. (Ruopio, P. SLO, 2011).

Toni: What do you think how markets have developed in these past 5 years and how it is going to develop in becoming 5 years?

I'd say that in becoming 5 years is going to be a lot more progress and development comparing to the past 5 years. There is going to be huge development because recently they are starting to get to the core of it. (Ruopio, P. SLO, 2011).

“Juha: Well, it’s a bit contradictional thing when you have to think about the basic use in households, but if that is left out and we would just think about public sector, then there it’s depending on how’s the target. In public sector we have accomplished many targets, some of them are pilot projects which ones you don’t have to care that much yet because those are pilot projects. But it goes like, that in factory conditions where is wanted led-products because of its long life. And parking slots are one place too where is wanted led-lights because usually they have common problem that those aren’t warm enough. For a fluorescent lanp it might take a while to light up in winters and outside/street lighting it has worked through itself to markets.” “Whole Finland’s share of led-products in lighting industry is very small. Of 200 million euros yearly lighting market revenue led-lights share is about 4-5 million euros this moment. “

Unfortunately few years ago when all kinds of came to markets to offer led-lights, they practically destroyed markets for a while. They gave promises they couldn’t keep, like they don’t use much electricity. Well, those products didn’t use much because they didn’t give light much. (Rajala, J. Glamoxluxo, 2011).

According to the interviews, in Finland it seems like that the markets are developing slowly and steady because many suppliers and professionals don’t trust yet that much to new products because there aren’t yet that much user experiences. They trust only to certain big brands that have shown in time for being long time in markets that they are reliable and having high-class products. Though the price might not be that low. So companies are willing to pay for the quality and the feeling of certainty. It was surprising to hear from Rajala (2011) that few years back some companies that came in the markets and offered led-products, they gave promises for their products that they couldn’t kept so through user experiences, it crashed some of the trust. According to Rajala it (2011) it affected to the markets in a bad way by lowering the sales volume among users in led-products. But after that, led-markets have developed annually a lot since then. All the companies, from whom I have gotten responses, said that in the past three or five years their revenue in led-sector has even doubled every year. But they still have just a minor percentage of led-products of all their product range. Rajala (2011)

mentioned that led-products cover from total revenue in Finland around 1-2% when total revenue was around 200 million and led's cover only a share of 4-5 million.

Product development is also very fast these days. Ruopio (2011) from SLO Oy says that they are having so many new products from manufacturers all the time that it's sometimes even hard to keep up the following the product development and picking up the right products to their own catalogue. Also in other companies that I interviewed, told that their product catalogue changes almost every year or have many new products on a monthly basis.

Basic lighting sources like lighting bulbs are becoming to be extinct in Europe in these upcoming few years. So there have to be some energy-sufficient replacements and in most cases led-lighting sources are doing those replacements. (Ruopio, P., 2011). Incandescent and quicksilver bulbs which are lighting sources are also being drawn off the markets by the end of March 2015 (tekniikkatalous.fi, 2009). So there have to be found replacement products for lighting and this moment led's seem to be developed enough to make those replacements.

7.1.3. Which sectors are developing the most?

All the people that I interviewed had almost the same visions about how upcoming markets are going to develop and which area the most. They listed those following things shown below, only in different order of importance. Industrial, office and street lighting usage were the top three.

“When these products develop and already looks like that there is products that can lighten up office and industrial spaces, and when those products work, they are going to have big markets in the future. So biggest markets might be office spaces. Hotels, which have different types lighting, they have existing led-lighting solutions very much. And these public spaces, schools, daycare centers are going in that direction too, like street and road lighting. (Ruopio, P. SLO, 2011)

Next growing area is going to be industrial and these parking halls. One interesting thing is these greenhouses. I'm waiting that if there is going to be a led that could produce light which plants need. That company is going to be very successful." "Also lighting outside households is going to be a big thing." "In industry there have been wanted led-lights because of its long life. And also parking slots are one in where have been wanted led-lights because there is a problem that those are so cold. For fluorescent lamps it might be too much because of the coldness. Also in outdoor and street lighting it is taking its place." (Rajala, J. Glamoxluxo, 2011)

Toni: Can you say, let say thinking about Tampere that where is led-products going to ve most used?

Eurovalaisin: I'd say that in outside lighting. It's hard to say. But for example those quicksilver bulbs are forbidden. But how much led is going to replace lighting technology or are we going to use something else, is still a bit mystery for me. (Eurovalaisin, 2011)

Market-sectors that are developing the most in upcoming years:

- Industrial
- Office spaces, hotel's, auditoriums, schools
 - Lighting sources are still in the progress of development because those are still not powerful or cost-effective enough
- Parking halls
 - Positive: Parking halls are cold especially during the winter in Finland and in cold conditions fluorescent lamps have difficulties to light up
- Greenhouses
 - If someone discovers how to use them effectively and use up all the lighting power of led
- Outside lighting
 - In households
 - Roads, walking streets
 - European Union made regulations for the old lighting system that there can't be used some of the old lighting sources. (sahköseura.fi, 2009) www.sahkoseura.fi/eu_direktiivi.pdf

But there are still many areas in those that need to be developed. In industrial lighting Eskelinen (2011) said that because of high temperatures in factories led-lights wide out too easily. Led-products still can't tolerate the high temperature which is a big problem. And in office lighting led as a lighting source is still too "sharp" which is a problem for computer screens (Ruopio, 2011).

Ruopio, Rajala, Eurovalaisin.fi and Eskelinen, they all said that in outside lighting led is now giving the best results because it can bare coldness and be long lasting which also makes savings in maintenance fees. There is no need to order some leverage help to get in high heights if needed.

7.1.4. Buying behavior

We have learned that you have to pay to get quality. At the end, it's the cheapest way to buy good led products and then we use these... Mostly when these advertisements are situated in places, for example, there is an advertisement situated at the height of a sixth floor and when one bulb turns out you have to get up there and change it. And that costs quite much. Actually, quality is the one and only thing. (Eskelinen, J. Neontekniikka, 2011)

Well, for me the price isn't the most important factor if I know that I will get good quality, and then I can pay more too. And one thing that I want to figure out is that how long guarantees those have, which is important. Also what I want to know is that safety aspects are reliable, quality is good and guarantees are good, price comes fourth as in last. Price isn't the most important factor for me. So first one is safety, then quality, guarantee and then price. (entrepreneur, Eurovalaisin, 2011)

Depending on the company's customer database their buying behaviors differ. Wholesale companies buy mostly products which lighting engineers want to use in their projects for end-users. Resellers try some new products what they think could sell and have demand, after having enough certainty of the product. Knowing and having enough test results are important before taking it for their own catalogue.

They buy often because new products come out constantly and therefore of course they are interested in new manufacturers and products to keep up in market development. But few things repeated itself which are important for led selling companies like Eskelinen and Eurovalaisin (2011) mentioned, and those are:

1. Stable quality (also guarantee and safety),
2. Competitive price
3. Delivery reliability
4. Products competitive advantage.

Those four objectives came up with every interviewee and the most important factor was quality and right after that price, naturally. They argued on behalf of quality because led-products are still unfinished product which has to developed in some areas, and because of being unfinished those companies are unsure about whether to buy or not if there isn't any experiences of it. Products imaginative features affect to buying (Rope,1998), although the product would be perfectly fine. That would be maybe the biggest frontier for Z-Sen Automatic Electric Co. Ltd. too. Assure that their products are high quality and will work as promised.

It was interesting to notice that price wasn't, according to interviewees' opinion, the most important thing. They are willing to pay more if they can get more stable quality. But in this point I can't make generalizations because sampling were so small.

Statistical info about customer-satisfaction -feed from earlier customer who has used those products already would've helped me in my interview and got those interviews even more productive. Finnish companies are maybe too careful sometimes comparing to companies abroad, so they want statistical info of energy consumptions, maintenance fees, etc.

8. CONCLUSIONS

Analyzing the markets/situation:

Led-markets in Finland are still evolving a lot and all over the world. And according to every person that I interviewed there are lot of space and opportunities in markets. Right now the uncertainty of being a good product affects to market development in Finland. Like Rajala (2011) said: Led-products have had much development but in overall sales it doesn't show that much yet.

In big companies it's going to be tougher because they make themselves led-products and if there is some trust issues and the command chain is also bigger it makes things more complicated (see table 6, Rope 1998). Then especially there would be needed some statistics and results that their products are high-quality and long lasting.

According to Rajala (2011) he also mentions that in whole Finland there are only around 200 professionals in lighting industry. It is very small amount and if things don't go well with some companies (i.e. deliveries are slow, quality is bad, etc.) it's also dangerous amount. It's dangerous because if some company in Finland has bad experiences about the products, delivery reliability or anything like that they might share that information with other similar entrepreneurs which might to lead to a point that no-one trusts you.

How to make the buying easier?

Trust issues and lack of experiences towards the products are the biggest concerns when starting to export. So trust and experience issues undermine a lot of new and unknown manufacturers abroad making it harder to sell for companies in Finland. To make that easier for both, to make a sell and buy with more certain feeling, Z-Sen company could make some customer feedback mapping from targets where is used their products. Statistics about energy consumptions, maintenance fees and targets that in which kind of places those are used.

Also being flexible on demands what buyers want in their products to be. All of the interviewed people required that from the supplier, to be flexible.

Possibilities?

Based on this research it was shown that if the products are high quality, has competitive price (China price), delivery is working and oneself can make required adjustments on demand, then exporting to Finland would be a working and profitable concept.

Markets are just about to get the spike in selling growth. On advertisement area there aren't yet many big led-screens either in public premises. That sector I didn't study in this case so it's a whole different business area.

Many areas, which I mentioned earlier in results section, give lot of opportunities. But it seemed that the best things to offer are in industrial, office and public outdoor lighting. Public outdoor lighting rapidly because there have been those regulation changes in European Union forbidding some lighting sources.

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10. APPENDIXES

A questionnaire which I send through e-mail to 20 different companies and used as a base in my interviews (first in Finnish, then same in English):

Kyselylomake:

Kiitoksia paljon osallistumisestanne opinnäytetyöni tutkimukseen koskien LED-valojen markkinoita Suomessa. Tutkimus on tehty kiinalaiselle yritykselle nimeltä Z-Sen Automatic Electric Co.Ltd., joka toimii Shanghaissa, Kiinassa.

Z-Sen Automatic Electric Co.Ltd. etsii tutkimuksen avulla tietoutta LED-tuotteiden markkinoista Suomessa sekä yhteistyökumppaneita.

Mikäli ette johonkin kysymykseen halua vastata voitte jättää vastaamatta, luonnollisesti.

Etukäteen haluan kiittää ajastanne ja vastauksistanne. Ne auttavat minua saattamaan opinnäytetyöni päätökseen ja valmistumaan.

Paljon kiitoksia!

Yrityksestänne:

1. Nimenne:
2. Missä asemassa työskentette yrityksessänne?
3. Yrityksenne nimi:
4. Kuinka pitkään yrityksenne on myynyt led-tuotteita?
5. Millaisia asiakkaita teillä on?
 - a. Yrityksiä
 - b. Kuluttajia
 - c. Julkiset organisaatiot, säätiöt, yhdistykset
6. Millaisia tuotteita he pääasiassa ostavat?
 - a. Millaisia määriä?

7. Kuinka paljon teillä on led-tuotteiden myynti kehittynyt viimeisen kolmen vuoden aikana?
8. Käytättekö ulkomaisia vai kotimaisia toimittajia? Mikäli ulkomaisia niin minkä maan/maiden toimittajia?
9. Millä perusteella valitsette toimittajanne?
10. Millainen olisi ”ihanne” toimittajanne?
11. Kuinka usein ostate uusia tuotteita?
 - a. Kuukausittain
 - b. Puolivuositain
 - c. Kerran vuodessa
 - d. Muu. _____
12. Millä perusteella valitsette ostettavan tuotteen? Mikä vaikuttaa ostopäätökseenne?
 - a. hinta
 - b. Laatu
 - c. Toimitusvarmuus
 - d. Tuotteen alkuperä
 - e. Jokin muu, mikä _____
13. Miksi?

Tuotteista ja markkinoista:

1. Mitä mieltä olette nykyhetken led-tuotteiden markkinoista?
2. Entä mitä mieltä olette tulevista markkinoista ja tuotteiden käytöstä sekä niiden kehityksestä? Miksi?
3. Millaisia led-tuotteita myytte eniten?
4. Onko joitain led-tuotteita, joita teillä ei mahdollisesti ole, mutta sille voisi olla kysyntää?

Z-Sen Automatic Electric Co. Ltd.

1. Haluatteko kuulla myöhemmin lisää Z-Sen Automatic Electric Co.Ltd:n mahdollisuuksista ja tuotteista lisäten teidät kontaktilistalle myöhempää yhteydenottoa varten?
2. Olisiko teillä nyt tällä hetkellä mielessä joitain tuotteita, joista haluaisitte kuulla lisää?

Muuta kommentoitavaa:

Voiko tietojanne käyttää opinnäytetyössäni (nimeänne/yrityksenne nimeä)? Työ on julkinen. Mikäli ette halua tietojen tulevan julkiseksi jäävät ne vain minun käyttöni opinnäytetyöni ajaksi.

- a. Kyllä
- b. Ei

Oikein paljon kiitoksia vastauksistanne ja käyttämästänne ajasta!

- Toni Halonen

Questionnaire:

Dear X,

Thank you very much for participating in my research about the markets of LED-light products in Finland. The research is made for company that collaborates in China, primarily in Shanghai. I am very happy about the respondents that take part in this survey and every answer gets me closer to graduation, so I'm very grateful.

Z-Sen Automatic Electric Co.Ltd. is looking for affiliates through this survey. After this survey results are send to all correspondents if one has allowed.

Please don't rush the answers. I rather wait a few more days for good answers than get fast ones tomorrow.

But once again, many thanks for your time,
I appreciate it!
Kind regards,

Company background:

1. Your name:
2. Name of your company:
3. In what position are you working in this company?
4. How long your company has been selling LED-products to customers?
5. What kind of customers do you have?
 - a. B2B
 - b. households
 - c. public organizations
6. What kind of products they usually purchase?
 - a. What kind of quantities?
7. How much your company's selling has developed in the past 3 years?
8. Does your company use domestic or foreign sellers/factories/wholesale-partners?
9. Does your company have some sort regulations from whom you can buy?

10. How often do you buy new products from resellers?

- a. Monthly
- b. Every half a year
- c. Once a year
- d. Other..

11. based on which arguments, how do you choose the products? What affects your buying decision?

- a. Price
- b. Quality
- c. Delivery reliability
- d. Origin of the product
- e. Something else, what _____

12. Why?

About products:

1. What do you think about present demand in LED-light markets?
2. What kind of products do you sell the most?
3. Are there some products you don't sell but there is a demand for it?
4. What do you think about upcoming markets in Finland? Why?

Z-Sen Automatic Electric Co:

1. Would you like to hear more about company X? Can I add you to e-mail contact list to get in touch with you later?
2. Are there now already some products from which you would like to hear more, that you are interested in having in your product range?

Other comments:

Can I use your information (your name/company name) in my thesis? If this thesis is going to be public.

- c. Yes
- d. No

I appreciate your time and your answers. Thank you very much!

-Toni Halonen