

Mikko Ala-Mäenpää

**Analyzing a packaging company**

Case: 3Pack Group

Thesis

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## Opinnäytetyön tiivistelmä

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Tämän opinnäytetyön tarkoituksena on analysoida slovakialaisen pakkausalan yrityksen osaamista. Alun johdannon jälkeen tutkimus koostuu neljästä eri osiosta.

Ensimmäisessä osiossa käsitellään SWOT- ja PESTE-analyysien perusteoriaa. SWOT-analyysiä on myös jatkettu ns. laajennetulla SWOT-analyysillä. Lisäksi osiossa on ydinosaamisen teoriaa ja selvitetään prosessin käsitettä. Ensimmäinen osio keskittyy hyvin paljon myös pakkausalan perusteoriaan. Siinä tuodaan esiin eri pakkausmateriaaleja ja – tapoja.

Toisessa osiossa käsitellään tutkimusympäristöä. Aluksi esiin nostetaan pakkausalan tilastoja maailmanlaajuisesti. Tämän jälkeen tarkastellaan Slovakian teollisuusrakennetta ja lopuksi tarkastellaan hieman tutkittavan yrityksen historiaa.

Kolmannessa osiossa 3Pack Groupin eri yritykset ovat analysoitavana. Jokainen eri tehdas valmistaa eri tuotteita ja emoyhtiöt on jaettu alueen mukaan.

Viimeisessä osiossa tarkastellaan lyhyesti tämän tutkimuksen kulkua ja luotettavuutta. Myös ehdotukset tulevaisuuden tutkimuksista ovat esitettyinä.

Avainsanat: yritysanalyysi, SWOT, PESTE, pakkausteknologia, osaaminen

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## **Thesis abstract**

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The purpose of this thesis is to describe know-how of 3Pack Group, a packaging company located in the Slovak Republic. After introduction in the beginning, this research contains four parts.

First part includes basic theory behind SWOT- and PESTE-analyses and explains concepts of core competence and process. First part also includes basic theory of packaging technology.

Second part presents the research environment. First the packaging industry is viewed globally with some statistics. After that is presented industry structure in the Slovak Republic. Last is short introduction to 3Pack Group's history.

In the third part, different companies in 3Pack Group are analyzed.

Last part presents the progress of this research. Also some recommends to researches to do in future are given.

Keywords: company analysis, SWOT, PESTE, packaging technology, know-how

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## **Used terms**

### **SWOT-analysis**

Analysis which takes account of company's internal (strengths and weaknesses) and external (opportunities and threats) factors.

### **PESTE-analysis**

Company's environmental analysis which consist of political, economic, social, technological and environmental factors.

# 1 INTRODUCTION

Packages can be seen everywhere. Nowadays almost all the goods people buy, have a package: television, candies, medicine etc. Some companies produce packages for end products, others for industry. The packaging industry is a world-wide industry. In long distances, transport costs would rise very high. Therefore packaging companies usually operate in relatively small areas. Packaging companies are often located near some big factories that need their products.

The packaging industry is worth of billions of Euros (ReportLinker, [Refferred 25.11.2013]). Usually people do not even think about packaging industry. Companies in the packaging industry usually do not advertise to consumers. The packaging industry companies usually produce products for other industries and consumers get packages with products they buy.

Nowadays people are aware of environmental issues. Packages are usually used only to protect products on their way to customers. After that they are thrown away and it makes pollution. That makes packaging industry to develop their production more environmentally friendly. As awareness of environmental issues rises, governments follow and set laws to protect the environment. These laws also force companies to develop their production.

## 1.1 Research problem

The purpose of this thesis is to describe the main processes and know-how at 3pack Group. 3pack provides customized packaging solutions based on customers' needs. 3Pack Group consists of a main company and few companies which produce wooden pallets, cardboard boxes and different kinds of blisters.

The idea is to describe what makes 3pack Group valuable to customers and how they benefit from it. In the packaging industry, there are some big multinational companies and especially Asian companies that are interested in expanding to Europe.



Relationships between 3Pack Group companies are also analyzed. In this kind of business where whole packaging solutions are sold, cooperation between companies is important. Without fluent cooperation the idea of the whole packaging solutions can be flimsy.

## **1.2 Research boundaries and methodology**

This study is limited to refer only 3Pack Group. In this field of industry is a lot of companies, but this research focuses on 3Pack Group and its know-how. The same approach can be used to other research, but outcomes on this study can be related only to 3Pack Group.

This study is a functional thesis by nature. The study employs qualitative and empirical means of research. The qualitative study was made by interviews. In every factory, there was one contact person telling about the functions and answering the questions. The factories were visited and their functions were explored under the guidance of a contact person.

An empirical study was made partly at the same time as the one qualitative. Functions were observed and the contact person presented facts and details.

## **1.3 Research method**

A functional thesis varies from other thesis methods. Often theses are divided into qualitative or quantitative researches. In the functional thesis boundaries between these are not so exact, even though methods are same (Vilkka & Airaksinen 2003, 57). The functional thesis is a combination of different methods.

In the functional thesis, the quantitative method is used if wanted result contains measurable and numerical information. If wanted result is a study or a statement by nature, qualitative method is reasonable (Vilkka & Airaksinen 2003, 58-63).

#### **1.4 Getting information**

There are many ways to get information about subject. In this research information is collected in many ways. Basic information about companies and their functions were gathered in an excursion to Slovak Republic and 3Pack Group companies.

Nowadays a lot of people have a computer with an internet connection at their homes. It is a very handy aid while gathering information, especially when the source of information is in other country. In this research most sources were located in the Slovak Republic.

## 2 THEORY OF PACKAGING COMPANIES

The theory part focuses on background of company analyzes and the theory of packaging. First part is explanation of meaning of company analysis and how they are supposed to use. Under the first part are sections about concept of process and core competence. It is important to know these concepts to understand the entirety of this research. At the end of the first part, two widely used environmental analyzes are introduced.

The second part explains aspects about packaging design. Package has many purposes in a supply chain. Some factors for packages are precisely defined by the law or other standards.

### 2.1 Company analysis

Company's analyzing work should be continuous process (Kamensky 2010, 113). Too often it seems to be intermittent process and it is something companies see to be difficult, laborious and barely rewarding.

Analyzes have always some goal. Kamensky (2010, 114) lists three factors how analysis work benefits company:

1. It creates a basis for creation, realization and renewal of strategies.
2. It improves knowledge at the starting point about environment and the company and their interaction.
3. It develops people's strategic skills by improving analyzing skills and people's will to strategic work. Besides, analysis work creates conditions to understand common strategies.

Analyzes creates the basis for successful business. It is important to know the starting point and the environment. Environment changes all the time and sometimes it is not so easy to predict where the changes are leading (Kamensky 2010, 114).

There are a lot of different kind of analyzes. Basically analyzes are divided into two groups: environmental analyzes and internal efficiency analyzes (Kaminsky 2010, 115). Also third group is developed, so called synthesis analyzes, which are combination of different analyzes. There can be combined both environmental and internal analyzes.

According to Kamensky (2010, 117), analyzing process has three main steps:

1. Preparation step
2. decision step
3. implementation step

At the beginning of analyzing process, it is important to think what is being analyzed and why. Proper boundaries should be set to get good results. Kamensky (2010, 118) proposes that too narrow or too wide research can lead to fatal conclusions.

Analyzing work is all about knowledge. In analyzing process is important to collect information. Obtained information should be reliable and valid (Kamensky 2010, 118). Validity indicates if information is from the right area and does it cover enough. Reliability of information is always complicated challenge. There are almost infinity sources of information: competitors, media, customers etc. Nowadays internet has brought information close to people. Also, it is easy to put information to internet. That's why it is important to think what sources are using.

Carefully made conclusions and decisions are prerequisite for analyzes to work properly (Kamensky 2010, 124). Afterwards is important to monitor the results and how they impact.

### **2.1.1 The concept of process**

The concept of process is ambiguity inherent. It has a lot of meanings. (Laamanen 2004, 19). It can describe almost every activity: eating process, thesis process, painting process etc. It is about phenomenon; when people have a new way to

understand functions, they use it in every context. Laamanen (2004, 20) summarizes that concept of process consists of activity, resource and artifact.

In industry which produces physical products, processes are easy to perceive by viewing the flow of products (Laamanen 2004, 20). There might be also related processes to core process, such as purchasing, manufacturing, testing, storage and delivering.

Laamanen (2004, 22) proposes that well divided processes give three benefits:

1. cooperation with customer works well
2. people working in organization understand the whole operation, their own role and how to add value in the whole organization
3. development of the operation will be based on organization's aims and customer's needs.

### **2.1.2 Core competence**

Core competence is know-how which organization's operations are based on. Tuomi and Sumkin (2012, 83) narrate that to identify core competence, it is needed to answer three-piece question: What can we do that

- is unique
- creates added value to customers
- creates new possibilities in the future.

Defining core competence, it is recommended to think three sections of business: business idea, vision and business field (Tuomi & Sumkin 2012, 83-84). Business idea tells what the company is doing and why. Vision tells what is the object of the functions and what is wanted. It is also important to know the field of business: what competitors can do.

Tuomi and Sumkin (2012, 85) present a tool to help defining organization's core competence. It has three main points:

1. Make a list of different skills
2. Which of those skills are critical and most important according to company's operations
3. Moot what connects those skills and how to describe core competence.

### **2.1.3 SWOT-analysis**

SWOT-analysis (Strengths, Weaknesses, Opportunities and Threats) is used in the research to analyze 3pack companies. SWOT-analysis takes account to company's internal capabilities and external possibilities. Both are divided to two parts: internal capabilities to strengths and weaknesses, external possibilities to opportunities and threats (Fleisher & Bensoussan 2003, 92).

Ken Andrews is often regarded as the developer of SWOT-analysis (Puusa, Reijonen, Juuti & Laukkanen 2012, 49; Fleisher & Bensoussan 2003, 92). Andrews developed SWOT-analysis in the 1960's.

SWOT-analysis estimates company's resources and environment's features (Viitala & Jylhä 2006, 59). Company's resources are listed in internal capabilities and it is something company can affect for. Environment's features and development are listed in external possibilities and usually company has only a little chance to affect for those factors. It is also useful to try to predict future's trends. Thus it is possible to plan the future (Puusa etc. 2012, 50).

Figure 1 shows the basic distribution of SWOT-analysis. It can be used by fulfilling four segments

Strengths are company's know-how and positive learning. For example professional workforce, long experience in the field of industry and modern hardware.

Weaknesses show company's sides that should be improved. It is not always possible to improve these things, so weaknesses should be matched to external possibilities to minimize them.

Opportunities tell what is happening outside the company. Analyst has to be aware of the environment; otherwise result of analysis will be faulty.

Threats are external factors that will make organization's operation harder. Those factors should be noticed while making plans.

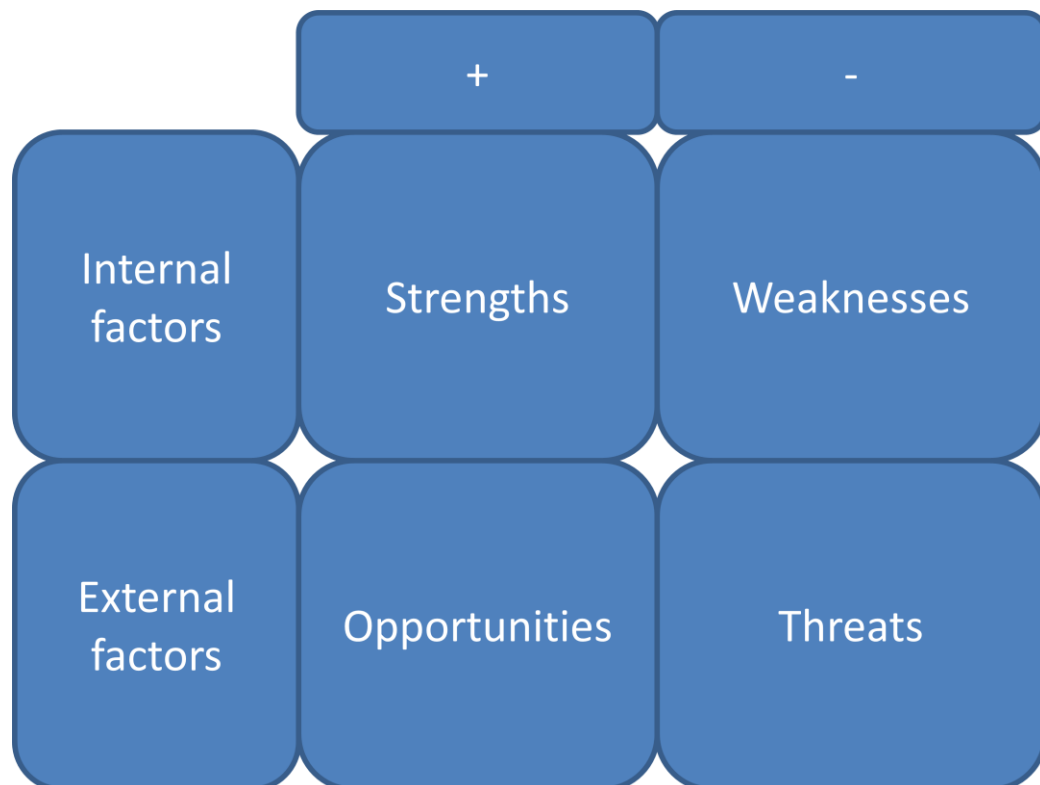


FIGURE 1. Basic SWOT-template.

Figure 2 demonstrates how to compare fulfilled parts. Comparing fulfilled parts gives conclusions. Viitala and Jylhä (2006, 60) proposes that SWOT-analysis should not be only writing down strengths, weaknesses, opportunities and threats but also make conclusions.



FIGURE 2. Help for SWOT-analysis. (Viitala & Jylhä 2006, 60.)

#### 2.1.4 PESTE-analysis

PESTE-analysis (also known as STEEP-analysis) is a tool to analyze external factors. Name PESTE consists of five terms: Political, Economic, Social, Technological and Ecological (Puusa etc. 2012, 41; Fleisher & Bensoussan 2003, 269). PESTE-analysis was developed to support management. It takes account macro-environmental issues which a single company's strategy can't affect.

Political issues relates to government and public attitudes (Fleisher & Bensoussan 2003, 273). Laws and acts affects to business in many ways. Laws can determine lots of activities in general and in a specific industry. Government can regulate business for example with entrepreneurial freedom, economic policies and taxa-



tion (Viitala & Jylhä 2006, 54). Some industries have lot of laws to define how to perform, for example, Finnish alcohol law: it gives orders when and where alcohol can be sold.

The economic component consists of all economic factors affecting surrounding environment. Environment's purchasing power determines companies' opportunities to operate and it consists of such things like incomes, saving, indebtedness, cycles, changes in the structure of consumption and international contracts (Viitala & Jylhä 2006, 54). Changes in macroeconomic environment affects differently in different companies (Fleisher & Bensoussan 2003, 273). That's why it is important to know industry and environment well enough.

The Social component refers to the environment's societal context (Fleisher & Bensoussan 2003, 272). For example demographics, cultural attitudes, beliefs, lifestyles, education level, literacy rate and the mobility of the population are all affecting factors in environment.

Technology develops all the time. Over the last 100 years, technology has taken big steps. The development of technology has forced companies to conform to the times. Environment's technological competence defines company's possibilities (Viitala & Jylhä 2006, 55)

Nowadays ecological issues are growing bigger and bigger. Consumers are aware of their consumption behavior's effect to nature. Growing amount of population drives people to think about the future of our planet. Companies have to think ecological aspects in their business. Puusa etc. (2012, 46) narrate that sustainable development has become one of the key issues in many companies.

In conclusion, Mika Kamensky (2010, 132) presents a list of most affecting factors of each component.

#### Political

- legislation
- regulation
- support measures
- tax policy
- political attitudes
- international attitudes

#### Economic

- economic growth
- trends
- money markets
- inflation
- exchange rate changes
- monetary policy
- workforce
- incomes policy

#### Social

- social infrastructure
- values and attitudes
- lifestyles
- perceptions of the work
- consumption habits
- leisure time

#### Technological

- raw material technology
- manufacturing technology
- product technology
- information technology

#### Ecological

- land use and nature preservation
- waters and their protecting
- quality of air
- noise
- waste

## 2.2 Packaging

Packages have a big role in today's world. Huge amount of different kinds of products are used all over the world. Usually products are used far away from where they are produced. That's why it is very important to design packages well. Packages have four basic functions (Suomen Pakkausyhdistys, [Referred 21.9.2013])

- include the product
- protect the product from environment and environment from the product
- facilitate product handling and
- tell about product.

Co-operation between every partner from raw-material producer to package waste recycling is important to optimize the packaging solutions. Target in packaging planning is to work effectively in every part of supply chain. It is important to take on count many different things while planning packaging, like materials, composition, measurements, marks and environment.

### 2.2.1 Package as a cover

Package has to protect product. Product has to be unbroken and good quality when customer receives it. It means that package protects product from spoilage, breach, disappearance and stealing. Package also has to protect product from environment and the other way round. (Karjalainen & Ramsland 1992, 27)

Choosing the right material for package is important to protect the product. Package has to protect the product against mechanical, chemical, biological and climatic stress (Ritvanen, Inkiläinen, von Bell & Santala 2011, 68). Figure 3 points out different kinds of stress. Package has to tolerate many kinds of influences during its life cycle.

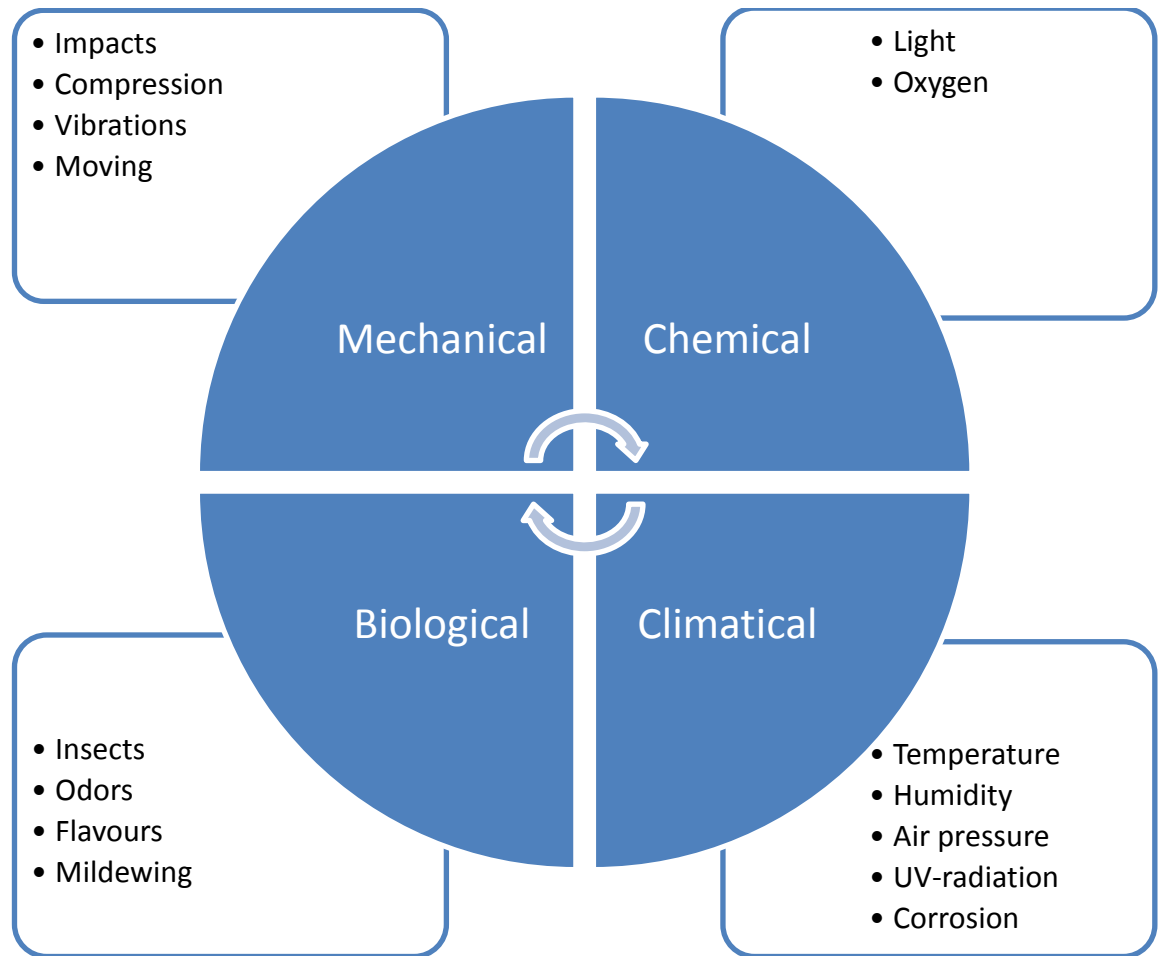


FIGURE 3. Stress for packages. (Ritvanen etc. 2011, 69)

Package is a part of a product. However, packer has to be aware that the product is packed also for the supply chain (Karjalainen & Ramsland 1992, 200). Package has to be sustainable. Package's supply chain starts when the product is packed and ends when the product is unpacked and the package is recycled or thrown away.

### **2.2.2 Package's appearance**

Package often tells a lot about product. Karjalainen and Ramsland (1992, 29) propose that package's appearance design is based on three main factors:

- what (product)
- who (manufacturer)
- to whom (customer)

In Finland, The Ministry of Trade and Industry's act of food's package labeling (1084/2004, § 3, §4) says that package has to give a clear and understandable image about the product. Same principle is good way to go with all kinds of package labels.

Package has to tell what it contains. If product can't be seen in a package, it is necessary to give an image of the product in some other way. (Karjalainen & Ramsland 1992, 29) It is important for transporter to know if there is something fragile inside or contents have to be transported in certain temperature. If labels are misleading, contents can get damaged.

Package tells often a lot about producer. In different countries are a bit different laws about how the producer has to be marked on a package. Karjalainen and Ramsland (1992, 30) narrate that it depends on company how they bring forward their name. It can be a guarantee of quality, but it can also give a negative image of product.

Packages' appearances are usually based on to whom the products are made for. Products for children look different than products for adults, products for industry look different than products for consumers (Karjalainen & Ramsland 1992, 30).

### **2.2.3 Standards for packages**

Laws give standards for packaging. Some laws in Europe are set by European Communities and some laws by country's government. Some standards are not set in the law, but they are general standards in an industry (Järvi-Kääriäinen &

Leppänen-Turkula 2002, 53). Standards are needed to ease transportation as well as to protect the product and environment.

Except for legislation, all standardization aims in a way or another to lower costs and simplifying activities. This kind of standardization is not punishable but consequences are usually economic (Karjalainen & Ramsland 1992, 13). With optimal package sizes is possible, for example, to minimize transportation costs.

Finnish standards association, SFS ry., determines standards in Finland. For example, in Finland are standardized two sizes of pallets: FIN-pallet 1000mm x 1200mm and EUR-pallet 800mm x 1200mm (Suomen Pakkausyhdistys, [Referred 25.11.2013]). Finnish standard SFS 3536 gives measurements for packages that are transported on pallets (Miten vältämme kuljetusvahinkoja 1989, 14-15).

#### **2.2.4 Materials**

Different kind of materials are used in packages. Fiber-based materials, like paper, paperboard and solid fiberboard, are most used (Karjalainen & Ramsland 1992, 50). Other possible materials are plastics, metals, glass and wood.

Fiber-based materials are environmentally friendly if pollution from producing is not taken to account (Karjalainen & Ramsland 1992, 50-51). Fiber-based materials are renewable and they are easily recycled. Such raw materials as paper, card board, paperboard and corrugated board are fiber-based.

The chemical industry has created plastic materials and still does (Karjalainen & Ramsland 1992, 76). Plastics are artificial material and their features are precisely defined before producing. Basically plastics are divided to two groups: thermosetting plastics and thermoplastics. Thermosetting plastics can be shaped only once and thermoplastics can be soften and shaped again. Most of the plastics used in packages belong to the second group.

Metal packages have many different materials. Steel is possible to be used as a raw material for many packages and most used material is tin-coated steel (Karjalainen & Ramsland 1992, 98). It is mostly used in techno chemistry and some

groceries. Aluminum is also widely used material. It is used for example in beverage cans, spray cans and tubes (Paltakari 2007, 80).

Glass is one of the oldest packaging materials (Karjalainen & Ramsland 1992, 106-107). Oldest found glass bottles are made about 3.500 years ago. Most of glass packages are bottles and glass is good material if package has to be impermeable. Old glass materials are also possible to recycle and use in producing new packages.

Resistance and strength of wood are used in pallets, cages and boxes (Rask & Järvi-Kääriäinen 2007, 69). As a natural material, wood is also appreciated to be used in gift boxes. Properly chosen and made wood package gives excellent protection to product (Karjalainen & Ramsland 1992, 109). It protects from impacts, allows stacking, prevents pilferage and eases handling.

### 3 RESEARCH ENVIRONMENT

This part of the study takes a review to research environment. The first part is about packaging industry worldwide. The second part introduces industry structure of Slovak Republic. The third part takes a short look at the history of the research object, 3Pack Group.

#### 3.1 Industry

The packaging industry is big industry worldwide. Yearly global packaging industry generates 380 billion Euros (ReportLinker, [Refferred 25.11.2013]). 100.000 packaging industry companies exist and they employ 5 million people.

Percentages of different materials vary on different sources. Figure 4 shows how total turnover of materials split in 2011. Most used materials were different kind of plastics with the share of 37 % (rigid plastics 27 % and flexible plastics 10 %). Second biggest materials were paper and board with the share of 35%. Metal has the share of 14 %, glass 12 % and other materials 2 %.

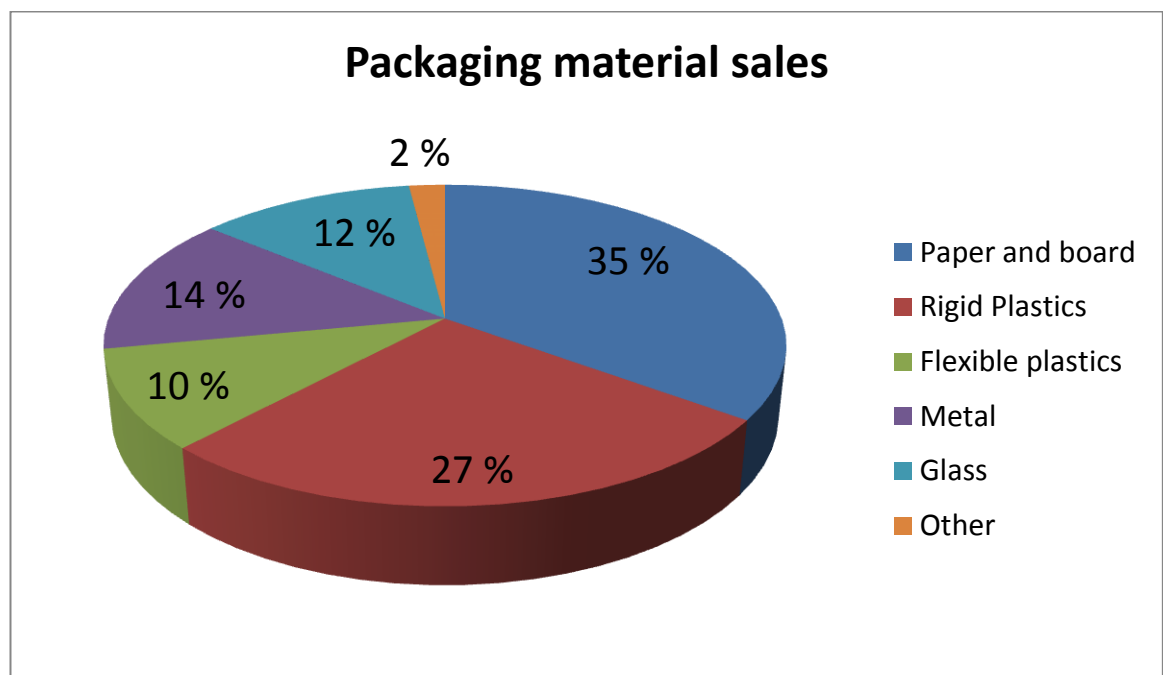


FIGURE 4. Worldwide sales by materials. (Bagge, R. 2013.)



Figure 5 shows where the packages were used in 2011. Over half of the packages turnover came from food industry with the share of 51 %. Other big industries were beverage industry (18 %), healthcare industry (6 %) and cosmetics industry (5 %). The rest (20 %) is other small industries.

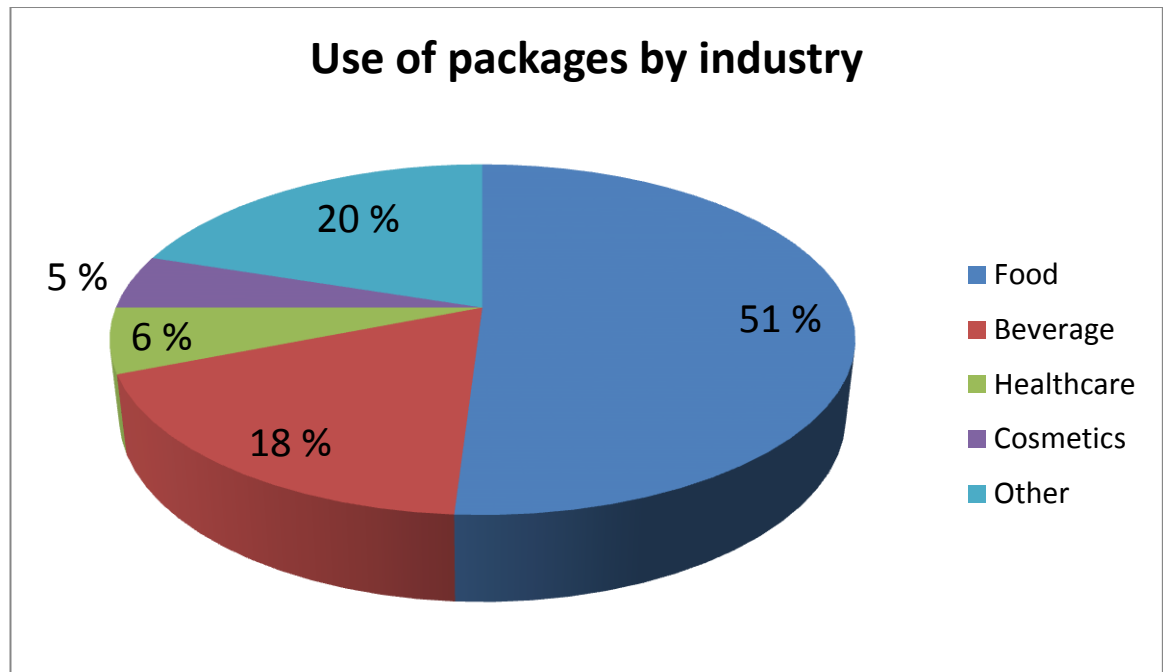


FIGURE 5. Worldwide sales by using industries. (Bagge, R. 2013.)

### 3.2 Slovakia

In 2011, Slovakia had the population about 5.400.000 (Statistical Office of the Slovak Republic 2011, [Referred 26.11.2013]). It has been almost the same since 1996, only little diversity.

In 2012, the biggest industry was manufacturing of motor vehicles, trailers and semi-trailers with the turnover of 19 776,8 million Euros (Statistical Office of the Slovak Republic 2013, [Referred 2.12.2013]). The second biggest industry was manufacturing of computer, electronic and optical products with the turnover of 5 744,2 million Euros. As can be seen, car industry is clearly the biggest industry in Slovakia.

### 3.3 Company

History of the 3Pack Group started in 1998 when Thomas Knappek, the founder of 3Pack Group, was responding to the needs on the market. Car industry was in need to find suppliers who would be able to supply products and services as a single complex. At first 3Pack was only buying products and selling them. In 2000 was time to establish the first production line. Palette-Wood was established to produce wooden pallets.

In 2005, management started thinking of getting more independence. Unstable suppliers of polypropylene and polyethylene made management to establish a new subsidiary, Trio Pack Plastic. Trio Pack Plastic was established in 2007.

At the same time, it was time to plan future of the company. A need to become independent in the processing of cardboard packaging emerged an idea of establishing a new sister company. 3Pack Žilina was established in 2007 to meet the needs of Korean car industry in Žilina and Ostrava Regions.

Because corrugated cardboard is 50-60 % of goods traded, latest move in long-term planning was to establish Big Box. In 2012 3Pack bought an inline production line of corrugated cardboard. Operation in the production line started in January 2013.

## **4 CASE 3PACK GROUP**

This part of the study focuses on 3Pack Group. Different 3Pack companies are analyzed separately. At first, the whole 3Pack Group is analyzed and below comes subsidiaries.

### **4.1 3Pack Group**

3Pack s.r.o. is a packaging company situated in Slovak Republic. It produces packaging solutions for companies. It is divided to 2 main companies, 3 pack s.r.o. and 3 pack Zilina s.r.o. 3pack group can provide all-in-one packaging solutions to companies. In 3Pack Group, there are different companies that produce wooden pallets, carton boxes and bubble wrap insulation. The specialization of 3Pack Group is that they can provide all this at once to customers. Customers can get packages they need from one provider.

3Pack provides packaging solutions only businesses. Amounts of products are big. Biggest customer for 3Pack is car industry.

3Pack is a registered trademark of 3Pack Group.

Figure 6 presents the structure of 3Pack Group. 3Pack Group has its headquarters in Bratislava.

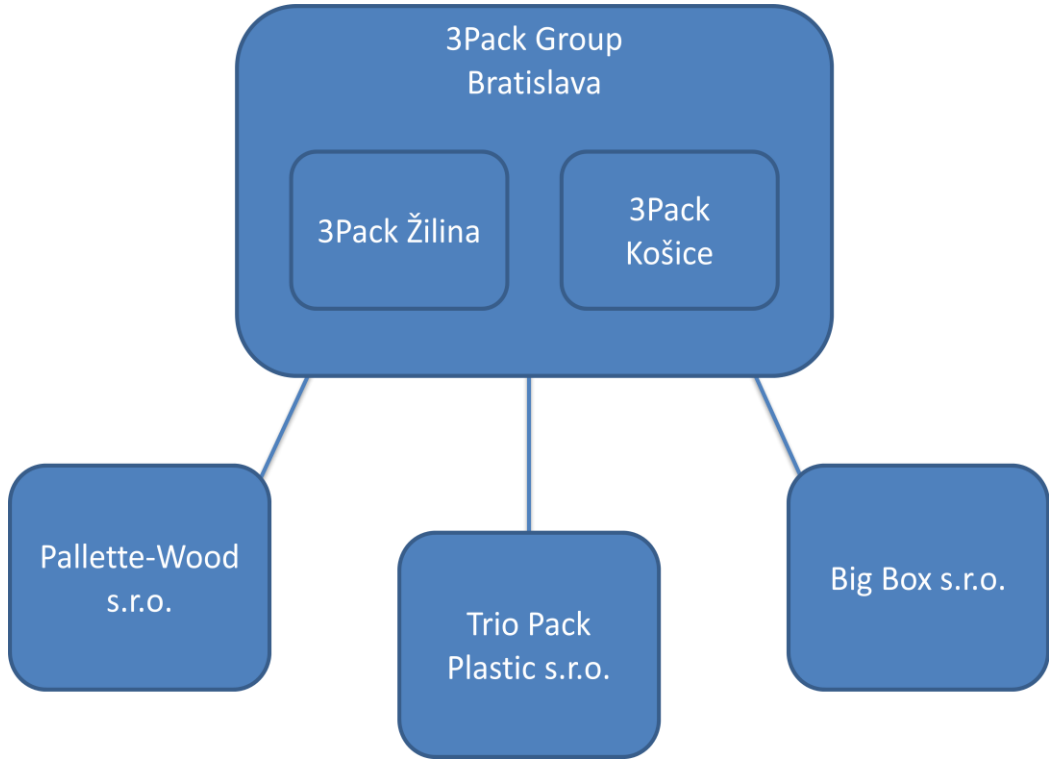


FIGURE 6. Structure of 3Pack Group. (Bytčanek, M. 2013)

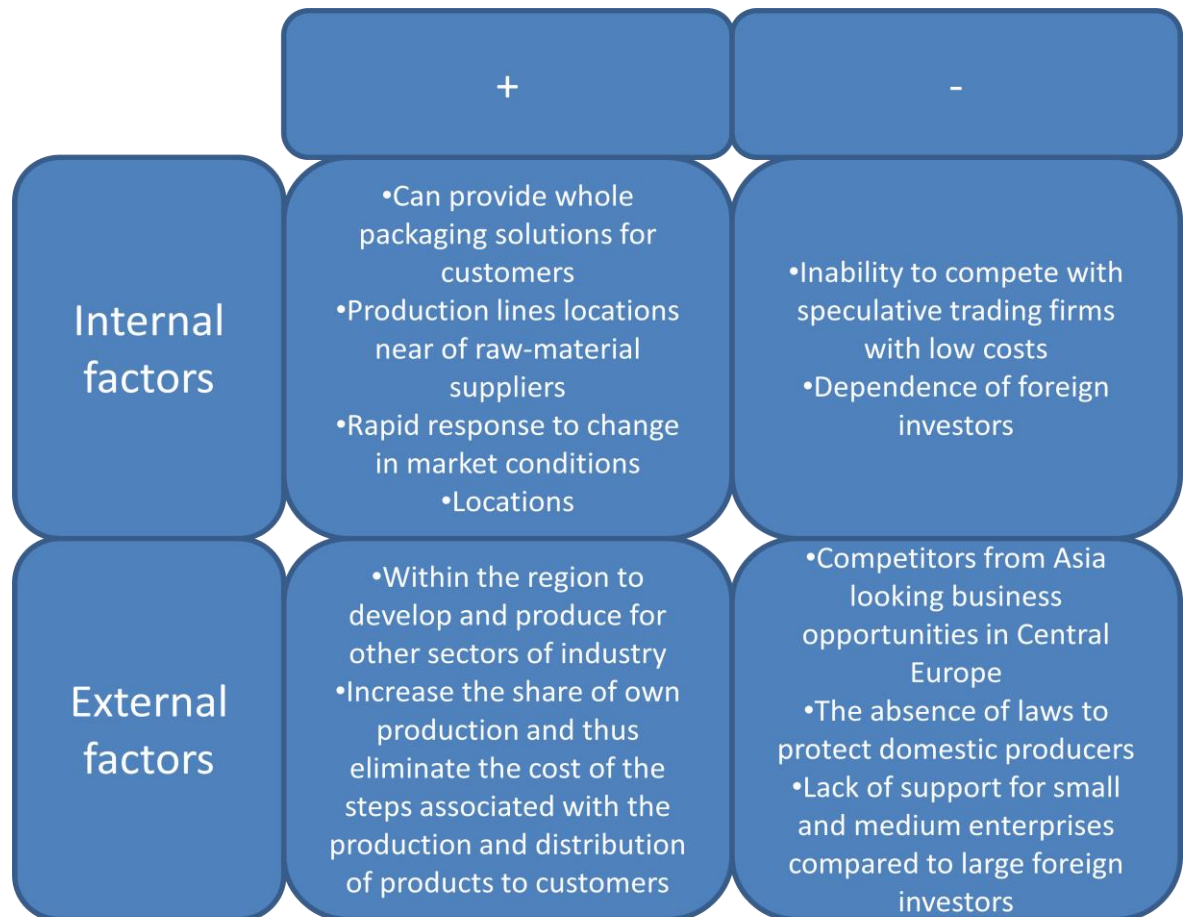


FIGURE 7. 3Pack Group SWOT-analysis.

Figure 7 shows SWOT-analysis of 3Pack Group. 3Pack Group can provide whole packaging solutions for customers. It is an advantage to customers, when they don't have to order every piece of packages from different suppliers. 3Pack factories are located near to raw-material suppliers. This helps keeping transportation costs of raw-materials low and it creates a possibility to keep the prices of products low. 3Pack can rapidly response to the changes in market conditions. It is possible to increase or decrease production rapidly. Locations of 3Pack factories are also near to industry. This also makes possible to keep transportation costs low.

Instability to compete with speculative trading firms is a weakness. Speculative trading firms operate with low costs and it is not reasonable to compete with low prices. 3Pack is dependent of foreign investors. A lot of foreign companies are investing to Central Europe and 3Pack's biggest customers are big foreign companies.

3Pack Group has a possibility to expand their products also for other sectors of industry. Now they are focusing mostly on car industry, but they are willing to expand to other sectors, for example food and building industries. By increasing the share of their own production, 3Pack Group is able to cut the costs. By cutting costs, it is possible to increase the profitability and offer cheaper products.

Asian companies are looking for business opportunities in Central Europe. Low prices attract also competitors of 3Pack Group. Big competitors usually have existing production methods and it is relatively easy for them to expand to other countries. Also, in Slovak Republic there is a lack of subsidies for SME companies. Government has subsidies to big foreign investors and thus makes it harder to compete with big companies.

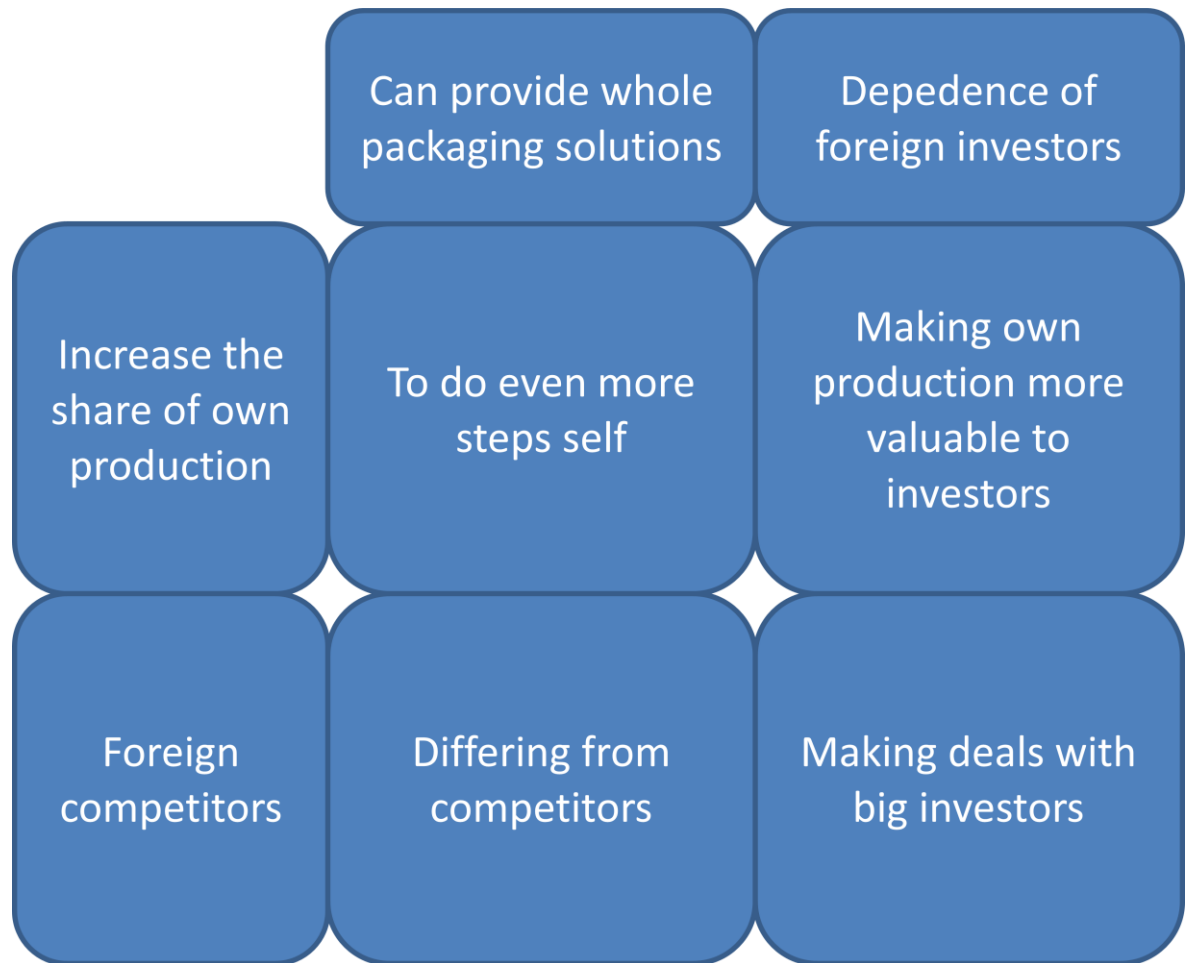


FIGURE 8. Extended SWOT-analysis of 3Pack Group.

Figure 8 shows an extended SWOT-analysis of 3Pack Group. Possibility of increasing the share of own production combined with the strength of providing the packaging solution can make 3Pack Group stronger. For example getting rid of unstable suppliers and replace their steps in production with own production.

Situation in 3Pack Group is now, that they are dependent of foreign investors. It is important to somehow develop 3Pack's products and production more valuable to foreign investors and thus strengthen 3Pack's own position.

Foreign competitors are making the above hard. How to make own production more valuable to foreign investors when competitors are offering same products? In the intensifying competition it is necessary somehow to differ from the competitors and make own products more valuable to customers than competitors'.

Making deals with customers contribute business. And beating competitors requires making more deals than competitors. Big investors usually need a big quantity of products and it raises the number of orders.

#### Political

- Lack of governmental support for SME companies

#### Economic

- Global economic situation

#### Social

- Familiar operation environment

#### Technological

- New technologies develop

#### Ecological

- Awareness of environment

Above is presented some factors affecting to 3Pack Group's operation with PESTE-analysis. In the Slovak Republic, the governmental support for SME companies is very small. A lot of big companies are investing to the Slovak Republic and SME companies are difficult to compete with them.

Global economic situation affects also to 3Pack Group. 3Pack Group have big global customers and economic situation affects for them a lot both in a good and in a bad way.

3Pack Group mostly operates in the Slovak Republic. Familiar operation environment causes that 3Pack knows the local manners.

New technologies develop all the time. Everything is more automatic than few years ago. That causes all the companies to follow the new technologies.

People are aware of the environmental issues nowadays. It forces companies to develop their operation more environmentally friendly all the time.



## 4.2 3pack Žilina s.r.o.

3pack Žilina s.r.o. (later 3pack Žilina) operates in the Žilina region. 3pack Žilina is a seller of packaging products.

Biggest customer for 3pack Žilina is Korean automotive industry, especially Kia and Hyundai. Other big customers are Gefco and Otolift.

3Pack Žilina is located separately from the other 3Pack companies. Distances to other companies are long. That is why transportation costs rise too high and it is not reasonable to use other 3Pack factories' than Big Box's and Trio Pack Plastic's products in Žilina region.

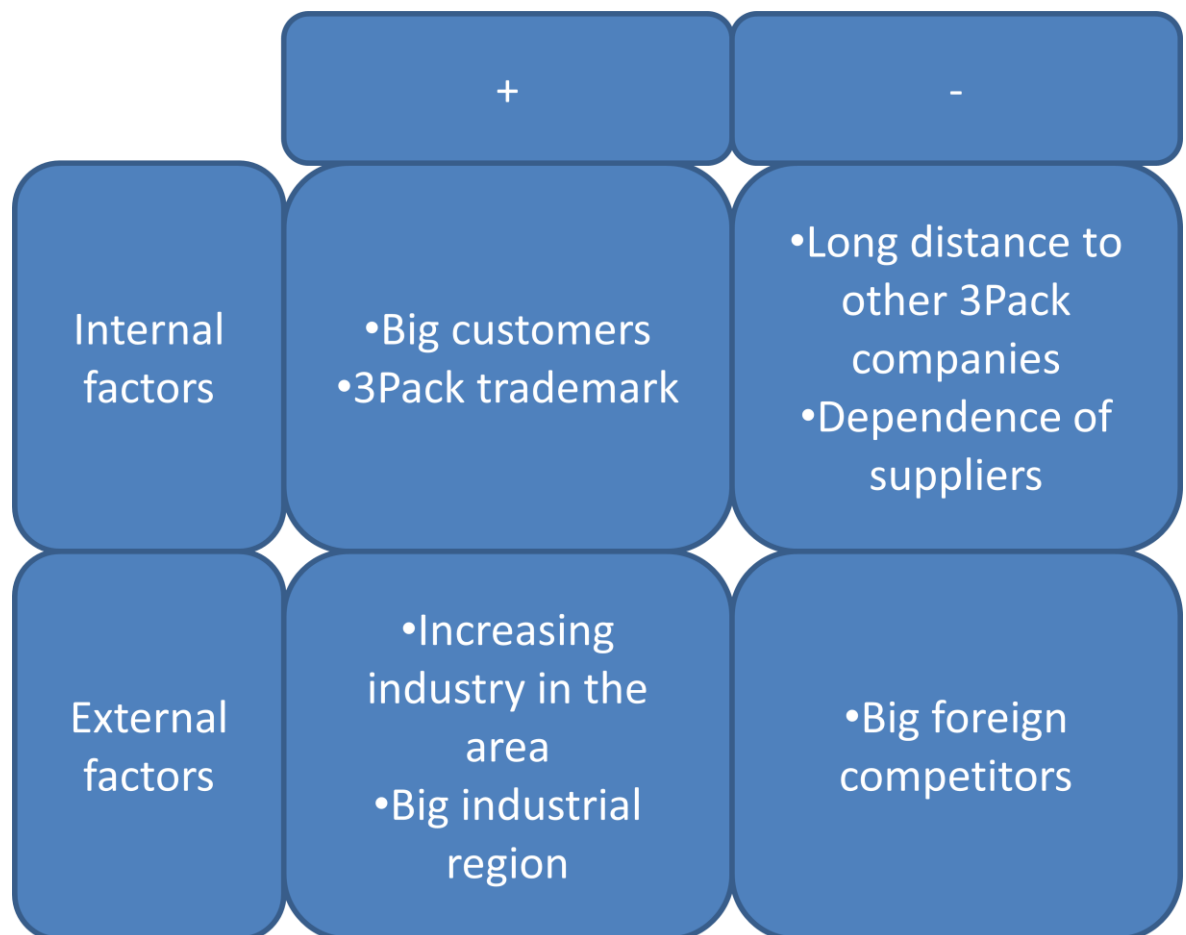


FIGURE 9. 3Pack Žilina SWOT-analysis.

Figure 9 shows SWOT-analysis of 3Pack Žilina. 3Pack Žilina has some big customers. Big customers often need big number of products provided. At the same

time 3Pack Žilina works under 3Pack trademark which is already known trademark, so it already has a reputation.

Long distances to other 3Pack companies make cooperation with other factories hard. Transportation costs would rise very high and 3Pack Žilina has to use suppliers. Unstable suppliers hamper business.

Žilina region is already big industrial area. Future expectations tell that more companies are investing to Žilina region. While more companies are investing to Žilina region, it means that more business opportunities are available.

Like to every business areas in Central Europe, foreign competitors are making local companies' business harder. Big foreign companies with low prices bring SME companies to bay.

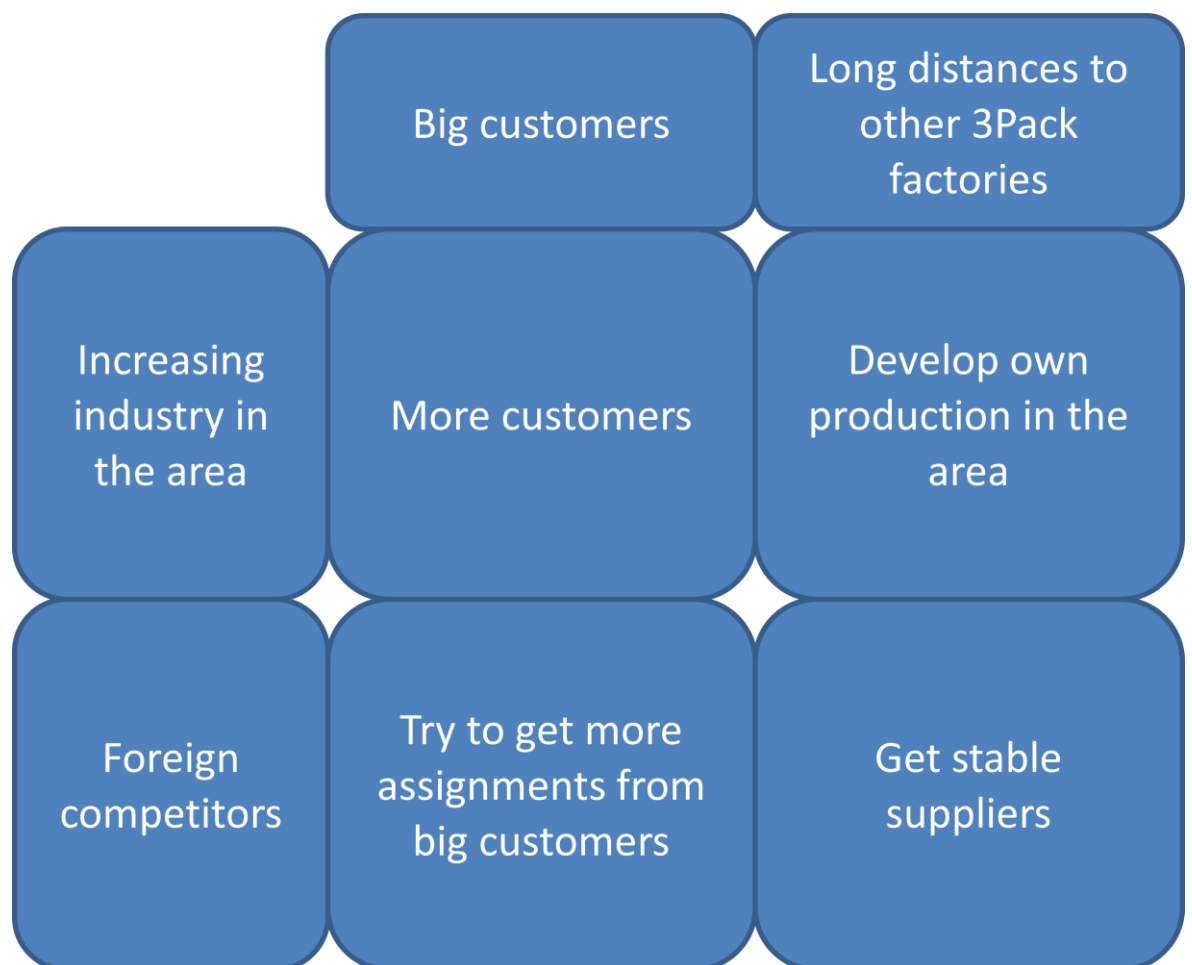


FIGURE 10. Extended SWOT-analysis of 3Pack Žilina.

Figure 10 shows an extended SWOT-analysis of 3Pack Žilina. Already existing big customers and possibly more investing big companies create a possibility to get more customers. Growing industrial area creates a lot of business opportunities and chances to sign new contracts.

Long distance to other 3Pack companies causes that their products are not reasonable to use. 3Pack Žilina is selling Big Box's and Trio Pack Plastic's products. At the moment 3Pack Žilina has only one affiliated company, Big Box. But increasing industry in the area may need also other products to use. Thus one possibility is to establish more factories to the area.

One solution to beat foreign competitors is to try to get more assignments from big companies. Although it is not so easy to compete with low-price companies, it is important to make deals with big customers and somehow develop own production more favorable to customers than competitors'.

Stable suppliers are hard to get. At the moment long distance to other 3Pack companies complicates the possibility to offer whole packaging solutions. In the competition against big competitors, it is important for SME companies to network with other companies and thus create value to customers.

### **4.3 Big Box s.r.o**

Big Box s.r.o. is a subsidiary company of 3pack Žilina. It produces cardboard boxes. It was founded in 2012. It employs six persons in producing and 4 persons in office. The maximum capacity of producing is 7000 units per hour, but normally production is from 700 to 4000 units per hour.

Big Box factory has one production line which formats and folds sheets. It also has a thin blade slitter machine which cuts big sheets to smaller and Kongsberg plotter machine to produce small series of products and cut PPE foams. Big Box purchases cardboard sheets from external suppliers and manufactures boxes from sheets. That is why Big Box is dependent of other suppliers.

3Pack Žilina is the biggest customer of Big Box and 3Pack Žilina's biggest customer is Kia and its partners. Big Box is also producing to 3Pack s.r.o. In 2013, 32% of products were produced to 3Pack s.r.o. Almost all the products are first sold to 3Pack Žilina and with contacts 3Pack Žilina sells them forward.

Before setting up Big Box, 3Pack Žilina mostly imported cardboard boxes from Czech Republic. Importing cardboard boxes is relatively expensive, because transport costs rise high. That is why setting up a new factory was needed.

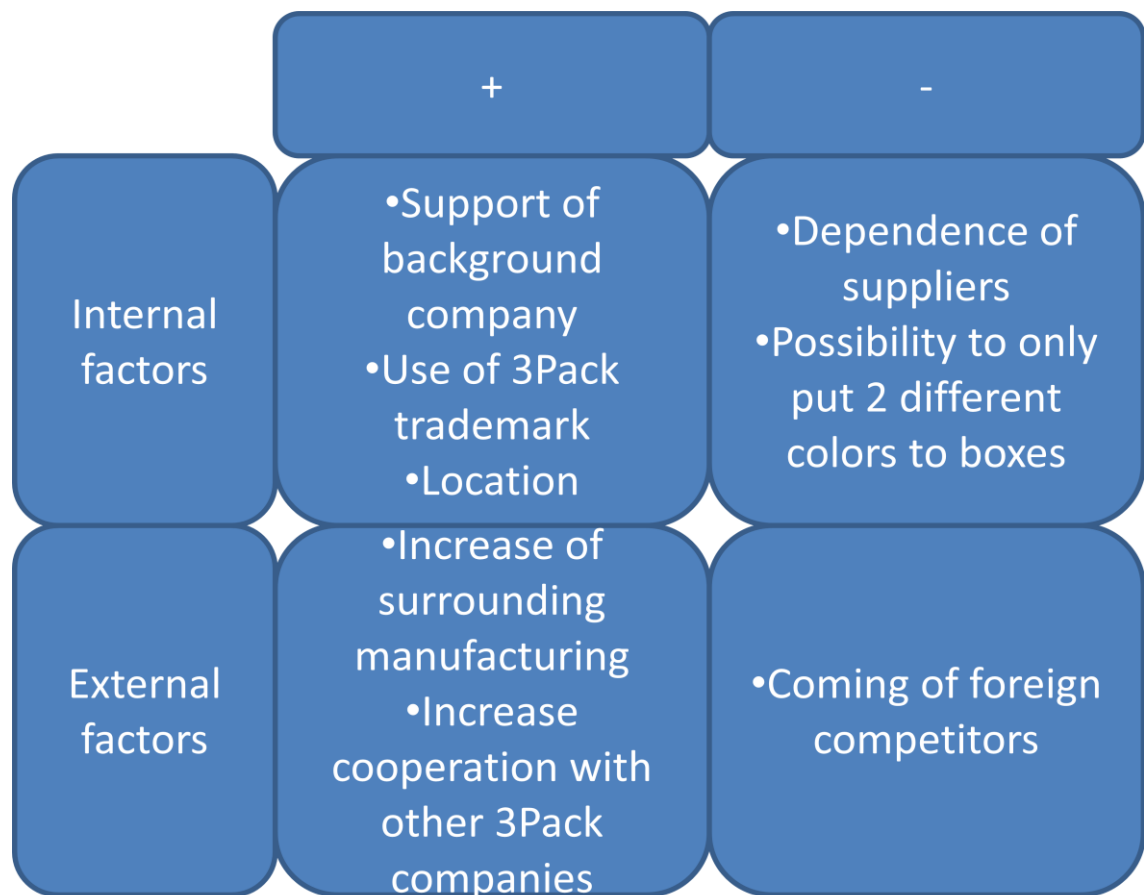


FIGURE 11. Big Box SWOT-analysis.

Figure 11 shows the basic SWOT of Big Box. Support of background company is considered to be strength. Big Box operates under 3Pack Group and gets support and assignments from 3Pack. It is also advantage to operate under 3Pack trademark. 3Pack is already known trademark and 3Pack Group already has contacts to some customers. Location of Big Box is strength, because some big customers

are located near. In packaging industry it is important to be located near to customers. Otherwise transport costs would rise too high.

Dependence of suppliers is not a good thing in a long term. Big Box orders cardboard templates from suppliers and shapes them into a right format. If cooperation goes well, it is not necessarily a weakness, but if supplier is unstable it can cause problems in production and delivery. Possibility to put only 2 different colors to boxes is not necessarily a weakness. Usually boxes used in industry are simplified and only needed notes are printed. But if customers want more colors to boxes, for example to the products which are sold to consumers, it can be a problem. In that case, an external company's service is needed.

To the area where Big Box is located, is planned more industry. This is clearly an opportunity for Big Box, because more companies mean more possible customers. Nowadays distances to other 3Pack factories are long. That is why it is not currently reasonable to use products from other 3Pack factories. But in the future, if 3Pack will establish more factories, it is reckoned possibility. It could get rid of unstable suppliers.

Coming of foreign competitors is a challenge for many companies nowadays. Big companies are expanding their range new countries. Big companies can compete with their prices and it makes local companies operating hard.

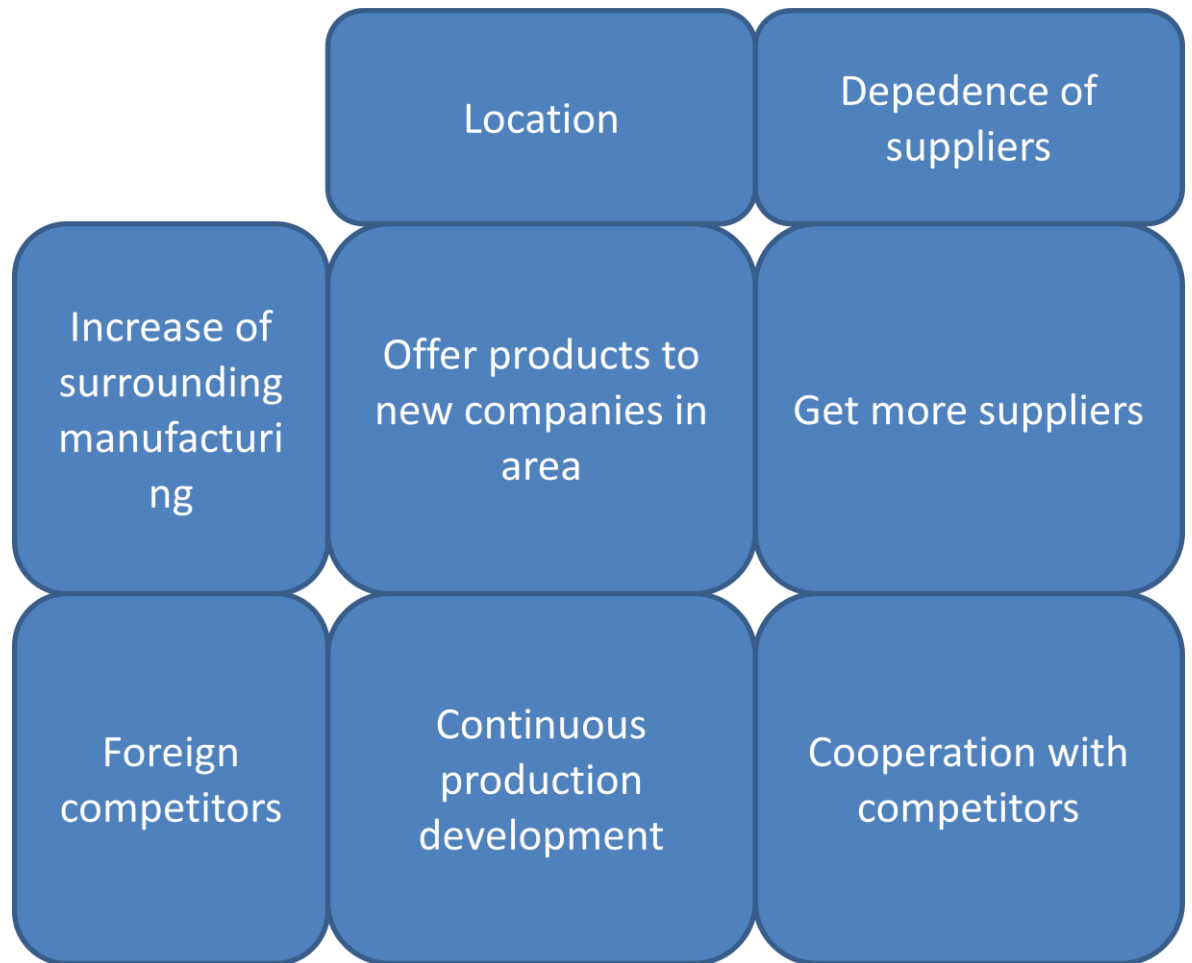


FIGURE 12. Extended SWOT-analysis of Big Box.

Figure 12 shows an extended SWOT with some solutions. With good location and increasing manufacturing in the area, it is possible to get some new customers. Dependence of suppliers can be minimized by getting more suppliers. If there is only one or few suppliers, is company dependent of their operation. Growing manufacturing in the area makes a possibility to have new suppliers.

Globalizing world makes easier to invest new countries and continents. To compete with big companies, it is important to continually develop production to stay competitive. Foreign investors can be also a possibility. Cooperation with competitors can reduce dependence of suppliers and strengthen competitive position of both parties.

#### **4.4 Palette-Wood s.r.o.**

Palette-wood s.r.o. is a producer of wooden pallets. It is located in Nemcice. Palette-wood produces wooden pallets of different sizes. It employs normally 20 persons, but in the best season it employs 35 persons.

In the factory, there are 6-7 tables in use. In each table are produced different sizes of pallets, depending of orders. Employees work in 2 shifts: morning shift and evening shift.

Because pallets are hand-made, exact measuring is needed. There is only one automatic saw in use, so also cutting is mostly made by hands. Employees with more experience usually do more complicated pallets and newer employees do simpler. Overall, workforce changes a lot and they don't do long careers in Palette-Wood.

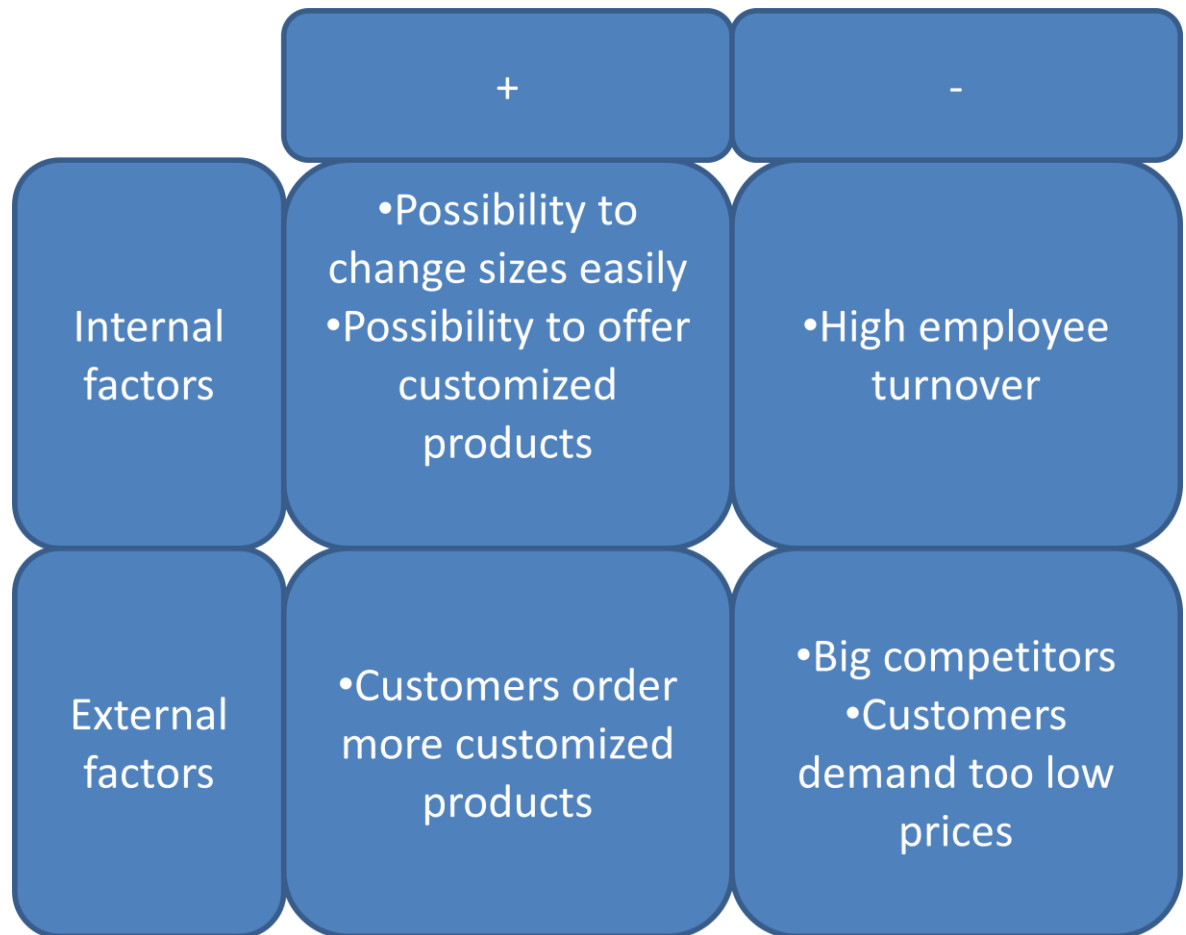


FIGURE 13. Palette-Wood SWOT-analysis.

Figure 12 shows SWOT-analysis of Palette-Wood. Because everything is hand-made, it is easy to change sizes of pallets fast. Configurations of automatic machines are not needed. Employees measure new measures and start producing with the new ones. Most of pallets used in transportation are standard sized. Sometimes some customers need custom-sized pallets. Because everything is made by hand, Palette-Wood has preparedness to do customized pallets. Some more automatic factories may need to do big changes to machines to produce customized pallets.

Employees change a lot in Palette-Wood. That makes a problem, when employees with more experience leave. Lot of know-how is missing when they leave.

The preparedness to do customized products could be opportunity if more customers order them. There is also a chance to get more customers that need customized pallets.



Like to the whole 3Pack Group, big foreign competitors are threat to Palette-Wood also. Big competitors lower the level of prices and customers demand products with too low price.



FIGURE 14. Extended SWOT-analysis of Palette-Wood.

Figure 14 shows an extended SWOT-analysis of Palette-Wood. Palette-Wood can change sizes easily and offer customized products and one way to differ from the competitors is to offer more customized products to customers. Big automatic factories cannot change the sizes so easily and it takes a lot of time. Most of pallets are standard sized and it is not reasonable to change many times the measurements with automatic machines. Also finding new customers in need of customized pallets is a chance to differ from competitors.

While employee turnover is high, it is possible to get some new know-how to company. Recruiting experienced employees bring new know-how.

Customers demand too low prices. One possibility to is to differ from the competitors and offer customized products which are hard to get from somewhere else.

It takes time to train a new employee and in the beginning their pace of producing is not very fast. Usually experienced employees are faster at producing, because they have the experience to do it. Experienced employees can produce more than inexperienced in the same time and thus the unit price lowers.

#### **4.5 Trio Pack Plastic s.r.o.**

Trio Pack Plastic s.r.o. is a producer of bubble wrap, plastic foil and insulation. It is located in Levice. It employs 15 persons: in production 9 and 6 in the office. Production workers work in 3 shifts.

The main product of Trio Pack Plastic is bubble wrap combined with foil. Most of the production is automated. Employees are mostly used to operate the machines and feed the raw-materials.

Trio Pack Plastic's products are mainly used in industry. The biggest customer is Kia. Sometimes products are used also as insulation in houses, because their features are appropriate.

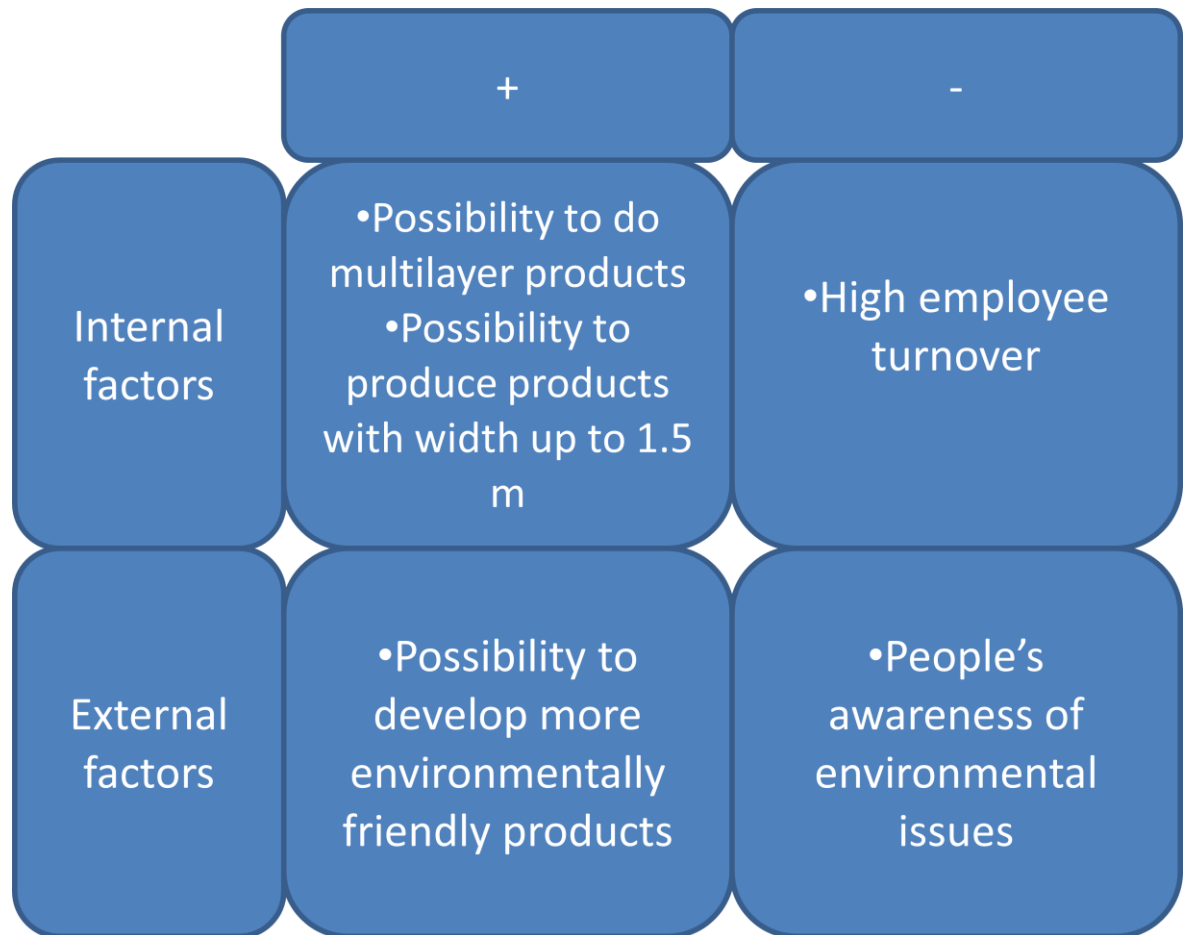


FIGURE 15. Trio Pack Plastic SWOT-analysis.

Figure 15 shows SWOT-analysis of Trio Pack Plastic. In Trio Pack Plastic factory is possible to do multilayer products. It is possible to do basic products like bubble wrap and plastic foil and combine them. The standard width of these kind of products is 1 meter but in Trio Pack Plastic it is possible to do products with 1.5 meters. This gives an opportunity to do bigger size products.

Trio Pack Plastic has the same problem as Palette-Wood: high employee turnover. Employees stay in Trio Pack Plastic only for short time. Better employees works as operator of machines and they stay longer in the company. As employees change a lot, know-how of the employees does not evolve.

Environmental issues can be both opportunity and threat. A lot of plastic waste is produced by companies. Trio Pack Plastic could improve their recycling and use raw materials again. At the moment they are doing so in the factory, but it could be

possible to also collect raw materials from other factories. The problem is that usually companies don't sort their wastes enough.

People are aware of environment nowadays. Plastic packages produce lot of waste and a lot of people try to reduce their use of plastic packages. In the future this can be a threat to a company which produces plastic packages.

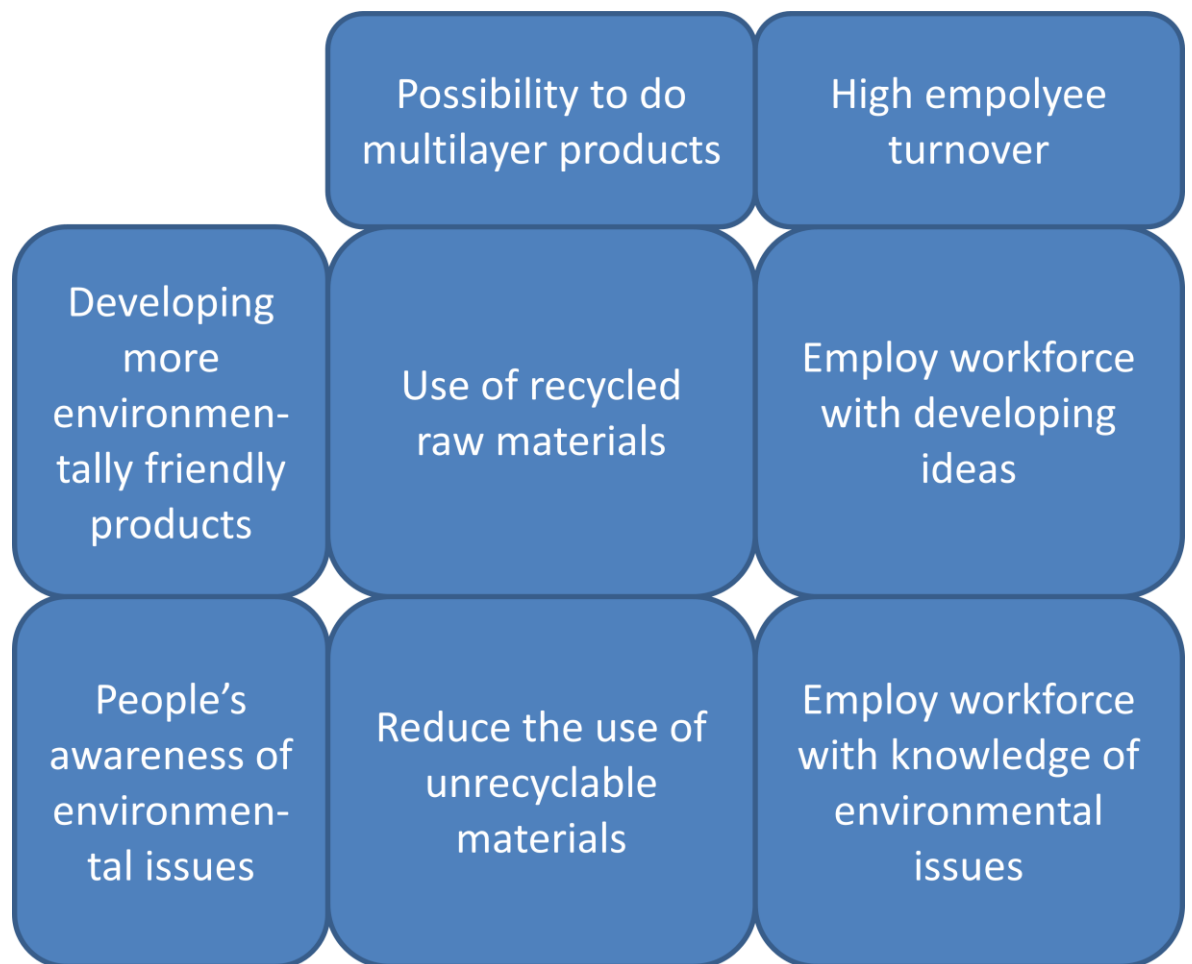


FIGURE 16. Extended SWOT-analysis of Trio Pack Plastic.

Figure 16 shows extended SWOT-analysis of Trio Pack Plastic. Environmental issues force companies to think about the environment in their production. Trio Pack Plastic has a possibility to do multilayer products. And the use of recycled materials could reduce the plastic waste and improve Trio Pack Plastic's imago as an environmentally friendly company.

High employee turnover causes, that lot of know-how will disappear from the company. At the same time it is an opportunity to employ workforce with knowledge of

the environmental issues. New employees may have knowledge and ideas of developing existing recycling systems.

Reducing the use of unrecyclable materials reduce the plastic waste. Finding alternative raw materials can also be expensive and other raw materials can make business unreasonable. But in the future, people's awareness of environmental issues is likely to grow and this could make the company to be one step ahead.

As above is mentioned, new employees may have ideas about environment. While customers try to reduce use of plastics, it is possible to create new ways to use raw materials and try to turn decreasing use of plastics to win. Environmentally friendly operation is strength for companies.

#### **4.6 Advantages of whole packaging solutions**

3Pack Group can provide full packaging solutions for customers. It is easy for customers to order needed products from 3Pack. 3Pack collects orders and sends them to factories.

Customers can save time by ordering everything from one company. The buying process can be complicated and could take a lot of time if everything is ordered from different companies. 3Pack can design customized packaging solutions to customer's needs. It makes customer's buying process easier when they do not need to order every specific piece from different providers.

Usually one provider can offer products with cheaper price compared to a situation where everything is bought from different producers. 3Pack can optimize the steps of production chain and thus it is possible to offer products with competitive price.

For 3Pack Group, producing different packaging products is strength. It is easier to sell products as all-in-one package. Selling only a certain packaging products to industries can be challenging.

## **5 CONCLUSIONS**

This part takes an analytical view of this process. First is validity and reliability of this research. After that, usefulness of this research to the target company is analyzed. In the end is given suggestions for the future researches for the company and progress of this process analyzed.

### **5.1 Validity and reliability**

This research refers only to 3Pack Group companies. Basic theory is applicable to other same kind of researches and can be customized to different purposes. Interviews were made usually with one contact person in each company. Some of the statements are from the interviewees and some are author's conclusions.

In this research has been taken account of 3Pack Group's and environment's factors from many point of views. 3Pack Group's know-how has been analyzed with their strong areas of know-how but also with areas in need of development. 3Pack Group's know-how is also reflected with environment and compared to competitors.

Some information was gathered from Statistical Office of the Slovak Republic. As a source of information, it can be seen reliable. Also other sources, like Finnish Packaging Association, are experts in their field.

### **5.2 Usability**

With this research 3Pack Group can identify its own know-how and areas in need of development. The most important thing what comes up in this research is to identify what the target company is now doing and how they are doing it. With knowledge of own know-how it is possible to develop operation and improve profitability.

Suggestions in this research are made by the author and they may be useful for 3Pack Companies. Some suggestions' benefits are not straight comparable to financial benefits, but in the marketing. For example environmentally friendly is a positive factor in the marketing. Some suggestions are also functional and they can develop some operations. But in the end, 3Pack companies can evaluate if they can benefit from these suggestions.

### **5.3 Future research**

In the future, 3Pack Group could make a research about expanding their operations. Unstable suppliers can cause significant damage to a business and independence from unstable suppliers can stabilize own business.

Also 3Pack Group could make a network analysis. With network analysis 3Pack Group can define which partners are needed and which are easily replaceable if needed. Cooperation with some partners are very useful and with some partners it can be sometimes more like a weight.

### **5.4 What has been learned**

This whole process took more time than was planned in the beginning. The biggest problem with progression was the lack of knowledge of packaging industry and industry in Slovak Republic.

Familiarization with the packaging industry before excursion to Slovak Republic could have helped this process. Probably the start of the process could have been better and faster and it could have been easier to focus on the right factors. It was hard to shape collected facts into a proper research.

During this process a lot of about analyzing companies has been learned. Also packaging technology became familiar.

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