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Product Segmentations of Children's Winter Accessories

LAHTI UNIVERSITY OF APPLIED SCIENCES
Degree Programmed in International Business Management
Master's Thesis
Completion date
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Lahti University of Applied Sciences
Master's Degree Programme in International Business Management

TAIMISTO RIINA ANNUKKA:

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Master's Thesis in International Business Management

69 pages, 4 pages of appendices

Spring/Summer 2016

ABSTRACT

The objective of this study was to analyze sales data and provide better understanding of existing *data* of companies' in the clothing industry. New clothing collection planning would be more precise, if analyzed findings from the historical statistical data could be more efficiently used. This study was carried out in cooperation with a Finnish children's clothing company. Research data was collected between winter seasons 2013-2015. The Research focus was on a country level comparison for complete understanding of user age groups demand and purchase behavior. This study looks at synergies between cluster markets based on the existing secondary data, and looks at solutions for filling the gaps in where market potential exists.

The Main data sources used in this study are the case company's sales statistics, BHC marketing study, and statistics from child populations in research countries. The Study converts sales statistics into age statistics and analyzes these secondary data by following the life-style demands, birth rates, global trends and sales channels feedback in different market areas. Converting sizes to age also enabled seeing the user age curve clearly, while duplicate sizing between age groups are in use in the case company.

Secondary data and Quantitative Method were used in this study.

A comprehensive literature review from ***Product and Marketing segments***, *and* ***Lifestyle*** combined with the secondary data findings, completed the product segmentation for children's winter clothing in this study.

The study results indicate that seasonality and market demands give frames for agile collection planning process in the clothing industry. However, there are no proper tools for collecting needed market demand data or it is in development stage in companies. Before efficient systems can be used, existing secondary data should be analyzed more efficiently. Existing data must be available and in usable form faster and more often for product teams. This way, agile and transparent product planning is achievable. Collected product segmentations are increasing in importance e.g. helping clear and systematic data to be comparable. Secondary data ought to be collected with clear focus, goal and defined segments. Data collection and main analysis ought to be automatically included in reporting. In clothing companies, where there is *high* ***brand loyalty*** among customers, analyzing only existing historical data, can increase performance. However, if a brand is not well known and does not have loyal customers, demand in the markets should not be predicted based on historical data only.

As a conclusion, the study discovered synergy factors in demands from cluster markets, which helps to develop new seasonal collections towards the correct markets with accurate size range, color pallet and product range. Cluster level differences are a good base for collection structure in the market needs of the case company. Adding country and cluster segmentations next to the product segmentations will improve transparency for product portfolio planning. Lifestyle affects customer demand, especially in children's clothing. Offering service to a loyal customer base, based on users' life cycle and lifestyle can create new potential for market growth. Product and market segmentations together create a base for efficient product planning in children's winter accessories collections.

Key words: ***Children Clothing, Product Segmentation, Market Segmentation, Purchase Behavior, Age Curve, Lifestyle, User Life Cycle, Historical Data***

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INTRODUCTION

The Clothing industry is a solitary industry sector with high demand for change. Lifestyle changes can create trends in clothing industry in a very short timeline. Ability to design and plane new product portfolios and identify customer needs on a seasonal basis has its challenges, while the environment is unpredictable. However, with the help of defined data analysis, companies can increase their performance.

Market segmentation requires knowledge about the behavior behind purchase decisions. In different market segments, *behavioral segmentation* gives the most accurate outcome for companies regarding customers' demand. Behavior is studied through customer surveys. Behavioral segmentation includes lifestyle and individual aspects. Recognizing *customer's demand*, with purchase behavior surveys, and analyzing these further, is rising in importance. In the children's winter clothing industry, companies have good knowledge about the demands and needs for each age group. Companies know, based on existing data and country level customer surveys, in which countries classical colors are important, which styles they sell the most, and what functions and appearance they require. However, these are not collected into one database, which would serve in performance product portfolio planning.

Effective data analysis requires clear product segmentations for collecting the *data*. Multiple new technologies have increased companies' knowledge about customer's demand and purchase behavior. New technologies are e.g. Point Of Sale scanners (POS) and customer loyalty cards. These methods gather valuable information for sales channels for further analysis and use e.g. improved services and sales channels. New technologies enable following customers' actual *decision-making* and *purchase paths* through the web sites or shops in real-time. These methods have been utilized by many clothing retailers to improve agile process. Radiofrequency identification (RFID), which helps with logistical handling and purchasing for stock level keeping, is also one of the newest

developments. (Fisher 2009, 527) Possibility to follow clothing during its life cycle from end-to-end, can be possible in the future with RFID. This might be an important factor for future requirements in textile recycling.

The Children's clothing industry offers a wide range of assortments to fill customer satisfaction. Then again, rarely do companies sell-out equally the whole collection range. This similar problem is in size range, which is wider than the volume sales covers. Why do brands offer as wide ranges of clothing collections even though more performance could be gained with existing data analysis? Children's individual growth affects the needs behind the purchase decisions. Age and lifestyle of the user, as well as clothing functions affect the purchase decision. This study's ***problem space*** looks more closely at product size needs from user or consumers perspective by analyzing the case company's age curve in a defined product range. In addition, the study focuses on efficient collection range planning by analyzing cluster countries' needs.

The most important aim is to keep the customers repeating purchase decisions. This can be gained, when companies recognize what are behind the decisions and needs affecting the purchase. Understanding how a child's own lifestyle develops and how families' lifestyle reflects on it is also important for this industry sector. Babies, toddlers, kids, and junior age children's need several types of clothing e.g., based on the activities they have: more casual or active outside, in any weather. These vary, also based on geographical and cultural differences, which affects the purchase decisions. This study separates cluster countries needs in product, size and color level segments for further understanding and more focused market segmentation base on product portfolio.

1.1 Case study of children's winter accessories

The Case company is known for children's winter clothing. This study looks only at the accessories product category in this study.

The Aim of this study was to provide better understanding of existing *data* which companies' collect from the clothing industry, to plane tighter collections more towards customer needs. The Study focuses on existing data such as the case company's sales statistics, marketing study (BHC), and external reports from Euromonitor. ***Secondly***, study aim is to find the most important accessories product segmentations and the needs for further improvements, to enable efficient analysis for seasonal use in product teams.

The ***goal of the case study*** was to analyze existing secondary sales data from accessories, in main cluster areas. Study converts sales-statistics into age-statistics and analyzes these secondary data by following the *lifestyle* demands, BHC-survey, and birth rates in different market areas. Goal was to recognize new ways to gain performance for whole children's age groups from 0-12 years old. Currently, clear sale volume gaps are in babies and juniors sectors. Case study defines needed actions to gain market share also from size ranges where case company offers sizes, which are not selling. ***Secondly***, this study goal looks at synergies between market clusters based on the existing secondary data in accessories. In case study, BHC survey fulfills sale volume data when defined country level differences in purchase behavior.

1.2 Changes in Customers Purchase Behavior

Environmental, economic, social, individual, emotional and cultural factors e.g. affect customer purchase behavior in the clothing industry. Fast decision-making is essential in balancing the supply and demand, in the markets where agility is the newest trend in the business. Recognizing coming changes in factors and taking these in action in management level is strategic decision. E.g., currently many brands have increased interest towards sustainability, recycling, and social conditions in the clothing industry. For example, usage of water in raw material manufacturing, safety of textiles, and safety of the workers in the factories are now interesting also the end-users. By taking care of currently important

aspects, companies can increase their interest in the consumers. Ability to look into to the future and to do big strategically decision is risky. However, in the clothing industry these are very important steps to stay competitive in the markets.

Currently, world clothing tendencies are dependent more on individual aspects which vary by lifestyle. Each consumer does their personal decision, which indicates changes in values, habits, and lifestyle. Purchase behavior has more variations that ever. In addition, the global markets are making this even more challenging, while demand varies in country level.

Changes in population age structure affect purchase behavior. Young people in age of 20 are heavy users of *the fast fashion clothing and mass markets.* Clothes give the first expression from the user and affect to the status and that for group pressure is involved. Especially young consumer likes to feel they belong to the group and clothes are way to show the status. However, a*geing* in the population is happening at this moment. There will be more over 65 years old than younger than 5 years old people in the world in becoming years. Age to become parent is older than in the past years. These assumptions will change purchase behavior for the future. Moreover, middle-aged consumers are moving to direction of *sustainability*. From environmental perspective, energy, water, raw materials, work, and deliveries used to fast fashion are turning less recommended, while short lifecycle products. (Kosonen 2013) This change can affect to safe and sustainable children's clothing sale volumes in positive way, while older consumer group is purchasing children's clothing for their grandchildren. The most important *social changes* for the future are growing *middle class* and *rising standard of living.* These changes are influencing to the purchase behavior in developing nations. Both of these changes grows simultaneously and affects to the purchase power in the clothing industry increasingly. Lifestyle is renewing when wellbeing increase and people has money to spend for clothes.

(http://www.oph.fi/download/142524_Tekstiili-_ja_vaatetusalan_laadullisen_ennakoinnin_selvitys.pdf)

Market size should be considered when analyzing purchase volumes or new markets for entry. It is important to study the generation developing in different market areas. E.g. in the USA markets the generation Y (born 1984-2010) is the biggest generation group ever. Purchase volume has expected to be five time higher with Y when compared purchasing power in earlier generations. (Gronbach 2008, 15-17) Based on this fact the growth of the fast fashion is still on-going in the USA, however parents purchasing habits have some effect to the Y generations consumer behavior, which could be turned in to more sustainable. In addition, in Finland generation Y expect to have less money to consume when compared to their parents. This can affect also to increased sale of mass markets, while these are mainly low price products.

Considerable *economic change* in the fashion industry is expected to engender growth in sales volume. From year 2012 to 2025 global growth is from 1.105 billion $ to 2.11 billion $. Biggest market growth in 2025 has forecasted to be in China with sale volume of over 25% of total markets. Second biggest market is forecasted to be EU with 440 billion $ sale in the markets. Third is United States and fourth India. Lowest growth rates has forecasted in Australia, Canada, Brazil, Russia, and Japan. Future challenge is to adapt to the Asian markets demand. This means high volume growth in new cluster areas for many companies. Moreover, in the contrary, sights from full markets in some countries can be recognized. Local brand management is essential while different cultures and demands worldwide come together. In new markets', new product life cycle and age curve analyzing are required. (http://www.statista.com/statistics/279757/apparel-market-size-projections-by-region/)

1.2.1 Changes in Customers Purchase Behavior in Children's Clothing

At this moment, circumstances in the world's economy are uncertain. However, consumption in the clothing sector will remain important for its nature of necessity. Children's growth and the climate change seasonality's are together setting requirements towards new clothing purchasing.

Purchase behavior of the family change when baby is born, while newborn's needs are involved. When purchasing children's clothing, parents or grandparents are making ultimate purchasing decisions. In children clothing sectors' the needs to purchase clothing depend by the age curve and life cycle of each growing child in the world. Ageing customer groups, as grandparents, are valuable to recognize from life cycle and lifestyle perspective in children clothing industry. This segmented consumer group value sustainability in clothing and it is essentially growing. Purchase behavior analysis focuses on parents and grandparents decisions criteria for the age group from newborn babies (0month) to 6-year-old kids. After reaching, the age of 7 years, children's own lifestyle, need and demand towards clothing is increasingly growing.

A major part of consumption in the clothing industry comes from *mass markets* and *street fashion* clothing. Both of these are currently strongly becoming digital. Worldwide expansion and immense growth at the internet channels has made clothing business globally significant industry sector. Change towards *Omnichannel* shopping is one of the greatest changes in consumer behavior. E-commerce is the biggest globally growing sale channel. (Easey 2010, 4-7, http://theamericangenius.com/business-news/online-shopping-increasingly-popular-here-are-the-freshest-stats/) Customer purchase behavior is in change e.g. when it comes to single weekly grocery shopping. Shopping must be faster and smoother for customers (http://www.theguardian.com/business/2015 /oct/06/supermarkets-modern

-shopping-habits-industry-chief). Time wise parents appreciate seamless purchase experiences, which has no longer gained from enormous supermalls. Omnichaneling (internet & smart phone applications especially) should be accessible for all the markets in the competitive sector in children's clothing industry. This is also the sector where consumer can be only 10-year-old child. Nowadays kids and juniors age groups are increasingly participating to choosing own clothing's, and from this age on this group is potential customers with high demand of smoothly working omnichanel shopping. Based on this consumption in the clothing industry the change in the purchasing tendency is towards *value adding effortless shopping experience*.

Volume growth in children's clothing industry is forecasted to continue in Euromonitor reports. Growth focuses on baby and toddler age groups clothing, where the necessity for safe products is essential and quality is a prominent criterion. *Economic changes* in the children's clothing industry globally has been under recession, however turn to growth is happening based on Euromonitor's resent report on July 2015. (http://www.euromonitor.com/micro-fashion-trends-in-childrenswear/report)

Customer purchase behavior differs at the country level because of the weather conditions, cultural differences, economic and social changes, and unique lifestyle habits. Next section looks more closely cluster level differences in case company's children clothing future sights and age groups market segmentation possibilities.

1.3 Scandinavia in Children's Clothing Markets

Scandinavia is an important market area for the case company in this study. Scandinavian cluster area includes Finland, Sweden, Norway, Denmark, and Iceland. ***Denmark*** has distinguished from its intelligence in the clothing industry, as well as Sweden. Sweden and Denmark has own special features in demands. As a precursor, new innovative and sustainable steps have been taken in Danish children's clothing brands.

For example, recycling baby clothing is the fundamental idea of Vigga brand http://www.vigga.us. For the future Danish markets are in the direction of sustainability, probable deeper and faster than others are? Competition in Denmark is led by the Bestseller e.g. with brands as Name It, Vero Moda, Vila and tens of others renowned brands. (http://www.euromonitor. com/childrenswear-in-denmark/report) Denmark with sustainability edge and special color tones as light pastels are popular.

Sweden. H&M is the leading brand in its home market, Sweden. The future trend in Swedish markets is in the digitalization and internet purchasing. Furthermore, parent's value the time saving shopping through internet especially in children' clothing. Sweden is the top country in Scandinavia with the highest e-commercial usage level and greatest growth has expected to be there. Importance of blocks and social media is high in this market area. In Sweden, the trend in children's wear is stimulated towards teenage fashion. Teenagers as a customer group are potentially growing group. (http://www.euromonitor.com/childrenswear-in-sweden/report, http://the-americangenius.com/business-news/online-shopping-increasingly-popular-here-are-the-freshest-stats/)

The birth rate in ***Norway*** is expected to rise, which affects the baby and toddler age group, increasing by 6%. In addition, kids and junior age groups are growing with 4% towards year 2019. As a leading children's wear brand in Norwegian markets is, in spite of un-technical products is H&M. (http://www.euromonitor.com/childrenswear-in-norway/report). In Norway there also is high volume ordering thru internet recognized.

Based on the newest statistics in ***Finland,*** birth rates have been decreasing in the last four years in a row. This has been forecasted to affect the number of youngsters in under age of 15years by the year 2060. In Finland under 15years old would be only 14% from the population in coming years. (http://www.stat.fi/til/synt/)

1.4 Russia in Children's Clothing Markets

Russian economic circumstances, as well as depreciation of the ruble, will affect children's clothing markets growth, although Russian parents are unwilling to skimp on children's clothing. The economic situation in Russia has forced consumers to learn how to be more frugal, and un-necessities are not purchased. This has affects especially in accessories. Increase in the children's wear markets is still predictable to be 2% towards year 2019 when in year 2014 it was 13% in children clothing sector in Russia. In the competitive environment Gloria Jean's is guiding Russian children's clothing markets for middle class consumers (http://www.euromonitor.com/childrenswear-in-russia/report). In Russia, clearly girlish and boyish styles with heavy waddings and with warmth functions are most sellable.

1.5 China in Children's Clothing Markets

The Asian cluster includes *China* and *South Korea*. Towards this cluster, the highest future growth is forecasted. Asian markets are different when compared to Russian, European or Scandinavian markets based on geographical differences. From Asian Pacific, ***China*** is leading the growth in children's clothing consuming already from year 2012. Sale growth has been expecting to continue. (http://www.euromonitor.com/micro-fashion-trends-in-childrenswear /report) In China for the year 2019 babies and toddler's apparels in age group of 0-3 year old has been predicted to grow by 11%. The one child policy has been affecting growth. Increased living standards among Chinese parents and grandparents has been effecting to the purchase behaviors and demand in these markets. Strongly growing markets at China are looking potential, while parents are willing to pay from the children's clothing. This has affected already to the extensive selection of children's clothing competition in the markets from fast fashion to luxury brands and yet expanding. In this competitive scenery in children's clothing business in China, each approach to become recognized by customer e.g. with marketing, digitalization, events and fairs

must be taken in practice in all channels. (http://www.euromonitor.com/childrenswear-in-china/report)

1.6 DACH cluster in Children's Clothing Markets

The DACH cluster area includes Switzerland, Austria, and Germany. This cluster is the third biggest in the case company's market cluster areas for accessories. Strong growth is expected in these markets. Towards Germany there is potential growth expected for the future. Switzerland and Austria are full of winter sport activities and clothes are high quality, technical and high price products. Technical functions as moisture moving, breathability, and light, windproof materials are important in these conditions.

1.7 Children's Clothing Market Segmentation

Through market segmentation, customer satisfaction, increased customer loyalty, expanded sales, and profitability are accomplished. Market segmentation helps companies to *manage the demand*. Focusing on correct products towards accurate user age groups ensure accomplished repeating purchase decisions. (Easey 2010, 6, 7, 16, 147)

Different market intermediaries can affect customer decision making. Different ***Market Intermediaries*** are; *retailing, agents, wholesalers, distributors, market research agents and advertising agents* (Easey 2010, 30).

1.8 Research Question, Objectives and Scope

In the children's clothing industry, it is essential to analyze the demands of the purchaser and user. Companies must focus on correct sizing, but also correct lifestyle, and lifecycle management towards right age groups interest. Different age groups are having different needs in clothing functionality and appearances. Parents and grandparents make the

purchase decisions for children's in age 0-7 years. Kids' and junior's age groups are more challenging, while children's own decision-making is growing. Even if child does not make the purchase decision, he or she makes it by giving direct feedback as a user. *Data minding, analyzing actual sales over time and look patterns in cluster countries and age curves are* ***objective of this study.***

The Research issue is to *study how historical statistics can be more efficiently used to improve collection planning with the help of product segmenting.* For example how cluster countries synergy in product, size, and color level can be used as a base for collection planning as also forecasting the sale volumes.

Secondly, research question in the study is which actions the company should carry out to increase the sales volume in all the age groups offered to the markets more equally. Babies, toddlers, kids, and juniors age groups where sale volumes are focusing on specific age group only, not to whole age range. Case company's core focus is on toddlers and kids clothing segmentation, however this research asks why potential in wider child age groups sales are not efficiently used. Why product portfolio planning is focus on toddlers and kids only?

Thirdly, we have the question of how to profile consumer and user based on age curve, lifestyle, and market segmentation in children clothing.

Research Scope included analyzing three winter season's 2013-2015 accessories secondary data in the case company. Focus in this study is in children's winter accessories.

2 THEORETICAL FRAMEWORK

To define customer requirements and behavior in different cluster countries requires analyzed data and clear definition of ***Market Segmentation***. Marketing is a tool for *creating demand* for products. Especially in the clothing industry comprehensively towards target cluster areas, directed marketing campaigns, can improve market position. In addition, ***Product Segmentation*** of the company's product portfolio is needed based on demand from customers. Changes in the markets or in lifestyles affect to the purchasing decisions. In general, product segmentation and the product portfolio are constantly changing in the clothing industry. Depending of the nature of the product and the brand, changes need to be carried out.

2.1 Segmentation

Segmentation is a process where something, e.g. clothing product, is dividing into segments. In this study, product and market segmentations are used for existing sale data analysis. Product and market segmentation enable that data collecting, and comparing was focusing on right parts.

2.2 Product Segmentation

With product segmentation, companies can control that the current product portfolio serves the customer base in existing markets. With clear segmentation, e.g. products, which are important in different market areas, are easier to compare. To gain markets among potential new customers, also missing products from the product portfolio can be recognize with help of product segmentation. Core customers have to be recognized and individual product lines should produce for these needs.

Planning a product portfolio depends on the product types in the collection and in the purchasing model. Is the brand producing *fast fashion* goods, technical textile products or accessories for winter or summer season.

Product portfolio includes different contributions to the company's performance; some products have higher margin and some are "must have's" without profits. Product portfolio for children winter collection shows company's internal segmentations and segmentations from products functions. Internal segmentation helps for further analysis as size, age group or colors. Product functions as wadding weight are also areas, which affect to the product sale in different countries. To control waddings thru segmentations, could help to avoid several special customer styles e.g. towards Russian markets.

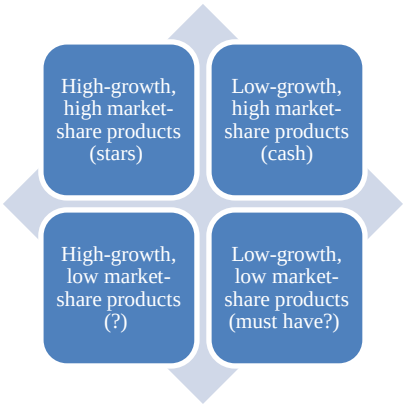

FIGURE 1. Product segmentation based on market growth and share

http://www.investopedia.com/terms/p/product-portfolio.asp

Companies can generate new business with an efficient product portfolio, where size, age, color and lifestyle demands are fulfilled at the country level. New markets from high-growth/low-growth and high market share locations are most beneficial. The 80/20-rule normally shows in the industries portfolio base, where 20% of products are 80% of company's revenue.

2.3 Market Segmentation

Market segmentation defines correct markets for specified product groups and set base for supply and demand. Segmentation is done based on 1) ***Demographical***, 2) ***Behavioral,*** 3) ***Geographical,*** 4) ***Psychographic*** factors.

Demographic deviation is done based on age, genre, income, social class and life cycle. This segmentation creates the base for the further segmentation, it is important to understand the synergy in demographical factors towards user behavior. Currently individualism is increasing and segmentation only based on demographical factors can be misleading especially in clothing industry. In children's clothing industry, age of user and purchaser varies, and this needs different segmentations in product levels. Demographical is one of the most used segmentation.

Behavioral segmentation requires knowledge about how the customers feel about products. This segmentation requires more investments from the markets with surveys. This gives quite reliable results from the markets current state, after all, purchase in clothing industry is emotional based decision.

Geographical segmentation is based on differences in areas or countries based on climate differences. This segmentation strategy is easiest, but rarely accurate, so this method cannot alone work directly as a key for defining customers demand. In the clothing industry, geographic changes as climate although can be reason for special demand in products. One of the clothing functions is to protect e.g. from the cold, wind, and sun which all are changing weather conditions.

Psychographic segmentation is done based on personality, ***lifestyle***, and values. Psychographic segmentation assume that purchasing reflect individuality and values of life. While purchasing is emotional decision, psychographic segmentation gives valuable information for the companies

when collected. However individual values are behind purchase decision are not always correct.

Well-planned segmentation defines ***Homogeneity***, ***Distinction***, and ***Reaction*** between consumer bases and makes sure the right message is given to the right markets. *Homogeneity* ensures that segmented group has similar needs. For example, family needs change when baby is born, and parents have similar needs while they fulfill babies' demand. *Distinctive* segmentation group is different from other consumer groups. For example, parents are different consumer group than singles or e.g. when pregnant women need clothing is request special. Segmentation is based on the consumer *reaction* means that the group is reacting similarly to marketing for certain products. Early adapters go right away to find new trendy clothing for the newborn, and for part of the consumers, looks only discounts or purchase from second hand. (http://www.businessdictionary.com/definition/market-segmentation.html, http:// www.learnmarketing.net/segmentation.htm, http://www.investopedia .com/terms /m/marketsegmentation.asp)

2.3.1 Lifestyle

From Market segmentations, *Psychographic Segmentation* term "Lifestyle" has been used since the 1950's, coined by Alfred Adler. Currently, *Lifestyle* trends include e.g. sustainability, luxuries, time management, omnichannels, healthy habits and sporty & active way of life. All of these trends already in digital, also lifestyle. Lifestyle has also basic features, outside the trends. Alfred Adler's theory from lifestyle shows importance for childhood experiences and surroundings as in which kind of neighborhood family is living. As Adler's theory shows, social and economic wellbeing affect to the lifestyle in childhood already. From that time, parent's habits and way of life have been learn for the future, e.g. purchase behavior. However, each individual decisions, economic situation and status in social surroundings change learnt lifestyle and habits, which gives only a base. (http://www.lifestylemarketing.com.au/)

With marketing, building the brand and creating the demand are the most effective ways to have an affect directly on consumers and guide purchase decision making. However, product users, consumers, and markets lifestyle demands should be recognize before effective marketing strategy is ready and products actually respond to the demand. Lifestyle marketing has several ways to work: marketing communications, PR, digital support, and CRM factors for companies. Good example is Nike, company who has gained suggest because its effective life style marketing. It is important to recognize consumer's lifestyle and adapt changes on time.

From kids to junior age, the child grows in size, but also independence and own decision making are changing from the earlier pattern. When purchasing decisions are made by parents or with the parents, or grandparents, in some point children make the purchase decision on her or his own. In this change, the *lifestyle* that has earlier come from parents, need to re-focus for these children's age groups, starting from age of 7-10 years. Young kid's and juniors are already users of omnichannels and this create possibilities to focus specific lifestyle marketing for junior groups directly when segmented users are known in lifestyle level.

In the children's clothing industry, lifestyle is an element in a child's ***Life Cycle*** thinking. Growing and age curve development are considered in design new product and size range, and when launching new products to the markets. Between babies, toddlers, kids, and juniors there are more differences than just age and sizes; it is also demand and interest based on several lifestyles. This however is individual. In this study life cycle is about the consumer's/users life cycle, in children's accessories.

Figure 2 shows the growth of the baby to junior (adolescents). During this journey, children have adopted lifestyle from family and close friends, and his/her own identity has become stronger.

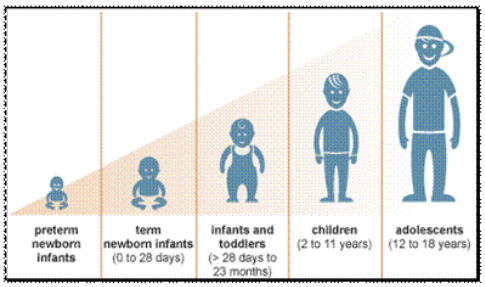

FIGURE 2. Children's life cycle

http://www.bing.com/images/search?q=life+cycle+of+human+consumer&view=detailv2&id=5AA37099538599BE1953D02AEE16E19BEE830CBE&selectedindex=4&ccid=shkqBFaC&simid=608030206023502554&thid=OIP.Mb2192a0456821259d0926428af3408f7H0&mode=overlay&first=1

Human life cycle is affected by many variants, and growth is different for each individual. For example, cultural and genetic differences affect the populations growth. In advanced countries, the population is taller than in developing countries and e.g. the OECD this as an indicator of a country's welfare. World Health Organization (WHO) studies children's body measurements around the world to keep updated statistics. (http://www.theguardian. com/news/datablog/2014/oct/02/why-a-countrys-average-height-is-a-good-way-of-measuring-its-development)

Consumers in the age span of 0 months to 12 years grow with enormous speed and winter clothing is too small after the first winter in use, while in the summer time, the child has the highest growth curve. From this reason for children in growing age, new clothes has purchased in especially for winter. This assumption has based on geographically segmented countries requiring winter clothing. For newborn babies growth during the first year based on WHO statistics is over 20cm in height, and head circumstance growth more than 10cm. During toddlers second year, head circumstance growth is 3cm. For boys growth in body height and head circumstance is faster than for girls. Upper figures are averages. Highest growth in children clothing sale has expected to be in Asian markets, where geographical differences can vary from northern countries winter clothing habit. In potential new markets like Asia, companies must have better understanding from new market areas life cycle and lifestyle

segmentations. For example in children's body measurements versus age reference, has differences is worlds a parted continents, where e.g. Asian population body measurements are smaller, and in the other hand in U.S.A markets sizing is different and children are bigger.

2.3.2 Product/Market Matrix

Product Development and Market penetration strategies increase the product growth. ***Product/Market Matrix*** is a tool for analyzing the growth. Market development & Diversification strategies increase the Market growth. To be competitive, companies should focus on both: market and product growth. *Internal* and external factors affect to the selection from these four strategic: external: state of competition & Internal: product range and life cycle. (West, Ford, and Ibrahim, 2010, 128-129)

Market penetration strategies, in market share growth, customer loyalty improvement, and customer value improvement are all ways to improve the competence of already existing product in existing markets. Existing markets are without changes. Market penetration strategy in Product/Market matrix is the safest option and can gain the dominant market share. (West, Ford, and Ibrahim, 2010, 128-129) However, this strategy should be fast reacting to the market changes as lifestyle change or competitor actions in new markets.

When a new product is introduced to existing markets, ***Product development strategy*** is used. When having new developments in deliveries', payment methods or in product collection, product development strategy is involved. Goal is to increase the sales. ***Market development strategy*** analyzes geographic markets and customer segments for new markets for already existing products. With this market development strategy, products enter to the new markets with clear marketing plane and knowledge about the competitors. This strategy is more risky when compared options mentioned on top, while new market

segments normally require modification to the products or services. Survey from consumer purchase behavior from the new markets would give valuable information before entering these markets. ***Diversification strategy*** has used when new products are presented to the new markets. This requires most investments; purchase behavior research and analyze and competitor knowledge from the new market's. It has the most risk factor from these four strategies. (West, Ford, and Ibrahim, 2010, 129)

FIGURE 3. Product/Market Matrix (Ansoff's 1957)

In this study, the ***Product/Market Matrix*** is used with secondary data analysis and cluster country defining. Study analyzed existing market areas and possibilities in new markets.

2.4 Demand Forecasting

In the clothing industry, future forecasting is required when planning and purchasing new seasonal collections. ***Demand Forecasting*** is usually in use in the clothing industry. *Demand Forecasting* has divided in to two different methods based on data sources: *quantitative or qualitative survey methods* and *quantitative research method*. ***Quantitative and qualitative survey methods*** measure customer's behavior. A qualitative survey method study customer behavior with direct communicating with customer

base. This method has used for example in seasonal demand forecasting for short life cycle products. In clothing industry, this is usable way for products in agile process. This is because mainly clothing collections designed few years before they enter the markets. (http://www.smetoolkit.org/smetoolkit/en/content/ en/416/Demand-Forecasting)

Quantitative research method is an additional statistical technique, where existing historical data is collected and analyzed. Quantitative research, used as an extended forecasting method, is extremely useful in clothing industry among brands with high loyalty customer base. (http://www.smetoolkit.org/smetoolkit/en/content/en/416/Demand-Forecasting)

This study uses quantitative research methods, while used sources are from existing secondary data only. Combining analysis results from existing data, to the collection creating trend forecasts, is a way to gain best performance towards customer satisfaction in all market areas. BHC-survey, secondary source in this study is however, done from direct customer base from the case company. In addition, this study has also customer demand and behavior knowledge from real markets.

TABLE 1. Demand Forecast Methods for Qualitative and Quantitative approaches (http://www.smetoolkit.org/smetoolkit/en/content/en/416/Demand-Forecasting)

Description	Qualitative Approach	Quantitative Approach
Applicability	Used when situation is unclear & little data exist (e.g., new products)	Used when situation is stable & historical data exist (e.g. existing products)
Considerations	Involves intuition and experience	Involves mathematical techniques
Techniques	Jury of executive opinion, Sales force composite, Delphi method, Consumer market survey	Time series models: Trend line Analysis, looks-like analysis, moving averages. Causal models: Linear regression

For quantitative analyze, in *Demand Forecasting Methods*, there are two approaches: 1) *Time Series* or 2) *Causal Method.* ***Time Series Method*** is based on the forecasting from existing, historical data and observed towards the future. This is statistical approach, which is conventionally used method in the industry. *Time Series method* is looking for assessing future consequences with help of averages, e.g. year, or other time level changes in sale volumes. In clothing industry, time series in forecasting demand analysis has used because purchasing has been finalized year before clothes are at the shops. Customers demand knowledge for products with long lead-times based on the customer loyalty. Time series have several methods to choose as Trend line analysis, looks-like analysis, and moving averages. ***Causal Method*** explains the cause and effect relationship between variables. In the clothing industry, causality method is also required, when analyzing changes in the purchase behaviors etc. (http://www.investopedia. com/articles/financial-theory/11/basics-business-forecasting.asp) In this study, demand forecasting uses both methods; Time series and Causal models.

2.5 Data Sources

There are ***primary and secondary data sources***. *Internal* and *external data are secondary sources*. ***Internal data,*** such as accounts, sales figures, reports, and reclamations are required to control in the company. Companies can find the facts from the best sellers or low sellers, and products with quality issues etc. with help of existing statistics. However, this internal data is not showing the future trends or items the company has believed in. For this External data is giving the answers. (Easey 2010, 101-102).

External data has collected from financial reports, government and trade statistics and information and for example published books and journals. (Easey 2010, 101-102) In clothing industry external data is mainly focusing in customer demand, coming trends as products, colors, materials, techniques, industry analyses and idea trips to see the shops &

competitors around the world, mainly from important target countries for the companies' sale or future growth.

This study uses secondary data sources. Internal data as sales figures in pcs/PRs, sizes, and colors in different cluster areas are the main data source for this research, so the main existing data is from internal data sources. BHC brand research results conducted for case company and Euromonitors statistics, used in this study are from external secondary data sources.

3 RESEARCH METHODS AND APPROACH

3.1 Research Method

The Main purpose of this study is to analyze product segmentations in children winter accessories, existing sales data, and customer survey from the perspective of cluster areas. The Study looks at possibilities to use existing data more effectively as a base for product portfolio planning. Market areas (clusters), data is separated in this study in user age groups, sizes, color and product types. This ***quantitative study*** has conducted for case company in children clothing industry.

This study analyzes different user age groups in a specific children's clothing product group: accessories. Analyze was done with help of user ***age curve,*** which was converted directly from sold product sizes. Case company's sales data from 2013-2015 winter seasons from defined product group give trustable data for this research. Age groups segmentation in case company is not giving the exact information e.g. which is the core user age group based on sale, while in products there are sizes which are used in several product segments, e.g. in age groups toddler and kids. This study, will look detailed data towards user age groups and use results as a analyze base.

This study has two ***Research Problems. The first research problem*** is that existing historical data are collected in ICT systems, but further analysis is not in usable form for product teams in hectic seasonality timelines. In addition, direct feedback from sales teams are not in clear format. This study presents how to improve data collecting for future with more efficient product segmentation.

A second research problem was found after short study in sales statistics. Sales statistics show that some age groups are lacking the high volumes in sales. These are babies and junior age groups. This study try to find answers how to generate sale volume also in these age groups.

Study tries to find way to increase babies and juniors sale volumes in the case company's potential markets, and find synergy between cluster countries.

The Study Design aim in this study is to show the possibilities companies have with their existing data, especially sale figures in the clothing industry. The aim is to show that detailed analysis will improve company performance against competitors, keep loyal customer satisfied, and stock turnover in healthy level. In addition, possibility to gain new loyal customers, by focusing on problem areas and analyzing further the route costs. Country level analyze is essential to be the market leader in children clothing in right markets with most effective collections.

3.1.1 Research Approach and Context and Quality of Data

The research analyzes children's winter accessories segmentations with ***secondary data*** from one main internal source and from two external sources.

The Case company's main secondary data sources are historical sale statistics from QlicView reporting tool. QlikView provides reliable information from internal and external sales channels. This study has not separated internal and external channels. However, in own internal channels sale can have other reasons than customers demand in a base of the sale volumes. E.g., styles full minim order quantities are purchase as extras, or case company has believed in certain style or it fulfills the assortment. Internal customers in accessories collection in 2013 - 2015 is ¼ from the total accessories sale.

The main data used in this study includes purchase volume in pcs/PRs, sizes and colors at country and cluster levels. Quantitative data analyze for the secondary data started from collecting sale's data from past three-winter season's 2013-2015 at the case company. Three years research period give deeper understanding of the seasonal changes than one season. Research time-period selected, while segments and data

collecting for these years were possible. Case company started a project to unify segmented data in product level on 2014. Project was finalized same year, so thanks to this, the collected data was possible to compare in this research. E.g., years 2012 and earlier, data are not in comparable form, also 2016 data was not finalized in data collecting state in this study. Although 2016 winter seasons sale statistics added to the trend-line analysis part, while sale season ended during this study. From collected data, the age curve was turning out to be the focus in this study when analyzing clusters country level sale's data.

The second external source for secondary data in this study was the case company's Brand Health (BHC) research from the year 2014. The BHC study was made by Research Insight Finland, which is a professional company providing customer surveys and brand research for the companies. This BHC research was used as a database for purchase behavior and loyalty clarification in the case company's cluster countries'. Research data has based on wide respondents range in case company's main countries. BHC research gives purchase behavior, demand and loyalty aspects, which are important in market segmentation planning part of this study.

Euromonitor statistics give global comparison for the case study on global population and it is the second ***external secondary data source*** used in this study. Euromonitor offers trustable global statistics. Time-period for used data from this source collected from two different time-lines. First time-line statistics are from years 2013, 2014, and 2015. Eurominitor statistics gives base knowledge for generation's growth in cluster countries. This data provide population level statistics from countries this study is looking for: Scandinavia, Russia, DACH and Asia. In this study, population levels compared to the sale in each age group: babies, toddlers, kids and juniors.

The second time-line for Euromonitors statistics are from the years 2016-2025. This data is used in analyze part for looking synergies between sale volumes-population levels and sold age-population for the future.

TABLE 2. Secondary data sources in this study

Secondary data sources	Time-line for collected data	Main segmented data collected	N
Case Company; sales data (Internal data source)	2013-2015	Sale volumes ➔ product level analyze Sizes converted to age➔ user analyze Color analyze	N= 537 (product) N= 1589 (SKU) N= 36 (sizes) N= 4 (cluster areas) N= (11 countries) N= 139 (colors)
Case Company; BHC survey (External data source)	(2011 &) 2014	Customer loyalty Product features	N=3308 (respondents) N= 4 (cluster areas) N= (8 countries)
Euromonitor statistics (External data source)	2013-2015	Population/ generation statistics in cluster countries	N= 4 core clusters from case company
	2016-2025	Population/ generation statistics in cluster countries	N= 4 core clusters from case company

4 CASE STUDY

4.1 Case Company; Research Situation

Industry challenges accumulate in the fact that product portfolio planning is done more than one year before products are entering markets. To achieve the most effective collection range, collection must include correct products, materials, colors, sizes, and prices for right age groups in right markets.

Knowing core sale channels at the product-planning stage would lower the risk of producing unwanted products. Use of historical data in forecasting is normally used process in clothing industries. In the other hand, from historical data statistics are not showing missing products from the markets or see the potentials in different sale channels. To have this kind of knowledge, historical sale statistics need analyzing and product teams should know the markets and visit these annually.

Seasonality in collection-creation makes the process hectic, and further analyzed data does not offering the product team what it needs in report form in the case company. However, data are available from several sources, as used in this study also. Clear reporting tool from collected data would be ideal for product teams, but also usable in sourcing, forecasting, and purchasing. Report would base on product and market segmentations recommended in this study. Country level analysis for each product segment is one of the aims this research looks into.

4.1.1 Secondary Data Collection

Winter season sales data was collected from Qlicview reporting tool from the years 2013, 2014, and 2015. Collected data included only winter seasons data, summer seasons data is not included in this research. For current situation from product sales, gives newest sale statistics from 2016

winter season. This current data used only in some figures e.g. in trend analyzes (APPENDIX 7).

This study is not looking into the possibility that some products have extra volume from purchases of full minimum order quantities. Internal purchasing in case company's accessories is ¼ of the total sales volume. In addition, this study is not comparing the sale channels out sale, or stock levels.

Research was done on the case company's customer base, which includes 7 cluster areas and 25 countries. This research looks more closely at four main cluster areas; Scandinavia, Russia, DACH and Asian markets. ***Scandinavia*** includes Finland, Sweden, Norway and Denmark and Iceland. ***Asian*** countries are China and South Korea. ***DACH*** market area includes Austria, Germany, and Switzerland.

BHC-research internet survey data was collected on children's wear customers from the markets in eight countries. This BHC study with case company current segmentations is used in this style for a analyze base from customers' demands. BHC-research survey respondents were merely women in age between 25-50 years. BHC-study were conducted in Finland, Sweden, Norway, Denmark, Germany, Switzerland, Russia, and China, so all main countries from case company's market areas. Based on the BHC-research findings, the most performing product properties analyzed and estimated from children clothing industries point of view. This study uses these product properties and customer loyalty aspects to analyze product segmentation.

4.1.2 Product Segmentation in Case Company

Products in the clothing business are segmented by the companies own requirements. There is no one global way to do it and each company must find the best solutions for their needs. Challenge is increasing amount of collected data in different ICT systems. This is why in clothing industry more attention has added towards clear segmentations. In the case

company, new ERP will be in use from 2017 collections and it will help current situation with product analysis.

In this research, the case company is currently using product segmentation based on several features in ICT systems. Product segmentations used between research periods: 2013-2015, has 21 main segments for *product*. From M-Files segmentation for product are: 1) collection category 2) product categorizing 3) sex 4) age group 5) collection line 6) product type 7) process type 8) product level 9) customer 10) sale season 11) delivery week 12) project 13) size range. From Qlickview system product segments are: 1) brand 2) season 3) delivery year/month 4) order year/month 5) product group 6) description 7) vendor 8) size.

4.1.3 Product Level Segmentation

Product levels in the case company are segmented into three parts: highest, middle, and lowest. Level defines technicality and price of the product. Highest level has highest price and most technical functions, its *special*. Middle level has good technical properties and price. However, based on *brand requirements in the case company*, middle level are quite high in quality. Lowest level is basic collection, with medium technical properties, if any. Case company lowest quality/price level products are still good when compared to competitors. This actually is the growing product level segment in many markets.

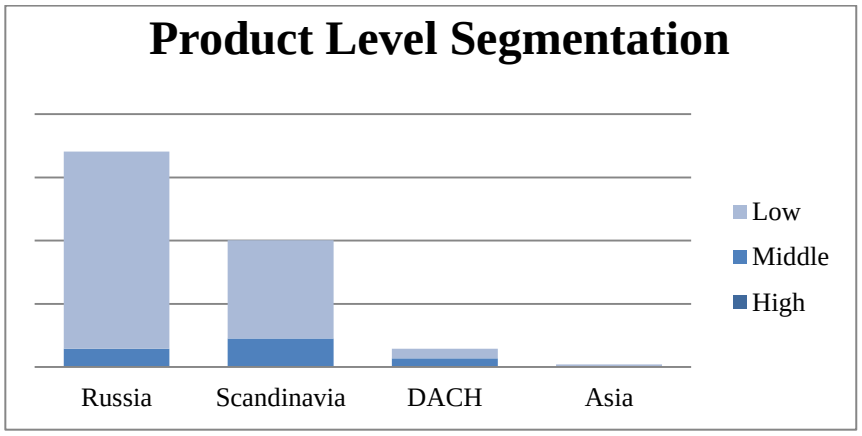

FIGURE 4. Accessories Product Level Segmentation in sales volume in pcs, between winter seasons 2013-2015, in main cluster countries of this study

As Figure 4 shows, in accessories, the lowest level products have highest sale volume in all cluster markets. In DACH, Asia and Scandinavia, there are potential markets for middle and highest-level product. Current customer segmenting in the case company, targets to the high product segment level in markets. With the current accessory range, this target is not achieved. Statistics from sale volumes indicate that the lowest level accessory products have the highest sale volume, especially in Russian and Scandinavia.

TABLE 3. Case Company's Product Level Segmentation

Product Level Segmentation			
Low	Basis	Every day use	
Middle	Waterproof	Breathable	Taped seams or insert
High	New innovation	High-tech details	High quality

4.1.4 Product Type Segmentation

Figures 4 and 5 shows that the product segmentation by product level or product type gives clear visual analysis base in each cluster area for sale

volumes for defined product groups. The Figures show that products with good quality/price in low level are the core products in the case company accessories. Segmentation in product types, show that two core products groups: beanies/hat's & mittens/gloves are both having almost equal sale volumes in all countries in this study. Importance of beanies and hats is highest in Russian markets. In addition, DACH markets are highest in mittens and gloves. In Asia and Scandinavia between these two product types are almost as important. This type of product segmentation creates base for product portfolio planning towards correct markets.

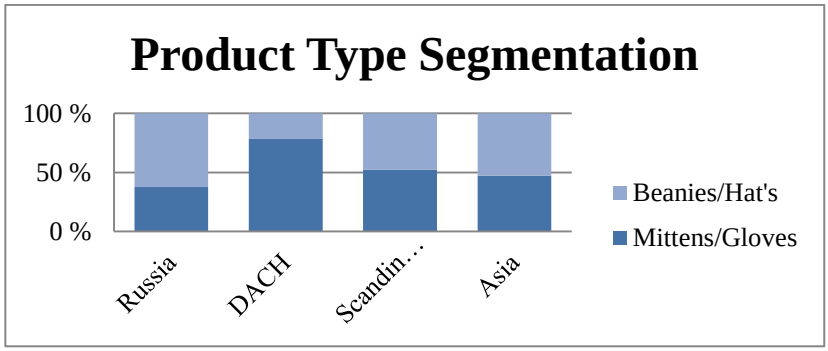

FIGURE 5. Accessories Product Type Segmentation. Four main cluster countries sale volume in pcs, between winter seasons: 2013-2015. Figure shows each clusters average in two product type groups. Clusters are not comparable to each other's.

4.1.5 Product Category Segmentation

Product category segmentation makes it possible to analyze detailed specified products separated by product types. The Case company categorizes accessories in to a four levels: beanie/hat, mitten/gloves, other, and socks. These four continue to have 24 under segments according product and material used. This detailed product segmentation is important, and further analyze in product design and developing teams should use this as a main segmentation for collected data. (APPENDIX 3)

4.1.6 Product Age Group Segmentation

Product segmenting for age groups in the case company defines; babies, toddlers, kids and juniors products age groups.

4.1.7 Product Size Range Segmentation

The Case company's accessories include 36 sizes between research periods 2013-2015. Range is high while company offers products to wide age group, from 0-12 old children. In this age group occurred the fastest growing period in human's life cycle.

Children clothing size range segmentation in the case company is based on body measurements on average. Individual differences must be taken into consideration when purchasing children clothing.

TABLE 4. Case company accessories different Age Groups in size level

Baby	
	o Gloves and mittens (0, 1, 2)
	o Beanies & hats (34/36, 38/40, 42/44, 46/48)
Toddler	
	o Gloves and mittens (2, 3, 4)
	o Beanies & hats (46, 48, 50, 52)
Kid's	
	o Gloves and mittens (3, 4, 5, 6)
	o Beanies & hats (50, 52, 54, 56)
Junior	
	o Gloves and mittens (6, 7, 8)
	o Beanies & hats (52, 54, 56, 58)

There are sizes overlapping in all age groups, in both product type groups, gloves/mittens and beanies/hats. Overlapping sizes are 2, 3, 4, and 6 in gloves and mittens and 46, 48, 50, 52, 54, and 56 in beanies and hats.

4.1.8 Product Sex Segmentation

Each product at the case company is segmented based on the sex of the user. Children clothing's are designed for girls, boys and for unisex use. Product sex segmentation is reflected in the colors, prints, details, shapes, and fittings.

4.1.9 Product Segmentation in Collection Lines

Each product in the case company has its collection line. All accessories however are in "general" collection line, while products are not directly designs to any collection. Design philosophy is that all accessories should match to all other collection range, and more over supplement the outfit.

4.1.10 Product Segmentation to Customers or Projects

Currently, the case company's product segmentation for customers or projects is not in full use. Only some special customer styles use these segments. These styles, are designed after main collection is ready. This study cannot use these segments for any benefit.

4.1.11 Product Segmentation to Sales Season and Delivery Week

All the Case company's accessory products between the years 2013-2015 are designed on a seasonality based time-line, where two collections are created in a year. Autumn/Winter collection and Spring/Summer collections are divided into a four delivery weeks between years 2013-2015. Delivery week is actually defining the product design, material and functional details, while e.g. autumn and winter collections are different. This study has focus on Autumn/Winter collections product range.

4.1.12 Existing data

Collected data from the case company's accessories product group includes a total of 1589 stock keeping units at color level (SKU) and at

product level, 537pcs over the winter seasons 2013-2015. From this data, core cluster areas were select for this research. Research data is collected in the table below (TABLE 5) from two data sources from the case company. Table separate cluster areas for further analyze.

TABLE 5. Research data from BHC survey and sale statistics. Red highlighted deviant from the average. In green, exact similarities found between DACH and Russian clusters in clothing appearance.

	Scandinavia	DACH	Russia	Asia
Consumer age average at case company, 2013-2015 sale volume, all products groups.	1,5-3y			
Main consumer age; accessories	2-5y			
Main consumer age; accessories in clusters	1,5-3y	6-9m	2-5y	1,5-3y
Seasonal colors top 3 colors, 2013-2015 accessories(pcs)	Pink	Black	Navy Blue	Pink
	Navy Blue	Pink	Pink	Navy Blue/Blue/Grey
	Black/Blue/Berry	Blue/Navy Blue	Grey/Blue	Blue/Navy Blue
Winter clothing Appearance, based on 2014 BHC study (top 3 average in cluster level)	Classic colors	Quality details	Quality details	Quality details
	Quality details	Many practical details	Many practical details	Many practical details
	Many practical details	Stylish, trendy	Stylish, trendy	Figure patterns designed for children
Purchase Decision Criteria, based on 2014 BHC study (top 3	Hardwearing/ durable	Price	Comfortable to wear / fits well	Comfortable to wear / fits well
	Heat-retaining	Comfortability	Heat-retaining	Heat-retaining

average in cluster level)	**Price**	**Waterproof**	**Hardwearing / durable**	**Versatile (suitable for many use)**
Main Shopping places, based on 2014 BHC study (top 3 average in cluster level)	**High street cloth stores**	**Sport shops**	**Children's clothing stores**	**Department stores**
	Sport shops	**High street clot stores**	**Online stores (new clothing)**	**Hypermarkets**
	Hyper markets	**Department stores**		

4.1.13 Consumer Segmentation

To meet customer requirements, companies need planned product portfolios for different intermediaries. In the case company, customer segmentation divides consumers into four segments 1) High Loyal & Discount 2) High Loyal & Full Price 3) Low loyalty & Discount 4) Low loyalty & Full Price. In addition, two segments towards Russia and Asian markets are added to Table 6 in green and blue base.

TABLE 6. Customer Segmentation Matrix of the case company

High Brand loyalty	Family focused	Status	Career oriented
	Care Free & ecological solutions	Comfortability	Best solutions
			Buy thrue network
			Premium conscious
Low Brand loyalty	Price		Wiling to invest
			Style conscious
	Practicality		Special solutions
	Discount		**Full Price**

TABLE 7. Market Segmentation in case company. Data source * http://esa.un.org/unpd/wpp/DataQuery/, ** http://www.statista.com/statistics/226956/average-world-wages-in-purchasing-power-parity-dollars/, https://stats.oecd.org/Index.aspx?DataSetCode=AV_AN_WAGE

Geographic				Demographic				Behavioral (BHC)
Countries	**Segmentation by Regions**	**Customer segmenation**	**Climate affect to the collection range**	**Population by age 2013-2015**			**Social Class; Average wages adjusted to purchase power 2012**	**Loyalty**
				0m-4y	**5-9y**	**10-14y**		
Finland	Scandinavia	volume driven	Scandinavian climate, varies with four seasons	4 603 000*	**4 623 000***	4 386 000*	2,925usd/m**	low
Sweden		image driven					3,023usd/m**	high
Norway		image driven					3,678usd/m**	high
Denmark		image driven						high
Iceland		volume driven					2,431usd/m**	low
Germany	DACH	volume driven	Middle European climate, varies with four seasons	12 543 000*	12 636 000*	**13 521 000***	2,720usd/m**	low
Austria		image driven					3,437usd/m**	high
Switzerland		image driven						high
Russia	Russia	volume driven		**48 204 000***	43 872 000*	38 641 000*	1,215usd/m**	low
China	Asia	volume driven					656usd/m**	low
South-Korea		image driven		**252 726 000***	238 991 000*	230 826 000*	2,903usd/m**	high

5 ANALYSIS

The analysis is divided into three subsections based on the research findings, problem areas and theoretic framework used in this study. ***1) First analysis part*** clarifies clothing companies' aspects for the segmented data collected in seasonal basis. Research findings show how to gain competent with efficient product segmenting, further data collecting, and analyzing. ***2) Second analysis part***, focus is on market perspective in country and cluster levels. Research findings show how differences between market countries and cluster areas are affecting to the product portfolio planning and further data segmenting. In addition, in the clusters similarities are also recognized. ***3) Third analysis part*** focus on customers' life cycle and lifestyle demands from children clothing user perspective. Parents and grandparents make purchase decision for babies and toddlers. This section, come up with a study findings how to gain in potential user markets in babies and juniors in the case company.

5.1 Product Segmentation

The First analysis part clarifies clothing companies' aspects for the segmented data collected on a seasonal basis. Research findings show how to gain efficiency with product segmentation, further data collection, and analysis.

Seasonality in the clothing industry causes short research time lines. However, historical data is well performing for planning database for collection, if brand is loyal to its products and have loyal customer base. Primarily well-planned product segmenting will provide the analyze base for the existing data. Systematized data collecting controls the core items from which companies have historical, valuable data turned into experience!

For the future, *Big Data* is only increasing the possibilities to collect data from the consumer base and product life cycle, if tools are fixed. Existing data have enormous volumes and variations in segment levels in

company's internal database. In addition, external and silent data, which are not defining or collect from the customer base, are missing from the data analyses, because of absent systems for data collecting. E.g., data can found from several sources: researches, surveys, consultants, sale agents, shop managers, product team etc. Intensely progressing seasonal collections in the clothing industry has always the probability to overlook certain features or demands from core markets which would have been essentially needed to gain higher level of customer satisfaction. However, only portion of collected data is relevant for analyze based on product segmentation and historical data. In below, study findings for key features for product segmentation in children's winter clothing are present.

5.1.1 Product Segmentation Improvements

Study findings show that the most important existing segments to define product data are 1) Collection Category 2) Product Category 3) Sex 4) Age Group 5) Product Type 6) Product Level 7) Size Range 8) Color 9) Season 10) Delivery Week.

In addition, currently missing product segments are mainly concerned with market demands and product dimensions. The **Study recommends adding market segmentations and update existing ones.** To add market segmentation to the product segmentation is important 1) Country (to which markets product is plant) or 2) Cluster (to which markets product is plant, and also defines product appearance and other know requirements) 3) Sale Channel Segmenting 4) Lifestyle Segmentation 5) User Age Segmentation.

Product Segmentation towards Countries and Clusters will automatically define product appearance requirements, purchase decision criteria and main shopping places. This data is collected from surveys from the markets, and must be update to ICT systems consistently, at item level. The Case company has already used same BHC survey study in years 2011 and 2014, so expected to have new in 2017. It is important to

use this basic knowledge in product planning base also, not only in marketing tool.

This study recommends additional **Sales Channel Segmentation**, which helps product portfolio planning towards customer front end. This would make “silent data” transparent to all; sale would define in product level which are core customers most important products for winter season. Customers would be listed behind current customer segment, where all options would be for easy communicate tool for sale. Defining the partners, advocates, supporter’s etc. is essential, so that the loyalty between parties will increase. Clothing companies’ customer base has to define each season.

Lifestyle Segmentation is a tool for marketing and for product planning.

User Age Segmentation gives more information about the user base for company products. This is also a tool for Lifestyle segmentation is also important to define. User age is information taken directly from product sizes and case company’s age recommendation for each size group. This user age information could also be important future study area. Country level differences exist in children’s growth and age curves, but there is no research information. User age information could be asked e.g. from shops and web sales to have better understanding. Also big data already collected from many companies, are most proper data sources for age and size comparable.

Moreover, suggested **product segmentations updates are** 1) Collection Line Segmentation 2) Process Type Segmentation 3) Product Share 4) age group 5) size range 6) product segmentation to sex

Updated Collection Line Segmentation clearly separates currently used lines into their own profiles. Each Collection Line is brand loyal, although it difference from other lines is clear and make collection with clear separated parts. This way, servicing children clothing customers e.g. with casual (fashion or sustainable), sport or basic collection lines where all

products are matching from outdoor clothing to accessories and shoes is most efficient. Separating lines with materials, colors, product functions, fittings and appearances open potential new markets. For this segmentation, this study will have recommendations to divide also accessories to existing product lines with outdoor, layers and shoes and delete currently used “general” segmentation. This serves sales and customers with clear designed combinations.

Updates for existing Process Type Segment so that it clearly divides product by place in Product Market-Matrix. A Product is new, continuing, or customer style. Process type defines whether a lean or agile method should be used in planning, designing, purchasing, producing and in logistical steps. One of the most important product segments is not as clear as it should be in case company’s ICT systems. This product segment tells is style new, reference or continuing. Currently product Type Segments has options; collection, original, flash and customer style.

Product Age Group Segmentation gives workable tools, if the whole collection range of products would also be defined by user ages, not only to groups; baby, toddler, kids and junior. This is because one group includes several sizes. Detailed information will decrease size range and gives transparency to the product portfolio planning as also to lifestyle analyzing for user and consumer.

Product Size Range Segmentation is transparent when all the products of the case company’s collection are reflected in specified user age group. In products, there are defined measurements; based on children’s body measurements, so actually information’s exists in the company, now just this study recommends adding it to own segmentation. For accessories, size 0 in other products than mittens, booties and gloves based on this study are recommending to change, so that the report statistics will be more accurate. Currently scarfs and collars for all age groups affect to the age curves, by increasing 0-2month age sale.

In Product Segmentation by Sex, this study recommends improvements in reporting system level. Unisex collection range especially for baby collection is important, while the unborn baby's sex is often unknown. Also in some markets, such as Sweden and Denmark, there is interest in unisex collection. In Russia, girlish and boyish clothing are important. In case company, analysis based on unisex product sex segmentation does not have clear analysis system, while one style can have girl, unisex and boy colors. Also based on color numbers it is not possible to define unisex products from the sale statistics. Therefore, this study cannot look deeper to this interesting segmentation, important for product planning. However, suggestion to improve is present in the analysis and conclusion part of this study.

Product Share Segmentation separates *stars, cash items, must have products* and *lowers*. With this segment tool, already in product planning process the most important products are recognized.

TABLE 8. Product Segmentation improvement recommendations of this study

Product Segmenting	**Current problem**	**Suggested improvement for product segmenting in case company**
Collection Line Segmentation	Differences between collection lines not clear. Accessories in "general" line	Separation between collection lines with colors, prints, materials and details. In addition, accessories separated in lines.
Process Type Segmentation	Process type segmentation not used in data 2013-2015, which would tell is style new, reference of continuing style.	Process type segmentation gives guidelines for product designing to the end consumers. These were adding in new ERP.
Product Sex Segmentation	System to analyze sold unisex products and colors not possible to exist.	Product and color levels sex segmentation will give analysis base e.g. cluster level importance for unisex products and colors.
Country	Products planned for all markets. Idea behind the product is not clear for all.	Planned country level collections where country needs are recognized.
Cluster		Planned cluster level collections where cluster needs are recognized. This Cluster levels segmentation are

		recommend doing in also lifestyle perspective.
Sale Channel Segmenting	Sale team knows which product they start selling to which customers	Planned collections towards sale channels
Product Color Segmenting	Seasonal colors based on continuing colors, and new trend colors decided by design team. Seasonal color comparison is not easy, while new color codes.	Country and cluster level required colors added also to the ICT systems, so no lack in needed colors.
Product Age Group Segmentation	Currently segmentation is done for baby, toddler, kids and juniors	Suggestion is to add age segmentation also in user age and unify whole collection size towards defined user age
Product Size Range Segmentation	Currently, used size ranges in age groups have overlapping in accessories. Statistics shows that especially in babies and junior sized size range need focusing.	Recommendation is to have two baby and two junior sizes.
Lifestyle Segmentation	Lifestyle is not in use in product planning state, working as a marketing tool only.	Efficient product planning, take consideration lifestyle in country and cluster levels.

5.1.2 Product Color Range Segmentation

The color palette is what makes this a collection segment. Based on the data, the top five of the best-selling colors are continuous. To define important colors for each cluster has some differences, but clearly, basic color in correct appearance and price is what sells. Print design is sometimes the selling point in the product, and it is important to keep well-performing prints in the collection from season to season, like original products or continuing colors. Currently all prints renews for coming season and here is no continuing ones. This study recommends that also continuing prints are part of the case company's collection range for few seasons in a row. An important point is that a color can improve performance of a print or knitted stripe design, and this is not showing in the color-coding or statistics in accessories data in the years 2013-2015. For accessories, similar coding as in outdoor is recommended to take in use for the future. This way, multicolored products has special color code, and these are more easily separated from the data for deeper analyze.

TABLE 9. Color coding study recommendations for accessories

Segmentation	Current state	Improving suggestion
Color code	Continuing colors same from season to season	Keep as it is. Possible to add more continuing colors to the case company's color range?
	Seasonal colors, new color-code each season.	To create system to control seasonal colors e.g. how well each seasonal pink performs in the markets in comparable form. How to have seasonal color data in comparable form?
	Seasonal new prints, new color-code each season.	Well performing prints has continuing for next season. Also, help in stock levels. Decision to continue seasonal prints affect to the coming season collection look and idea, so it must be timeless, or brand symbolizing.

5.1.3 Product Stock Keeping Unit

The trend with the winter season products is toward decreasing stock keeping units (SKU) in the case company. Direction has been correct and in winter 2016, shows that there is growth even with smaller collection. Wide market area with geographical, psychographic, demographical and behavioral differences affect the seasonal demands. The study recommends based on the research findings, that separating collection lines is not decreasing SKU need, but it will reduce the risk for duplicate products in collection (APPENDIX 7)

Based on statistical data in this study, Asian markets have potential, but there is demand for different products from the current volume products in Scandinavia, Russia and DACH clusters. In accessories, it is important to keep core products for current core markets, and similarly study which are the possible new core accessories for new potential markets like Asia. This leads to the fact, that part of the collection is not interesting to some clusters. Diversification with new products to new markets is risky although it will more potentially increase the market growth. Separated Collection Lines, will be helpful tool to clear differences between colors or design's, when accessories are separate towards cluster area's needs. If clusters geographical segmentation varies from core markets, also product range must offer products correct to this market.

Moreover, dividing deliveries to certain capsules must be taken into consideration while planning product portfolio.

More detailed segmentation of colors is recommend for different country and cluster segments to help separate collection Lines. In the case company, stock keeping unit (SKU) defines collections item/color level. It is not in size level, although it is good to remind that also the size is having its own requirements in the process.

Controlling collection size range is important from planning, pricing, purchasing, and warehousing to user's needs. Size range check has affects also on efficiency in production lines, pattern making, cutting, sewing, labeling, and packing. In Case Company, many overlapping sizes are in use between Age Group Segments. By fixing these sizes not to have as much overlapping can reduce SKU levels.

Currently, high volume sales products in accessory team are continuing styles. Why is there a need for seasonal updates, so often, when products are purchased because of need, children's growth and weather conditions in the winter season? Of course, shop appearance must be updated on a monthly/seasonal basis, but there are agile ways to do that. These agile ways are achieved by pre-planning and use of short lead-time products.

5.2 Cluster Countries Synergy and Differences

The Second analysis part focuses is on the cluster markets' perspective in existing sales volume findings. Research findings show how differences and similarities between market cluster areas affect the product portfolio planning and further data segmenting and how existing data is used as a tool to achieve higher performance are used.

Results from the existing data collected from years 2013-2015 in the case company's accessories clearly shows current core countries, products, sizes, user ages, colors, required product appearances and main sale channels.

Analysis from cluster countries synergy and differences in full version found from the appendix 7. Short overview from sections 5.2-5.4, help the reader understand the basics in synergies and differences.

5.2.1 Trend Analyze over Time

Trend Analyze over Time in sales curve between years: 2013-2016 shows how the sale has been developing in the yearly basis. Economic circumstances are the main reasons affecting to the trend lines, increasingly or decreasingly.

Trend analyzes over time in Scandinavia indicate that this market area is strong for the case company and has quite stable base. Finland and Norway are keeping their positions as currently, and growth in Sweden and Denmark are to be expected.

DACH countries; Germany, Switzerland, and Austria are all countries with high purchase power potential in the markets for the future, based on the trend analyze over time.

Russian markets are potential; however, sudden changes can have major affects to the case company's seasonal results and trend analyze indicate.

Asian cluster area continues its stable growth in the markets as shown in trend analyze over time. These markets are potential and sudden sale volumes are expect to increase. Strong start at these markets gains faster growing, as in Asian markets, competition is hard and ways to achieve market growth should be consider.

5.2.2 Highest and Lowest Values

Case company's top selling products between research periods 2013-2015 based on existing data indicate existing core products (APPENDIX 4). In addition, areas where most potential is to develop new products can be defined based on lowest values in sale volumes.

Highest selling products are known among develop, and sales teams, and among loyal customers. These high runners can gain price competence with well-planned purchasing and delivery processes.

Among clusters, there are similarities in Scandinavia, DACH and Russia clusters with the volume sale products. Asian market is different from its top sold products based on the study findings.

Lowest sold products in the case study are mainly special styles. These special styles are not volume product; they complete the collection assortment. These products are important, however plane behind these product segmentations should be thought so that in analyze state these styles are recognized, e.g. some project segmentations. Based on this historical data similarity in product and SKU level sales in Scandinavia and Russia is surprising, while volume from Russia is such high.

5.2.3 Sales Power Analysis in the Cluster Countries

Country level sales power analysis (Brutto EUR / sold pcs per country) in the case company shows comparable statistics between countries. Statistics gives quid lines for the case company, about the products profitability. Purchase power analyze indicate target products to its most profitable markets.

Found synergies between cluster-countries indicate that with **purchase power** separation current clusters could be re-organized. This separation defines new cluster combinations towards "*purchase power clusters"* for accessories products, where product range planning in product levels is most efficient. This help to design high-level product to correct markets, as well as low price products to certain areas.

China has the lowest purchasing power volume and the second lowest is in Russian markets in the case company's accessories. Currently Russia is the volume market for case company and in China; it is expect to have volume in sale for future. Sale power analyze indicate potential for low-

level products in these markets. Defined products to each cluster markets, based on geographical, behavioral, purchase power and lifestyle differences and similarities will increase market potentials. In Scandinavian and DACH markets high and middle level accessories has performing potential to growth, however also low level products are selling especially in Scandinavia.

As a conclusion, accessories product range could be more focused towards country specific needs. Target customers, to each product level and in country level, should be defining.

5.2.4 Accessories Size Curves in each Age Group Segment

This study separates products based on type segmentation and more specifically on product categories. In case company, product range this means defining product collections first under accessories then under hat/beanies and again more defined to beanies.

Each product category and type has different size range based on children's height and head circumference measurements. In addition, children's clothing products have shorter lifecycle while the growth of each individual child. This indicates to the fact that efficient size range for children's accessories is essential.

Accessories size curves in each age group segment indicate that sales focus on certain sizes. In addition, low sales volume in certain sizes is in tail ends sizes, meaning smallest or biggest sizes. Based on this conclusion, to define products size range is essential, while from historical data, forecasted focus on middle sizes is quite certain.

5.3 Cluster Level Age Curve

The Case company's highest sales volume between winter-seasons 2013-2015 focuses on toddler's in the age group from *1.5 to 3-years old*. This is the existing core user group for the company's whole collection. For this

age group, parents, grandparents or other adults are making the purchase decisions behalf of children. Based on this knowledge, conclusion is that the main shopper is adult and adults know brand. However, for the user, for the child, brand can be totally unknown.

In accessories, the average user age group is 2-5years old. This is an older age group than case company's whole collection user age in average. This can be partly because size and age comparison between product groups has small differences and age is not aligning thru the collection. However, figures are averages, and further study will look more closely to age groups in cluster levels for more detailed information from accessory team.

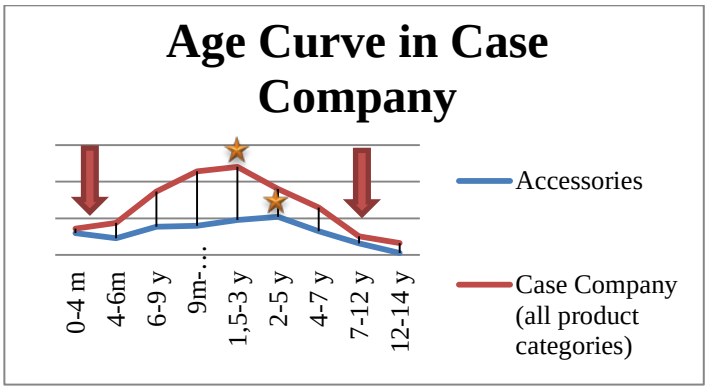

FIGURE 6. Case Company's whole Age Curve versus defined Collection Category in this study

The figure above clearly shows the second main problem in this study. Age curve in case company has high volume for some age groups, and "tails" at the beginning and end of the age curves which lack sale volume. There are smallest and biggest sizes. Un-used potential shows in these certain age areas, and this study looks possibilities to gain more performance for babies and junior accessories. In addition, possibility to delete these low performing sizes and age ends from the collection is one of the considered options in this study. This however, would affect to the case company's assortments.

There are differences between when the sales volume peaks in the whole collection and in separate accessory collection categories. To increase accessories sale, additional sale with the case company other collections would gain more market shares for accessories. In figure 6, between red and blue lines has highest potential shown for accessories to growth its sale volumes? This area has volume potential in accessories additional sale.

The research demonstrates differences in cluster market age group peaks between separated product segments as opposed to the case company's whole collection. There are differences also found in colors, product appearances, and purchase decision criteria's, in shopping places and market purchase powers and population volumes in cluster areas. Further analyze in cluster level, for all recognized differences, are presented in Analysis part.

5.3.1 Scandinavian Markets Age Curve

When separating sold sizes inside the Scandinavian cluster area, country level deviations are evident. This cluster area includes Finland, Sweden, Denmark, and Norway. Main users in Scandinavian markets for case company's winter accessories are from 1.5 to three years old (FIGURE19, APPENDIX9). Age curve follows the decline from highest peak strongly down and is quite low after age of 4-7 years old. Potential markets are in age groups for babies and from four to 12 years old juniors. These user age groups market potential is unused.

In the babies' age group, sales volume is growing after babies reach 6-months of age. However, there is a lack of sales in this part of the accessories clothing collection. Babies are requiring protection from cold with good quality accessories and beanies, mittens and booties. Babies' size range, especially need checking.

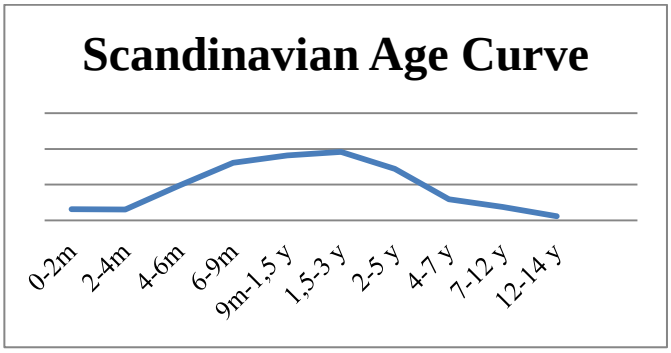

FIGURE 7. Age Curve from Scandinavian Cluster Markets for winter accessories 2013-2015

5.3.2 Russian Markets Age Curve

Below, the age curve shows that in Russian markets, the case company's sales volume spreads widely over several age groups when compared to other cluster areas. There are clearly two high peaks in the figure. Highest user age group is including two age groups 9m-1,5year old and 1.5-3year old. Age curves decline starts after 4-7 years with clear drop, as in other clusters as well. However, babies' age group products have highest sale volume. In these markets have still growth potential in babies sector, as long as collections are plant towards these demanding markets performance are gained. Top products in Russian markets are primarily low product level accessories.

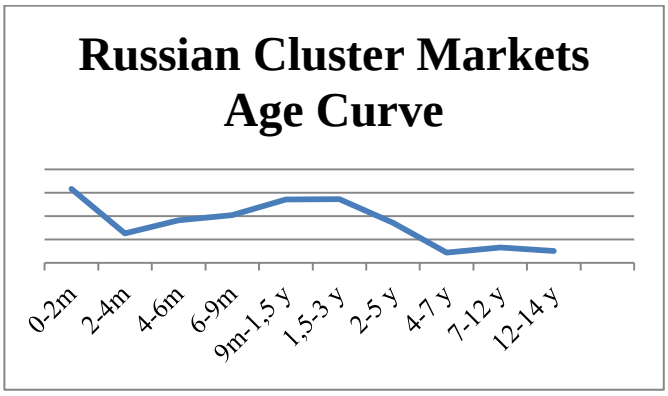

FIGURE 8. Age Curve from Russian markets for winter accessories 2013-2015

5.3.3 Asia Markets Age Curve

The main user age group in Asian markets is from 1.5 year to 3 years old. In Asian markets kids and juniors have shown as most positive market area. However, currently drop in sales in case company is in 7-12years. Newborn age group, based on forecasted birth rates at Asian countries has potential to growth as well.

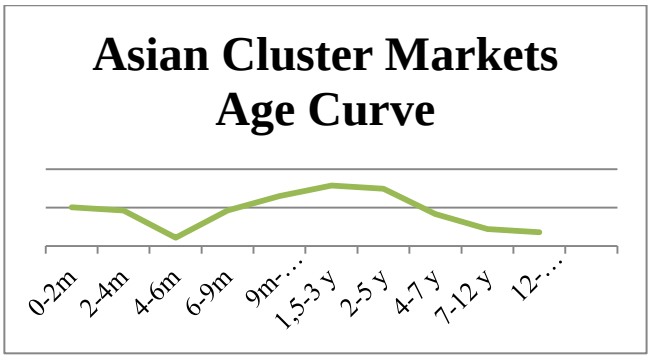

FIGURE 9. Age Curve from Asian Cluster Markets for winter accessories 2013-2015

Top products in Asian markets have differences to other clusters. Moreover, it is important to find core accessory products for Asian markets. It is expected that in Asia, the future forecast for the children's population for year 2025 will decrease, and highest growth will be in the junior age group. (APPENDIX1) This same expectation is happening in Russian markets also. Still, both Asia and Russia are the markets with definitely most population, so drop in birth rates has minor if any affects to case company sale volumes. Most probably, increased wellbeing and growing middleclass able case company's children accessories to growth in Asian markets. Population with enough purchase power, only partly reached in these countries even in the lowest product levels of the brand. (TABLE4) Towards Asian markets, current accessory collection need own production line for warm geographical countries.

5.3.4 DACH Markets Age Curve

DACH has a different main user age group when compared to other cluster countries. The DACH cluster area incudes Germany, Switzerland, and Austria. Accessories for younger age groups sell with different deviation than in other cluster countries. However, similarities in top products between Russia and Scandinavia are found based on this study.

In the DACH cluster, the user is younger than in any other cluster. In DACH, as in other clusters, the sales decline starts from older kids,, but not as dramatically. In DACH countries, there is potential for growth in junior products. (APPENDIX 7)

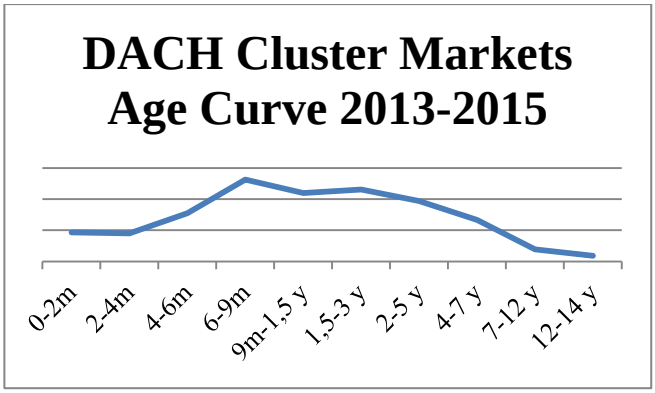

FIGURE 10. Age Curve from DACH Cluster Markets for winter accessories 2013-2015

In Denmark, Norway, and Sweden, forecasts show that the number of children from zero to four years old is rising. This is because in developed countries family size is bigger. In DACH countries; Austria, Germany, and Switzerland all age groups are growing towards year 2025. (APPENDIX2) With existing accessory collection, growth is most achievable.

5.4 Color Statistics

Statistical data in this study on colors focuses on top colors where sale was highest. The full version of color demands and analysis in cluster markets is found in APPENDIX 7.

Color is an important part of the accessory product and also segmenting products at the color level and its main market are recommended based on the study findings (TABLE 7). Colors match accessories to the other collection range, and colors define markets towards which they are designed.

Research data in seasonal color analysis was easily decipherable based on color codes in full understanding. Between seasons, it is not easy to compare performance in these colors. However, to define all seasonal colors performance is possible but time consuming. Colors with highest sale volume are mainly continuing colors from season to season and possible to analyze while continuing color numbering system. Also behind color level sales there can be product design, material and fitting affecting to the look and to how well they are liken in the markets.

5.5 Customer Lifestyle

The third analysis part looks at customers' lifestyle demands and looks at potential ways to increase sales volume for babies and junior products in the case company. In addition, the third part focuses to the user in the clothing industry specialized for children's clothing.

In this study, children's life cycle thinking starts from the baby clothing collection and continues to junior products. Currently, case company's product range is focusing on toddlers and kids products and for small collection for babies. Only proportion of the collection assortment is towards junior age groups.

Style appealing to juniors is currently looking inspiration from adults clothing. Also in smaller children parents dress up their children's with the "mini-me" like father like the son way e.g. "***Mini-me***" dressing launches a wide new possibilities for children's wear industry. This increased challenges for the brands only working with children's clothing, while design in the future markets must appeal as well parents and match to their clothing. In kids and junior age groups, teenage trends are more adult like. Therefore, the comfort ability in children's clothing is moving more towards fashion like. (http://www.euromonitor.com/micro-fashion-trends-in-childrenswear/report)

High-level brands have already noticed potential in mini-me children's clothing. In addition, Bestseller studies future visions of the markets and they launched a "Limited by Name It" with mini-me idea, where children's wear is more adult like. There is also available sportier children's collection from Name It. Danish clothing business is always strongly taking part of new trends.

Mini-me children's clothing collection could be one of the Collection Lines also for the case company to achieve sales volume in certain markets such as Sweden, Denmark, South Korea and China. Ideology case company prefers is to children to be children, and potential from mini-me thinking for the case company are gained when looking e.g. back to the company history in adults sport and technical clothing. As BHC survey showed, in several countries *products details* are highly appreciated among consumers. With small things, products are more interesting and in level what is parents also considering to purchase for them self's also.

The Case company is moving towards active lifestyle, and currently there are huge potentials in ***sport clothing***. This is where the company needs to take its share and here case company could do something special for children in its own way.

Internet and social media are creating possibilities for low cost and fast methods for purchase behavior surveys. Thru internet, companies can connect with wide consumer base worldwide and data is collect in real time. Point of sale (POS) information gives real time data from customer demand directly to the companies. Knowing about customers lifestyles is already now huge business in the omnichannel network. However, new ICT systems are expensive and not all clothing companies have yet invested to this. This is highly recommended to take in use, while knowing your customers and their lifestyles is one of the futures most important dimensions in business.

In agile process in the clothing industry, the most important element is to have data on customer demand and stock levels in order to make agile decisions. At this moment, case company is lacking system to combine these two databases to a report, which would give clear and fast data. For the future, case company's renewed ERP systems will make possible also this kind of data analyzing.

In addition, use of RFID is highly recommended in agile process. RFID is working as a tool to respond to customer demand. It has data from what sells out from the whole collection, and what is the warehouse stock status in size and color level. This gives market benefit for companies, while they have product available. Time saving purchasing and agile processes, are both ways achieved with RFID technology between customer and factories. In addition, RFID help to recognize products that are not selling, and give sign to product team not to plane these for future. RFID works communication way also between customers and product teams and more precisely product portfolio planning. Future trend in recycling textile can also have dimensions in RFID use.

A purchasing decision is an emotional process, and that for the clothing industry is foremost in transparent sustainability in the markets. Sustainability in clothing industry is megatrend and for future still growing its position. Because of the sustainable direction in the markets and in the

clothing industry, this study assume that also in kids and juniors clothing low quality products will lose their importance for the future in developed countries. In developing countries, it is expect that the fast fashion will gain its growth. Within time, change towards lasting clothes is coming worldwide. Based on this assumption, study indicates that children clothing in all age should be quality products and sustainable appealing to children, juniors, parents and grandparents.

5.5.1 Collection Package helping in hectic lifestyle of parents

Time management in families is challenging. Lack of time can affect the food families eat, hobbies parents can manage with their children, clothing they purchase and channels they use for purchasing.

This study recommends that the case company would create, with the help of existing brand club members, a way to serve the growing child in the best and easiest way for the parents. The system would work so that the newborn or toddler, kid or junior in any age can register to the club, and the family or any adult will purchase similarly ***packaged*** with seasonally required clothing products, accessories and shoes. The package would have differences between country or cluster level. Based on general averages, child's growth curve and sex, case company offers second packaging for the child when new season comes. Case company would take back the used package if customer request. Used clothes will be checked by case company's own personnel, only accepted packages can be returned. Recycled package is for customer who requires second hand package. Recycled package is sold with discounts. Handling used packages needs efficient system to be workable.

Case company's well-known brand in the markets is something consumers would be willing to wait, as long they know they will have it when it is need. This could make possible to design service for the internet where customer pre-purchase children winter clothing in advance.

TABLE 10 Recommendation for Packaging Service for special customers

Children's Age Group	Summer and winter seasons collection package examples	Improvement suggestions
For Babies	WINTER: padded overall, woolen layer overall, mittens, beanie, booties SUMMER: light soft shell overall, light beanie, mittens, booties	Case company could provide internet based full service product packages for families. Especially important to start from babies age group, and continue to toddler, kids and juniors age groups.
For Toddlers	WINTER: padded overall, fleece layer overall, mittens, beanie/balaclava, shoes SUMMER: Light jacket and pants, light beanie, mittens, summer shoes/sandals	Control of child's age curve and sex and lifestyle of the family will help case company to provide babies, toddler, kids and juniors package for the customer. Case company would offer ready customized package with comprehensive price. Delivery for packages would base on geographical demands.
For Kids	WINTER: Padded jacket and pants, shoes, beanie, mittens/gloves SUMMER: light jacket and pants, light tricot beanie/cap,(light casual gloves), sneakers	
For Junior	WINTER: padded jacket, sporty outdoor pants, gloves, beanie SUMMER: light jacket, pants, beanie, sneakers	In junior's package lifestyle is more affect. Package must be commercial clothing and accessories.

5.5.2 Potential in Baby Age Group

As the age curve shows, based on existing sales data findings in this study, babies' sales volume is not as high as it could be. Many markets have potential in babies' clothes, especially in Denmark, Austria and Switzerland has highest growth forecasts for the year 2025. In the case company, there is special babies' collection range for 0 to 1.5 years old, but the growth in collection has been slow and in all four study cluster areas sale is drop in baby sizes. In Finland, Kela's baby box can be reason baby collection low sale. In Finland, also second hand shopping is growing especially in baby clothes.

With tightened size range for accessories, at least better performance is achievable in the baby collection. In addition, the baby collection range includes products from tip to toe, and this way fulfills the SKU's. The study recommendation is to check its comprehensive collection, and focus first on core products for the case company. For baby collection, these products are outdoor products, knitted beanies, mittens, and booties.

TABLE 11 Suggested improvements for baby Age Group

Suggested improvement	Currently	How to Improve
Baby Size Range	3 sizes in accessories	decrease to 2 sizes all baby accessories
Collection Range	Tip to toe	Focus on core items for babies case company has good sale and increase this type of products in collection.
Additional sale	Baby collection sold normally, no sets	Packaging service for babies and additional sale of baby accessories with outdoor and layer products.

5.5.3 Potential in Junior Age Group

Currently, kids and juniors demands for own style in the children's clothing markets are increasing in importance worldwide.

The Case company produces clothing for a variety of sports also for adults. However, a few years ago, the company focused its product segments only towards children's clothing and it has been right direction to go. Growth towards worlds known brand has started in field of children's clothing. There are benefits towards competitors, while for them additional children's collections is not as important as adult's. When thinking mini-me idea producing only children's clothing can be seen as a weakness. However case company's skill set also unglued history in adults products, so there is potential unused. Why not use the history as company's benefit and create best junior collection for the markets. Idea is to create new way for junior consumers to show their individual needs, which also parents appreciate. To create possibility for juniors to make sustainable decisions.

Juniors grow and each season they need new outdoor clothing for active lifestyle as kids do. Junior age children have many activities and they purchase with parents new winter clothing for each season. This age group also has the most needs for high price products, so they are in the target consumer group in that way for the case company. Study findings recommend case company to take Junior Age Group as a challenge.

Junior collection range should be totally separate from babies, toddler's and kids collection part.

Sales channels in the case company need re-checking, when parents and grandparents are the main purchasers in core products age groups, not junior clothes. Urban, city proof products, such as the case company main line is directed to the junior user and has high potential also among new users. For example, in Russia and in Asia forecasted population in junior age groups especially have risen towards 2025 to be more than other children age groups (APPENDIX 2).

TABLE 12. Suggested improvements for junior Age Group

Suggested improvement areas based on study findings	**Currently**	**How to Improve**
Use existing knowledge from adults clothing for case company's benefit	Current focus on toddlers and kids and it is notice in sale.	To increase sale in juniors, more focus must be for junior product range. This must include case company's entire product groups: outdoor, layer, accessories and shoes. Wider and clearer junior collection, without any prints or similarities from toddlers or kids is need to whole collection range in case company.
Lifestyle Segmentation	Junior accessories or case company's whole collection is direct to junior clothing where purchase decisions made by parents.	Collection needs also products where all levels appeal to junior age user. To start this from kid's age already would increase junior's knowledge and interest to case company's collection. Competition is hard and juniors demand is increasing.
Junior Size Range		Check for existing size range. Focus on core sizes.
Increasing Sale Volume	Only few junior accessories	Check for junior collection needs. Packaging service. Additional sale.

6 CONCLUSION

6.1 Purchase Behavior

Purchase behavior is under constant change and new ways to collect data on market behavior is increasing in importance. Purchasing tendencies are moving towards value adding shopping experiences where omnichannel has growth for its convenient usability any time anywhere. Omnichannels make possible data collection in real time, and increases existing data sources. Existing historical data, which companies have more than they many times realize, give valuable direction for market development. This data is based on new seasonal collections in the clothing industry. The main key is to having data effective in practice is planned product segmentation, and report and analysis process.

For future, the highest expected growth in the clothing industry is in China and the second highest growth in European countries. In expanding towards Asian markets, new brands must have a strong start for all possible attention among competitors.

In new markets, as the study indicates, product portfolio planning must be carefully studied and it must be broad enough. Collection size depends on the size of the new markets the company is entering, big markets require a wider collection etc. With *Market Development Strategy*, in this study, entering new markets where there are existing products is seen as challenging for the case company.

Clearly, it shows that the modification of products and services, when entering big markets must be re-checked. Diversification Strategy towards these markets can be the best solution, which could be possible with separated collection lines.

Purchase behavior towards sustainable products in the clothing industry will be the second biggest trend coming for the future after omnichannel shopping experiences. These two new trends will grow simultaneously and

will stay among consumers; while omnichannels gives possibilities for consumers to have information e.g. from raw material origins, factory conditions and workers average salaries, which all will affect to the purchase decisions. In addition, safety of the textiles with used chemicals and environmental aspects have huge effect to certain consumer's decision making.

6.2 Product Segmentation

The overall conclusion from children's winter accessories product segmentation in this study is that several important segmentations are not finalized to serve product portfolio planning in historical data. This is why the study recommends additional segmentations be utilized and the updating of few existing segments.

The recommendation is to combine ***Product Segmentation*** and ***Market Segmentations.*** These segmentations are important for the company, but rarely used as internally combined to achieve product portfolio planning efficiency. These segmentations together make future product planning and data analyzing more efficient and is multi-dimensional tool for marketing and sales team, as well as purchasing teams. In below figure shows advances for the company when change from the product segmentation is turned more towards consumers, markets and their lifestyles. Lifestyle is separated from market segmentation because of its current importance in worldwide clothing business.

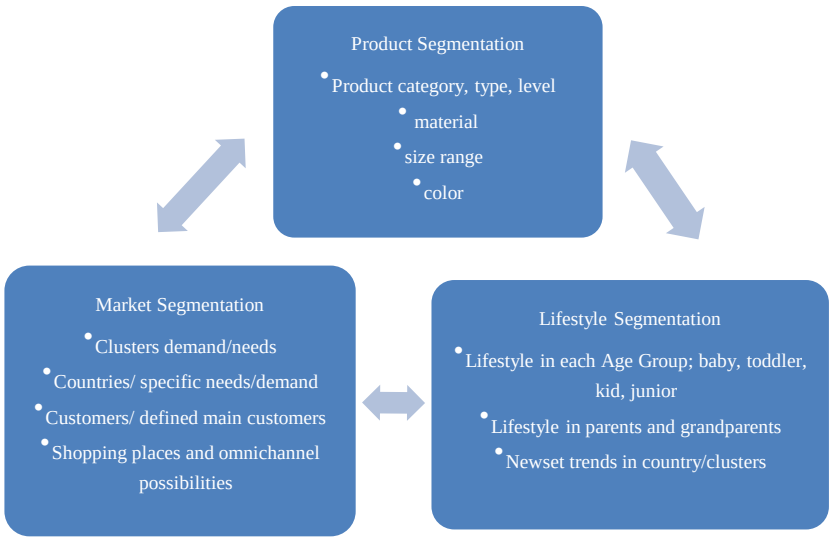

FIGURE 11. Segmentation for product, markets and lifestyle combined to gain best efficiency in product portfolio planning in the clothing industry.

Study findings indicate that core products, on which the company has existing data, should be clearly standardized and separated from the seasonal collections. This would ease the flow from design, product and purchasing teams from the most hectic seasonal time-lines. In addition, standard products could move to agile purchasing and delivery process, with automatized purchasing systems.

New markets from different ***Geographical Segmentations*** directly affect the collection range requirements. Product modification or new product designs are required for big markets with clear differences in geographical conditions.

The recommendation in this study is to implement ***Process Type Segmentation***, which gives guidelines for product designing to the end consumers. This segmentation type will be in use in new ERP.

Product and color levels ***Sex Segmentation*** will give an analysis base, for example, in examining cluster level importance for unisex products and colors. This is a new way of segmentation and is recommended as a finding of this study.

Color Segmentation into main colors, blue, red, pink, yellow, grey etc. is recommended for the future. This way, companies have comparable color statistics from seasonal color tones.

Country Level Segmentation enables planned collections, where recognizing country needs are important if the brand is operating worldwide in different markets. ***Cluster Level Segmentations*** in collections gives guidelines for product portfolio planning. However, as study findings show, cluster definition in geographical segments is not always the only type of performance. The Case company needs to define clusters to control its target to gain market share in high-level products.

Planned collections towards ***Sale Channels*** and core customers would improve future efficiency. This segmentation is also a tool for marketing and sales. For special customers, the collection planning stage could already be the stage when they have drafts of what is coming. Moreover, this way, the planning of the capsule 1-delivery products are finalized before moving to the second delivery product designing stage. This would make the process more realistic and align the busiest times.

The last suggestion is to add ***Age Segmentation,*** which is an indicator variant for Lifestyle Segmentation. In addition, user age tells more about the product style, appearance, material, color needs than purchased sizes, while worldwide population in children's growth has variations. When planned control of collected user age is implemented at the country level and current clusters children's user ages give important analysis base for the case company to define size ranges for its most performing level. With this age segment, there is a possibility that the cluster separation in the future is done with the needed size ranges. E.g., define countries size needs.

6.3 Cluster Countries Conclusion

All cluster markets have their own needs, and these markets were under analysis in this study. Similarities and differences between clusters in this

study were recognized. Currently, cluster market areas in the case company are focusing on geographical segmentations. Scandinavian and Russian cluster markets have the most similarities in sold volume products, because of similarities in product functions because of similar climatic conditions. DACH markets are also similar to Scandinavian and Russian markets, however small changes are recognized especially in technical mittens and gloves sales. Asian markets are different when compared to other clusters. Differences are evident in sold top products, size range, age curve, colors and product appearance demands (APPENDIX 12)

If collections are directed towards geographical demands, then also a clearly lighter winter collection towards Asian markets is required in the accessories product range. Alternatively, it is possible in Asian clusters to separate clusters inside a country by urban area, as distances inside China are great, and geographical requirements vary. With this thinking, the delivery capsules could be tools to control needed accessory products of new collections to reach each market.

FIGURE 13. Accessories seasonal product cycle, based on geographical differences illustrated in this figure

Purchase power volume in markets, based on this study, focuses on Russia with low price-level accessories. This assumption to turn towards target markets, where the case company seeks certain consumers is to be especially in DACH and partly also in some Scandinavian countries. Cluster deviation can also be done based on how much financial benefit markets have for the case company, as study findings show. Focus is on markets where the case company has the most profit. Again, focus would be in DACH and Scandinavia.

6.4 Collection Packaging

The Case company has the possibility to provide, through their own internet pages, full service product packing. Collection Packaging is based on loyal customer memberships service through the internet, where growth and needs are monitored by company and registered adult. When a new season comes, for example, winter, a registered adult gets an offer for a full service package from the case company. The package includes all needed winter products the child user needs for the coming winter. The package has a commercial price, and it can be collected from the shop or delivered to the door. Payment can be made by credit card in installments. Moreover, the idea is to have a value adding shopping experience for consumers.

Also recycling, which is becoming strong in the clothing business is part of this package service. A returned package will have a positive effect on the new package price for the club member purchasing a second package. Recycled packages are resold at a special price. The Case company could offer this service from babies to juniors, as the fact is that a child at any age during her or his growth needs clothing on a seasonal basis.

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APPENDIX 1

WORLDS POPULATION 2013-2015 IN CLUSTER COUNTRIES

TABLE 1. World's population age groups divided in years 2013-2015 at cluster countries: Asia, Russia, Scandinavia, and DACH. This age data is from same years as secondary data used in this survey. 0-4 year is group of babies and toddlers, 5-9 years is kids groups and 10-14 juniors. http://esa.un.org/unpd/wpp/DataQuery/

Population by age and sex (thousands)				
Location	**Time**	**0-4**	**5-9**	**10-14**
World				
Asia		252 726	238 991	230 826
Eastern Asia				
China	2013	81 623	77 267	74 839
China	2014	82 727	77 860	75 022
China	2015	83 186	78 637	75 292
Dem. People's Republic of Korea	2013	1 710	1 778	1 912
Dem. People's Republic of Korea	2014	1 733	1 739	1 893
Dem. People's Republic of Korea	2015	1 747	1 710	1 868
Russia		48 204	43 872	38 641
Russian Federation	2013	8 725	7 566	6 493
Russian Federation	2014	9 002	7 739	6 711
Russian Federation	2015	9 166	7 938	6 928
Scandinavia		4 603	4 623	4 386
Channel Islands	2013	8	8	8
Channel Islands	2014	8	8	8
Channel Islands	2015	8	8	8
Denmark	2013	309	329	336
Denmark	2014	300	331	333
Denmark	2015	295	332	330
Finland	2013	306	296	289
Finland	2014	305	302	288
Finland	2015	304	307	288
Iceland	2013	24	22	21
Iceland	2014	23	23	21
Iceland	2015	23	23	21
Norway	2013	314	306	308
Norway	2014	313	311	306
Norway	2015	315	316	305
Sweden	2013	575	553	491
Sweden	2014	583	567	506
Sweden	2015	590	581	519
DACH		12 543	12 636	13 521
Austria	2013	396	399	423
Austria	2014	400	397	419
Austria	2015	404	397	413
Germany	2013	3 346	3 443	3 761
Germany	2014	3 364	3 414	3 688
Germany	2015	3 384	3 393	3 620
Switzerland	2013	410	390	401
Switzerland	2014	416	398	398
Switzerland	2015	423	405	398

WORLDS POPULATION FORESIGHTS 2016 & 2025 IN CLUSTER COUNTRIES

TABLE 2. World's population foresight in age groups 2016and 2025.
http://esa.un.org/unpd/wpp/DataQuery/

Population by age and sex (thousands)			
Location	**Age**	**2016**	**2025**
World population /thousands)			
Asia			
China	0-4	83 464	68 697
China	5-9	79 627	78 480
China	10-14	75 681	82 878
Dem. People's Republic of Korea	0-4	1 780	1 767
Dem. People's Republic of Korea	5-9	1 693	1 764
Dem. People's Republic of Korea	10-14	1 835	1 736
Russia			
Russian Federation	0-4	9 334	8 006
Russian Federation	5-9	8 176	8 818
Russian Federation	10-14	7 148	9 169
Scandinavia			
Denmark	0-4	285	330
Denmark	5-9	331	310
Denmark	10-14	331	301
Finland	0-4	301	299
Finland	5-9	311	304
Finland	10-14	291	313
Iceland	0-4	23	22
Iceland	5-9	23	22
Iceland	10-14	21	23
Norway	0-4	315	346
Norway	5-9	322	348
Norway	10-14	309	337
Sweden	0-4	589	631
Sweden	5-9	594	634
Sweden	10-14	537	622
DACH			
Austria	0-4	408	426
Austria	5-9	397	424
Austria	10-14	409	410
Germany	0-4	3 417	3 500
Germany	5-9	3 379	3 537
Germany	10-14	3 568	3 433
Switzerland	0-4	429	469
Switzerland	5-9	411	464
Switzerland	10-14	401	434

APPENDIX 2

TABLE 3. WHO growth statistics

World Health Organization

Simplified field tables

Head circumference-for-age GIRLS
Birth to 5 years (z-scores)

Year: Month	Months	-3 SD	-2 SD	-1 SD	Median	1 SD	2 SD	3 SD
0: 0	0	30.3	31.5	32.7	33.9	35.1	36.2	37.4
0: 1	1	33.0	34.2	35.4	36.5	37.7	38.9	40.1
0: 2	2	34.6	35.8	37.0	38.3	39.5	40.7	41.9
0: 3	3	35.8	37.1	38.3	39.5	40.8	42.0	43.3
0: 4	4	36.8	38.1	39.3	40.6	41.8	43.1	44.4
0: 5	5	37.6	38.9	40.2	41.5	42.7	44.0	45.3
0: 6	6	38.3	39.6	40.9	42.2	43.5	44.8	46.1
0: 7	7	38.9	40.2	41.5	42.8	44.1	45.5	46.8
0: 8	8	39.4	40.7	42.0	43.4	44.7	46.0	47.4
0: 9	9	39.8	41.2	42.5	43.8	45.2	46.5	47.8
0:10	10	40.2	41.5	42.9	44.2	45.6	46.9	48.3
0:11	11	40.5	41.9	43.2	44.6	45.9	47.3	48.6
1: 0	12	40.8	42.2	43.5	44.9	46.3	47.6	49.0
1: 1	13	41.1	42.4	43.8	45.2	46.5	47.9	49.3
1: 2	14	41.3	42.7	44.1	45.4	46.8	48.2	49.5
1: 3	15	41.5	42.9	44.3	45.7	47.0	48.4	49.8
1: 4	16	41.7	43.1	44.5	45.9	47.2	48.6	50.0
1: 5	17	41.9	43.3	44.7	46.1	47.4	48.8	50.2
1: 6	18	42.1	43.5	44.9	46.2	47.6	49.0	50.4
1: 7	19	42.3	43.6	45.0	46.4	47.8	49.2	50.6
1: 8	20	42.4	43.8	45.2	46.6	48.0	49.4	50.7
1: 9	21	42.6	44.0	45.3	46.7	48.1	49.5	50.9
1:10	22	42.7	44.1	45.5	46.9	48.3	49.7	51.1
1:11	23	42.9	44.3	45.6	47.0	48.4	49.8	51.2
2: 0	24	43.0	44.4	45.8	47.2	48.6	50.0	51.4
2: 1	25	43.1	44.5	45.9	47.3	48.7	50.1	51.5
2: 2	26	43.3	44.7	46.1	47.5	48.9	50.3	51.7
2: 3	27	43.4	44.8	46.2	47.6	49.0	50.4	51.8
2: 4	28	43.5	44.9	46.3	47.7	49.1	50.5	51.9
2: 5	29	43.6	45.0	46.4	47.8	49.2	50.6	52.0

http://www.who.int/childgrowth/standards/second_set/sft_hcfa_girls_z_0_5.pdf?ua=1

TABLE 4. WHO growth statistics

World Health Organization

Simplified field tables

Head circumference-for-age BOYS
Birth to 5 years (z-scores)

Year: Month	Months	-3 SD	-2 SD	-1 SD	Median	1 SD	2 SD	3 SD
0: 0	0	30.7	31.9	33.2	34.5	35.7	37.0	38.3
0: 1	1	33.8	34.9	36.1	37.3	38.4	39.6	40.8
0: 2	2	35.6	36.8	38.0	39.1	40.3	41.5	42.6
0: 3	3	37.0	38.1	39.3	40.5	41.7	42.9	44.1
0: 4	4	38.0	39.2	40.4	41.6	42.8	44.0	45.2
0: 5	5	38.9	40.1	41.4	42.6	43.8	45.0	46.2
0: 6	6	39.7	40.9	42.1	43.3	44.6	45.8	47.0
0: 7	7	40.3	41.5	42.7	44.0	45.2	46.4	47.7
0: 8	8	40.8	42.0	43.3	44.5	45.8	47.0	48.3
0: 9	9	41.2	42.5	43.7	45.0	46.3	47.5	48.8
0:10	10	41.6	42.9	44.1	45.4	46.7	47.9	49.2
0:11	11	41.9	43.2	44.5	45.8	47.0	48.3	49.6
1: 0	12	42.2	43.5	44.8	46.1	47.4	48.6	49.9
1: 1	13	42.5	43.8	45.0	46.3	47.6	48.9	50.2
1: 2	14	42.7	44.0	45.3	46.6	47.9	49.2	50.5
1: 3	15	42.9	44.2	45.5	46.8	48.1	49.4	50.7
1: 4	16	43.1	44.4	45.7	47.0	48.3	49.6	51.0
1: 5	17	43.2	44.6	45.9	47.2	48.5	49.8	51.2
1: 6	18	43.4	44.7	46.0	47.4	48.7	50.0	51.4
1: 7	19	43.5	44.9	46.2	47.5	48.9	50.2	51.5
1: 8	20	43.7	45.0	46.4	47.7	49.0	50.4	51.7
1: 9	21	43.8	45.2	46.5	47.8	49.2	50.5	51.9
1:10	22	43.9	45.3	46.6	48.0	49.3	50.7	52.0
1:11	23	44.1	45.4	46.8	48.1	49.5	50.8	52.2
2: 0	24	44.2	45.5	46.9	48.3	49.6	51.0	52.3
2: 1	25	44.3	45.6	47.0	48.4	49.7	51.1	52.5
2: 2	26	44.4	45.8	47.1	48.5	49.9	51.2	52.6
2: 3	27	44.5	45.9	47.2	48.6	50.0	51.4	52.7
2: 4	28	44.6	46.0	47.3	48.7	50.1	51.5	52.9
2: 5	29	44.7	46.1	47.4	48.8	50.2	51.6	53.0

http://www.who.int/childgrowth/standards/second_set/sft_hcfa_boys_z_0_5.pdf?ua=1