

Master thesis

Market Segmentation Analysis in the B2C health industry.
A framework for determining the accurate target market
of an international niche player based on *a priori*
and *a posteriori* segmentation techniques.

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Approach each customer with the idea of helping him or her solve a problem or achieve a goal, not of selling a product or service.

Brian Tracy

Abstract

The purpose of this work is to explore implicit schemes underlying the market segmentation analysis process. Boosting transparency for and in the new discipline of healthcare marketing, the work offers a toolbox of both primary and secondary methods to identify the accurate target market. This is crucial, since resource allocation in B2C segmentation and targeting is still often misleading. An Austrian, internationally present niche player serves as a research object to turn theoretical insights into practical verification. Data for the thesis are collected through company-internal data analysis and desk research, grounded in a multi-method approach with primary and secondary research. On the one hand, the work assesses the most effective segmentation and attractiveness/knock-out criteria according to scientific sources. Delving into the topic of *a priori* and *a posteriori* segmentation, an overview of suitable techniques is going to be offered. On the other hand, the thesis illustrates how the accurate target segment in the healthcare industry can be evaluated and determined through company-internal consumer and market data.

Primary research on demographics (age, gender), psychographics (preferred channels), behavioral criteria (new/existing, CLC) and product categories is found to be particularly meaningful for the healthcare player. Results vary between countries, which is why an international-marketing strategy instead of a domestic-marketing approach is advisable.

Secondary research shows that socio-demographic and behavioral criteria are most used as *a priori* criteria, whereas *a posteriori* segmentation is promising to reveal psychographic clusters. One of the author's recommendations is to niche down accurate market segments such as LOHAS or "best agers" by refining psychographics/socio-demographics with behavioral segmentation through "occasions" (e.g. back pain, depression, injuries). Novel approaches such as outcome-based segmentation or emphasizing "promoters" are discussed too.

The findings pave marketing managers the way for identifying the accurate target segments in the B2C health industry, selecting accurate methods grounded in profound scientific research and with concepts suitable for SMEs. The thesis proves that marketing segmentation is no longer a "nice-to-have" but a "must" in the health(care) industry.

Key words: B2C targeting, market segmentation analysis, *a priori* & *a posteriori* segmentation, market attractiveness, health industry, healthcare industry

Kurzreferat

Marktsegmentierungsanalyse in der B2C-Gesundheitsindustrie. Ein Konzept zur Identifizierung des attraktiven Zielmarktes eines internationalen Nischenanbieters anhand von *a-priori*- und *a-posteriori*-Segmentierungstechniken.

Das Vorhaben dieser Arbeit ist die Erforschung impliziter Schemata der Marktsegmentierungsanalyse. Die Förderung von Transparenz für und in der neuartigen Disziplin des Gesundheitsmarketings wird dadurch ermöglicht. Eine resultierende „Toolbox“ baut auf Primär- und Sekundärforschung und bietet eine umfassende Variante, den attraktiven Zielmarkt zu identifizieren im Sinne einer effizienten und effektiven Ressourcenverteilung im B2C-Segmentierungs- und Targeting-Prozess. Ein österreichischer internationalagierender Nischenanbieter dient als Forschungsobjekt, um theoretische Erkenntnisse einer praktischen Anwendung zu unterziehen. Zur multi-methodischen Wissensgenerierung werden unternehmensinterne Analysen herangezogen sowie Sekundärforschung betrieben. Zum einen erfolgt eine wissenschaftstheoretische Abwägung von populären Segmentierungs- bzw. Attraktivitäts-/Knock-Out-Kriterien und geeigneten *a-priori*- und *a-posteriori*-Techniken. Zum anderen wird dargelegt, wie der attraktive Zielmarkt in der Gesundheitsindustrie anhand unternehmensinterner Kunden- und Marktdaten eruiert und ausfindig gemacht werden kann.

Als für den Gesundheitsanbieter besonders geeignet erweist sich Primärforschung mit demographischen (Alter, Geschlecht), psychographischen (bevorzugte Kanäle), verhaltensbasierten Kriterien (neu/wiederkehrend, Kundenlebenszyklus) und Produktkategorien. Ergebnisse variieren zwischen den Ländern, worauf die Empfehlung zu einer internationalen anstatt heimisch-orientierten Marketingstrategie erfolgt.

Sekundärforschung zeigt, dass soziodemographische und verhaltensbasierte Charakteristika die am weitest verbreiteten *a-priori*-Segmentierungskriterien sind und *a-posteriori*-Segmentierung meist der Entlarvung psychographischer Cluster dient. Die Autorin empfiehlt die Entwicklung attraktiver Marktsegmente (LOHAS, „Best Ager“) zu Nischensegmenten. Hierzu bietet sich eine Verfeinerung psychographischer/sozio-demographischer mit verhaltensbasierten Segmentierungsvariablen, e.g. Kaufanlass (Rückenschmerzen, Depression, Verletzungen etc.), an. Neuartige Ansätze wie die *outcome-based segmentation* sowie das Kundenpotenzial von „Promotern“ werden im Kontext des Forschungsfeldes weiters einer Diskussion unterzogen.

Die Forschungsergebnisse sollen Managern als Ansatz dienen, um attraktive Zielsegmente in der B2C-Gesundheitsindustrie zu ermitteln. Dazu wird eine Auswahl an tiefgehenden, wissenschaftlich begründeten Methoden erörtert und angewandt. Aufgrund der Unternehmensgröße des Forschungsobjekts ist das präsentierte Konzept speziell für KMUs geeignet. Die vorliegende Arbeit vermittelt, dass Marktsegmentierung längst nicht mehr ein „nice-to-have“, sondern ein Muss in der Gesundheitsbranche ist.

Stichworte: B2C-Targeting, Marktsegmentierungsanalyse, *a-priori-* & *a-posteriori-* Segmentierung, Marktattraktivität, Gesundheitsindustrie

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List of Abbreviations and Symbols

cf.	lat. <i>confer/conferre</i> , compare
e.g.	lat. <i>exempli gratia</i> , for example
i.e.	lat. <i>id est</i> , that is
p.	page (book)
pos.	position (e-reader)
et al.	lat. <i>et alii/aliae/alia</i> (neutr.), among other things/others
ibid.	lat. <i>ibidem</i> , in the same place (literature source)
SME	small and medium enterprise
RQ	research question
cust.	customer(s)
cons.	consumer(s)
comp.	company
ROI	return on investment
GDP	gross domestic product
EU	European Union
DACH	region of Germany, Austria and Switzerland
US	United States of America
UK	United Kingdom
OECD	Organization for Economic Cooperation and Development
WHO	World Health Organization
NGO	Non-governmental organization
KPI	key performance indicator
OOP	out-of-pocket
VALS	Values and Lifestyle
€	euro
US\$	United States Dollar
CHF	Swiss francs
%	percent
™	trademark
®	registered trademark
BCG	Boston Consulting Group
GE	General Electric
CRM	customer relationship management

CAGR	compound annual growth rate
B2B	business to business
B2C	business to consumer
BU	business unit
CVD	cardiovascular disease
NCD	noncommunicable disease
NPS	Net Promoter Score®
WIdO	scientific institute of AOK
AOK	Allgemeine Ortskrankenkasse (health insurance firm)
LOHAS	lifestyle of health and sustainability (cons. group)
RLA	Restless Legs Syndrom
REM	rapid-eye-movement
RBD	REM sleep-behavioral disorder
MedUni Wien	Medical University of Vienna
ICD	International Classification of Diseases
PSQI	Pittsburg Sleep Quality Index
TK	Techniker Krankenkasse (health insurance firm)
PwC	Pricewaterhouse Coopers
CLC	customer life cycle
COVID-19	Corona virus ("19" accounting for the year of discovery)
Jan	January
Feb	February
Mar	March
Apr	April
Jun	June
Jul	July
Aug	August
Sep	September
Oct	October
Nov	November
Dec	December

1 Introduction

Fact is: if you reach to find out your most attractive customers and position your product as a more relevant solution than the broader-spectrum competitor's offer, you will win (cf. Brown 2017). Although bigger and well-established companies shall have more opportunities to act and react within a margin that allows them to remain successful in a market of intense competition, it might not be true for SME¹s with rather strictly limited resources.

Almost all SMEs strive for affordable, effective and efficient ways to address their consumers and drive business (cf. Porta 2010), since their limited competencies and resources force them to do so.

The challenge for SMEs lies in determining the most attractive market and reach it at the lowest cost possible, in order to attain market share, "escape" competition and maximize sales potential (cf. Veem 2019).

"Getting bigger by acting smaller" is relevant, especially for SMEs which "understand the value of the product niche" (cf. Doole; Lowe 2006, p. 102). The definition of a "niche" according to Kotler (2002, p. 145) emphasizes that a focused segmentation strategy comes with "size, profit, and growth potential".

Therefore, a centralized strategy seems to be especially suitable for a resource-restricted company: it rewards the nicher with economies through specialization while consumers pay a premium price to having satisfied particular needs (ibid.).

What is market segmentation?

Segmentation means to divide a market into customer groups with same characteristics such as equal needs, purchasing behavior, financial capability, geographic location etc. (cf. Kotler; Lane Keller; Bliemel 2007, p. 357). Its purpose is to become more effectively and profitably by focusing resources on suitable customer groups instead of a mass market.

¹ An abbreviation for "small and medium enterprise". To be classified as such, different criteria might be applied; nevertheless, the most common classification is made in accordance with the number of people employed, which, in the case of a SME must not comprise more than 250 employees. Further distinctions can be made between "micro enterprises" with fewer than ten employees, "small-sized enterprises" with ten to 49 employees, "medium-sized enterprises" with 50 to 249 employees and "large enterprises" with more than 250 people. (cf. OECD 2018)

For SMEs, already available customer data is still easier and cheaper to acquire. Categorized by commonsense segmentation criteria such as geographic or socio-demographic characteristics (e.g. age, gender), “traditional” segmentation criteria are most used to split the market. However, realizing the potential of mixing them with new segmentation techniques is often regarded as even more beneficial.

Though globalization is increasing, customer needs remain fragmented beyond customer groups of different countries (cf. Guillén; Zandman 2013, p. 2). Even within national borders, applying a focused strategy can lead to fruitful outcomes, since individuals face particular problems for which they usually seek specific solutions. In the healthcare industry, a focused scheme is paramount, since serving exclusively attractive consumers enables a company to bundle resources and thus being more personal and specific in positioning. The outcome are precise marketing tactics based on a neatly executed segmentation to match consumer expectations while guaranteeing a trustworthy, individual treatment based on a value-based customer centricity.

Still, coming to an optimal market situation like this is only feasible with an *added* value for consumers. Providing customers with a supplementary benefit can drive sales volume and allows the company to set prices at a high level, thus maximizing revenue to cover necessary production costs (cf. Bieger 2015, p. 82). This is why product quality and/or meeting customer needs call(s) the tune for price setting. Bieger highlights that the willingness to pay always correlates with an adaptation/customization of products to individual preferences (2015, p. 82).

Wrapped up, product offers become more individualized, whereas marketers notice a shift towards more specified wishes and needs of their customers. The only way to fulfill their expectations is tightening segmentation boundaries – which, at the same time, leads to an increase in efficiency: “The next level of segmentation will be understanding audiences on a more granular level and combining data sets to be able to target niche groups more effectively.” (“Digital Segmentation. Basic principles of effective customer segmentation.” 2012, p. 145). As the author will illustrate further in the thesis, *a posteriori* segmentation techniques represent an accurate way to do so.

The more precisely a company knows its customers, the better it can tailor its offer to meet specific needs to deliver value in tight segments, which, in the end, drives revenue.

So, how to orchestrate the segmentation process with customer data, how to determine the “right” segmentation criteria/variable for conducting accurate market segment analysis, and what segmentation criteria/variable to choose for identifying the accurate target segment in an international business environment?

- For the sake of clear terminology, there is a distinction made between “segmentation criterion/criteria”, “segmentation variable(s)” and “descriptor variable(s)”. Differences are thoroughly explained in chapters 6.1.2.2 and 6.1.2.2.1.

1.1 Research objective & research question (RQ)

Due to limited resources, the author is *not* going to elaborate on the whole market segmentation analysis process but instead focus on selected steps such as “specifying the ideal target segment”, “collecting data” and “selection of target segments” (by determining market segment attractiveness/relevance). Theoretical insights regarding other steps of the market segmentation analysis such as data exploration, segment extraction and segment profiling based on empirical data, the development of a customized marketing mix based on the insights or implementing a market segmentation strategy, controlling it and monitoring it, do not form part of the thesis.

Moreover, the thesis is going to *abstain from* finding reasons for certain market specifics such as consumer behavior or psychographic consumer makeup² but just work with them as “mere criteria” for conducting market segmentation. In order to gain a deeper understanding of consumer characteristics, the research object is suggested to invest financial resources into conducting a neat market research in the future (e.g. focused on preferences). Without it, hypotheses remain mere assumptions lacking necessary research for testing their final truth.

The thesis is *not* going to give final solutions as to how the “one and only” most attractive B2C target segment will look like, since the research purpose is to establish a conceptual framework as to how an attractive target market can be evaluated. The final decision is left to the management board. What the author can provide is a sound basis for making decisions, thus identifying possibilities of target segments due to the segmentation analysis process. This also means that a sales forecast is *not* going to be part of the thesis, even though, size and growth

² e.g. consumer preference for shopping window as the company's most popular customer source in Switzerland

of segments play a significant role in the identification process of long-term profit potential (cf. Bieger 2015, p. 81), like it is going to be outlined later. Moreover, also from a strategic point of view, a sales forecast does not make sense for the thesis, because the research object still lacks clear objectives and transparency concerning resources and selected knock-out and attractiveness criteria. Once having settled these issues, the research object will be advised to conduct a sales forecast for those segments which the thesis identifies to be particularly attractive.

Cluster analysis is a fruitful approach to gain insights into structure of data-driven/*a posteriori* segments. If applied, according computation methods would form part of the step “collecting data” in the market segmentation analysis process, e.g. “Bootstrap analysis”, “scree plots”, “dengrogramm inspection”, “random graph test” etc. (cf. Dolnicar; Leisch 2003, p. 2450). Since the thesis does not rely on algorithms-based analysis, cluster analysis is no substantial part of the work. However, the topic is going to be superficially covered in chapter 6.1.1.2 for future investigation.

1.1.1 Research objective

Since the topic of the master thesis revolves around a marketing issue which seems to be already intensely discussed in scientific literature, namely market segmentation, one might ask: “So, what’s the purpose of this work?”. The aim is to increase transparency with a toolbox of methods. To shed light on implicit schemes imbuing major research on market segmentation and to provide a framework serving managers as an effective draft for tagging the accurate B2C markets in the health industry.

After studying five years a whole bunch of topics related to marketing, market segmentation, targeting and positioning, the author was still confronted with not having a clue about how the accurate target market can be *reliably* identified. Of course, there were some “conceptual aids” such as consumer segmentation criteria, segment evaluation criteria and so on, but what was still missing is a broader perspective of this whole concept, an open approach to investigate this topic of high relevance for marketers from multiple angles. Since the importance of health is continually rising, not to mention pandemics such as COVID-19 which has been affected us all in the first half of 2020 and may continue doing so, broaching the topic of target market identification will be paramount in the future, specifically for the health sector. Not just for delivering the right offer to the right consumers at the right place, but to deliver them *on time*.

The master thesis comes up with both primary and secondary research. The main purpose of the thesis is to offer valuable insight into the steps of market segmentation analysis leading to the accurate market segment, may it be from desk research or company-internal customer data. The knowledge is going to serve an international Austrian SME which is active in the B2C healthcare market, specified in sleep solutions, (see chapter 1.2) as a possible guideline to properly segment its market, combining traditional (*a priori*) with novel (*a posteriori*) segmentation techniques.

The thesis is going to evaluate different segmentation techniques and criteria. Hence, the author is *not* going to deal with one segmentation criterion (e.g. age) in detail but instead shed light on a multiple-segment-criteria approach, which will be applied. It will be of great interest to find out how the accurate target market can be identified and how the right segmentation criteria/variable can be chosen. Secondary research will show how segmentation criteria/variables shall be selected and orchestrated, in order to reach the most attractive/suitable/accurate target market for the research object; the outcome may also serve further SMEs conducting business in the B2C healthcare market.

The most valuable insights from secondary research will be finally put into practice when delving into primary research: along the evaluation of company-internal data, the theoretical findings of the thesis are going to be implemented into the market segmentation analysis process of the research object (focus on the DACH region).

1.1.2 Research question(s)

RQ: How can a framework for targeting the accurate market of an international SME in the B2C healthcare industry look like?

In order to answer the main research question, there are sub-questions with dependent variables to be dealt with in advance:

RQa: What are the pros and cons of different *a priori* and *a posteriori* segmentation techniques?

RQb: How can the effective segmentation criteria/variable for a given market be identified?

RQc: How can the accurate market segment from customer data be evaluated and determined?

1.2 Research object

The SME's business revolves around healthy sleep: helping people achieve better sleep and have more energy for life. Thus, its business offer does not serve the mass market but instead focuses on a niche market.

1.2.1 Product offer

The product range is consisted of a high-quality sleep system. This sleep solution is characterized by 100 % natural features: mainly organic, orthopaedic, hand-crafted and environmentally friendly produced. Distinctive components make the product categories special which are: bed frames, orthopaedic pillows (with interchangeable cores), highly flexible slat frames, natural rubber mattresses, climate-regulating virgin wool pads, bioactive duvets and earthing pads. Even though the product may sound promotional at first sight, the company's major purpose goes deeper: it is to enhance people's life by offering natural sleep solutions. The SME's mission is manifested in its claim: to use sleep as *therapy*. Implications are clear: the business is dedicated to more than sales, namely improving the health of its final consumers. Natural materials such as virgin sheep's wool or solid wood are used to meet peoples' need of physical and mental regeneration through sleep. Organic and raw materials can help reduce bacterial properties and regulate temperature conditions. It is worth mentioning that the sleep system provides active support for the spine, can reduce painful pressure on the back and neck while supporting muscles where possible.

1.2.2 Business purpose & industrial classification

The SME's ultimate goal is to improve customers' quality of life. Healthy sleep is an important health promoter, strengthening the body's defenses, regulating blood pressure and mental functions such as recognition and emotional capacity (cf. Walker 2018, p. 18f). This means that sleep is a vital factor impacting longevity (cf. Walker 2018, p. 14).

As a consequence, it is more appropriate to speak of the "healthcare industry" in respect of the business landscape in which the company has positioned itself, than referring to the mere "bed industry". Besides, the company's purpose is dominated by the knowledge of its CEO who is a sleep psychologist and health expert actively shaping the field of sleep science and sleep medicine. The broad knowhow can be seen as an outstanding service which the company is delivering through sleep consultancy to its customers and through education programs for

sleep coaches. Perceived risk during the purchasing process can be kept at a minimum level, due to product-accompanying services; like this, customers are integrated into the purchasing process, which increases loyalty and trust (cf. Bruhn 2014, p. 155). The outcome is a preferable situation which raises customer value through additional quality criteria (cf. Bruhn 2014, p. 125) while amplifying and completing the package of tangible offerings.

1.2.3 Current segmentation approach and its challenges

The company currently addresses four main groups of consumers:

- 1) People coping with **posture-related problems, back pain, muscle tenseness, disc problems** etc.
- 2) People interested in **regeneration and recovery**: people who must deliver high performance or face stress in the job, sportsmen etc.
- 3) People who value highly the **pristine nature** in the products: people who estimate natural raw materials and hand-crafted production.
- 4) People suffering from **sleep disorders** who are struggling with disruptive sleep patterns, unrest and/or remaining asleep or struggle with other forms of insomnia.

One of the main problems which the company faces is the very extensive nature or vague idea about its B2C audience, not making use of well-defined segmentation criteria/variables but instead address mass markets. Limited marketing capacities cannot address this vast target audience properly. Thus, the thesis aims to find the target segment with the most potential for success, breaking down the current consumer base to the most attractive/accurate target segment(s). This will contribute to an enhancement of the current strategy which can provide a transparent guideline for the management board as regards (domestic and international) marketing-related decisions in the B2C market and could also serve employees as a guiding light in their daily work.

“Bad strategy ignores the power of choice and focus, trying instead to accommodate a multitude of conflicting demands and interests.” (Rumelt 2011, p. 2).

Undesirable outcomes are marketing tactics without clear message, manifesting itself in an image lacking a clear brand value, benefit and USP (due to a vague segmentation-targeting-positioning). This hinders the company to reach its target audience both efficiently and effectively. A market segmentation analysis is going to be applied to foster the company's

future strategy. Investigating current industry characteristics and market data is the first step to assess the attractive target segment of the SME. Breaking down the current consumer groups to (a) more concentrated cluster(s) will enable the company to focus resources and ensure competitiveness and, ultimately, success in the future: “Good strategy (...) works by focusing energy and resources on one, or a very few, pivotal objectives whose accomplishment will lead to a cascade of favorable outcomes.” (Rumelt 2011, p. 5)

2 State of the art

Along the last years, segmentation studies which use empirical data sets as a basis have gained popularity in the fields of academic research and industry (cf. Dolnicar; Leisch 2003, p. 2452). Although private persons (patients) are going to gain particular attention in the market segmentation analysis process, the main industrial branch in the healthcare industry belongs to hospitals, doctors, pharmaceutical companies, since the research object's main business is directed towards the B2C market. There have been some research studies focusing on consumer segmentation in the healthcare industry in Europe; however, the majority of studies have been conducted in the US.

Dolinsky; Stinerock (1998) put an emphasis on geographic and socio-demographic segmentation in the US, shedding light on Afro-American, Hispanics and Anglo-American societies in the healthcare market. The authors came to the conclusion that cultural differences are directly linked to the importance which individuals attach to health-care attributes. They identified different consumer behavior characteristics which they linked to cultural values, such as a high brand loyalty to be found among Hispanics; they seem to be more conscious of brand reputation, valuing highly "long-standing, nationally advertised brands more than local and lesser-known brands" (Dolinsky; Stinerock 1998, p. 30). The reason is to be assumed behind the great value which Hispanics place on tradition and family (ibid.) (psychographic characteristic). Moreover, Hispanics show a high price-sensitiveness which shall be caused by a limited income status (socio-demographic characteristic) and they put emphasis on service promptness, which becomes clear in an unusually high rate of non-delivery and delay-related complaints.

On contrast, Afro-American women attach high importance to convenience as regards store location and a friendly atmosphere, whereas the price level plays a relatively insignificant role (ibid.). Furthermore, they found that older Anglo-Americans are more sensitive towards the way they are personally treated than their younger counterparts (cf. Dolinsky; Stinerock 1998, p. 36). The investigation of Dolinsky; Stinerock (1998, p. 30) used independent variables such as education, health status, marital status, number of household members, age and gender – with the dependent variable of ethnicity – to conduct research. The major finding was that all of the groups rated the health expert's knowledge and skills as the most important attribute in health treatment (cf. Dolinsky; Stinerock 1998, p. 30), whereas women, persons with less education and individuals with a good health status reacted significantly sensitive towards knowledge and skills of the staff (cf. Dolinsky; Stinerock 1998, p. 37).

Lynn et al. (2007) came up with a segmentation model which they called “Bridges to Health” focusing on the individual patients and their health prospects and priorities, dividing the US population into eight different segments: people “in good health”, “in maternal/infant situations”, “with an acute illness”, “with stable chronic conditions”, “with a serious but stable disability”, “with failing health near death”, “with advanced organ system failure”, and “with long-term frailty” (cf. Lynn et al. 2007, p. 185). All of these groups feature their own definitions of optimal health and show diverse priorities towards services. The investigation uncovers six “specific aims for care”: safety, effectiveness, efficiency, patient-centeredness as regards individual desires and preferences, time and equitability (ibid.).

The study of Moschis; Friend (2008) puts an emphasis on baby boomers in the US, also called “golden agers”, who are 55 years or older. They are assigned a huge market potential mainly due to their financial capability, high customer loyalty to health consultants, chronic health condition, interest in their own health and readiness to explore and consume.
(cf. Moschis; Friend 2008, p. 8)

The goal of their study was a segmentation framework determining the demand of health-related goods and the preferences of the mature consumer segment. The result shows that a person’s gerontographic profile³ is a promising segmentation scheme, even more suitable than other demographic characteristics, and that other important drivers would be lifestyle and personal characteristics (Moschis; Friend 2008, p. 18). The authors suggest marketers not only relying on one segmentation characteristic (e.g. age), and instead combining it with further consumer information (Moschis; Friend 2008, p. 19).

Liu; Chen (2009) shed light on data-mining techniques in the healthcare industry, in order to form patient segments based on demographic characteristics and preferences of healthcare attributes. Their method consisted of a market segmentation process focusing on patient preferences regarding healthcare attributes and an exploration of the segments’ demographic characteristics (cf. Liu; Chen 2009, p. 117). Practical implications suggest that data mining is an accurate tool in market segmentation, since it helps to reduce variables (via factor analysis) for a better understanding where manifold variables are applied in cluster analysis (ibid.).

³ Gerontographics is a life-stage model which serves marketers for a better understanding of the heterogeneous older consumer segment. It combines state-of-the-art knowledge from different disciplines, is reactive towards changes over time (regarding people and environment) thus flexible and comes up with suggestions for marketing action to score better results, as it is immediately linked to marketing strategies.

More recent research was conducted by Elrod; Fortenberry (2018). In their study, the authors propose an alternative approach to segmentation and targeting, namely an “off the beaten path” (Elrod; Fortenberry 2018, p. 17), which means going for another strategy than the competition: targeting children as direct care recipients (and influencers) instead of addressing care takers/parents as prime audience. This approach ensures competitive advantage by “following a road less traveled” (Elrod; Fortenberry 2018, p. 18): children as a confined market segment and immediate influencers of grown-ups. The authors strongly favor a “target marketing” approach by which they mean adapting “services and their associated attributes to appeal to particular audiences” (ibid.). Socio-demographic criteria helped them segment the pediatric medicine market.

3 Thematic relevance

99 % of all companies in Europe are SMEs (cf. Gouardères 2020, p. 1).

In Switzerland, SMEs account for 99.7 % (cf. University of St. Gallen 2019, p. 3), in Austria for 99.6 % (cf. BVMW n. y.). This highlights the relevance of putting a niche player as an SME in the focus of the master thesis, coming up with scientific findings which could further serve a multitude of enterprises to ensure their competitiveness.

As regards industrial sectors, the health and social industry is “one of the biggest and fastest growing employers in the world”, especially for women, who are accounting for 70 % of the workforce and contributing US\$ 3 trillion per year to global health (cf. WHO 2019 p. 48). In Austria, the whole health economy consisted of 624,000 employees in 2013, which accumulates to 14 % of the total economy (cf. Federal Ministry of Labour, Social Affairs, Health and Consumer Protection 2019, p. 35). This underlines the relevance of dealing with a health-related business in the present thesis.

There have been several studies conducted on the segmentation process of SMEs, rather for B2C or B2B markets, which partially shed light on how target markets can be successfully identified. However, actual research lacks a proper insight into the determination process of ideal target segments by combining *a priori* and *a posteriori* segmentation techniques.

Little has been written about healthcare marketing (also called “health marketing”); a term which is still misunderstood and relatively unpopular in the public health community, mainly due to the novelty of the discipline and because it is still not taught as a subject in public health or medical schools (cf. Bernhardt 2006, p. 1). Already in 2006, Bernhardt highlighted that the time was there to raise awareness, application and training of health marketing strategies (2006, p. 1). Fact is that there is an urgent need for additional and further research in this field: Mouravskiy (2018) emphasizes the necessity of new segmentation insights in the industry, since they help “target more specific slices of the population” and “can be used to [even] improve healthcare marketing”. Dey (2013, p. 254) emphasizes that figuring out the segments which are most receptive to specific services provided would have a positive impact on costs. He further proclaims that a focused segmentation approach enables companies to score higher returns on investments. Dolinsky; Stinerock (1998, p. 36) argue that investigations of segmentation attributes in the healthcare sector will be of great support for marketers, since knowledge helps to target different subcultures more precisely: “(...) well-executed, (...)”

segmentation strategies will become increasingly useful in helping healthcare marketers serve their various patient groups effectively.” (Dolinsky; Stinerock 1998, p. 37) Bernhardt (2006, p. 1) stress that health can be significantly enhanced through marketing; i.e. customer research is of great importance for health behaviors, since it closes an existing gap between research of public health and daily practice. Further, the Director of the National Center for Health Marketing at the Centers for Disease Control and Prevention (Atlanta, Georgia) refers to own experience when stating that health marketing helped him achieving the vision for his healthcare institution, which is: “a world in which all people actively use accessible, accurate, relevant, and timely health information and interventions to protect and promote their health and the health of their families and communities.” MacLennan; MacKenzie (2000) underline that just a few companies make use of the potential of market segmentation in the healthcare industry, replacing it rather by incomplete or intuitive marketing analyses leading to missing opportunities or inappropriate strategies. Reasons might be a reduction of time to market and a lack of expert level in marketing. Although marketing is beginning to receive acceptance, healthcare marketers are still greeted with skepticism by health professionals, due to an “unfavorable connotation that implies the subjugation of clinical concerns to the bottom line” (Thomas 2008, p. 1). Concerns over the return on investment (ROI) are common; thus, conducting cost/benefit analyses to substantiate health-marketing practices will be of particular importance in the future (cf. Thomas 2008, p. 1).

At the same time, other disciplines clearly challenge this limiting view with a strong advocacy for segmentation. Ample evidence are long-term competitive advantage in selected target segment(s) and large potential for profit and growth, higher return on investment and even a better team atmosphere, since segmentation-analytical tasks require representatives from various organizational units to excel as a team (cf. Dolnicar/Grün/Leisch 2018, p. 7f).

MacLennan; MacKenzie (2000, p. 40) take a different view on the importance of marketing tactics such as strategic market segmentation, stating that it enables companies to augment sales, find a creative advantage, improve resource allocation and boost overall performance.

Lynn et al. (2007, p. 186) underscore that a segmentation of patient population can enhance “creative and effective strategies for safe, efficient, effective, timely, patient centered, and equitable healthcare” and would ultimately lead to an enhanced understanding of health for each individual and the overall population.

The global service provider “Deloitte” has conducted a survey of US healthcare consumers in the year 2018, coming to the solution that relevant segmentation can support health systems, life sciences companies and clinicians adapting their consumer engagement, whether it is for finding a new health expert or dealing with a chronic illness (2018, p. 2). Thomas (2008, p. 1) highlights that the fluid environment, thanks to its novelty, makes healthcare marketing unique; it is “characterized by an air of excitement and exploration”, offering manifold opportunities with a scarcity of yet established marketing procedures. Hence, delivering fresh insights and coming up with new segmentation approaches will boost the development of this new discipline. Bernhardt (2006, p. 3) concludes that the market is calling for “research, evaluation, and accumulated experience” for an effective translation and application of marketing principles to public health. Authors such as Read & Korenda endorse the view that segmentation analysis enables healthcare activists such as “healthcare providers, health plans, and life sciences companies” become aware of customer attitudes and behaviors; thus, it helps to understand how to “attract, retain, and engage consumers” (Deloitte Center for Health Solutions 2018, p. 2).

At this point, it makes sense to acquire a more balanced view and broach the relevance of marketing for society and its crucial and manifold purposes. Unfortunately, marketing is widely perceived as exclusively oriented towards promoting and thus increasing demand for products or services. Consequently, its value for society tends to be misunderstood, being wrongfully confined to selling purposes. The same problem is faced by B2B pharmaceutical companies which sell useful products to hospitals but are not appreciated due to advertising tactics perceived as “bothersome” by its target group.

Tracing back to the origin of this issue, it is crucial to differentiate between “sales” and “marketing”: while former focuses on the needs of the seller, latter is always oriented towards the *fulfillment of needs and wishes of the customer* (cf. Kotler; Lane Keller; Bliemel 2007, p. 21). From time to time, marketing has been evolving more into a holistic concept, of which *welfare marketing* is of superior value for society (cf. Kotler; Lane Keller; Bliemel 2007, p. 23-31):

- **Relationship marketing:** creation and maintenance of long-term relations with customers, distributors, sales channels and other stakeholders along the supply chain
- **Integrated marketing:** creating synergies between communication (promotion), products & services, sales channels (distribution) and price
- **Internal marketing:** ensuring first-class (customer) service in the marketing department, management and other departments

- **Welfare marketing:** compatibility of business activities with ethical norms, environmental consequences, legal standards, social legitimacy

Fact is that marketing generates a favorable outcome and thus an added value for its micro-environment (consumers, customers, government, suppliers, retailers etc.), much more than it is widely assumed. Tallying with this view, Meffert et al. (2019, p. 44f) underscore that a paramount purpose of marketing is to generate knowledge, spread information and foster interpersonal relationships while exchanging goods and generating value for society.

Companies aiming at minimizing harm to individuals and nature and avoiding scarce resources can even be determined as firms who execute “**de-marketing**” (cf. Kotler 2017,); in the case of the research object, that is to reduce or even diminish demand for harmful products such as sleeping pills, drugs and detrimental nutrition through healthy sleep, fostering an environmentally-friendly production and the use of natural resources.

Market-based goals (e.g. revenue, market share, profit, product quality, market development), rentability-based and prestige-based goals are significant to ensure success. Nonetheless, widely-underestimated social, societal and environmental goals are at least equally important for a company (cf. Meffert et al. 2019, p. 284f):

- **Social goals:** employer satisfaction, income and social security, social integration, personal development
- **Societal goals:** non-commercial services for stakeholders (e.g. relationship management), sponsoring services for public institutions
- **Environmental goals:** reduction of emissions, reduced consumption of natural resources, recycling quota

In particular, *sustainability marketing* contributes to societal well-being by adhering to transactions which help reduce ecological and social problems (e.g. environmentally-friendly production, waste management, employer-friendly working conditions), while guaranteeing public legitimacy (cf. Meffert et al. 2019 287f, 294).

From an angle of global health organizations, the WHO reveals, between 76 % and 85 % of people in low- and middle-income countries suffering from mental disorders do not receive proper treatment (cf. WHO 2019a). This calls for a cost-efficient solution to mitigate health problems; above all in resource-poor habitats. Deloitte Center for Health Solutions (2012, p.

10) further emphasize that circumstances such as medical problems or obtaining effective treatment are increasing and causing “consumer activist segments” to rise. This will lead to the fact that interactive health solutions to boost the relationship between providers and customers will be of particular relevance in the future – consumers’ activity will also mean that they want to become involved in the whole health process.

Especially, “novel” or “modern” *a posteriori* segmentation techniques are not explored enough. This renders visible in companies which are still lacking proper knowledge and keep struggling with the segmentation process, mainly due to problems regarding traditional segmentation methods (cf. Ulwick 2005, p. 61). For the past years, it might have been the most common way to group customers on the basis of purchased products or price points. Yet also demographics or psychographics (age, level of risk aversion etc.) have been used to identify useful market segments. Although it might be valid for particular marketing purposes, they do not enable marketers to identify the most attractive customers with the biggest opportunity or rather “customers that have unique underserved outcomes (...) or jobs” (Ulwick 2005, p. 62). A reasonable number of managers hold on to traditional segmentation patterns such as attribute-based classifications which are product type, business size, age or price point. They can be relevant and useful; however, nowadays, this approach is often detected to be inappropriate. Ulwick (2005, p. 81) underlines that such traditional segmentation variables are generally used out of reasons rooted in familiarity and are “downright harmful” in many cases; instead of addressing actual requirements, they are simply applied due to tradition and habit. Thus, segmenting in a more flexible manner might lead to more success: the awareness of ever-changing consumer demands makes *a posteriori* segmentation relevant, for which a revision and update of segmentation variables to actual conditions is imperative.

4 Theoretical framework

This chapter is going to guide the reader through the definition of relevant terms. First, the meaning of healthcare (marketing), sleep and sleep health will be comprised, followed by a theoretical elaboration on market research and its purpose, including qualitative/quantitative research and primary/secondary research.

4.1 Defining healthcare and healthcare marketing, sleep and sleep health

Contemplating the definition of “America’s leading language provider”, Merriam-Webster, suggests that “**healthcare**” comprises all “efforts made to maintain or restore physical, mental, or emotional well-being especially by trained and licensed professionals” (Merriam-Webster n. y.). Chappelow (2019) considers the healthcare sector to be further consisted of “businesses that provide medical services, manufacture medical equipment or drugs, provide medical insurance, or otherwise facilitate the provision of healthcare to patients.”

Thomas (2008, p. 1) defines “**healthcare marketing**” as “any activities that relate to the development, packaging, pricing and distribution of healthcare products and to any mechanisms used for promoting these products.” Bernhardt (2006, p. 1) puts an emphasis on the value which is created by health marketing by delivering it to customers and by strengthening customer relationships in order to reach a win-win situation for both organization and its stakeholders. Moreover, the author refers to the Centers for Disease Control and Prevention (CDC) which stress the delivery of health-related information through the use of strategies mainly focused on consumer benefit and the public (and *not* product “seller” or shareholders) in order to guarantee protection of diverse populations’ health; this also means to make use of commercial-marketing knowledge for products which are “evidence-based health information and interventions” (cf. Bernhardt 2006, p. 1).

Nowadays, marketing is often confused by pure promotional techniques such as advertising or public relations; even though promotion forms part of marketing, the term “marketing” should be seen as an umbrella of multiple activities (cf. Thomas 2008, p. 2) are built upon market research and marketing strategy (cf. Bernhardt 2006, p 1), and thus market segmentation too.

What is sleep?

The WHO sees “sleep” as a “physiological state occurring in alternation with wakefulness, and its duration and quality are equally important for the quality of life.” (WHO 2004, p. 24)

It is a basic human need which is vital for life quality, health and performance during the day (cf. WHO 2004, p. 2).

Zeman; Reading (2005, p. 97) offer a more critical view on sleep, endorsing: “it is a structured physiological process which influences, and is influenced by, a wide range of medical and psychiatric disorders.”

There have been several efforts made in defining “**sleep health**”, especially in textbooks. However, they are scarcely leading to a clear outcome. PubMed offers 150 results and Google Scholar delivers over 3,000. One might be astonished about this high amount of results: it is in large part due to a comma put between the terms “sleep” and “health”, mistakenly classifying them in separated lists of concepts instead of one (cf. Buysse 2014, p. 9). Despite the fact that “sleep health” is a word scarcely defined in literature, Buysse (2014, p. 9) makes an attempt to link it to sleep medicine and puts a special emphasis on disorders. Attributable to a lack of accurate definitions, we are bound to orient ourselves towards his definition (Buysse 2014, p. 12):

Sleep health is a multidimensional pattern of sleep-wakefulness, adapted to individual, social, and environmental demands, that promotes physical and mental well-being. Good sleep health is characterized by subjective satisfaction, appropriate timing, adequate duration, high efficiency, and sustained alertness during waking hours.

The author stresses that sleep health ought to be seen as a positive attribute which can be measured through behavioral or physiological levels and self-report (cf. Buysse 2014, p. 12). Despite including “patients, providers, and healthcare administrators” into the concept of sleep health and health deficits alike underlines the importance of not solely contemplating the absence of health but see sleep health also as the overall result of “how well an individual or population is doing” (Buysse 2014, p. 9). Further, sleep can specify targets for health promotion and preventive activities while treating disorders in order to diminish symptoms: “Sleep health provides a metric for health promotion efforts at the individual, group, and population level.” (Buysse 2014, p. 9)

4.2 Market research and its purpose

There is no doubt that market research is crucial to gain insights into consumers, understanding them and thus creating fruitful strategies to appropriately target them. Nonetheless, there are two variables which must be in line with each other to deliver appropriate results: the researcher and the client. Rob A. Cooke, CEO and Director of Human Synergistics International teaching at the University of Illinois (Chicago), perfectly summarizes:

“Unless you have the combination of ‘researcher with integrity’ and ‘client with brains’, true research quality and results are unlikely to occur no matter what technique is used.” (Dodd 2007, p. 1).

According to Dolnicar; Grün; Leisch (2018, p. 45), there are three main ways to gather data for market segmentation:

1) Survey Studies (questionnaires):

Data from surveys are relatively easy and cheap to collect, which makes this approach one of the most popular ones. However, biases and noisy variables represent the biggest risk with survey studies (e.g. inappropriate questions for data collection, selection of wrong segmentation criteria during market segmentation analysis) (cf. Dolnicar; Grün; Leisch 2018, p. 46). Such inadequate variables can prevent algorithms from delivering the right segmentation solution (Dolnicar; Grün; Leisch 2018, p. 45).

Response options can focus on the following different types of variables (cf. Dolnicar; Grün; Leisch 2018, p. 46f):

- **Nominal data:** respondents choose one answer among unordered options, often binary data (answers can just take on two characteristics) (cf. Häder 2019, p. 17)

➤ **Example:** gender

- **Metric data:** characterized by a distance between the scale values. Answers indicate a number and are particularly accurate for statistical illustrations (thus very suitable for segmentation analysis)

- **Example:** age, number of nights spent in a hotel
- **Ordinal data:** the order of values is essential, e.g. respondents are asked to show their agreement with statements; usually, answers are non-numeric and statistical illustration (“standard distance measures”) is almost impossible to generate
 - **Example:** satisfaction of a product

2) Data from Internal Sources

Internal Sources can be company stores and their scanner data, loyalty programs and consumer-behavior information or online purchase data (cf. Dolnicar; Grün; Leisch 2018, p. 51). An advantage is that the data puts an emphasis on actual consumer behavior, instead of consumers’ description of their behavior, and can often be gathered automatically. Thus, biases are usually kept at a minimum level (ibid.). However, scanner data just considers actual customers, excluding potential future customers who might be interested in the product as well.

3) Data from Experimental Studies

In general, field or laboratory experiments are used to gather corresponding data. For example, result of tests which show how people respond to specific advertisements are commonly applied. Choice experiments is another approach (e.g. testing how product attributes affect product choice).

4.2.1 Qualitative and quantitative research

Whether qualitative or quantitative data, they are all acquired through methods grounded in social science. The crucial difference is that with qualitative data, answers are described verbally, whereas in quantitative surveys, responses are represented with numbers (cf. Häder 2019, p. 16).

➤ **Example**

Qualitative survey: Research question: “How satisfied are you with your work life?” / Response: “I am very satisfied.”

Quantitative survey: Research question: “On a scale from 1 to 10, how satisfied are you with your work life?” / Response: “9”

Both approaches are substantiated with opposing premises: quantitative research fosters an analytical-nomological approach, postulating that the world is ordered and structured, that there is a cause-effect relation between occurrences and that the “job” of research is to come across these principles and rules in order to make hypotheses about the truth (cf. Häder 2019, p. 65f). In contrast, qualitative research assumes that the world is not structured by certain given rules which have to be observed but that people continually form these structures with their behavior; thus, qualitative research follows an open approach to understand the subjectively formed truth, whereas quantitative research is built upon standardized, objective instruments to keep individual/subjective influence as minimal as possible. (cf. Häder 2019, p. 66)

Quantitative	Qualitative
Scientific approach	Humanistic approach
“Strict”, standardized methods	“Light”, almost non-standardized methods
Deductive research process, preserving the “truth”	Inductive research process, expanding the “truth”
Testing created hypotheses	Exploratory in nature
Strives to explain the “truth”, focused on external effects	Strives to understand the “truth”, focused on internal causes
Data source is an inspected sampling, indicating the significance level	Data sources are individual cases without any claim to be valid ⁴ , reliable ⁵ or objective ⁶
Statistical connections are the goal	Reconstructive answers are the goal

Table 1: Comparison of quantitative and qualitative research methods. Own elaboration based on Häder 2019, p. 67.

4.2.2 Primary and secondary research

The most important difference between the two research types is indicated by Hox; Boeije (2005, p. 593): whereas primary research deals with “data collected for a specific research goal”, secondary research takes into consideration “data originally collected for a different purpose”, more specifically, for a different research question. A way to gather quantitative

⁴ “Validity” is one of the quality criteria of quantitative research. It postulates that the investigation is credible and indeed measures what it is supposed to measure. (cf. Pfeiffer 2018)

⁵ “Reliability” is another quality criterion of quantitative research. It proves that the research delivers the same results in repeated investigations. (cf. Pfeiffer 2018)

⁶ “Objectivity” is another quality criterion of quantitative research. It indicates that the investigation is objective and that the researcher itself does not have an impact on the research results. (cf. Pfeiffer 2018)

primary data are experiments, surveys (e.g. questionnaires); qualitative primary data is often collected via interviews, participant observations or focus groups (cf. Hox; Boeije 2005, p. 593). The big advantage of primary research is that the researcher can tailor the theoretical basis, the research design and the data-collection strategy to particular needs and the specific research problem which exists. Nonetheless, primary research is time-consuming and comes with high costs (ibid.). Secondary data usually relies on “official statistics, administrative records, or other accounts kept routinely by organizations” (Hox; Boeije 2005, p. 596). Thus, it is important to make sure that secondary data meets the quality requirements of the problem at stake and that it fulfills the needs of a good scientific practice (e.g. data collection, sampling etc.) (Hox; Boeije 2005, p. 596f).

- In the actual thesis, both primary and secondary data sets are used for the market segmentation analysis (see chapter 5 for methodological details).

4.3 Is segmentation worth it?

There might be suggestions that market segmentation does not make sense. Especially for SMEs, where resources are limited, the market is expected to be “one” with a wide appeal and a large degree of a reactive culture without adhering to a specific strategic approach. Therefore, splitting (potential) buyers into smaller groups with similar patterns of needs may be considered useless. However, the thesis postulates the opposite, for which clear and reasonable causes are existent. So, what can be different scientific justifications for breaking down the market into segments?

Fact is that a neatly drafted segmentation policy plays a vital role for a business’ success, since it enables a company to use its resources more effectively while reducing wastage (cf. Wilson; Gilligan 2001, p. 269). Positive consequences are a broader degree of “market sector knowledge”, discovering industry needs and competitive movements (cf. Ulwick 2005, p. 63), customer loyalty and competitive advantages (cf. Wilson; Gilligan 2001). Whereas a differentiated-market approach leads to a higher level of sales by targeting different customer groups, segmentation also means an increase of cost in production, distribution, administration, promotion and inventory (cf. Wilson; Gilligan 2001, p 272). To put that in a nutshell: at the time of dividing up its market, a company must decide in favor of a cost increase or sales decrease at the time of dividing up its market.

4.4 Hurdles in the segmentation process

A successful implementation of market segmentation is highly dependent on senior management. Managers' responsibility is to coordinate resources which are necessary for a long-term implementation of a market segmentation strategy. The organization culture is a further issue which can prevent the segmentation process from failing (cf. Dolnicar; Grün; Leisch 2018, p. 26). Employees who show a lack of consumer centeredness, resist to change and new ideas but also a lack of creativity, communication and information interchange can cause struggles. For sure, training is a crucial requisite when it comes to get staff and management being familiar with the principles of market segmentation and its implications.

“If senior management and the team (...) do not understand the very foundations of market segmentation, or if they are unaware of the consequences (...), the attempt of introducing market segmentation is likely to fail.”
(Dolnicar; Grün; Leisch 2018, p. 26)

Regarding organizational structure, it is advisable to adapt formalization to market diversity (cf. Dolnicar; Grün; Leisch 2018, p. 27). I.e. the higher the variety of markets targeted, the more staff is required and the bigger an organization evolves, which makes formalization imperative to work soundly.

The majority of such barriers can be identified at the first stage of market segmentation study and subsequently removed by the company. If hurdles cannot be mitigated, management should seriously consider whether it takes the risk or rather abstains from going for a market segmentation strategy.

5 Methodology

The master thesis is going to implement a multi-method research via cross-sectional studies with a prevailing deductive approach. In order to keep the risk of bias low, primary research will be enriched with secondary research.

5.1 Applied research methods

In order to answer the RQ, the following methods are going to be applied:

- 1) **Primary research:** “survey studies” in the form of an internal source are going to be used. These “survey studies” consist of in-store reports which are quantitative questionnaires filled by the research object’s stores/retail owners and CRM data. Investigated data will be as follows:
 - **Nominal data:** gender, new/existing visitors, channels used, customer-life-cycle stage, product categories
 - **Metric data:** age
 - **Ordinal data:** revenue, sales volume

- 2) **Secondary research and best-practice screening:** sub-research-questions 1a, 1b and 1c are going to be answered via a qualitative approach. First, theoretical literature will be used, dealing with *a priori* and *a posteriori* segmentation, the market segmentation analysis process, healthcare market specifics and current industrial trends. Furthermore, best-practice screening will be applied through case studies on B2C (*a priori* and *a posteriori*) novel segmentation (e.g. “How do consumers navigate the healthcare frontier?” (Deloitte 2018)).

Literature research suggests itself, since the topics have already been assessed in profound scientific research and offer sound information sources to be applied to the actual case.

5.2 Analytical steps to primary research

Both in-store reports and data from the CRM tool have been provided by the research object as Excel sheets. First, this data will be polished and noisy variables will be diminished. In a second step, pivot tables will be created. This reveals how different characteristics play

together, in order gain a deeper understanding of mutual influences. The following steps will be applied:

1) Product categories of CRM data: Minor items are united to bigger product categories, since product characteristics such as product size or exact product names are not relevant for the analysis.

- “additional parts” = covers, CDs, books, accessories, partner products, side table, discount etc.
- “pillow” / “slat frame” / “natural rubber mattress” / “virgin wool pad” / “duvets” = different sizes of 20x50 cm, 90x200 cm, 135x200 cm, 155x200 cm, 100x200 cm etc.
- “bed frame” = different bed frames of various suppliers
- “pillows” = different product versions
- “duvet” = different product versions, e.g. 100 % organic, summer duvet, autumn duvet, 4-season duvet etc.

2) Revenue of CRM data: revenue generated from delivery and bed installation are excluded from the analysis; only product-categorical data is relevant. Moreover, revenue amounted from third party products⁷ (making up roughly 1 % of overall revenue) is not considered.

3) Currency transfer of CRM data for the sake of revenue calculation: Swiss francs are converted to Euros in accordance with the prevalent exchange rate of April 16th, 2020: 1 EUR = 1,0521 CHF (finanzen.at 2020)

4) Analyzed segments of in-store reports:

- “customers” = actual customers & potential customers (interested store visitors)
- trade/cooperation partners are excluded, since they do not represent final consumers

5) Translation: data sets of both in-store reports and CRM tool are translated from German into English

➤ Details about the applied segmentation technique for primary research are neatly presented in the beginnings of chapter 6.2.

⁷ The company is sourcing one of its product lines from a German supplier specified in an industry different from beds.

6 Findings

The following chapter is going to discuss both secondary and primary research which build the very basis for the research questions.

Starting with **secondary research**, different segmentation techniques are going to be covered, the market segmentation analysis process illustrated, and healthcare market specifics dealt with. Afterwards, the sleep health consumer market and mental health consumer shall be discussed. More insights are gathered from an analysis of the bedroom-furniture market, trends of the industry and case studies.

Last, the chapter is going to conclude with **primary research** analyzing internal customer data sourced from in-store reports and the research object's CRM tool. This last step is the most laborious part of the thesis. Several different aspects might be considered in order to supply the research object with the most significant research insights about its customer base.

6.1 Secondary research

Leading into the topic of segmentation, the author is going to come up with different techniques, mainly introducing into the concept of *a priori* vs. *a posteriori* segmentation (RQ a). Then, the market segmentation analysis process is going to be thoroughly explained: specifying the ideal target segment (segment selection techniques, segment evaluation criteria), collection of data (market segmentation criteria) and selection of target segments (mainly grounded in "decision matrices"). Delving deeper into secondary research, characteristics which distinguish the healthcare industry from other industrial sectors shall be emphasized. Moreover, relevant KPIs will underline the industry's importance for both individual consumer, state and society.

Then, the healthcare consumer market is going to be discussed. This is grounded in health sciences and actual human health developments in Germany, Switzerland and Austria. Societal groups such as "best agers" and LOHAS might be thoroughly examined as potential target segments. After having gained an overview of the healthcare consumer market, the sleep health consumer market and mental health consumer market shall be examined, while comparing particularities in Germany, Switzerland and Austria. As an alternative to the healthcare market, the bedroom-furniture market is thoroughly discussed. Taking off with general data, the chapter is going to lead through the bed industry and the mattress industry in Germany, Switzerland and Austria. Moreover, current trends of the healthcare market shall be illustrated, such as digitization, pandemics, proactive (self-)management, discrepancy

between cognitive and chronological age etc. An additional method for secondary research is built of case studies, for which best-practice efforts of Motorola and Deloitte shall gain significant attention.

6.1.1 Segmentation techniques

In order to classify segmentation on a larger scale, we mainly distinguish between *a priori* and *a posteriori* segmentation. The terms have their origins in philosophy and were first used by Aristotle (384-322 B.C.), referring to *a priori* for “the general” which conceptually happens first and “the individual” which occurs *a posteriori* (after) (cf. Eucken 1904, pos. 1334).

It was not until medieval times that the terms became part of language usage, when Albert the Great (1098-1179) used *a priori* referring to “for the reasons” and *a posteriori* as a synonym for “as a consequence”; the same standpoint was applied by Prantl (1870, p. 78).

With the arising question concerning the sources of awareness/knowledge in the 17th century, the two terms experienced major developments. From then onwards, *a priori* has been used synonymous to “derived from reason”⁸ (and thus from mere deduction/reasoning), whereas *a posteriori* has been used equally to “derived from experience”⁹ (cf. Eucken 1904, pos. 1339). At this point, it is worth mentioning that Eucken (1904, pos 1388, 1393) further sets *a priori* and *a posteriori* into relation with empiricism (individual awareness is shaped by continuous experience and subsequent mental concepts) and rationalism (individual awareness is originated through autonomous thinking). Although determining “necessary empirical awareness derived from reason” as *a priori* and “acquired awareness from experience” as *a posteriori*, Kant (1724-1804) neglected a chronological sequence of the two approaches, i.e. a concept occurring before the other and thus causing the other as a consequence, but that they exist at the same time. More specifically, he fosters a balanced middle way: “all awareness is rooted *a priori* in experience”¹⁰ (Kirchner; Michaelis 1907, p. 54-55).

Drawing a picture of *a priori* and *a posteriori* in the sense of segmentation, Wilson & Gilligan (2001, p. 275) suggest that the decision whether to go for one or the other heavily depends on the strategist’s knowledge about the market. In the event of new or changing markets, *a posteriori* segmentation might be more accurate, because it identifies key segmentation

⁸ In German: “aus der Vernunft“

⁹ In German: “aus der Erfahrung“

¹⁰ [translated by the author]

variables. Dolnicar; Leisch (2003, p. 2449) emphasize that it is becoming more common to determine homogeneous target groups of consumers via empirical market data (*a posteriori*) than to split consumers on the basis of pre-defined segmentation criteria (*a priori*).

- The following chapters mainly cite the authors Dolnicar; Grün; Leisch (2018), as relevant literature is scarce and the authors particularly shaped the knowledge of *a priori* and *a posteriori* segmentation techniques.

6.1.1.1 *A priori* segmentation

A priori segmentation basically means to come up with single attributes to segment the market before any market research has been done and is mainly of geographic or socio-demographic nature (cf. Dolnicar; Leisch 2003, p. 2449). Dolnicar; Grün; Leisch (2018, p. 14) emphasize that the relevant sources of segmentation are “managerial intuition, analysis of secondary data sources, analysis of internal consumer databases, and previously existing segments”. Wilson & Gilligan (2001, p. 274) suggest categorizing consumers based on common segmentation criteria: “usage patterns (heavy, medium, light, and non-users)”, “demographic characteristics (age, sex, and income)” or “psychographic profiles (lifestyle and personality)”. Dolnicar; Leisch (2003, p. 2449) underline to first decide over single criteria for forming homogeneous groups of individuals. Additional research is conducted in a further step on “size, location and potential of each segment”, which helps to estimate the worth of concentrating market efforts on a particular segment. Dolnicar; Grün; Leisch (2018, p. 15) propose to use rather “age”, “gender”, “country of origin”, “prior purchase”, “benefits sought (convenience, value for money, speed, ability to compare offers)”, or “motives” as *a priori* segmentation base. The St. Gallen Management Approach underlines that on the first stage (*a priori*), “sale- and behavior-relevant segments” are applied (Bieger 2015, p. 87).

The marketer’s knowledge about the market primarily determines the nature of the criteria chosen for *a priori* segmentation.

6.1.1.2 *A posteriori*/data-driven segmentation

Within this segmentation approach, an empirical data set is the source for “disaggregate consumer information”, which assigns individuals to groups of homogeneous nature (cf. Dolnicar; Leisch 2003, p. 2449). The prerequisite is that the organization already has a rough idea about (yet not an exact notion of) critical consumer characteristics of its target segment

(cf. Dolnicar; Grün; Leisch 2018, p. 16). Referring to the St. Gallen Management Approach, Bieger (2015, p. 87) suggests forming sub-segments, which are based on a secondarily important criterion.

➤ **Example**

Choosing a behavior-related criterion such as “benefits sought” in the first step, on the second level it might be accurate to look for psychographic characteristics, whether consumers are “conservative” or “progressive” (cf. Bieger 2015, p. 87).

Cluster analysis is the most applied method to identify *a posteriori* customer segments. The main difficulty might be to figure out if these groups are “real” or “merely imposed” by a marketer (cf. Aldenderfer; Blashfield 1984, p. 16). It is to be expected that research reveals attributes, attitudes or benefits of particular customer groups, which help detect the best market division (cf. Wilson; Gilligan 2001, p. 274).

In *a posteriori* segmentation, market segments are not explored until after data analysis has been executed: “(...) data analysis creates the solution” (Dolnicar; Grün; Leisch 2018, p. 16).

This approach proves to be especially valuable in the identification of preferences and the purchase behavior of a target market (cf. Dolnicar; Grün; Leisch 2018, p. 16).

There are different, scientifically valid, assumptions as regards the “constructive nature of market segmentation”, whether data-driven segments exist “artificially” or if there are “naturally” existent clusters which “just” need to be described in the segmentation process (cf. Dolnicar; Leisch 2003, p. 2450). Dolnicar; Leisch (2010, p. 84) refer to “natural”, “reproducible” and “constructive segmentation” as the three main conceptual ways for data-driven market segmentation.

The authors use the term “clustering” as an equivalent for “segmentation”, since the two constructs share the same purpose: ideally, they are heterogenous between each other but homogenous within themselves.

The subsequent goal is to reduce complexity by forming groups of objects through the application of different variables (cf. Homburg; Krohmer 2009, p. 101). Until now, it remains

questionable, what the correct or ideal number of clusters is (cf. Dolnicar; Leisch 2003, p. 2450).

In the field of business administration, more than 60 % of empirical studies underline that three to five clusters is the ideal number or “best” solution (cf. Dolnicar; Leisch 2003, p. 2452).

Interestingly enough, the numbers of clusters is independent of “the nature of the data, the number of variables used, the sample size or any other relevant parameter in the clustering process (...)” (Dolnicar; Leisch 2003, p. 2452).

6.1.1.2.1 Natural/revealed clustering/segmentation

Natural segmentation refers to the traditional assumption that market segments are already existent in the data and that the “mere” aim of market segmentation analysis is to find and identify them. Thus, density clusters are prevalent in consumer data, which are revealed “correctly and reliably over repeated computations” via clustering algorithms (Dolnicar; Leisch 2010, p. 84). Interestingly enough, this was the very first conceptualization of market segmentation. Within this approach, consumer data is “just” divided into segments through clustering algorithms instead of forming them. The first duty is to determine the structure which the clusters are made of. Usually, when natural groupings are to be assumed, “density cluster structure in multidimensional space” (Dolnicar; Leisch 2003, p. 2451) is applied. Only in this incident, it is legitimate to speak of “natural clustering/segmentation”. Essential is that density clusters have to be revealed in a reliable way with repeated computations (cf. Dolnicar; Leisch 2010, p. 84).

6.1.1.2.2 Reproducible clustering/segmentation

In this event, despite non-existent natural density clusters (like in the event of natural/revealing segmentation), data contains some kind of structural pattern. Although clear clusters are lacking, data structure enables marketers to derive “stable, reproducible market segments” (Dolnicar; Leisch 2010, p. 85). This means that “repeated grouping leads to the same solution(s)”; thus a “pseudo cluster structure” can be found (cf. Dolnicar; Leisch 2003, p. 2451). Nonetheless, it has to be mentioned that this “pseudo cluster structure” is highly impacted by the clustering method applied, which “enables clustering algorithms to repeatedly identify similar segmentation solutions” (Dolnicar; Leisch 2010, p. 86).

Coming with a specific degree of stability, reproducible market segments can serve managers as a basis for strategic marketing decisions (ibid.).

6.1.1.2.3 Constructive clustering/segmentation

Constructive segmentation comes with the occurrence that natural segments are not prevalent and data does not feature any kind of structure, which would cause marketing strategists to go for a mass-marketing strategy. As an alternative, managers can opt for this method, where “market segments are created on the basis of an unstructured data set as constructive clustering/segmentation.” (Dolnicar; Leisch 2010, p. 85) Different groupings of data are compared to each other and the most promising one is chosen by a marketer (cf. Dolnicar; Leisch 2003, p. 2452). “Promising” means “useful” in this event: “Managerial usefulness can be defined as ease of communication with the segments, ease of identification of these customers in practice etc.” (Dolnicar; Leisch 2003, p. 2452). This approach also sees population sample (besides the algorithm chosen) as a significant denominator for the final solution and is often used in many data-driven segmentation processes, although marketers would usually not admit that due to unfavorable connotations such as lack of objectivity and professionalism (cf. Dolnicar; Leisch 2003, p. 2452). The choice whether it is preferably to proceed with artificially constructed consumer segments or to instead address the entire market is left to the marketer. Dolnicar; Leisch suggest going for a “useful arbitrary grouping of consumers into homogeneous segments” (2003, p. 2453) instead of opting for a mass-market approach, since consumer needs can be fulfilled more efficiently.

Dolnicar; Leisch (2003, p. 2453) conclude that the most desirable situation is “revealed clustering” and recommend to just favor “constructive clustering” if there are no alternative options to choose from.

➤ Example

Imagining that consumers of mobile phones are asked for their aspiration level as regards the feature sophistication of the device and their willingness to pay. The resulting clusters can appear in three different shapes (cf. Dolnicar; Leisch 2010, p. 85):

- 1) **True natural clusters:** the clusters are highly homogeneous internally and different from other segments.

➤ **Example**

One consumer group favors maximum feature sophistication and shows a high willingness to pay. The other consumer group does not require a lot of technical features and shows a low willingness to pay.

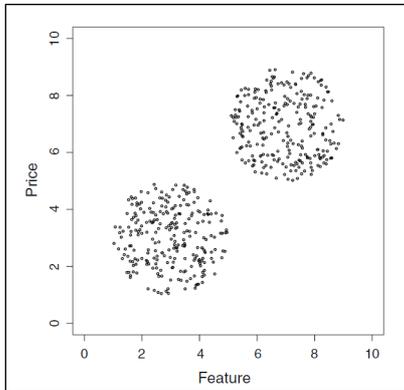


Figure 1: Natural segmentation. Two clearly defined segments with high cluster stability. (Dolnicar; Leisch 2010, p. 85)

2) **Reproducible clusters:** although the best solution from a statistical point of view is to identify one big segment as a natural one (this would be the entire ellipse of figure 2), it does not serve managerial use, since the right-hand corner of the ellipse has other expectations concerning features and prices of the mobile phone than the left-hand corner of the ellipse. Thus, the cluster has to be first divided in order to be appropriately targetable. As in figure 2 shown, data analysts have come to a stable segmentation solution, dividing the ellipse data into two segments (left illustration) or three clusters (illustration in the middle).

➤ **Example**

- Price-inelastic techno affiliates (right-hand corner)
- Basic-configuration bargain hunters (left-hand corner)
- In-between consumers (middle)

The right illustration in figure 2 shows highly instable “seven-cluster partitions” (Dolnicar; Leisch 2010, p. 90) which lack stability due to segmentation randomness. Thus, this option is most insignificant for the segmentation process.

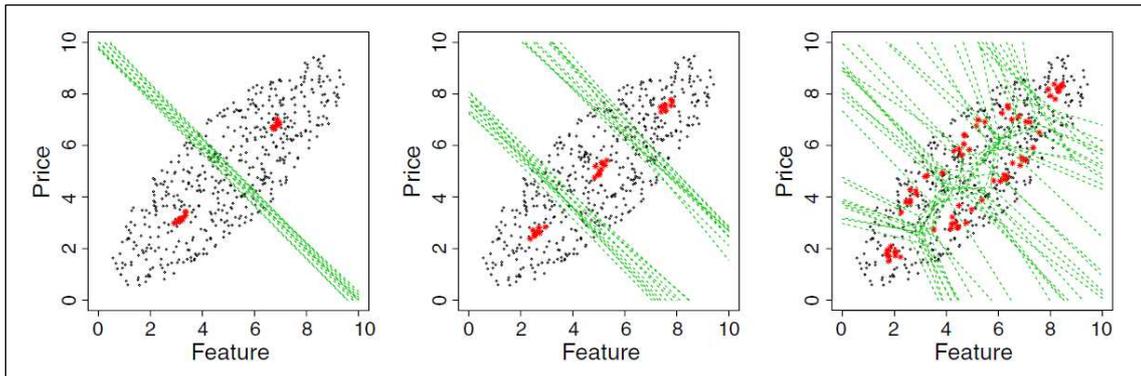


Figure 2: Reproducible segmentation. (Dolnicar; Leisch 2010, p. 90)

3) **Lack of structure in the data:** being confronted with a missing structure in the data would force data analysts to go for a constructive segmentation, which – in the event of the current example – could happen through natural *or* reproducible segmentation. Based on figure 3, the square data can be seen as a natural, stable segmentation resulting in four different segments (left illustration).

➤ **Example**

- Price-inelastic techno affiliates (upper right-hand corner)
- Price-inelastic bargain hunters (lower right-hand corner)
- Basic-configuration techno affiliates (upper left-hand corner)
- Basic-configuration bargain hunters (lower left-hand corner)

Concerning the circular data (right illustration), natural and stable segments of consumers are not constructible. If a mass-marketing approach is not an option, different solutions have to be “computed, visualized, described, and presented” (Dolnicar; Leisch 2010, p. 93) by analysts for the management board to be later compared for a final decision.

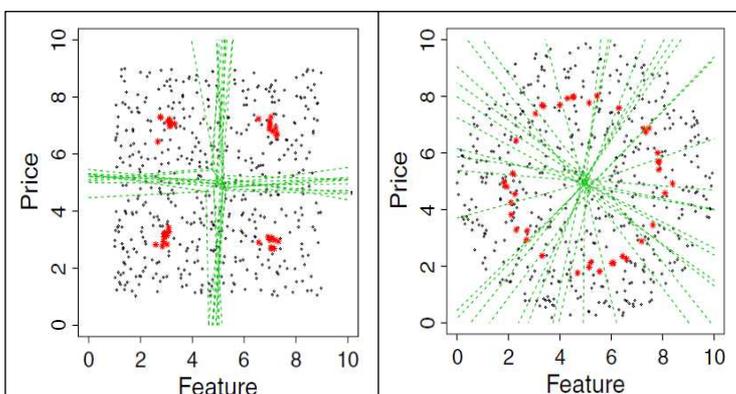


Figure 3: Constructive segmentation. (Dolnicar; Leisch 2010, p. 93)

6.1.1.3 Alternative approaches

If there are no apparent natural segments, the procedure to segment can also be done with a more formal approach. One of the most popular ones is “the three steps” invented by Kotler (1988, p. 284):

- 1) **Survey stage:** interviews are conducted, and consumer focus groups are formed, in order to figure out motivations, attitudes and behavior of the market. The results form the basis of a formal questionnaire for a sample of consumers to collect data related to:
 - Attributes and how important they are
 - Brand awareness
 - Product usage
 - Attitudes toward product category
 - Demographics, mediagraphics of the respondents and psychographics

- 2) **Analysis stage:** factor analysis is applied to the data, in order to remove variables which highly correlate. Further, cluster analysis is applied to create maximally different segments (internally homogeneous, externally heterogeneous)

- 3) **Profiling stage:** each cluster is formed based on demographics, media consumption habits, psychographics, attitudes and behavior.

6.1.1.4 *A priori* or *a posteriori* segmentation?

Several researchers explored that companies usually do not decide themselves for *a priori* or *a posteriori* segmentation techniques but rather use a mix of it. Dolnicar; Lazarevski; Yanamandram (2013, p. 3), for example, use *a priori* segmentation criteria such as demographics, geographic criteria, usage levels or intention and refine their results with data-driven segmentation focusing on motivations, benefits sought, information sources, values, image, emotions or self-concept. Ulwick (2005, p. 64) endorses using as a segmentation base a combination of demographics, psychographic and “needs” data. The author further develops that “traditional” segmentation schemes often make companies focus on “phantom targets”: “That is, groups of customers who are neither homogeneous nor nonoverlapping, and who may not value a unique set of desired outcomes.” (Ulwick 2005, p. 67) Therefore, a novel segmentation technique which combines *a priori* and *a posteriori* segmentation (thus avoiding going for one *or* the other) will be helpful when it comes to effectively segment markets.

6.1.2 Market segmentation analysis process

The segmentation analysis is consisted of different steps (see figure 4). Following the concept of Dolnicar; Grün; Leisch (2018, p. 20), the first step is to decide whether to go for a segmentation strategy or not (step 1), specifying the ideal target segment (2), collecting and compiling empirical data from existing sources (3), exploring the data (4), extracting segments (5), profiling the resulting market segments (6), describing them (7) and selecting the number of market segments to target (8), developing a customized marketing mix (9) and continuously monitoring the segments for potential shifts as regards size or characteristics (10).¹¹

Dolnicar; Grün; Leisch (2018, p. 12) underline how important it is to subsequently profile and describe the clusters after having divided customers into market segments. This step is essential to understand consumers, select appropriate target segments and designing a suitable marketing mix.

6.1.2.1 Specifying the ideal target segment

Since companies cannot afford adapting marketing mixes to everyone, it is necessary to look for features which make targeting viable. Ideally, those segments “exhibit similar responses to a company’s marketing mix” (Baack 2019, p. 182). For a successful targeting of consumers, marketers must assess likelihood for purchasing a company’s goods and if consumers can afford them. Thus, it is paramount to determine what people want, their needs, affordability, whether they show characteristics which allow a targeting with similar products and the factors which impact consumers’ product choices (cf. Baack 2019, p. 180).

6.1.2.1.1 How to evaluate target markets?

Whether to use a mass-market, differentiated-market or concentrated-market strategy, depends on the organization’s capability, the opportunities which exist and the degree of market coverage which is realistic (cf. Wilson; Gilligan 2001, p.272). Kotler; Lane Keller; Bliemel (2007, p. 387) propose that companies shall orient themselves towards the following aspects: (1) size and growth of segments and (2) goals and resources. Ulwick (2005, p. 78) underscores

¹¹ As already indicated, the author will not elaborate on the whole market segmentation analysis process but only deal with selected steps such as “specifying the ideal target segment”, “collecting data” and “selection of target segments” (by determining market segment attractiveness/relevance).

that the ideal segment is “small”, “filled with opportunity” and “ignored by the current set of competitors”.

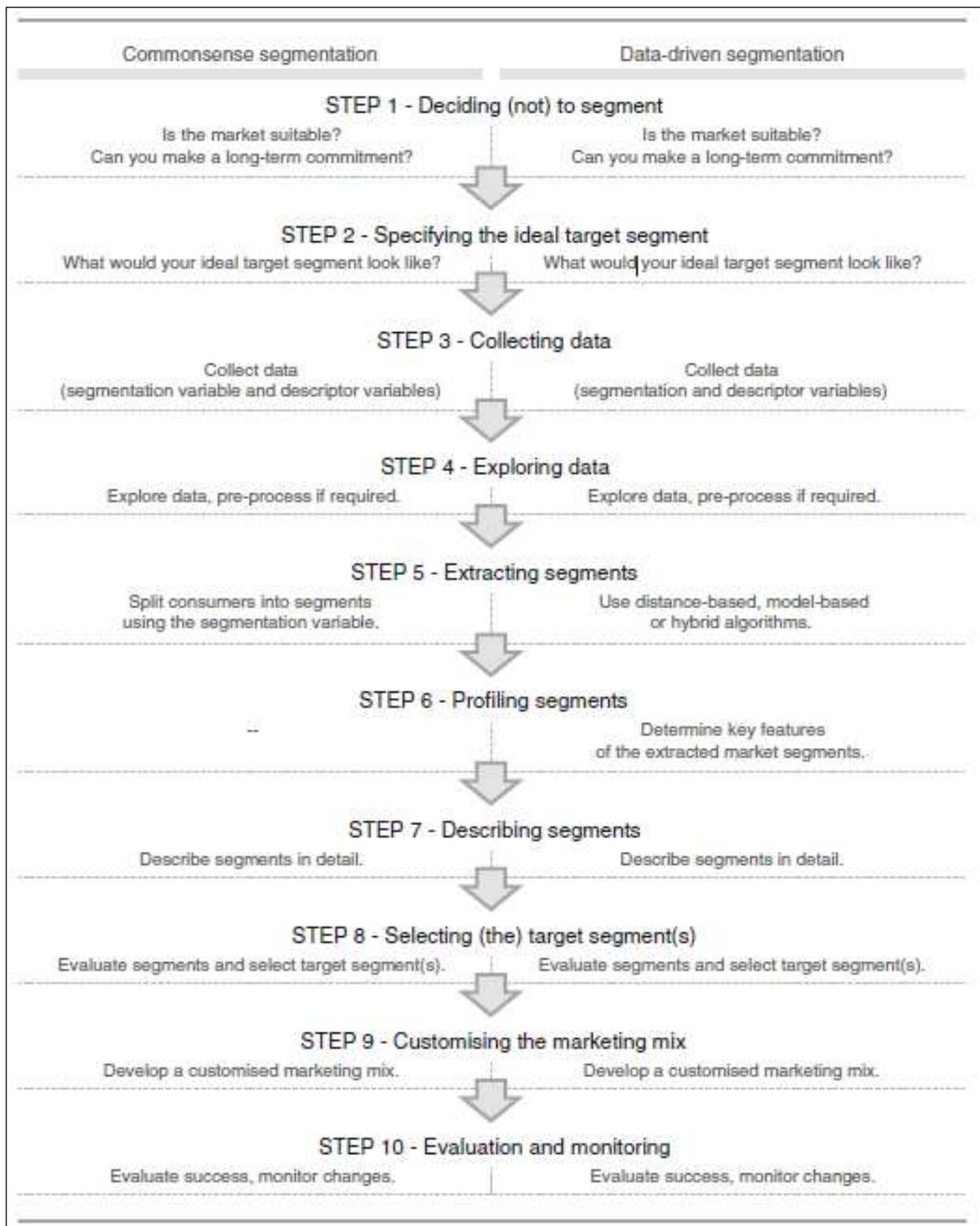


Figure 4: Ten steps of market segmentation analysis. (Dolnicar; Grün; Leisch 2018, p. 21)

- Along the whole market segmentation process, but especially in step 1, the role of the **competitive landscape** might not be undervalued. It is heavily dependent on the degree of competition whether a segmentation strategy is useful for a company. With low competition, market segmentation might become obsolete. The company's level of market lifecycle can be an indicator for prevailing competition and as to what degree segmentation is necessary. Usually, competition increases along the cycle. In the emergence of a new industry, "a handful of innovators (...) [try] to find a sizable market for [a product]" (Wu 2019, p. 16). While the industry is growing, the number of suppliers is rising up to the stage of maturity (cf. Wu 2019, p. 19). In a mature industry, a more subtle segmentation strategy is needed (to differentiate oneself), as it is the case in a newly emerging industry.

6.1.2.1.1.1 Size and growth of segments

The "right size" of segments is relative: bigger companies are advised to aim at segments with high revenue volume and avoid smaller segments (due to an unsatisfying return on investment). On the opposite, smaller companies do not go for larger segments, since their capacities are too restricted to properly target them (cf. Kotler; Lane Keller; Bliemel 2007, p. 387). Segment growth is always desirable, as companies, in general, aim at increasing revenues and profits. Nevertheless, organizations are often confronted with competition in growing segments, which reduces profit potential.

6.1.2.1.1.2 Goals, objectives and resources

There might be attractive segments which, despite being adequately large and promising to be growing in the future, turn out to be irrelevant, since they do not match the company's short-term goals and long-term objectives. The St. Gallen Management Approach suggests that the first step in each segmentation strategy is to define "sensible and realistic objectives", which can only be done through a market analysis (cf. Bieger 2015, p. 79). Having defined objectives, the company can then become clear about the target markets which it can serve best and the products and tools it wants to use. Usually, aspects such as long-term profit potential and added value (for consumers and/or relevant stakeholders) should form part of overall, prevailing objectives (cf. Bieger 2015, p. 81).

A company might further distinguish between short- or medium-term (dynamic) *goals* which contribute to achieve long-term (static) marketing *objectives* (ibid.).

But: even when segments comply with company goals and objectives, it is essential to figure out whether competencies and resources are readily available to ensure success (cf. Kotler; Lane Keller; Bliemel 2007, p. 387). There might be cases where a company can acquire new competencies for serving a market segment properly and thus remain competitive, however Kotler; Lane Keller; Bliemel (2007, p. 387) underscore that companies should not enter segments to which they cannot offer a significant value. The St. Gallen Management Approach endorses this view: delivering value can increase revenue significantly, as it decides on the price level which can be set (to finally cover production costs) (cf. Bieger 2015, p. 82). Ensuring product quality and fulfilling customers' needs play a decisive role for price setting, since both are indicators for the extent to which customers perceive a value added to satisfy own needs.

The St. Gallen Management Approach is proposed by a concept to determine the "ideal segmentation degree". Size of ideal segments (number of customers) is set into relation with segmentation costs (production and cultivation) and segmentation benefit (willingness to pay for the best customized product version) (see figure 5)

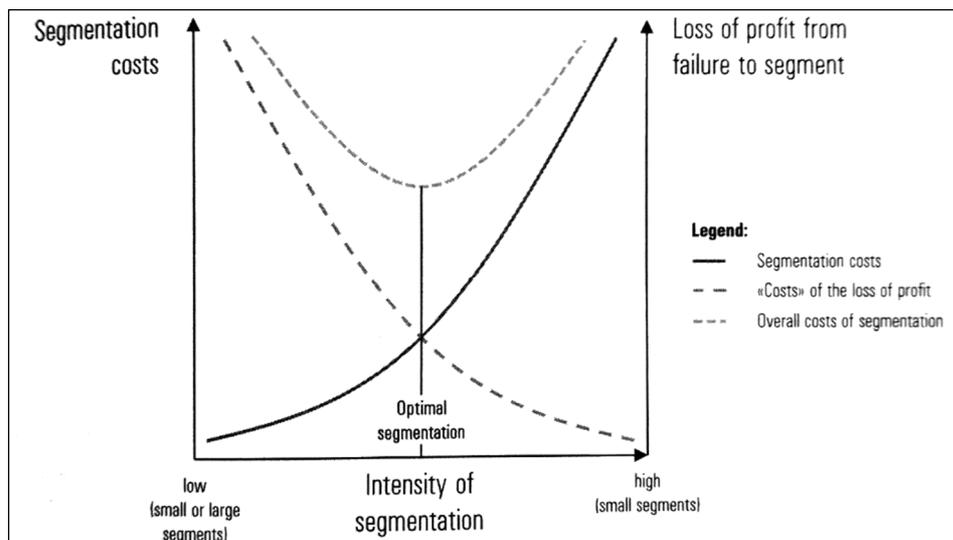


Figure 5: Optimal segmentation. (Bieger; Reinecke; Tomczak 2004, p. 126)

6.1.2.1.2 Selecting market segments

After having ensured that segments fulfill the before-mentioned prerequisites, the company has to define one or more segments in which the entry is worth its efforts; this means, it is time to decide the target markets. There are different segmentation techniques and several approaches towards identifying target markets. As literature suggests, going for one or the other technique is highly dependent on the structure of a marketer's market. The company might act differently, if there are apparent natural segments emerging out of the market or if

the market is one mass market which has no particular features leading to potential segments. Therefore, it is common to begin with an examination of the market to see whether “natural segments” already exist (see chapters 6.1.1.2 and 6.1.1.3).

Once having identified segments, there are five common patterns to cover a market: concentration on one segment, selective specialization, product specialization, market specialization and complete market coverage (undifferentiated marketing/differentiated marketing) (Kotler; Lane Keller; Bliemel (2007, p. 387)); the five options will be observed in detail below.

6.1.2.1.2.1 Concentration on one segment

Allowing the company to build up a strong position in its target segment, this approach means meeting special needs while generating a special image (cf. Kotler; Lane Keller; Bliemel 2007, p. 388). The company decides to target a one-and-only segment and concentrates all its efforts (logistics, production, and promotion among other things) on it. Companies going for a concentrated effort count on vanishing competition or use single segments as a logical basis for expanding to other segments in the future.

Corresponding risks must not be undervalued. Depending on the stability of segment, the company can be suddenly confronted with high losses (e.g. in the event of shifting lifestyles, new technologies or entrance of competitors). Relying on the “one-and-only” segment and concentrating all efforts on it means taking into account a high degree of risk.

6.1.2.1.2.2 Selective specialization

Selective specialization means that the company chooses several attractive segments, either because of a good match with goals and resources, or due to profit potential (cf. Kotler; Lane Keller; Bliemel 2007, p. 388).

Compared to a concentrated strategy, “selective specialization” endorses a higher spreading of risk. If one segment turns out to be no longer attractive for the firm, profit can still be sourced from other segments.

6.1.2.1.2.3 Product specialization

Going for a product specialization requires the company to focus on one specific product with which several groups of customers are satisfied (cf. Kotler; Lane Keller; Bliemel 2007, p. 388).

➤ **Example**

A company offers a microscope which meets the demand of academic laboratories and at the same time is used by public research centers and private enterprises; the product remains exactly the same, while diverse needs of different segments are fulfilled.

6.1.2.1.3 Market specialization

Applying market specialization signifies satisfying different needs of one particular consumer group through different product lines (cf. Kotler; Lane Keller; Bliemel 2007, p. 388).

➤ **Example**

A company's product offer comprises microscopes, oscill scopes, lab garments etc. especially tailored to the needs of academic laboratories.

An advantage is the potential to acquire an outstanding image among this particular segment, yet risking being dependent of this one and only cluster.

What is a niche?

A niche is a particular form of market specialization, which is built to meet the needs of a restrictively defined and small customer group. Usually, niches are formed by breaking down segments into sub-clusters; in the case of the research object, this could be a group of consumers who want to explore natural beds, further broken down to the niche of consumers who use natural beds as a therapeutic measure.

Kotler; Lane Keller; Bliemel (2007, p. 359) corroborate that the only case a niche is profitable for a firm is: (1) when the needs of customers are different and of complex nature, (2) if customers react positively on the niche offer, (3) if competition is almost non-existent, i.e. the nicher is the only supplier (ibid.)

Current developments in marketing segmentation show that companies fostering a niche approach are becoming increasingly successful (cf. Kotler; Lane Keller; Bliemel 2007, p. 359f). The reason is that they are more flexible in adapting to market changes and can react relatively easy to a shift in customer needs.

Despite acting with strictly limited – both financial and personnel – resources and being quite unpopular, SMEs are often those companies to cover over 50 % of global market share within their specific niche (cf. Kotler; Lane Keller; Bliemel 2007, p. 360). It is common that nichers are

family enterprises (ibid.) which have gained an impressively specified knowledge about their customer base along the years; what further qualifies them are the great efforts they put in customer care.

➤ **Example**

Hohner is a German brand serving the niche market of harmonicas, making up 85 % of global market share (cf. Kotler; Lane Keller; Bliemel 2007, p. 360).

6.1.2.1.3.1 Complete market coverage

All customer groups are served with different products of the same product family (cf. Kotler; Lane Keller; Bliemel 2007, p. 388), either through undifferentiated or differentiated marketing.

➤ **Example**

Coca-Cola which addresses customers with several versions of soft drinks (Fanta, Sprite, Coca-Cola etc.).

Undifferentiated marketing

The company offers a one-and-only product to a mass market, ignoring possible discrepancies between the segments. This is only possible, if the company succeeds in figuring out the similarities (thus needs of the mass population) in different segments which it can use as a basis for the marketing program and product development. Mass-distribution channels and mass promotion are used to address an undifferentiated marketing segment.

What is the difference between “undifferentiated marketing” & “product specialization”?

“Undifferentiated marketing” means to focus on a tight product range with slight variation, “product specialization” just offers one standardized product (cf. Kotler; Lane Keller; Bliemel 2007, p. 389).

➤ **Example:** Coca-Cola “light”, “zero”, “vanilla” etc.

This approach comes with advantages such as high economies of scale and cost reduction due to restricted warehousing, production, logistics, marketing research and product management (ibid.).

In spite of its cost efficiency, it is almost impossible to develop a product which is capable of fulfilling the needs of everybody. Thus, this approach must be dealt with reservation.

Differentiated marketing

Several segments are served with special marketing programs. Although inhering great potential to satisfy diverse consumer segments and causing an increase in revenue, costs are to be expected to rise due to product modification (product development), (pre-)production costs owing to different product versions, administrative costs (marketing plans, market research, sales analysis, distribution etc.), warehousing/storage costs, and merchandising costs (communication channels) (ibid.).

This scheme comes with the risk of over-segmenting, which means that the company offers a particularly diversified offer for segments which turn out to be too small for the company to address efficiently. In many cases, companies have to take a step back again and “counter-segment” – putting together several small segments into larger batches (ibid.).

6.1.2.1.4 Segment evaluation criteria

After having decided to go for one segmentation strategy, the second step is to ensure that segments match certain criteria in order to become a potential target market. Dolnicar et al. (2018, p. 31) distinguish between (“mandatory”) knock-out criteria and (“optional”) attractiveness criteria to evaluate market segments after they have passed the knock-out test; yet, researchers often do not make a difference between the one or the other. Dolnicar et al. (2018, p. 33) underscore that ideally, the relative importance of each segment evaluation criterion to the organization is determined beforehand. This helps the company be clear about its aims.

6.1.2.1.4.1 Knock-out criteria

Knock-out criteria are applied to determine, whether segments are worth being further assessed with attractiveness criteria (cf. Dolnicar; Grün; Leisch 2018, p. 33). Kotler (1988, p. 155) distinguishes between size, profitability, growth, low risk and scale economies to evaluate different market segments. Further, the author underlines that the company has to decide if the firm’s objectives and resources comply with these segments; a segment might be dismissed when the company fails to deliver one or more of the competences which are required to provide the corresponding consumer market with superior value (cf. Kotler 1988, p. 155).

Dolnicar; Grün; Leisch (2018, p. 33) refer to the following knock-out criteria:

- **Homogeneity:** members of the segment must be featured with the same characteristics
- **Distinction:** members of the segment must differ from member of other segments
- **Size:** the segment must be large enough and thus, comprise enough consumers who ensure a certain return on investment for creating a customized marketing mix
- **Match:** the market must comply with the organization's strengths and be able to satisfy the needs of the segment members
- **Identification:** members of the segment must be "possible to spot" in the market
- **Reachability:** getting in touch with the segment members through a marketing mix must be feasible

Baack (2019, p. 183) endorses the findings of Dolnicar et al., suggesting similar criteria which must be inherent in segments in order to "pass the test":

- 1) Those within the segment should be homogenous or have similar characteristics.
- 2) The segment must differ from other groups and the population as a whole.
- 3) Sufficient demand must be present to make the segment financially feasible.
- 4) Methods to reach the market must exist, both in terms of physical delivery of the item and in terms of the marketing messages that would entice customers to make purchases.

Further, the author points to the following criteria to assess the potential of market segments (Baack 2019, p. 201):

- **Measurability:** Can the segment be quantified and identified?
- **Accessibility:** Can the segment be reached?
- **Profitability:** Is the segment large enough to generate profits?
- **Actionability:** Can a marketing program be designed to stimulate interest and behavioral responses (purchases)?

The St. Gallen Management Approach proposes to adhere to the following "requirements for market segmentation characteristics" (cf. Bieger 2015, p. 86):

- **Purchase behavior relevance:** homogeneity as regards equal purchase behavior within the segments, but heterogeneity among segments with different purchase behavior
- **Significance for the application of marketing tools:** chosen market segments must be able to target with marketing tools
- **Accessibility:** ability to focus marketing efforts on selected segment through distribution and communication channels

- **Measurability (operationalization):** statistical definition of segmentation via market research methods¹²; a prerequisite is a clear definition of segments “according to adequate criteria” (cf. Bieger 2015, p. 86)
- **Temporal stability:** segments need to remain stable on the long-term, since marketing operations to penetrate a segment last as well¹³
- **Profitability:** yield has to exceed segmentation costs, which is ensured by accurate segmentation size and efficient cultivation (see Figure 5 in chapter 6.1.2.1.1.2).

6.1.2.1.4.2 Attractiveness criteria

Attractiveness criteria offer a possibility to rate each market segment and decide which market segment wants to be chosen for targeting (cf. Dolnicar; Grün; Leisch 2018, p. 34). Ulwick (2005, p. 64) fosters the approach of “basic tenets of solid segmentation theory” and postulates that an attractive target market should fulfill the following requirements:

- A unique combination of outcomes which are rather underserved or overserved
- Representation of considerable portion of the population
- Homogeneity: “the population agrees on which outcomes are underserved or overserved and responds in the same manner to appropriately targeted products and services”
- Interesting strategic target matching both philosophy and competencies of the firm
- Reachable through marketing and sales tactics

The St. Gallen Management Approach considers taking into account the following variables to get to the most attractive target market (Bieger 2015, p. 88):

- Market size: market capacity (theoretical maximum quantity), market potential (demand for a product), market volume (realized turnovers of all market suppliers; ideally corresponds with market potential), market share (company’s sales volume proportional to total market) (cf. Bieger 2015, p. 63f)
- Handling costs: costs for performance adjustments and marketing (for example, special commissions in distribution)
- Strategic significance of a market: for example, significance as a lead target group for the development of other target markets, or the significance for selling other goods and services such as lucrative consumables or additional products

Almgren suggests “four factors for targeting an attractive market” (cf. Almgren 2014, p. 73f):

- **Size of market:** number of actual consumers or potential consumers (e.g. derived from a market survey)

¹² Socio-demographic characteristics may be easier to investigate due to secondary statistical information which is already available.

¹³ Usually, segments based on socio-demographic criteria are highly stable, as age distribution does not change over time and is easily predictable.

- **Growth:** although competition might be higher in growing segments, growth rates and growth potential are crucial
- **Stability:** stability can comprise environmental stability as a shaping force for many themes such as distribution and production system, technology etc.; other important variables to measure stability of a market are prices, availability of commodities or economic indicators such as net trade balance. Thus, this indicator can be rather supply-related (e.g. natural disasters, seasonal changes) or demand-related (e.g. preferences, lifestyle)
- **Competition:** although competition is a good sign for market health, it also means that market entry gets difficult, especially in a landscape informed by competitors with long-standing experience in the industry (due to their intense capital and assets)

6.1.2.2 Collection of data

Empirical data is necessary, in the events of *a priori* and *a posteriori* segmentation alike. Segmentation criteria are chosen beforehand, in order to determine different segments.

Whereas “segmentation variable” is used for “one item in a survey, or one observed expenditure category”, the term “segmentation criterion” is used in a much broader sense to describe the “nature of the information used for market segmentation”, e.g. benefits sought (cf. Dolnicar; Grün; Leisch 2018, p. 41).

The decision over the applied segmentation criteria is made long before the segmentation has taken place. Neither a consultant nor a data analyst is skilled enough to decide over the segmentation criterion to choose; instead, a job position with deep knowledge about the market usually has to carry out this task.

6.1.2.2.1 Descriptor and segmentation variables

The term “segmentation variable” refers to one single characteristic of consumers in a sample; this could be gender, age or whatever characterizes the segment as such. The essence of *data-driven* segmentation is that not only one but multiple segmentation variables are used to define the segments – whether they are already naturally existent or “artificially created” (cf. Dolnicar; Grün; Leisch 2018, p. 39).

“Descriptor variables” reveal details about consumers (ibid.). They are personal characteristics (socio-demographics like age, gender, media behavior etc.) necessary to neatly design

marketing mix, distribution and communication channels, the right pricing strategy or advertising and promotion (cf. Dolnicar; Grün; Leisch 2018, p. 41).

Data-driven segments are always constituted of multiple segmentation variables:
(1) descriptor variables and (2) segmentation variables.

6.1.2.2.2 Tools

Empirical data is the prerequisite for data-driven segmentation, mostly sourced from survey studies like observations (e.g. through scanner data which record purchases and often relate to individual long-term purchase histories of customers) or experimental studies (cf. Dolnicar; Grün; Leisch 2018, p. 41). In the ideal case, the corresponding studies reflect consumer behavior. Even though surveys are the most common source in market segmentation studies, they can be unreliable (ibid.). Therefore, it is advisable to use and combine different types of sources to get to the data which uncovers most about consumer behavior (ibid.).

6.1.2.2.3 Market segmentation criteria

The most common segmentation criteria are socio-demographic, geographic, psychographic, behavioral and benefit-sought segmentation (cf. Homburg; Krohmer 2009, p.133). Whether to go for one or the other heavily depends on “what works for your product or service at the least possible cost.” (Dolnicar; Grün; Leisch 2018, p. 42) In recent years, marketers mainly opted for purchase data or demographic data of customers.

Since digitization allows companies to collect data at almost each touchpoint nowadays, there are more segmentation options to choose from; examples are user engagement in emails, clicks on Google Adwords, reviews, social media interaction and online purchases. (cf. Artun; Levii 2015, p. 47)

Hence, the amount of behavioral data has certainly increased. Artun; Levii (2015, p. 48) highlight that marketers shall prioritize purchases, email clicks and web visits as regards behavioral data and gender, age and location of a customer as demographic data. Another possibility to collect data is through in-store purchases. However, this is more difficult, since in-store purchases tend to happen anonymously; thus, data is usually not easily accessible. In contrast, the St. Gallen Management approach proposes to focus on personal values and also

consumption behavior, “stage of life, purchase situation or the person’s psychographic makeup” (Bieger 2015, p.85).

6.1.2.2.3.1 Socio-demographic segmentation

This segmentation approach is one of the most used, since data is easy to track and segments are effectively reachable. In this case, demographic or socio-economic criteria are rather used isolated or in a combined manner. Relevant variables as regards demography are age, generation/cohort, gender, family status, location/nationality, social class, culture and for socio-economic criteria: education, job and income (cf. Homburg; Krohmer 2009, p. 133f).

Gender and income can be valuable segmentation variables/criteria, especially for product categories such as luxury goods (which correlate with purchasing power), cosmetics and baby products (concerning gender) (cf. Dolnicar; Grün; Leisch 2018, p. 43).

Furthermore, life stage can become an important variable. Depending on the nature of the product, a “person’s major concern” (e.g. divorce, marriage, moving in with a partner) offers marketers valuable opportunities, to find perfect buyers for their products (cf. Kotler; Keller 2012, p. 239).

6.1.2.2.3.2 Geographic segmentation

Generally speaking, we are able to distinguish between macro- (country- or city-wise) and micro-geographic (places within a city) segmentation. This type of segmentation suggests that people with the same features regarding social status, lifestyle or purchasing behavior reside in similar microgeographic areas (cf. Homburg; Krohmer 2009, p. 134), e.g. luxury suburbs. Drawbacks are high costs for data gathering and a likely instability of micro-geographic segments. The favorable aspect is that consumers within a geographic segment are easy to target, since communication channels to reach them are manifold and are usually regionally organized (local newspapers, TV stations, radio) (cf. Dolnicar; Grün; Leisch 2018, p. 42f). Especially in international marketing, this type of market segmentation has gained importance; a common example is country-based segmentation revealing cultural differences.

6.1.2.2.3.3 Psychographic segmentation

Relevant data for psychographic segmentation comprise lifestyle, beliefs, interests, aspirations, attitudes or preferences (cf. Dolnicar; Grün; Leisch 2018, p. 44), which usually reveal a product’s purchasing relevance to a marketer. However, purchasing relevance is heavily

dependent on product involvement: products featuring a high involvement (e.g. cars, blood sugar measuring devices) are generating more interest among consumers than low-involvement products (e.g. toothpaste) (cf. Homburg; Krohmer 2009, p. 134). An advantage is the high stability over time, whereas drawbacks comprise high expenditure and problems in effectively reaching psychographic segments (ibid.). Compared to other variants, this segmentation approach is complex, since it is constituted of different dimensions; one trait of a person does not tell a lot about his/her psychographic dimension of interest. That is why marketers usually use a combination of criteria to determine a person's psychographic makeup: e.g. not only one, yet a couple of perceived risks or a number of usage motives (cf. Dolnicar; Grün; Leisch 2018, p. 44). Thus psychographic segmentation reveals a lot about consumer behavior; although it is risky to assign consumers segments, due to an increased complexity of their psychographic makeup. Dey (2013, p. 257) highlights that lifestyle habits are a crucial indicator for determining individual behavior especially in the healthcare sector, although still not being applied often.

A common and fruitful way to build psychographic segments is the "Strategic Business Insight's (SBI) VALS™ framework". It divides consumers into eight different groups based on VALues and LifeStyle. The VALS system is updated regularly, being based upon current market data gathered from more than 80,000 surveys annually (cf. Kotler; Keller 2012). The main pillars of this framework are "consumer motivation" and "consumer resources"; moreover, subgroups such as "ideals", "achievement", and "self-expression" help to define the three primary motivations of consumers (see figure 6 for an overview of VALS).

Since the thesis aims at establishing a segmentation approach for a SME whose product is highly-priced, only those VALS groups which feature the necessary purchase power are going to be mentioned in detail below. Kotler; Keller (2012, p. 248) distinguish between the following groups with "higher resources":

- 1) **Innovators:** are known for their successful, active and "take-charge" character and for a high self-esteem. They show a particular taste for niche-oriented, upscale goods.
- 2) **Thinkers:** cultivate mature, reflective and satisfied life attitudes and usually strive for knowledge, responsibility and order. Their goal is to find value, functionality and durability in products.
- 3) **Achievers:** focus on family life and career. They are usually successful and prefer premium products in order to polish up their image within their peer group.

4) **Experiencers:** impulsive, young, enthusiastic people looking for excitement and manifold experience. They tend to invest a relatively high amount of income on entertainment, socializing and fashion.

Ideals			Achievement		Self-Expression		
Innovators	Thinkers	Believers	Achievers	Strivers	Experiencers	Makers	Survivors
Are confident enough to experiment	Plan, research, consider before acting	Believe in right/wrong for a good life	Have a me-first, my-family-first attitude	Are the center of street culture	Want to stand out	Are distrustful of government	Are the quiet rank and file
Are information ready	Are the old guard	Want friendly communities	Are fully scheduled	Live in the moment	Want everything	Believe in sharp gender roles	Are cautious and risk averse
Are future oriented	Enjoy historical perspective	Not looking to change society	Are peer conscious	Wear their wealth	Are spontaneous	Protect what they think they own	Use television as a window to the world
Are receptive to new ideas and technologies	Have "ought" and "should" benchmarks for social conduct	Have no tolerance for ambiguity	Are anchors of the status quo	Desire to better their lives; have difficulty in doing so	Have a heightened sense of visual stimulation	Want to "work" on their world	Take comfort in routine and the familiar
Enjoy problem-solving challenges	Use technology in functional ways	Have strong me-too fashion attitudes	Believe money is the source of authority	Experience revolving employment	Introduce new sayings	Have strong outdoor interests; don't want to be walled in	Are loyal to products and brands
Are self-directed consumers	Are not influenced by what's hot	Want to belong	Are committed to family and job	Are looking for a fun time	See themselves as very sociable	Are not concerned with being fashionable	Are analog not digital
Are keenly aware of others' self-interests	Follow traditional intellectual pursuits	Trust traditional sources; don't question authority	Value tech that provides a productivity boost	Are impulsive	Are first in, first out of trend adoption	May appear to be anti-intellectual	Place emphasis on preservation

Figure 6: Characteristic Snapshots Emphasize Important Differences by VALS™. Strategic Business Insights®, 2017.

6.1.2.2.3.4 Behavioral segmentation

Prior product experience, purchase frequency or usage rate, price sensitivity of customers, consumer expenses, and information search behavior are relevant variables for behavioral segmentation (cf. Dolnicar; Grün; Leisch 2018, p. 45). Furthermore, Kotler; Keller (2012, p. 249) distinguish between needs and benefits (e.g. "luxury enthusiasts", "image seekers", "heavy shoppers", "traditionalists" and "overwhelmed"). They found decision roles as significantly interesting for the segmentation process and further suggest dividing consumers into "initiators", "influencers", "deciders", "buyers" and "users" (Kotler; Keller 2012, p. 249). Moreover, occasions, which means a specific point in time when a consumer develops a need, purchases or uses a product, can be a helpful variable to segment (Kotler; Keller 2012, p. 250).

Sleep products might be triggered by **occasions** related to health issues such as **medical consultation, back pain or other health-based urgencies.**

More relevant criteria are "buyer-readiness stage" and "loyalty status". "Buyer-readiness stage" emphasizes consumer awareness of a product (aware, ever tried, informed, interested, desire,

purchasing intention, purchasing action). Usually, a marketing funnel helps to break down the whole market into buyer-readiness stages. This approach might be especially fruitful for designing advertisements, since it offers the possibility to directly address consumers in specific buyer-readiness levels (cf. Kotler; Keller 2012, p. 250). “Loyalty status” usually splits a market into four groups: “hard-core loyals” (only one brand is bought), “split loyals” (loyal to two or three brands), “shifting loyals” (changing loyalty from one to another brand), and “switchers” (no loyalty shown). Moreover, split loyals can deliver insights into how the competitive landscape is structured (ibid.).

Dey (2013, p. 254) distinguishes between three different types in healthcare segmentation to refine consumers on the basis of their user behavior:

- Health Behavior (health conscious – annual health checkup)
- Illness Behavior (searching for remedy to cure)
- Sickness Behavior (admittance of sickness and visiting health service provider)

Since this segmentation approach is usually dependent on data about prior product-usage behavior, it is only suitable for existing segments to be refined, yet not to figure out potential or new buyers. Many times, it is also linked to other segmentation criteria such as socio-demographic or psychographic. Established segments tend to react heavily heterogenous, which can make proper targeting quite difficult (cf. Homburg; Krohmer 2009, p. 135).

6.1.2.2.3.5 Benefit segmentation

“What benefits are customers looking for in product consumption?” is the question to be answered. Thus, benefits sought can offer an interesting insight into purchasing relevance. Benefits directly affect purchasing decisions (cf. Homburg; Krohmer 2009, p. 135). They are of great importance for marketers, even though a proper targeting can be problematic. Therefore, it is recommendable to describe identified segments with more segmentation criteria such as demographic or socio-economic characteristics (cf. Homburg; Krohmer 2009, p. 136). What is also worth considering: benefit segmentation is highly bound to products, since different product versions supply customers with benefits.

Ulwick (2005, p. 67) corroborates that in the event of choosing benefit-based information for segmentation, markets might fail to define what a “need” or “benefit” is. Only having a vague idea about what this term actually inheres – usually revolving around “solutions, specifications, needs, benefits, and the occasional outcome” (Ulwick 2005, p. 67) – can be seen as the source

of serious problems when it comes to segmenting a market clearly. As an alternative, the author suggests looking for “unique segments of opportunity, that is, groups of customers with unique sets of underserved outcomes” (ibid.).

6.1.2.2.3.6 Outcome-based segmentation

“Outcome-based segmentation is used to discover segments of opportunity in a specific market of interest.” Ulwick (2005, p. 80).

Ulwick suggests that consumers’ ultimate goal is to “get their jobs done perfectly” (2005, p. 68) with products and services.

Therefore, the basis is formed by “customers’ desired outcomes” which are used as a metric to explain what it takes to satisfy them (Ulwick 2005, p. 68). Observing the jobs which customers want to get done, which however currently available goods fail to deliver, is the core of this segmentation scheme. Underserved desired outcomes of customers vary between different groups of customers; thus, each outcome-based segment inheres particular opportunity for the firm resulting in growth potential (cf. Ulwick 2005, p. 82).

6.1.2.3 Selection of target segments

This step serves the decision about which of the many possible market segments want to be chosen for targeting. Dolnicar; Grün; Leisch (2018, p. 237) consider it as a long-term decision which affects all the organization’s future performance. Within this process, the marketing team may look back on the attractiveness criteria which it had already set up to for segment evaluation. It is relevant to mention that all the steps¹⁴ yet taken by the organization theoretically reveal whether the investigated markets meet the necessary size, homogeneity, or if the consumer group is truly identifiable, reachable, accessible etc. Thus, this step in the market segmentation analysis process is “only” another assessment to completely make sure that considered market segments can certainly fulfill all knock-out criteria. The next step is to determine organizational competitiveness within different segments. For this purpose, Dolnicar; Grün; Leisch (2018, p. 238) propose to ask the following questions:

1. Which of the market segments would the organisation most like to target? Which segment would the organisation like to commit to?

¹⁴ Referring to the steps of market segmentation analysis process which are not broached in the present thesis due to limited resources, as thoroughly explained in chapter 1.1.

2. Which of the organisations offering the same product would each of the segments most like to buy from? How likely is it that our organisation would be chosen? How likely is it that each segment would commit to us?

The authors further suggest making use of a “decision matrix” which helps visualizing the relative attractiveness of each segment; hence, one or a small number of target segments can be identified more easily. Accurate matrices to compare market attractiveness are the “Boston matrix” invented by Boston Consulting Group in the year 1968 (cf. BCG n. y.) or its extended version “General Electric/McKinsey nine-box matrix” developed in the early 1970s (cf. McKinsey & Company 2008) (see figure 7).

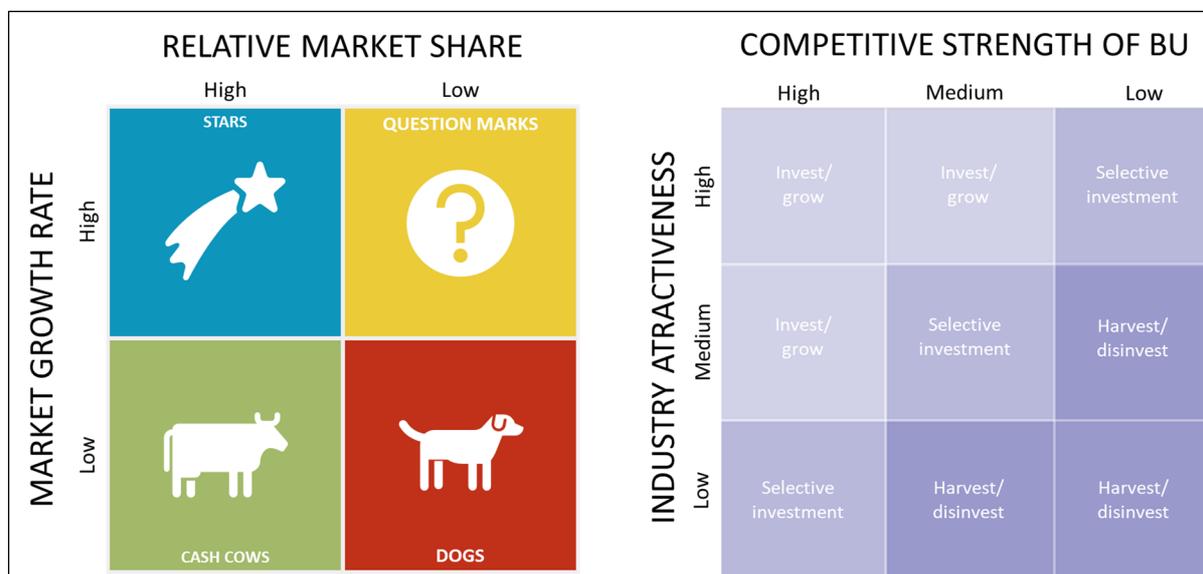


Figure 7: Boston matrix (left) and General Electric/McKinsey nine-box matrix (right). Own elaboration based on Presentationgo 2019 and McKinsey & Company 2008.

Further tools are the “directional policy matrix”, “McDonald four-box directional policy matrix” or the “market attractiveness-business strength matrix” (Dolnicar; Grün; Leisch 2018, p. 239).

“Decision matrices” inhere two different dimensions which allow marketers compare segment attractiveness (x-axis) with relative organizational competitiveness (y-axis); these indicators can be found out by asking the following questions: “How attractive is the segment to us?” (market growth rate/industry attractiveness) and “How attractive are we to the segment?” (relative market share/competitive strength of BU).
(Dolnicar; Grün; Leisch 2018, p. 239)

Despite representing a sound method to investigate relative market attractiveness of the segments, doing so is the responsibility of the marketing team and therefore bound to a

subjective view. This bias is clearly driven by the target segment criteria which have already been identified earlier. Though, determined characteristics lead the marketer to a specified value, emerging from “the grouping, profiling, and description of each market segment” (ibid.). This means to compute them by a multiplication of the weight of segment attractiveness criterion (determined earlier in the process) and segment attractiveness criterion for each market segment (Dolnicar; Grün; Leisch 2018, p. 239). The outcome is a weighted value for each **segment attractiveness** criterion; after adding them up, the overall attractiveness of a segment can be depicted along the x-axis. The same process is applied for **organizational competitiveness** (illustrated along the y-axis); the question to be focusing on here is “Which criteria do consumers use to select between alternative offers in the market?” (Dolnicar; Grün; Leisch 2018, p. 239) (see table 2). These are criteria informed by the nature of the segmentation criteria/variables chosen, such as ability to pay, benefits sought by consumers etc.

Dolnicar; Grün; Leisch (2018, p. 240) are summing up: “(...) first, criteria are agreed upon, next they are weighted, then each segment is rated, and finally the values are multiplied and summed up.” The different segments will be visualized as circles in the matrices (see figure 8), informed by different sizes according to their profit potential which is a crucial value for segment attractiveness; less frequently, contribution to turnover or loyalty are used as indicators for the size (ibid.).

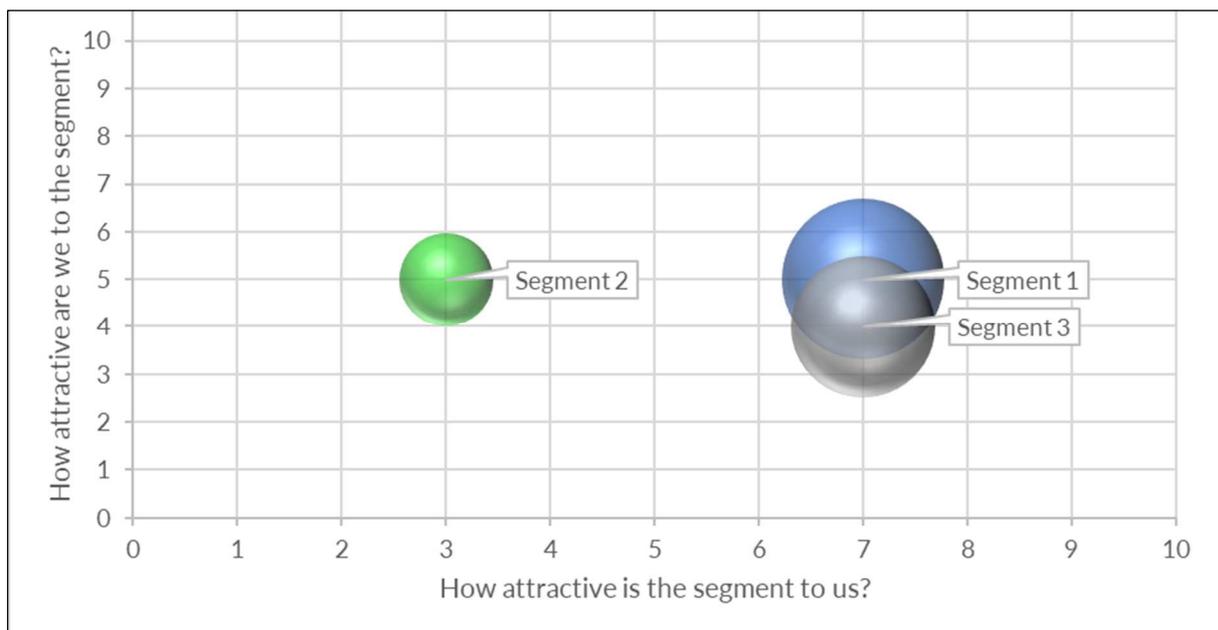


Figure 8: Matrix illustration of a sample segment-evaluation process. Attractiveness criteria are rated with 1 to 10, while 1 indicates the poorest/lowest and 10 the highest/most desirable degree of concordance. Own elaboration based on Dolnicar; Grün; Leisch 2018, p. 240 f.

How attractive is the segment to us? (segment attractiveness)	Weight	Seg 1¹⁵	Seg 2	Seg 3
Criterion 1: growth potential	30 %	8	0	9
Criterion 2: temporal stability	30 %	9	3	7
Criterion 3: non-competitive environment	20 %	8	3	4
Criterion 4: cost-efficiency of marketing adaption	10 %	8	8	10
Criterion 5: strategic significance	10 %	4	6	8
Total	100 %	7.9	3.0	7.6
How attractive are we to the segment? (relative organizational competitiveness)				
Criterion 1: ability to pay	30 %	9	2	6
Criterion 2: prevalence of sleep disorders	40 %	5	8	2
Criterion 3: brand awareness	10 %	2	3	5
Criterion 4: brand recognition	10 %	4	6	7
Criterion 5: well-differentiated products & services	10 %	6	6	8
Total	100 %	5.9	5.3	4.6
Size		9	3	7

Table 2: Data illustration of a sample segment-evaluation process. Attractiveness criteria are rated with 1 to 10, while 1 indicates the poorest/lowest and 10 the highest/most desirable degree of concordance. Own elaboration based on Dolnicar; Grün; Leisch 2018, p. 240 f.

There might occur the event of a segment to be attractive concerning both organizational and segment attractiveness and still, profit potential (size) can be moderate. Hence, including further target segments to balance resulting deficiencies is advisable.

6.1.3 Healthcare market specifics

One of the main market specifics of the healthcare industry is that consumers (or patients) are looking for personal treatment, which is the reason why relationships with “expert service providers” (Schwartz; Luce; Ariely 2011, p. 163) play a significant role. Schwartz; Luce; Ariely (2011, p. 169) found that consumers who make use of health-care treatments tend to invest

¹⁵ In the event of the research object and its potential markets (based on insights from the following market analysis), the following sample target segments are selected: best agers (segment 1), housewives (segment 2) and LOHAS (segment 3). Since a real market forecast and final decision on attractiveness criteria to be applied do not form part of the thesis, the weighted criteria are just predictive. The table serves the simple purpose of an illustrated example for the segment-evaluation process and subsequent matrix illustration.

in more expensive solutions (even “out-of-pocket expense” (Schwartz; Luce; Ariely 2011, p. 167), provided that the relationship is long-term oriented. They may even show reluctance to look for a second opinion to maintain relationship harmony with their provider (cf. Schwartz; Luce; Ariely 2011, p. 163). Thus, keeping up a trustful and long-term customer relationship and meeting their needs properly can prevent companies from customer loss to competition.

“Trust” is an important keyword when it comes to purchasing decisions, since “healthcare consumers have almost no other choice than to rely on advice from experts who have more information, skill, knowledge, confidence, and power to control outcomes”.

(Schwartz; Luce; Ariely 2011, p. 163)

Moreover, the **decision-making process** of buyers tends to be significantly longer compared to other industries. This is mainly caused by purchasing decisions which come with great impact on personal, physical and financial life (cf. Schwartz; Luce; Ariely 2011, p. 163; Himmelstein et al. 2009, 143).

The healthcare industry delivers one of the most important services for any society, whether they are developing or developed (cf. Dey 2013, p. 253). Nonetheless, governments seem to be less tentative towards financial healthcare support for individuals, which can contribute to bankruptcy. Himmelstein et al. (2009, p. 143) found:

- 62.1 % of the whole US population facing bankruptcies did so due to illness or medical bills
- A telephone survey revealed that 5.7 % even had to leave their homes in order to uphold financial liquidity for medical bills (related to a specific health problem, medication or illness).
- 40.3 % faced a decrease of income due to illness (Himmelstein et al. 2009, p. 143).

Consequently, the interest shown by private households is increasing; more often, they take care of their own health and set measures to prevent themselves from health problems instead of relying on third-party involvement/assistance.

6.1.3.1 Spending on health

In 2016, 10.6 % of “total government expenditure from domestic sources” was spent **worldwide** on health, varying from less than 2 % in low-income countries to over 20 % in high-

income countries (cf. WHO 2019, p. 48). In 2018, health expenditure¹⁶ in **Germany** was 5,986 US\$ per capita (cf. OECD 2019, p. 151) and thus the second highest in Europe (after Belgium and followed by Finland), whereas **Austria** invested 5,395 US\$ per capita, ranking 13 in the EU (ibid.). In **Switzerland**, expenditures accumulated to 7,217 US\$ which indicates the second highest value worldwide, subordinate to the US and followed by Norway, Germany, Sweden and Austria (cf. OECD 2019, p. 151).

Having a look at health expenditure as a proportion of GDP, **Germany** ranks third in the EU, indicating 11.2 %, followed by France, Sweden, Denmark, Belgium and **Austria** (10.3 %) (cf. OECD 2019, p. 153). Statistics show that all DACH countries are above the OECD average (3,994 US\$). In **Switzerland**, health expenditure as a share of GDP amounted to 12.2 %; also here, the country ranks second worldwide after the US (16.9 %), followed by Germany, France, Sweden and Japan (ibid.) (see figure 10). Putting these figures into relation with the OECD average of 8.8 % (ibid.), the importance of the health industry in the DACH region is obvious.

6.1.3.2 Health-financing KPIs

Concerning core indicators for health financing (KPIs), the WHO suggests focusing on “total expenditure on health (National health Accounts/NHA)”, “general government expenditure on health as a proportion of general government expenditure (GGHE/GGE)” and/or “the ratio of household out-of-pocket payments for health to total expenditure on health” (WHO 2010, p. xii).

For this matter, the OECD has published scientifically investigated data (see figure 9), suggesting that among German-speaking countries, **Switzerland** has noted the highest out-of-pocket investments¹⁷ in health (2,069 US\$ per capita), directly followed by **Austria** (1,363 US\$ per capita), whereas **Germany** has spent just 738 US\$ per capita (cf. “Health spending” 2018). However, the US remains first in government/compulsory spending¹⁸ in health (10,586 US\$

¹⁶ The term “health expenditure” is defined by WKO as “System of Health Accounts”, that is all financial flows in healthcare regardless of the institution which financed the spending. This standardized measure sheds light on the functions of healthcare, healthcare provision and financing schemes too.

¹⁷ The definition of “out-of-pocket payments” according to the OECD is as follows (2019, p. 112):

Out-of-pocket (OOP) payments are expenditures borne directly by a patient where neither public nor private insurance cover the full cost of the health good or service. They include cost-sharing and other expenditure paid directly by private households and should also ideally include estimations of informal payments to health providers.

¹⁸ “Government/compulsory spending” is a mixture of government spending and compulsory health insurance, thus an alternative financing arrangement of healthcare, besides private funds (OOP, NGOs and private corporations) and voluntary health insurance. (cf. “Health spending” 2018)

per capita), followed by Switzerland (7,317 USD\$ per capita), Norway, Germany (5,986 US\$ per capita), Sweden and Austria (5,395 USD\$ per capita) (cf. "Health spending" 2018).

6.1.3.3 Healthcare consumer market

Fostering a general view on the healthcare sector, it shall be made clear beforehand that B2B businesses form an essential part of the healthcare industry. Beside doctors, also hospitals and pharmaceutical companies are of paramount importance to ensure global health. Due to the nature of the research objective's business (B2C), the thesis is going to focus on final consumers. In the following chapters, the health consumer market in Germany, Switzerland and Austria shall be assessed. Owing to the fact that Germany is the biggest market of the research objective (as regards population size and market coverage), special emphasis needs to be put on this country.

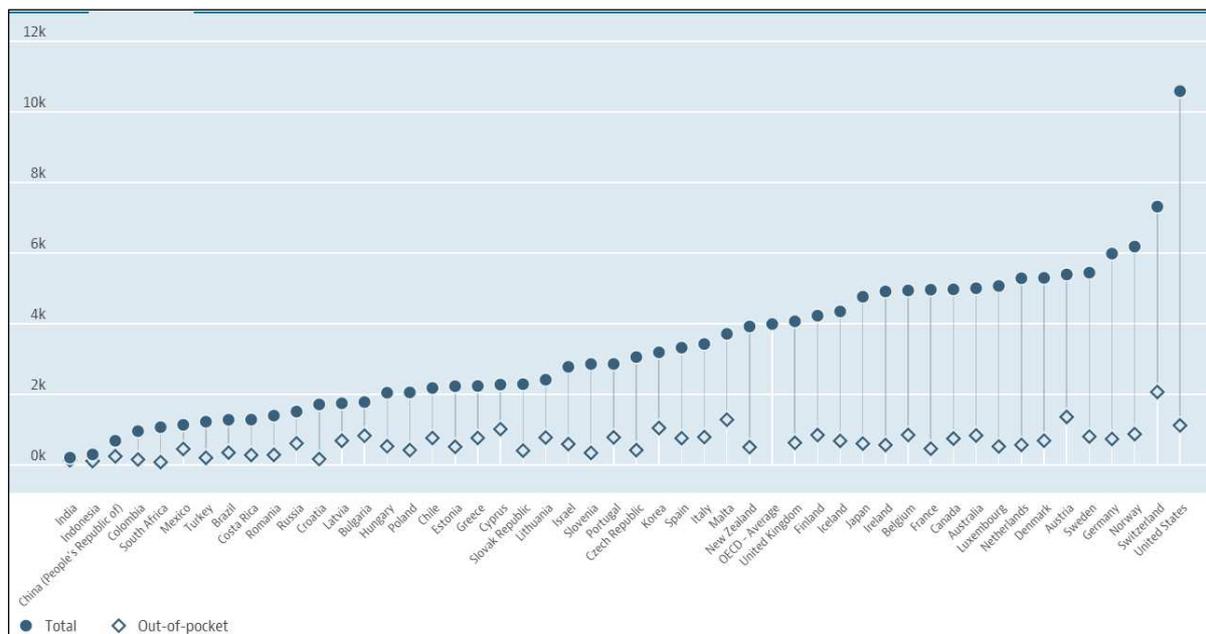


Figure 9: Health spending "total" vs. "out-of-pocket" across OECD member states ("Health spending" 2018).

6.1.3.3.1 General data

Walker found that nutrition, exercise and sleep are essential to life, among which sleep is of paramount importance (cf. Walker 2018, p. 19).

With a global life expectancy increase by 5.5 years (from 66.5 to 72.0 years) between 2000 and 2016 (cf. WHO 2019, p. 4), maintaining health is to become a crucial issue also in the future.

Fact is that women have a longer life expectancy than men, which can be justified by a lower rate of ischaemic heart disease, road injuries, lung cancer, chronic obstructive pulmonary disease, stroke, cirrhosis of the liver, tuberculosis, prostate cancer and interpersonal violence (cf. WHO 2019, p. 5). Noncommunicable diseases such as cardiovascular disease (CVD), cancer, diabetes and chronic respiratory disease are still the greatest risk, accounting for 70 % of global deaths (cf. WHO 2019, p. 31). In contrast, the most common illnesses causing death among Austrians were malignant tumors (13.8 % of all deaths) and cardiovascular diseases (10.8 % of all deaths) in the year 2017 (cf. Federal Ministry of Labour, Social Affairs, Health and Consumer Protection 2019, p. 5). The majority of these diseases among men is caused by tobacco use and alcohol consumption but also underuse of health services and a lack of frequent visits of a physician. Insufficient physical activity and obesity leads to the fact that women are more vulnerable to some NCDs (e.g. diabetes) (ibid.). Moreover, there are different areas of health services which experience a lack of proper assistance, not meeting the needs of patients and thus causing illness.

Hypertension control is rated second worldwide among illnesses which have an unmet need of essential health service (cf. WHO 2019, p. 47). The illness can also be caused by poor sleep (cf. Amann-Jenison 2015, p. 23).

Health consciousness

Health is a crucial topic, especially in German-speaking countries. The US, Switzerland and Germany show the highest investments in health measured by proportion of GDP in 2018.

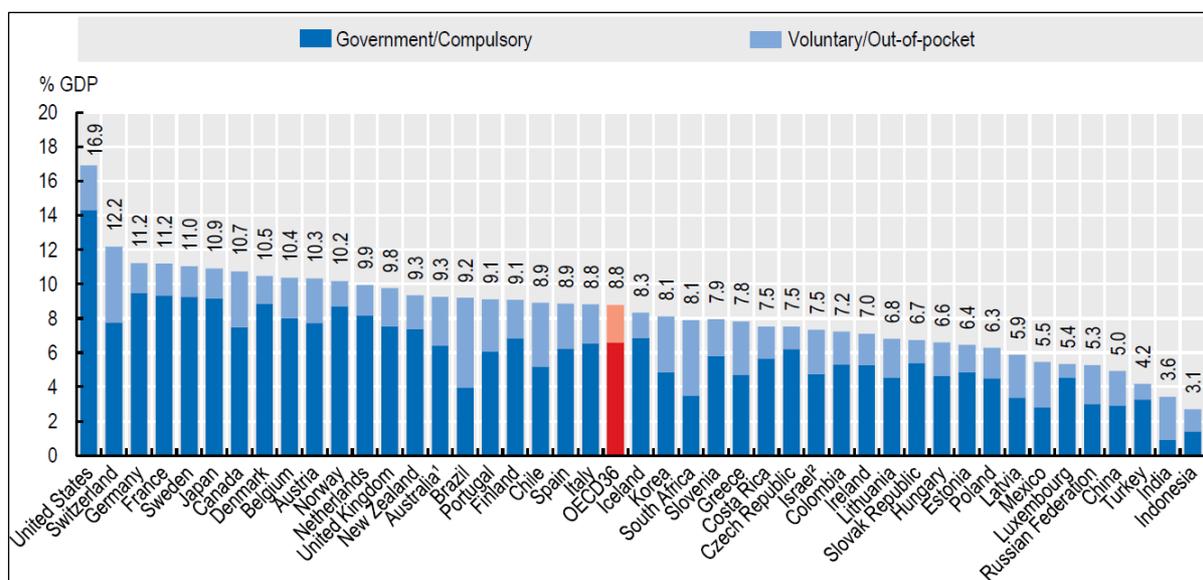


Figure 10: Investment ratio in health, measured by proportion of GDP (OECD 2019, p. 153)

The amount of health-conscious Germans has been rising in the past 4 years, accumulating for 20.6 million who consider themselves “very health-conscious” (more than 25 % of the overall population), 8.7 million people who are oriented towards sustainability and 4.9 million who describe themselves very health-conscious and sustainable (cf. Sommer 2018, p. 38). Moreover, Sommer (2018, p. 32) reports that health consciousness is rising proportionally to age, persisting to his findings in a market research based on interests related to advertisements which reveals that 25 % of people aged between 20 and 49 actively care for their health, almost 33 % of people aged 50 to 69 and 41 % of people aged 70 and older.

“Best agers”

In accordance with the findings of Moschis; Friend (2008), Innofact market research institute shows that “best agers” inhere particular potential for healthcare products; not just in the US but also in Germany. 48.5 % of mature consumers (aged 50 to 70 years) have a propensity to invest in beauty and health such as surgeries, homeopathic treatment, supplements or health programs, whereas the most popular sectors occupy journeys and holidays, accounting for 81 % of the investigated mature population (cf. Innofact Marktforschungsinstitut 2018). A research conducted by WIdO shows that people over 60 years strive towards a health-promoting behavior and lifestyle more than young people do, which becomes visible in 77 % of interviewees who confirmed this (cf. Günster et al. 2019, p. 35) (figure 11).

Moreover, dementia is one of the most common diseases the mature population suffers from, which is always linked to sleep disorders (cf. Frohnhofen 2018, p. 227).

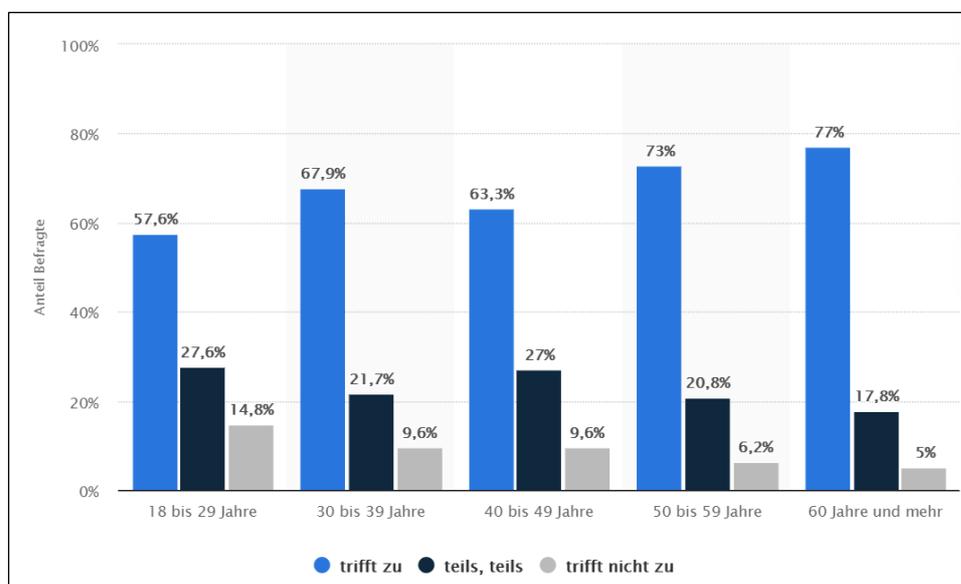


Figure 11: Illness-preventive behavior among different age groups. Statista based on Günster et al. 2019, p. 35.

In this context, the **intake of benzodiazepines** is also worth mentioning. In spite of risking side effects, for instance fatigue, dependence, confusion or dizziness, older populations are often prescribed benzodiazepines for sleep disorders or anxiety (cf. OECD 2019, p. 226).

Apparently, people who take benzodiazepines suffer from sleep disorders and may inhere great potential as a target market for sleep-promoting goods. These findings could be used for market development in countries such as Iceland, Ireland, Portugal, Spain, Slovenia or Estonia where elderly people show a particular tendency towards intake of sleep-inducing medication.

Figure 12 shows benzodiazepine use in adults aged 65 and older across OECD countries. Apparently, DACH countries do not feature benzodiazepines abuse.

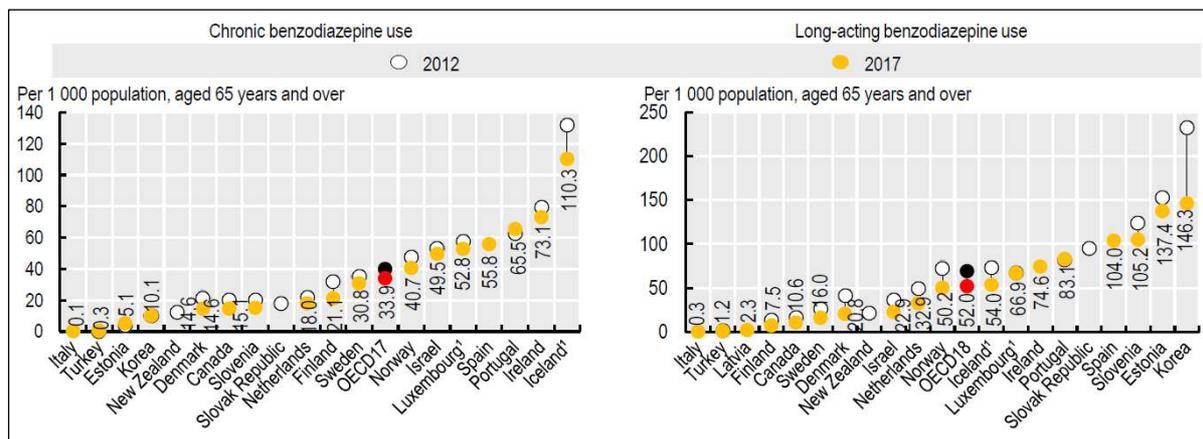


Figure 12: Trends in benzodiazepine use among adults aged 65 and above, 2012-2017 (or most recent years) (OECD 2019, p. 227).

LOHAS

LOHAS¹⁹ are particularly sensitive towards health, nature and sustainability. Hence, they may be of particular interest for the research object. A recent report comparing LOHAS and the overall population of Germany, which was published by statista on behalf of ifD Allensbach (cf. Statista 2019, p. 9) serves as a proof.

¹⁹ Acronym for “Lifestyle of health and sustainability”; a term which describes people geared to a healthy and sustainable way of life

Pertaining to socio-demographic characteristics of LOHAS, ifD Allensbach found the major part of LOHAS to be married (56.5 %) or single (24.1 %), above 70 years (22.2 %) or between 50 and 59 years (21.9 %) (cf. Statista 2019, p. 3f). Besides, the report indicates that 64 % are female and 35.9 % male (Statista 2019, p. 2).

LOHAS lend countenance to the following life values:

Values	LOHAS	German population
Tight and long-standing relationships	93.7 %	63.8 %
Love of nature	89.9 %	40.9 %
Examination of the deeper sense in life	72.5 %	24.5 %

Table 3: Value orientation of LOHAS in Germany. Own elaboration based on Statista 2019, p. 9.

Aforementioned characteristics of LOHAS in Germany are in large part concordant with their areas of interest, as illustrated in the report, for instance healthy nutrition and lifestyle, nature and environmental protection, yet also journeys and holidays:

Area of interest	LOHAS	German population
Healthy nutrition, healthy lifestyle	97.5 %	82.4 %
Nature and environmental protection	94.8 %	73.3 %
Journeys and holidays	92 %	84.1 %
Music	91.9 %	84.5 %
Medical topics	91.1 %	72.6 %
Interpersonal relations, humanity, psychology	90.9 %	68.6 %
Books	86.6 %	64 %
Living and furniture	86 %	72.2 %
Cooking, recipes	85.9 %	69.7 %

Table 4: Areas of interest of LOHAS in Germany. Own elaboration based on Statista 2019, p. 18.

In this context, nutritional habits of LOHAS in Germany are also worth mentioning.

51 % of LOHAS (compared to 24.1 % of the whole population) point out that they attach high value to their nutrition due to health-related reasons, accompanied by 23.7 % (8.6 % of the whole population) who endorse a vegetarian lifestyle and do without meat (cf. Statista 2019, p. 11).

Open rates of e-mails in the DACH region, which serve as an indicator for thematic relevance for the German-speaking countries, reveal that health & medicine only occupies the fourth last topic relevant for **users**, with an open rate of 21.9 % (compared to leading topics such as arts & culture accounting for 47.5 % or insurances with 38 %) (cf. Inxmail 2019, p. 16).

Comparison studies have reported contradictory findings: an investigation which has been conducted by Marketagent on behalf of the insurance firm “Generali” suggests that 52.3 % of Austrians aged 20 to 60 years assess health as “very important” and 43,1 % as “relatively important” (cf. Generali 2019, p. 2).

Austrians see “health” as the most important factor for happiness; 85 % of the population underscore that health is a precondition for feeling happy and for leading a prosperous life, followed by “recovery from illness”, “humor” and “pain relief” (e.g. back pain). (cf. Schwabl 2018c, p. 37)

The eHealth Report Germany delivers valuable consumer insight, demonstrating that more than 50 % of online users worldwide would like to do more for their health, segmenting countries into four different consumer groups based on their efforts put in health preservation: “health enthusiasts” are China, India, Turkey, US, South Africa, Indonesia, Mexico, Canada or Nigeria, “health satisfied” are Austria, Germany, Finland, Sweden, Colombia and Spain, “health aware” are Russia, Poland, Marocco, Brazil or Argentina and “health uninvolved” are France, UK, Australia, Italy, Netherlands, South Korea and Japan (cf. Becker 2018, p. 60) (figure 13).

- Using these countries as target audiences, steering the demand might look differently: whereas in “health aware” countries there might be a latent demand calling for development marketing, in “health uninvolved” areas, poor demand could only be met with stimulation marketing or conversion marketing.

However, targeting such countries can be jeopardizing for the company due to several causes:

- 1) although showing high interest, some of these “health enthusiasts” are developing countries which are not able to pay for the research object’s highly priced products
- 2) micro-environments (especially consumer needs) differ among countries, which makes targeting difficult
- 3) varying macro-environments (political-legal, cultural, economic and ecological circumstances) inhere risk of failing

Thus, drawing a concrete picture of the global environment is essential before it has been decided to go abroad and moving further in the international marketing management process.

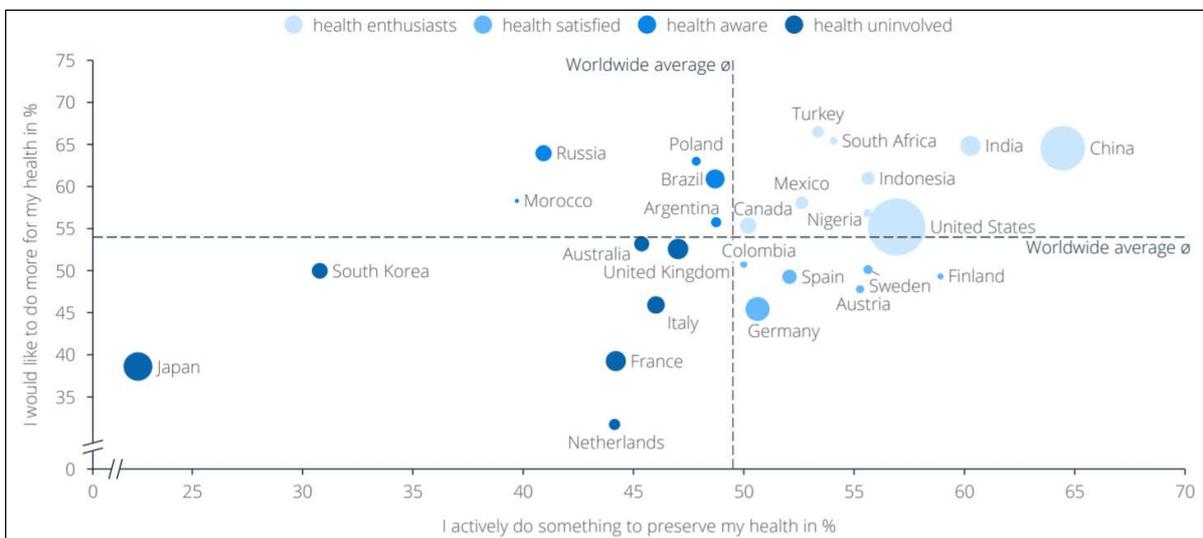


Figure 13: Global comparison of attitudes towards personal health behavior. (Becker 2018, p. 60).

6.1.3.3.2 Sleep health consumer market

Sleep disorders are manifold, of which the most common ones are symptoms of neurological illnesses such as the Restless Legs Syndrome (RLS), REM (“rapid-eye-movement”) sleep-behavioral disorder (RBD), obstructive sleep apnea syndrome (OSAS) and in particular insomnia (cf. Oertel; Riemann; Pollmächer 2014, p. 7).

Insomnia is the most-widely spread sleep disorder in industrialized countries (cf. Sateia et al. 2000 p. 1), affecting 9 % of employed persons (cf. Walker 2018, p. 328) and 30 % of the overall adult population (cf. Roth 2007, p. 7).

Insomnia

Roth (2007, p. 7) refers to demographic characteristics of patients who are confronted with insomnia and indicates that age and gender “are the most clearly identified (...) risk factors”. Insomnia is particularly prevalent in women and elderly adults. The consequence is a reduction in mental or physical performance along the day (cf. Walker 2018, p. 327).

According to (cf. Sateia et al. 2000, p. 2), clear **symptoms** of insomnia are:

- difficulty in falling asleep
- difficulty maintaining sleep
- insufficient total sleep time (involuntary)
- poor quality of sleep
- waking up too early

Walker (2018, p. 327) specifies that for the diagnosis with insomnia, symptoms must:

- last three months
- occur three times a week
- be independent of mental or physical suffering

RLS, RBD & dementia

RLS has gained popularity since 1990 and nowadays affects 3 % of the overall population waiting for proper treatment (unsaturated market) (cf. Oertel; Riemann; Pollmächer 2014, p. 7). It comes with problems to a patients' lower limbs, sleep disorders, immense urge to move and often correlates with a high blood pressure. Interestingly enough.

80 % of patients suffering from RBD will be affected at the same time by Parkinson or dementia in ten to 20 years (ibid).

The German Alzheimer Society proves that almost 10 % of people aged 65 and older suffer from **dementia** (cf. Bickel 2018, p. 1), whereas the disease is diagnosed more often in women and increases with advanced age (cf. Alzheimer Europe 2013) (see table 5).

Age group	Prevalence rate based on EuroCoDe (%)		
	Male	Female	Total
65-69	1.79	1.43	1.60
70-74	3.23	3.74	3.50
80-84	14.35	16.39	15.60
85-89	20.85	28.35	26.11
90 and older	29.18	44.17	40.95
65 and older	7.16	10.95	9.99

Table 5: Prevalence of dementia in Europe. Own elaboration based on Alzheimer Europe 2013; Bickel 2018.

Within the European boundaries, Germany recorded the third most patients suffering from dementia in 2019, followed by Austria on the 9th and Switzerland on the 12th place (see figure 14). Until 2050, dementia will have increased by almost 15 % on OECD average. (cf. OECD 2019, p. 225)

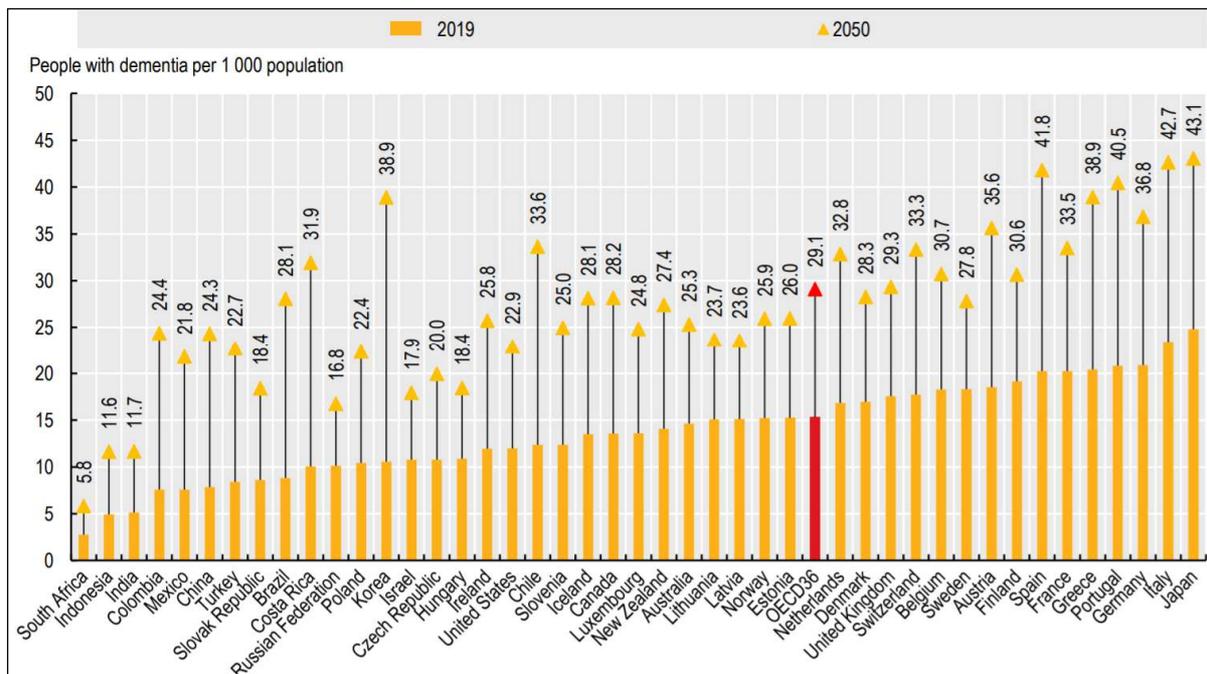


Figure 14: OECD analysis on dementia prevalence. (OECD 2019, p. 225)

OSAS

OSAS is mostly connected to a cardio- and cerebrovascular illness (e.g. stroke) with initial signs such as breathing disorders while asleep; therefore, treating corresponding sleep disorders

from an early stage can reduce the progression of neurological illnesses, cardio- and cerebrovascular secondary disease (cf. Oertel; Riemann; Pollmächer 2014, p. 7).

Furthermore, sleep disorders can be symptoms of psychiatric illnesses along with problems falling asleep, sleep disturbances or daytime sleepiness. 10 % of the world population is affected by chronic insomnia related to falling asleep and/or to maintain sleep during the night, which impacts physical and mental performance along the day (cf. Roth 2007, p. 7) and can be an initial sign for depression (see chapter 6.1.3.3.3).

The situation of sleep behavior of the **Austrian population** was last studied by Blume et al. (2019) and by Zeitlhofer et al. (2010). Former is going to serve as the fundamental basis for the description of Austria's sleep health market, being the latest survey on Austria's sleep patterns (cf. Blume et al. 2019, p. 1). Blume et al. did an online survey on 986 participants (mean age 40.9 years) between March 2019 and May 2019, which they called "How does Austria sleep?" (2019, p. 1). The study, which was realized via a "validated self-report questionnaire" (based on Pittsburgh Sleep Quality Index, PSQI) reveals that 46 % of the respondents feature current sleep problems; these findings compare favorably with the results of a poll conducted by the Medical University of Austria in 2018, which reveals that 30 % of Austrian interviewees complained about sleep problems, showing an increase of 24 % compared with corresponding data gathered in 2007 (cf. MedUni Wien 2018). 86 % of them reported to face sleep problems over a period lasting more than six months and 37 % who are affected by sleep disturbances for more than five years (ibid.). When they were about to assess their own sleep quality, choosing from a four-step scale from "very good", "good", "poor" or "very poor", only 31 % considered themselves "good sleepers", whereas 40 % reported to have a (very) poor sleep (cf. Blume et al. 2019, p. 3). Self-reported sleep problems accumulated with increasing age and affected particularly women aged 60 and older (see figure 15). They mainly comprised early awakenings (53 %), problems maintaining sleep (32 %) and struggles falling asleep (50 %) (ibid.). 11 % were implementing sleep medication and about 6 % have already tried sleeping pills or something similar.

In tally with this data, MedUni Wien (2018) came to the conclusion that just 16 % of people with sleep disorders have made use of medical assistance yet; however, the authors also suggest that in many cases, "light" sleep aids or alternative medicine (e.g. valerian) could already help mitigate symptoms (cf. MedUni Wien 2018).

Assumed reasons for sleep disorders are perceived stress levels which are on the rise (caused by social or work life), irregular sleep-wake cycles and the use of electronic devices before going to sleep; MedUni Wien additionally mentions the chronobiological rhythm as another potential cause of sleep disorders (2018). Researchers conclude that accurate treatment options were either not available or ineffective (Blume et al. 2019, p. 1).

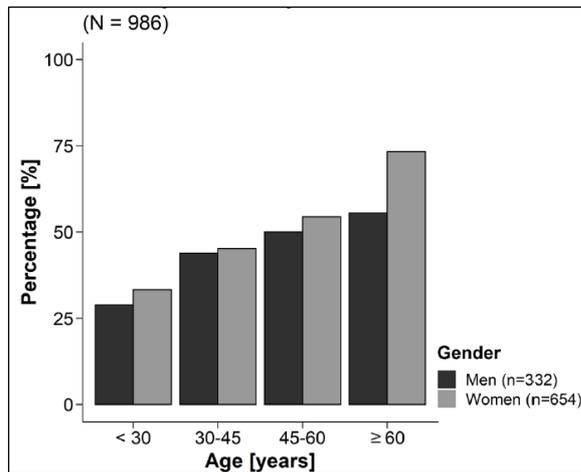


Figure 15: Self-reported sleep problems observed in the Austrian population. (Blume et al. 2019, p. 4)

The insurance provider BARMER did a survey on 3.9 million employed individuals in **Germany** (Grobe; Gerr; Steinmann 2019, p. 9), which was later complemented by an online survey on sleep health with 4,000 participants living in private households, aged between 14 and 75 years. Data shows that sleep disturbances are often not documented in medical health examinations and might even not be evaluated as such from individuals, despite being prevalent. Therefore, these 6.9 % of study participants who were officially diagnosed with sleep disorders might actually be more extensive than it is assessed in the report. Similar to the situation in Austria, women are 1.5 times more affected by sleep disturbances than men and sleep disorders are more frequent in mature populations (cf. Grobe; Gerr; Steinmann 2019, p. 13 f.). The survey reveals that sleep disorders correlate with specific fields of work; thus, shift workers and unemployed people seem to be faced more often with difficulties falling asleep or maintaining sleep (cf. Grobe; Gerr; Steinmann 2019, p. 18). The main cause for inability to work were related to musculoskeletal diseases (e.g. back pain) (21.4 %), directly followed by mental problems (19.0 %) and physical problems regarding breathing (14.9 %) and injuries (12.0 %) (see figure 16). Types of diseases and their spreading among different age groups and gender, which tend to increase with age, are presented in figure 17.

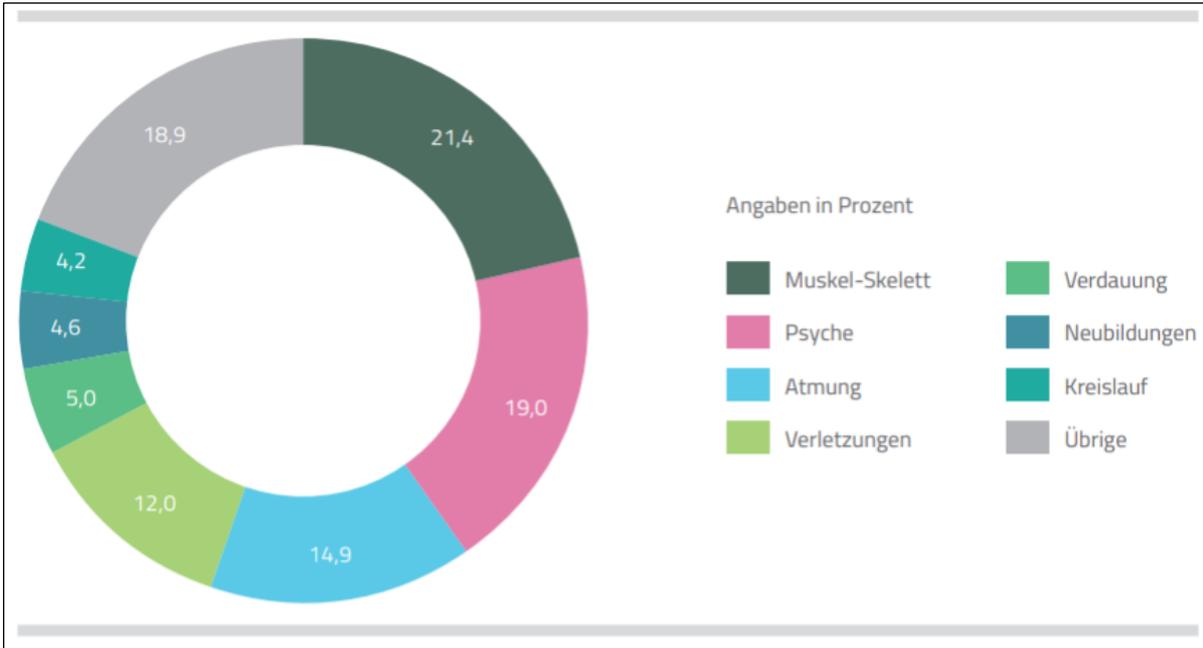


Figure 16: Proportional distribution of causes for inability to work of German employees. (Grobe; Gerr; Steinmann 2019, p. 57)

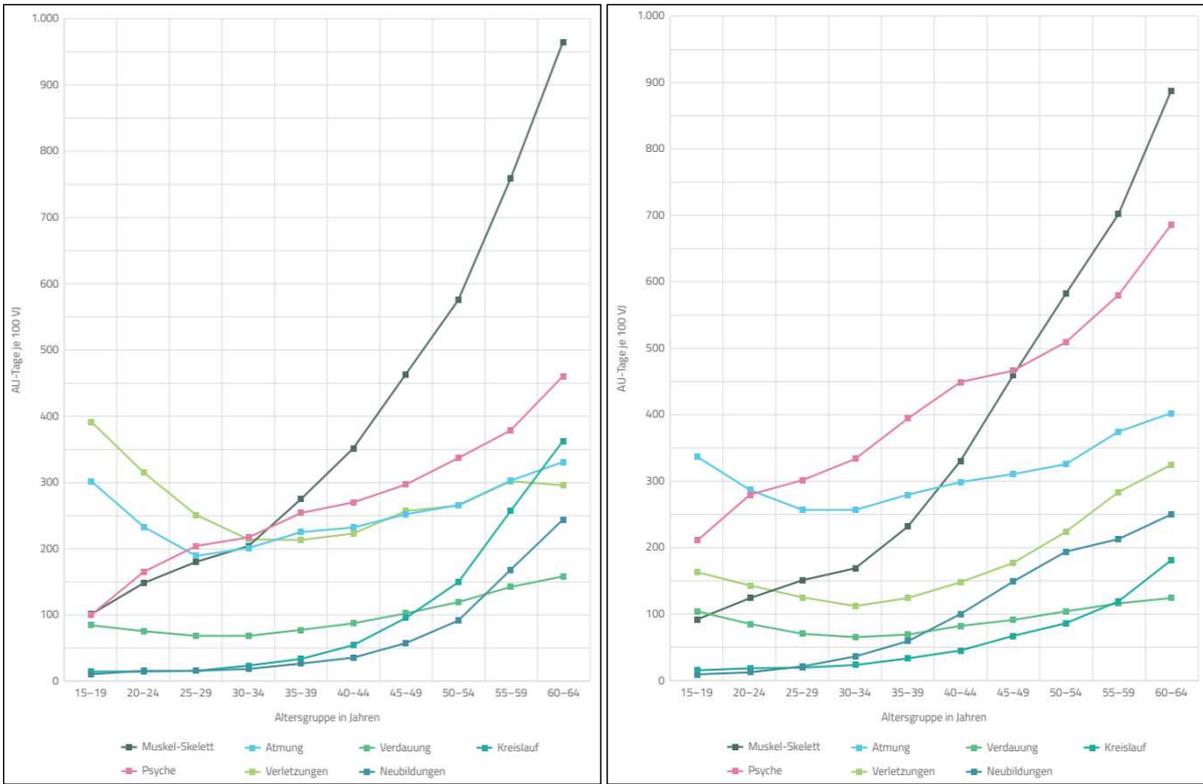


Figure 17: Inability to work of German employees in accordance with type of illness, age and gender: male (left) and female (right). (Grobe; Gerr; Steinmann 2019, p. 66f)

The importance of sleep for mental health in particular and for prevention of depression, which is the primary cause for mental illness, is thoroughly presented in chapter 6.1.3.3.3.

BARMER assumes that many accidents at work (injuries) to be induced by mental problems which often – unjustly – do not lead to sick leaves (cf. Grobe; Gerr; Steinmann 2019, p. 64); therefore, sleep quality might also help reduce inability to work and is of great significance for those societal groups with a high absence rate.

Concerning prevalence rates in Western industrialized countries, BARMER states that approximately 10 % of adults would suffer from chronic insomnia (cf. Grobe; Gerr; Steinmann 2019, p. 95), whereas 1.6 % of the employed population in Germany was officially diagnosed with insomnia in a narrow sense²⁰ (cf. Grobe; Gerr; Steinmann 2019, p. 99), 3.8 % in a broad sense²¹ and 6.0 % in total²² (Grobe; Gerr; Steinmann 2019, p. 103) in the year 2017.

Despite being prevalent, not all cases of insomnia are actually diagnosed by a health expert or physician. This is due to the fact that sleep disorders' symptoms such as a decrease in sleep efficiency or daily performance might remain unnoticed for a long time (cf. Grobe; Gerr; Steinmann 2019, p. 98). Moreover, the consequences of sleep disorders are still underestimated, which might impede people from feeling a necessity for professional health consultancy.

Thus, the investigation results of BARMER shall be regarded with reservation, since unregistered events can be expected.

From 2005 to 2017, diagnosed sleep disorders in a narrow sense have increased by 111 % and those in a broad sense by 71 %.

Concerning regional differences, Berlin and Saarland were featured with the highest prevalence rates of diagnosed sleep disorders among employed people and show the highest growth rates of people facing sleep problems from 2015 to 2017 (see table 6).

²⁰ Definition based on ICD-10 "Classification of Diseases" (WHO) with diagnostic keys F51.0 (non-organic sleep disorders, e.g. mental and behavioral disorder) and G47.0 (difficulties falling asleep and problems maintaining sleep) (cf. Grobe; Gerr; Steinmann 2019, p. 97-99). See appendix for actual and additional diagnostic keys used by German insurance providers, which clearly define insomnia.

²¹ Definition based on ICD-10 classification with diagnostic keys F51.0, G47.0, F51.9 (non-organic sleep disorders, not specified) and G47.9 (difficulties falling asleep and problems maintaining sleep, not specified), often used in the ambulatory environment for cautious diagnoses. (cf. Grobe; Gerr; Steinmann 2019, p. 102f)

²² Also includes minor sub-categories of sleep disorders, among which sleep apnoea is the most diagnosed sleep disorder. (cf. Grobe; Gerr; Steinmann 2019, p. 102f)

Region	Prevalence rate of diagnosis in a narrow sense	Prevalence rate of diagnosis in a broad sense	Growth rate of diagnosis in a narrow sense	Growth rate of diagnosis in a broad sense
Berlin	19.9 %	44.4 %	+ 20.4 %	+ 16.1 %
Bremen	19.1 %	42.6 %	+18 %	+ 11.3 %
Saarland	20.1 %	42.6 %	+ 23.8 %	+ 11.4 %
Bayern	19.5 %	41.3 %	+ 20.4 %	+ 7.9 %

Table 6: Prevalence and growth rates of diagnosed sleep disorders in Germany. Region-based results. Own elaboration based on Grobe; Gerr; Steinmann 2019, p. 112-115.

Affected job fields

In 2017, the insurance firm investigated prevalence rates of diagnosed sleep disorders (in a narrow sense) in diverse fields of work and found heavy variations among 7,000 employed people who participated in the survey (cf. Grobe; Gerr; Steinmann 2019, p. 144). The investigation reveals that the most affected jobs in sequence are bus and tram drivers, machine and plant operators, property and personal protection and dialogue marketing (mainly call center); the reasons are assumed behind shift working and particular health burden occurring in the fields of work (cf. Grobe; Gerr; Steinmann 2019, p. 149). Diagnosed sleep disorders were more seldom among people with an academic degree (cf. Grobe; Gerr; Steinmann 2019, p. 153).

In 2018, BARMER did a panel-online poll with 4,000 respondents, which demonstrates that 26.0 % (22 % male, 30 % female) of employed people were struggling with a sleep disorder, whereas only 45 % of them agreed to let their sleep disorders be observed by a physician (cf. Grobe; Gerr; Steinmann 2019, p. 104).

This inheres great potential for non-medical sleep solutions, since the psychological barrier to consult an alternative health expert is usually lower. Moreover, the poll demonstrates that older people are affected by sleep disorders more often than the youth, whereas housewives and housemen show a higher tendency than employed people (cf. Grobe; Gerr; Steinmann 2019, cf. 107).

“Studie zur Gesundheit Erwachsener in Deutschland (DEGS)” (Robert Koch-Institut)

From 2008 to 2011, the Robert Koch-Institut did a study on the health of grown-ups in Germany, called “Studie zur Gesundheit Erwachsener in Deutschland (DEGS)”. This project

comprises polls, investigations and tests, which evaluate sleep behavior and sleep quality based on the Pittsburgh Sleep Quality Index (PSQI) of more than 8,000 adults aged 18 to 79 years (cf. Schlack et al. 2013, p. 740). It indicates that 5.7 % show prevalence for insomnia syndrome²³ of which the majority has a low socioeconomic status (mainly female), is living in Western Germany (mainly male) and takes prescribed or non-prescription sleeping pills (cf. Schlack et al. 2013, p. 742, p. 744). However, 11.1 % of respondents state that they suffer from difficulties falling asleep at least three times a week; this was mainly the case in women aged 60 and above. Almost 25.0 % claim to be struggling with problems maintaining sleep at least three times a week, which is discovered more in men than women (cf. Schlack et al. 2013, p. 742f). The study sheds light on gender, age and social status too: women show a significantly higher tendency than men to be affected by insomnia, people (especially women) of low income have a 3.5 higher risk than high-income earners and citizens of Western Germany were the ones featuring the highest prevalence rate (cf. Schlack et al. 2013, p. 745).

“TK Schlafstudie” (Techniker Krankenkasse)

Another sleep study on German sleep behavior was conducted by health insurance firm “Techniker Krankenkasse” in the year 2017, which they called “TK Schlafstudie”. It suggests that 34 % of people living in Germany cope with mediocre or unsatisfactory sleep; interestingly enough, singles feature a healthier sleep pattern than people who share their bed with a partner (cf. Wohlers; Hombrecher 2017, p. 15). Unlike before-mentioned studies, the authors found that the younger the people, the more likely they are to deal with unsatisfactory sleep: 42 % of people below the age of 30 and 73 % of seniors aged 70 and more report to be satisfied and thus experience a regenerative sleep (cf. Wohlers; Hombrecher 2017, p. 16). On average, 60 % feel well rested in the morning (ibid.), whereas 24 % have problems with maintaining sleep and 13 % complain about difficulties falling asleep²⁴; in each case, women were more inclined towards sleep disorders than men (cf. Wohlers; Hombrecher 2017, p. 17).

6.1.3.3.3 Mental health consumer market

A human’s sleep-wake cycle, steered by the central nervous system, is a behavioral pattern of high complexity. It is one of the interdisciplinary topics affected by neurology, psychiatry and psychology (cf. Oertel; Riemann; Pollmächer 2014, p. 7). Mental health and sleep impact each

²³ Definition in accordance with ICD-10 “Classification of Diseases, 10th Revision” (WHO): in order to be diagnosed with “insomnia”, sleep disorders and thus bad sleep quality have to remain at least over a period of four weeks, which comes with unpleasant symptoms such as daytime fatigue.

²⁴ This means to involuntarily remain awake for at least 30 minutes before she/he has fallen asleep.

other bidirectionally: psychiatric diseases often become visible in symptoms such as sleep disorders, and sleep can be an “independent risk factor” for mental diseases. Thus, sleep is essential for therapeutic success (cf. Göder et al. 2017, p. 320).

40 % of adults suffering from insomnia are at the same time affected by a diagnosable psychiatric disorder, mainly depression (cf. Roth 2007, p. 9). BARMER found that approximately 30 % of patients diagnosed with sleep disorders were also diagnosed with depression (cf. Grobe; Gerr; Steinmann 2019, p. 184).

Mental illnesses have evolved into common illnesses, not only affecting individuals but whole populations; this renders visible in 28 % of the worldwide population dealing at least with one form of mental illness in the year 2016 (cf. Göder et al. 2017, p. 320). General symptoms can be anxiety, the feeling of inner emptiness, hopelessness, loss of control but also disoriented mental states along the night, early awakening, reduced need for sleep (ibid.).

A measuring tool which is applied often in order to track biological processes is the electroencephalogram (EEG). This method allows health experts to gain valuable insights into the current state and changes of health conditions on a pathophysiological basis through sleep tracking (cf. Göder et al. 2017, p. 3). Insomnia (difficulty to fall asleep or maintain asleep during the night, waking up early) almost always correlates with mental illness, especially in people who suffer from depression, anxiety or schizophrenia (cf. Göder et al. 2017, p. 321).

A research of Baglioni et al. (2011) proves that people with insomnia face a twofold higher risk developing depression, in comparison to those with no sleep difficulties.

According to WHO, common mental disorders to a large part comprise diagnostic categories such as depressive disorders and anxiety disorders (cf. WHO 2017, p. 5). Depressive disorders can be characterized by symptoms like “depressed mood, loss of interest and enjoyment, and decreased energy” (WHO 2017, p. 7). At a global level, WHO estimates over 300 million people to be affected by depression which accumulates to 4.4 % of the world population (ibid.), showing a growth rate of 18.4 % between 2005 and 2015 (cf. Vos et al. 2016, p. 1568). Regions which are considered to be most affected are South-East Asia and Western Pacific (cf. WHO 2017, p. 8).

With regard to German-speaking countries, there is modest variation of inter-country prevalence: Austria has recorded 5.1 % of the total population to be affected by depressive disorders, Germany 5.2 % and Switzerland 5.0 % (cf. Global Health Data Exchange 2015).

An investigation of the European Commission scrutinized the **number of psychiatrists** in 2016 (cf. European Commission 2018). Since the influence of sleep on mental health accounts for 100 % (cf. Amann-Jennson 2018), findings about the availability of psychiatrists across countries might be understood as an indicator for the demand of mental curing. Hence, the following findings of the European Commission point out the potential for sleep-enhancing solutions in different countries with Switzerland, Liechtenstein and Germany on the leading edge (figure 18).

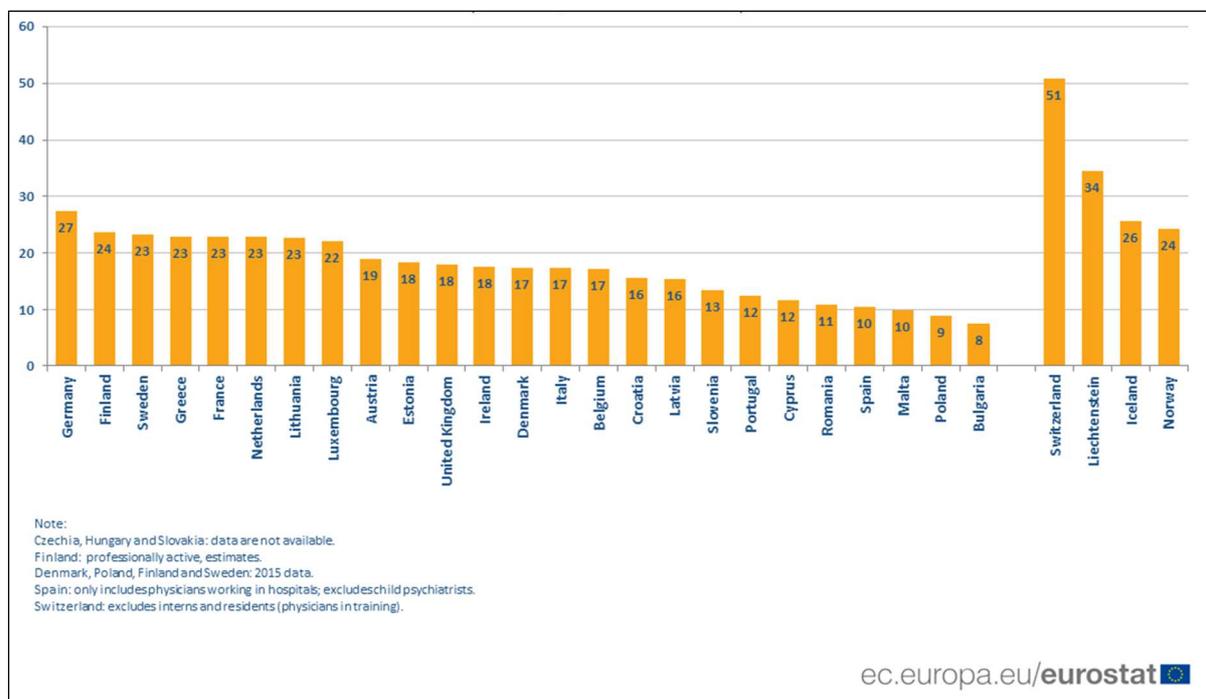


Figure 18: Number of psychiatrists per 100,000 inhabitants in 2016 (European Commission 2018).

The market agency “spectra” found that 10 % of Austria’s male and 16 % of Austria’s female citizens have already suffered from depression or depressive episodes before; the majority of affected people is aged over 30 years (cf. Spectra Marktforschungsgesellschaft 2018, p. 2). In addition, the corresponding research shows that 44 % of respondents turn to their family doctor for mental issues, 19 % to family members, 9 % to psychiatrists and 8 % to psychotherapists or psychologists. Concerning method of treatment, 20 % of the respondents reckon that medication (antidepressants) would help them, 21 % favor psychotherapy and only

10 % believe in alternative remedies or natural products (cf. Spectra Marktforschungsgesellschaft 2018, p. 5). Still, 11.8 % state that they think a combination of psychotherapy and homeopathic remedies would be accurate (ibid.).

In Germany, the cases of burn-out have risen from 3.1 AOK members (2009) to 5.7 out of 1,000 (2018) (cf. Badura et al. 2019, p. 470) (see figure 19).

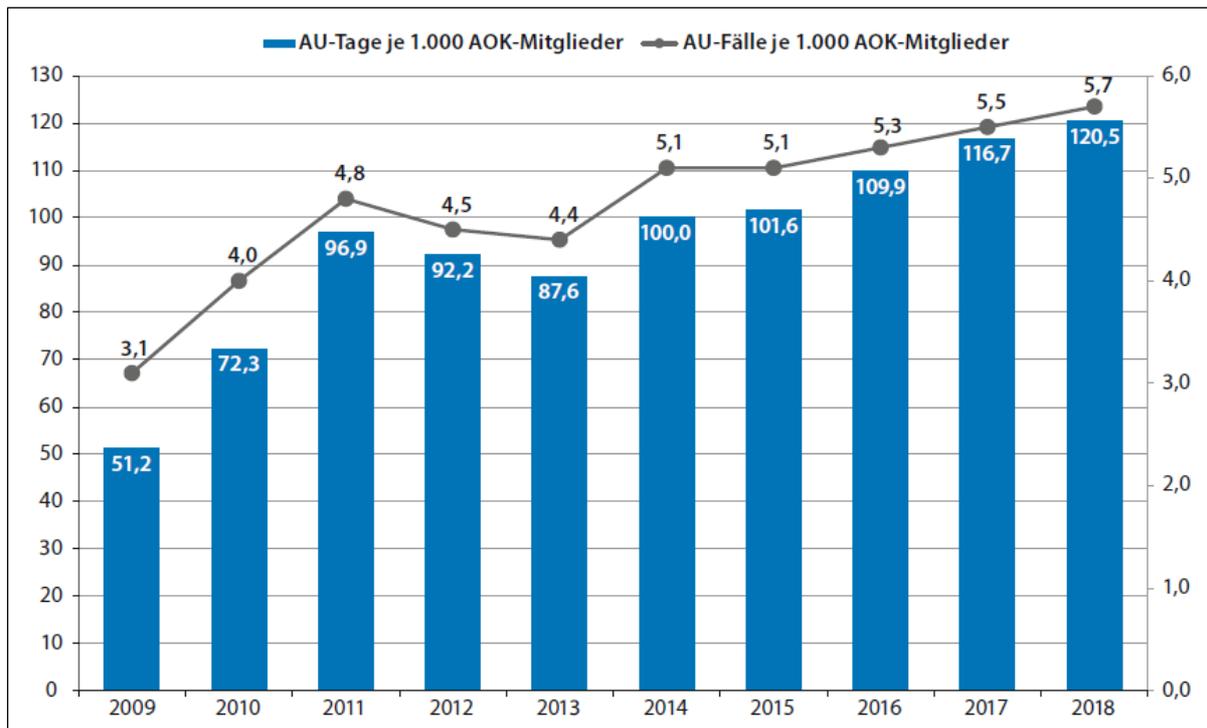


Figure 19: Prevalence rate of inability to work due to burn-out disease in Germany (Badura et al. 2019, p. 470).

6.1.4 Bedroom-furniture market

In the following chapters, industry specifics of beds and mattresses are going to be shortly analyzed. These numbers and figures about the bedroom-furniture industry will be of importance, since the research object's products are likely to be positioned more in the bed market in the future rather than in the healthcare market (how it is currently done). For the sake of a better comparability, US\$ is used.

6.1.4.1 General data

As regards the overall market of bedroom furniture²⁵, IKEA is “the largest furniture company” on a global level with a revenue of over US\$ 45 billion, followed by wayfair (US\$ 6.8 billion),

²⁵ “Bedroom furniture” comprises beds, mattresses, wardrobes and bedside tables.

ASHLEY (US\$ 4.6 billion) and Steelcase (US\$ 3.1 billion) (cf. Oloruntoba 2019, p. 3). In 2018, it was Switzerland (US\$ 312 per capita) and the UK (US\$ 260 per capita), which invested the most in the industry, followed by Norway (US\$ 238 per capita), Denmark (US\$ 215 per capita), Hong Kong (US\$ 204 per capita), Austria (US\$ 192 per capita), Australia (US\$ 184 per capita) and the United States (US\$ 183 per capita) (cf. Oloruntoba 2019, p. 5).

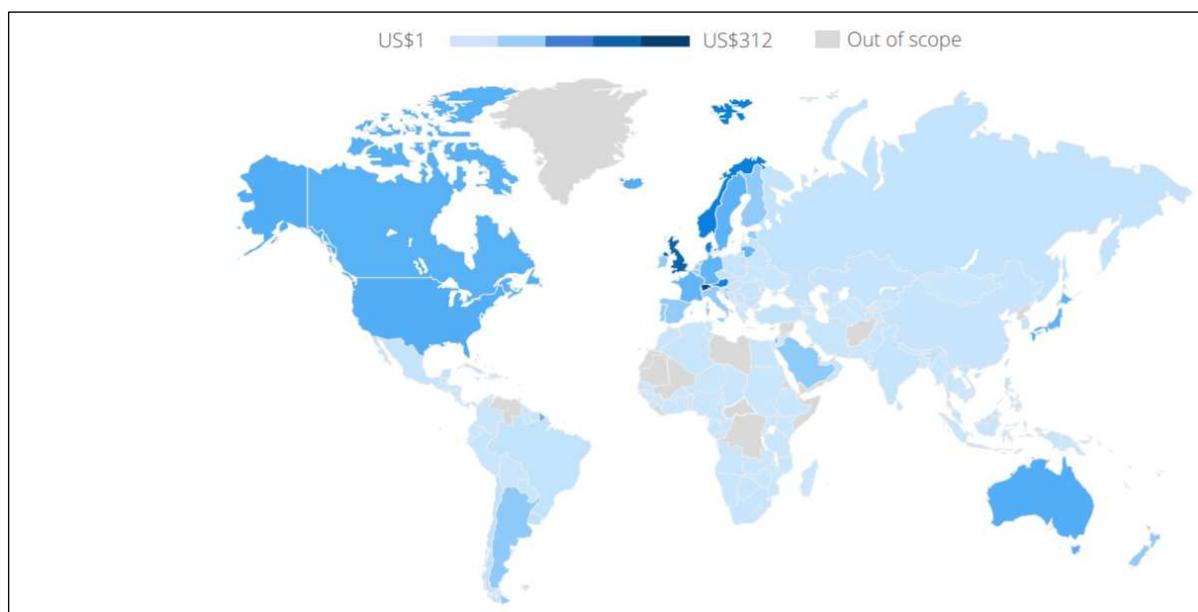


Figure 20: Regional per-capita revenue generated from bedroom furniture in 2018. (Oloruntoba 2019, p. 4)

Bedroom furniture is on the rise, in Europe with a compound annual growth rate (CAGR) of 2.4 % (making up US\$ 76.7 billion in 2018 and US\$ 78.4 billion in 2019), and as well in the US with a CAGR of 0.8 % (accounting for US \$ 59.9 billion in 2018 and US\$ 60.3 in 2019).

However, the share of total market, which the bedroom-furniture industry currently represents, is higher in the US (23.2 %) than in Europe (20.3 %) (cf. Oloruntoba 2019, p. 7). The highest growth rate of the industry is expected in China with a CAGR of 9.1 % and in South-American territory (8.5 %) (cf. Oloruntoba 2019, p. 8).

6.1.4.2 Bed industry

Concerning worldwide data, the bed industry²⁶ accounted for a total revenue of US\$ 112,002 million in 2019, which means a growth rate of 3.4 % over the previous year and an estimated

²⁶ “Bed industry” solely comprises beds, excluding other bed furniture such as mattresses, wardrobes or bedside tables.

CAGR of 3.8 % until 2023 (cf. Statista 2019d, p. 2). Having a look at the “top-5 countries”, the US is estimated to score the first place in the year 2020 with a revenue of US\$ 25,479 million, followed by India (US\$ 18,696 million), Japan (US\$ 9,496 million), China (US\$ 8,090 million) and the UK (US\$ 7,907 million) (cf. Statista 2019d).

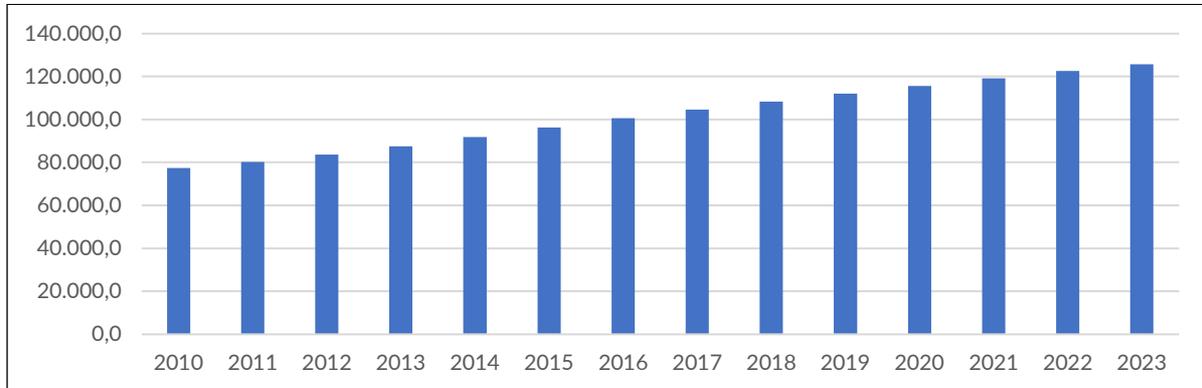


Figure 21: Worldwide revenue in US\$ generated in the bed industry and forecast until 2023. Own elaboration based on Statista 2019d.

In **Germany**, revenue in the bed industry accounted for US\$ 3,702 million in the year 2019, showing a decrease by -2.9 % between 2018 and 2019. Revenue per capita in 2019 was US\$ 44.32 (cf. Statista 2019b, p. 2). Numbers in **Austria** are more prosperous: revenue accumulated for US\$ 898 in 2019 with a growth rate of 1.2 % between 2018 and 2019. Revenue per capita was more than twice as high as in Germany, namely US\$ 100.33 (cf. Statista 2019a, p. 2). Approaching the figures of **Switzerland**, numbers indicate a growth rate of 2.4 % between 2018 and 2019, which represents the highest annual increase among the DACH countries. Revenue generated accumulated for US\$ 1,223, which is equivalent to US\$ 142,400 per capita (cf. Statista 2019c).

Thus, Switzerland has the most prosperous bed industry in the DACH region.

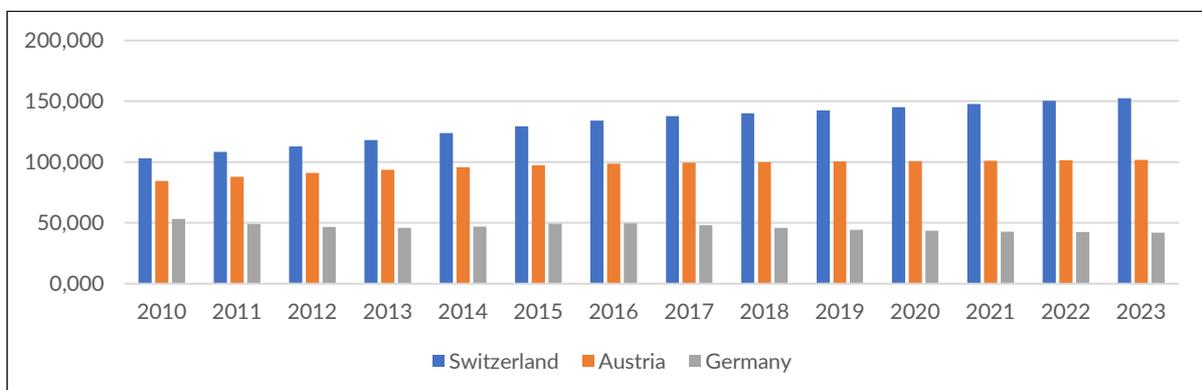


Figure 22: Revenue per capita in US\$ generated in the bed industry and forecast until 2023. International comparison. Own elaboration based on Statista 2019b, 2019a, 2019c.

6.1.4.3 Mattress industry

Shedding a light on worldwide data, the mattress industry²⁷ generated a total revenue of US\$ 78,702 million in 2019, which means an increase by 4.1 % over the previous year and an estimated CAGR of 4.2 % until 2023 (cf. Statista 2019h, p. 2). Concerning the “top-5 countries”, the US is estimated to rank best in the year 2020 with a revenue of US\$ 14,470 million, followed by India (US\$ 11,246 million), China (US\$ 10,526 million), Japan (US\$ 5,232 million) and the UK (US\$ 3,876 million) (cf. Statista 2019h).

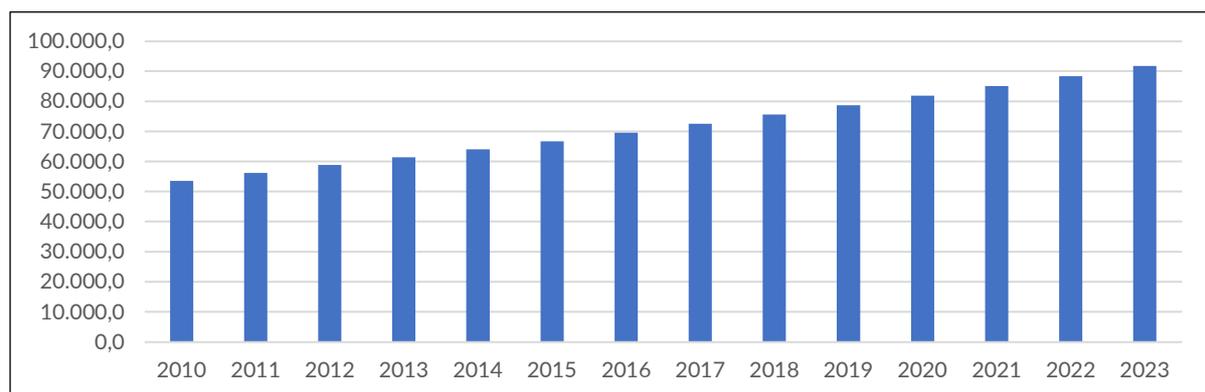


Figure 23: Worldwide revenue in US\$ generated in the mattress industry and forecast until 2023. Own elaboration based on Statista 2019h.

In **Germany**, revenue within the mattress industry accounted for US\$ 2,539 million in the year 2019, which indicates an increase by 1.1 % between 2018 and 2019. Revenue per capita in 2019 was US\$ 30.40 (cf. Statista 2019f, p. 2).

Comparing the data with **Austria**, a revenue of US\$ 365 was generated in 2019 with a growth rate of -1.4 % between 2018 and 2019. Featuring a per-capita revenue of US\$ 40.77, consumption was higher than in Germany (cf. Statista 2019e, p. 2).

In **Switzerland**, data are even more flourishing than in the bed industry: a growth rate of 4.1 % over the year 2019 indicates that Switzerland – again – witnessed the highest increase among DACH countries. Overall revenue generated in the mattress industry was US\$ 732.00, whereas revenue per capita represented US\$ 85.17 per capita (cf. Statista 2019g, p. 2).

The Swiss market for mattresses is more than twice as extensive as in Austria and is almost triple the size of the German mattress market.

²⁷ “Mattress industry” solely comprises mattresses (spring core, foam, latex), excluding other bed furniture such as beds, wardrobes or bedside tables.

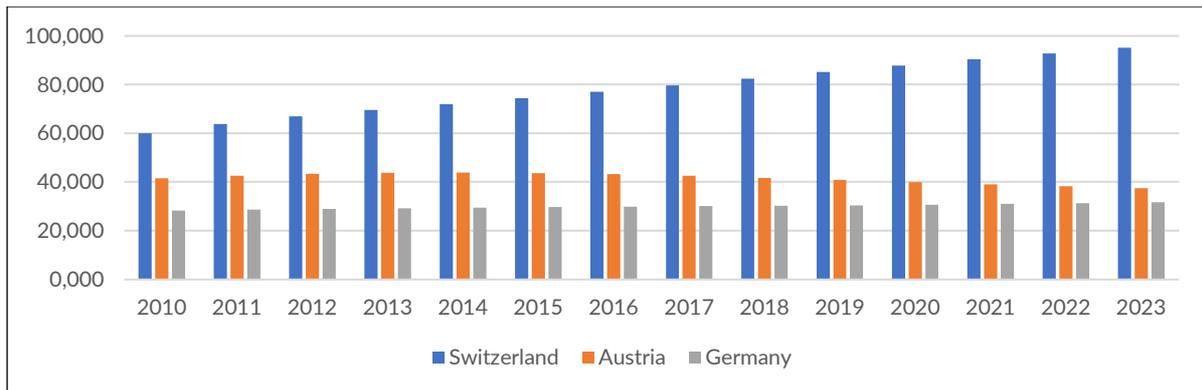


Figure 24: Revenue per capita in US\$ generated in the mattress industry and forecast until 2023. International comparison. Own elaboration based on Statista 2019g, 2019e, 2019f.

6.1.5 Current trends in the healthcare market

Megatrends such as digitization, distrustful consumers, pandemics, proactive consumers' (self-)management and integration of health system are broached in the following chapters, since they have a major impact on the industry and segments.

6.1.5.1 Digitization

Digital transformation has been reaching almost every industrial branch, inclusively the health sector. Despite the fact that this will require a certain degree of adaptation, digital enhancement would not make human assistance obsolete, yet remaining a significant “co-creator” of service quality: “It’s about augmenting human intelligence – not replacing it.” (cf. “Top health industry issues of 2019: The New Health Economy comes of age” 2018, p. 13). An actual report of the PwC Health Research Institute observed current trends in the health industry, concluding that digital therapeutics and connected devices will represent a critical part of the industry during the up-coming years (cf. “Top health industry issues of 2019: The New Health Economy comes of age” 2018, p. 2). 54% of survey participants show interest in FDA²⁸-approved apps or online tools in order to treat their medical condition and 47 % feel comfortable about making use of health services from Google or Microsoft (cf. “Top health industry issues of 2019: The New Health Economy comes of age” 2018, p. 3).

²⁸ An abbreviation for “U.S. Food & Drug Administration”; a regulatory authority of experts for premarket approval ensuring effectiveness and safety of products and drugs related to the diagnosis, tracking or treatment of diseases (cf. FDA 2017)

Connected health services could augment or even replace therapeutic measures. With digital apps or online tools, sharing data between customers and care providers gets much easier, as real-time insights and behavioral changes in a therapeutic setting are trackable. (cf. "Top health industry issues of 2019: The New Health Economy comes of age" 2018, p. 6)

Research reveals that more than 50 % of consumers would be somewhat or very likely to make use of an FDA-approved app or online tool for the sake of treating their medical condition and that 56 % of health consultants are already integrating digital therapies in the treatment or diagnosis of health condition (figure 25).

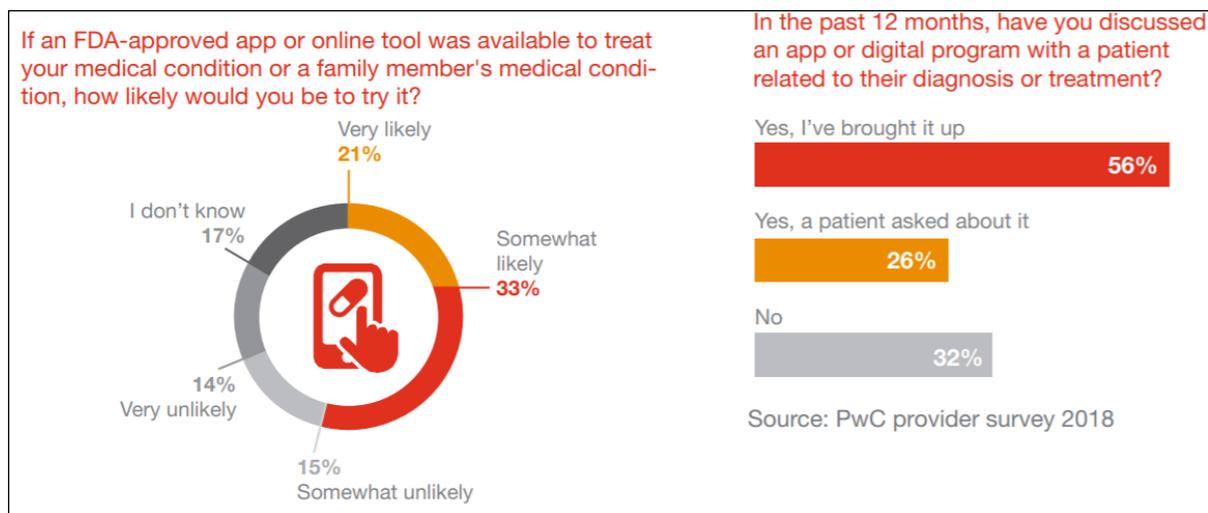


Figure 25: PwC Health Research Institute consumer survey on digitization in treatment. ("Top health industry issues of 2019: The New Health Economy comes of age" 2018, p. 8)

Moreover, **sleep trackers** are common gadgets to record sleep patterns. Popular brands are "Fitbit" or "Garmin" which both are activity monitors worn on the wrist, indicating the heart rate, able to connect wirelessly to the application. Such wearables allow consumers the tracking of sleep time and sleep quality besides step counts, calories burned etc. (cf. Lee et al. 2018, p. 3f). The "Oura Ring" is another smart gadget tracking sleep, wellness and activity, especially focused on nocturnal recovery. Collaborating with such innovative firms would enable the research object to position its sleep products in a modern way while reaching out to the accurate target market.

6.1.5.2 Distrustful consumers and pandemics

Trust is declining in different institutions, which leads to a rise of skepticism in consumer markets who nowadays demand the highest degree of information possible about their

treatment or product choice (cf. PwC Health Research Institute 2018, p. 5). This has an impact on what they are looking for in providers.

One in four global consumers is open towards receiving services in a “non-traditional setting” such as retail, banking or other industries.

Thus, using different channels comes with potential for the future to meet consumers' demands.

Moreover, pandemics and widespread diseases such as influenza, cholera, Ebola and especially COVID-19 will require health systems to enhance their readiness by offering appropriate products and services, while being prepared for logistical challenges.

6.1.5.3 Proactive (self-)management

Allen underlines the importance of shifting away from a “system of sick care” (treatment of patients who already suffer from illnesses) and instead support a system of health which promotes well-being on both physical and mental level, early intervention and prevention (cf. Deloitte Center for Health Solutions 2019, p. 3). Especially aspects not related to the medical system could move people towards a proactive management of their well-being (ibid.), informed by a trend enhancing engagement and empowerment of consumers/patients.

“Consumers are demanding transparency, convenience, access, and personalized products and services – which they get in all other aspects of their life.” (Allen 2019cf. 13)

Owing to rapid digitization, consumers are gaining more insights into their own health information (e.g. through digital tools tailored to their lifestyle) and are no longer passive but actually managing their own health. PwC endorses a proactive approach, since health systems worldwide are noticing an increase in consumer engagement and innovation (cf. PwC Health Research Institute 2018, p. 7). Personalized experiences, affordability, accessibility and appropriate management tools will be necessary to satisfy consumers in the future (cf. Allen 2019, p. 14).

“Virtual-health model”

A digital technology-enabled “virtual health” model is already applied by several companies, to be supported in delivering the right health service via digital technologies “at the right time in the right place, in a connected and coordinated manner” (cf. Allen 2019, p. 19). The concept makes use of telecommunication technologies to offer a connection base for health experts, diverse stakeholders and consumers/patients. Service delivery happens via video visits and online appointments; modern approaches like these foster consumer engagement and consequently customer relationship, clinical outcomes (e.g. by health tracking), information sharing between physicians or other health experts but also among consumers (through a social network), improve efficiency and even reduce costs on the long-term (cf. Allen 2019, p. 17f). For the planning process of such a “virtual health” offer, Allen suggests complying to “strategy, first; technology, second” (2019, p. 18), which ensures investments adhering to short-term goals in the first place, but also considering future scalability as regards technology.

6.1.5.4 Integration of health system

In its annual report, PwC highlights the potential of a mutual learning process in the health industry via trading and connecting of key players (cf. PwC Health Research Institute 2018, p. 5). Illness usually stems from social and contextual factors such as lack of exercise, unhealthy nutrition, poor air quality and bad sleep alike; this means that health-focused companies and activists should work together in order to ensure integrated services from different health disciplines to meet consumer needs faster, more effectively and on each layer of interest.

➤ Example

The health system in Netherlands is characterized by hospitals which focus on patients with complex cases. The rest of patients are assigned to clinical hospitals, regional hospitals, and other treatment centers (e.g. orthopedics, physiotherapists, eye care). Like this, consumers are supplied with the most accurate treatment, competencies are implemented perfectly, and health providers are protected from overcapacity.

6.1.5.5 Discrepancy between cognitive and chronological age

“It’s not how old you are but how you are old.”

(Zniva; Weitzl 2016)

Jolibert et al. (2012, p. 74) highlight that cognitive and thus “felt” age might be more important to consider nowadays for consumer behavior than chronological “real” age, especially in the case of elderly people.

Felt age of a great part of people aged beyond 60 years is ten to 15 years lower than their chronological age (cf. Kohlbacher; Herstatt 2008, p. 107).

Zniva; Weitzl (2016, p. 271) support this view: “Older people think, feel, and act younger than they chronologically are, due to difficulties in adapting their self-perception to changes in later life.” Though limitations concerning the body are felt as an indicator of age, these signs are particularly perceived in other people instead of themselves (ibid.). Product image for mature people is often stigmatizing, which is obviously not well perceived by elderly consumers who actually feel younger (cognitively) as their actual chronological age is.

It is essential that senior-friendly products ideally come with a particular non-stigmatizing and “beautiful” design based on a modern concept not exclusively addressing elderly people: “(...) senior-friendly does not mean senior-specific, but means an aid for seniors and others.” Kohlbacher; Herstatt (2008, p. 107)

Zniva; Weitzl (2016, p. 268) conducted a research on how aging impacts behavior of senior consumers and the influence of such behavioral shifts on marketing efforts. The authors suggest seeing the concept of chronological age as an umbrella term which certainly affects consumer behavior but which is constituted of several ever-changing “age-related [sub] factors” (Zniva; Weitzl 2016, p. 271):

- **biological aging:** shifts as regards the body system such as problems in vision and hearing, chronic diseases etc. influencing how consumers experience products
- **social aging:** role shifts of elderly people while turning older, e.g. becoming grandparents or retirees, thus evolving particular needs for matching products
- **psychological aging:** shifts concerning personality, cognition and the self, which affect consumers’ reactions and responses on marketing activities
- **life circumstances:** historical, environmental events occurring independently from the aging process, despite being tied to cohorts; e.g. baby boomers who are open towards new products, because they were risen in an era shaped by experimentation and novelty

- **life events:** random or “programmed” events, e.g. accidents, natural disasters, which happen at different ages, or empty nest experience, birth of grandchild, or loss of a spouse, which are more likely to occur in retirement

The result supports the initial assumption that chronological age is the most widely spread criteria to determine aging in consumer behavior (cf. Zniva; Weitzl 2016, p. 288). Nonetheless, they point to the “risk to false interpretations” and that it “should be definitely avoided in future research efforts” (Zniva; Weitzl 2016, p. 289). The apparent threat is that a rising chronological age makes consumers perceive communication in varying ways, accompanied by changes concerning both behavior and motivations. As a consequence, the authors highlight that every above-mentioned sub aspect of chronological age must be integrated in consumer studies (cf. Zniva; Weitzl 2016, p. 291).

6.1.6 A glance at case studies

In the following chapter, different case studies of the health-care sector are observed. Shedding a light on best-practice cases, the author is going to elaborate on novel segmentation techniques, more specifically, on their methodology and the findings of the segmentation approach applied. Complementing these insights with market data can deliver accurate answers to the research questions.

6.1.6.1 Motorola’s Radio Products Group: outcome-based segmentation

Motorola is a manufacturer of mobile radios for vehicles. In 1977, it decided to go for growth objectives, due to inconsistencies in customer behavior across resulting segments. The company built on the following “four-step methodology” to access the most attractive market.

6.1.6.1.1 Methodology & findings

This “four-step methodology” is also supported by Ulwick (2005, p. 69):

- 1) **Collect the required data:** in total, Motorola found almost 100 different desired outcomes with radio products (e.g. minimization of communication). On this basis, Motorola created a survey instrument which acted as a tool for market research to capture the importance allocated on each outcome by users and the degree to which customers felt that products were currently fulfilling their desired outcomes.

- 2) **Choose the segmentation criteria:** to identify the most useful segmentation criteria, Motorola applied factor analysis which would then help to break down a set of 100 desired outcomes to eighteen different opportunity-based factors.
- 3) **Conduct cluster analysis:** non-hierarchical clustering algorithms were existent in computer-based statistical analysis, forming segments of equally rated answers
- 4) **Profile the clusters:** apart from the desired outcomes, Motorola also observed demographics and psychographic characteristics of segments defined in step 3. The questions addressed segmentation variables such as age, job, product usage and product purpose, industry classifications, frequency of product usage, geographic location etc.

Ulwick highlights (2005, p. 73) that step 4, and therefore applying “traditional” segmentation variables to “novel” segmentation schemes, is crucial for understanding and interpreting the segment content of clusters.

➤ **Example**

One segment consisted of younger users who conducted covert operations in vehicles, who attached high value to privacy- and security-related outcomes. Policemen and security firms in urban areas were likely to be found herein.

This example makes clear that novel segmentation approaches (such as “desired outcomes”) can form a perfect match with traditional segmentation approaches (such as socio-demographics). Whereas latter can also be tracked via *a priori* segmentation, desired outcomes are typically gathered through an *a posteriori* technique. This scheme helped Motorola improve its product portfolio for each segment. It could address previously underserved outcomes or eliminate product features which had been causing meaningless outcomes before (that is, without relevance for customers).

Why outcome-based segmentation?

“The (...) result [are] better products at a lower price with increased customer satisfaction.

The new products accelerated revenue growth to 18 percent in a stagnant market

and secured the company’s leadership position (...).”

(cf. Ulwick 2005, p. 73)

6.1.6.1.2 Practical implications for the research object

Despite dealing with a completely different kind of industry, the current case study shows a scheme to draft a neat methodology for an outcome-based segmentation. The example does not give clear guidance as for segmentation criteria/variables to go for; what it does is simply showing how powerful it can be to combine both modern/novel with traditional segmentation schemes. As it has been presented, mixing *a priori* with *a posteriori* techniques is an ideal way to improve both product portfolio and product features to serve customers better and raise revenue.

6.1.6.2 Deloitte 2018 survey of US healthcare consumers

The global service provider “Deloitte” conducted a survey with US healthcare consumers to assess their behaviors, preferences and attitudes when making decisions about healthcare, health insurance and well-being. This approach allowed them a “far richer understanding of consumers than analysis focused solely on demographics” (Deloitte Center for Health Solutions 2018, p. 2). The results are four consumer segments which show differences as regards preferences and interaction with healthcare stakeholders. This segmentation approach is unique, since it mixes *a priori* with *a posteriori* techniques, while conveying valuable knowledge about healthcare segmentation.

6.1.6.2.1 Research design: mixing *a priori* & *a posteriori* segmentation

Researchers dedicated themselves to a survey on a nationally representative sample of US citizens aged above 18, which has been conducted and continually extended from the year 2008 onwards, investigating experiences and attitudes related to health, healthcare and health insurance (see chapter 6.1.6.3). In 2018, Deloitte made an additional online survey of 4,520 US adults part of its efforts. The outcome was valuable, though based on unstructured data.

Thus, the company chose 158 out of 347 variables which they further broke down to 12 main themes to apply to the actual segmentation analysis (Deloitte Center for Health Solutions 2018, p. 8) and thus relied on *a priori* segmentation with the following criteria:

- Technology use
- Adoption and willingness to use virtual care
- Wellness and prevention behavior
- Healthcare utilization
- Willingness to share personal health information/data
- Self-efficacy
- Views on healthcare affordability
- Important factors when choosing a doctor

- Customer service
- Trusted sources of information
- Healthcare issues with which consumers want help navigating the system
- Purchasing/shopping behavior for health insurance plans

Deloitte finally applied K-Means approach to structure the available data, resulting in a solution of four distinct clusters (*a posteriori* segmentation) which are thoroughly described below.

6.1.6.2.2 Findings: Trailblazers, Prospectors, Homesteaders & Bystanders

Variables such as interaction with health experts, technology use and purchasing behavior served as important to define homogeneous characteristics among the four segments but heterogeneity between them. Putting the findings in a nutshell, the following descriptions match the nature of each segment (Deloitte Center for Health Solutions 2018, p. 2):

- **Trailblazers:** tech-savvy, directed towards themselves, interested in wellness, tendency to share data
- **Prospectors:** dependent on recommendations from relatives and friends, providers are “trusted advisors”, likelihood to use technology
- **Homesteaders:** reserved, careful traditionalists
- **Bystanders:** complacent, tech-averse, change-reluctant, unengaged

Table 7 brings out a contrasting perspective of the different segments as regards demographic profile, technological affinity, reliance on third-party advice, reliance on WOM²⁹/recommendations/quality ratings, shopping behavior and loyalty.

²⁹ An abbreviation for “word of mouth” as “the process of telling people you know about a particular product or service, usually because you think it is good and want to encourage them to try it” (Cambridge Dictionary 2014).

	Bystanders (14 %)	Trailblazers (16 %)	Prospectors (30 %)	Homesteaders (40 %)
Demographic profile	Oldest segment; lowest income; mainly women; poor health	Youngest segment; mainly men; highest income; excellent health	Second youngest group; men & women equal, second highest income	Second oldest group; second lowest income; mainly women
Technological affinity³⁰	1	4	3	2
Reliance on expert advice³¹	1	4	3	2
Reliance on WOM, recommendations³²	1	4	3	1
Shopping behavior	Convenience-oriented as regards costs and hours	Most likely to change doctors	Oriented towards quality ratings of health experts	Convenience-oriented as regards time, location
Likelihood to change health advisor³³	1	4	-	2

Table 7: Survey of US healthcare consumers. Market segments are rated with 1 as the lowest and 4 as the highest value scored based on corresponding segmentation criteria. Own elaboration based on Deloitte Center for Health Solutions 2018.

³⁰ Technological affinity comprises attributes such as willingness to have health information tracked through an electronic health recorder (EHR), a wearable device or virtual care visits (cf. Deloitte Center for Health Solutions 2018, p. 3).

³¹ Expert advice includes recommendations for a healthy diet, exercise, or meditation (cf. Deloitte Center for Health Solutions 2018, p. 3).

³² WOM/recommendations means quality ratings for health experts, report cards/scorecards, expert-ranking data, suggestions from friends and family (cf. Deloitte Center for Health Solutions 2018, p. 3).

³³ Change of health advisor refers to shifting experts in the event of dissatisfaction with quality and/or communication style (cf. Deloitte Center for Health Solutions 2018, p. 3).

6.1.6.2.3 Practical implications for the research object

After having identified the above-mentioned segments, Deloitte derived options for each type of consumer to effectively interact with them. Insights can also serve the research object for a better targeting, provided that they apply a similar segmentation technique.

“Trailblazers”

Deloitte suggests offering high-quality virtual office visits and seamless technology experience (e.g. a connected app or digital platform) for Trailblazers due to their technical affinity. Further, it is advisable to make use of consumer willingness to share personal data through data in collection initiatives (e.g. remote diagnostic testing via wearables) (cf. Deloitte Center for Health Solutions 2018, p. 4).

“Prospectors”

For Prospectors, Deloitte found that promoting “social and patient-advocacy groups” (e.g. health forums or social media sites) is accurate, since they value highly recommendations from third parties, and providing wearables could meet their passion for new technologies. Owing to the fact that Prospectors show a high trust in health experts, the customer relationship is of particular importance, which could be promoted via consultancy and treatment (Deloitte Center for Health Solutions 2018, p. 5f).

“Homesteaders”

Concerning Homesteaders, offering off-hour appointments in the evening or early morning might enable a company to meet their call for convenience; furthermore, shared decision-making regarding treatment strategies and interacting with a health coach could improve health behaviors, since Homesteaders show an aversion to “top-down” treatment and appreciate human connection (e.g. instead of using wearables) (cf. Deloitte Center for Health Solutions 2018, p. 6f).

“Bystanders”

And last, Bystanders’ reluctance to engage with health providers on their own is calling for a trustworthy person to regularly engage with or leverage familiar communities such as grocery stores or churches to promote health-related products and services. Despite an aversion to reaching out actively, each interaction could turn into a high-value opportunity as long as the consumer is being profoundly dedicated to while arising concerns are resolved (cf. Deloitte Center for Health Solutions 2018, p. 8).

6.1.6.2.4 Excursus: Understanding the power of WOM

Having a closer look at the value of recommendations, Meffert et al. (2019, p. 37) distinguish between three different characteristics of performance features products are characterized by: “search qualities”, “experience qualities” and “credence qualities”. Depending on the level of information which consumers already have about product features at the time of purchase, they look for or abstain from recommendations (through WOM) beforehand. Consumers’ product knowledge always highly correlates with their capacity for judgment about product quality before having purchased (cf. Meffert et al. 2019, p. 35f): a product featured with “search qualities” indicates that consumers are able to evaluate quality (e.g. through mere inspection) before having purchased without searching for additional information; examples are clothes or furniture (cf. Meffert et al. 2019, p. 36).

Although beds are to be found among the product category “furniture”, they inhere more “experience qualities” than “search qualities”, since they form part of the healthcare industry as medical goods. This means that product quality cannot be evaluated before but only after the transaction has taken place (e.g. through experience).
Accurate measures to mitigate this lack of information on consumer side are:
(1) physical testing of the product, (2) warranty or (3) developing WOM marketing.

Furthermore, “credence qualities” are known to lack both the possibility of testing products before and after having acquired them, which increases consumers’ perceived purchasing risk; nonetheless, consumers are ready to pay a reasonably high price, since these qualities are of great importance to them (cf. Meffert et al. 2019, p. 37). Organic materials composing the research object’s beds would count to this category of performance features, which are ideally supported with certificates but also references of other consumers (e.g. WOM). This example illustrates the manifold importance of WOM marketing for the research object’s products.

6.1.6.2.5 Excursus: Determining promoters in customers

An orientation towards the Net Promoter Score® (NPS) is helpful to figure out which customers are most profitable due to their stimulation of business growth through positive WOM (cf. Satmetrix Systems 2017).

According to the Net Promoter Score®, each customer base is composed of “promoters”, “passives” and “detractors”; all of the three categories can be easily identified by asking actual (and perhaps also potential) customers “How likely is it that you would recommend the brand to a friend or colleague?” (ibid.).

Surveyed customers respond to a 0-10 scale as visualized in figure 26, whereas the overall NPS prevalent in the customer base is calculated by subtracting detractors from promoters.

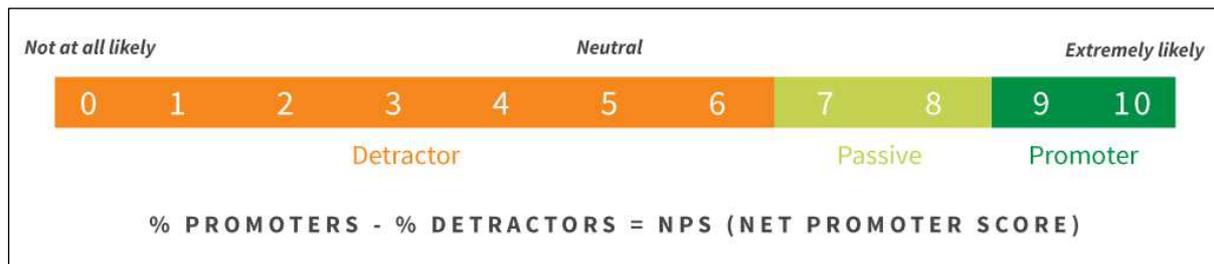


Figure 26: Respondent's 0-10 scale of the Net Promoter Score ®. (Satmetrix Systems 2017)

Promoters (scoring 9-10): loyal enthusiasts who drive WOM and refer others

Passives (scoring 7-8): satisfied, yet unenthusiastic contemplating other offers as well

Detractors (scoring 0-6): unhappy customers, destructive for the brand due to negative WOM

6.1.6.3 Deloitte: a strategic view of consumer segmentation

The survey data has been collected in an online survey which has assessed consumers' health behavior and their attitudes in navigating through the healthcare system. Moreover, their socio-economic profile was evaluated (age, generation, gender, education, income). Plus:

- health status
- rates of actual prevention: e.g. healthy diet, regular exercise, wellness programs, health screening
- treatment preferences: e.g. traditional/conventional, alternative/non-conventional

The outcome is a “behavioral and attitudinal segmentation scheme” which has being monitored since 2008 (cf. Deloitte Center for Health Solutions 2012, p. 1), concluding with six different segments: “Sick & Savvy” would not challenge a professional's recommendation and is constituted of “obedient patients”. “Casual & Cautious” consumers do not see a need for engagement, with a lack of activism, representing typical “consumers” rather than “patients”. “Out & About” are pro-actively looking for alternative medicine, “Online & Onboard” engage

through online tools and mobile applications (also to compare treatment options) and “Shop & Save” are always seeking value, which is why latter consumers show an aversion to invest high sums into health.

6.1.6.3.1 Research design

As demonstrated in the previous chapter, Deloitte has conducted different surveys since 2008. In 2012, a sample of 4,012 US adults (aged 18 years and above) was surveyed with a web-based questionnaire in order to determine attitudes toward healthcare providers and information technology, use of services and their personal opinion about the healthcare system (cf. Deloitte Center for Health Solutions 2012, p. 2). In 2008, an initial segmentation analysis had already been conducted using factor and clustering analyses, based on 4,000 consumer opinions. Another analysis followed in 2009, in which 4,000 respondents were investigated and in 2012, another 4,012 respondents were interviewed in opinion polls (cf. Deloitte Center for Health Solutions 2012, p. 2).

6.1.6.3.2 Findings: six unique healthcare segments

The findings reveal that one of three respondents is currently disengaged, without feeling a particular need for care or prevention (“Casual & Cautious”); one in two adheres to a “passive patient” approach and is dependent on health experts while following ordered treatment strictly (“Content & Compliant” and “Casual & Cautious”), whereas another two in five are “active” consumers who tend to manage their health on their own (“Online & Onboard”, “Sick & Savvy”, “Out & About”, “Shop & Save”) (cf. Deloitte Center for Health Solutions 2012, p. 3).

Already in 2008, the segment “Casual & Cautious” was the largest consumer group in the US (23 %) and had been rising to 34 % until 2012. Figure 27 shows how the segments are structured according to their generation, hence giving an insight into demographic varieties among the segments.

Since “Casual & Cautious” the most widely spread segment in the US consumer market, this segment is going to gain particular attention; due to its intense growth rate, it represents the most attractive consumer segment seen from an angle of the research object. However, “Sick & Savvy” and “Out & About” shall be scrutinized as well, since the former contains the highest rate of boomers and seniors (and subsequently shows a high demand for health services) and the latter is expected to show most interest for alternative treatment options (e.g. sleep) and

would therefore score high concerning organizational competitiveness (see chapter 6.1.2.3 for “organization competitiveness” as an indicator in the segment-evaluation process).

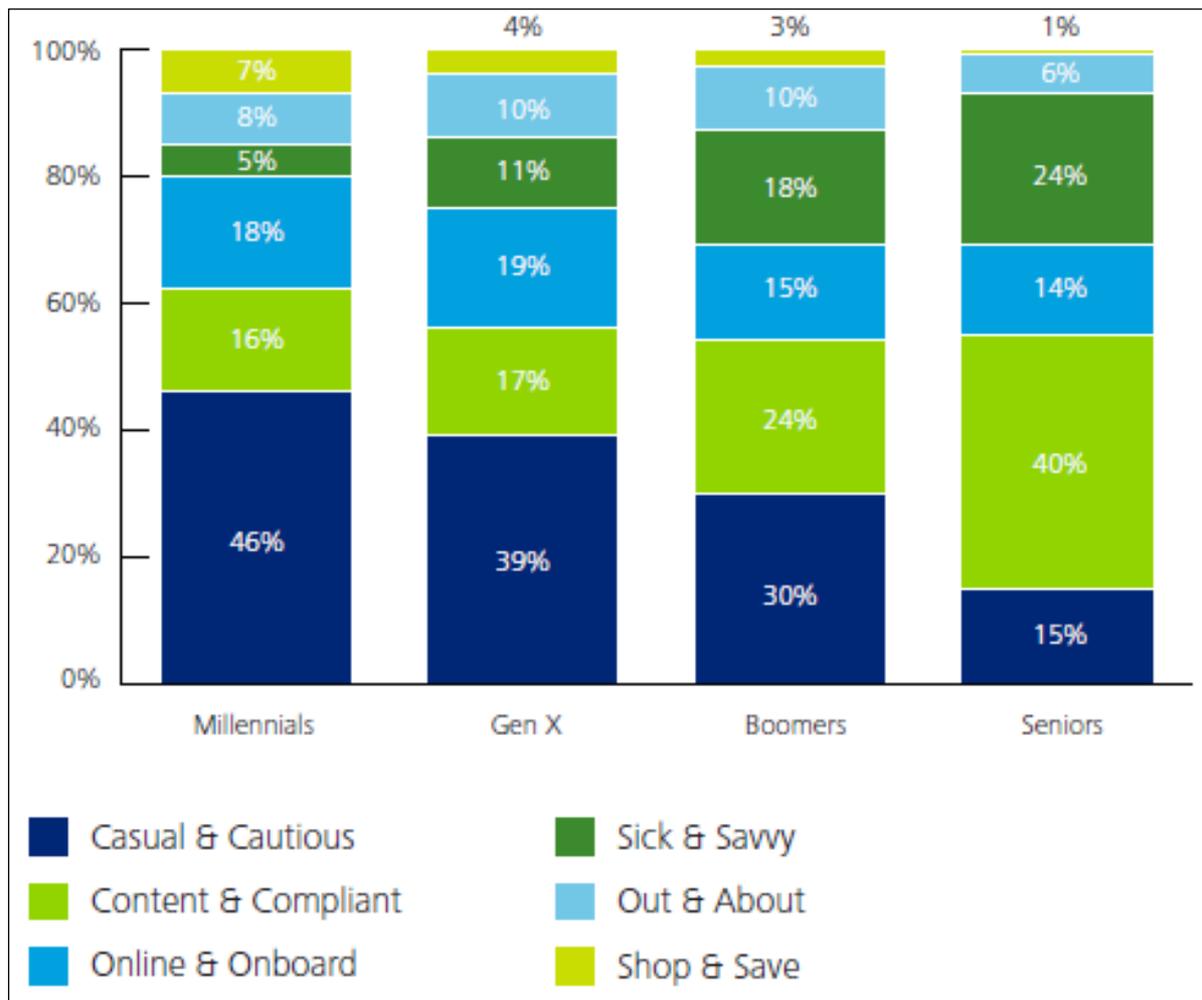


Figure 27: Segments by generation. Online survey of US healthcare consumers. (Deloitte Center for Health Solutions 2012, p. 10)

“Casual & Cautious”

70 % of this consumer segment thinks that half of healthcare investments is money wasted, which may be the reason that they are least likely to be insured (66 %), also indicating the lowest level of trust in doctors, government and health plans (cf. Deloitte Center for Health Solutions 2012, p. 4). Consequently, “Casual & Cautious” consumers look for cost-efficient health solutions, which might be caused by their low income (59 % earn < \$50,000). As regards demographic profile, their average age is 41 years and inheres more Millennials (30 %) than other segments (ibid.). Furthermore, they rarely make use of retail clinics (5 %) and just 3 % endorse alternative medicine (ibid.). Nevertheless, “Casual & Cautious” is the most widely

spread consumer group in the US; this emphasizes the segment's significance for the healthcare market.

“Sick & Savvy”

This cluster features the highest amount of elderly people with an average age of 54 years and a higher income (23 % earn >\$100,000) (cf. Deloitte Center for Health Solutions 2012, p. 7). 92 % of consumers commit to health insurance, and 80 % state that they suffered from one or more chronic conditions (ibid.). Just 7 % make use of alternative medicine; instead, consumers prefer traditional/conventional approaches and show great loyalty by making high investments in healthcare products, services, sticking to treatment plans and keeping themselves informed mainly through online channels (ibid.).

“Out & About”

This segment is characterized by an average age of 45 years and a relatively low income (58 % of households indicate an income of <\$50,000) (cf. Deloitte Center for Health Solutions 2012, p. 8). Consumers prefer natural therapies to conventional approaches, but just 42 % are in a very good health condition (lowest of all segments) (ibid.). Moreover, major part is unhappy with hospitals, health plans and doctors, foregrounding that they rather rely on themselves than following doctors' orders as regards treatment plans (ibid.).

6.1.6.3.3 Practical implications for the research object

Properly addressing **“Casual & Cautious”** consumers would mean a marketing-mix customization, since patients/buyers are looking for cost-efficient solutions, which the research object currently cannot offer. In this event, the marketing task would be rather to raise awareness for health-related products (especially alternative remedies) in order to get the audience buy (e.g. via interactive tools) or create a cheaper product offer. Deloitte Center for Health Solutions (2012, p. 10) highlights that non-traditional methods of treatment are going to be applied more often in the future, since activism segments are on the rise; therefore, raising awareness for alternative products might play out well, supporting actual trends (cf. Deloitte Center for Health Solutions 2012, p. 10).

In contrast, mature populations of the **“Sick & Savvy”** segment already show high demand, since 80 % suffer from chronic diseases and show specific need and interest for treatment options (cf. Deloitte Center for Health Solutions 2012, p. 7). The challenge, though, would be to raise awareness for alternative medicine and thus going for a marketing-stimulation strategy.

Once convinced, relevant consumers have great potential to remain loyal and to generate a fair amount of revenue on the long-term.

Raising awareness for natural sleep products would not be the challenge among “**Out & About**” consumers: with an existing preference for non-conventional treatment, they might be easy to convince of product appropriateness. Nonetheless, targeting this segment also comes with some drawbacks. A relatively low income and their reluctance to follow health experts’ advice (cf. Deloitte Center for Health Solutions 2012, p. 8) may impede the company from success.

6.2 Primary research

Now it is time to put the before-mentioned theoretical input into practice. A mixture of summary and practical application is going to guide the reader through this chapter.

In-store reports

Wilson & Gilligan (2001, p. 274) propose to categorize consumers based on usage patterns, demographic characteristics (age, sex, income) or psychographic criteria such as lifestyle and personality. Dolnicar; Leisch (2003, p. 2449) also suggest using socio-demographic or geographic data and Dolnicar; Grün; Leisch (2018, p. 15) highlight the application of age, gender, country of origin besides prior purchase, benefits sought (convenience, value for money, speed, ability to compare offers), or motives as *a priori* segmentation base. Dolnicar; Lazarevski; Yanamandram (2013, p. 3) support these views, foregrounding *a priori* segmentation criteria like demographics, geographic criteria, usage levels and further refine outcomes with data-driven segmentation informed by motivations, benefits sought, information sources etc. Ulwick (2005, p. 64) and Artun; Levii (2015, p. 48) underscore the importance of demographics as well; the former suggests endorsing a mixture with other data, e.g. psychographic customer information.

Keeping this theoretical knowledge in mind and also considering the resources of the SME and data availability, the decision is made to apply *a priori* segmentation based on socio-demographic criteria such as age, gender and further refine segments with psychographic criteria such as preferred channel and behavioral criteria such as customer life cycle. In spite of being available up to the point of the analysis, neither internal data nor CRM scanner data related to individual purchase histories of consumers had been investigated by the company and thus not used for segmentation in the past. The author has recognized this opportunity to use the sources as a basis for consumer segmentation in the thesis.

Due to limited resources of the SME, it is recommended to use rather overall (cross-store) data as segmentation fundament or a country-based division. Specific targeting of each store/city is not possible due to the size of the research object and restricted financial resources.

Thus, the first approach executed by the author is a macro geographic (country-based) segmentation (Austria, Germany, Switzerland), thus an international comparison, which reveals pure demographic attributes in an international setup such as gender and age of customers, psychographic criteria such as preferred channels, behavioral criteria such as new or existing customers and the customer-life-cycle stage. For the sake of gaining a broader understanding of consumer characteristics, sub clusters among the before-mentioned customer groups are built by setting demographic criteria into relation with the sub criteria “channels used” and “customer-life-cycle stage”.

This scheme of country-based segmentation is executed alike for overall (cross-store) data.

Owing to the fact that the research object has 17 own stores in the DACH region, the author endorses in a further step a segmentation approach on a larger scale: order ratio in each store, number of customers, number of new and returning visitors and new-to-returning visitor ratio are analyzed. In-store-based analysis is crucial for the firm, since it helps the company gain insight into the whole customer base, not only tracking *definite* customers but also *walk-in* customers; in fact, the company asks retail stores to record each occasion in which they got in touch with visitors and customers, be it per mail, telephone, in the store or home visits. Since this customer data is not only bound to those who make final orders but also records information about individuals who are aiming at other tasks such as offers, reclamations, past-order operations, it is possible for the author to analyze the customer-life-cycle stage of each contact. **Hence, tracking walk-in customers helps to plan the marketing mix and resource investment through the revelation of the most frequented and successful stores and enables the company to act within the “power of focus”, witnessing and emphasizing those stores with the highest popularity and potential for success.**³⁴

³⁴ Nonetheless, due to the requirement of the thesis to censor sensitive company data, concrete names of the stores will be kept secret, substituting them with the country they belong to.

Customer-relationship-management (CRM) system

In a second step, CRM data is analyzed by the author. **The most significant difference between in-store and CRM data is that latter tracks actual customers who also make orders, whereas the former registers actual and potential customers.** The segmentation basis in the event of CRM data is built by purchasing history of more than 2,400 unique consumers who executed over 10,000 orders in the year 2019. As has already been previously outlined, several researchers foster the relevance of purchasing information for the segmentation process; Dolnicar; Grün; Leisch (2018, p. 45) stress the importance of consumer expenses and their importance for behavioral segmentation as psychographic criteria. Moreover, purchasing data offer marketers insights into the interests, attitudes and preferences of their customers (cf. Dolnicar; Grün; Leisch 2018, p. 44), which is why the product's purchasing relevance is an essential part of consumer segmentation. Despite the fact that Deloitte Center for Health Solutions (2018, p. 8) has included purchasing behavior as a guideline for segmentation for *health insurance plans*, the accuracy for the actual *sleep-health market* is undeniable.

In a nutshell, the author investigates consumers' expenses (revenue) on and sales volume of different product categories, further analyzes them on a monthly basis for tracking potential seasonal changes and sets into relation the monthly variations with decisive product categories. These analytical steps are taken for both overall CRM data and country-based CRM data. Furthermore, revenue and number of orders in each of the 17 stores are investigated, which helps the company to go for an effective resource allocation in the future by segmenting stores on the basis of their contribution to the businesses overall turnover.

The distinction between revenue and orders has been made, since the former can be seen as a measure of mere success and the latter as an indicator for customer engagement.

Moreover, the development of consumers' expenditure (revenue) over months are analyzed, seeing which stores are the most decisive ones not only for generating the highest turnover along the year but also in the company's most prosperous months.

Given the above-mentioned circumstances, the author focuses on the following segmentation criteria in a total of two information sources of internal data:

1) In-store reports

- **Overall & country-based:** demographic segmentation (age, gender³⁵), psychographic segmentation (channels used), behavioral segmentation (new/existing customers, customer-life-cycle stage), demographic-psychographic segmentation (age & gender combined with channel); demographic-behavioral segmentation (age & gender combined with customer-life-cycle stage)
- **Store-based:** behavioral segmentation (order ratio of customers per store, number of customers per store, number of new and existing visitors per store, new-to-existing visitor ratio)

2) Customer-relationship-management (CRM) system

- **Overall & country-based:** behavioral segmentation (consumers' expenses/revenue on and sales volume of product categories, development of consumers' expenditure/revenue over months set into relation with decisive product categories)
- **Store-based:** behavioral segmentation (total revenue per store, number of orders per store, development of consumers' expenditure/revenue over months set into relation with decisive stores)

In the following two chapters, the outcomes of the internal-data analysis, as previously outlined, are going to be broached, gathered both by in-store reports and the customer-relationship-management tool.

6.2.1 In-store reports

As has already been stated before, data analysis has been conducted on an overall (cross-store) basis, a country-based basis and finally on a store basis with selected criteria.

Cross-in-store analysis shows that the stores interacted with 8,993 customers along the year 2019, which equals 529 interactions per store and roughly 10 interactions per week per store.

³⁵ Gender data was available in a total of 10 of 17 stores.

6.2.1.1 Overall (cross-store) results

Concerning **demographics**, data indicates that 35.49 % of all customers are male and 64.51 % female. They are mainly constituted of an elderly population, aged around 50 (34.60 %), directly followed by customers aged 60 (24.16 %) and 40-year-old customers (21.17 %). Combining these two criteria, data shows that female customers aged around 50 years constitute the biggest proportion of customers (see figure 28).

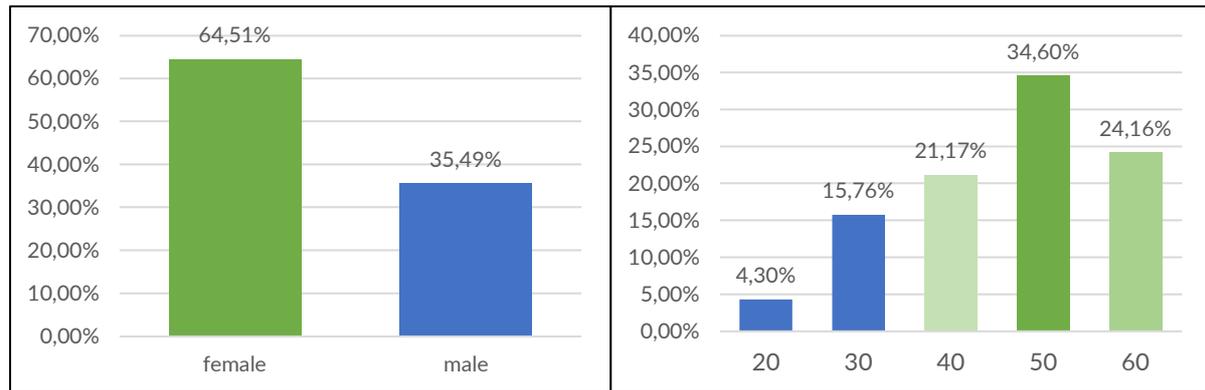


Figure 28: Gender distribution (left) and age distribution (right) of research object's customers. Cross-store results. Own elaboration.

As regards **behavioral data**, 61.52 % are new customers, whereas 38.48 % existing. Concerning **psychographic** makeup, most of them turn to the company for past-order issues (34.97 % as returnees) or due to spontaneous store visits, attracted by the shopping window (34.23 %). 10.52 % find their way through Google Ads and other 10.02 % are acquired by pro-active retailers (see figure 29).

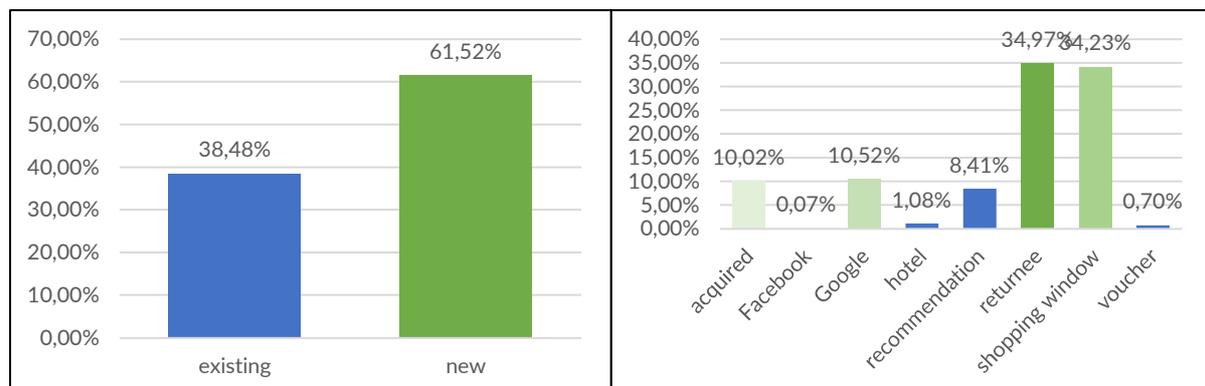


Figure 29: New-to-returning visitor ratio (left) and customer channels (right) of research object's customers. Cross-store results. Own elaboration.

As regards **customer life cycle**, 38.49 % make a final order, 18.62 % take advantage of a sleep consultancy and 14.21 % receive aftercare operations (see figure 30).

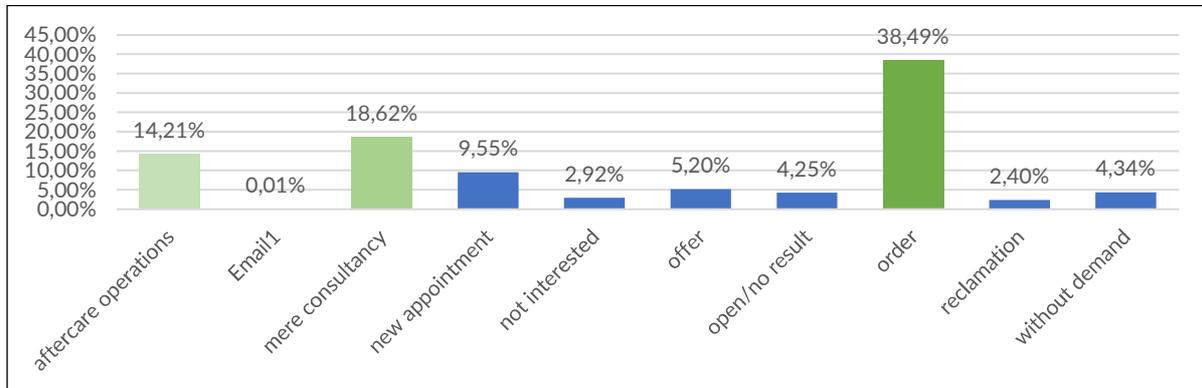


Figure 30: Share of customers in each customer-life-cycle stage. Cross-store results. Own elaboration.

Gaining a deeper understanding of the customer base, **gender-age segmentation has been refined with psychographic criteria**. It shows that the 11.80 % aged around 50, who represent the biggest proportion of male customers, are mainly attracted via the shopping window (38.59 %), followed by returnees (34.85 %) and through pro-active acquisitions (11.20 %). As regards women, 38.80 % are returnees, 35.18 % of them make their way through the shopping window, and 9.62 % visit the store due to recommendations.

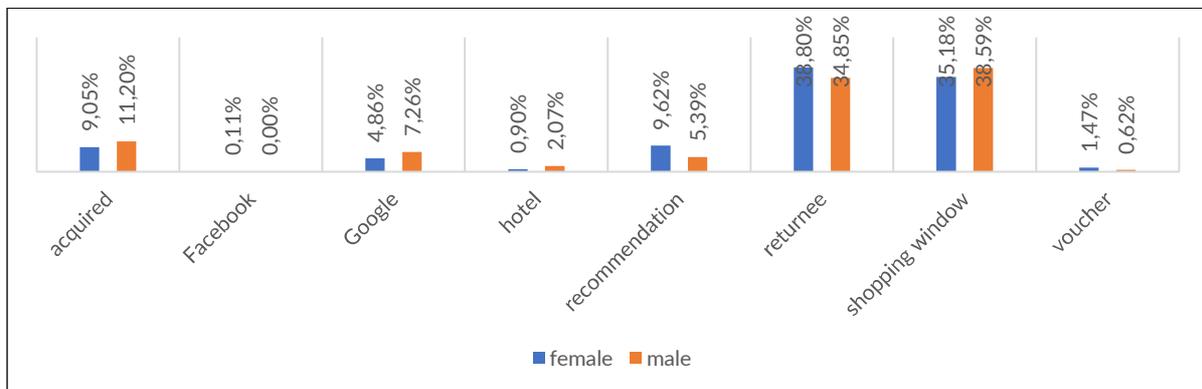


Figure 31: Channels used by research object's 50-year-old customers. Gender-based distribution. Cross-store results. Own elaboration.

Having a closer look at **behavioral criteria on the basis of demographic segmentation**, the customer-life-cycle stage, 50-year-old male customers are in contact with the stores for ordering (44.01 %), mere consultancy (14.67 %) or for aftercare operations (13.84 %), whereas 50-year-old women are in touch with sleep experts due to orders (41.40 %), aftercare operations (18,67 %) or for making an appointment (14.25 %) (see figure 32).

The shopping window is the most attractive channel for both men and women to get aware of the company and mostly turn to their sleep-health experts for order making. Interestingly enough, female customers show a sensitivity towards pull media (in this case word-of-mouth marketing, more specifically recommendations), whereas male prefer push media (health experts reaching out to them).

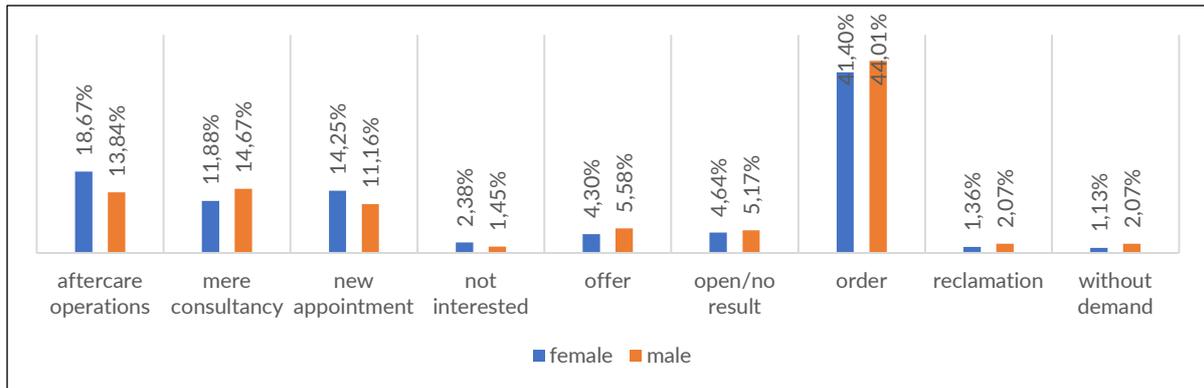


Figure 32: CLC stage of research object's 50-year-old customers. Gender-based distribution. Cross-store results. Own elaboration.

6.2.1.2 Country-based results

➤ Illustrations of a country-based/international comparison based on the demographic, behavioral and psychographic data can be found at the end of chapter 6.2.1.2 (Figure 39, Figure 40, Figure 41, Figure 42).

6.2.1.2.1 Austria

Having a look at **Austrian customers' demographics**, female-to-male ratio is less diverse than overall customer data has indicated: 40.49 % are male and 59.91 % female. Likewise, the most frequented customers are around the age of 50 (25.61 %), followed by 40-year-old customers (24.61 %) and 60-year-old individuals (22.25 %).

Concerning **behavioral data**, the biggest proportion is constituted of new customers (57.08 %) versus already existing (42.92 %). Thus, Austrian customers are more likely to return than average (overall) data shows. Different from overall **psychographic data**, Austrian customers turn to the company as regards past orders and make up returnees respectively (40.03 %), 24.09 % are acquired by health experts and other 16.96 % are sourced through the shopping window.

Setting these results into contrast with overall data, pro-activity of health experts and returnees (potential indicator for customer loyalty) are above average in Austria.

Shedding a light on **behavioral makeup such as the customer life cycle**, 40.99 % make a final order, 18.96 % receive aftercare operations and 12.37 % contact the company for mere consultancy.

Aftercare operations are above average in Austria, which might indicate a higher degree of loyalty too.

Refining **gender-age segmentation with psychographic criteria** (see figure 33), it becomes visible that most of 50-year-old male customers are acquired pro-actively by retailers (42.05 %), 25 % are returnees and 18.18 % are attracted through the shopping window. Concerning women, the most of 50-year-old female customers are acquisitioned pro-actively by retailers (42.25 %), 38.03 % are returnees and 14.08 % are attracted by the shopping window.

Shopping window is not as popular as in overall data, whereas pro-active acquisition seems to work well for customer acquisition in Austria. However, recommendations/word-of-mouth marketing does not gain much popularity in the country.

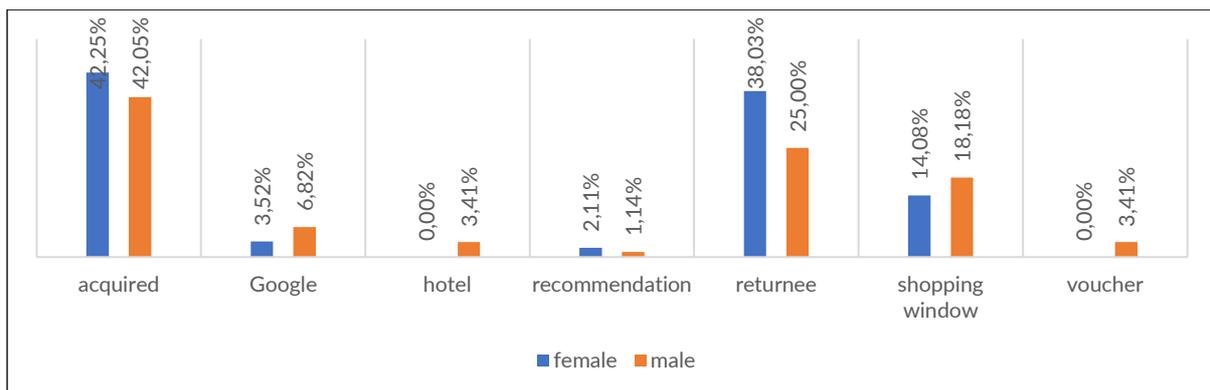


Figure 33: Channels used by research object's 50-year-old Austrian customers. Gender-based distribution. Country-based results. Own elaboration.

Polishing demographic segmentation with behavioral criteria (customer-life-cycle-stage) (see figure 34), data shows that 50-year-old male customers reach out to the company for concrete orders (37.78 %), 33.33 % make use of aftercare operations and 14.44 % make new

appointments; in contrast, women of the same age group have made concrete orders (41.55 %), 31.69 % have been assisted in the aftercare process and 11.97 % remain with open/no results.

The most striking finding is that aftercare operations are relatively high.



Figure 34: CLC stage of research object's 50-year-old Austrian customers. Gender-based distribution. Country-based results. Own elaboration.

6.2.1.2.2 Switzerland

Taking a closer look at the **demographic profile of Swiss customers**, they show a significant number of female customers (66.48 %), compared to male who account for 33.52 %. Similar to overall data, in-store data shows that people aged around 50 years are standing out (36.57 %), followed by 60-year-old customers (29.38 %) and individuals aged around 40 (18.45 %). Likewise, as mentioned in previous cases, women around 50 years make up the biggest proportion of customers.

Behavioral data indicates that 58,47 % are new customers and 41.53 % existing.

Swiss customers show an inclination towards returnees above average.

Psychographic criteria shows that the majority are spontaneous visitors, more specifically pedestrians, who are attracted by the shopping window (40.63 %); 36.62 % turn to the company for the sake of past orders, followed by customers who are lured through recommendations (9.50 %).

The shopping window enjoys great popularity in Switzerland and also past-order issues are common above average.

Customer-life-cycle data (behavioral criteria) proves the high proportion of customers committing to final orders (43.88 %), customers receiving aftercare operations (15.34 %) and making appointments (12.88 %).

Swiss customers show an above-average tendency towards order making, which is an indicator for good completion rates.

Concerning the **combination of gender-age segmentation and psychographic criteria** (see figure 35), men aged around 50 years are reached through the shopping window (42.92 %), followed by past-order issues (40.42 %) and pro-active acquisition by the retailer (5.83 %). In comparison, the most attracted age and gender group (women aged around 50 years) mainly originate from the shopping window as a communication channel (43.99 %); nevertheless, returnees contacting the stores seem to be several as well (37.47 %) and 8.76 % are attracted by recommendations.

Data indicates that, Swiss women react particularly sensitive towards the shopping window (compliant with overall data). In accordance with overall data, Switzerland is also featured with men who prefer to be addressed actively (push media), which does not play a role for women who rather follow third-party advice/recommendations (pull media).

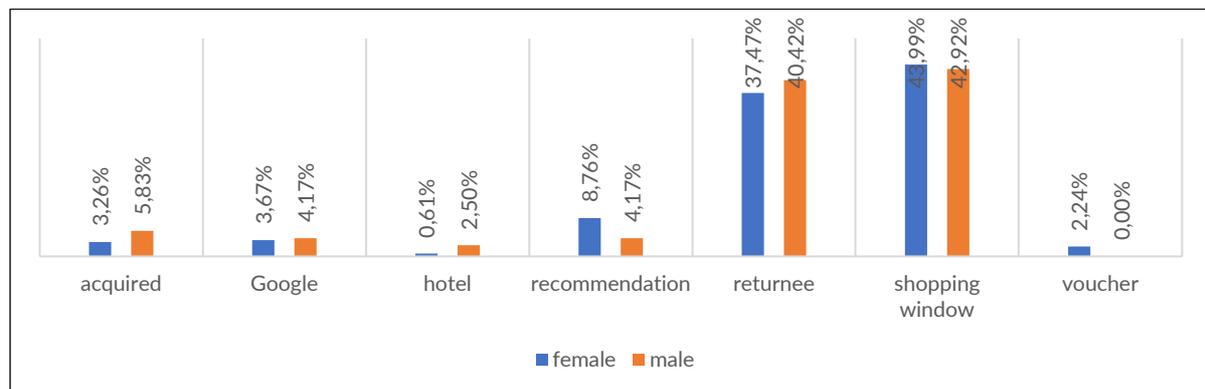


Figure 35: Channels used by research object's 50-year-old Swiss customers. Gender-based distribution. Country-based results. Own elaboration.

As regards the **combination of age-gender criteria with behavioral characteristics (customer-life-cycle stage)**, 50-year-old men mainly reach out for order making (48.33 %), take advantage of mere consultancy (12.92 %) or due to appointment making (12.50 %). Women within the same age group primarily address the company for order making too (37.88 %), show a high likelihood for appointment making (19.35 %) and aftercare operations (17.52 %) (see figure 36).

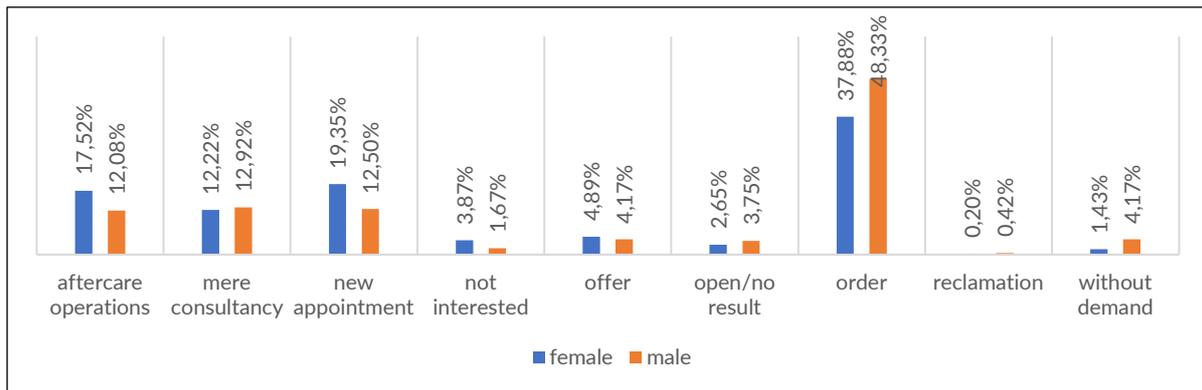


Figure 36: CLC stage of research object's 50-year-old Swiss customers. Gender-based distribution. Country-based results. Own elaboration.

6.2.1.2.3 Germany

Demographic data of German customers follows the same trend as overall data and Switzerland: 64.35 % are female customers, whereas men account for 35.65 %. Similar to overall data, the customers are mainly constituted of people aged around 40 (22.28 %) and above; customers aged around 50 are prevalent (36.00%) and people around the age of 60 are relatively dominant too (20.47 %). This tendency in age data is comparable with overall data. Concerning **behavioral data**, the majority of the customer base is constituted of new customers (65.56 %), whereas existing customers account for 34.44 %. **Psychographic data** indicates that most of them are attracted through the shopping window (34.65 %), directly followed by past-order issues (31.92 %) and via Google Ads (14.35 %). Contemplating the customer life cycle, 33.17 % issue an order, 25.72 % take advantage of mere consultancy and 11.68 % receive aftercare operations.

What is striking is the high rate of mere consultancy in Germany, which is almost twice as high as the rate in Austria and Switzerland.

Broaching the topic of **gender-age refined with psychographic criteria**, the most male customers aged around 50 years are attracted through the shopping window (43.51 %), 31.82 % reach out to the firm for post-order issues, followed by Google Ads (12.34 %). In the case of female customers, 41.83 % contact the store for post-order issues and 29,88 % are lured by the shopping window, while 15.54 % find the company through recommendations.

As in overall data, the shopping window is particularly popular for customer acquisition in Germany. However, pro-active acquisition is almost non-existent, which may indicate a low degree of retailers'/sleep coaches' engagement for customer acquisition. Furthermore, women are more inclined towards WOM, whereas German men are likely to react on Google Ads.

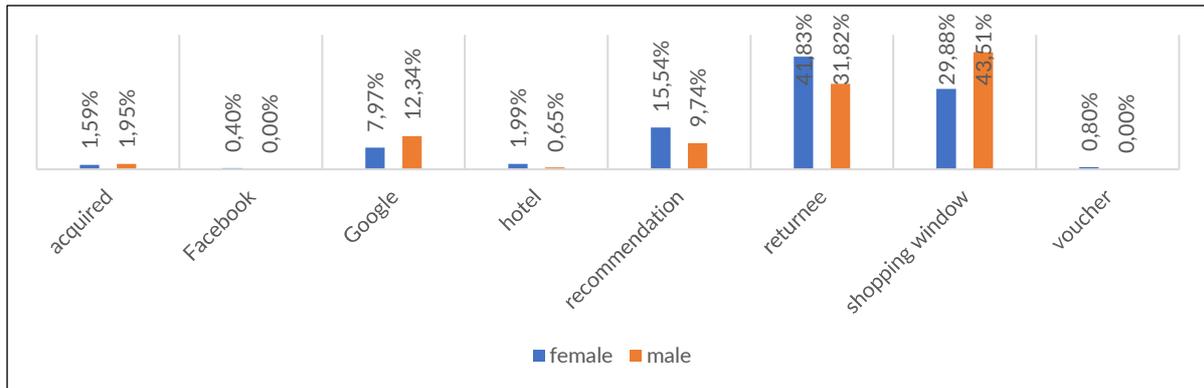


Figure 37: Channels used by research object's 50-year-old German customers. Gender-based distribution. Country-based results. Own elaboration.

Contemplating the **gender-age analysis based on customer behavior (customer-life-cycle stage)**, most of the male customers aged around 50 issue an order (40.91 %), whereas 24.68 % only seek advice in consultancy and 10.39 % invite an offer. As regards female customers within the same age group, 48.21 % issue an order, 16.73 % take advantage of mere consultancy and 13.55 % are served with aftercare operations.

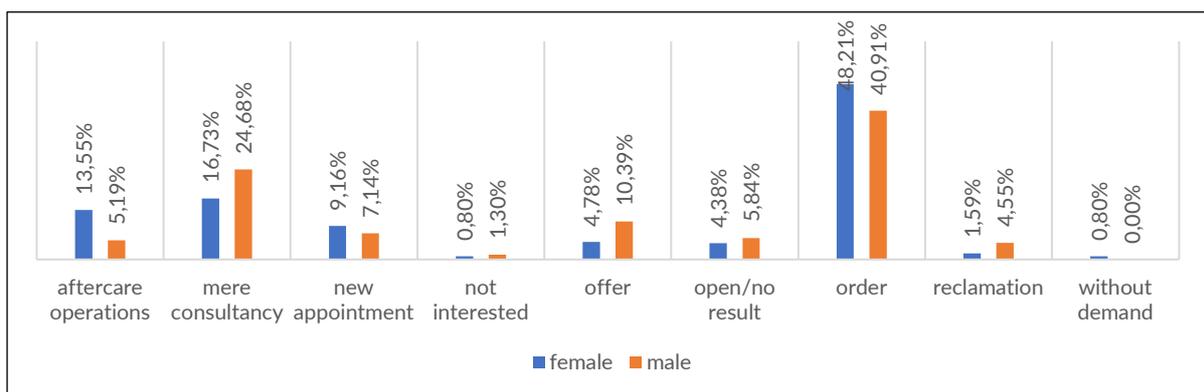


Figure 38: CLC stage of research object's 50-year-old German customers. Gender-based distribution. Country-based results. Own elaboration.

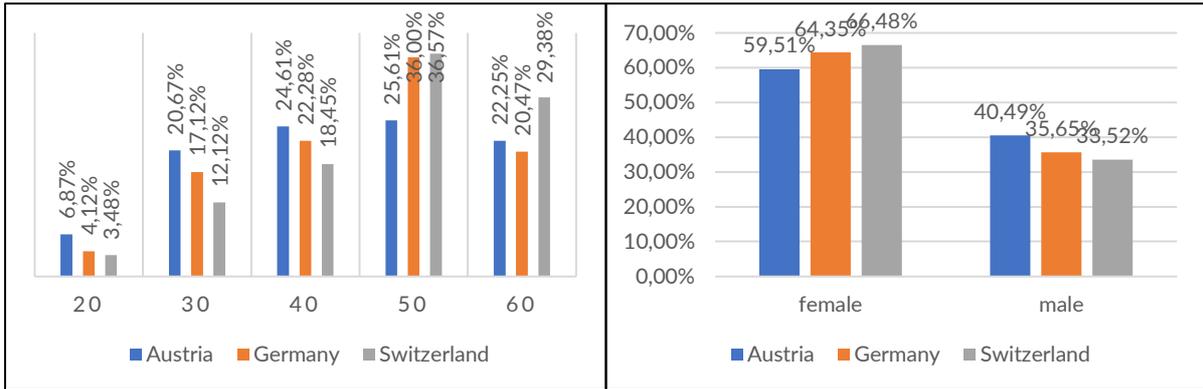


Figure 39: Age distribution (left) and gender distribution (right) of research object's overall stores. International comparison. Own elaboration.

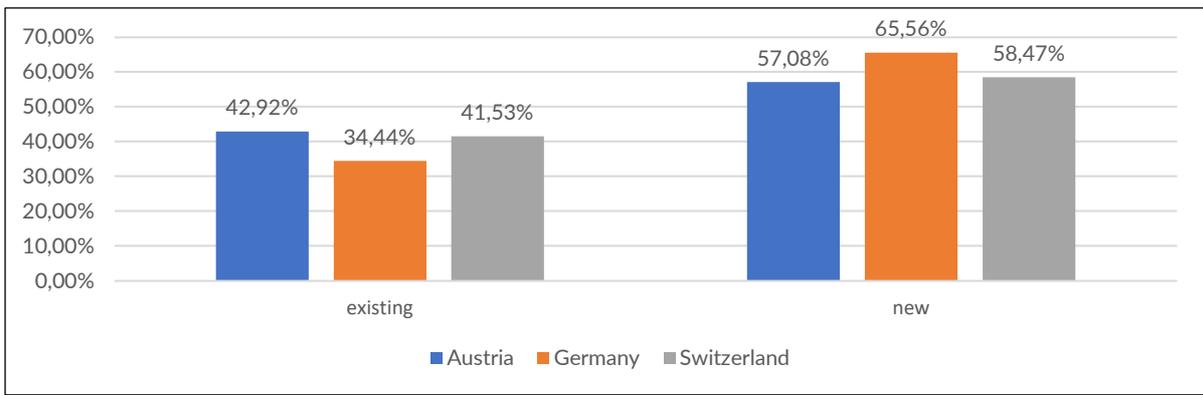


Figure 40: New-to-returning visitor ratio of research object's overall stores. International comparison. Own elaboration.

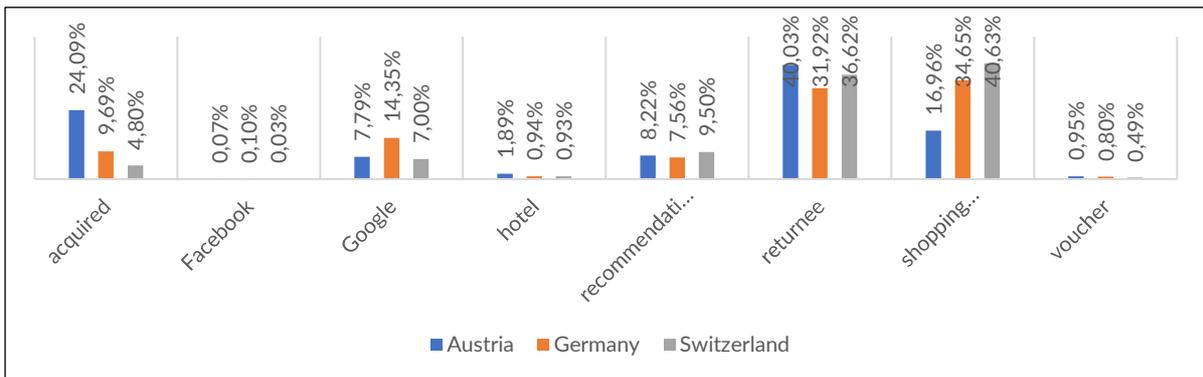


Figure 41: Channels used by research object's overall customers. International comparison. Own elaboration.

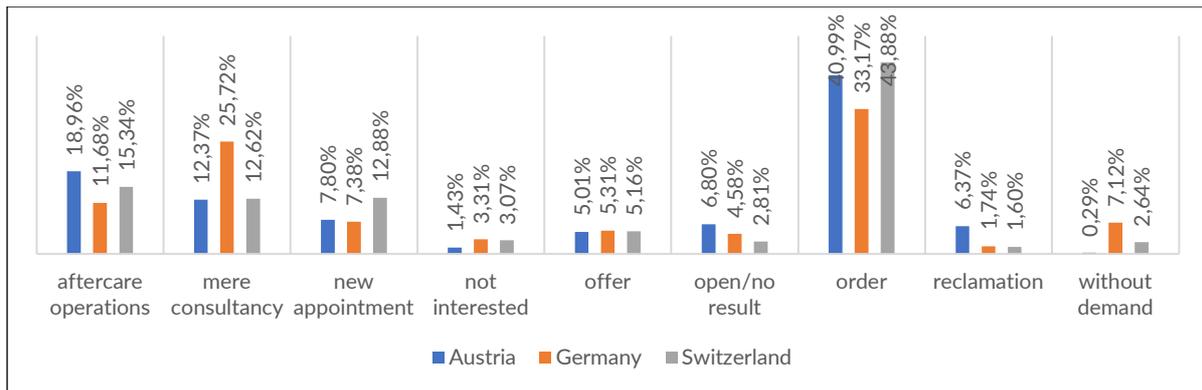


Figure 42: CLC stage of research object's overall customers. International comparison. Own elaboration.

6.2.1.3 Store-based results

- The **order ratio** of the different stores has been analyzed by setting order processing, as the most decisive task contributing to revenue, into relation with other activities such as making offers, mere consultancy, aftercare operations, complaint management and appointments. This shows the efficiency in customer care per store.

The findings indicate that three Swiss stores are on the leading edge with an **order ratio** of 68.55 %, 58.66 % and 57.12 %.

However, the **number of customers** is the highest in a Swiss store which is second among the leading edge of order ratio (1,323 customers or 14.71 %), followed by a German (852 customers or 9.47 %) and the third Swiss store which has been mentioned before (696 customers or 7.74 %) (see figure 43). Moreover, the **new-to-returning visitor ratio** is analyzed in each store. Previous cross-store data has already demonstrated that new customers are more common than returning customers. One of the German stores scores highest as regards the **number of new customers** (537 visitors), followed by two Swiss stores (530 and 491 visitors) (see figure 43). Setting them into relation with returning customers, the greatest ratio of new-to-returning visitors can be found in a Swiss store (89.83 %), followed by two German stores (86.27 % and 80.21 %) (see figure 44).

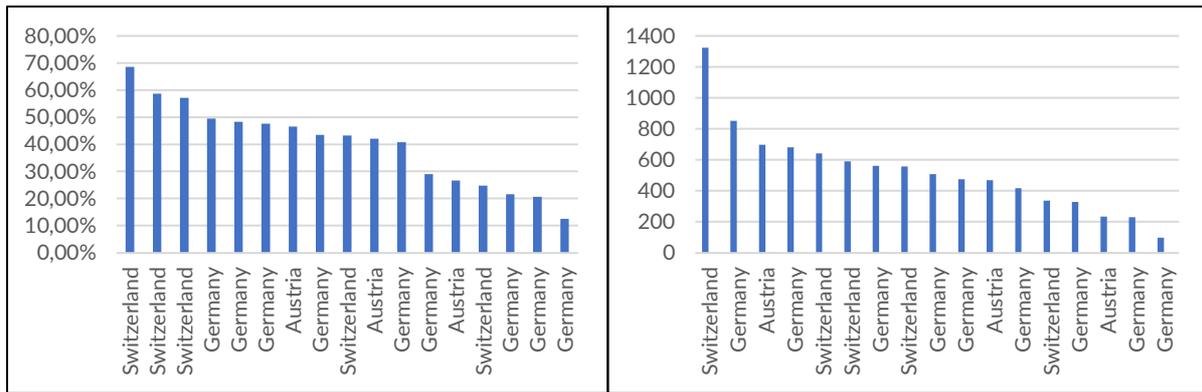


Figure 43: Order ratio (left) and number of consumers (right) of research object's DACH stores. International comparison. Store-based results. Own elaboration.

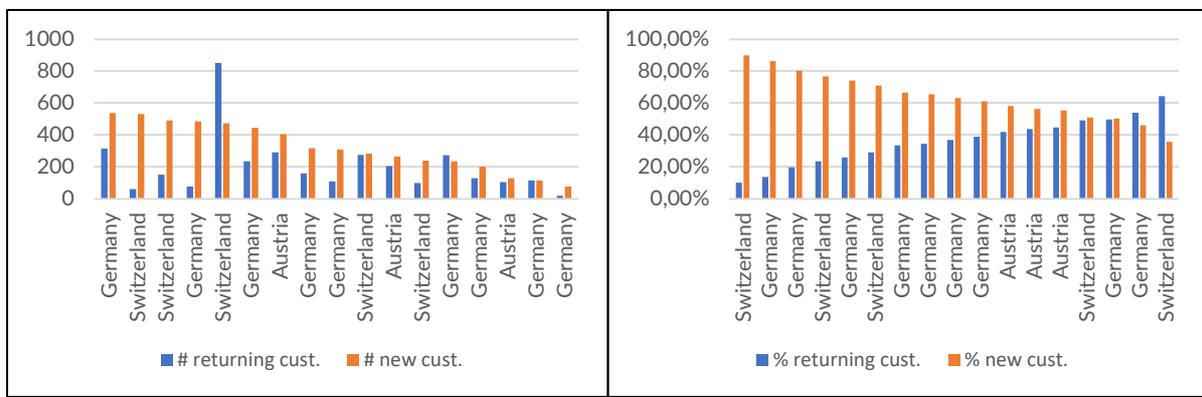


Figure 44: Number of returning and new visitors (left) and new-to-returning visitor ratio (right) of research object's DACH stores. International comparison. Store-based results. Own elaboration.

6.2.2 Results of CRM tool

As previously outlined, data analysis is conducted on an overall (cross-store) basis, a country-based basis and finally, on a store basis with selected criteria.

Cross-store CRM analysis shows that the company had 2,377 unique customers in the year 2019. Customers make 10,000 orders with 10,935 items. On average, this equals 4.6 purchased items per customer, contributing to an annual overall revenue in the 7-digit area.

6.2.2.1 Overall (cross-store) results

As precisely presented in chapter 1.2, the company has nine main product categories. The highest amount of revenue, which equals **consumers' expenses on product categories**, is generated by slat frames (20.69 %) and natural rubber mattresses (20.19 %) in the year 2019. The third most lucrative product category are pillows which account for 14.03 %, followed by virgin wool pads (12.70 %) (see figure 45). Contemplating the **product categories with the**

highest sales volume, data records that pillows with 3,058 items (out of a total of 10,935 sold items) enjoy the greatest popularity among customers.

It may not be surprising, that smaller additional components encounter a significant degree of interest too (4,210 items sold) (see figure 45); however, they are not worth a deeper analysis, since they only make up 7.15 % of total revenue.

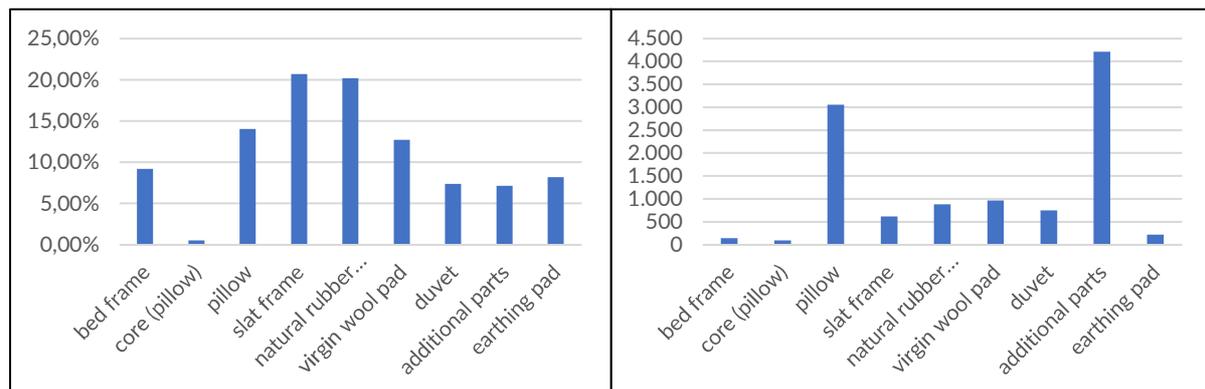


Figure 45: Share of annual revenue (left) and sales volume (right) of the research object's overall stores. Product-categorical distribution. Cross-store results. Own elaboration.

Assessing consumers' expenditure on different product categories distributed over months, it renders visible that the highest share of annual revenue is generated in October (11.74 %), followed by December (10.91 %) and September (9.79 %) (see figure 46).

The most profitable quarter is quarter four, generating 30.28 %, while the first quarter ranks second, accounting for 24.90 % of annual revenue.

Going into detail concerning product groups which contribute to the great success in October, it renders visible that natural rubber mattresses (19.85 % of monthly revenue), slat frames (19.39 % of monthly revenue) and virgin wool pads (12.87 %) are most lucrative. The same ranking is true for December and September, only that the third most beneficial product category in December are pillows (16.42 % of monthly revenue) instead of virgin wool pads (12.50 % of monthly revenue).

Slat frames, natural rubber mattresses and virgin wool pads are the most decisive product categories in the company's most successful months.

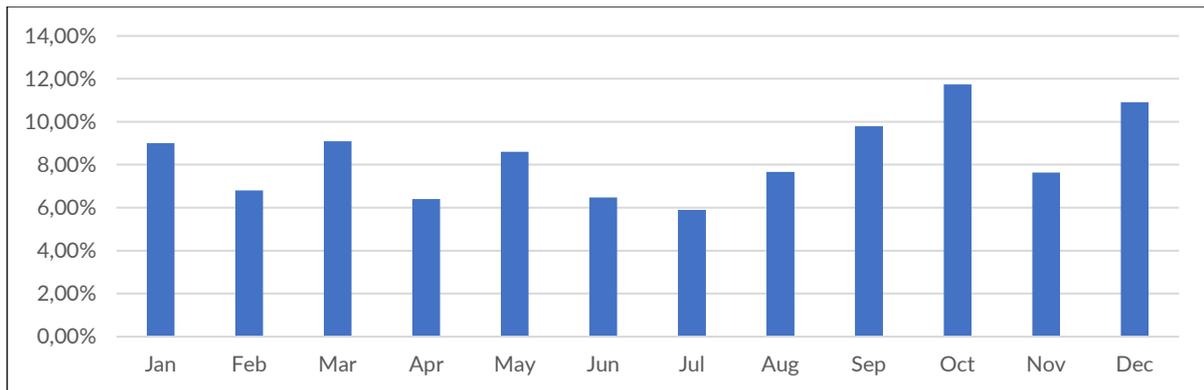


Figure 46: Share of annual revenue of research object's overall stores. Monthly distribution. Cross-store results. Own elaboration.

6.2.2.2 Country-based results

➤ Illustrations of a country-based/international comparison based on investigated segmentation variables can be found at the end of chapter 6.2.2.2 (Figure 53, Figure 54, Figure 55).

6.2.2.2.1 Austria

In **Austria**, the most lucrative **product categories for the company, where the most customers invested in**, are natural rubber mattresses (25.31 % of annual revenue), slat frames (23.84 %), virgin wool pads (14.44 %) and pillows (9.36 %) (see figure 47).

Austria shows an on-average performance of natural rubber mattresses (see figure 53).

Alike the trend in overall data, the highest **sales volume** is witnessed in pillows (498 items), whereas additional components account for 967 items (see figure 47). Nevertheless, latter shall not gain special attention, since revenue generated within this product category is strictly confined, solely making up 7.32 % of annual revenue in Austria.

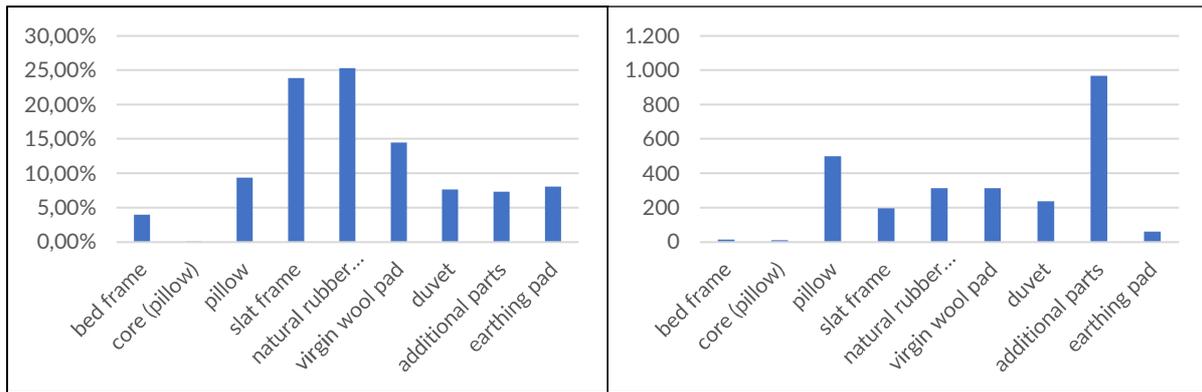


Figure 47: Share of annual revenue (left) and sold items (right) of the research object's Austrian stores. Product-categorical distribution. Country-based results. Own elaboration.

Assessing consumers' expenses on product categories over months, the outcome is that the highest share of annual revenue is registered in October (13.69 %), followed by December (12.83 %), May and September (both 11.67 %) (see figure 48).

Thus, the most lucrative quarter is quarter four (30.02 % of annual revenue), whereas the third quarter occupies the second place (26.64 %).

As regards the different product groups responsible for the high revenue in October, natural rubber mattresses are sold most with 25.92 % of monthly revenue, however being on track with overall-data trend; slat frames account for 20.22 % and virgin wool pads for 12.77 % of monthly revenue in October 2019. The same ranking is valid for December, September and May, except the latter indicates more revenue generated with slat frames (27.52 %) than natural rubber mattresses (25.83 %).

Similar to overall data, natural rubber mattresses, slat frames and virgin wool pads are accountable for the most successful months in Austria.

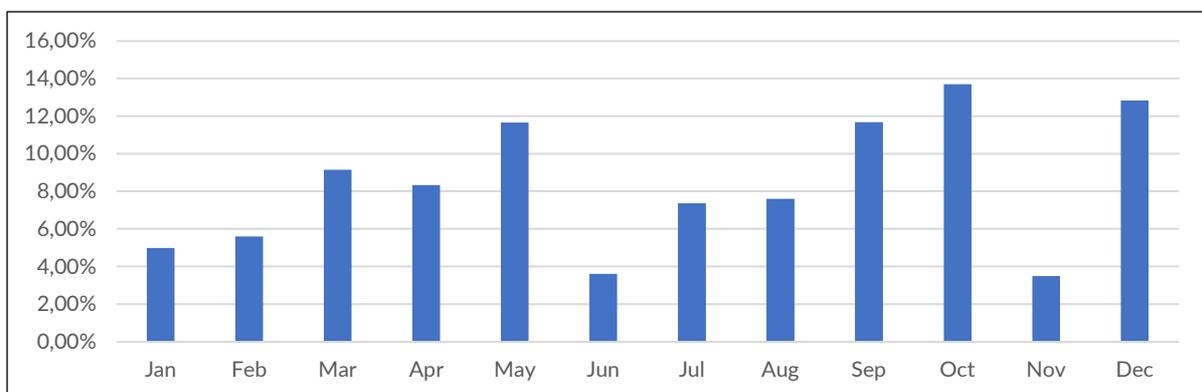


Figure 48: Share of annual revenue of research object's Austrian stores. Monthly distribution. Country-based results. Own elaboration.

6.2.2.2.2 Switzerland

Having a look at the **Swiss market**, the **product categories which made up the biggest portion of revenue** are natural rubber mattresses (18.94 % of annual revenue), slat frames (18.24 %), pillows (15.83 %) and virgin wool pads (12.64 %) (see figure 49).

Switzerland indicates the same trend as Austria, witnessing more revenue generated through natural rubber mattresses than slat frames. Thus, Austrian and Swiss customers seem to share similar interests. Moreover, pillows are more popular than virgin wool pads, which has also been true for overall data but not for Austria.

The highest **sales volume** is registered in pillows (1,277 items) besides additional parts (2,218 items) (see figure 49).

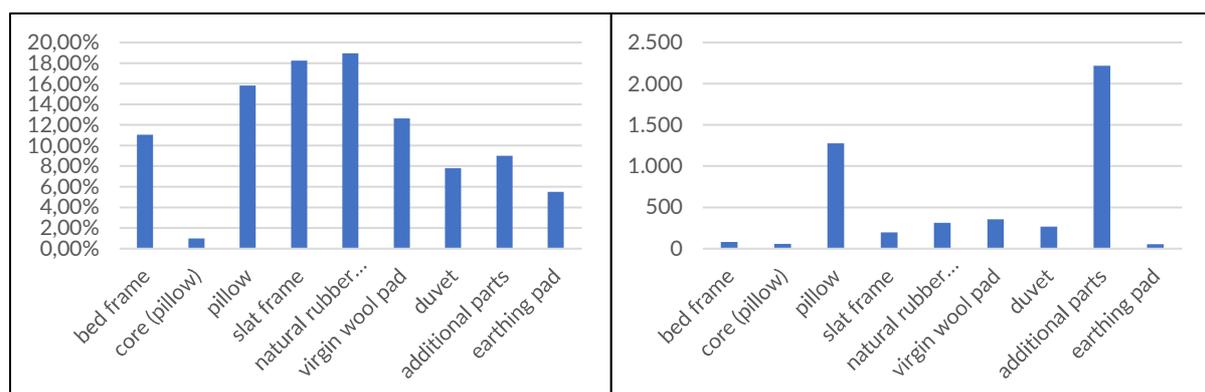


Figure 49: Share of annual revenue (left) and sold items (right) of the research object's Swiss stores. Product-categorical distribution. Country-based results. Own elaboration.

As regards the development of **consumers' expenses on different product categories over months**, data analysis shows that the highest shares of annual revenue are recorded in October (11.70 %), December (10.51 %) and September (10.13 %). Like in the case of overall data, most revenue is generated in quarter four (30.32 % of annual revenue) and quarter one (27.50 %).

In the event of Switzerland, quarter one was extraordinarily profitable for the company.

Concerning the product groups which are responsible for the high revenue in the before-mentioned months, slat frames and natural rubber mattresses are almost sold to the same extent: whereas slat frames generate 17.09 %, natural rubber mattresses make up 17.06 % of monthly revenue. Moreover, bed frames account for 14.21 % in October. In December, natural

rubber mattresses are most lucrative (19.21 %), directly followed by pillows (18.02 %) and slat frames (14.57 %).

Different from Austria but similar to overall data, pillows are especially popular in December.

September again records the highest revenue in slat frames (20.56 %), natural rubber mattresses (20.45 %) and virgin wool pads (14.30 %).

As data proves, the most lucrative product categories enjoying the greatest popularity among Swiss customers in October and December are natural rubber mattresses and slat frames. However, virgin wool pads are less relevant in the Swiss market, scoring even below pillows in the most successful months. Yet, bed frames share a higher degree of overall turnover than in overall data and in the Austrian market.

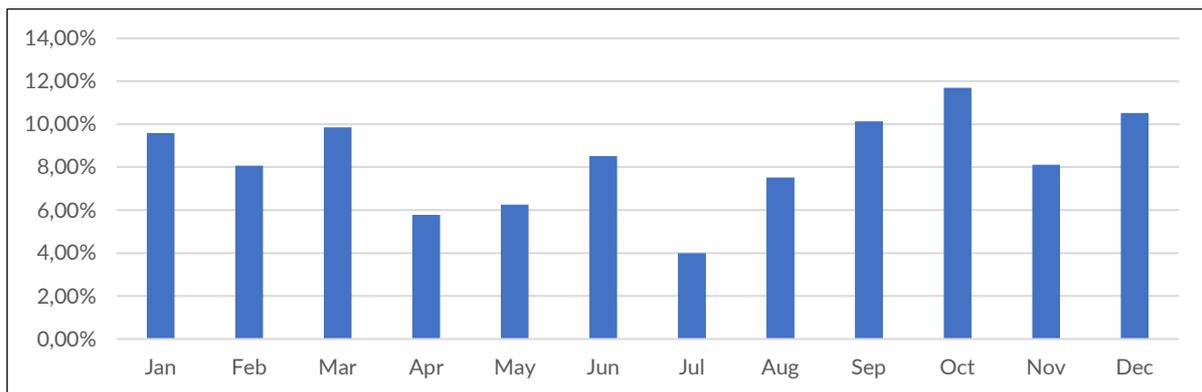


Figure 50: Share of annual revenue of research object's Swiss stores. Monthly distribution. Country-based results. Own elaboration.

6.2.2.2.3 Germany

In **Germany**, consumers' expenditure is highest in the **product categories** of slat frames (21.66 %), natural rubber mattresses (17.84 %) and pillows (15.23 %) (see figure 51).

Interestingly, customers seem to react more sensitively towards earthing pads in Germany than in all other countries, accounting for 12.10 % of annual revenue, whereas virgin wool pads only make up 11.38 % (see figure 51). Concordant with overall data but diverse to Austria and Switzerland, slat frames are more popular than natural rubber mattresses in Germany. Pillows seem to gain significant attention among German customers.

Pillows witness the highest sales among all product categories and almost an equally high sales volume as in Switzerland (1,283 sold items); even more than additional parts (1,025 items) (see figure 51).

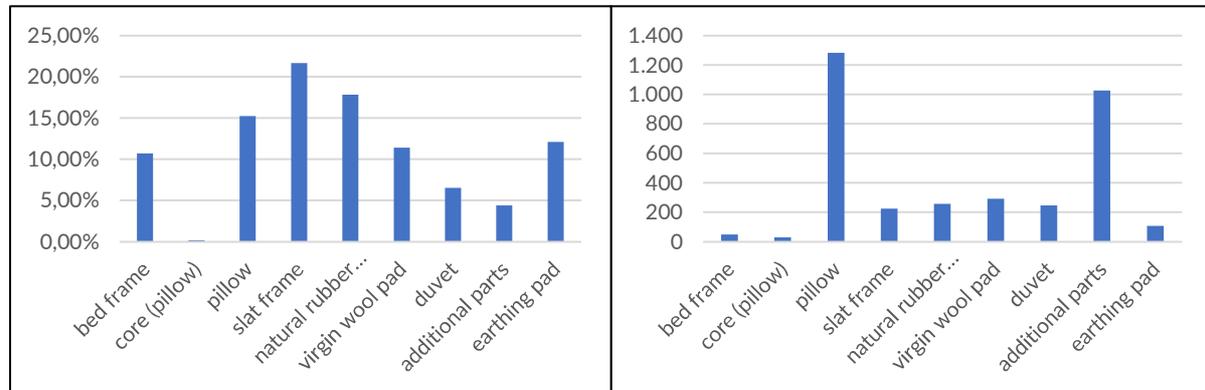


Figure 51: Share of annual revenue (left) and sold items (right) of the research object's German stores. Product-categorical distribution. Country-based results. Own elaboration.

As regards **monthly generated revenue and consumers' expenses on products**, January is the most successful month in Germany (11.42 %), followed by November (10.29 %), October (10.22 %) and December (9.93 %).

The highest share of annual revenue is recorded in quarter four (30.44 % of annual turnover), followed by quarter one with 25.45 % share of annual revenue.

The product groups which are responsible for the high revenue in January are slat frames (20.89 % of monthly revenue), natural rubber mattresses (18.56 %) and bed frames (16.73 %). Success in November comes mainly through slat frames (21.46 %); further, bed frames (16.38 %) and pillows (16.12 %) are responsible for the high monthly revenue. October shows a particularly high revenue in slat frames (22.24 %); moreover, natural rubber mattresses (17.86 %) and bed frames (15.03 %) generate a significant amount of turnover, contributing to the prosperous monthly outcome. Alike overall and Swiss data, pillows are particularly relevant for December's revenue, which rank third (19.13 %).

In contrast to all other countries, January is the most lucrative month in the German market. As German data reveals, slat frames are more decisive for the highest monthly revenues than natural rubber mattresses; the reverse is true for overall data and Swiss plus Austrian data. Bed frames are more successful in Germany than in Austria; Switzerland shows a trend which goes in line with German results as regards bed frames. Further, virgin wool pads contribute less to turnover in the most successful months.

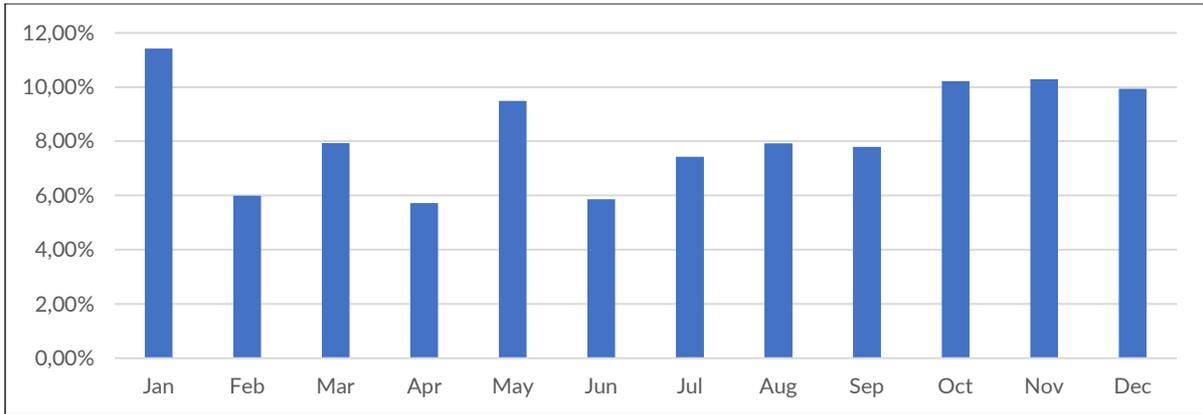


Figure 52: Share of annual revenue of research object's German stores. Monthly distribution. Country-based results. Own elaboration.

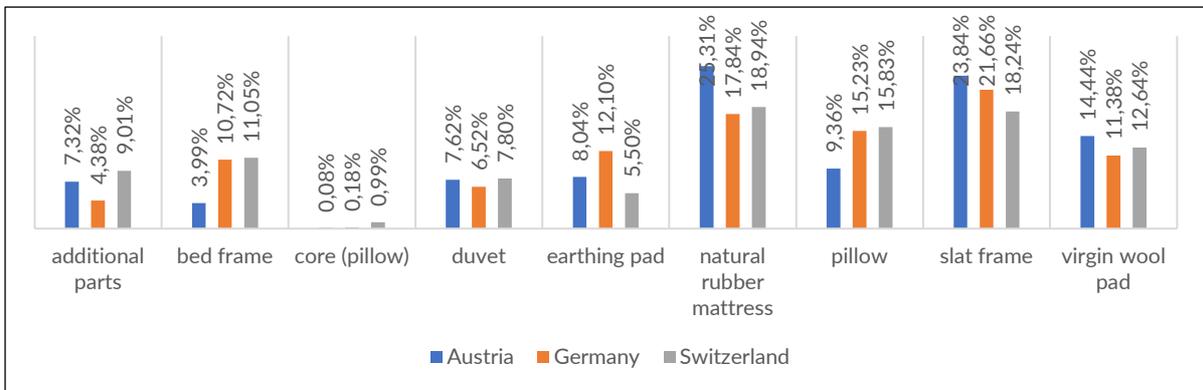


Figure 53: Share of annual revenue per product category of the research object's overall stores. International comparison. Own elaboration.

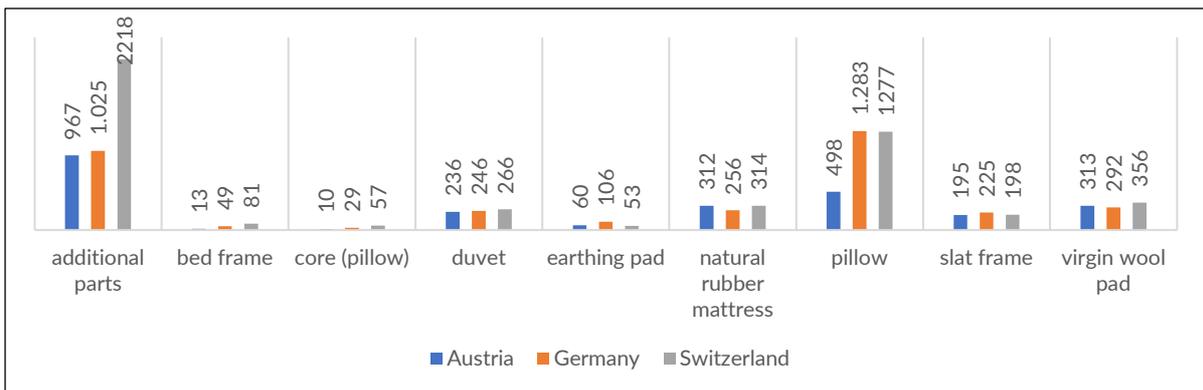


Figure 54: Sales volume per product category of the research object's overall stores. International comparison. Own elaboration.

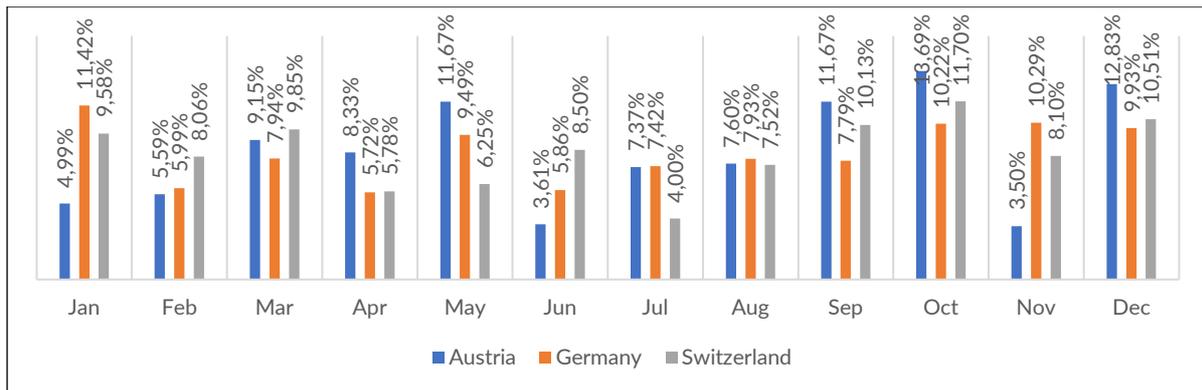


Figure 55: Share of annual revenue per month of research object's overall stores. International comparison. Own elaboration.

6.2.2.3 Store-based results

The most lucrative market in the DACH region is Switzerland with a share of 44.13 % of annual revenue, followed by the German market (30.99 %) and Austrian market (24.88 %).

Germany is the most intensely covered market with a total of nine stores, followed by Switzerland with five shops and Austria with three retailers.

Given these facts, it might be surprising that the highest annual revenue is generated in a Swiss store which is directly followed by two Austrian stores (see figure 56).

Setting this outcome into relation with market coverage in the DACH region, the findings of data analysis might be surprising. Whereas Swiss stores are uncovered to be particularly powerful and profitable, there is a high (still unmet) potential of German stores. The German market would have the distributional competence to serve customers properly and, as data reveals, currently does not play out its asset of customer proximity. The great success of Austrian stores might partially come with home advantage, since the company puts a focus on promotion in Austria, attracting those customers who are sensitive towards regionality, sustainability and familiarity³⁶.

³⁶ A high degree of familiarity is substantiated by promotional efforts emphasizing the company's great tradition (30-year-old history) and the positioning of a reliable and high-quality business. The customers' need for regionality is met by the nature of the company and its products originated by 100 % from natural raw materials. Moreover, family-owned businesses are widely appreciated especially in Austria, which might help to increase sales further. Values such as "sustainability", "trust", "openness", "engagement" and "quality" are attributes applying to the research object as much as to the majority of other family-owned companies in Austria (cf. "Österreich-Report: Family Business Survey 2018" 2018, p. 37). Thus, an intense growth of 82 % of family-owned businesses in Austria ("Österreich-Report: Family Business Survey 2018" 2018, p. 8) and their subsequent success might indeed be caused by such shared values between customers and the company.

Most orders are made in an Austrian and two Swiss stores with Germany scoring poorest (see figure 56).

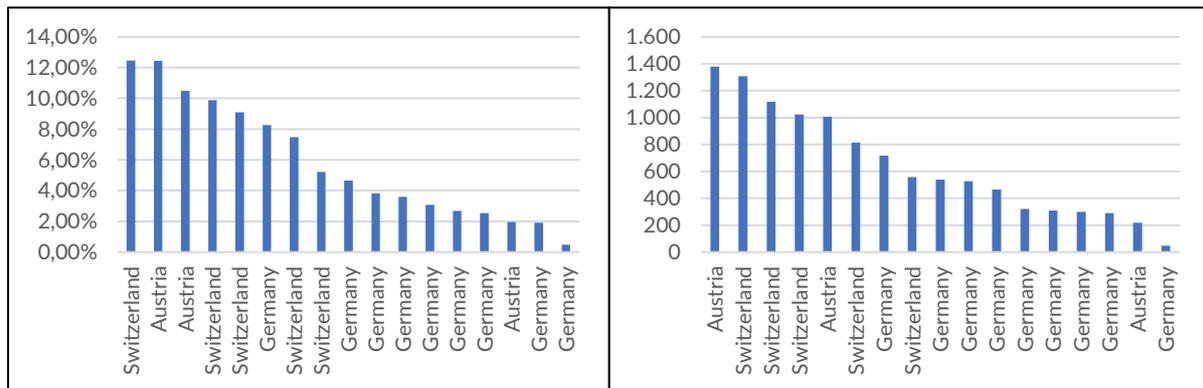


Figure 56: Share of annual revenue (left) and number of orders (right) by the research object's DACH stores. International comparison. Store-based results. Own elaboration.

Having a look at the **development of consumers' expenditure (revenue) over months**, it has already been indicated that the highest share of annual revenue is reported in October (11.74 % of annual revenue), followed by December (10.91 %) and September (9.79 %) (see figure 46).

Interestingly enough, there has not been any German store among the most lucrative shops in these months.

In October, Swiss stores rank first (17.88 % of monthly revenue) and third (11.87 %) with an Austrian store in between (15.80 %). In December, an Austrian store occupies the first place (16.12 %), followed by two Swiss stores (14.19 % and 11.70 %). In September, a Swiss store generates the highest amount of revenue (18.62 %), whereas two Austrian shops are the other retailers which also contribute significantly (17.93 % and 10.82 %) to a prosperous outcome.

7 Discussion

The segmentation basis for the thesis is built upon company-internal data which enabled the author to conduct an *a priori* segmentation for the research object. The thesis offers a framework for making firm steps in the field of market segmentation; yet, the scientific view of Ulwick (2005, p. 64), which warns against the limitations of a segmentation approach solely based on “traditional”/isolated segmentation schemes, shall be kept in mind, since it inheres the risk of focusing on “phantom segments” neither homogeneous nor nonoverlapping. Thus, future business success in the health industry will be dependent on refining segments even more with accurate criteria/variables to continually meet consumers’ ever-changing demands.

The thesis shows that the decision to segment *a priori* or *a posteriori* heavily depends on the marketing strategist’s level of market knowledge. Whereas in changing or new markets, scientific resources propose *a posteriori* segmentation (and thus forming variables after empirical, primary market research has been conducted), *a priori* segmentation sets on criteria which are pre-defined and thus have been established before market research. Latter is especially suitable if strategists already have an idea about how the market is structured, if managerial intuition, secondary data sources or internal databases are existent to become the source of data. That is the reason why the present thesis has been built upon *a priori* segmentation. However, refining the results with *a posteriori* segmentation in the future might allow the company to gain a better knowledge about customer characteristics (see chapter 9).

Almost any segmentation criterion turned out to be appropriate for *a priori* segmentation (see table 8). However, socio-demographic and geographic criteria have been proven to be the most well-known ones. In contrast, *a posteriori* segmentation states that attributes of customers are detected in data sets. Especially purchase behavior and psychographic criteria such as preferences are assumed to be revealed with this technique (see table 9). The segments can rather be of “natural”, “reproducible” or “constructive” nature.

Having a closer look at those segmentation techniques which are assumed to be most successful, it renders visible that a novel segmentation approach should ideally be constituted of a mixture of *a priori* and *a posteriori* segmentation techniques, e.g. deciding *a priori* to go for demographic criteria and combining the outcome with manifold *a posteriori* segmentation variables such as motivations, values, information sources, self-concept, benefits sought etc.

	Dolnicar; Grün; Leisch (2018)	Dolnicar; Leisch (2003)	Dolnicar; Lazarevski; Yanamandram (2013)	Wilson; Gilligan (2001)	Bieger (2015)	Kotler (1988)	Ulwick (2005)	Deloitte (2018)	Deloitte (2012)
geographic		✓	✓	✓ age, sex, income			✓		
socio-demographic	✓ age, gender, country of origin	✓	✓			✓	✓ age, job	✓	✓ age, generation, gender, education, income
behavioral			✓ usage level	✓ usage patterns	✓ sale- and behavior- relevant	✓ product usage	✓ frequency of product usage	✓ technology use, prevention behavior, shopping behavior	✓ use of services
psychographic	✓ motives			✓ lifestyle, personality		✓ attitudes	✓ product usage, product purpose	✓ views, preferences, trusted sources	✓ attitudes
benefits-sought	✓ convenience, value for money, speed, ability to compare offers		✓ intention				✓ needs		

Table 8: Summary of a priori segmentation criteria discussed in the thesis. Own elaboration.

	Dolnicar; Grün; Leisch (2018)	Dolnicar; Lazarevski; Yanamandram (2013)	Wilson; Gilligan (2001)	Bieger (2015)	Ulwick (2005)	Deloitte (2018)	Deloitte (2012)
socio-demographic					✓ age, job		
behavioral	✓ purchase behavior					✓ tech affinity, shopping behavior, loyalty	✓
psychographic	✓ preferences	✓ motivation, information sources, values, self-concept	✓ attitudes	✓ conservative, progressive		✓ reliance on WOM, experts	✓ health status, prevention, treatment preferences
benefits-sought		✓	✓				
outcome-based					✓		

Table 9: Summary of a posteriori segmentation variables discussed in the thesis. Own elaboration.

On the basis of the theoretical insights of Dolnicar; Grün; Leisch (2018, p. 21) concerning the market segmentation analysis process, the three chosen steps of “specifying the ideal target segment”, “collecting data” and “selection of target segments” are going to be scrutinized and applied to the research object, underlined with theoretical knowledge from secondary literature.

7.1 Specifying the ideal target segment

Before segmentation has been executed, there is a need to clearly define how the ideal target segment looks like, thus to forecast how inclined consumers are to purchase a company's products and if they have the necessary income to do so. For this purpose, consumer market analysis has been conducted, which can be found in chapters 6.1.3, 6.1.4, 6.1.5.

Risk mitigation is essential for a business with restricted resources. Hence, choosing selective specialization (the importance of a niche for SMEs has been thoroughly outlined) is more reasonable than concentration on one segment or complete market coverage. Even though differentiated marketing would come with the likelihood of spreading risk among several segments, it is not advisable. Drafting diverse marketing programs for varying segments almost always means high costs concerning product modification, production costs, administrative costs, storage costs etc. Moreover, many companies commit the mistake to “over-segment” customers, which jeopardizes profit potential even more.

Literature research has indicated that the smaller the company size, the more restricted capacities usually are. Owing to this, SMEs such as the research object should better go for confined segments where competition is low. Since success of every company primarily depends on how accurately its offer meets the needs and desires of the target segment, it will be paramount for the company to become clear about objectives (e.g. long-term profit potential, added value). This step helps figure out what and how many segments the business can serve best with which tools and products, keeping segmentation costs always on a balanced degree. Thus, objectives call the tune for the selection of target-segment characteristics.

If the SME wants to reach the goal of becoming the market leader, it might either choose a small segment such as a niche (and thus focus its resources). If the goal is predestined to become a luxury/quality brand, it might look for high-income segments. If it wants to foster a sustainable image, it might address environmentally conscious segments.

If it looks for spreading risk, it might reach out to manifold segments.

If it wishes to be innovative and gain new knowledge,
it might target a new market etc.

With missing objectives, it will not be possible to make a final suggestion about how the ideal target market may look like. However, Table 10 shall serve as a basis for the specification of the ideal target segment, summarizing both knock-out and attractiveness criteria discussed in the thesis. Once the research object has fixed its objectives, it can adapt this conceptual scheme accordingly.

Besides company objectives, resources are leading principles when it comes to specifying the ideal target segment. Generally speaking, the higher the resources, the bigger the segment size which the company can satisfy.

	Kotler (1988)	Bieger (2015)	Dolnicar; Grün; Leisch (2018)	Baack (2019)
size	✓	✓ actual and potential cons.	✓ ROI	
profitability	✓	✓		✓
growth	✓	✓		
low risk	✓			
scale economies	✓			
purchase behavior relevance		✓		
homogeneity among segments			✓	✓
heterogeneity between segments			✓	✓ distinction
measurability/identification		✓	✓	
match			✓	✓ comp. strengths vs. cons. needs
reachability/accessibility		✓	✓	✓
actionability		✓ significance for the application of marketing tools		✓
temporal stability		✓ supply- or demand- related		✓
handling costs		✓		
strategic significance		✓		
competition		✓		

Table 10: Summary of knock-out and attractiveness criteria discussed in the thesis. Own elaboration.

7.2 Collecting data

Data analysis is based on empirical data, whether in the event of *a priori* or *a posteriori* segmentation. As Dolnicar; Grün; Leisch (2018, p. 41) suggest, different types of data sources should be ideally combined to get the most out about consumer characteristics. Since the research object has not made any market research in the form of market surveys or experimental studies yet, different case studies served as a substitute to scrutinize the existing consumer market and to consequently gain knowledge about the B2C consumer healthcare market and sleep health sector in particular. With company-internal data, a multiple-variable approach was implemented to collect customer data via primary research.

7.2.1 Data from secondary research

The author could derive fundamental inspiration from a secondary-literature-based research on segmentation criteria; this assessment shall be shortly summarized to clarify how it could help complement the actual segmentation approach.

Furthermore, chapters 6.1.3 and 6.1.4 have been dedicated to a sound market research of Switzerland, Germany and Austria. Later in this chapter, the most essential findings of secondary-literature research, also comprising the healthcare and bed furniture market, are summarized to draw a concrete picture of how the appropriate target market could look like, based on actual research findings.

7.2.1.1 Market segmentation criteria

Dey (2013, p. 257) puts an emphasis on lifestyle habits as a reliable indicator for individual behavior with specific relevance for the healthcare sector. Psychographic criteria could be also suitably combined with socio-demographic segmentation, e.g. choosing a person's marital status to find out whether consumers sleep without or together with a partner. Further, using the job fields of consumers as segmentation basis can be favorable, as the market research revealed that certain employees show a high prevalence rate of sleep disorders. In order to classify consumers more effectively, it might also be interesting for the research object to make use of the knowledge of the VALS™ framework. Another fruitful approach can be to shed light on the decision role which is inherent in consumers and in people interested in buying products, such as "initiators", "influencers", "deciders", "buyers" and "users" (Kotler; Keller 2012, p. 249). Becoming clearer can help the company target consumers at each particular stage of the decision-making process, using its already existent, diverse and well-developed information channels and promotion activities accurately. "Occasion" as a segmentation criteria seems to be significantly interesting for a health provider who draws upon sleep solutions, since health products are always related to some sort of need related to physical or mental well-being such as back pain, symptoms of insomnia, depression, injuries etc. Categorizing customers into three different types of consumers based on Dey (2013), might offer a deeper understanding about customers' interests and helps draw a concrete picture about the occasions in which customers turn to the company: whether it is for the reason of mere health consciousness ("health behavior"), in the search for a remedy to cure ("illness behavior") or recognizing sickness and searching for consultancy ("sickness behavior") (cf. Dey 2013, p. 254).

Digitalization has enabled marketers to choose from a broader variety of behavioral criteria (cf. Artun; Levii 2015, p. 48). Thus, putting an emphasis on user engagement in emails, clicks on online ads and social media interaction might enable the company to segment customers while keeping costs low. This data might be further combined with a benefit segmentation based on the purchasing relevance of products for customers; a similar scheme was stressed by Ulwick (2005, p. 64) who suggests adding “needs” data as an additional source of customer information for segmentation. Nonetheless, Ulwick (2005, p. 67) raises awareness that this comes with the risk of failing to accurately segment, since the criteria “benefit” is often misunderstood by “solutions, specifications, needs, benefits, and the occasional outcome”, which are not the same. Some experts consider an outcome-based segmentation a better alternative, putting the focus on the job-to-get-done by customers. Be that as it may, many experts hold on to the belief that it is this “originally hard-to-access” online customer data which – thanks to the currently rapidly evolving digital enhancement – offers the best insight into target audiences for the highest possible engagement (cf. Bartz 2014).

7.2.1.2 Healthcare market

Seen from the angle of financial investments, Switzerland is the most promising country for the research object’s business. A high degree of overall, out-of-pocket and governmental expenditure invested in health underlines the market potential for health products specifically in this country. Fact is that sleep is considered to be the biggest variable influencing human health; this also means that most widely spread illnesses such as noncommunicable diseases (affecting 70 % of the world population) such as cardiovascular disease, cancer and diabetes (cf. WHO 2019, p. 31) could be treated and prevented appropriately with the company’s products. Sommer (2018, p. 32) has shown that health consciousness is rising proportionally to age. Adhering to elderly people in customer acquisition would be further recommendable due to their tendency to spend money in health (cf. Innofact Marktforschungsinstitut 2018). Furthermore, they are more often affected by common health problems such as dementia, which is always related to sleep disorders (cf. Frohnhofen 2018, p. 227) and are likely to take benzodiazepines to combat sleep disorders or anxiety (cf. OECD 2019, p. 226). In the latter case, alternative sleep solutions could represent a healthy and attractive substitute to medication without side effects. Further, LOHAS promote long-standing relationships, demonstrate love of nature and care for a healthy lifestyle. As far as socio-demographic variables is concerned, LOHAS are to a major part married (56.6 %) and female (64 %) (cf. Statista 2019, p. 2). Addressing LOHAS, data proves that advertisement with an emphasis on

music, books or cooking/recipes (especially vegetarian) would match their interests perfectly (cf. Statista 2019, p. 18).

In the event of global market development, countries such as Spain, Portugal, Iceland, Slovenia or Estonia are recommendable to target, as they show high prevalence rates of people who take benzodiazepines (cf. OECD 2019, p. 227).

Concerning the sleep health consumer market, research reveals either women aged 60 and above or elderly adults to be specifically confronted with insomnia (cf. Roth 2007, p. 7). These findings are concordant with the study results of Grobe; Gerr; Steinmann (2019, p. 13) who prove that women in Austria are 1.5 times more likely to suffer from sleep disturbances than men. Frequent symptoms of insomnia are non-organic sleep disorders, difficulties falling asleep and problems maintaining sleep; however, sleep apnea is the most popular illness to be encountered among “minor sub-categories” of sleep disorders (cf. Grobe; Gerr; Steinmann 2019, p. 102f). More specifically, shift workers and unemployed people are inclined towards difficulties falling asleep or sleep disruptions (cf. Grobe; Gerr; Steinmann 2019, p. 18).

In Germany, regions such as Berlin, Bremen, Saarland and Bayern are most attractive for targeting, since they feature the highest prevalence rates of employed people diagnosed with sleep disorders and corresponding growth rates.
(cf. Grobe; Gerr; Steinmann 2019, p. 112-115)

Interestingly enough, the most affected job fields are bus and tram drivers, machine and plant operators, property and personal protection and dialogue marketing (especially call center), since they show a great likelihood for shift working and health burdens (cf. Grobe; Gerr; Steinmann 2019, p. 153). In addition, housewives/housemen feature a higher tendency to deal with sleep disturbances than employed people (cf. Grobe; Gerr; Steinmann 2019, p. 107). In Germany, insomnia syndrome is particularly prevalent in people with low socioeconomic status (3.5 higher risk than high-income earners). Female citizens and inhabitants from Western Germany (mainly male) are most affected societal populations (cf. Schlack et al. 2013, p. 745). The “TK Schlafstudie” has found people who were sharing their bed with a partner to inhere more risks of dealing with sleep disorders than singles (cf. Wohlers; Hombrecher 2017, p. 15). Fact is that depression, anxiety or schizophrenia almost always correlate with insomnia (cf. Göder et al. 2017, p. 321) and that people dealing with insomnia face a twofold risk developing depression (cf. Baglioni et al. 2011). In Europe, need for psychiatric assistance is especially

prevalent in Switzerland, Liechtenstein and Germany (cf. European Commission 2018). Thus, these three countries come with extensive demand for sleep solutions to treat mental problems.

7.2.1.3 Bedroom-furniture market

Switzerland has turned out to be the market which invests most in bedroom furniture worldwide; this corroborates the suggestion to target the Swiss market. Moreover, the *bed industry* of Switzerland is the most successful among all DACH countries, followed by Austria. Germany currently witnesses a decrease in revenue, for which it is recommendable to put the focus on Switzerland or Austria instead. The bed industry turns out to be even more successful than the *mattress industry*: the *bed market* is expected to be growing by 3.8 % until 2023 and indicates a revenue four times higher in Switzerland than in Germany and more than twice the size in Austria, compared to Germany. Nonetheless, the *mattress market* is going to grow even more: in Switzerland, the mattress market is twice the size of Austria and almost triple the size of the German mattress market. However, the corresponding market is decreasing in Austria, but rising in Switzerland and Germany.

7.2.2 Case studies

Motorola's Radio Products Group gives a clear impression of how a methodological draft of an outcome-based segmentation can look like. Furthermore, it illustrates how powerful this segmentation scheme truly is. Outcome-based segments come with huge potential for the firm, since they deal with the jobs customers want to get done and uncover customer needs which available products fail to meet. Thus, they offer a deep understanding of what customers actually want and how the competition's offer looks like. The author would suggest applying this segmentation scheme *a posteriori*, that is to refine already existing customer segments with it.

Another mix of *a priori* segmentation criteria and *a posteriori* segmentation variables has been made in **Deloitte 2018 survey of US healthcare consumers**. It illustrates how a healthcare provider can enrich its customers' demographics with data such as preferences, attitudes and behaviors of consumers. Among twelve chosen criteria, three main topics have been emphasized in data: interaction with health experts, purchasing behavior and technology use. The outcome are four segments: Trailblazers, Prospectors, Homesteaders and Bystanders. This segmentation approach can serve the research object as a fundament for their segmentation,

since it comes with clear practical implications presented in the case study. Thus the approach is ideal for SMEs with limited resources, as it can rely on already established segments and promotional guidelines. This means a reduction of financial, time-based and personnel resources. The topic of promotion/communicative interaction with customers fostered in the survey is very useful for the research object, emphasizing promotion in its marketing activities. Virtual visits, an app to engage, “social and patient-advocacy groups”, wearables, off-hour appointments, collaboration with familiar public sites (e.g. grocery stores) are just a few of the many useful measures suggested by Deloitte.

A further orientation towards consumer behavior has been outlined in **Deloitte: a strategic view of consumer segmentation**. It shows the importance of socio-economic data and behavioral criteria such as health status, actual prevention and treatment preferences in the field of healthcare, resulting in six different clusters. The analysis demonstrates that the majority of consumers goes for a “passive patient” approach; thus, though following expert advice they do not reach out actively, just for the sake of necessary treatment due to illness, sickness, health problems etc.

Provided that the research object wants to build upon identified segments from the case study, “Sick & Savvy” segment is the most promising cluster which would be ideally targeted with a marketing-stimulation strategy promoting alternative products.

7.2.3 Data from primary research

The actual chapter summarizes the results of the internal data analysis, comprising two different data sources: in-store reports and customer relationship management (CRM) tool. The author has applied diverse macro-segmentation methods for both sources, leading to **overall (cross-store)**, **country-based** and **store-based** categories. Whether the research object puts the focus on one or the other is left to the management board. Anyway, this decision may be heavily dependent on the company’s strengths, long-term and short-term objectives, resources etc.; once being clear about these topics, the company might then decide whether it wants to treat the DACH region as one homogenous market (applying a domestic-market strategy³⁷), and thus rely on overall (cross-store) data, or divide the DACH region into three

³⁷ A domestic-market strategy with export activities means to distribute products and services from a domestic market to foreign countries without making major differences “in products and overall operations in other countries”(Chen 2018, p. 10); thus going for an ethnocentric (cf. Drachal 2014, p. 85) approach.

different markets (applying an international-market strategy³⁸), and therefore use country-based data. Another option would be to apply store-based data, adapting marketing programs to the most successful retailers with the highest order ratio, number of customers, number of new and returning visitors or new-to-returning visitor ratio. Certainly, this would also be a method for the SME to act both efficiently and effectively.

The most significant results for each of the three methods are discussed now. Due to the extensive elaboration in chapter 6.2, results shall be generalized and kept short, though significant.

1) In-store reports

Overall data shows:

- The main customer is female and aged 50 (*demographic criteria*)
- She is a new customer (*behavioral criteria*), visiting the company for a spontaneous visit, being attracted by the shopping window and making a final order (*psychographic criteria*).

Country-based data indicates the following outcomes.

Austria:

- male and female customers are almost prevalent to the same extent and aged between 40 and 50 (*demographic criteria*)
- He/she is a new customer (*behavioral criteria*), acquired pro-actively by health experts and making a final order (*psychographic criteria*).

Switzerland:

- customers are female and aged 50 (*demographic criteria*)
- Since relevant data is ambiguous, it can only be *assumed* that the “most attractive” customer will not be existing but new (*behavioral criteria*). She is rather attracted by the shopping window or gets in contact for past orders. She shows a great likelihood for doing a final order (*psychographic criteria*).

³⁸ An international-market strategy addresses one or more countries, which are usually similar to each other, with adapted marketing programs. Consequently, “products, services and prices [are] adapted to suit local consumer/user behavior and customs” (Chen 2018, p. 12). This approach is then oriented towards a more polycentric (cf. Drachal 2014, p. 86) view.

Germany:

- customers are clearly female and aged 50 (*demographic criteria*)
- She is a new customer (*behavioral criteria*), coming through the shopping window or for past-order issues and making a final order (*behavioral criteria*).

Concerning **store-based results**, *behavioral* results demonstrate that:

- Swiss stores are leading with regard to *order ratio*
- As regards *number of customers*, a Swiss store ranks first, followed by a German and Austrian store.
- The *number of new customers* is the highest in a German store, followed by two Swiss stores.
- The highest *new-to-returning-visitor ratio* is witnessed in a Swiss store, followed by two German stores.

2) Customer-relationship-management (CRM) system

Overall *behavioral* data reveals:

- The highest *consumers' expenses (revenue)* flows into slat frames and natural rubber mattresses
- The product category with the *highest sales volume* is pillows
- *Consumers' expenditure (revenue)* over months is the highest in October flowing into natural rubber mattresses, slat frames and virgin wool pads

Country-based *behavioral* data indicates the following results.

Austria:

- The highest *consumers' expenses (revenue)* flows into natural rubber mattresses and slat frames
- The product category with the *highest sales volume* is pillows
- *Consumers' expenditure (revenue)* over months is the highest in October flowing into natural rubber mattresses, slat frames and virgin wool pads

Switzerland:

- The highest *consumers' expenses (revenue)* flows into natural rubber mattresses and slat frames
- The product category with the *highest sales volume* is pillows

- *Consumers' expenditure (revenue)* over months is the highest in October flowing into slat frames, natural rubber mattresses and bed frames

Germany:

- The highest *consumers' expenses (revenue)* flows into slat frames and natural rubber mattresses
- The product category with the *highest sales volume* is pillows
- *Consumers' expenditure (revenue)* over months is the highest in January flowing into slat frames, natural rubber mattresses and bed frames

Store-based *behavioral* results indicate that:

- The *highest total revenue* is witnessed in a Swiss store, straightly followed by two Austrian stores.
- The *highest number of orders* is filed in an Austrian and two Swiss stores.
- The *development of consumers' expenditure (revenue) over months* reveals October to be most successful, with Swiss stores ranking first and third, while an Austrian store occupies the second position among the most revenue-contributing/decisive stores.

7.3 Selection of target segments

In order to determine the accurate target segment, it would be now time to make use of a "decision matrix", for which table 2 serves as a sample illustration. Since a market forecast does not form part of the thesis, the illustration shall be seen as a draft to be adapted by the research object, as soon as being clear about objectives, resources and selected knock-out and attractiveness criteria.

7.3.1 Primary research

Table 11 and 12 show an overview of the most attractive target customers gained from in-store data. Table 13, 14 and 15 illustrate the most attractive customers identified through CRM data. Again, only the most relevant findings are taken into account: e.g. data about overall (cross-store) and country-based results are scrutinized, whereas store-based data is not included.

DEMOGRAPHICS					
	gender		age		
			40	50	60
overall data					
Austria					
Switzerland					
Germany					

Table 11: Rating attractiveness of primary-research (in-store reports') demographic data for target-segment selection. Green indicates the most attractive, yellow mediocre, orange sufficient and red unattractive criteria to target; light colors are inferior to bright colors. Own elaboration.

PSYCHOGRAPHICS & BEHAVIOR											
	new/ existing cust.		channels					CLC			
	new	existing	returnees	shopping window	Google	acquired	recommenda- tions	order	mere consultancy	aftercare	new appointment
overall data											
Austria											
Switzerland											
Germany											

Table 12: Rating attractiveness of primary-research (in-store reports') psychographic & behavioral data for target-segment selection. Green indicates the most attractive, yellow mediocre, orange sufficient and red unattractive criteria to target; light colors are inferior to bright colors. Own elaboration.

PRODUCT CATEGORIES – revenue						
	slat frame	nat. rubber mattress	pillow	virgin wool pad	bed frame	earthing pad
overall data						
Austria					-	
Switzerland						-
Germany						

Table 13: Rating attractiveness of primary-research (CRM) product-categorical data for target-segment selection. Green indicates the most attractive, yellow mediocre, orange sufficient and red unattractive criteria to target; light colors are inferior to bright colors. Own elaboration.

PRODUCT CATEGORIES – sales volume						
	slat frame	nat. rubber mattress	pillow	virgin wool pad	duvets	earthing pad
overall data						
Austria						
Switzerland						-
Germany						

Table 14: Rating attractiveness of primary-research (CRM) product-categorical data for target-segment selection. Green indicates the most attractive, yellow mediocre, orange sufficient and red unattractive criteria to target; light colors are inferior to bright colors. Own elaboration.

MOST SUCCESSFUL MONTHS – revenue							
	January	March	May	September	October	November	December
overall data						-	
Austria	-					-	
Switzerland			-			-	
Germany				-			

Table 15: Rating attractiveness of primary-research (CRM) revenue data for target-segment selection. Green indicates the most attractive, yellow mediocre, orange sufficient and red unattractive criteria to target; light colors are inferior to bright colors. Own elaboration.

7.3.2 Secondary research

Figure 57 compresses the most attractive segments as a solution to target, using *secondary* research as a basis.

The sleep-health market analysis has revealed that people who sleep alone feature a better sleep quality (cf. Wohlers; Hombrecher 2017, p. 15), which means that couples are more likely to be confronted with sleep disorders. Furthermore, shift workers (bus and tram drivers, machine and plant operators, property and personal protection and dialogue marketing/call center), and housewives are those job fields with the highest likelihood for difficulties falling or maintaining asleep. Moreover, market research has identified sleep disorders to be particularly prevalent among shift workers and housewives. The VALS™ framework has uncovered that “thinkers” have the necessary income, strive for value, functionality and durability in products with a preference for history/tradition, whereas “achievers” are committed to family and career, being inclined towards premium products. Therefore, these two segments are promising as well. Patients affected by NCDs, especially women, represent another potential market and elderly populations are specifically desirable to target. Patients of mental disorders are also qualified as a high-potential target market for the firm. In Germany, low socioeconomic status and male citizens from Western Germany have been found to be particularly confronted with sleep problems.

A niche comes with great potential for SMEs; thus, a segment valuing highly the pristine nature of products (e.g. LOHAS), which guarantees complete product acceptance, could be further confined to those sustainability-oriented populations with a special demand for sleep as therapeutic measure. Well-experienced knowledge qualifies the company as a key player in the healthcare industry; this highlights the potential for success in this niche. LOHAS' psychographic makeup matches interests such as music, books and cooking/recipes (especially vegetarian). Furthermore, since segment growth is vital, it would be recommendable to focus on best agers who feature desirable purchasing power.

The key to reach the accurate target segment?

Niching LOHAS or “best agers” down by refining psychographic/socio-demographic segmentation with behavioral criteria such as occasions would supply the company with the necessary insights about consumers’ physical and mental well-being, whether they are coping with back pain, depression, injuries etc. as a “trigger” to turn to the company.

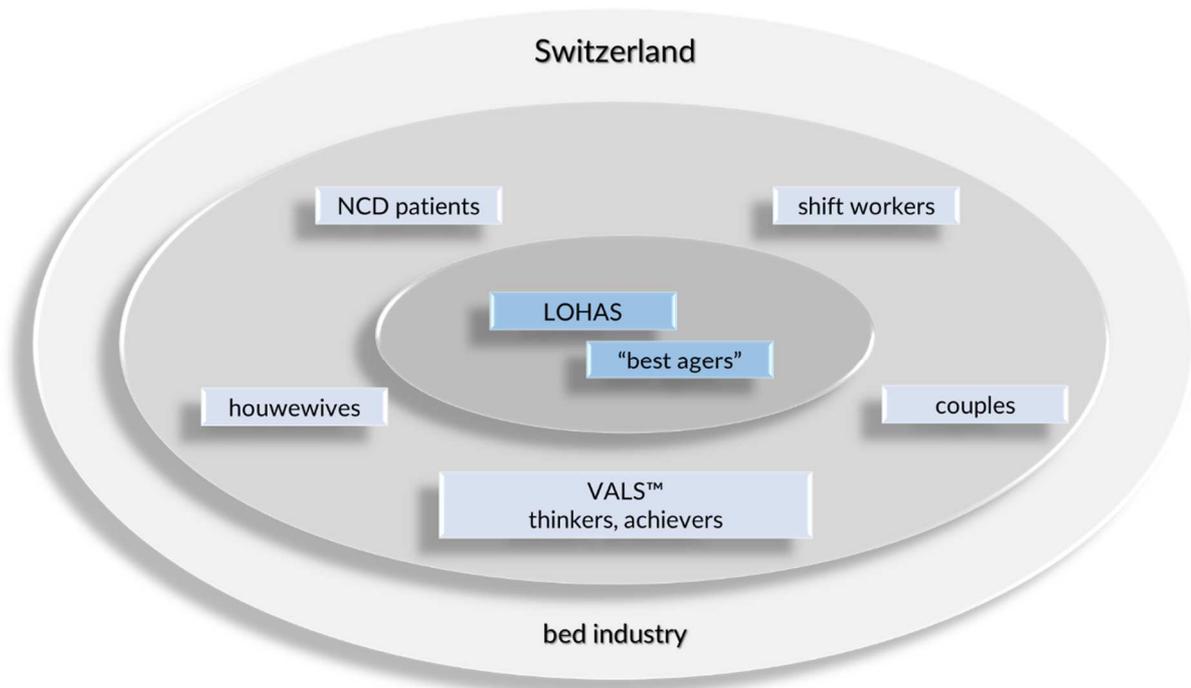


Figure 57: Suggested target segments for the research object, based on secondary market data: healthcare industry, bedroom furniture market. Target-market attractiveness is expected to decrease from the inside out. Own elaboration.

7.4 WOM marketing

As it has been thoroughly discussed in chapter 6.1.6.2.4, WOM marketing is essential for the research object, since its beds are mainly constituted of “experience qualities” and “credence qualities” (Meffert et al. 2019, p. 36f). This calls for recommendations to decrease arising purchasing risk. Because a lack of information for product-quality evaluation and subsequent perceived relevance to purchase (before the transaction has taken place) can be credibly diminished through recommendations and references from former customers.

An orientation towards the Net Promoter Score® (chapter 6.1.6.2.5) is helpful to figure out promoters stimulating business growth through positive WOM. The results of the NPS shows the company its most desirable target audience and gives a well-grounded suggestion where to focus marketing efforts on.

In order to increase the number of promoters among customers, after-sales operations are vital. According measures can be manifold: vouchers for customers who conduct WOM and acquire new customers, (family) events to widen the customer base, expert talks to increase credibility and loyalty etc.

7.5 The inaccuracy of “age” as demographic criterion

Chapter 6.1.5.5 highlighted that, in spite of being one of the most important segmentation variables, chronological age must be applied carefully: psychological age or even alternative variables such as social and physical ageing (e.g. proposed by Zniva; Weitzl (2016)) may offer transparent and more suitable insights into consumer behavior than mere chronological age does, in particular as regards seniors. With this knowledge in mind, manifold layers of age might be taken into consideration at the time of segmenting and targeting the mature market.

Adapting the marketing mix more to the felt age than to chronological age prevents the company from failing due to stigmatizing products.

8 Implications

An overall contribution of the findings to the research field could be realized. The thesis illustrates how an open, holistic, and flexible approach can favor a desirable and defined outcome. Along the whole work, an exploratory strategy with a prevailing deductive approach has been implemented: the thesis combines both primary and secondary, qualitative and quantitative data, company-internal research and company-external desk research.

The research field has been able to be enriched with a great learning curve. Step by step, a new framework for consumer segmentation in the B2C healthcare industry has been formed, which is finally grounded in both theoretical-conceptual and practical methods for identifying the appropriate target segment(s).

Up to now, scientific research has mainly revolved around the US market, which is why the thesis has gathered **knowledge with a focus on the DACH market**. Furthermore, past research in marketing shows a tendency to emphasize *rather* the theory behind the market segmentation analysis process or its steps as isolated research fields, the consumer market, the company makeup, *or* practical methods. The thesis proposes an encompassing view, meaning that it provides a **holistic approach towards the entire segmentation analysis process** and offers transparency to understand its interrelations with manifold theoretical-conceptual methods and unfolded practical implications. This qualifies the research findings not just as suitable for the research object but also as consistent with other healthcare players' demands and can contribute to a far greater learning spectrum than it had been originally anticipated.

An additional implication for the research field comes through the findings concerning a **two-step/split-segmentation**. The benefit of mixing *a priori* segmentation with *a posteriori* segmentation has been thoroughly discussed. Certain methods could be uncovered to be particularly successful in the B2C healthcare industry and promising clustering criteria for a split-segmentation have been identified through primary and secondary research. As a consequence, extending traditional and familiar segmentation with novel approaches can be clearly considered as enriching for healthcare providers looking for effective and efficient segmentation solutions.

Finally, the thesis should also **raise awareness of health marketing strategies** and **reduce skepticism towards marketing in the healthcare industry**. This new discipline is in urgent need for further research due to its essential purpose of ensuring that human health and safety are

actively promoted, and customer needs suitably met. The thesis proves how marketing, originally coming with “unfavorable connotation that implies the subjugation of clinical concerns to the bottom line” (Thomas 2008, p. 1), can be successfully, reliably and seriously applied in the medical/healthcare landscape. Valuable insights into the market segmentation analysis process could be gained, supporting health systems and healthcare providers in reducing incompleteness through intuitive marketing analyses, while proposing opportunities grounded in scientific research. This counteracts the risk of inappropriate segmentation strategies and leads to a better resource allocation, which is particularly important for enterprises with confined margins like the research object.

9 Conclusion

The goal of the thesis, to enhance transparency offering a toolbox of methods, has been met. Implicit models underlying the whole market segmentation analysis process have been presented and discussed. The outcome is a framework which is built upon insights from both primary and secondary research, a conceptual, multi-method approach has been demonstrated to gain further insights into the structures and characteristics of the accurate B2C target segment(s) of the research object/in the health industry.

This framework could be established from insights grounded in

- theoretical literature-based sources regarding *a priori vs. a posteriori* segmentation and its pros and cons, target-market evaluation criteria, market selection techniques, segment evaluation criteria, market segmentation criteria/variables and matrices for the selection of target segments.
- secondary research for gaining a deeper understanding of the healthcare market, bedroom-furniture market and current trends of industry. Presented case studies will be particularly helpful, if the company decides to build upon best-practice models in the healthcare industry.
- primary research based on company-internal data (in-store reports and CRM) offers valuable insights into the research object's actual customer base and most attractive and profitable consumers, from which managers can derive the right and suitable marketing activities in the future.

Findings which are paramount for the businesses' *future* daily business shall be emphasized now.

9.1 Unmet potential in Germany

Installing new stores in Bremen, Saarland and Bayern and/or strengthening the Berlin store is recommendable, since sleep disorders are very common in these regions. This indicates a prevalence rate accumulating to 44.4 % and a growth rate of 11.7 % on average. Analysis of in-store reports demonstrate that the customer life cycle ought to be fostered in German stores; particularly the completion stage is lacking effectiveness. Striving towards a higher conversion from interested people to buyers might help to act more efficiently, while reducing the number of people who just take advantage of consultancy without generating revenue. Furthermore, the distributional competence in Germany shall be used in a better way. The

Swiss market was found to be far more successful than the German market, even though counting not far as many retail stores. Thus, the strength of customer proximity should be better played out in the German market. The first step can be additional market research to find the cause for this phenomenon and consequently take action e.g. through a diversified international-marketing strategy with a polycentric view.

9.2 Digitization as an opportunity

In the future, the trend of digitization is likely to conquer the healthcare industry. Connected health services and digital therapeutics will be of great importance to meet future needs of consumers. Users are becoming more open towards interactivity and proactive (self-)management, which confers a crucial role to transparency, convenience, access and personalization. A “virtual health” model has been proposed to foster an integrated health system for supplier and consumer networks, fulfilling needs faster and more holistically.

Moreover, digitalization offers marketers greater and faster insights into customer structures. Data-driven criteria has been revealed as particularly promising for both actual and future segmentation, e.g. user engagement in emails, clicks on online ads and social media interaction. Besides financial attractiveness, refining offline with digital segmentation variables might even help the company to understand consumers on a more granular level for the highest possible engagement.

9.3 Split-segment approach

The actual market knowledge about the research object’s consumers has allowed the author to segment *a priori* (through company-internal data). For the future, refining these findings with *a posteriori* segmentation will enable the company to extend its knowledge about consumers’ purchasing behavior, “needs” data, outcome-based characteristics (the job-to-get-done), consumer preferences, attitudes, behaviors etc. This would certainly mean to conduct additional market research to gather relevant data with which *a posteriori* segments can be built.

9.4 Flourishing future

Outlook for the research object is more than prosperous. The bed market has been identified as particularly successful and with great perspectives in the DACH region. To meet future demand ideally, product development in this product category suggests itself.

Moreover, 45 % of people affected by sleep disorders are found to neglect visiting a physician for their sleep disorders (cf. Grobe; Gerr; Steinmann 2019, p. 104). This finding means high potential for the firm, since the psychological barrier to contact a sleep coach remains much lower than getting in touch with a physician. This unmet demand can be appropriately satisfied through sleep consultancy in a retail setting.

Non-traditional treatment methods, including alternative products, might be more often requested in the future. This is mainly due to emerging activism segments looking for treatment options enabling self-management.

Fact is that the world population is foreseen to increase by 1 billion from 2025 onwards and one-third of the global population is expected to be aged 65 or older by then (cf. PwC Health Research Institute 2018, p. 4). Hence, targeting the mature population does not only inhere great potential now, but shall do so even more in the future.

10 Limitations

Even though the thesis provides the reader with a vast theoretical and practical knowledge concerning the market analysis process of an international SME in the B2C healthcare industry, the thesis also encounters limitations, affording an opportunity for future research.

The thesis has clearly outlined the importance of a “decision matrix” to select the accurate target segment and thoroughly presented the necessary steps for it. However, the author has been strictly confined in its efforts to put this matrix into practice. Therefore, this final step to identify the accurate target segment is left to the research object. The reasons are:

- 1) Due to limited resources and owing to the research scope, a market-segment forecast was not part of the thesis. Yet, doing so is the precondition for a “decision matrix”: even though evaluating segment attractiveness and relative organizational competitiveness on a subjective basis (with certain selected criteria) is feasible, information about market-segment size, as the most significant variable in a “decision matrix”, will remain purely hypothetical, unless a proper sales forecast on profit potential has been calculated.
- 2) At the point of establishing the thesis, the author has not been conferred with further insights into business objectives, resources and selected knock-out and attractiveness criteria. Lacking clarity about these issues, there is no point in doing a forecast for consumer segments; several attractiveness and knock-out criteria underscore the absolute necessity of a good match between all these topics.

Although the thesis applies “traditional” segmentation criteria such as demographic, psychographic and behavioral, the author offers a rather holistic way of segmentation, which considers a multi-method approach to the highest degree possible, combining various segmentation variables, and thus a unique insight into the structure of the consumer market. This insight is grounded in a deep understanding of both consumer-market dynamics (company-external) and the actual consumer base (company-internal) gained along the research process. Hence, the warning of Ulwick (2005, p. 64) against the limitation of “traditional” segmentation schemes – since they inhere the risk of focusing on “phantom targets” lacking a unique set of desired outcomes – has been circumvented in the best way possible.

Even though having gained deep knowledge about three particular steps of the market segmentation analysis process (“specifying the ideal target segment”, “collecting data” and

“selection of target segments”), it is recommendable to implement insights into the whole process. For the sake of completeness, future research should strive towards an integration of every step of the market segmentation analysis, coming to a full comprehension of the concept. More specifically, this means to also shed light on data exploration, the development of a customized marketing mix for target segments or implementing a market segmentation strategy, controlling it and monitoring it.

Scientific research and best-practices/case studies have demonstrated that the greatest potential is not to be found in an exclusive approach, deciding oneself for *a priori* or *a posteriori* but either choose the middle road. Multiple suggestions have been made as to how this can successfully be implemented.

A “golden middle course” closes the circle with what Kant already found in the late 18th century: “all awareness is rooted *a priori* in experience”³⁹
(Kirchner; Michaelis 1907, p. 54-55).
It is an integration rather than an exclusion.

³⁹ [translated by the author]

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12 Appendix

ICD-10-Kode	Diagnosebezeichnung	Personen mit genannten Diagnosen je 1.000 Erwerbspersonen			
		AU-Diagnose	ambulante Diagnose	stationäre Diagnose	beliebige Diagnose
F51.0	Nichtorganische Insomnie	0,12	3,07	0,12	3,16
F51.1	Nichtorganische Hypersomnie	0,01	0,12	0,01	0,13
F51.2	Nichtorganische Störung des Schlaf-Wach-Rhythmus	0,01	0,32	0,03	0,34
F51.3	Schlafwandeln (Somnambulismus)	0,01	0,11	0,01	0,11
F51.4	Pavor nocturnus	0,00	0,05	0,00	0,05
F51.5	Alpträume (Angsträume)	0,00	0,28	0,01	0,29
F51.8	Sonstige nichtorganische Schlafstörungen	0,04	0,93	0,01	0,94
F51.9	Nichtorganische Schlafstörung, nicht näher bezeichnet	0,24	4,65	0,02	4,66
F51	Nichtorganische Schlafstörungen (beliebige Diagnose F51.0 bis F51.9)	0,45	9,22	0,20	9,35
G47.0	Ein- und Durchschlafstörungen (Hyposomnie, Insomnie)	0,61	12,33	1,28	13,49
G47.1	Krankhaft gesteigertes Schlafbedürfnis (Hypersomnie)	0,03	0,51	0,05	0,54
G47.2	Störungen des Schlaf-Wach-Rhythmus	0,01	0,39	0,03	0,42
G47.3	Schlafapnoe	1,74	20,39	2,53	20,92
G47.4	Narkolepsie und Kataplexie	0,02	0,27	0,02	0,28
G47.8	Sonstige Schlafstörungen	0,10	2,09	0,14	2,22
G47.9	Schlafstörung, nicht näher bezeichnet	1,14	19,90	0,10	19,98
G47	Schlafstörungen (beliebige Diagnose G47.0 bis G47.9)	3,63	51,62	4,01	53,23
F51.0, G47.0	Ein- und Durchschlafstörungen (enge Definition)	0,73	15,00	1,39	16,21
F51.0, .9, G47.0, .9	Ein- und Durchschlafstörungen (erweiterte Definition)	2,09	37,07	1,50	38,24
F51, G47	Schlafstörungen insgesamt (beliebige zuvor genannte Diagnose)	4,06	58,55	4,16	60,19

Figure 58: Employed people affected by sleep disorders in accordance with diagnostic origin in Germany in 2017. (Grobe; Gerr; Steinmann 2019, p. 99f)