

Future Perspectives of Food Retail in Germany

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Preface and Acknowledgement

The idea of choosing “the Future Perspectives of Food Retail in Germany” as my bachelor thesis topic was inspired by a hike I have made through Bavaria, the southern part of Germany, in the summer of 2017. During this hike it caught my eye that grocery stores and other stores have been shut down in most smaller villages. In most cases, empty shops were left behind. The disappearance of smaller retailers not only increases the bargaining power of big companies but also increases the amount of effort the consumer has to put in his or her shopping. Thinking about the digitisation and increased ease of delivery, the question if the grocery store will remain the main source of acquiring food arose in my mind. Once I returned to my home town area, situated nearby Cologne, I became aware that this phenomenon does not exist at a denser populated region.

This report is aimed towards all food retailing companies and all organisations and companies holding a stake in the distribution of food.

Special thanks to Patrick Burgess for providing feedback and guidance, to everyone who participated in the conducted survey and to Mrs. Astrid Schmitz, the CEO of my internship company, who helped me with distribution of the survey by putting me in touch with business insiders. Furthermore, I would like to thank Mr. Peter Richrath, Mr. Gregor Hein, Mrs. Anna-Maria Herbst and Dr. Bernd Lüttgens for taking the time and interest providing knowledge and ideas during the interviews and for further distribution of my survey. Above all I would like to thank my parents for all their support during my work.

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Executive Summary

This research project with the title “Future Perspectives of Food Retail in Germany” dealt with current trends and digitization techniques that are relevant for future developments of the food retail in Germany. Intensive desk research was used to create the theoretical framework, which included an overview about the beginning and development of food retailers worldwide and in Germany. It was found that the digitization is competitive threat for the food retail stores but will also allow the food retail to enlarge the distribution channels. This led to formulating the main question: “Which current trends and digitization techniques will influence the future of food retail in Germany?”. As guideline for the elaboration of the answer to the main question of the report, four sub-questions were formulated: “What are current trends and digitization techniques that influence the future of food retail?”, “Which of these current trends and digitization techniques have the most potential in the food retail sector?”, “What changes could these trends and techniques mean for the food retail sector?” and “How can retailers adapt to these changes?”. To gather more information on the research topic, a survey with feedback of 41 participants and four interviews with experts have been performed. As result of the research it is to state, that e-Commerce will not substitute food retail stores in the long term because customers have a strong demand on fresh, high quality and regional products they expect to find in stationary food retail stores in which a high standard of consultancy is expected. As most influential trends and techniques for the future of food retail in Germany the development of omni-channel-offers which allow the combination of stationary and online food retail and the turning shopping into an experience have been identified. For short term, development of delivery services is regarded as most potential. Whereas checkout-free stores have been identified as the future of payment systems and as most important as it supports both customer’s and retailer’s convenience. The combination of omni/multichannel offers and strengthening of the shop experience is the only chance not to be overrun by Amazon and others.

1. Introduction

In this chapter the research topic “Future Perspectives of Food Retail in Germany” is introduced and is divided into four paragraphs; the context of the research topic, elaboration of the theoretical framework and knowledge gap, main question and sub-questions and objectives.

Context of research topic

The distribution of food has changed from food mostly being offered occasionally at markets to the daily offer in grocery stores such as supermarkets, such as Albert Heijn and Jumbo, and discounters like Aldi and Lidl. In comparison to the long time it took to develop supermarkets, the time it took supermarkets to develop themselves is rather short. By only comparing the products offered and store design of an Aldi store from ten years ago and now this rapid development becomes more obvious. Since the introduction of the internet the retail of goods has changed in general. The Retail of food was at first not an option, but this also has changed by now. Again, facing changes of distribution, food retailers must act and apply techniques to keep up with future developments and keep satisfying future customer demands.

Multiple professionals have performed research on the development of the retail sector within the food industry. Bulwiengesa, an analytic company from Germany, performed research about the structural data of food retail in Germany in 2016. Bormann, as part of the INKOTA Dossier in 2008, has mapped out the development of supermarkets and discounters but has not formulated any future perspectives, which this thesis aims to do. In 2009 Laudon and Tracey explained the then relatively method of e-commerce but did not take a look into food related e-commerce.

The consumer is arguably the most important segment within the supply chain since it is the consumer who decides what is being purchased in the end. The main question of this thesis is:

“What are the current trends and digitization techniques that will influence the future of food retail in Germany?”. This question is a very important question to ask because changes in the retail of food would not only influence the distribution of goods but the entire food industry. Therefore, an answer to the research question is important to everyone involved in the food industry. Similar to this are the findings of Huré, Picot-Coupey and Ackermann in their research “Understanding omni-channel shopping value: a mixed method study. Once more, there is no connection to the food retail on which the thesis will take a further look on.

The target group of this research are all food retailing companies in Germany. Targets of the research for the thesis will be to lay out the development of the retail of food and to discuss techniques that will influence the future perspectives of it.

Elaboration of the theoretical framework and knowledge gap

Food is a vital part of human life. Without food humans cannot sustain themselves. Looking at how food was distributed in the past it can be noted that a lot has changed during the centuries. Beginning with ancient and medieval times almost everyone had a direct relation to food in terms of growing, hunting and collecting. For those who did not have a direct relation to food, the nearest market was the first form of food retail and the only possibility to acquire food. Markets are the oldest still existing form of food retail and distribution (Jones & Tadajewski, 2016). Due to increasing urbanisation and industrialisation most people lost their direct relation to food over the recent centuries, especially in the recent past. Nowadays food is produced by a small number of people in comparison to the number of consumers (PlanetWissen, 2017).

In the 20th century grocery stores were introduced, centralising and fastening the retail of food to the end consumer (Ellister, 2015). The introduction of grocery stores was the beginning of the future as it simplified the purchase of food and created a completely new experience for the consumers. Whereas the people were used to buying their groceries in many various locations,

e.g. at the butcher, the baker or merchants at markets, the supermarket combined all of those different locations of purchase into one shop. This was a new experience for the people at that time (Reardon & Gulati, 2008). Over the years multiple national chains of supermarkets formed itself in each country. The amount of different supermarket chains decreased due to mergers and acquisitions forming big both national and international organisations. Merging and forming big companies increased the economy of scales making it possible to cut cost through volume. An example for this is that the chains started to produce house-brands to make more profit (Bormann, 2008; Stiegert & Kim, 2009). This led to a few organisations overseeing the retail and distribution of food. These organisations own supermarkets which are spread over whole countries. For example, the supermarket chain REWE, which is part of the REWE Group, is spread over entire Germany (D, 2017; Stern, 2018).

When discounters such as Aldi or Lidl were introduced in the early sixties, an intense competition for the supermarkets was formed (Bormann, 2008). This was due to the fact that food was offered and still is offered at a lower price than in the supermarkets and grocery stores. In the beginning those discounters were simple stores where customers were able to pick their food directly from cardboard boxes rather than from shelves. There are two different concepts of discounters. There are the hard-discounters, such as Aldi, who offer less A-brand products. The second concept of discounters are soft-discounters, like Lidl, who are offering a bigger assortment of A-brand products next to their own brands (Bormann, 2008). Comparing discounters to supermarkets it must be noted that the discounters have changed the most as they offer a modern shopping experience including A-brand products next to their house brands together with redesigning their shops. The battle for the favour of the consumer is intense and forces both supermarkets and discounters to continuously develop themselves (Jacobsen et al., 2017).

The table below shows the ten leading organisations in the food retail industry in Europe ranked by turnover in 2017. A change in percent to the previous year is shown in the right column.

Rank	Organization	Turnover 2017 in billion	Change in percentage
1	Schwarz Gruppe	106,4	+6,0
2	Carrefour	64,9	-0,7
3	Aldi	61,7	+6,4
4	Tesco	56,8	-3,9
5	Edeka	56,75	+5,4
6	Rewe Group	54,7	+6,9
7	Auchan	43,3	-1,5
8	E.Leclerc	38,1	+2,0
9	Metro	34,1	n.p.
10	Sainsbury's	31,3	+2,9

Table 1.1. the ten biggest food retailers in Europe (Stern,2018)

This table ranks the ten biggest food retailers in Europe. Moreover, it shows that five of the biggest food retailers are in fact German. The five German organisations in this table are Schwarz Gruppe, Aldi, Edeka, REWE Group and Metro (Stern, 2018). The fact half of Europe's most powerful retailers originate in Germany supports Bormann's thesis from 2008 that German retailers are focussing on enlarging themselves on the European markets. Back in 2008 the Metro group was still the strongest German food retailer being topped by the French company Carrefour and the British company Tesco. The global market leader at that time was Walmart. (Bormann, 2008) It can be noticed that in the span of ten years they caught up and partially overtook European competitors.

The rise of technologies and the internet changed many things in the most recent years (Laudon & Traver, 2009). One thing that was created through this and was not present before was e-commerce. E-commerce is the buying and selling of products, services and information using computer networks. The main difference between e-commerce and conventional commerce is the difference between transaction and access (Stafford & Gilleson, 2003). In the beginning e-commerce did not affect the food retail sector that much due to the relatively short shelf life of especially fresh food (Morganosky & Cude, 2000). This has changed as companies for example Amazon offer food for delivery. Even supermarket chains started to offer a home delivery services. In Germany multiple supermarket chains like REWE, Edeka and Real have introduced a delivery service (Fleisch-Marketing, 2018). However, the delivery service is not everywhere where there is a store of one of these chains. The downside of these services is that a person must be home to take in the delivery because for some products the cool chain should not be broken. This forms the challenge for customers and retailers to time deliveries which can be challenging as most customers have to work and cannot be home. In addition, the more customers make use of these services the more challenging it gets for the retailers to provide it because both transportation vehicles and range of transpiration is still limited. As the e-commerce of food is rising, food is on the way to become an omni-channel good (Hübner, et al., 2016).

The rise of technologies, especially the digitization, also opened new channels of distribution in the food retail. They can be distinguished between single-channel, multi-channel and omni-channel strategies. Single channel is when a product can only be purchased at by either going to a store or purchasing online (Verhoef, et al., 2015). A food retail related example for this would be Aldi. Because it is only possible to purchase Aldi products in Aldi stores, Aldi has a single-channel strategy. A company uses a multi-channel strategy when products are offered using more than one channel. For example, giving the opportunity to the customer to buy a

product in a store or order it online (Melis, et al., 2014). The supermarket chains like REWE and Edeka which offer a delivery service are an example for multi-channel distribution in the food retail in Germany. Omni-channel distribution is when the customer has total choice of how to get the product. It should give them the choice of ordering it online or buying it at any time in a store. It allows companies to match inventory availability at all locations (Huré, et al., 2017). In the moment there is no food retailer that is omni-channel in Germany.

Another technology that has been introduced is the use of information systems such as track and trace, SAP or CBS. Programs like this allow to control the products coming from farms all the way to the customers plate. They prevent information from being lost and make it possible to gather information throughout the entire supply chain (Woo Yoo, Parameswaran & Kishore, 2015).

In addition to the use of information systems, the implementation of so called RFID tags will be a new technology used in the retail of food. RFID tags are a new way of saving information on packaging. They use a small transmitter which makes it possible to locate the product all the time. Unlike a bar code a RFID tag is able to hold a much higher amount of information. It would be possible to sync these new tags to your fridge which would then be able to automatically re-order the consumed product (Nath, Reynolds & Want, 2006).

Besides the delivery of food to the customer's home, there are plenty of trends influencing the food retail. For retail stores the neighborhood character, finding fun in value, celebrity chefs, vibrant graphics and enticing spaces are recent trends (English, 2017). Turning the shopping experience into a fun experience is another trend which organisations put into practice by building large stores with integrated cooking stations e.g. sushi prepared in front of the customer (Dawson, Shaw & Rana, 1988; Hösch, 2018). Another new trend which has been popping up are the so called zero waste supermarket in which the products are not prepackaged with plastic but just placed in the shop, for example the opening of the world's first plastic free

supermarket in the Netherlands (Taylor, 2018) This is a new shopping experience targeting environmentally friendly minded customers and decreasing pollution in general (Hino, 2014). Another example for a different kind of grocery store showcases Amazon's newly introduced checkout-free grocery store Amazon Go. This store is a trial in which the customer pays using an app. The customer has to scan the products he chooses with this app and pays automatically by smart phone when leaving the shop (Reuters, 2018). These shops can be seen as one of the first attempts of omni-channeling within the food retail industry. This is due to the customer's ability to decide between ordering through Amazon express and checking availability of products and purchasing at the shop.

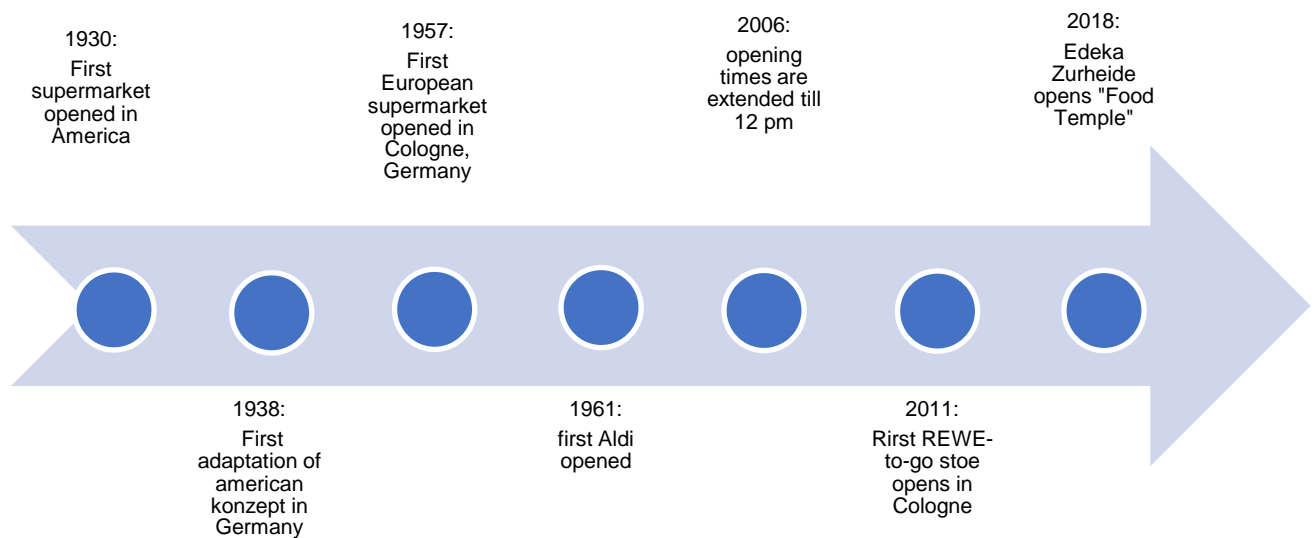
By acquiring Ele.me food delivery service, the company Alibaba, the Asian equivalent of Amazon, targets to introduce pick-up stations for food products in China. These stations will be cooled in order to keep the cool chain intact. These stations will work similar to DHL pick-up stations. Customers can order products through the internet which then get delivered to a station where the customer can open the assigned storage space using a code received with the bill. This is revolutionary to the food retail industry and could solve the problem of being/staying home for home deliveries (Armstrong & Wang, 2018). Another example for this kind of food distribution is the company FoodTogether. This Australian company offers food using a multi-channel approach where customers can choose between picking up the products at pick-up points and getting a delivery. Since a lot of villages in Germany have the problem that their local stores die out this kind of system could be not only a convenient option but could be beneficial for the environment as well (Neumeier, 2014).

All these current trends and digitization techniques will influence the future of food retail but it is not known how fast and to what extent. The future will bring a conflict between the "old-fashioned" grocery store and the "new" possibility to order food online. As there is no retailer offering an omni-channel distribution in Germany it would be beneficial for a retailer to

introduce an omni-channel strategy to create a competitive advantage. For instance, if REWE would build pick-up points and introduce an app in which the customer can check the availability of items and the way of it, they would be omni-channel. Replacing barcodes with RFID tags would make it easier for the retailers to keep track and inventory of their products. The data derived from the tags could be beneficial for creating reliable apps as well.

The development of food retailers in Germany is similar to the development explained above. What is special about the development of food retail in Germany is that the concept of discount was introduced with Aldi. Instead of focusing on selling branded products the profit was found in selling high volume (Bormann, 2008). Comparing how Bormann described the retail situation in 2008 with table 1.1. showcases the development and rise of German food retailers.

To give a more detailed overview about the past development of the Germany food retail; a timeline was created.



Graph 1.1 Timetable of the development of food retail in Germany

The timeline begins in 1930, when the first supermarket was opened by the American Michael Cullen in his former garage. In 1938, a store with a similar concept opened in Osnabrück, Germany. However, the concept flopped and the store was closed. 19 years later the first European supermarket was opened in Cologne, Germany. The brothers Karl and Theo Albrecht revolutionized the food retail by opening the first Aldi store and introducing the discount concept. The next striking development was in 2006, when the opening times of supermarkets got extended. From that point on, food retailers were allowed to stay open until twelve pm. The additional time of business led to additional income but also to the closures of many smaller shops which profited from early-ending opening hours of supermarkets. In 2011, REWE opened the introduced the REWE To Go concept and opened the first store on one of the main shopping boulevards in Cologne, Germany. The REWE To go concept focusses on the convenience market by specializing in snacks and products that can be easily consumed on the

go. This year Edeka Zurheide opened a large-space food temple like supermarket on the main shopping boulevard in Düsseldorf. This shop goes beyond the daily shopping by providing and creating a real customer experience. (Lüttgens, 2018)

Known trends that will influence the food retail's future are the changes of distribution channels, implementation of RFID tags in packaging, introducing information systems and turning the shopping into an experience. Various managers of big food retailers point out that attractive architecture with individual interior equipment is part of successful future concepts to present regional products and involve events addressing the customer's emotions (Lebensmittelzeitung direkt, 2018). It is however not known what these techniques could mean for the food retail and how companies can adapt to these techniques. This is the knowledge gap that must be clarified.

Main question & sub-questions

The main question can be formulated as follows: "Which current trends and digitization techniques will influence the future of food retail in Germany?"

The following sub-question were created and used as a guideline for systematical elaboration for answering the main question.

1. What are current trends and digitization techniques that influence the future of food retail?
2. Which of these current trends and digitization techniques have the most potential in the food retail sector?
3. What changes could these current trends and digitization techniques mean for the food retail sector?
4. How can retailers adapt to these changes?

Objectives

All the recent trends in food retailing show that it will change in the future. As the consumer is becoming more and more time sensitive and convenient it is expected that there will be a shift towards e-commerce of food products. For the retail companies but especially for those who are new in the business and focus on more modern ways of distribution, this research could be interesting as it lays out what trends are attractive and what changes could be beneficial for the companies. The future of food retail and distribution is an important and interesting topic because it can change the way how people perceive food. In the thesis the expression “trends and techniques” is applied to tools, methods, technologies and changes that are implemented in the food retail. While technological advancements cause some of the trends and enable their development, these two are combined in the chosen expression. The thesis aims to discuss the development and future possibilities of the food retail industry Germany.

For the retailers it is relevant to know and research about the techniques and trends that are influencing their business. The adaption to the demands of the customers and the newest technologies are crucial to keep up with the competition. But not only are the technologies relevant to the retailers. It will also affect the producers because they for example would have to make changes to their packaging if RFID tags are implemented. The outcome of this thesis therefore would be relevant to all stakeholders of the retail industry.

It is possible to frame the following hypotheses:

H1: The food retail will be omni-channel in the near future in Germany

H2: Pick-up stations will be implemented to serve the convenience of customers in small villages in Germany

H3: RFID tags will be added to food packaging

H4: There will be a shift from shopping food in the store to shopping food online

2. Methodology

This section presents the materials and methods used in the making of this research project. It describes what the student did during the course of the project and how the data collected was analysed. The student aimed to find detailed information about trends and techniques that will have an impact on the food retail in Germany. For this project, only applicable sources which exclude lecture notes, Msc or Bsc papers, newspaper articles and websites were used.

Methods

For conducting the research, three methods have been used. Of these three, two methods were of qualitative nature and one was of quantitative nature.

Qualitative method

The first qualitative method used was an intensive desk research. Information was collected using google scholar and science direct. The following key words were be used to draw more information on these platforms: future food retail, future food retail in Germany, trends in food retail, omni-channel in food retail, food retailers in Germany, e-commerce in food business, e-commerce within the food industry, trends in the food distribution, distribution of food, food distribution in Germany, RFID tags in food packaging, grocery shopping of the future, future techniques of food retail and many more. In addition, Information was gathered from articles provided by Mr. Burgess and specialist journals provided by Astrid Schmitz. The information gathered was used to build up the theoretical framework and provide a background for both survey and interviews.

The second qualitative method was conducting interviews with experts of the food retail in Germany. The conduction of these interviews is further explained in the “interviewee selection”

and the “interview process”. The results of the interviews have been used in answering the sub-questions.

Quantitative method

The quantitative method used in the making of this research project was a survey. The survey was distributed to people who work in the food retail in Germany. This target group has a professional background and the group’s opinion provides a better reflection of the current situation within the food retail in Germany than the opinion of for example customers. Ways of distribution are described in “survey development and distribution”. The data retrieved from the survey was used to create graphs. These graphs were used in combination with descriptions to answer the sub- and main questions. The results are presented in the chapter “results”.

Materials

Various materials were used to collect data for this research. These include literature, a survey creation program and use of personal contacts, from the student’s personal and internship surroundings, as described in further detail below.

Survey development and distribution

During the project a survey was planned and performed. This survey was created and spread with the website surveymonkey.com. This website was chosen as a medium to build up the survey because of the ease to create a link that is able to be distributed via mail. All costs incurred were covered by the student. The survey was distributed to people who work in food retail in Germany. Contact to those people was made with the help of Astrid Schmitz, the CEO of the student’s internship company. Mrs. Schmitz gave access and allowance to contact the company’s customers, which are food retailers, and encouraged them to participate in the

survey. Because low participation was expected, the student went to a number of retail stores within the student's living area and asked store managers to participate in the survey. In addition, the interviewees were asked to distribute the survey inside their company. It was planned to get a minimum of 30 responses. This goal was achieved as 41 responses were collected. There is no representative overview about age and gender structure of the participants as the survey was answered anonymously. The duration the participants work in the food retail is known and showcased in graph 2.1.



Graph 2.1 Participant's experience in the food retail

Because only German speaking people were asked, the questionnaire was designed in German.

The survey and the results were translated into English and can be found in Appendix A and B.

Interviewee selection

Another part of the research project was to conduct interviews with experts of the German food retail. For the interviews fitting candidates have been found through personal contacts.

The interviewees have acquired wide knowledge of the food retail in Germany and are holding high positions with responsibilities for cost-efficiency and customer and employee convenience

within their organisation. Table 2.1 depicts a list of the interviewed food retail experts of different companies and organisations. All of the interviewees gave approval to be named and sourced within this research project. An interviewee ID has been given to each of the interviewees to simplify mentioning the interviewee's opinion in the text. I-1 and I-2 are owners of several retail stores and have a more entrepreneurial view, while I-3 and I-4 have more scientific background and bring in a more systematic view.

Name of Interviewee	Interviewee ID	Interviewee Job Title	Company/Organization
Peter Richrath	I-1	CEO and owner	REWE Richrath
Gregor Hein	I-2	CEO and owner	Edeka Hein
Anna-Maria Herbst	I-3	Key-account manager	Kaufland (Schwarz-Gruppe)
Dr.Bernd Lüttgens	I-4	Deputy CEO	Rheinischer Landwirtschafts-Verband

Table 2.1 interviewees

Interview process

To ensure a systematic and reproducible interview process, all interviews were conducted equally. All interviewees received the same participation invitation and each interview followed the same steps and predefined questions. However, each interview transpired a little different as topics were discussed to different extents and different contextual questions were asked (see Appendix C).

The interviews were held in German and were analogously transcribed in English. The interviews were recorded using an app in order to simplify transcriptions. This can be found in Appendix D.

3. Results

In this chapter the results of the survey and the interviews are described. In order to answer the main question “Which techniques and trends will influence the future of food retail in Germany?”, this section is divided into four paragraphs correlating to the sub-questions. The answers of the survey questions two, five, six and 14 were clustered into categories, where it is possible that one answer fits into multiple categories. For each category a description is given. The survey can be found in Appendix A and the detailed answers of the survey can be found in Appendix B.

What are current trends and digitization techniques that influence the future of food retail?

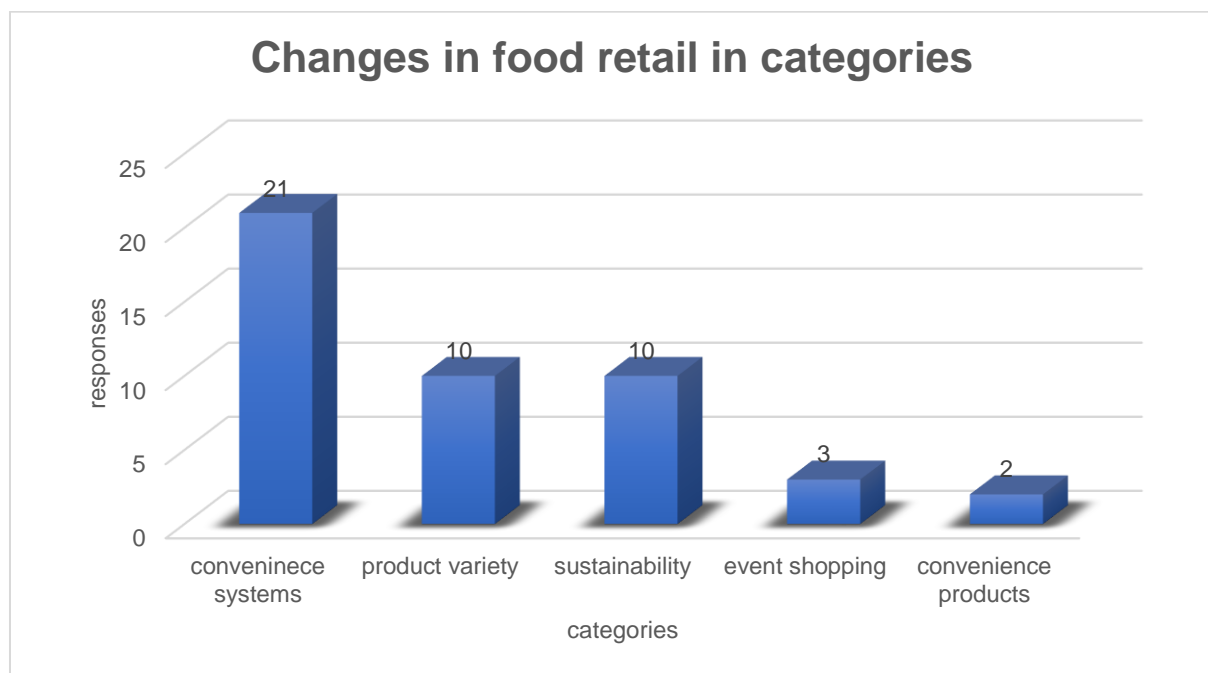
As basis of answering this sub-question it is needed to know what has changed the most in the food retail sector in Germany over the past years. In Q2 of the survey the participants were asked to describe the biggest change they have noticed within food retail in Germany. Because the answers were similar and referring to the same topics, the answers were clustered into five categories. The five categories are:

- convenience systems
- product variety
- sustainability
- event shopping
- convenience products

The category “convenience systems” includes all answers about the introduction of some kind of system that supports convenience of both customer and retailer. Under the category “product variety”, all answers regarding the introduction of new products with different target groups were grouped. All answers regarding sustainable developments and energy efficiency in all

processes were put into the category “sustainability”. The category “event shopping” consists of all the answers that saw the most change in the development of turning shopping into an experience.

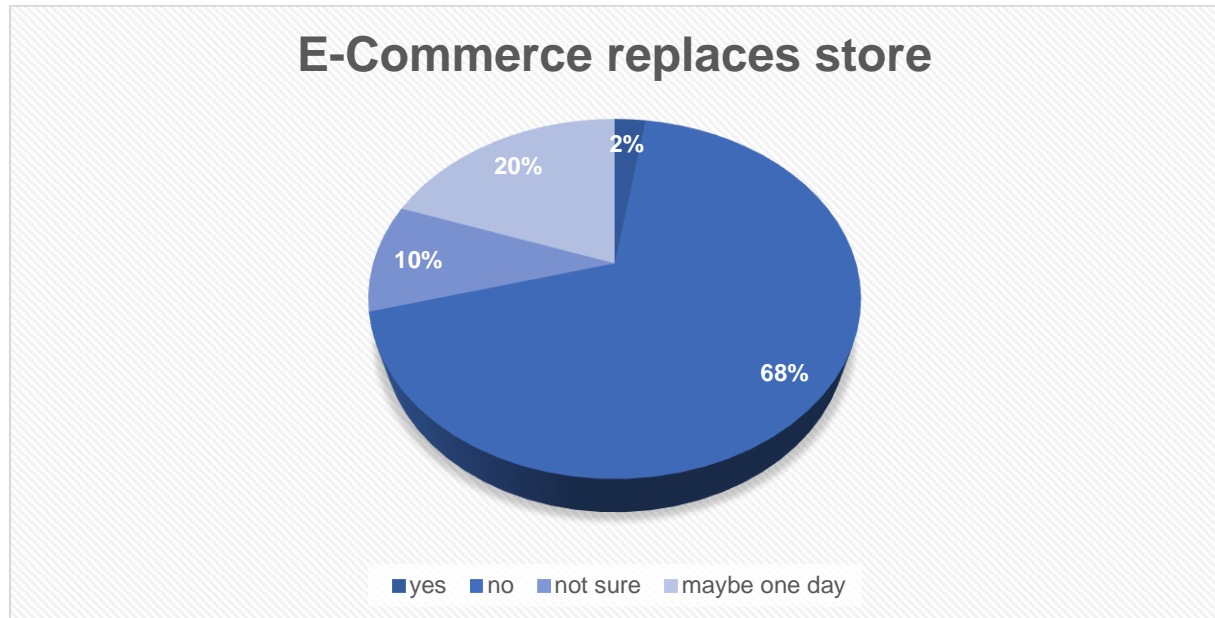
In the category “convenience products”, the introduction of all kinds of pre-cut, ready-to-eat and ready-to-cook products was seen as the biggest change in the food retail. Detailed answers to each category can be found in Appendix B.



Graph 3.1 Changes in the food retail in Germany over the past years

The graph 3.1 shows that the introduction of systems which enhance the convenience of the customer and the retailer was defined as the biggest change in the German food retail industry. 21 of 37 answers were linked to this category. The two other main changes were the increasing range of products and increased focus on environmentally-friendly and efficient practices. Changes regarding event shopping and convenience products are not seen as changed too much. Therefore, convenience systems can be highlighted as category that changed the most. Participants gave examples for this category like online retail of food, mobile payment and electronic price tags.

Against the background that most people have access to the internet and use it for online trade purposes, the importance of online retail of food increases. The participants of the survey were asked whether the online retail of food could replace the store. Graph 3.2 showcases the result.



Graph 3.2 E-commerce replaces store

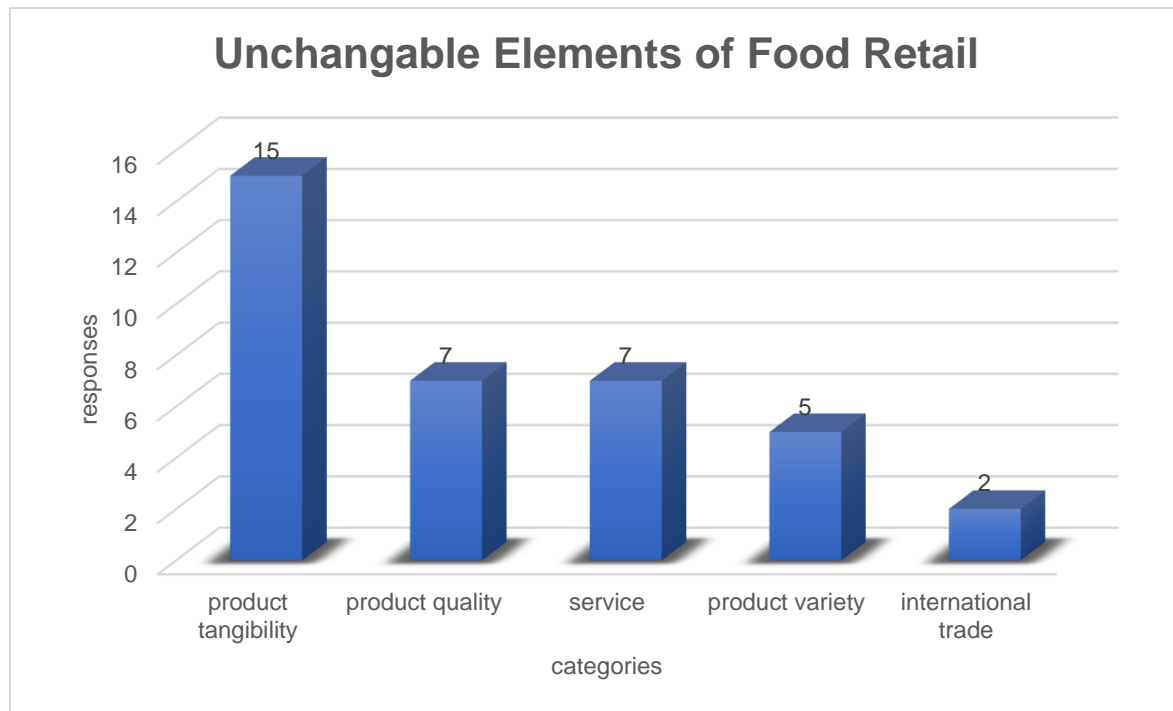
68% believe that the online trade cannot replace the classic store. This belief is shared by all interviewees. I-2 stated that it would be logistically impossible to deliver to each customer if compared to the volume of products that is being delivered to the stores every day. I-4 believes that online-retail will not replace the stores but will thin the density of stores.

The interviews and the theoretical framework defined the following trends as being most influential for the food retail in Germany in the future. The combination of stationary and online retail will gain more importance as it expands the distribution channels of food. Implementing delivery services or pick-up services/stations would serve the customer's demands of convenience. Also following the customer's demand of convenience is the experimenting with different store concepts like checkout-free and zero-waste stores. The regionality of products also gains importance. Turning shopping into an event is seen as relevant in the future because a unique selling point must be created to bind customers. The implementation of RFID

technology into product packaging is seen as beneficial for both customer and retailer. It would simplify the entire supply chain process.

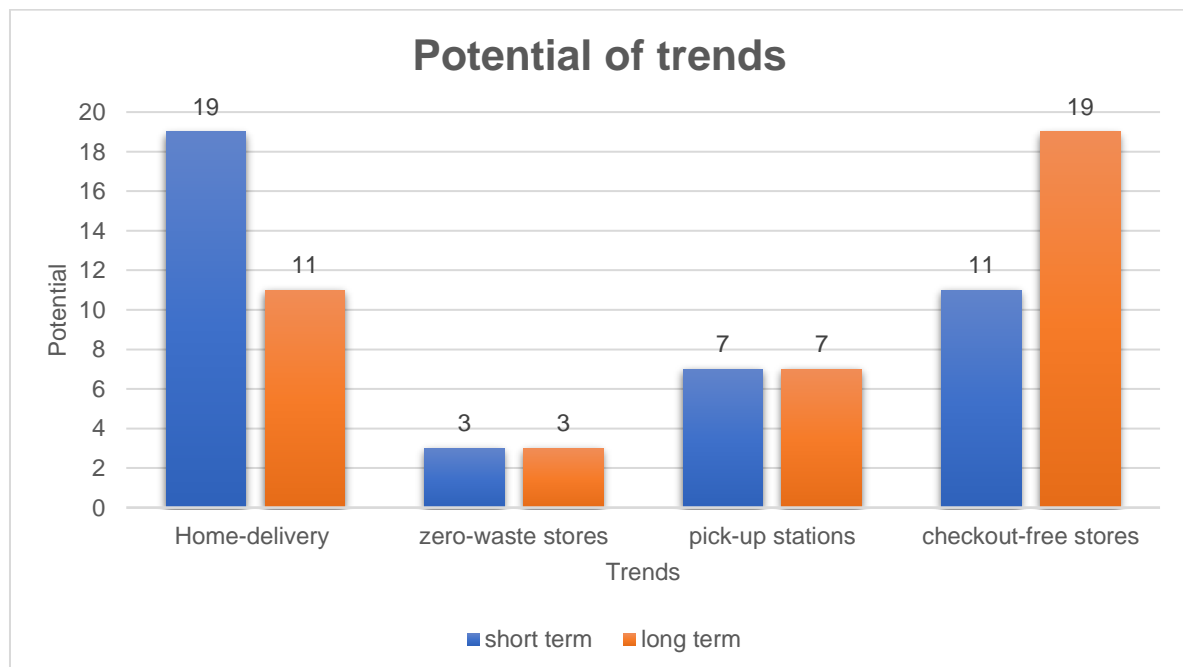
Which of these current trends and digitization techniques have the most potential in the food retail?

Before it is possible to know which of the trends will be successful, it is helpful to think of what cannot change in the food retail. In the survey the participants were asked this question. Again, the answers were put into five categories. In the category “product tangibility”, all answers are dealing with the fact that some customers will always want to see, smell and touch the products prior to buying and are attracted by interesting presentation of products. The next category was called “product quality” and refers to the customer’s desire to buy fresh products and that the shelf-life of these products cannot be increased. The third category is about “service” and means that the service, the consultancy and the communication offered in stores cannot be offered to the same extent on an online platform. The category “product variety” includes all answers that promote a necessity of a wide range of products in stationary food retail and that this cannot be changed. The last category “international trade” implies that it is always necessary to import some products from other places. As it can be seen in graph 3.3 the majority of answers were linked to product tangibility. This importance of this aspect was strengthened by I-1, I-2, and I-3. 15 out of 31 answers were linked to product tangibility and included aspects a like contact to the product. Product quality and service have been seen as equally unchangeable. High quality of products and high level of service will be important. The two categories of “product variety” and “international trade” were mentioned but do not seem as unchangeable.



Graph 3.3 Unchangeable Elements of the Food Retail in Germany

The results of Q9 and Q10 deal with short- and long-term potential of identified trends. The results are presented in graph 3.4.

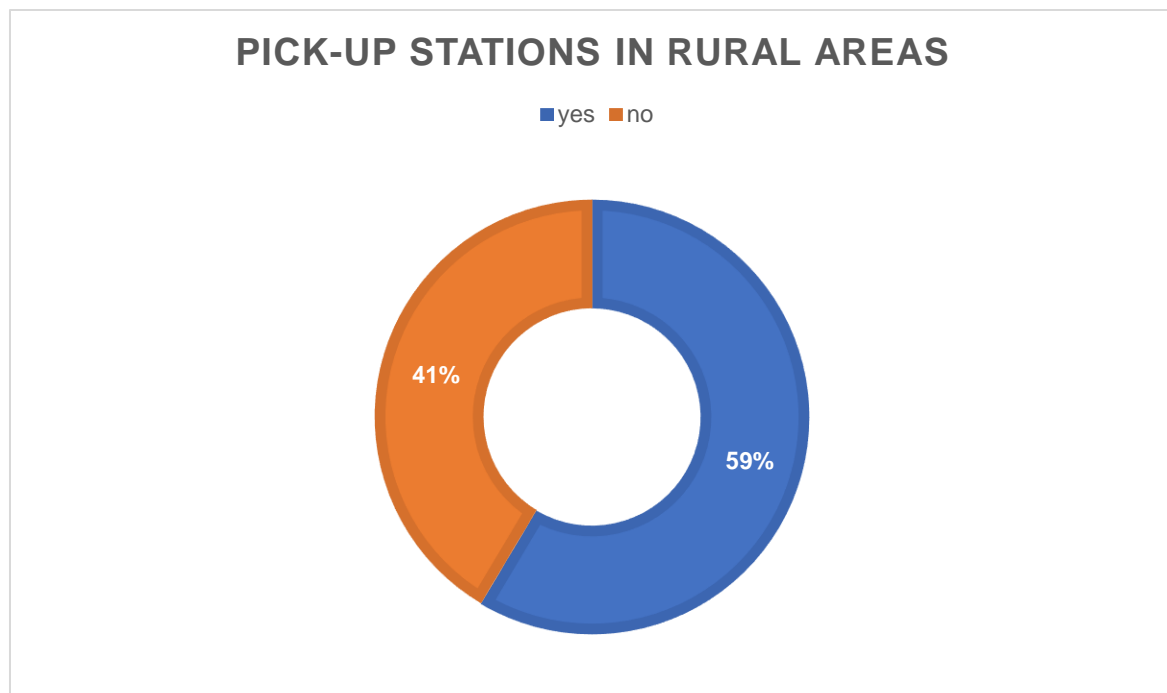


Graph 3.4 Potential of trends in the short and long term

Survey participants see a high potential for retailers to implement delivery systems in the short term. This correlates to the fact that I-1 stated that REWE launched REWE Digital which is a

food delivery service based on online ordering, managed and owned by a food retailer. The launch of REWE Digital underline the trend of combining stationary and online food retail. I-3 mentioned during the interview that all retailers are experimenting with these kinds of systems whereas I-2 stated that Edeka is neither working on delivery services nor on pick-up stations. I-1 and I-2 stated that there is no delivery system yet that offers profit. The response rate of zero-waste stores shows that the potential for this store concept is not seen as high. All interviewees see this as experiments which follow the trend of being more focused on the environment and on sustainability. However, the experts did not see this concept as applicable for big retail chains due to hygienic regulations and the fact that some products require packaging. The survey participants see pick-up stations as relevant for the future but not as strong as home-delivery or check-out free stores. Systems similar to pick-up stations, like pick-up systems in supermarkets, are already being tested in some stores of I-1. I-1 mentioned that the number of users is not high at the moment but described the average volume of each order as interesting. I-4 sees many chances for the pick-up stations especially in rural areas. I-1, I-2 and I-3 state that it would be difficult to implement pick-up stations as they would require extra warehouses, effort and employees.

Graph 3.5 shows that 59% of the survey participants think that pick-up stations would be able to bind purchase power in rural areas. The other 41% have similar estimations as most of the interviewees.



Graph 3.5 Pick-up stations in rural areas

Regarding the trend of checkout-free stores graph 3.4 shows that the participants see the biggest potential in this in the long term. All interviewees were convinced that this is a concept of the future but requires investments and further technological development on both sides, customers and traders. I-2's company is currently working on implementing a mobile payment system and is looking forward to technological developments to make this easier.

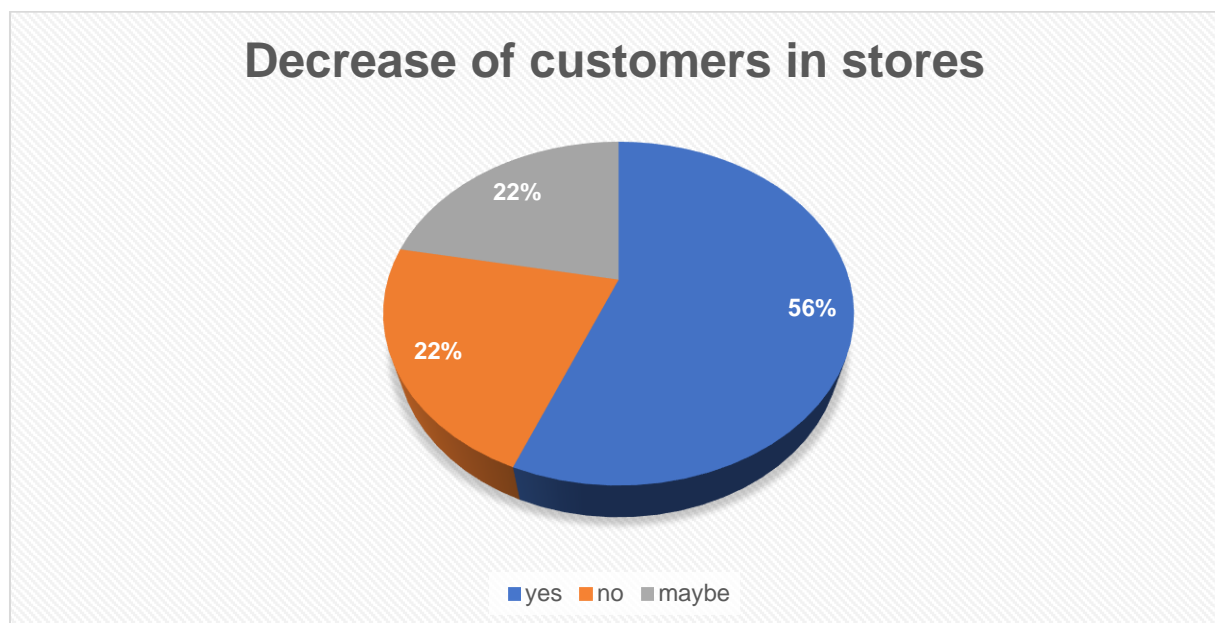
80% of survey participants assess the RFID-tag to be a good replacement for the barcode. I-2 pointed out that this technology must be in line with the whole concept of each store in order to be suitable for implementation. According to all interviewees, the cost of RFID-tags still is too high for mass-implementation but I-4 expects the price to lower that much that it is applicable to food packaging.

As one of the most important trends, all of the interviewees spoke about the necessity of turning the shopping process from a daily needed activity into a shopping experience. According to them this can be done by creating a unique selling point in each store through offering added value, high-level presentation of products, competent consultancy and special events as degustation, show cooking and personal contact with producers of regional products. To

highlight the results of this section, the product tangibility, the product quality and service must be maintained or improved in the future. Home-delivery is seen as the most important trend for the short term. Whereas, checkout-free stores are seen as most important long-term trend. Pick-up stations are evaluated as important but difficult to implement.

What changes could these trends and digitization techniques mean for the food retail sector?

As the online retail of food is gaining importance the question arises if it is a risk for the stationary retail. This question was asked in Q4. 65% think the online retail is a risk for stores. The other third is divided between it is not a risk and it might be a risk. This can be seen in Appendix B. In addition, it was asked in Q3 if the online retail of food could lower the number of customers in stores. The result can be seen in graph 3.6.

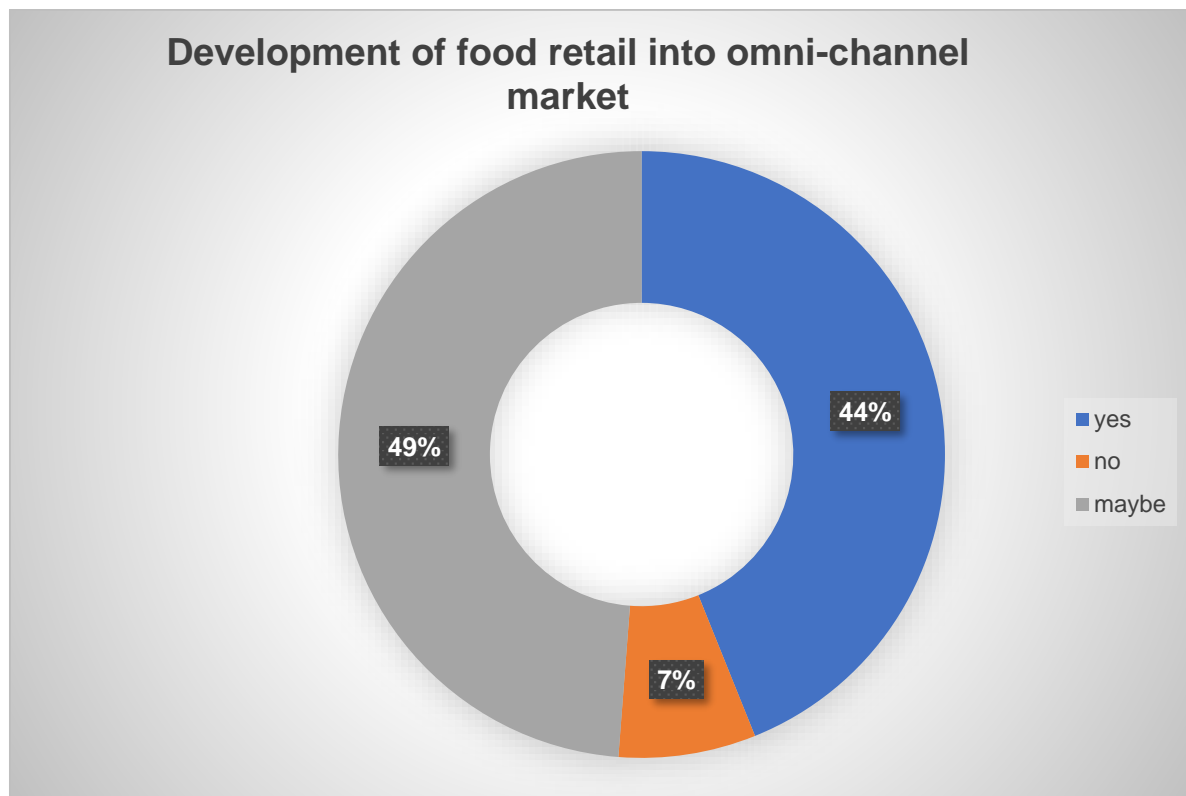


Graph 3.6 Decrease of customers in stores

As graph 3.6 shows, the majority of survey participants think that there will be a reduction of customers in the stationary retail. However, this is not what the interviewees expect. All interviewees except I-4 believe that the importance of stationary retail will remain as strong as

it is in the future. I-4 as described in: “*What are current trends and digitization techniques that influence the future of food retail?*” believes there will be a thinning of stores due to less customers.

Forming the basis that e-commerce is competitive to stationary retail, the question is if retailers could combine the two. Therefore, the survey participants were asked if they believe that the food retail in Germany could develop into an omni-channel market. The results are showcased in the graph below.

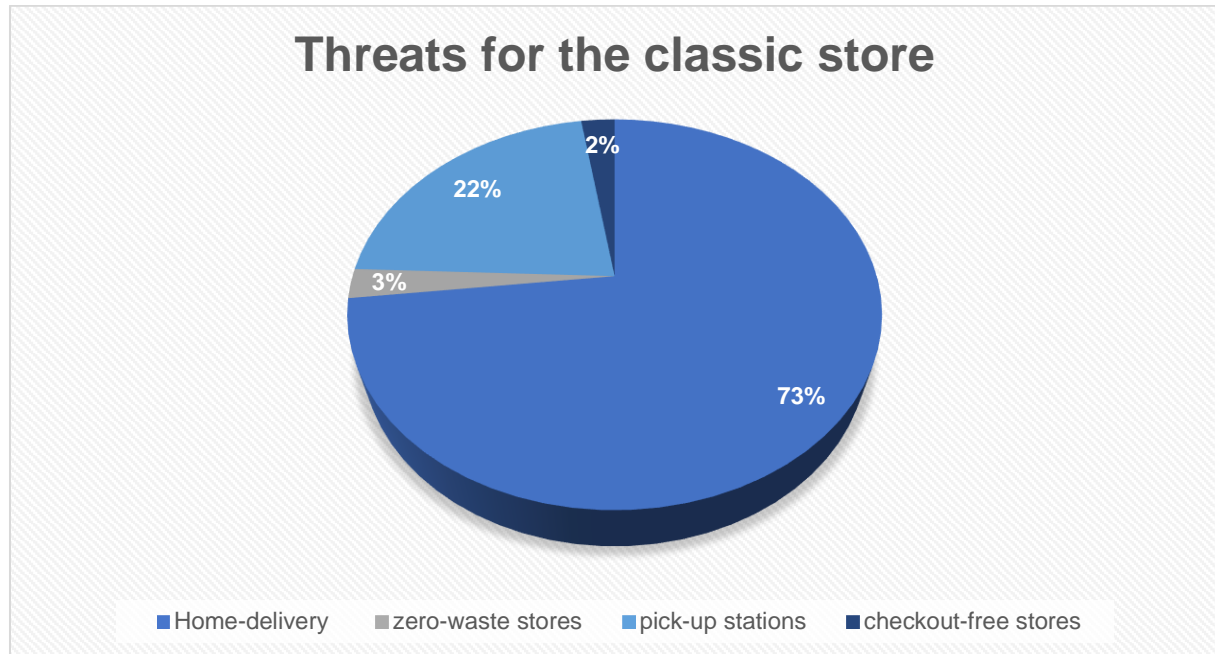


Graph 3.7 Development of food retail into omni-channel market

44 % think that the food retail in Germany will develop into an omni-channel market and the majority of 49% also thinks that there is a chance. This shows a clear positive signal for the development of omni-channel models. The interviewees position on this was that the food retail in Germany is already developed into an omni-channel market.

E-commerce was found to be a risk for the stationary retail of food. In Q11 the survey participants were asked which trend would be the biggest threat to classic stores.

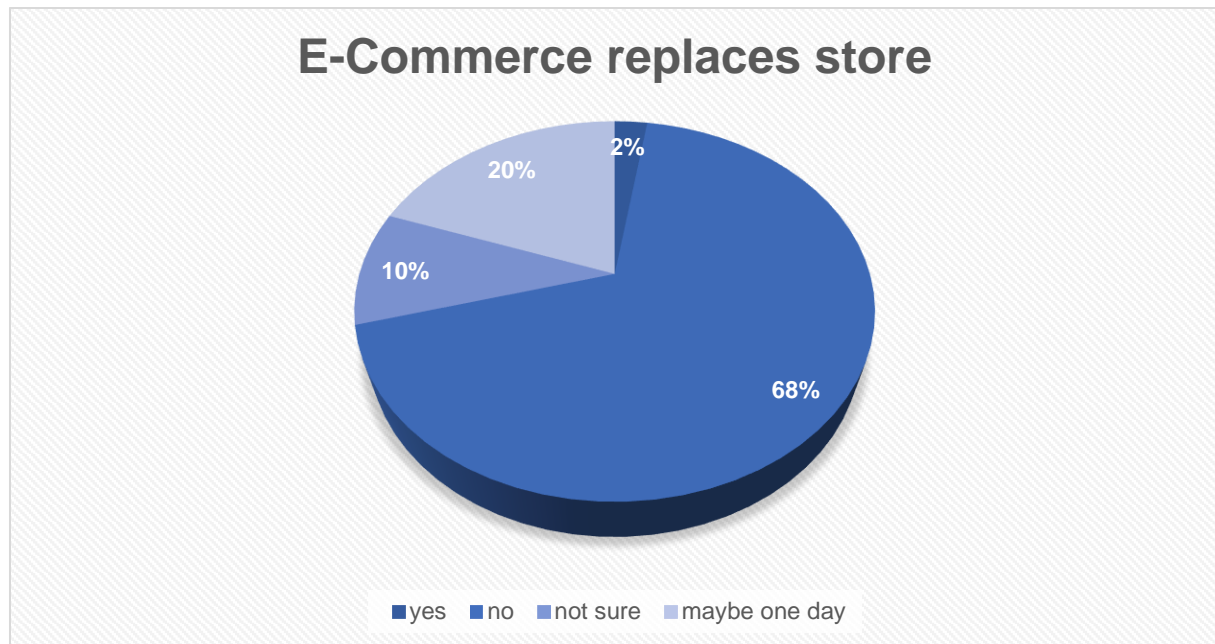
Graph 3.8 shows the results for this.



Graph 3.8 Threats for the classic store

As seen in graph 3.8, 73% believe that delivery systems are the biggest threat for classic stores. Beneath this, pick-up stations are a further competition for the stores as 22% of the participants think. Zero-waste and checkout-free stores are not seen as being a threat for the classic store. I-1, I-2 and I-3 are convinced that the stationary retail will be the main source of food for the majority of people. I-4 on the other hand believes that the unstoppable digitization will force retailers to combine online and stationary retail. According to him, if the retailers in Germany do not develop into this direction, Amazon will overrun the food retail industry when focusing on food retail.

Q13 asked the survey participants if the e-commerce could fully replace stationary retail.



Graph 3.9 E-commerce as replacement for stores

As seen in graph 3.9, the vast majority of people believe that online retail is no replacement for stationary retail. This is agreed by all interviewees. Ten % of the participants are not sure about this and 20% believe that the online retail might replace the stationary retail one day. Only two % are convinced that this is the case.

From the perspective of both survey participants and interviewees, the e-commerce in combination with delivery or pick-up systems is a big threat for the stationary retail of food but will not be a full replacement of stores. As participants and interviewees believe, the development of the food retail into an omni-channel market is a necessity.

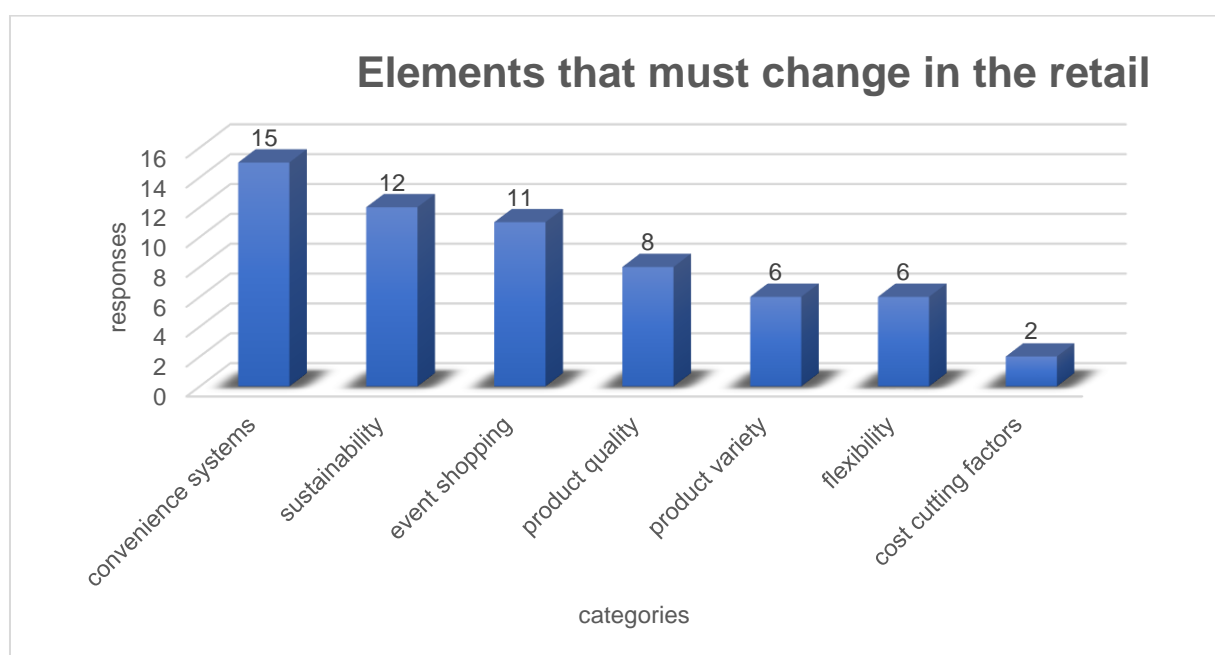
How can retailers adapt to these changes?

As the online retail of food is gaining more importance, it is necessary for the food retail sector in Germany to adapt to it and develop solutions how the online and stationary retail can be combined. Prior to knowing how retailers can adapt to these changes, it is firstly necessary to

know what retailers have to change. This question was asked to survey participants in Q5. The results of this question were put in the following seven categories:

- Convenience systems
- Sustainability
- Event shopping
- Product quality
- Product variety
- Flexibility
- Cost cutting factors

Except the categories “flexibility”, “product quality” and “cost cutting factors” the categories are identical to the categories in chapter 3 “*What are current trends and digitization techniques that influence the future of food retail?*”. The category “flexibility” describes all answers about the flexibility of the retailers to answer to trends and customer demands. In the category “product quality”, the answers refer to an increase of regional products and increased concentration on quality of the products. The category “cost cutting factors” consists of answers referring to the costs convenience systems would save in terms of replaced personnel. 39 of 41 participants provided an answer to Q5.



Graph 3.10 Elements of food retail that must change

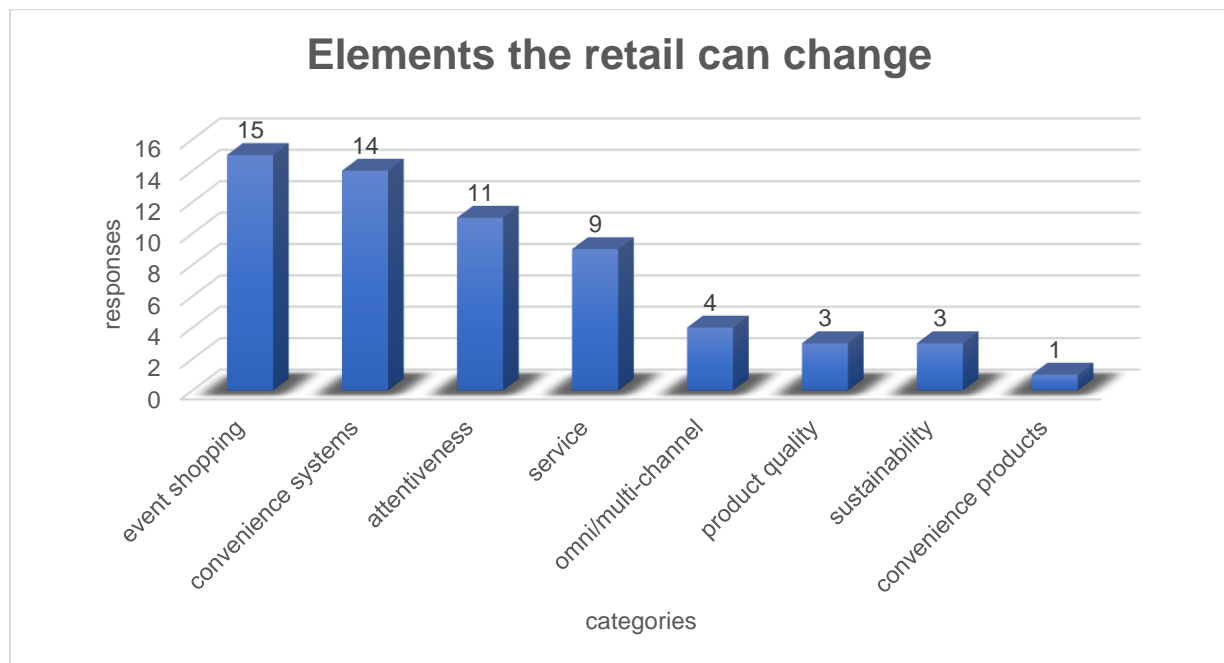
Graph 3.10 shows that 38 % (15 answers) of the answers were linked to convenience systems. That means that participants think that the retail must introduce more convenience systems such as self-checkouts, mobile payment and delivery systems. Sustainability and event shopping, with twelve and eleven linked answers, are in the focus of the participants as well. The categories product quality, product variety and flexibility show fewer feedback.

In order to find an answer to this sub-question, Q14 asked the survey participants what the food retail can do to adapt to the current changes. Again, the answers were clustered into eight categories. These eight categories are:

- Convenience systems
- Attentiveness
- Service
- Event shopping
- Omni/multi-channel
- Product quality
- Sustainability
- Convenience products

Again, the category “convenience systems” includes answers about the introduction of systems enhancing the convenience of customers and retailers. “Attentiveness” is the category that consists of answers referring to the ability of retailers to react to customer demands and to trends accordingly. In the category “service” answers regarded the offered service in the stationary retail. The category “event shopping” contains answers that relate to the trend of turning shopping into an experience. All answers regarding the change of distribution and becoming multi- or even omni-channel were put in the category “Omni/multi-channel”. The category “product quality” refers to increase importance of quality and regionality of products. In the category “sustainability”, the answers focus on environmentally-friendly products and methods. The last category “convenience products” refers to the introduction of more ready-to-

eat/cook, pre-cuts and to-go products. The graph 3.11 shows how many answers were clustered into the categories and therefore underlines the importance of each category.



Graph 3.11 Elements the retail can change

From the point of view of the participants, the event shopping must be much more targeted. This can be done through friendly customer-oriented concepts offering high-level consultancy and eventful shopping. Another priority the participants set focus on is the further implementation of systems which enhance convenience of customer and retailer. The categories attentiveness and service also seem to have a big importance for adapting to the current changes. I-1 agrees with the majority of the participants as he sets a focus on implementing convenience systems in his stores. I-2 focusses more on “event shopping” and “service” in his stores. Both I-2 and I-3 state that the large-scale food retail is immensely losing turnover and is therefore not future-oriented. I-4 believes that retailers must combine online retail and stationary retail in order to stay competitive.

Comparing the two graphs in this section, it becomes obvious that the categories convenience systems and event shopping are set in a focus as elements that must change and can be changed by the retailer.

4. Discussion of Results

In this chapter the methodology and the results of the research project are discussed and analysed. The chapter is divided into five paragraphs; a paragraph for each sub-question and one for the reflection of the conducted research. The research project aimed to find information on current trends and digitization techniques that influence the food retail in Germany in the future. The four hypotheses that have been created after the desk research, are answered in this chapter as well.

What are current trends and digitization techniques that influence the future of food retail?

The interviews, the survey and the theoretical framework defined the following trends as being most influential for the food retail in Germany in the future. Because the development of the food related e-commerce was seen as a big risk for the stationary retail, the combination of stationary and online retail will gain more importance as it expands the distribution channels of food. Implementing delivery services or pick-up services/stations would serve the customer's demands of convenience as also Armstrong and Wang describe for the example of Alibaba in China (Armstrong & Wang, 2018). Also, following the customer's demand of convenience is the experimenting with different store concepts like checkout-free and zero-waste stores. The regionality of products also gains importance. Turning shopping into an event is seen as relevant in the future because a unique selling point must be created to bind customers. This correlates with findings of the Lebensmittelzeitung direkt (Lebensmittelzeitung direkt, 2018). The implementation of RFID technology into product packaging is seen as beneficial for both customer and retailer. It would simplify the entire supply chain process.

All in all, these are the current trend and digitization techniques that will influence the German food retail in the future.

Which of these current trends and digitization techniques have the most potential in the food retail?

Of the trends and techniques that were identified to influence the future of food retail in Germany, the delivery systems are seen as having the most potential in the short term. This however, depends on each retailer's strategy. REWE Digital is an example for the beginning of realizing the combination of stationary and online food retail as I-1 described. For the long term, the checkout-free stores have been identified as having the most potential. This is backed by all interviewees as the convenience of both customer and retailer seems to be the most important aspect when speaking of future developments. The combination of stationary and online retail of food is not only a chance for the big retailers to enhance their business and stay competitive but also for starting companies to enter the market and specialise themselves. The implementation of RFID-tags would be a future step into the direction of being omni-channel but yet, according to interviewees, proves to be too costly for the implementation into food packaging. Verifiable information about current costs and cost developments of RFID technology was not found. Once the price of RFID-tags is affordable it is to expect that it will be used, in case that no cheaper and equivalent substitute will be invented. Therefore, it is possible that H3, "*RFID-tags will be added to food packaging*", might be realized.

Pick-up stations are seen as a challenge by the retailers as they require a lot of effort to implement and to carry out but it could bind purchase power in rural areas. Only I-4 saw potential in pick-up stations, especially regarding rural areas. For rural areas with a lower density of store, the pick-up station has a high potential. Also, here the cost-efficiency must be given which is not deeper analyzed in this project. The other interviewees did not favor the idea of pick-up stations but more like pick-up counters inside stores. This is a concept that I-1 implemented in some stores already. Introducing pick-up systems at already existing stores would be an implementation that would make sense in urban surroundings. It would be

beneficial to give customer's the opportunity to perform shopping designed towards customer convenience and time-flexibility. However, it is not possible to approve H2, "Pick-up stations will be implemented to serve the convenience of customers in small villages in Germany", as it depends a lot on how each retail organization addresses this matter and where each store is situated.

Turning shopping into an experience is a trend followed by all retailers as stated by the interviewees. *"Supermarkets should create individuality and should bind customers emotionally"* (Lebensmittelzeitung direkt, 2018). This quote underlines the relevance of turning shopping into an experience. The store must be a unique selling point that offers consultancy, atmosphere and community.

What changes could these trends and digitization techniques mean for the food retail sector?

"Quickly changing market situations challenges the food retail" (Lebensmittelzeitung direkt, 2018). In addition, the risks of the proceeding e-commerce in relation to food products, forces the retailers to change. Most of the survey participants believe that a development into an omni-channel market is possible. The interviewees stated food retail in Germany is already at an omni-channel state. However, food retail in Germany is a multi-channel market as there is no retailer that offers a fully omni-channel service. The customer does not have the possibility to check if a desired item is in store and then decide whether to get in the store or to order. Therefore, food retail in Germany is at maximum multi-channel.

Instead, most of the interviewees believe that stationary retail outlets will not lose importance whatsoever in the near future. On the other hand, I-4 believes that the increase of online retail will lead to a thinning of stores. The majority of the survey participants believe that the online retail of food is a risk for stationary retail but cannot replace it. Therefore, the two must be

combined by the retailers in any future concept. This underlines H1, “the food retail will be omni-channel in the near future in Germany”,

Against the background of the strong demand of emotional shopping events, retailers will have a good chance to create a unique selling point in the stores and to bind customers. There will always be people who prefer to buy online and there always be people who prefer to go into shops. Therefore, H4, “there will be a shift from shopping food in the store to shopping food online”, cannot be approved. Due to increasing demand of convenience and change of generations it is possible that there will be a shift towards online retail of food but it is not certain.

Summarizing, the food retail in Germany will have to face that both offering both, stationary and online retail, is necessary to stay competitive. Not only is both needed, but both must be further developed.

How can retailers adapt to these changes?

A high attentiveness towards the development of trends and digital techniques is basis for every successful food retail concept. This was also highlighted in Q14 of the survey. Further implementation of convenience systems and high service standards have been identified as having the most potential of being beneficial. Each retailer has to find the best fit for his business strategy. Reaction and adaption to current changes needs action on all levels. Whatever concept, whether multi- or omni-channel, needs investments in appearance of stores and training of employees to reach demanded service quality. Further investments in convenience systems are needed to fulfill the convenience demands of customers and increase convenience level of retailers. For example, it would be possible to implement a self-checkout and install an instore pick-up service. In that case employees that would normally sit at the counter could pick orders and fill the spot at the pick-up counter, where pick-ups could be picked up. When implementing any kind of delivery or pick-up station system, the order picking must happen at

a cross-docking warehouse. Order picking and loading of orders would create too much trouble at the store. The introduction of RFID- tags would make omni-channel services easier to implement. The trend of binding customers by turning the shopping into an experience must be taken serious by the retailers as this is the real reason customers shop at a certain retailer's store. The store has to create an added value and must be the unique selling point. As the online retail is unstoppable and gains more and more importance, the retailers must combine their traditional stationary retail with online retail. This must be done in order to stay competitive and not be overrun by an organisation like Amazon.

Reflection of the conducted research

All aspects of the research went according to plan. The goal of getting 30 responses was reached and even surpassed by eleven responses. Looking back, it seemed to be noticeable that some of the survey participants did not have full knowledge about the topic. This became noticeable as some of the open answers were very general and not result-oriented. An obstacle was formed by the website surveymonkey.com as it was blocked by the intranet of the Schwarz-Gruppe. Another experience is that it is not possible to rely on the timely participation in the survey. Some receivers of the survey answered after a reminder and some did not at all.

Managers in the food retail can use the answer of the fourth sub-question as election for own decisions. In addition, the detailed interviews can be used to acquire opinion of experts of the food retail.

Academic can especially use the results of the survey for further research regarding further development of food retail.

5. Conclusion and Recommendations

In this chapter a conclusion is drawn and recommendations are given.

Conclusion

This research project aimed to answer the question: “Which current trends and digitization techniques will influence the future of food retail in Germany?”. In order to do this, the following four sub-questions were created and used as a guideline for systematical elaboration of the answer to the main question. Intensive desk research, a survey and detailed interviews were used to gather information and results that are needed to provide answers to the following sub-questions.

- What are current trends and digitization techniques that influence the future of food retail?
- Which of these current trends and digitization techniques have the most potential in the food retail sector?
- What changes could these current trends and digitization techniques mean for the food retail sector?
- How can retailers adapt to these changes?

The combination of stationary and online food retail and turning shopping into an experience have been identified as most influential trends and techniques for the future of food retail in Germany. For short term, development of delivery services are regarded as most potential. Whereas checkout-free stores have been identified as the future of payment systems and as most important as it supports both customer's and retailer's convenience.

While facing these trends, retailers need to react and find individual solutions for the own strategy. Although the online retail of food is growing in importance, it will never fully replace the store. However, it is necessary for retailers to strengthen the attractiveness of both, stationary and online retail, for customers. Retailers can react to all these trends by keeping high product quality and variety, investing in shopping atmosphere and training employees to

create a high-quality service. Besides this, investments in online and convenience systems must be made to stay competitive.

All in all, the future of food retail is strongly influenced by digitization and increasing customers' demands. First stands the trend of turning shopping to an event. For this necessary to turn the store into an unique selling point that binds customers. Secondly, the digitization creates the new opportunity and need to combine stationary and online retail of food. The target there must be to reach omni-channel food retail business in Germany.

Recommendations

For retailers it is recommended to observe the coming trends and react to them according to their personal business strategy. Every trend is worth further research but not every trend is worth following. Although the online retail of food products forms obstacles like keeping the cooling chain, it is recommended to combine stationary and online retail. Parallel to this, the stores must be welcoming and attractive to customers. This can be done by creating a pleasant and individual store atmosphere, offering high standard level of service and consultancy and offering special attractions about food for example, show cooking or degustation. The combination of the two is the only chance not to be overrun by Amazon and others.

Following are practical recommendations for retailers.

For retailers it would be beneficial to implement both self-checkouts and pick-up system inside some stores. The employees that are saved through the self-checkouts could be used for all tasks related to the pick-up service. By simply offering the pick-up service, the store offering this service would attract all customers who prefer not to shop themselves. This would be a cost-sufficient way of reacting to customer demands.

If a retailer wants to implement a delivery service, the orders have to be taken in, picked and loaded at a special warehouse just for this purpose and not at retail store.

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Appendix

Appendix A: Survey handed out and answered by insiders of the food retail business

Appendix B: Answers of the survey

Appendix C: Interview Protocols

Appendix D: Interview Transcripts

Appendix A: Survey handed out and answered by insiders of the food retail business.

The section at hand includes the questions that were asked in the survey.

Q1: How long have you been working in the industry for?

- ☐ 1-2 years
- ☐ 3-4 years
- ☐ 5-6 years
- ☐ 7-8 years
- ☐ 9-10 years
- ☐ More than 10 years

Q2: What was the biggest change in the industry you have witnessed and why?

- ☐ Open answer

Q3: Do you see a decrease in customers of grocery stores in the future?

- ☐ Yes
- ☐ No
- ☐ maybe

Q4: Do you think the e-commerce of food is a threat to grocery stores?

- ☐ Yes
- ☐ No
- ☐ Maybe

Q5: What do you think has to change in the food retail industry?

- ☐ Open answer

Q6: What do you think cannot change in the food retail industry?

- ☐ Open answer

Q7: Do you think food retail will be shifting to omni-channel strategies?

- ☐ Yes
- ☐ no

Q7.1: If yes, why?

- ☐ Open answer

Q7.2: If no, why?

- ☐ Open answer

Q8: Do you think RFID tags would be a good replacement for bar codes?

- ☐ Yes
- ☐ No

Q8.1: If yes, why?

- ☐ Open answer

Q8.2: If no, why?

- ☐ Open answer

Q9: Which trend do you think has the most potential in the short term?

- ☐ Home-delivery
- ☐ Zero-waste stores
- ☐ Pick-up stations
- ☐ Checkout-free stores
- ☐ Other

Q10: Which trend do you think has the most potential in the long term?

- ☐ Home-delivery
- ☐ Zero-waste stores
- ☐ Pick-up stations
- ☐ Checkout-free stores
- ☐ Other

Q11: Which of these trends do you think is the biggest threat for grocery stores?

- ☐ Home-delivery
- ☐ Zero-waste stores
- ☐ Pick-up stations
- ☐ Checkout-free stores
- ☐ Other

Q12: Do you think pick-up stations could bind purchase power in rural areas?

- ☐ Yes

- ☐ no

Q13: Do you think e-commerce could completely replace the grocery stores?

- ☐ Yes
- ☐ No
- ☐ Not sure
- ☐ Maybe one day

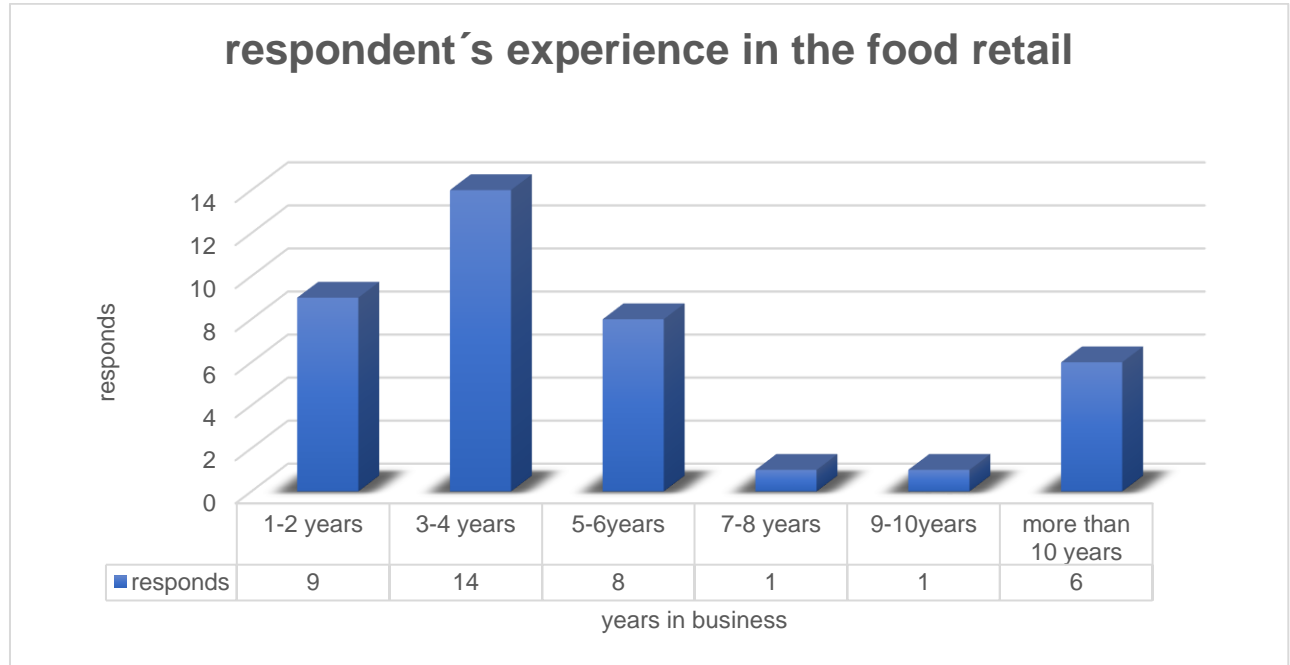
Q14: How do you think retailers can adapt to the current changes?

- ☐ Open answer

Appendix B: Answers of the survey

In this section the answers of the survey are given.

Q1: How long have you been working in the industry for?



Answered by 39, skipped by 2

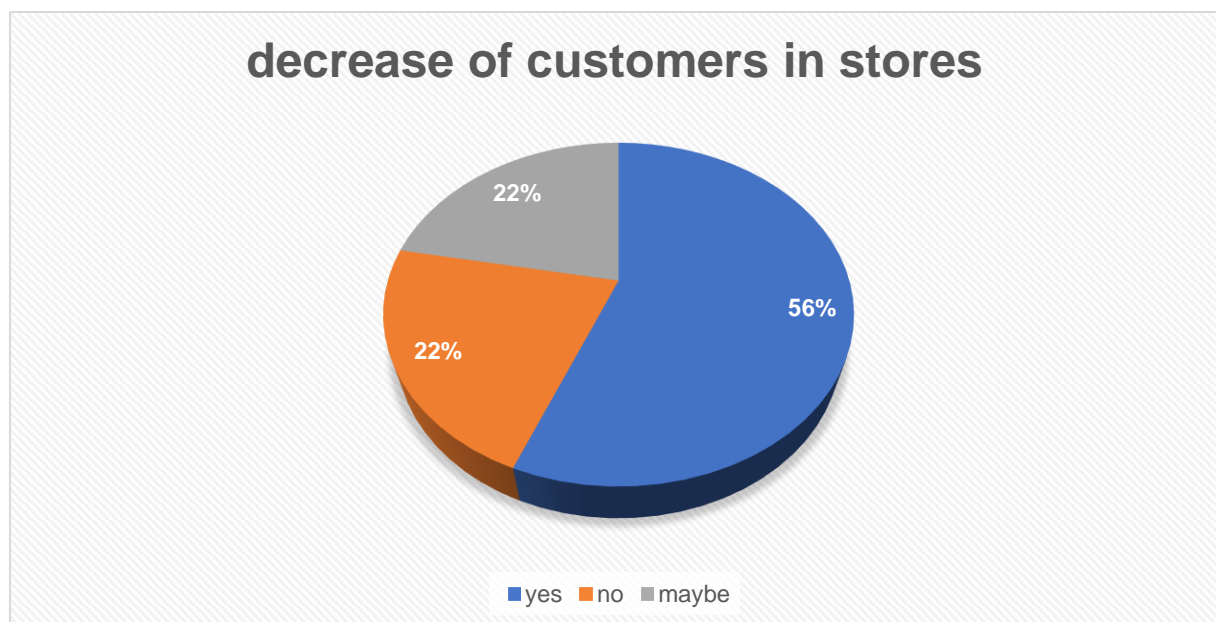
Q2: What was the biggest change in the industry you have witnessed and why?

cluster category	Most important aspects of the answers
Convenience systems 21/37	Introduction of self-checkouts Delivery offers by retailers Payments via phone Apps for scanning products Online retail Digitalisation Electronic price tags Electronic customer communication
Sustainability 10/37	Increase of waste reduction Meat substitute products (Tofu) More organic products More ethical clean products (Fairtrade) Deposit on cans and bottles Environmentally-friendly packaging Increase of regional products to avoid transport

Product variety 10/37	Wide range in price and quality Environmentally-friendly products (meat substitutes) Products from all over the world with different backgrounds and focusses Fat-reduced products targeted to weight-loss Focus on regional products
Event shopping 3/10	Attractive presentation of products Specialized consultation during the shopping Degustation events Customer-oriented Focus on organic and regional products
Convenience products 2/10	Introduction of convenience food like pre-cut vegetables.

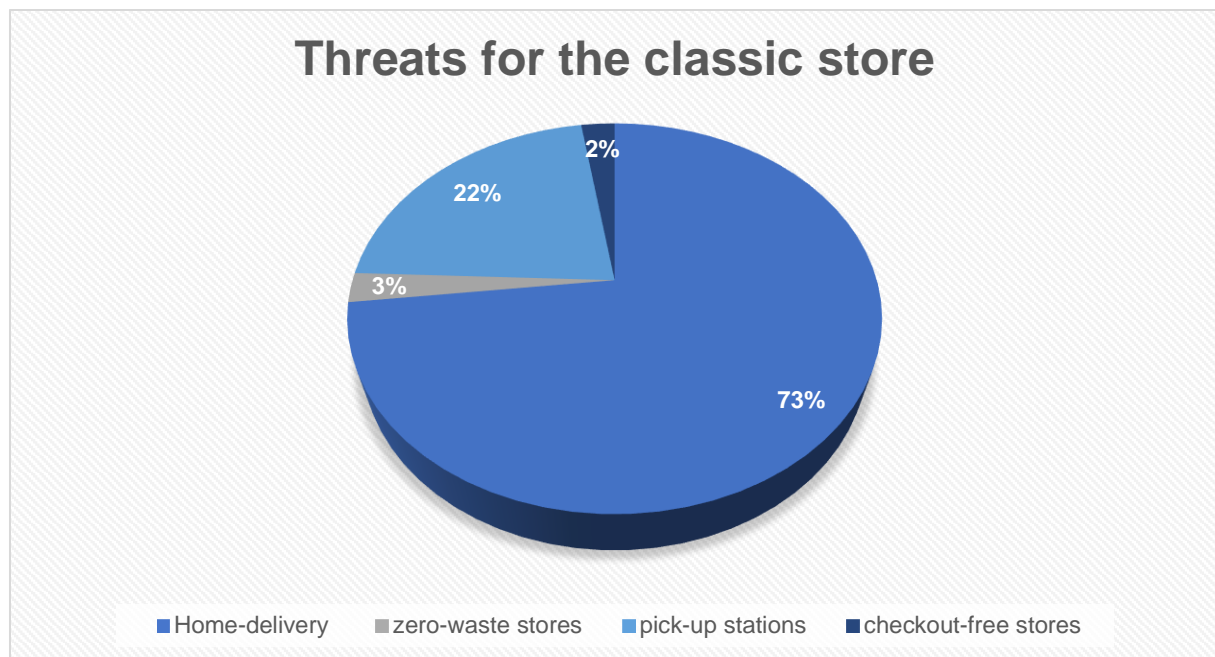
Answered by 37, skipped by 4

Q3: Do you see a decrease in customers of grocery stores in the future?



Answered by 41, skipped by 0

Q4: Do you think the e-commerce of food is a threat to grocery stores?



Answered by 41, skipped by 0

Q5: What do you think has to change in the food retail industry?

cluster category	Most important aspects of the answers
Convenience systems 15/39	Optimisations of delivery systems Too long queues at the checkouts Sale systems must be automatized More automatization within payment systems Qualified consultation and help must be available in the stores “customer is king!” Focussing on individual customers demand Option of express shopping should be implemented Additional online shopping

Sustainability 12/39	Packaging waste must be reduced and recycled as much as possible Fewer food should be wasted Reduction of transport by focussing on regional products Increase of regional, organic and fair-trade products Focus on regional products also in urban surroundings Production should focus more on being energy efficient
Event shopping 11/39	Positive atmosphere must be created in stores Shopping must be turned from a daily need into a joyful event Customers questions and needs must be taken care for Shopping must be combined with gastronomy and relaxation in one place Stores must offer an added value through consultants and additional advises for preparing a certain product Offering a wide range of products
Product quality 8/39	More transparency regarding origin and shelf life must be provided High quality products must have high-quality prices Freshness in stores as main marketing tool
Flexibility 6/39	Trends must be observed and evaluated continuously and require quick reactions if seemed profitable
Product variety 6/39	Wider range of local products More specialized products following the individual needs of the customer

Answered by 39, skipped by 2

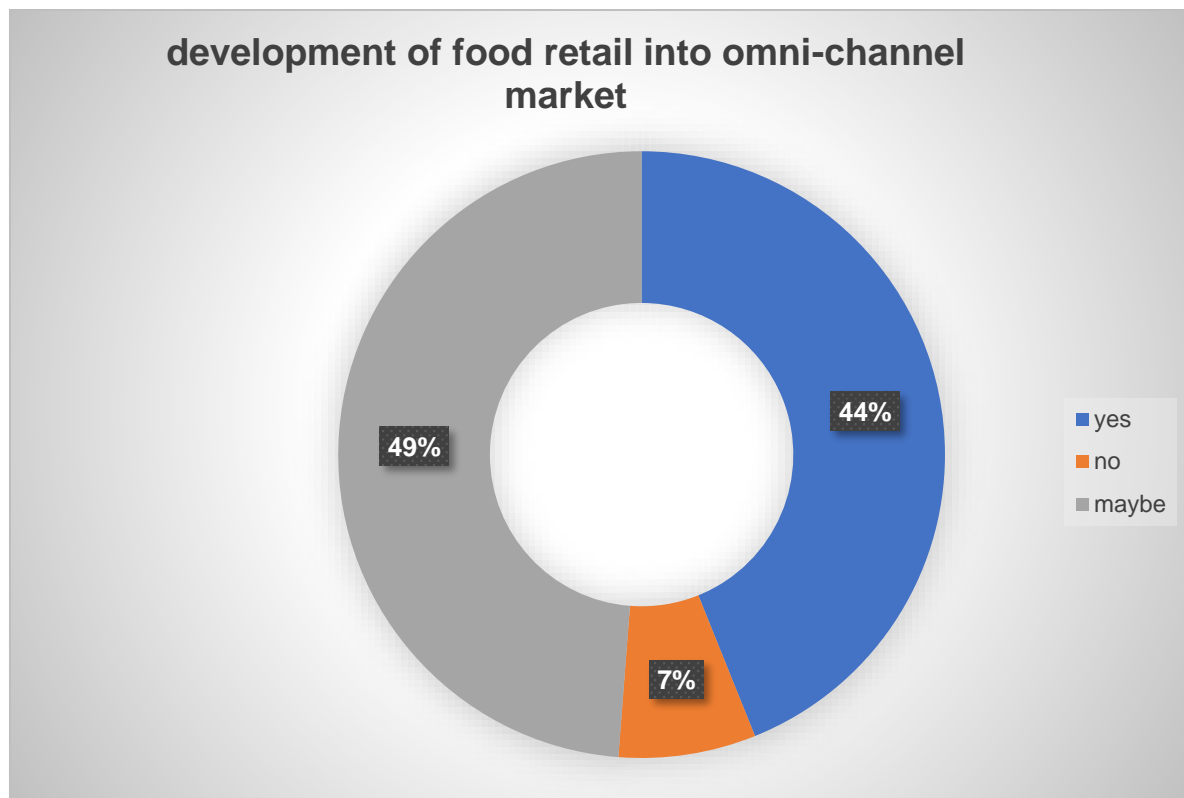
Q6: What do you think cannot change in the food retail industry?

cluster category	Most important aspects of the answers
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Product tangibility 15/31	<p>Some customers will always want to see/smell/feel the product prior buying</p> <p>Personal contact between customers and service employees is important</p> <p>Consultancy is wanted by customers</p> <p>For some groups of customers, the shopping is part of daily communication</p>
Product quality 7/31	<p>Shelf-life of fresh products cannot be changed</p> <p>High quality products require a high price</p> <p>Transparency is wanted by the customer</p> <p>Fresh products can not be offered by online retail</p>
Service 7/31	<p>Transparency is wanted by the customer</p> <p>Personal contact is required while consulting during the shopping</p>
Product variety 5/31	<p>Range of product cannot be increased without decreasing the amount of products that is being presented to the customer</p> <p>The size of stores should not increase</p>
Competition 5/31	<p>Competition amongst retailers will continue to be hard regarding prices and services offered</p>

Answered by 31, skipped by 10

Q7: Do you think food retail will be shifting to omni-channel strategies?



Answered by 41, skipped by 0

Q7.1: If yes, why?

Most important aspects of the answers

Beneficial for most customers

Supports convenience and follows demands of customers

Heavy goods could be ordered online while purchasing fresh goods in can be done daily relevant at stores

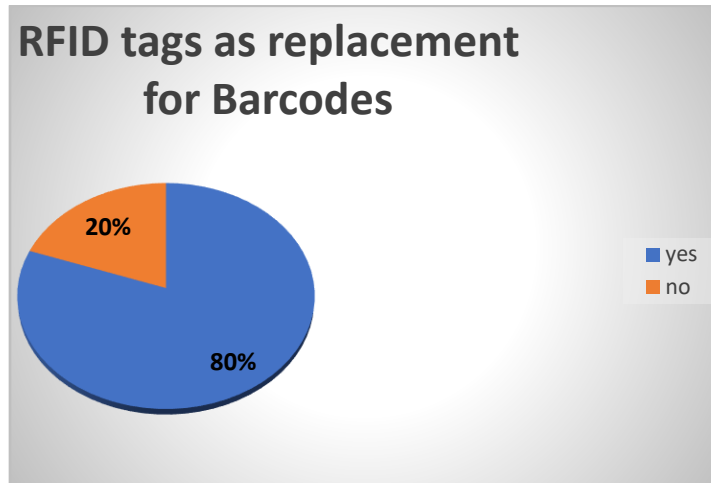
Omni-channel reacts best on different customer needs: Who wants to shop online can do so and who prefers to have consultancy and tangibility can go to the shops

Answered by 20, skipped by 21

Q7.2: If no, why?

No relevant feedback

Q8: Do you think RFID tags would be a good replacement for bar codes?



Answered by 41, skipped by 0

Q8.1: If yes, why?

Most important aspects of the answers

The fast development in digitization will make RFID tags cheaper and cheaper and therefore more applicable to packaging in food retail

RFID-tags would simplify the process of ordering, delivering and payment

Expected is that RFID-tags are more secure as it is easier to keep inventory

RFID allow very fast shopping process without manpower being involved and therefore implies efficiency

Answered by 27, skipped by 14

Q8.2: If no, why?

Most important aspects of the answers

Is still too cost intensive especially for independent, smaller traders

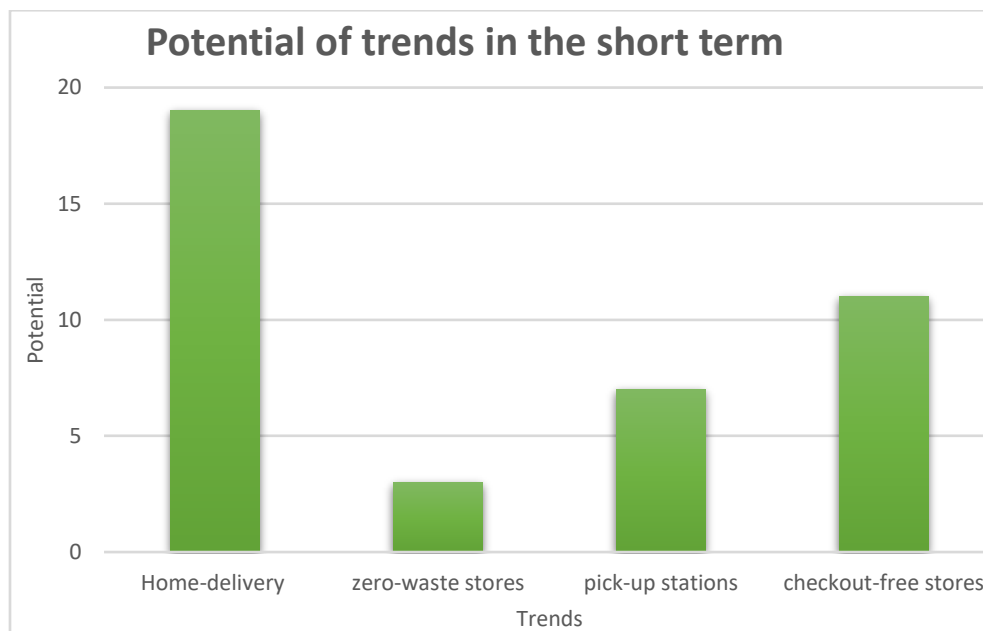
Only efficient when fully integrated into one's organization

Production of RFID-tags is too cost intensive and not environmentally-friendly

Solution for personnel data protection must be developed

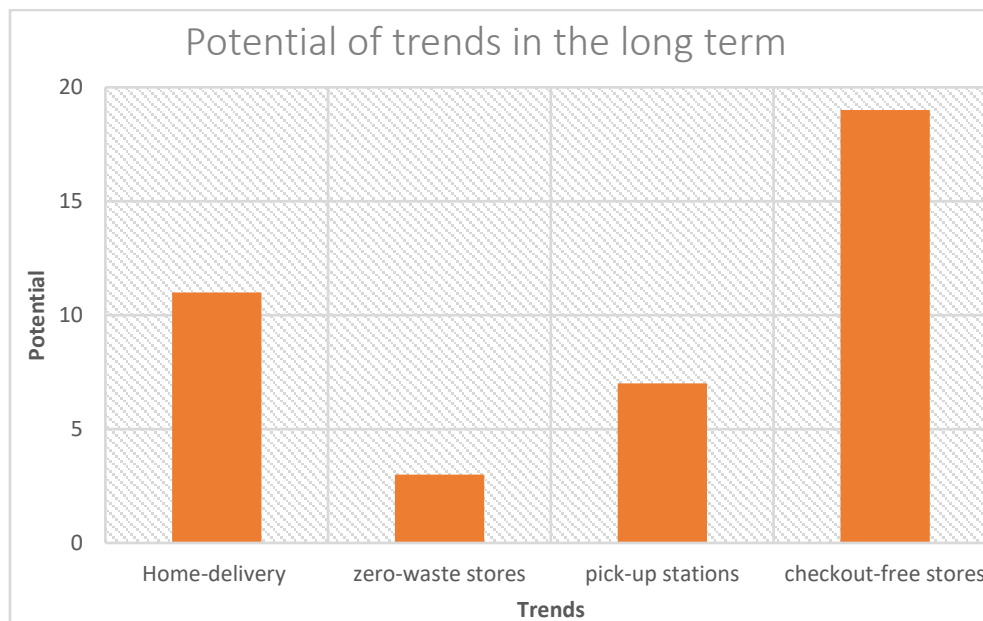
Answered by 15, skipped by 26

Q9: Which trend do you think has the most potential in the short term?



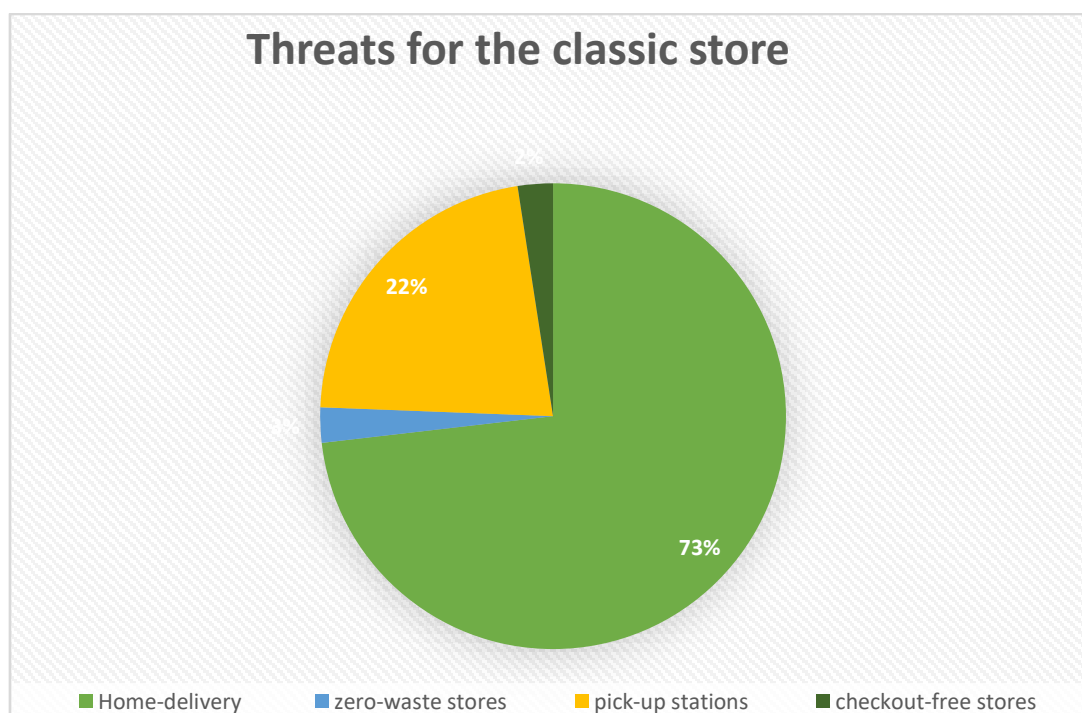
Answered by 41, skipped by 0

Q10: Which trend do you think has the most potential in the long term?



Answered by 41, skipped by 0

Q11: Which of these trends do you think is the biggest threat for grocery stores?

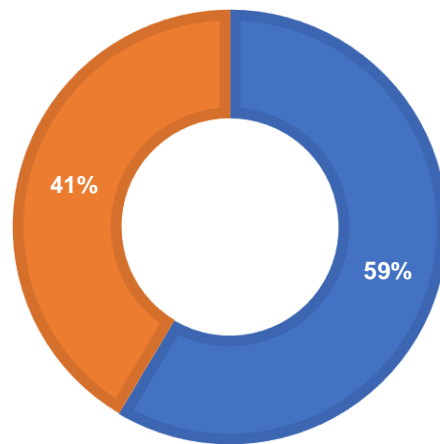


Answered by 41, skipped by 0

Q12: Do you think pick-up stations would be a positive development for rural areas?

PICK-UP STATIONS IN RURAL AREAS

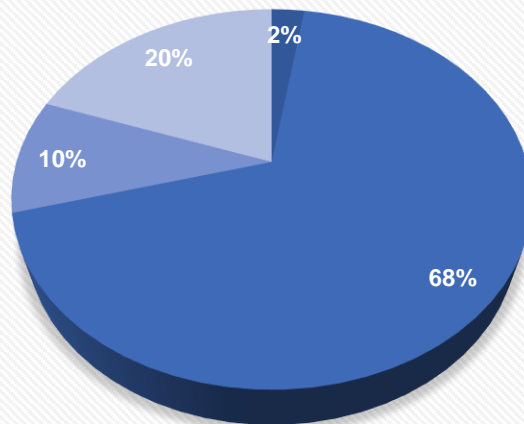
■ yes ■ no



Answered by 41, skipped by 0

Q13: Do you think e-commerce could completely replace the grocery stores?

E-Commerce replaces store



■ yes ■ no ■ not sure ■ maybe one day

Answered by 41, skipped by 0

Q14: How do you think retailers can adapt to the current changes?

cluster category	Most important aspects of the answers
Event shopping 15/27	<p>High-level consulting and help during shopping must be available for customers</p> <p>Being innovative and develop customer-oriented concepts and events</p> <p>Optimise the shopping and turn it into an experience for the customer</p> <p>Emotions have to be involved in the shopping process</p> <p>Personnel must be friendly and customer-oriented</p> <p>Increase of convenience and to-go products</p>
Convenience systems 14/27	<p>Encourage customer loyalty by offering services like bonus cards and delivery services</p> <p>Make shops attractive and shopping fast (no queues)</p> <p>Implement services like pick-up stations</p> <p>Follow individual customer needs</p> <p>Being innovative and develop and test business models</p> <p>The retail should implement current and coming technologies in order to not fall behind</p>
Attentiveness 11/27	<p>Being aware of each development in the business surrounding in customer demand</p> <p>Have enough budget for testing</p> <p>Not every trend has to be followed, but those which could be in line with each business strategy should be followed.</p>
Omni/multi-channel 4/27	<p>Implementation of additional online sale</p> <p>Combine stationary and online sales</p>
Sustainability 3/27	<p>Reduction of waste in packaging</p> <p>Increased use of organic products</p>

Appendix C: Interview Protocols

Participation Invite

*“Dear ******

My name is Jan-Felix Beecks and I am studying International Food Business at the Aeres University of applied sciences in Dronten, the Netherlands and Dalhousie University in Truro, Canada. Currently I am in writing my bachelor thesis about the development and future perspectives of grocery stores in Germany. Your profession and position inside your company/organisation reveal that you are an expert in the retail business. Therefore, I was hoping to schedule a brief personal/phone interview with you, at your convenience, and to receive further recommendations, information and support for my findings from an expert. If you are willing to support me with my thesis, please give me some timeframes for finding the most suitable time for an appointment.

Kind regards,

Jan-Felix Beecks”

Introduction

During the interview, all interviewees received the same general introduction

I would like to thank you again for taking your time to help me with my thesis by participating in this interview. Before diving into the interview, I would like to give you a little background of the topic and why I chose it.

I made a hike though Bavaria in the summer of 2017. During this hike me and my group were looking for supermarket to buy supplies. To our bad luck we had to notice that many supermarkets in small villages had been closed. I started to imagine why those supermarkets were closed and if there are alternatives to the single-channel distribution of food. Inspired by tis event, I decided that I want to know more about the food retail and how may develop in

the future. This is why I chose to concentrate my thesis on techniques and methods influencing the future of food retail in Germany. I distinguished a couple of trends that I would like to further discuss with you. If there are any questions regarding the understanding or terminology I of course provide explanations.

General Framework Questions

After the introduction, the interviewees were asked the following predefined questions.

1. How would you describe the future of the food retail in Germany?
2. I identified a couple of trends while researching for my thesis and I would like you to give me your opinion of them: The first trend I would like to have your opinion on is pick-up stations and delivery systems and especially the idea of implementing pick-up stations in with lower density of population like more rural areas.
3. What do you think of zero-waste stores?
4. What is your opinion of checkout-free stores?
5. Do you know what RFID tags are and if so, how can they be used in the food retail industry?
6. Is the online sale of foods a risk for the store?
7. To what extent in terms of distribution channeling is the food retail in Germany developed? And could the use of RFID tags be beneficial to achieve offering products through omni-channel distribution?
8. How should the German food retail react to the trends?
9. What do you think of the trend to enhance the shopping experience into something more than an everyday life activity?

Besides these questions, the interviewees had the space to make further comments relevant for the research topic. As each interview was a bit different in terms of style contextual questions were sometimes asked and the order of predefined questions can differ. The interviews partially turned into discussions. The responses to the predefined questions as well as responses to context questions can be found in Appendix D.

Appendix D: Interview Transcripts

This section provides the single interview transcripts. Therefore, the transcriptions were analogously reproduced. All transcriptions have been verified by the interviewees immediately after the completion of the interview. Introductory questions are labelled with IQ, the predefined questions with PQ, context questions with CQ and the answered are opened with the Interviewee ID.

I-1: Interview Transcript

Date: 25.09.18 **Time:** 10:00 am **Duration:** 25 min. **Place:** Bergheim

IQ: How would estimate the future of the food retail in Germany?

I-1: I think that the aspect of convenience of products will gain more important. Comparing this trend to what is offered in a Dutch supermarket, I see a chance for example for pre-cut vegetables as more and more people want to spend less time on preparing food. However, the quality of those pre-cuts must be higher when offered here in Germany. At least in our stores. We recently introduced self-service checkout systems in some of our stores. In that I also see a rise as it proves to be more convenient for some customers.

PQ: I identified a couple of trends while researching for my thesis and I would like you to give me your opinion of them: The first trend I would like to have your opinion pick-up stations and delivery systems and especially the idea of implementing pick-up stations in with lower density of population like more rural areas.

I-1: We implemented a similar service in a couple of our stores. The service offers the customer to order and pick up the order within 30 minutes. We implemented a special counter for pick ups inside of the stores and right now we are still figuring out how personnel intensive this system is. So far, the service is not used that much but the average value of each order is certainly interesting for us. As for rural areas I could imagine that the implementation of DHL

like pick up points could be convenient for the customer. But the profitability in comparison to the effort has to be tested.

PQ: What do you think of zero-waste stores?

I-1: This trend is more like a fashion trend in my opinion. It is by far not applicable to the large-scale food retail. It would be a hygienic issue as well. Some products simply need packaging for various reasons.

PQ: What is your opinion on checkout-free stores?

I-1: We implemented self-checkout systems in some of our stores as I mentioned before. This is a step into that direction. I believe that checkout free stores are the future as it is more convenient for the customer.

PQ: Do you know what RFID tags are and if so, how can they be used in the food retail industry?

I-1: Yes, I know what they are. In my opinion would be a good replacement for the bar code one day as it is possible to give out more information and thus some added value to the customer. In addition, it would simplify a lot of processes in the food retail. I think the RFID tag is the system of the future but for current use it proves to be still too expensive. Once it is affordable it will be implemented in the food retail for sure. Through the RFID tags one store could really become omni-channel.

PQ: Is the online sale of foods a risk for the store?

I-1: As for now I would not so much believe in that. The importance of online retail of food is not so high. I still believe in the classic supermarket focusing on quality and offering an experience and added value to the customer. In the future the importance of online food retail will increase. This is why the REWE Group is trying to get some experience in that field. Otherwise they would not experiment with delivery systems.

PQ: To what extent in terms of distribution channeling is the food retail in Germany developed? And could the use of RFID tags be beneficial to achieve offering products through omni-channel distribution?

I-1: I would say that the food retail in Germany, seen as a whole, is already omni-channel. There are many ways the customer can acquire food by now. The REWE Group just launched the project of REWE Digital, which is basically a delivery service. This system however is a long-term test and does not prove to be profitable at all so far. The RFID tags, again once they are more affordable, could be very beneficial for inventory keeping and track and trace systems.

PQ: How should the German food retail react to the trends?

I-1: We at REWE like to experiment a bit. I believe you have to adapt to current times and current technologies. Therefore, it is important to keep on track with technologies. And therefore, REWE implemented REWE digital and other things.

PQ: What do you think of the trend to enhance the shopping experience into something more than an everyday life activity?

I-1: All in all, I would say that the supermarket must create some kind of added value and must provide an experience for every customer. Some customer will always want to look at nicely presented foods and want to be consulted during their shopping. The added value a supermarket offers lies in presentation of products and consultation combined with implementation of gastro-service like experiences.

I-2: Interview Transcript

Date: 09.10.18 **Time:** 4:00 pm **Duration:** 78 min. **Place:** Cologne

IQ: How would you describe the future of the food retail sector in Germany?

I-2: I do not think that we (Edeka) will have any striking problems with the Internet, delivery systems etc. The REWE Group is currently working on it but there is no system that is profitable or that sustains itself in the moment. If you imagine what volume of products are brought to each supermarket everyday and then imagine this volume had to be delivered. The streets would be blocked by the delivering cars alone. I do not think that this would be possible to handle. Moreover, it is the fact that the customer wants the experience to choose the strawberries that he buys himself and that this place of experience will remain the store. An argument for this hypothesis is that Amazon, as the biggest internet company, found its solution for the retail of food in terms of entering the stationary food retail. Amazon made the decision that if the online-retail of food is not intensively enforceable then the items we do sell online must be lucrative enough. And that's why Amazon entered the stationary food retail. If you want to take a closer look at the German food retail it has to be mentioned that the large-scale retail like Real, Kaufland and Marktkauf does barely sustain itself. Real has big issues and are looking to sell. Kaufland does not speak about it but is not as happy as the used to be and Marktkauf is the large-scale retailer owned by Edeka. Edeka tries to privatise this piece by piece. If you compare this to the Marktkauf in Frechen, which is the one of the few that sustains itself and makes profit, and would think about renovating it then you would turn the upper level into office space, leave out most non-food products and specialise on food products. Because nowadays the customer does not want to buy strawberries and pass by the bicycle tires anymore. It all stays at the classic specialist shops. This is what Edeka focussed on and that's why it is the market leader. Edeka makes a turnover of 58 billion Euros alone with food products. Second is REWE with a turnover of 35 billion Euros. There is a big difference. And after that there are Aldi and Lidl (Schwarz Gruppe) in the ranking. These four big retailers own 82% of the market share. And when you keep in mind that Edeka as number one in Germany owns twice as much retail

space as number two and the four big ones own 82% of the market; then you know what the situation is.

PQ: I identified a couple of trends while researching for my thesis and I would like you to give me your opinion of them: The first trend I would like to have your opinion pick-up stations and delivery systems and especially the idea of implementing pick-up stations in with lower density of population like more rural areas.

I-2: There are different variations of this trend. There is the classical online retail; you order something and it gets delivered to your house. But as we discussed before, as long as there is no idea of how to efficiently send food it won't work for the food retail. That is not possible due to the cooling chain, the freshness of products and the amount of options for the customer; it is simply limited. However, if a customer wants to do the shopping quicker and does not want to select the products themselves, then REWE, we (Edeka) do not offer such a system, offers a system in which you can order online and pick-up the order within 30 minutes. In order to make this system quicker you would have to pay and pick up your order at a designated counter. You would have to see in how this system establishes itself but it is for sure a possibility. In the moment I do not see this as so strong as REWE does. REWE is way more adventuresome than Edeka as REWE experimented a lot in the past and also failed a lot. The whole idea has some drawbacks. In the moment we have less than 5% of the people are unemployed. Therefore, it is very personnel. If a customer orders something online, an employee has to go through the store for him and pick the order. And then there is the question: Who is going to pay for that? If the customer won't be paying for this, this kind of system will be very expensive for the retail. Nowadays personnel and the costs are exploding due to the low unemployment rate. Again, I cannot recognise the strategy of profitability of REWE. They offer service at any cost. But this does not show profitability. But you will have to wait how that will develop. I could imagine that in other market situations, for example with a higher unemployment rate or in

another country with a high unemployment rate, it would be possible to realise a delivery and/or pick-up system with relatively low personnel costs. In the end it depends on the cost structure if these systems will fully establish themselves. Because in the end everybody wants to live and therefore it must be profitable enough. And REWE is currently trying a lot of things. If you compare it to the classical online retail then it is the case that REWE Cologne is implementing following strategy: REWE delivers approximately 2 customers per delivery vehicles per hour and they are charging six Euros for the delivery. That means that they would have a revenue of twelve Euros per hour which is approximately the gross-income of the driver. You can quickly calculate that all the cost relating to vehicle are not paid and the cross-docking warehouse that picks the orders is also not paid. These are thing which do not make a lot of sense. You can push it, which REWE is doing because they think that sometime there will be an idea of how to improve it. But the facts show that it is not profitable. We inside Edeka made a study in which we compared the prices of products to an average purchase of 100 Euros. The results have shown us that in this moment REWE is the most expensive retailer. This shows that REWE is trying to get some of the money, spend on delivering systems, back in other ways. I believe Edeka knows why we are the market-leaders. We do honest business, we only do locations which sustain themselves and we work with independent merchants. That means the independent merchant has to be able to live at this location and we do not subsidies locations. Through that we only have efficient locations and within these efficient locations it is possible to be price-aggressive. Edeka maybe used to be considered as expensive in the past but today it is possible to compete with discounters on a price-basis. If you are looking at implementing pick-up stations at rural areas you are basically looking at an alternative for the former drive-in service. Back in the days some retailers drove with a big car or bus through the villages and sold items out of the vehicle. But even in the past services like that never had a big significance.

CQ: How is that possible for supermarkets?

I-2: In general, there is a simple explanation for this. An Aldi nowadays has around 4,000 different products in the store. In a supermarket, a full-range provider, there are around 30,000 different products. If you have that many different products it does not make a lot of sense to change prices a lot because Aldi and Lidl can react way quicker. That does not make sense and the customer understands this more and more. It used to be the way that the customer went to the discounter first and then get complete the grocery at the full-range provider. Nowadays the customer understood that REWE or Edeka have the same prices for the products in the discounters. Who really wants to shop cheap should go to Edeka because you only have to go to one store which is more time-efficient. Edeka has by far the deepest and widest range of food products. And as main market-leader Edeka is in the position to offer an attractive price system.

PQ: What do you think of zero-waste stores?

I-2: I do not see a real future for this as there are some products which have to be properly packaged. The real problem there is that the customers are quickly made “crazy” and put on a wrong track. We have the plastic issue in the moment. And with this issue we have the problem that a lot of customers recognise it and say I do not want plastic anymore. Now imagine a customer like this comes into the store, brings his own container and wants to have some slices of sausage for example. Then we simply cannot do that because it does not meet the standard of the hygienic regulations. The veterinary inspection office would kill us because if something happens we would take something from which we do not know if it is germ-free behind the counter. We have the same problem with the development that the customer was put in the direction to think it would be more hygienic if employees who work behind the cold-cuts counter wear plastic gloves. This is nonsense. The glove could be germinated with bacteria just as the bare hand. In addition, it is a problem that the glove causes the wearer to sweat which is not ok with the occupational safety. Now that the media made the people crazy about the glove being more hygienic some people demand it. That is problematic for. And the only way to

proceed in this matter is to instruct your employees on a voluntary basis to put on one glove, hold the fork in the other and switch it up sometimes. This way it is alright for the employees hands and the customer thinks it is more hygienic.

PQ: What is your opinion on checkout-free stores?

I-2: I think these are all experiments. Not one concept really established itself. The classic stationary retail is the form of retail which really asserted itself. For the German market you can say that the large-scale retail does not establish itself. It used to be the idea of getting bigger and bigger but this is not working. Offering food and non-food on a large-scale does not work in Germany. If you focus on food and build up something like a food temple. Depending where these kinds of temples are, they are running pretty successful. Fact is for the supermarket that a size of 2,500-3,000 m² is ideal. In a store with size you have enough space to present the full range of products and can offer an experience. For the discounter the size of 1,500 m² perfect. The concept of carrefour of big supermarkets does not work especially because Germany is so close meshed that the large-scale stores to which people drive to from further away is not profitable.

PQ: Do you know what RFID tags are and if so, how can they be used in the food retail industry?

I-2: Regarding this topic of field of technology I can imagine a lot. You can compare this electronic price labels inside the market and it depends a lot on each market's structure. For some markets it makes more sense to use paper-labels and for other especially bigger markets it makes more sense to use electronic labels. It depends which synergies the RFID tag builds up in order to be sustainable for each market. It might be the case at some point that a RFID tag is placed in each packaging but some stores cannot really use it as it is also expensive to implement for example shelves which can interact with those chips. You would need the technology behind the RFID tags, would have to be able to work with it and it should bring

value for your store. Only then it would make sense. I cannot really predict this but then again if you compare this to the electronic price labels the technology will become cheaper. Electronic price labels cost about 30% now from what they costed ten years ago. You could see a similar development regarding RFID tags. A future development I can imagine to be implemented is that the customer can use his phone in combination with the RFID tag to shop groceries. I think the retail will try to develop systems aimed to sell more to each customer. For example, creating a system that saves each customer and their buying behaviour. And let's say the customer is going through the store and the system knows that this customer always buys a certain brand of chips in the 100g bag. Then this system would recognize that and would light up the 250g bag in the aisle. In addition to this if you buy things during a certain season, for example you want to buy Sauce Hollandaise then the ham and the asparagus would light up/be recommended for you. I believe it is obvious that a kind of recommendation system will be implemented by the retail industry in Germany. Because that would be beneficial. If the customer's data is being gathered piece by piece, which goes against all developments of data protection but seems to be possible for the retail. The retail is heavily collecting and using the customer's data. Through this it is possible to guide the customers and create some kind of guiding systems. This and information systems go hand in hand because you would also want to send the customer information why he should buy a certain product.

CQ: What do you think of the "Dutch scanner system" seen in Jumbo?

I-2: These are experimenting system. I believe that this will be handled through your phone in the future. This might be enhanced in a way that you will be able to use wearable gear like watches or rings connected to your phone.

CQ: How does the Edeka system work exactly?

I-2: Edeka works with a cooperative system. That means that each merchant has cooperative percentages that can be compared to the share of turnover each merchant has. With these

cooperative shares we have the right to vote the supervisory board which is voted from the entire pool of merchants. It is the supervisory boards task to elect the managing directors. This system is the explanation for the success of Edeka. Because at Edeka the top of the organisations does not give directions but the mid and lower level do. You have to imagine that we have the toughest food retail market worldwide. Nowhere, at least inside Europe, the system is so close meshed, the sale space is so dense per capita and on the one hand you had the foundation of discounters like Aldi and Lidl, which establish themselves everywhere and are feared by competitors. And if you imagine that in this situation (the German market) Walmart, the biggest food retailer in the world, failed and if you then remember that the Edeka system established itself to be the market leader by far. Then there has to be a reason for it and there must be something special. And this is the independent merchant. If an independent merchant goes bankrupt it does not harm the group. One merchant does not carry the group. The merchant has to be able to manage locations himself and if this is the case the merchant will give everything to do so. In case one merchant is not able to handle it himself does no damage to the group. Only in terms of not buying at Edeka anymore and not in terms of carrying losses. That is what makes Edeka strong and I think this system would fit everywhere in the world and would establish itself. The main goal is to only to what saves the group through long-term success. It is also a brutal system because the individual does not play a big role.

REWE is an opposite as it is more managed by the top of the organisation.

PQ: Is the online sale of foods a risk for the store?

I-2: Not in the near future. It would not be a risk but an addition. But it is not very important at the moment. The digitisation could also improve the stationary retail. I mean standing in line to pay is an argument for the online retail. But if the digitisation brings us tools to help the customer shop and makes paying via phone possible. Then I think this could even strengthen the stationary retail.

PQ: To what extent in terms of distribution channeling is the food retail in Germany developed? And could the use of RFID tags be beneficial to achieve offering products through omni-channel distribution?

I-2: The German food retail is already omni-channel. You are able to reach all channels as a customer. And it will certainly be like that. The question behind is which importance the alternative channels will have. In the moment I see the importance of these alternative channels as relatively low. A development in how to delivery more efficient and most importantly more cost efficient in relation to the volume is necessary before the other channels grow in importance. But I do not see this coming.

PQ: How should the German food retail react to the trends?

I-2: That really depends on each organisation and its strategy.

PQ: What do you think of the trend to enhance the shopping experience into something more than an everyday life activity?

I-2: The customer does want the experience. If you compare this to the retail as a whole. Then you have to notice what is running. The gastronomy is running good. The customer does not just want to sit at home in front of the TV. The customer likes to go outside and experience something. Just compare it by what goes on in the city in the evening. All restaurants and bars are packed. The experience of community is what the customer wants. The experience of market atmosphere is what the customer wants. An experience must be given at a store, the customer's mouth must start to water. The development in the supermarkets will be that you will always have to give the customers an argument for coming to this store. And this is only given if you present the goods so attractive that the online business seems to cold, not emotional enough. You can compare this to Edeka Zurheide who focusses on experience and nearly turns shopping into gastronomy through building up these food temples. But a difficulty in this is the personnel for the specialist departments. It is difficult to find the right personnel and if you are

able to find it, it is very expensive. But that depends on the strategy you follow. REWE Richrath focusses more on the classic supermarket. While Zurheide likes to experiment more.

CQ: What trend do you think has the most potential in the near future?

I-2: I believe that the classic discounter is still pointing the way because the price of food always plays an enormous role. The classic stationary discount trade is so logistically-well thought through that it is unbeatable in this manner. You can see this with the success they have worldwide. The system works everywhere. But I also believe in the classic full-range provider, the supermarket such as REWE and Edeka, with the trend to turn the shopping into an experience. The trend is to further concentrate on experience, market atmosphere and I believe that there won't be anything for a long time that will make it hard for us (full-range providers).

I-3: Interview Transcript

Date: 20.10.18 **Time:** 3:00 pm **Duration:** 30 min. **Place:** Frechen

IQ: How would estimate the future of the food retail in Germany?

I-3: I would say that the food retail in Germany will endure in the coming future. It won't die out but it will deal with store size and demands of customers, fast grocery shopping. Taking Real (a German full-range provider owned by Metro) as example or older Kaufland (full-range provider owned by Schwarz Gruppe) stores, which are huge, they are massively losing turnover. This will further increase as the customer does not want to spend two hours on shopping but does want to get it done quickly. The retail will be must be more specialised. For instance I would buy my meat at the butcher around the corner and buy the potatoes from local farmers. That is the trend: quality, brands, regionality, speed and convenience. Since the demands of the customers will change, the retail has to react to that: to change concepts inside the stores, from big to specialised, to create a unique selling points.

PQ: I identified a couple of trends while researching for my thesis and I would like you to give me your opinion of them: The first trend I would like to have your opinion pick-up stations and delivery systems and especially the idea of implementing pick-up stations in with lower density of population like more rural areas.

I-3: pick up stations in stores is a thing that was and is being tested in single stores. It did not establish itself because the background processes are too complex and not profitable enough. A lot of retailers are working on pick up systems for years now. I think that this will be moved more towards dry good because there are no cooling chains that has to be met and to products with more solid packaging. I think that it will be continued to realise pick up stations. Another issue is the storage space and how to handle that. That means that you have to adapt locations (the stores) that there is enough storage space for the picked orders. This includes costs of redesigns of stores, space for turnover that you loose, you will need employees to pick the orders. It is as I said really complex. In addition, there are a lot of customers who want to choose and touch the products themselves prior buying. I think the customers in Germany are not ready for this yet.

PQ: What do you think of zero-waste stores?

I-3: this is a critical topic especially regarding the deli counters; many hygienic regulations and safety rules/processes have to be met. This is a trend that the Schwarz Gruppe seriously considered but discarded due to multiple points. It depends a lot on the assortment you are offering. As soon as fresh products are involved it is really difficult to implement this trend.

PQ: What is your opinion on checkout-free stores?

I-3: All retailers are working towards something like this. But the process of this is done step by step and it will take a lot of time until this is really used by the big chains. I think the trend in Germany is more going towards express/self-checkouts. Examples for this can be seen at

Albert Heijn in the Netherlands and at Tesco in the UK. This is a trend we are going to see in the near future, especially in smaller retail stores.

PQ: Do you know what RFID tags are and if so, how can they be used in the food retail industry?

I-3: It could majorly improve the inventory keeping and traceability. As long as the price is as high as it is now for those chips, it is not applicable for the use in food retail. However, it is a tool that is definitely being used. You always have to calculate the cost difference between manually doing something and implementing a technology.

PQ: Is the online sale of foods a risk for the store?

I-3: not in the near future.

PQ: To what extent in terms of distribution channeling is the food retail in Germany developed? And could the use of RFID tags be beneficial to achieve offering products through omni-channel distribution?

I-3: It is already omni-channel because the customers have the choice of how where and when to acquire food. RFID tags could support the omni-channel model because it would be possible for a retailer to offer a service via app that allows the customer to check availability of products in store and then to decide if he goes in store, orders for delivery or orders for pick up.

PQ: How should the German food retail react to the trends?

I-3: In my opinion, we have to focus on creating shopping experience and atmosphere. Quality and price are most important. Well-trained personnel that can consult the customers is also another important aspect. Only through that you can pull yourself ahead from the online retail.

PQ: What do you think of the trend to enhance the shopping experience into something more than an everyday life activity?

I-3: Here you have to differentiate between the different social classes. There are some that are willing to pay more for better quality but there are also a lot who cannot pay that much and only

care about getting food at all. It depends on the concept of each store how you approach this trend.

I-4: Interview Transcript

Date: 12.10.18 **Time:** 12:00 am **Duration:** 32 min. **Place:** Cologne

IQ: How would estimate the future of the food retail in Germany?

I-4: In Germany we have a relatively strong consulting process relating to the food retail and in its differentiation strategy its is main part that, let's say for the few five (*meant are the five German retailers who own most of the market share*), the regional marketing of food will play a bigger role. That means that the regional windows (*when talking about regional windows, the interviewee is talking about sourcing regionally*) will become more important and through that the retailers will try to differentiate themselves. A current example, which is not so regional, are the first steps of Bioland as big seller or producer of organic food products within the structure of the Schwarz-Gruppe. That means that the Schwarz-Gruppe will label organic products in the future. A counter-strategy can be observed at REWE which are the regional windows with increasing importance and management. The consultation process will untie a little bit and we will have a consumer trend. A consumer trend of more quality and higher priced food products will increase.

CQ: Do you think the convenience market with pre-cut vegetables etc. as seen in the Netherlands will increase in Germany?

I-4: Yes of course, we have more and more people who want to spend less time with food or making food. As a result, the convenience market will increase but I also see an increase in the trend consume of highly quality food products when people want to treat themselves with something good during the evening or weekend. And exactly this is the chance to make money

with higher priced food products and this development happens parallel. In addition, the trend of eating away from home will increase immensely.

PQ: I identified a couple of trends while researching for my thesis and I would like you to give me your opinion of them: The first trend I would like to have your opinion pick-up stations and delivery systems and especially the idea of implementing pick-up stations in with lower density of population like more rural areas.

I-4: It is a combination. Having pick-up stations, there are two advantages in my opinion. You can save quality in terms of keeping the cool-chain in tact and can guarantee proper storage of the products. The observation that is possible to sell products like we discussed on the way would be an argument for pick-up stations. (I met Dr. Lüttgens in Cologne in front of a restaurant which I set as meeting point due to its closeness to Dr. Lüttgens' appointment before the interview. From there we walked to a café. On the way to the café we talked about the thesis project and made some small talk. Dr. Lüttgens told me about the introduction of vegetable crate subscription from regional farmers) Pick-up stations, as seen from the perspective of the food retail industry, have the advantages that quality can be held high through better control over the cooling chain in comparison to delivery. Another advantage is that the consumer does not have the obligation to stay at home and wait unlike in the delivery system. Therefore, I see a chance for pick-up stations on the German food retail market. German food retailers are more investing towards delivery systems but when I compare pick up stations with the success many regional farmers have using vending machines I believe that pick-up stations are a practical idea.

PQ: What do you think of zero-waste stores?

I-4: This trend seems to be for the urban society. It is definitely a fashion trend. The focus should be set on keeping presenting and keeping the products quality during sale. I think we should think about how we could develop new and better ways of packaging. I have an example for

this. A relative of mine is selling potatoes in cardboard boxes. The cardboard box is recyclable and offers storing advantages for the potatoes as it does not allow light to shine on the potatoes prevents from dirt to fall of the potatoes and make the consumer's house dirty. I believe points like these are more important in the food retail but also has to be within hygienic requirements.

PQ: What is your opinion on checkout-free stores?

I-4: I cannot estimate how the general trend is but personally I would say that this is the future. You compare this to Ikea's walk through systems. Although it they are not connected to your phone it underlines the discussion about cash-free payments and shows further functionality and service options.

PQ: Do you know what RFID tags are and if so, how can they be used in the food retail industry?

I-4: I could say that because less and less people know how to cook and want to cook these chips will have a bright future in the food retail industry as it will be able to communicate with your stove, fridge and other devices. Basically, it could tell you when your food is ready. Therefore, I see a trend for specific service. To explain the product is an aspect with growing importance. It would be easier for less food-interested people to prepare high quality food. If you take this further and use the RFID tag as a marketing instrument with which you could explain the background and/or regionality of food in order to educate society. I see a big chance in this. The RFID tag could replace the Barcode in the future. From the perspective of the retail industry it would be beneficial to introduce RFID-tags as it would make price tags in stores unnecessary and would make traceability in terms of inventory easier.

PQ: To what extent in terms of distribution channeling is the food retail in Germany developed? And could the use of RFID tags be beneficial to achieve offering products through omni-channel distribution?

I-4: All in all, it can be said that the food retail in Germany is already omni-channel. The use of RFID tags in product packaging would be a good tool for being successful in an omni-channel market. Among the listed trends, the RFID tags have the most potential. I would guess that RFID tags will be commonly used by the German food retail industry within the next five years. Those tags can be used in many ways; for example, improving track and trace systems. For the primary sector this is important to achieve excludability. In combination with the blockchain technology you could tamper-resistantly build up customer-chains.

PQ: How should the German food retail react to the trends?

I-4: I think that the German food retail has to quickly build up a digitalisation strategy in order to compete with Amazon in the future. If Amazon focusses on the food retail in Germany now, Amazon would snowball the industry. With a speed you cannot imagine because Amazon can depress logistical cost so much that the retailers cannot compete. The retailers have to focus on quality and speed in order to be able to compete. As a result of establishment of the “Amazon System” in the customer’s minds, the retailers must enter new ways of distribution. There is one counter-movement, let me call it the REWE Richrath strategy, REWE focuses on a high-quality and high-priced promotion of products. Using this strategy, you have to sell real added value. You have to work with cooks in your store who prepare and present food etc. That will be more and more difficult to manage over the long-term run because this trend can be broken over time. The philosophy is to market the region and the product, from the food perspective, with high quality and promotion on a high level. But you have to be able to permanently sell added value which is slightly taken away by through the discussed technologies. Therefore, the German retail industry has to orientate itself towards the current technological realities.

PQ: What do you think of the trend to enhance the shopping experience into something more than an everyday life activity?

I-4: That is a trend. You can compare it to the fashion industry which also tried on turning the shopping into an experience and loses successively. All big brands which focused on the trend of high-priced product plus high-priced location plus high-priced promotion of products are struggling now. They have a way to high density of stores, which is another aspect, and in food retail the highest cost are location and storage costs in the end. Through the digitalisation it is possible to restore this. In Germany we have a price-conscious buyer and very high distribution cost in food retail. The only way to win the battle is to keep pushing high quality with new products while reducing costs. Quite funnily we are in the birthplace of the European supermarket, Cologne.

CQ: Could you provide a brief summary of the development of food retail in Germany?

I-4: Thinking about that, I like to put a starting point at 1930 when a man from the USA called Michael Cullen opened the first supermarket in his former car workshop. Eight years later, a shop with a similar concept was opened in Osnabrück. This store was not successful. In 1938, a store with a similar concept opened in Osnabrück, Germany. In 1957, the first European supermarket opened here in Cologne. The brothers Karl and Theo Albrecht revolutionized the food retail by opening the first Aldi store and introducing the discount concept in Dortmund in 1961. The next striking development was in 2006, when the opening times of supermarkets got extended. In 2011, REWE introduced the REWE To Go concept and opened the first store on the Schildergasse in Cologne, Germany. This year Edeka Zurheide opened a large-space food temple like supermarket on the main shopping boulevard in Düsseldorf. This shop goes beyond the daily shopping by providing and creating a real customer experience.

PQ: is the online sale of foods a risk for the store?

I-4: There might be a thinning of stores but the online sale of food products will never replace the stores but it will take away a lot of customers. You will always need the store as promotion and consulting tool. The question there is if you think a bit further if the retailer might turn into

a food logistician. For example, if you only offer vegetables and offer the service to put the single products together and have no storage but let the farmers pick the orders. That would be the most regional as you could be. There might be a thinning of stores.

CQ: What cannot be changed in the German food retail?

I-4: some customers will always want to see, touch and/or smell the products prior and want to be consulted. Things like the durability of fresh products cannot be changed much.

CQ: Can the online sale of food products be an enlargement for the big retail chains?

I-4: It can be an enlargement for the big ones but this is more of a slow or fast- than a small and big question. I claim if someone, for example REWE Richrath if he would implement such a system, does a clever job to find other clientele outside of the centres than it would be very possible. It is possible to take away some logistical matters and discuss if postal services are willing add food transport.