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*The impact of concentration on investment and innovation incentives of
small and middle enterprises (SMEs) in the food supply chain.*
-An experience of local SMEs operating in a concentrated grocery market-

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Abstract

Competition authorities are more and more concerned about the growing dominance of big retailers in grocery markets. Mergers accelerated the process of concentration and oligopolies even more and few dominant retailers have an enormous amount of market shares in their country they operate.

This thesis tests the effect of a concentrated grocery market on the incentives of local small and middle enterprises (SMEs) in the food supply chain to invest and innovate. The local grocery market of the German area Rhein-Main was chosen, because especially local markets are carefully monitored by antitrust authorities. 4 subquestions were established in order to answer the overarching research question more precisely. For this thesis, 4 interviews with local SMEs that are in different circumstances were conducted to find out information about what drives and harms them to innovate.

The outcome of the study is that concentration can have a negative impact on the incentives to innovate of local SMEs, but other factors such as bureaucracy, limited resources and capacities, financial bottlenecks, urbanization and the availability of skilled personnel can also influence negatively SMEs decisions to invest and innovate.

1. Introduction

1.1 Background and policy problem

The recent case of the German supermarket company Kaiser's Tengelmann concerned the German regulatory authority "Bundeskartellamt" to a very high extent and its opinion was heavily debated in the media, in the political sphere and in the public discourse. In one of its statements in April 2015, the regulatory authority opposed Rewe's acquisition of 450 Kaiser's Tengelmann supermarkets. According to the regulatory authority, the takeover of these supermarkets by Rewe would lead to a deterioration of the competition in various local German districts and cities. Moreover, the possibility of alternative choices for consumers would heavily be under threat and consumers would not have the chance to search for other products in their living area. Additionally, the takeover of the supermarkets of Kaiser's Tengelmann increased the likelihood for future price increases. The huge bargaining position of the big four of the German grocery market, e.g. Edeka, Rewe, Aldi and the Schwarz Group would increase and disadvantage their direct suppliers. The president of the German regulatory authority focused on regional and local markets, where Kaiser's Tengelmann was considered to be one of the main competitors of Rewe and Edeka and had an important share in these markets. Hence, it was an alternative to other supermarkets for consumers, which is now under threat by the takeover. The negotiations ended with the result that Edeka and Rewe took over all 450 supermarkets of Kaiser's Tengelmann and continue to increase their share in the German grocery market. ([bundeskartellamt.de](https://www.bundeskartellamt.de/SharedDocs/Meldung/DE/Pressemitteilungen/2015/01_04_2015_Edeka_Tengelmann_Untersagung.html), https://www.bundeskartellamt.de/SharedDocs/Meldung/DE/Pressemitteilungen/2015/01_04_2015_Edeka_Tengelmann_Untersagung.html)

Other recent examples of intervention of the German regulatory agency in the grocery market were the penalization of Edeka and the Schwarz Group in 2016 with € 90.5 million for price rigging in products such as beers and sweets. (Wikes, 2016) Just one year before, the regulatory authority imposed fines with a total amount of € 100 million against Aldi, Rewe and Edeka for doing price riggings in products such as coffee, beer and sweets. (Zeit.de, 2015, <http://www.zeit.de/wirtschaft/2015-06/kartellamt-strafe-lebensmittelkonzerne-handelsketten-bussgeld>)

These examples indicate that the German grocery market is under permanent observation by the regulatory agency and the fact that it is active in awareness raising and in saying that competition and choice could be affected by takeovers are worrying developments.

Additionally, the imposition of penalties over large food retailers is crucial and is part of the work of regulatory agencies. Nevertheless, these statements and actions of the regulatory agency indicate that the German grocery market is highly in danger to become more and more concentrated.

Andreas Mundt, the president of the regulatory agency expressed his concerns about the huge market power and share of the big four of the food retailers in Germany. Together, they share more than 80 per cent of the food retail market in Germany and the president declared that the main task is to prevent that the German grocery market will develop as the grocery market in Britain, where only 3 food retailers dominate the whole market. ([bundeskartellamt.de](http://www.bundeskartellamt.de), <http://www.bundeskartellamt.de/SharedDocs/Interviews/DE/FAZ%20-%20Die%20Machtverhältnisse%20Im%20Handel%20werfen%20Fragen%20auf.html>)

The situation of the grocery market in Australia, where Woolworth and Coles Myer control 76 per cent of the market must be avoided as well. (Dunford et al.)

Based on these examples and actions of the regulatory authority, the situation of the concentrated grocery market in Germany will be studied throughout this paper. In addition to that, this paper will concentrate on the innovation activities of SMEs when they are confronted with concentration and powerful retailers. Innovation is studied in this thesis, because a lot of programs be it at the EU level or at the national level are established to boost innovation of small and medium enterprises (SMEs). (European Commission: Horizon 2020, EFSI, ; BMBF: 10 points to promote more innovation in SMEs in Germany)

They become one of the main drivers for economic growth, employment, competition, know how and general well being. In a rapidly changing and globalized world, innovations are also important to survive in the national and global fight for products and new production techniques, which shall attract the interest of consumers. Without firms, that invest and innovate, some products and local tastes are in danger to disappear from the supermarket shelves. (Dailymail, 2009, <http://www.dailymail.co.uk/news/article-1161326/British-foods-disappearing-supermarket-shelves.html>; Blume, 2017, zeit.de) Especially in lots of villages

and cities in Germany, small companies could not compete with powerful national as well as international retailers.

Consequently, the policy problem addressed in this paper is the growing concentration of the grocery market, which leads to an increase in the purchasing power of retailers over local suppliers. Blair and Harrison (1991) call the process when retailers make use of their power to purchase over suppliers “monopsony“. These circumstances could lead to an erosion of incentives of SMEs to invest and innovate since they only get a minimum of return on investment. Other types of practices, which large retailers make use of even accelerate the non profitability for local suppliers to be innovative. What is meant with these practices of food retailers will be discussed in detail in the second chapter of this paper.

1.2 Scientific and social relevance of the thesis

Scientifically, the research extends the scope of previous studies, because only few academic articles focused on a regional setting, only on EU or national level. (Dobson et al., Dunford et al., and Argentesi et al.)

Of course this study will shortly analyze the situation of the grocery market in Germany as well, but the analysis will concentrate on a limited location. There is also a small amount of academic papers, that used interviews and qualitative empirical data in order to illustrate more profound how concentration affects innovation and investments of SMEs in real life. This paper will develop the existing scientific literature regarding the drivers and barriers that companies face when deciding to invest and innovate. New scientific insights of this paper provide a starting point for further research and it can also take into account the process of urbanization as a possible threat for local farmers which fear a loss of fertile land.

Furthermore, it would be important to test if the abuse of bargaining power in the Rhein-Main region is in line with the EU competition law or not and if local products are in danger to disappear in future if nothing will be done to pose barriers to concentration. More precisely, if local products are likely to disappear in concentrated grocery markets, due to disincentives to invest and innovate for SMEs.

The study has also a social relevance, because in times of globalization some people fear that local products will loose the fight against products from huge national and international

companies. In the last time, a tendency could be seen that some big national companies, that have a huge share in their native country, began to internationalize very aggressive. (Kolf, 2017, handelsblatt.com) Some of the local population of a region identify themselves with famous regional products. That makes their region famous and known among a lot of countries or parts of the country. Various German cities and even villages have their own breweries, wine growers and butchers. That is exactly what makes the local population proud of their reputation and taste. It is even part of the history and development of some regions and for patriotic locals, it would be unimaginable to see their products out of the region. As long as innovation and new technologies seem to play a crucial role for most governments today e.g. through the establishment of many agendas or programs to support innovation, the findings of this paper show with what kind of problems SMEs are confronted.

1.3 Research question

Studying the impact of a concentrated grocery market on the incentives of SMEs to invest and innovate, I proposed the following research question:

What is the impact of concentration on the incentives of small and middle enterprises (SMEs) in the food supply chain to invest and innovate?

The empirical research question is explanatory, because it examines the cause and effect of a causal mechanism. It examines the cause and effect of concentration on the incentives of suppliers to invest and innovate. The question contains 2 variables. The dependent variable (y) is the incentives of suppliers to invest and innovate and the independent variable (x) is concentration. In this case, the concentration of grocery markets. The research also contains a setting, which is the Rhein-Main area. The identified setting is suitable to be as specific as possible with the analysis. In order to clarify the research objective further, the following subquestions were developed, which are necessary to answer the overarching research question.

S1: What preconditions must be fulfilled to consider a market concentrated?

S2: What factors drive the innovation activities of SMEs?

S3: Which factors harm SMEs to be innovative?

S4: What types of practices of supermarkets have the ability to diminish the innovation incentives of SMEs?

The paper was started based on the following null hypothesis:

H0: There is a positive relationship between the level of concentration and innovation.

I tried to falsify the null hypothesis and to demonstrate that there is a negative relationship between the level of concentration and innovation.

1.4 Outlook for the coming chapters

The next chapter, chapter 2, will mainly serve as the literature review and will summarize academic articles and papers from other authors, who contributed actively in analyzing recent trends in grocery markets and problems that can arise from concentration. Both, negative and positive implications of dominant buyers and the effect of concentration on suppliers incentives to innovate will be presented. Drivers and barriers of innovation will also be part of the chapter.

Chapter 3 describes the methodology of this paper and how the data was collected in order to give a precise answer to the research question and the subquestions.

Chapter 4 will discuss the statements based on the interviews and will show how SMEs differ in working in a concentrated market.

Chapter 5 analyses and compares the results of the interviews and answers the overarching research question and the subquestions of this paper. Moreover, it will examine the link to the literature and what new factors that drive and harm incentives to invest and innovate were found during the research. Limitations to the analysis are described as well.

The last chapter will conclude my findings and will give a short overview what the aim of this paper was and the limitations of the research design used for this thesis. Additionally, some suggestions are provided where future research could concentrate on.

2. Theoretical Framework

This chapter examines the existing literature, that dealt with the topic of the thesis. Given their precise analysis and their professional approach towards the topic, these articles are important to understand the issue and the main point of contradiction between different authors. The following articles and journals are relevant, because the authors analyzed which factors drive the decision of suppliers and SMEs to invest and innovate in general, what are the main barriers to innovation for SMEs, the negative effects of concentrated markets in general and spill over effects of a concentrated grocery market to narrow the topic down. Companies, that can be considered SMEs will be the focus of this study. Furthermore, the problem of concentration as a barrier to innovation in grocery markets and its impact on suppliers and their decision to innovate will be analyzed. Moreover, they clearly describe how concentration affects the relationship between suppliers and retailers and how private labels of supermarkets increase their leverage of power and their bargaining position towards the suppliers. Nevertheless, some previous studies included in the literature review, do not share the expectations and they came up with completely different results compared to other authors. Especially the debate of increasing buyer power of retailers over the innovation and investment incentives of SMEs caused by concentration is highly controversial. These papers are included to avoid a biased and one sided approach of the literature review. The 2 main concepts for my study are concentration on the one side and innovation (drivers and barriers of innovation) on the other side.

2.1 Drivers of innovation

Before deciding to invest and innovate, SMEs have to take into account various factors that have the ability to drive and simplify their innovation activities. Such factors are presented in the final report of “The economic impact of modern retail on choice and innovation in the EU food sector“ from the European Commission (2014). The study analyzed factors, which drive the incentives of companies to invest and innovate.

According to the report, one of the factors which drive innovation is the rate of employment of the region where companies operate. (EC, 2014) Consequently, areas with high rates of unemployment can cause difficulties for the innovation incentives of companies. (EC, 2014) Economic uncertainty and difficulties have the potential to increase the risk that innovations

and investments will not be profitable without getting the estimated return on investment. (EC, 2014) Moreover, suppliers are discouraged and more vulnerable in regions, which are uncertain and unstable. (EC, 2014) Another factor, that drives innovation is a measure of retailers' business expectations. Therefore, "a positive macro business environment encourages both suppliers to develop product innovations, and retailers to list them." (EC, 2014, p. 36) Product category turnover also has a positive impact on the decision of suppliers to innovate. As the report found out, "product categories with high sales turnover are also those where suppliers are more likely to develop innovations." (EC, 2014, p.36) More competition in a regional area through the opening of new shops also brought improvements innovation incentives. (EC, 2014) Especially more product innovations, which were available for consumers were observed in areas where new shops opened. (EC, 2014) Additionally, the Commission found a positive relationship between the turnover in product category, choice in that category and investment: "Also, the larger the turnover in a product category, the more choice (and innovation, to a lesser extent) there is in that category." (EC 2014, p.2) The organization of the supply chain contributed to more innovations for fresh non-barcoded products as well. Therefore, "Club organizations have been the key factor in creating the conditions for introducing new breeds." (EC, 2014, p.37)

Another study, that analyzed the drivers of innovation for companies is a report from the European Bank for Reconstruction and Development (EBRD, 2014). It has analyzed other factors, which would drive the innovation incentives of SMEs. The report distinguishes between internal and external factors that drive firms incentives to innovate.

Internal factors e.g. its size, ownership structure or age are part of each firms characteristic or decisions, which firms have done e.g. decision to operate in national or international markets and the decision to hire high skilled personnel. (EBRD, 2014) The engagement of each firm in research and development (R&D) and its willingness to introduce new products or processes are part of internal drivers of innovation as well. (EBRD, 2014)

Trade regulations and customs regulations belong more to the external factors that shape the companies decision to innovate. (EBRD, 2014) Both factors elaborated by the EBRD are closely interrelated as the availability of high skilled personnel is closely related to regional

areas where universities can be found or the availability of professionals in the region in which the firm is active. (EBRD, 2014)

2.2 Barriers for innovation

Apart from drivers of innovation and factors that contribute in a positive manner to SMEs decision to invest and innovate, SMEs are not in the same position as big national or international companies. They have different characteristics and risks to take into consideration before deciding to innovate.

Tiwari and Buse (2007) from the European Commission published a study in which they build upon previous studies and contributed with their findings what barriers for innovation SMEs have.

The first disadvantage SMEs have are their financial bottlenecks, because SMEs have only limited access to internal and external finance. Such vulnerabilities result in higher innovation costs which in turn are associated with high economic and financial risks they have to be aware of. (Tiwari and Buse, 2007, p.7) Given their financial restraints, some SMEs have a shortage of a hindered access to qualified personnel, that must be paid in relation with their high skills and work they perform. (Tiwari and Buse, 2007, p.7) Moreover, SMEs have a high degree of limited internal know how to manage innovation processes effectively and in an efficient way. (Tiwari and Buse, 2007, p.7) As they have financial constraints, peoples in SMEs have to work on multiple tasks in the company. (Tiwari and Buse, 2007, p.7)

Additionally, due to the small size of these companies, SMEs are prone to bureaucratic procedures. Long administrative procedures and restrictive laws and regulations can affect their decision to innovate. (Tiwari and Buse, 2007, p.8)

In their study, which was also limited to a specific region of Germany, Tiwari and Buse (2007) found out that external barriers such as financial constraints were one of the main cause why some SMEs stopped some innovation in an early stage. (Tiwari and Buse, 2007) Secondly, the availability of high skilled labour plays an important role in their early decision to innovate. Companies consider that phenomenon a big problem, because the availability and the fight for suitable and qualified personnel is very high and small companies cannot compete with bigger companies in the fight for talents. (Tiwari and Buse, 2007) Another external barrier for SMEs are bureaucratic procedures, which threatens innovation activities

of SMEs. (Tiwari and Buse, 2007) Restrictive labour laws can also pose serious threats for SMEs in their early innovation decision. (Tiwari and Buse, 2007)

2.3 The problem of concentration in retail and its spill over effects

Another problem for SMEs is considered to be concentration. Especially for SMEs, which operate in markets that are supposed to be concentrated, this phenomena plays a high role and concentration could pose a serious threat in SMEs decision to invest and innovate. Moreover, concentration enables retailers to engage in certain practices harming SMEs. Based on that, this section will discuss the problem of concentration in general and afterwards the evolution of concentration in the grocery market in some countries, that are part of the Organization for Economic Cooperation and Development (OECD). Furthermore, it will discuss problems and spill over effects (private labels, power asymmetry and buyer power) arising from increased concentration. All the 3 problems on which I concentrate here are clearly interrelated to the phenomenon of concentration.

Many scholars have studied the negative effect of market concentration and their effects over the consumers and companies. An article from Smith (2017) in Bloomberg shortly describes this topic. According to Smith (2017), market concentration became a real problem for consumers and for the well functioning of the market. Market concentration refers here to the phenomenon when a certain industry has less players operating in a market, but with an increase in their share of sales. (Smith, 2017) This phenomenon is connected with price increases, limitation of market size and less efficient economies. (Smith, 2017) She suggested that increased concentration is one factor that contributes to slow productivity growth. (Smith, 2017) Moreover, she was engaged in finding out why concentration increased in the past. One possible cause could be “a more lax attitude toward antitrust enforcement.“ (Smith, 2017, p.1) Friendliness toward big mergers and a lack of reaction to them in the past is supposed to encourage a growth of concentration as well. (Smith, 2017) For her, one crucial aspect that could have encouraged concentration is the increase of regulations, which small and young companies face in their early years. This would advantage big players and disadvantages young SMEs, which do not possess money and power and they face high barriers to enter the market. (Smith, 2017)

Concentration became a serious problem in a variety of markets. Obviously, the situation of grocery markets in a lot of countries all over the world raised many concerns from analysts and competition authorities. This claim is supported by the report from the OECD (1998), that mentioned the increasing concentration of retail in a lot of national markets. Many countries, which are part of the OECD, the 4 or 5 biggest retailers have a market share of more than 60 per cent. Over time, retailers that had a modest share in their national market have grown to big enterprises. (OECD, 1998) Also the report “The economic impact of modern retail on choice and innovation in the EU food sector“ from the EC (2014), found that concentration at the local level harms incentives for suppliers to be innovative. The negative impact of concentration was especially observed for innovations in new packaging. (EC, 2014)

The article from Argentesi et al. (2016) also warns about the tendency, that it is hard to guarantee a degree of competition in markets that become more and more concentrated. According to them, “few grocery market retailers appear to have a strong position in several local markets.“ (Argentesi et al., 2016, p.2) Moreover, regional concentration leads to increased prices for consumers and a decrease of choice, service and quality. (Argentesi et al., 2016, p.2) Some practices can even help strong food retailers to transfer risks and excessive costs to their suppliers. Such unfair practices local suppliers face, affect their incentive to be innovative. (Argentesi et al., 2016, p.2) They argue that increased concentration benefit the retailers, which will be even more powerful and they might have the ability to transfer risk and costs to their suppliers, which could affect their decision to invest and innovate. (Argentesi et al., 2016, p.2) The authors mentioned the aggressive expansion strategy of discounters such as Lidl, Aldi or Netto. The first 2 are part of the big four of the German grocery market and the latter one is controlled by EDEKA. It seems that mergers and discounters owned by the dominating food retailers are an instrument to increase their power.

The findings of Argentesi et al., 2016 support exactly the statement of the German competition authority, which declared that product variety and alternative possibilities for consumers would be in danger in the case of Kaiser’s Tengelmann. (Bundeskartellamt. (2015). Bundeskartellamt untersagt Übernahme von Kaisers’ Tengelmann durch EDEKA.)

2.3.1 The use of private labels by strong retailers

One spill over effect of increased concentration in grocery markets could be the frequent use of private labels by powerful retailers. Moreover, the report from the OECD (1998) found out that private labels from leading retailers have an increasing share of the sales of the retailers. According to the report, “private labels are brands owned and usually exclusively distributed by one or more retailers.” (OECD, 1998, p.15)

Other studies focused on the effect of private labels on suppliers as well. The report from Nicholson and Young (2012) focused on big supermarkets, which use various practices to cheat suppliers. Examples of abuses of large retailers can be: listing fees, de-listing / threat of delisting, slotting fees, return unsold goods to supplier, late payments or the promotion of retailers own brands. (Nicholson and Young, 2012) Especially retailers own brands or private labels could put suppliers under even more pressure. A practical example for the latter is the home brand JA! from REWE.

Retailers own brands contribute to the increasing bargaining power of retailers and have an impact on competition in the food retail market and consumer welfare. (Daskalova, 2012) Therefore, private labels change even more the balance of relationship between retailers and suppliers in favor of the retailer. A survey by Vander Stichele and Young (2008) showed that some suppliers have gone out of business or had very low profits. Due to their limited financial capabilities, SMEs are part of the most vulnerable groups. (Vander Stichele and Young, 2008) The report reveals the same fact as Nicholson and Young (2012) that private labels of supermarkets have a negative effect on innovation. The topic of private brands are part of the investigation of competition authorities as well. (OECD 1998)

2.3.2 Supplier and buyer relationship in concentrated grocery markets

A second negative effect that arises from increasing competition is the relationship of retailers with their suppliers. One can easily think that increased power and market share is associated with a high degree of power asymmetry between the suppliers and retailers and unbalanced bargaining power.

Therefore, Sutton-Brady, Kamvounias and Taylor (2015), focused on the power asymmetry in highly concentrated retail markets and their consequence on the supplier-retailer relationship.

They argue that power asymmetry in the short term benefits consumers but not in the long term if nothing is done to stop the abusive use of market dominance of companies that own a large share of the grocery market. (Sutton-Brady et al. 2015) Lots of suppliers have little alternative choice to switch between retailers and are only focused to maintain their relationships with them to have access to the consumers. (Sutton-Brady et al. 2015) Thus, suppliers don't have choice variety between retailers. Big retailers have the ability to exert a huge amount of power and influence in concentrated markets. (Sutton-Brady et al. 2015) High concentration leads to a greater dependence of suppliers on the retailers, that controls the final access to the consumers. (Sutton-Brady et al. 2015) They depend on them to get to the customers and have to "maintain the relationship whatever the atmosphere" between both parts are. (Sutton-Brady et al. 2015, p. 129) Therefore, the retailer can be called the „gatekeeper“ to the customers. (Sutton-Brady et al. 2015) This argument is supported by the fact that suppliers have no option but to sell, because there is a lack of alternatives and suppliers are heavily dependent on big grocery retailers. Retailers gained the key position in the sales channel. (Sutton-Brady et al. 2015) Suppliers are concerned with increased fees imposed by retailers, fear on price pressures and restricted product range and shelf space allocation. (Sutton-Brady et al. 2015) For consumers such an asymmetry can be positive due to cheaper prices on the shelves but suppliers are disadvantaged and on the long run, it may lead to less choice for the consumers. (Sutton-Brady et al. 2015) Market failure is likely to occur when there is such an imbalance of power and people without power don't have the possibility to say anything. (Sutton-Brady et al. 2015)

The phenomena of private label brands adds additional power to the supermarkets, because that enables the possibility to powerful companies to squeeze suppliers and to push their products out of the shelves. (Sutton-Brady et al. 2015, p.126) For many suppliers this is a big issue, because private brands continue to increase in the past. This will act as a leverage of power for the dominant supermarkets. Suppliers are going to fight for more limited access to the supermarket shelves. (Sutton-Brady et al. 2015, p.126) This climate of fear and uncertainty among the suppliers will make them more vulnerable. Such an unequal relationship between the retailer and the supplier has the power to destroy the local food industry. (Sutton-Brady et al. 2015) Therefore, governments and law makers have to do more

in order to stop the dominant use of power of the big retailers. The greater the dependence of the supplier, the greater level of power the retailers have. (Sutton-Brady et al. 2015)

2.3.3 Effects of strong buyer power on the incentives of suppliers to invest and innovate

A third effect of concentration in grocery markets is the impact of strong buyer power over the incentives of suppliers to invest and innovate. The authors of the following articles disagree about the effect of buyer power on the incentives of suppliers to invest and innovate. Moreover, they dispute if huge buyers and retailers have a negative impact on local suppliers or not. Nevertheless, this thesis will also take into consideration articles from authors, that put into question the negative effect of buyer power on innovation. Being a controversial topic, some authors share the view that powerful retailers do not affect negatively the incentives of suppliers to invest and innovate, but say that if competition in the buyer side is high, the incentives for supplies to invest and innovate will not be affected to their disadvantage. (Köhler and Rammer 2012) Especially the clash of findings and schools of thought of different articles, which deal with the topic shall make the reader aware where the disagreement and the main conflict is and how this paper will try to solve it with special methods to obtain data, which were not often used in previous studies.

The report from Nicholson and Young (2012) introduces issues concerning supermarket buyer power and analyses the implication for customers and suppliers. Big food retail companies make use of their buying power in order to get “more favorable buying terms than it would be possible in a competitive market.” (Nicholson and Young, 2012, p.2) Large supermarkets can extract better terms from suppliers and that practice is called the abuse of buyer power. This power determines the retailer “what will and will not be stocked“ in the shelves of their supermarkets. (Nicholson and Young, 2012, p.3) The dominance of the retailers over the suppliers is worrying and the imbalance of bargaining power is obvious. The huge bargaining power can be a vicious circle for the suppliers because as the retail market share increases, they are able to secure better deals from the suppliers. (Nicholson and Young, 2012)

In contrast to the report from Nicholson and Young (2012), Köhler and Rammer (2012) oppose the view of many people, who think that increasing retailer power has a negative

effect on the decisions and incentives of suppliers to invest and innovate and the decrease in their profits. (Köhler and Rammer 2012) In their opinion, there are few academic articles and little empirical evidence, that deal with buyer power and its impact on the incentives of suppliers to innovate and to invest. Existing literature about the topic “lack an objective measure for buyer power on firm level but rather use either aggregated industry measure or firms’ subjective assessment whether they are confronted with powerful buyers.“ (Köhler and Rammer 2012, p. 1) Interesting to read are some sentences, that are in their literature review, one statement saying that “buyer power may provide additional innovation incentives for suppliers. Suppliers facing large buyers have an incentive to invest in both product and process innovation.“ (...) (Köhler and Rammer, 2012, p.3)

Moreover, they put into question the frequently found negative relationship between big retailers and the innovation activities of suppliers. For their study, firm level data by Mannheim Innovation Panel and a dataset of 1129 observations from German firms were used to test their 2 hypothesis. (Köhler and Rammer 2012) Both authors share the view that the negative effect of buyer power and innovation incentives of suppliers is mitigated if there are powerful buyers, that operate under strong price and technology competition. (Köhler and Rammer 2012) Throughout their paper, the type of competition, e.g. price and technology is key to prove that there is no positive relationship. Hence, they claim that a lot of existing studies ignore various dimensions of competition in the markets of the buyers. Consequently they argue that, “competition in the buyer market may lead to increased innovation incentives on supply side.“ (Köhler and Rammer 2012, p.1) This is exactly their point of study, because they argue that “it does make a difference for the upstream firm whether it is supplying to a buyer engaged in intensive competition or to a buyer facing no or only low level competition.“ (Köhler and Rammer 2012, p.1) Hence, if the buyer market has a high degree of competition, this may cause increased innovation incentives for suppliers, which in turn strengthens the position of the suppliers towards the buyer and the bargaining position of suppliers. (Köhler and Rammer, 2012)

A similar attempt to challenge the mainstream view that buyer power negatively affects the incentives of suppliers to invest and innovate is presented by a study from Inderst and Wey (2010). The main argument of their work is, that they put into question the fact that the

exercise of dominant buyers repress the innovation incentives of suppliers. (Inderst and Wey, 2010) Despite the fact that they clearly mention the growing concerns of antitrust authorities and the huge shift of bargaining power to the retailers, they analyzed if these circumstances harm suppliers to be innovative. In their opinion, “the formation of larger and, consequently, more powerful buyers will keep a supplier “on his toes“ and increase his incentives to invest.“ (Inderst and Wey 2010, p.2-3)

They find strong evidence for the fact that “the negative impact on the value of buyers’ outside option increases a supplier’s incentives to reduce own marginal cost or to make his product more attractive.“ (Inderst and Wey 2010, p.3) Consequently, if the number of buyers on the market decrease and they became more powerful, the incentives for suppliers will not decrease. From their perspective, if “a bargaining solution that satisfies the well known “outside option principle“, then there are additional effects at work that further increase a suppliers’ s incentives as there are fewer, but large buyers.“ (Inderst and Wey 2010, p.3) According to Inderst and Wey, if large buyers are present on the market, the probability will rise that for suppliers it would become more profitable to reduce marginal costs and to increase the quality of its products. More powerful buyers will create the condition to reduce marginal costs for suppliers. (Inderst and Wey, 2010)

In this chapter, the main drivers of innovation for SMEs and also barriers that SMEs have to face when deciding to invest and innovate were presented. Concentration was included in the category of a barrier for innovation. Afterwards, spill over effects of concentration and its impact on e.g. the use of private labels, supplier retailer relationship and the strong buyer power of large retailers over suppliers were discussed. Additionally, the clash and different findings of schools of thought that deal with this topic were presented. The next chapter will provide an overview of the appropriate methods chosen to answer the overarching research question and the subquestions of the thesis.

3. Methodology

In this chapter, the appropriate methods chosen to obtain the data will be discussed. First of all, the research design of the study will be presented. Here, it will be explained why it is a

qualitative empirical study. Afterwards, all threats this study has will be identified. After that, the case selection and sampling will be presented, which explains why the focus of this study will be on the area of Rhein-Main and what kind of characteristics the companies should have. The section operationalization of the main concepts and data collection will show how the 2 concepts concentration and innovation can be operationalized with the help of variables asked in the interview questions. The last part shows how the data retrieved from the interviews will be analyzed.

3.1 Research design

The qualitative empirical study is focused on a specific region of Germany. The Rhein-Main region will be the key field of research during this study and the core territorial area.

Therefore, the appropriate research design is a theory testing, because it tests the effect of concentration on the innovation incentives of suppliers and if the effect of concentration is negative in this study. The limited territorial area is an important tool to narrow down a very broad field of research. Grocery markets were often analyzed at the EU or national level in different countries. Hence, studies in the past (Dobson et al., Dunford et al., and Argentesi et al.) gave a professional, but a more national overview of the situation of retail markets without focusing on a small area where regional products play a special role for consumers. Of course, this does not mean that previous studies, that have focused on the national or European market were not specific as well. Therefore, this study is different compared to other articles, because it tries to be as specific as possible focusing on a concentrated local market. Additionally, it wants to show possible problems local SMEs face acting in a region that has strong and dominant supermarket retailers.

Local SMEs were the focus of the study and representatives from more than one SME ($n < 1$) were interviewed. As a minimum, 4 companies were interviewed, because this number is useful to compare their different situations and concerns. Comparing them is a powerful tool to show why they are in such different situation despite the fact that they are all operating in one and the same location. The method of triangulation enabled me to have different views and opinions on the same overarching problem e.g. for this study concentration.

Suppliers and local companies, that sell their products beyond the local area of the investigation were not chosen for this study, because I wanted to stress on the factor of regionality and regional products with a long tradition. Companies, that are focused on regional products with a long tradition do not have outside options of retailers to choose beyond the area in which they are active. Moreover, companies and suppliers which have plans to nationalize or even internationalize were not suitable for the study, because I only interviewed companies, which are settled in the area of Rhein-Main without the desire to have other locations in other parts of Germany. I also preferred local suppliers instead of national ones, because big national suppliers have more financial resources and they would not meet the scope of my study, that is focused on a specific region.

Consequently, the suppliers and companies should be small and not part of bigger firms.

Interviewing companies, that are in the category of small and medium enterprises (SMEs) was crucial, because SMEs belong to the main drivers of innovation now and in the future.

Moreover, SMEs are less powerful and have less access to money and are more vulnerable than big suppliers and companies. The special situation of SMEs acting in a grocery market, that is concentrated was also part of the survey by Vander Stichele and Young (2008), which revealed the fact that SMEs belong to the most vulnerable groups. Therefore, the link to the literature of the situation of SMEs is exactly what makes this research interesting. SMEs are under a greater danger to have troubles with selling their products than bigger and more flexible companies operating at the national or international level. All the interviews with the suppliers and companies were for the purpose to gather data to perform the testing, if they have incentives to innovate despite the fact that they operate in a concentrated market.

Based on these criteria, 4 companies which are active in the Rhein-Main area were selected.

Each of the companies chosen for the analysis are specialized only on one specific product that has a local preference and tradition within the region. Moreover, the companies had to respect the characteristics of SMEs. Despite the fact that there are various definitions of SMEs, the European Commission says that SMEs are “enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding eur 50 million.“ (Tiwari and Buse, 2007, p.5) The European Commission also distinguishes between 3 types of company

categories belonging to the groups of SMEs, e.g. medium-sized, small and micro companies. (EC, http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en)

The names of the companies and representatives interviewed were coded and anonymized. Each interview was audio recorded and transcribed. Informed consent forms were given to each interviewee to sign after the interview so that they can be sure that their names will not be made public in the thesis. Hence, this thesis has elements of highly confidential research practices.

In order to answer the research question and the relevant subquestions, the appropriate type of knowledge to give a response was required.

First of all, a clear definition what the word concentration means in practice and how it can be measured must be clarified. This knowledge was gathered from an informative interview with a professor, who is highly specialized in the situation of the grocery market in Germany. Having written various articles about the food retail market of Germany, he has excellent knowledge and a lot of information about the actual situation of the grocery market in Germany. Being an economist, he was able to provide information about the indicators that signalize when a market is concentrated.

To gain knowledge to answer the research question and the subquestions, I had interviews via telephone with human subjects. Only the interview with the professor was face to face and the participant had to answer different questions than the representatives of the companies, because during that interview, I wanted to gain knowledge about the actual situation of the grocery market in Germany, the actors which are active in the market and what instruments can measure the degree of concentration.

Before asking for permission to talk to SMEs, standardised interview questions for the suppliers were developed. They had to respond to similar questions and such kind of interviews are very suitable to go on more in detail with the questions and the answers. Qualitative interviews have a high degree of flexibility and new surprising information can appear throughout the interviews. That is one of the main strength of interviews compared to quantitative questionnaires that have only limited and broad possibilities for the participants in answering the questions. Only 2-3 questions were asked differently to the companies, because the content of these questions depend on the fact if the company is a direct supplier, if

it was or if the company is not a direct supplier. Hence, if a company is a direct supplier, I asked how the representative would describe the interaction with the retailer and if the company was a direct supplier, I asked how the representative would describe the collaboration with the retailer during these times and why they are not a supplier anymore. Important facts to ask were also what their incentives to innovate are, as well as how dependent they are on the retailer, who is their main purchaser of their products, if they have the possibility to choose between alternative retailers, how satisfied they are with their return on investments and what circumstances harm their decision to do innovation activities. Very interesting regarding the innovation incentives for the final comparison is if they are a direct supplier, were a direct supplier or why they do not want to be a supplier.

3.2 Limitations of the study

A threat to the theory testing design is that the situation of the suppliers in the Rhein-Main area cannot be generalized to the whole national level. In this study, it is therefore not possible to generalize the outcomes to the overall situation of the grocery market in Germany. Maybe in other parts of Germany the situation is totally different than in the region of Rhein-Main. To counter this effect, I mentioned that the research is limited to a regional level and does not reflect the situation of whole Germany.

Contrary, if national or local markets fulfill the conditions that the local area of Rhein-Main has, this study can be a useful tool to analyze the national level or the local levels of other countries. Nevertheless, this study can offer an enormous impact and can be a source of inspiration for other local markets that face similar problems as the Rhein-Main area.

Another serious threat to the study is the small sample size of companies chosen to interview and the limited number of interviews. Due to the fact that I only had 10 weeks to write my thesis, I would have run out of time if more companies would have been part of the study.

Therefore, apart from the small sample size, this study had a short time frame and a time threat. More time is needed to write a profound and more professional analysis about the effect of concentration in a local market. Therefore, I acknowledge that I had problems regarding the time and interviewing a larger sample is necessary for a better analysis.

Another shortcoming of this study is that researchers tend to be selective in small studies and a targeted approach is necessary in studies with limitations in time. Consequently, this study has a tendency to have a selection bias.

Throughout the phone calls with representatives of companies, the main concern was if they are willing to cooperate with me and to be a participant or not. I was lucky, that a lot of representatives were willing to cooperate, but I acknowledge that the permission from participants to be part of a study could be a first big obstacle throughout writing an academic article. Additionally, it is always advantageous for studies to have face to face interviews and to go to the places in which the companies operate, but due to limitation in funding, I could not afford to travel to all companies by my own, despite the fact that this would make the study more interesting and this would be an advantage also for my academic skills. Hence, the interviews had quite an impersonal character via telephone.

A fifth threat to my study is the different attitude of representatives of companies to work with researchers, because this study was very sensitive and highly controversial. Identity protection of companies was required and a violation of that principle could have devastating consequences for the firms included in my study. Hence, the fear factor played an important role throughout this study and some representatives of suppliers may be afraid to talk to researchers about their situation and relationship with their retailers. These limitations put into question the validity of the study and next time the validity can be improved if these threats will be addressed by another researcher.

3.3 Case selection and sampling

SMEs were selected on special criteria before asking for an interview. This study and its research design was different compared to other studies, because regional products do not have high chances to be sold outside their local scope. Hence, outside options for companies to ask other retailers if they sell their local products are restricted, because each local area is heterogeneous and has a variety of local tastes and preferences.

Thus, local companies can be isolated and here is the direct link to concentration. They have no option but to deal with the situation in the best way and to do everything they can to keep on selling their products. Regional companies cannot sell their types of products to other

regions with totally different preferences. It is quite challenging for small companies, that face a local monopsony, because they do not have other options where to sell their products.

Contrary, the national level is influenced by all sorts of other purchasers needs and preferences. The region of Rhein-Main as the setup of the study was selected, because it has a high level of concentration and one of Germanys big four retailers has a very powerful position with a lot of supermarkets there.

The companies selected for the interviews had to operate only in the Rhein-Main area without having the desire to expand with their products to other regions of Germany. As mentioned in the introduction section, big over regional SMEs were not selected. This is important, because that is what makes their type of product so special and connected to the region and the preferences of the people. Their products must be found only in this particular area. That is why the SMEs should be specialized on one specific product e.g. beer, salads or sausages within the region. Moreover, they were selected on the basis of local food preferences and the tradition they have e.g. the age of the company and their local reputation. Another criteria was the selection of local companies, which are a direct supplier to one of the dominating supermarkets.

Nevertheless, also companies that were a direct supplier and companies that are not a direct supplier will be part of the study in order to compare these 3 categories in the final part of the thesis. Their main customer must come from the region of Rhein-Main and not from other regions of Germany to respect the aspect of regionality and the limited local setting of this study.

To sum up, some suppliers must have a direct relationship with the leading retailer. This provides the right knowledge about their interaction. Other suppliers should be specialized on a product and not a direct supplier to the retailer to see how they perceive the degree of concentration and their innovation incentives.

3.4 Operationalization of the main concepts and data collection method

This section will focus how to operationalize the 2 concepts, concentration and innovation.

The interview with the expert in which I wanted to find out the appropriate tool that measures the degree of concentration operationalized the concept of concentration. Important variables that are relevant when someone is talking about concentration in retail markets is the amount

of retailers that are active in the market, the degree of concentration measured with the help of the Herfindahl-Hirschmann Index (HHI) and the concentration ratio that identifies the degree of market share of the most important retailers in the market. The frequency of mergers during the last years could also serve as a helpful tool to look how the market developed over time. The degree of concentration for the Rhein-Main region will be measured with the HHI. Additional variables that are relevant to find out the exact degree of concentration is the number of retailers that are active in the market, the number of supermarkets they have and the market share each retailer has.

The second concept of this study was operationalized in a similar way. The data on the degree of innovation came from interviews with the companies. The data, which is important to know the type of innovation e.g. product innovation was gathered through the interview questions. Here, the main concept is innovation and appropriate variables must be identified to define the concept.

Necessary is to break down the concept incentives to invest and innovate and to make the variables more tangible. Important variables that help to measure incentives to innovate are the amount of money companies spend to carry out innovative activities, what kind of innovations were achieved e.g. R&D activities, product innovation, process innovation or marketing methods and if the company gained a return on investment after they were innovative. That can be easily known through the degree of profitability and revenues after introducing the new product. Also factors that are drivers or that pose barriers for innovation must be taken into account when operationalizing innovation. Other important indicators that determines if a company is innovative in the food sector is its expenditure for research and development (R&D), new product announcements or how many persons, which are part of the company carry out R&D (Kleinknecht et al.) According to Kleinknecht et al., innovation activities of food companies are necessary for their growth, profits and employment. (Kleinknecht et al.)

A rather new indicator to see how innovative companies were is to analyze its sales of imitative and innovative products. According to Kleinknecht et al. „Firms can subdivide their product range into products, that during the last three years, a) remained essentially

unchanged, b) underwent incremental change, c) were subject to radical change or were introduced entirely new.” (Kleinknecht et al., p. 114)

The variable incentives to invest and innovate was operationalized with the help of the interview questions for the companies.

Variables	Operationalization: measures
Concentration	Herfindahl-Hirschmann Index (HHI) number of retailers number of supermarkets market share
Incentives to invest and innovate	new process innovations ability to appropriate benefit of innovation new product announcement new marketing methods consumer preferences / behavior market needs / market analysis R&D activities
Nature of relationship with retailer	problematic not problematic no relationship

(Tables: Own creation)

3.5 Data analysis

The information were analyzed from the participants on the basis of the interviews. They also served as the key source of data for the conclusion and results. Each interview was examined carefully and used to give a precise answer to the subquestions in order to give an appropriate answer to the main research question. The information received from the participants were analyzed based on the following criteria: Their incentives to invest and innovate, what factors harms their decision to invest and innovate and if applicable, the relationship between them and the retailer. Tables were used to provide a better illustration of the variables tested throughout the interviews. Finally, the interviews shall provide a clear analysis about the

relationship between local SMEs and concentration and how it affects their incentives to innovate and invest.

In this chapter, the appropriate methods which were chosen to answer the overarching research question and the subquestions were presented.

The next chapter will be the core chapter of the thesis and will firstly provide an overview of the actual situation of the grocery market in Germany and the actors which are active in the grocery market. After that, it will present the outcomes of the interviews with the 4 SMEs operating in the area of Rhein-Main and their experiences.

4. Results/Findings

In this chapter, the current situation of the grocery market in Germany, the changes in the past and possible future developments will be presented. After that, the 3 main actors that are active in the grocery market will be discussed shortly. Important aspects of the concept concentration and tools such as the Herfindahl-Hirschmann Index (HHI) that signalizes if a market is concentrated or not will be discussed as well. Based on a calculation of the HHI for the grocery market in Rhein-Main, the motivation why the region was chosen for the research will be stressed again and a short overview of the problems in this area is also part of subsection 4.4. Subsection 4.5 presents the final outcomes and the statements of the interviewee.

During the interviews with the companies, the concept incentives to invest and innovate were discussed and analyzed in each subsection. The information for subsection 4.1, 4.2, 4.3, and 4.5 is retrieved from the interviews and relies on statements made by the interviewees. Subsection 4.3 relies on statements of the professor but also on other sources.

4.1 The actual situation of the grocery market in Germany

The German grocery market together with grocery markets of Western European countries is characterized by a high degree of concentration. Germany has 2 hard discounters, Aldi and the Schwarz Group. Lidl and Kaufland belong to the latter discounter, Aldi Süd and Aldi Nord to the first one.

Currently, Aldi leads the discounter market followed by the Schwarz Group. Both are very successful discounters with a lot of profitable supermarkets and a high turnover per customer, store and square meter selling space. These 3 criteria measure the performance of every supermarket. The success of these discount retailers explains why the market share in Germany of discounters exceeds 35%, which is very high compared to other Western European markets. Rewe and Edeka belong to the other big retailers with a high market share and both have supermarkets operating in the discounter segment as well. Rewe is active with Penny market and Edeka has Netto for their discounter segment. Compared to Aldi and the Schwarz Group, the discounters from both retailers Rewe and Edeka are not so successful and profitable.

Consequently, few big retailers have a high market share and this constellation signalizes that the German grocery market is an oligopoly market. An oligopoly market means that there are only few providers, in our case the retailers, and a high demand from the end consumers. To be more specific, the German grocery market is considered to be a tight oligopolistic market with few big retailers that dominate the majority of the market. This trend towards a more and more oligopolistic market could be seen during the latest takeover of Kaiser's Tengelmann by Rewe and Edeka. After the competition authority agreed the takeover, Rewe and Edeka could expand their market shares with additional supermarkets and more shares on the market. The big retailers could also improve their position due to exits of other smaller retailers.

Nevertheless, these big retailers are in a constant competition to each other. Price competition is used to attract as much consumers as possible, to expand their position and to suppress other retailers. Hence, an oligopolistic market can also have a high degree of competition. In Germany, the big four retailers compete with each other and each retailer tries to gain additional market shares through practices like increased price competition. Moreover, the biggest retailers are also in a constant competition in the innovation sector. They are dynamic and they change their assortment, offers and sort of business very often. The regional areas are characterized by an increasing death of small local stores. 20 years ago, each small village had its small shop where the inhabitants had the possibility to find foodstuffs. Nowadays, these small shops did not exist anymore, because they were not profitable and competitive.

Due to the high level of price competition in Germany, these shops had no chance to survive on the market and discounters and retailers started to expand to local areas. Hence, concentration and price competition had an exclusionary effect for local areas.

Recently, the grocery market grows fast and stopped a phase of stagnation, due to demographic circumstances and migration influx. Additionally, the behavior of the consumers contributed as well to the growth in sales of the grocery market. Private households are now willing to pay more for their products, because their financial resources improved. Regional, healthy and sustainable products became more and more important for the consumers and the retailers are active to attract the customers with such kinds of products. Recently, online commerce offered by Amazon Fresh started in Berlin and Potsdam. Amazon Fresh is a new foreign retailer, which entered the grocery market with a totally new dimension and concept. In Germany, the dimensions of online shops in the grocery market were not successful in the past and their development must be analyzed with great attention.

Current retailers see the entry of Amazon Fresh as a threat to their position, because Amazon is one of the biggest companies in the world with power, huge financial resources and a high innovation capability. The whole market situation and structure of the German grocery market can change if the new concept of online commerce is successful in future. Therefore, the big four are analyzing and constantly monitoring what kind of strategies and steps Amazon Fresh will take in future. (All statements and arguments of this subsection are based on the interview with the professor.)

To conclude, in Germany there is a tendency of growing concentration on the selling side but also high competition between the retailers.

4.2 Actors operating in the German grocery market

The most important actors, that are active in the grocery market of Germany are the consumers, the retailers and the suppliers.

The consumers probably belong to the most important actors, because through their behavior, the consumers influence the development of the industry and big retailers try to change their assortment based on the needs of the consumers, which in turn reflect their success.

Nevertheless, if the selling side is characterized by high concentration and low competition, the ability of the consumers to discipline and to have an impact with their behavior on the retailers is limited. The consumers can also be split into different categories and preferences. Hence, the market of the customers is very heterogeneous due to a variety of financial resources, tastes, preferences and behavior.

The retailers belong to the second group of actors in the grocery market. Retailers are in a kind of middle position, because they have to interact with the consumers and with their suppliers at the same time. Their assortments depend to a high extent on the preferences and behavior of the consumers. However, the retailers also try to strengthen their position towards the suppliers.

The third actor in the grocery market are the suppliers, that supplies the retailers with their products. They are in constant interaction with the retailers and depend on the relationship with them. The delivery conditions the suppliers have with their retailers play an important role for the suppliers, because these conditions determine the capability to generate competition advantages.

During the final analysis of the interviews, the interplay between the retailers, the suppliers and the consumers can be seen very well. (The content of this subsection is also based on the interview with the professor.)

4.3. Which aspects are relevant to consider a market concentrated?

The German grocery market is an oligopolistic market with a high degree of market saturation. The number of retailers that are active in the market and their total share or each share the retailer has in the market are relevant factors to find out if the market is an oligopoly and concentrated or not.

The degree of concentration can be measured with the help of the concentration ratio, which analyses the degree of market shares of the retailers. Hence, this ratio helps us to measure if retailers also have a high degree of turnover concentration due to the high concentration level of the market.

In our case, the big four of the German retailers have together a market share of more than 75%, which increased during the last years. Their shares increased, because of mergers,

takeovers and exits of other retailers. Moreover, the strength of the position of the retailers toward the consumer is another way to see if a market is concentrated or not. Here, the local area is important, because also the competition authorities monitor if people have enough alternatives to buy their products in local areas. (These statements rely on the interview with the professor.)

In addition to that, the Official Journal of the European Union (OJ) evaluated some important factors to take into account when assessing the degree of concentration of a market. Important indicators to consider are the market shares the retailer has and the concentration level. Both are useful tools to evaluate the structure of the market. Post merger market shares are useful to calculate after a merger took place to see how the shares of the retailer developed after a takeover. (OJ, 2004)

Therefore, “concentration within an industry refers to the degree to which a small number of firms provide a major portion of the industry’s total production.” (investopedia.com) Market concentration can be measured with the help of the Herfindahl-Hirschmann Index (HHI), which is a useful tool used by many public organizations to measure the degree of concentration of a special type of market. Small firms are not included in the calculation of the HHI as they do not change the score of the HHI significantly. (OJ, 2004) The HHI is also an important tool to measure the degree of market concentration after a merger. (OJ, 2004)

The HHI can be calculated as following: $HHI = s_1^2 + s_2^2 + s_3^2 + \dots + s_n^2$

As an example, if one market is dominated by only one company with 100% market share, the HHI would be 10.000, which means full monopoly and concentration. (investopedia.com) The HHI varies between 10.000 (full concentration and no competition) and 0 (perfect competition). Hence, the higher the degree of concentration and monopoly, the lower the degree of competition. In the past, if the HHI increased with about 200 points after a merger had taken place, antitrust authorities were active. (investopedia.com) According to the Official Journal of the European Union, the Commission is not concerned about the market if the HHI is below 1000 after a merger or between 1000 and 2000, but under uncommon circumstances

the Commission can still become active in investigating mergers and market shares. (OJ, 2004)

The degree of market saturation is an other important determinant to see if the market is characterized by growth or not. As an example, the German grocery market has a high degree of market saturation, because the big four dominate more than 80% of the whole grocery market. Hence, the German grocery market is not characterized by a dynamic growth, because these powerful retailers are in constant competition to fight for available market shares e.g. through new innovations or strategies.

4.4 The controversial situation of the grocery market in the local area of Rhein-Main

The local area which was analyzed in this paper is situated in the German “Bundesland“ Hessen in the middle of Germany. It is characterized as a dynamic and prosperous place with high growth rates.

Therefore, the situation of the grocery market in Rhein-Main was analyzed by various experts and was also in the focus of some journalists. A German newspaper had written about the situation of the people in the city of Königstein, where the local population had no alternative supermarkets, because they could only find Rewe in their region. One shop in the city center has opened until midnight attracting even more people. Edeka started to open one supermarket in the city and the retailer was welcomed not only by the local population, but also by some politicians. (Köhler, 2013, faz.net) Some consumers were frustrated that they only saw products from Rewe and their private labels in the whole city. (Köhler, 2011, faz.net)

Rewe expanded their network very aggressive in the area and not only the people in Königstein faced the problem. Frankfurt experienced a huge wave of new supermarkets opening in the city, but only one retailer has opened supermarkets, Rewe. 2010, Rewe had takeover various supermarkets from the competitor Kaiser’s Tengelmann. Thus, they took over their shops even 7 years before the complete dissolution of Kaiser’s Tengelmann. (Köhler, 2013, faz.net)

Also in the city of Mainz, some people are worried because of the dominance of Rewe. Rewe stores can be found everywhere and other supermarkets are hard to see, because Rewe has 22 stores only in Mainz and 11 of them are in the city center. Therefore, Rewe has a monopoly over the city. (Hensler, 2016, merkurist.de)

Hence, Rewe is a huge player in Rhein-Main, because after the German companies Lufthansa, Deutsche Bahn and Deutsche Post, Rewe is the fourth employer in Hessen with more than 20.000 employees. Even some discounters, that are active in Rhein-Main such as Nahkauf, Toom and Penny are part of the Rewe Group. Consequently, their power is even bigger. Also the government of the “Bundesland“ Hessen advertises with Rewe, because if someone buys the family card in the state chancellery, the person has the possibility to buy cheaper products from Rewe. (Köhler, 2011, faz.net)

Recently, the retailer Tegut, that is active in Hessen tries to open some new shops to counter the dominance of Rewe. One representative of Tegut declared that “Rewe keeps the whole region under such a control that for us it is difficult to get offers to open a new shop.“ Moreover, the manager said that “in Frankfurt, people have the choice between Rewe and Rewe“ and he is surprised that the people accept that situation. (Köhler, 2014, faz.net)

Consequently, the HHI was used to measure the exact degree of concentration of the grocery market in Rhein-Main. The following criteria are presented here to evaluate if the grocery market in the area of Rhein-Main is concentrated or not: The number of competitors that are active in the regional market, their number of supermarkets, their market share and the HHI score is necessary to see if the grocery market in Rhein-Main is concentrated or not. The discussion about the situation of the market in this regional area of Hessen is organized based on these criteria.

Variable	Operationalization: measures
Concentration	number of retailers active in the market number of supermarkets market share HHI score

According to one article, there are 7 retailers active in the grocery market and Rewe has 300 supermarkets in Rhein-Main, Aldi 122, Netto 95, Lidl 91, Penny 85, Edeka 68 and Tegut has 34. (Köhler, 2013, faz.net)

In order to calculate the HHI score, the exact percentages of the supermarkets that the retailers have out of the total number must be calculated. The following situation arises: Rewe has 37,7%, Aldi has 15,4%, Netto has 11,9%, Lidl has 11,4%, Penny has 10,7%, Edeka has 8,6% and Tegut has 4,3% out of the total number of 795 (100%) supermarkets in the area of Rhein Main. Based on these percentages, the HHI was calculated for only the four most dominant retailers:

$$\text{HHI: } (37,7)^2 + (15,4)^2 + (11,9)^2 + (11,4)^2 = 1421 + 237 + 141 + 130 = 1929 \text{ HHI}$$

A HHI with the score 1929 signalizes that, the market is moderately concentrated, because if the HHI is less than 1500, the market place is competitive, if the HHI is between 1500 and 2500, the market place is moderately concentrated and if the HHI is more than 2500, the market place is considered to be highly concentrated. (investopedia.com)

Very important for our second calculation of the HHI is the fact, that also the retailer Penny is part of and controlled by the Rewe Group. For our second calculation we add the percentage of Penny to the percentage of the Rewe supermarkets (37,7% + 10,7% = 48,4%). The new calculation and score looks as following:

$$\text{HHI: } (48,4)^2 + (15,4)^2 + (11,9)^2 + (11,4)^2 = 2342 + 237 + 141 + 130 = 2850 \text{ HHI}$$

After the percentages of the retailer Penny was added to the percentages of the retailer Rewe, the result is completely different. Now, the HHI is 2850 and that signalizes that the grocery

market of Rhein-Main is a highly concentrated marketplace. Based on this score, the area of Rhein-Main was chosen for this paper.

Hence, the criteria for concentration is clearly met in the regional area this study focuses on. Nevertheless, the number of supermarkets in the article of Köhler (2013) is now 4 years ago. Due to the high competition between the retailers, the probability is high that some of them opened new shops in the cities or districts where Rewe dominated. The study can also be narrowed down to one city where only Rewe has supermarkets such as the situation in the city of Königstein. (Köhler, 2013) Moreover, 48% market share by one retailer is a lot and it can be a first indicator about the existence of a dominant market position. (OJ, 2004) However, there still can be sufficient competition on the market. The German grocery market is characterized by more than 80% market share of the big four, but they are still competitive and innovative among themselves. Another bias of the article from Köhler (2013) can be that the journalist only analyzed parts of Rhein-Main where Rewe dominates the landscape. Analyzing the whole area would then probably show other results.

4.5 The actual circumstances of 4 companies operating in the food market of Rhein-Main

This subsection will summarize the outcomes of the interviews with different companies operating in the Rhein-Main area. Each company is in a different situation and a different case, because one company is only a direct supplier to one of the dominant retailers, the second company has multiple retailers and also a huge offer of products inside their building, the third company was a supplier for the dominant retailer in the region, but decided to stop the collaboration due to unacceptable claims. The last company was not and does not want to be a supplier in future, because it does not belong to the philosophy of the company.

Comparing the different cases of the companies will be advantageous when discussing the outcomes in the 5th chapter of the thesis. The names of the companies were coded and anonymized. The content relies on the statements made by the representatives.

4.5.1 The experience of a direct supplier (C1)

The first company (C1) is a direct supplier to one of the dominant retailers in the grocery market of Rhein-Main. Thus, C1 only supplies for a tiny area within the Rhein-Main region. Moreover, the company has a long tradition. It is specialized on vegetables which can be

easily cultivated on open lands. The main products that are grown on the fields of the company are salads, cabbage and celeriac. Consequently, all vegetables grown on the field and sold to the retailer are regional products. Because of the fact that C1 is the main client and strongly connected to the dominant retailer, innovations do not play such a significant and crucial role for C1. However, C1 still has some incentives to invest and innovate.

Based on my expectations, C1 should have real problems with the retailer it supplies, because it supplies exactly one of the most powerful food companies of the whole Rhein-Main area. Nevertheless, C1 still has some incentives to invest and innovate despite the fact that it deals with a strong retailer. Thus, C1 is constantly innovative in the style and the look of the packaging of its products. The aspect of regionality of its products is visible on each package and special colors and effects shall attract more consumers to buy the products. Nevertheless, C1 has to follow clear rules, guidelines and recommendations from the retailer and to implement them according to their strategy. C1 receives guidelines such as what kind of colors the packaging must have and how it must look like at the end when products are sold on the supermarket shelves. Thus, C1 has incentives to invest and innovate but the way how they must be implemented come from the retailer. The retailer strictly tells C1 how to innovate and what to supply.

Consequently, the incentives to invest and innovate come from the R&D activities of C1.

Development is the main activity of C1 through the new creation of innovations in the form of marketing methods e.g new packaging of the product. However, C1 is only innovative in this regard due to strict guidelines and recommendations it receives from the retailer. Therefore, C1 is forced to be innovative by the retailer and does not develop new product packagings by itself. Nevertheless, C1 also gets incentives to innovate based on the needs of the market. C1 organizes the production strategy according to the preferences and behavior of the consumers. As C1 mentioned, *“the market creates these conditions without having an extended scope for me to try something else. The company goes with its innovations and investments hand in hand with the actual developments on the market and the current time.”*

Contrary, real barriers for the innovations of C1 is the growing amount of bureaucracy, the loss of fertile land due to the urbanization process, huge product variety and the availability of skilled workforce in the future.

Bureaucracy and red tape grew a lot in the past. The certificates and recommendations both the retailer and the supplier have to respect became stricter. This results in extra work and it is very time consuming, C1 said.

One of the most worrying developments in Rhein-Main is the loss of lands that C1 could see in the past. The area of Rhein-Main is very populated and is still growing with an enormous speed. It is a very dynamic, attractive and changing region. For C1 this will be a challenge for the future, because a lot of free areas are used for new constructions and building projects. Big cities are growing and the peripheries are expanding too. As the person said: *“Now, it is not a problem for us, but I can clearly feel the pressure which persist on us, because the cities and suburbs came closer to us and are still expanding.”* For C1, this is a very dangerous development and he would not be able to grow e.g. 200 salads for the retailer, if C1 will not have the appropriate amount of land available in the future.

The huge variety of salads the retailer has on its supermarket shelves to sell harms C1, because if consumers do not buy the products the company sold to the supermarket, the revenues of the company are in danger and also the innovations in the packaging would not be profitable. The retailer has now more than 30 kinds of different salads offered on its shelves. In contrast to this huge number of salads the retailer has, C1 has only 3 different kinds of salad grown on its fields. If the consumers decide to buy other types of salads and not one of the 3 salads C1 offers, this will have negative effects on its revenues and budget.

Regarding the relationship between the supplier and the retailer, C1 said that he would describe the cooperation as being okay, but he definitely can feel the growing dominance and position of the retailer compared to past years. *“At the end, you are only a tiny light when you compare the revenues of the retailer and when I start thinking with what small piece I am contributing to it.”*

C1 would not say that the retailer treats the company in an unfair manner but the growing dominance of the retailer is seen in the administration of funds. These rebates (“Rückvergütung“ in German, it means that the retailer pays the supplier less than promised)

are established by the retailer and the supplier has no chance to bargain in order to receive more rebate than the retailer want them to give. C1 used a metaphor and said that *“behind the doors, we see the severity of the retailer and either we accept their offer of rebate or not.”* The retailer made use of such practices last year and this year as well. C1 tried to raise the voice and to bargain a higher amount of rebates, but *“exactly in this kind of situation, I felt how overwhelming their power is.”* Additionally, C1 said that *“you have no chance to start a dispute with them. You are simply too small and it would create devastating consequences for the retailers to indulge.”* Moreover, other companies gave up and stopped trying to negotiate higher rebates after they have seen that they had no chances but to accept the retailers offer.

Nonetheless, the collaboration of the retailer with C1 could not be better for their strategy, because C1 crops the salads and drives the products directly to the retailer. There are few chances to get fresher products from elsewhere for the retailer. Compared to a large intermediary, where salads are stored 2-3 days before going to the supermarkets, the quality of C1 salads is definitely better. This aspect also improved the position of C1 towards the retailer, as it promotes regionality and it is hard to find salads with a better quality for the retailer.

Moreover, the collaboration with the retailer improved the situation of C1, because in the past it was harder for C1 to sell its products. C1 did not have one direct buyer of the products and had to call various supermarkets and shops if they want to buy the products. Hence, the collaboration with the retailer is good for the final turnovers and product sales of C1, because it creates stability and predictability for C1 for future investments. 2/3 of the total revenues of C1 come from the relationship with the retailer. The other 1/3 C1 gets from the little shop it has in the company and from a small booth where C1 sells flowers.

4.5.2 The experience of a sausage company supplying multiple retailers (C2)

The second company (C2) is an old sausage company, that is also active in the area of Rhein-Main. It is specialized on a sausage, that has a long lasting reputation and tradition within the region for more than 50 years. The sausage is very qualitative and the way how the sausage is produced plays an important role for C2. C2 sells the sausage only within the local area of Rhein-Main in a radius of about 50km. The aspect of regionality and exclusiveness is one of

the big advantages the company has. Their products are sustainable and C2 puts an emphasis on what kind of conditions the cows live and how the animals are treated. *“Our customers can eat our meat with pleasure, because the cows were grown in perfect conditions”*, C2 mentioned. The sheds are controlled and inspected regularly without informing the operator.

C2 supplies multiple retailers and it also supplies some smaller supermarkets that belong to the retailers that have a huge share in the grocery market of Rhein-Main.

Nevertheless, C2 is trying to be constantly innovative and to create new products based on the preferences of the consumers. C2 develops new kinds of sausages with special fillings that cannot be found in other supermarkets. New chops and steaks with special tastes are also very often created by the butchery. For the meat, C2 is active to provide new sauces which cannot be found everywhere. Thus, C2 is very engaged in product innovations. The butchery tries to develop new products and tastes all the time.

Its incentives to innovate and to try to offer exclusive food come from an intense analysis of consumer needs and behavior. The total amount of money they use for new innovations and investments varies every year, because unexpected happenings can influence their innovation capacities. Last year, one production machine was out of order during a period in which their products were very popular and they had to find a new machine to replace the old one in a very short period of time. This was an unforeseen and an unprofitable investment for the company, which suffered from losses in revenues during these days.

C2 exposes new things in their counter in order to make the new product innovations familiar with the people.

Despite the fact that C2 operates in a concentrated market, it tries to be as much innovative as possible and to develop new special products throughout the year. C2 innovates on a regular basis and invests money in R&D activities. Despite the fact that C2 does not spend money on research to know what the situation looks like, they monitor the market and the current behavior of the people. Afterwards new product developments e.g. new sausages, meats or sauces can be created. If the development and the innovation was successful depends on the amount of pieces C2 could sell and how the consumer reacted to them. For C2, consumer preferences are an important engine that provides the company with inputs and incentives what new products to develop that fit the taste of their clients.

Barriers to innovate in new meat products are the exorbitant rents that increased in the area of Rhein-Main. C2 is aware of the huge advantage to work in their own property, but normally *“if we had to pay a rent of about 2000 or 3000 euros, like other companies, it would not be possible to offer our sausage in the middle price segment. Nobody will buy the sausage anymore, because it would be impossible for us to keep the price of the sausage low.* The price in the middle segment is only possible for them, because the company works and has its office in their own house without the pressure to pay enormous rents.

Product imitations, that big retailers and supermarkets use are another obstacle for new product innovations, because such product imitations are cheaper than the sausages C2 produces and some people do not think about the whole production process if they accept to buy those cheap product imitations.

The risk factor is also a barrier for C2 to innovate, because if products are not accepted and bought by the consumers, the whole idea, investment and innovation was useless. As an example C2 mentioned that the recent trend of many people to be vegan and to refuse to eat all products, that are made of meat can be a challenge too, if customers decide to relinquish meat products.

External risks that have nothing to do with the company have a damaging potential as well. Some years ago, Germany had the so called BSE scandal. Cows had serious health problems and diseases during the time when the scandal arose. The meat from infected cows was bad and huge risks for the health of the people was associated with that nation wide scandal. The scandal hit C2 to such a high extent that it stopped all the production process. They survived the scandal with massive efforts, because the local staff was fired and the whole company reduced its size significantly. Temporary, other products without meat were offered to customers and the company suffered from decreasing revenues and investments. It took much time after the BSE scandal to sell the same amount of products as before the scandal began. After the financial crisis when consumers preferred only cheap products was a period of stagnation for the company and innovations were not so profitable for them.

Additionally, the lack of time to think of new innovations and investments due to increased regulations and requirements has a devastating negative effect for C2. *“Sometimes, I am not motivated and I also do not have the passion to think of something new, because suddenly an*

agency comes and says no, you cannot do these kind of innovations. Due to these regulations that come from above, it is very challenging for us to start to think about new innovations. “ Moreover, it is frustrating to start something new, if C2 respects all the guidelines and laws and in some countries e.g. Romania or Hungary nobody punished companies that do not respect EU regulations or if meat products are sold outside without hygienic standards. C2 criticized Europe very aggressively in this regard, *“the stupid Europe is at the very front when it comes to regulations that hinders us to innovate and invest.* “ The number of laws, stricter documentations and regulations increased a lot during the past. Administrative burden and the solicitations from state agencies contribute to the fact that an employee has to do multiple work within the small company. *“A bigger company definitely has an IT department for these kind of activities, but we only have limited power and financial resources to do the same kind of tasks.* “ The only product that stops them to close their company is the special sausage with a history of more than 50 years in the region of Rhein-Main.

The availability of personnel is another factor that can have serious negative effects on C2 as they have problems to find young workforce.

Due to the exclusivity of the product, many retailers asked C2 to start a collaboration and to sell its sausages to their shops. However, C2 would describe the experience it had with some retailers as problematic, because C2 chooses its retailer very selective and cooperates only with retailers, which guarantee revenues without unjustified deductions. C2 said that, *“we only cooperate with some small retailers, which have a tiny shop, but hands away from bigger retailers with which we had some problems in the past.* “ C2 had some frustrating experiences with retailers, because some of them paid C2 too late and C2 does not want to see its special sausage in a lot of cheap discounters or other supermarkets.

Some years ago, one buyer sold the sausages to a retailer, that in turn has sold the sausage with a very high price and customers made C2 aware of this practice. C2 also supplies some regional butchereries, small shops, small restaurants, associations and gas stations, which offer their special sausage to customers. Regarding the degree of concentration of the region of Rhein-Main C2 said that in its area the situation is still acceptable and C2 has alternative buyers, but during the past, the tendency goes towards a more concentrated grocery market. If nothing will be done to stop the concentration process in the grocery market, then C2 is sure

that it will affect their business negatively. Small shops did not have the capacity to survive in the market or they were takeover by dominant retailers in the past. *“I can say that the exclusivity of our sausage rescues us from a total bankruptcy.”* Therefore, it is also hard for C2 to build long term new trust relationships, because people and owners change very fast in our times and a lot of butchers had to close their shops in the past.

4.5.3 The experience of a sausage company that does not supply retailers (C3)

The third company (C3) is also specialized on sausages and is active in the area of Rhein-Main. Contrary to the second sausage company, this company decided to quit the cooperation with one of the dominating retailers due to unfavorable conditions. Compared to the first 2 companies, C3 is relatively young, because it was established only 28 years ago. A lot of other companies tried to create the sausage they offer but failed to get close to the taste of the sausage created by C3. It created a variety of sausages which were successful on the market. The regionality aspect of these sausages is the key for their success.

The incentives to invest and innovate for C3 come from the attendance of regional fairs and through direct communication with the local population. Through these discussions, C3 gets new ideas and input what the peoples preferences are. Based on these needs, C3 decides what product innovation to start and makes a clear plan how to implement the input. After the launch of a new product, the revenues signalizes C3 if the product was a successful innovation or if the money spend to create the product outweigh the final return on investment. Based on the return on investment, C3 knows if the innovation was profitable or not. In the past, C3 took the preferences of the local population very serious and one new product was so successful that some of the customers drove 50-60km by car only to taste and buy the new product. Moreover, new clients C3 had not seen before is a sign that the innovation had in impact within the city they operate but also on the whole region of Rhein-Main. Additionally, some TV channels asked C3 to make a small documentary about the production process of the new product that C3 had created.

Other incentives for C3 to innovate is to be different with the products compared to other retailers or big supermarkets. Asking the local population about their wishes and preferences is an important factor to consider their products as regional ones and to be outstanding. C3

also collaborates with a partner in its area. This partnership provides C3 with additional incentives to innovate, because they share ideas and common visions about future products. From this kind of collaboration, C3 receives fresh meat from cows and pigs from the region. Hence, the main incentives to innovate for C3 come from the attendance of regional fairs where C3 can explore the recent trends on the market. Direct communication with the population that lives in the district where C3 operates also provides C3 with new visions and insights what kind of new products to create. Socialization through partnerships with people that are also active in the district of C3 contribute to expand the incentives for innovation. Process innovations are also part of the innovation strategy of C3. Due to the increase in the degree of concentration in the area they operate, C3 changed its sale strategy and decided to start to deliver their products in the weekend for special events.

Therefore, C3 spends money in R&D activities yearly. Development is referred here as innovations for the development of new products. If the new development was successful, depend on the rewards C3 gets after the launch of the products. As mentioned above, the success of the new development is measured with the help of the revenues after the launch of the new product. Key for C3 to make use of the incentives and to make the new innovations attractive to the people is the communication with them. C3 mentioned that, *“I have to tell people why my product is better than product B or C. You have to document the whole production process and this step starts e.g. how the cow is treated and under which conditions the pig lives.”* Process innovations in the form of the launch of the new delivery strategy of C3 is also a sign of new innovations emerged within their company. Consumer preferences provide C3 with incentives to innovate in new products as well.

Factors that signalizes C3 that the product innovations were not successfully are decreasing profits after the launch of the product. If the new product is not successful after a period of time, C3 decides to stop the creation of the products and to remove it from the stock. Nevertheless, C3 said that *“despite of some setbacks I experienced with new product innovations, a company must be innovative all the time, because that is exactly what makes companies special. You have to be creative and to be up to date with recent trends. I am hungry towards new innovations and product launches. A privilege of an entrepreneur is to be*

innovative. “ C3 measures the profitability of new product innovations very simple. The measurement is based on a diagram that tells the company if the product was successful and if the company had more revenues after the launch of the product. One barrier that makes innovations and investments unprofitable is the fact that large retailers wanted to sell their high quality products under the price of the market and that was very frustrating for C3, because this kind of practice would result in a loss of revenues and income. Hence, price competition is bad for the innovation incentives and for the sales revenues of C3.

Regarding the relationship between C3 and the retailer, C3 had a quite negative experience in the past. C3 had a collaboration with the food retailer that has a leading position in the region of Rhein-Main. C3 supplied the retailer with their special products for a period of 10 years. During the collaboration with the retailer, C3 could realize how they treated their products. C3 said that, *“The grocery retailer asked to get my products and afterwards their main objective was to reduce the price of my products to an inappropriate extent. For me, as an entrepreneur the quality is one of the most important aspects and my products should have a proportional price. Contrary, I do not want to see my products sold with dumping prices and as a low cost article where nothing plays a role e.g. animal farming.”* C3 said that at the beginning, the collaboration with the retailer was without problems and went quite well. The retailer searched the best butcher in the region and they called C3 to get them as a partner with a small shop in their supermarket. However, after some years the collaboration stopped, because the retailer asked C3 to sell only low cost products and wanted to decrease the prices of their high quality sausages and other exclusive products they offered. After these requirements imposed by the retailer, C3 decided to renounce the collaboration with the retailer. C3 mentioned that, *“after these happenings, we said to the retailer that we do not want to collaborate under these conditions imposed upon us.”* Moreover, C3 could feel how the retailer made use of their powerful position within the market, because the retailer included some clauses in the contract with C3, that were not used in previous contracts. C3 was forced to sell some products only because of these new clauses included in the contract and if C3 was not willing to respect the contract clauses, the retailer said that C3 has no possibility but to sell. That is why C3 sells the cheese sausage and other products in the small shops inside the company now.

Additionally, C3 sells its special cheese sausage and other products to local restaurants or to small booths in villages near the company. C3 highlighted, that it does not want to work together with retailers in the region anymore, because C3 does not have the possibilities to supply big retailers and secondly, C3 fears that due the increased price competition, their regional products would be destroyed and would become a shoddy article. C3 is afraid that the articles will lose their uniqueness, exclusivity and quality. C3 could also feel the growing concentration which has been taken place in the grocery market of Rhein-Main. A lot of clients have an immense amount of square meters of selling space at their disposal and 10 years ago, it was less than today.

The growing concentration in the grocery market has also a negative impact on their company, because some years ago, they could easily survive only with the disposal of few meat and sausage products. Moreover, it is also harder to sell the products due to concentration as C3 said that, *“We had to change our whole sale strategy due to the concentration. It is not enough nowadays to sell only meat and sausages. That is why we decided to offer lunch to our clients and to deliver products for special events during weekends.”* C3 could observe, that it is now harder than it was some years ago to sell the products to the customers. C3 sees the responsibility also in the hands of the customers. As C3 mentioned, *“nowadays clients behave very comfortable, because they can get everything they want in big supermarkets without the reason to come to buy products from us.”*

4.5.4 The experience of a brewery that does not supply retailers (C4)

The fourth company (C4) is a SME that is specialized on the production of beer. It is a quite young company with no more than 23 years. In the region where they are active, C4 has a good reputation and various newspapers reported about them. This company also produces only regional beer and takes the aspect of exclusivity of their products very serious.

Therefore, it was not and it will not want to be a supplier for retailers in future to protect the exclusivity of their brands.

Despite the fact that also C4 operates in a market that is concentrated, it is permanently innovative and tries to be up to date with current trends. For C4 it is very important to go on with innovations and to include the customers preferences before starting innovations. C4 developed a lot of innovations in the past. 5 years ago, C4 has introduced a completely new

customer management system in order to identify and record their customers through direct and targeted marketing actions. Especially during the winter season, the customer management system targets the most important customers with special offers. This kind of innovation enables C4 to convince their customers that the brewery really cares for them. C4 said that, *“we must be and remain innovative, we must analyze that market and we have to look where the journey goes. If we do not react according to the needs of the market, we will have a problem.”*

Recently, they were innovative in their processes as they changed their machines and improved older machines in order to save energy and to produce more environmental friendly. That is directly reported also to the clients. These innovations saved a lot of time, work and resources during the development of new products.

Moreover, C4 is also active in product innovations. C4 has developed 16 different kinds of beers and special beers are offered during all seasons. The newest beer they offer is a draught beer with special aromas. The idea to develop the draught beer came from 2 sources of inspiration. First, the customers were asked and secondly, C4 was inspired by American trends. That is why for C4 the market analysis is the most important determinant for its incentives to innovate. As C4 mentioned: *“Without analyzing the market and without knowing what the people want, you do not know at a certain moment that you are bankrupt.”*

The brewery is also active with regards to innovations in new marketing methods. They developed new bags made of cardboard and relinquished plastic bags. Hence, they go hand in hand with more sustainable use of resources and try to diminish the number of plastic, that has a negative impact on the earth. Some bottles also have special designs to look more modern and fancy.

Hence, C4 is very active and has incentives to innovate in new products, production process and marketing despite the fact that it operates in a concentrated market. Thus, C4 is engaged to spend money on R&D activities. The focus is more on development of innovations, such as product innovation, process and organizational innovation and marketing innovations. C4 can measure the success of the developments in different ways e.g. if after the innovation of a new machine, the consumption of energy or water decreases or if after the launch of a new product innovation more products were sold and more customers visited the brewery.

Consumer preferences play a very important role for C4 and the clients are constantly asked to provide C4 incentives to develop new products that serve their preferences. A successful example of an incentive based on consumer preferences was the launch of the drought beer. Additionally, C4 did not have bad experiences with innovations in the past. The brewery has 1-2 innovations per year and follow the innovation plans very consequent. The market analysis helps C4 regarding its incentives to try new innovations as customers are asked directly in the brewery what kind of new products they would like to have. As illustrated above, the incentive to start the innovation in draught beer started also from simple customer inquiry. C4 also uses social media such as Facebook to incorporate their customers.

Nevertheless, C4 has capacity limits within the company, because it is only a small player in the region. C4 has limitations in space and in technical affairs. They operate in the city centre of an old town and they cannot expand or build some extra facilities to the existing company. They have to think about every new procurement twice, because it is very important for them where to place the new e.g. machine and how to incorporate inside the building. Hence, even small procurements requires immense organizational skills. These are real obstacles and diminish their incentives to innovate. Every new innovation must be planned very careful and each factor that can stop the successful implementation of the innovation must be elaborated. Other impediments towards new innovations is that the idea that confined oneself, does not convince the tastes of the customers. Insufficient market analyses and bad marketing plans can contribute to an innovation failure as well.

As all other companies complained about huge bureaucratic burden, C4 also mentioned the madness of bureaucracy they face. *“It is incredible what we have to take into account and what guidelines and documentations we have to respect“*, C4 complained. Over the past red tape took an extraordinary extent. C4 has to document the working hours of their employees and all the goods he bought and sold. C4 also agrees that it acts in a region with high concentration, because diversity in retailing was lost in the past. *“Especially here in our city, we observe the same supermarkets.“*, C4 said. C4 sees the increasing concentration with concern and it will be necessary for C4 to stop the increasing concentration of the retailers. Otherwise, *“exclusion will start“*, C4 mentioned. Recently, one of the retailer opened a new

restaurant as part of their new strategy and this could result in decreasing revenues for C4 in future.

C4 had nothing to say about the supplier-relationship, because the brewery does not want to supply the grocery market. The company offers special and innovative products for which some customers are willing to drive long distances only to buy them. That is exactly what makes their product innovations so special. It would also contradict their philosophy if their products are part of all the other mass products on the supermarket shelves. Consequently, consumers can only buy their beers in the city they produce and for C4 it did not become harder to sell their products.

In this section, the development of the grocery market in Germany was presented to give an overview of the latest developments and the 3 key actors that are active in the grocery market were discussed in order to understand their interplay during the analysis of the interviews. The 2 concepts and their variables of this study, concentration of the grocery market and incentives to invest and innovate were discussed. Concentration was operationalized and measured with the help of the HHI, the market shares and the number of the supermarkets each retailer has in the Rhein-Main area. The second variable incentives to invest and innovate was already operationalized through the interview questions. Innovations in the process of a company, new product announcements, new marketing methods, consumer preferences and a profound market analysis are the main factors that provide the 4 companies with incentives to invest and innovate. Thus, the responses of the interviewee were used and summed up after each subsection to test the findings of the variables.

The next chapter will analyze the main outcomes of the interviews and answers the subquestions and the research question. Similarities and differences of the incentives to invest and innovate of the companies and their concerns will be discussed as well. Moreover, I will check whether the observations are linked with the predictions of the literature used or if new factors were found with the help of the interviews.

5. Analysis

In this chapter, an appropriate answer to the research question and the subquestions will be given. The data retrieved from the interviews is used to analyze the main findings. A necessary step for this chapter is to go back to the theory and the methodology in order to evaluate what incentives of innovation were still part of the literature included and what new incentives and barriers for innovation this paper found out. Each circumstance of the SMEs will be evaluated and shortcomings regarding the analysis will be presented as well.

5.1 What preconditions must be fulfilled to consider a market concentrated?

The first subquestion deals with the preconditions that signalize if a market is supposed to be concentrated.

As already demonstrated in subsection 4.3 of the fourth chapter, there are various factors which are necessary to take into account to know if a market is concentrated. The number of retailers that are active in the grocery market is the first important aspect to know.

Another crucial thing to consider would be the number of supermarkets each retailer has within a region or nation. The percentages of supermarkets each retailer has is important for the calculation of the HHI. It also signalizes the market share of the retailers. This will be helpful when calculating the exact score of the Herfindahl-Hirschmann Index.

Afterwards, the market share each retailer has must be identified to know the most important players in the market. Only the four most important retailers are used to calculate the HHI, because other smaller and less important retailers will not influence the final score significantly.

A grocery market with a HHI score between 1500 and 2500 is supposed to be moderately concentrated and a market that exceeds the score 2500 raises serious concerns as such markets are highly concentrated with an tremendous market share for the four most important retailers. (Department of Justice, USA, 2015)

The concentration ratio (CR), a ratio that shows the market share of the third, fourth or fifth largest companies operating in a market, is a useful tool to analyze the degree of concentration of a market as well. Here, the CR evaluates if a market is supposed to be oligopolistic or not. Despite the fact that there are no clear rules under what exact CR a

market is considered to be oligopolistic, a CR of 60% signalizes that the market has an oligopolistic nature. (economicsonline.co.uk)

Hence, a HHI score of more than 2500 and a CR of more than 60% are clear preconditions that signalize that the market is concentrated and has an oligopolistic nature.

5.2 What factors drive and harm the innovation activities of SMEs?

The second and third subquestions show factors, that drive and harm the activities of SMEs to innovate.

According to the literature review, there are different factors that drive and harm the innovation incentives of SMEs.

The report “The economic impact of modern retail on choice and innovation in the EU food sector“ (EC, 2014) predicted that the rate of employment is one factor that drives the innovation incentives of SMEs. This was confirmed by my findings as all the companies work in an area which is an attractive region characterized by a low rate of unemployment. (Bundesagentur für Arbeit, arbeitsagentur.de) Hence, there are plenty of SMEs operating in the region of Rhein-Main.

A good turnover of a product category has also a positive impact on the innovation activities of companies. Especially C2, C3 and C4 mentioned that increased turnovers and new customers are a sign that their innovation was successful and provide the companies with additional incentives to innovate, because the turnover can be used to reinvest the money in other types of innovations. A good turnover in a product category also results in more choice for the consumers. This was also confirmed for C2, C3 and C4.

Contrary, the report found out that economic uncertainty and difficulties are risk factors that can hamper innovation. This was true for C2 as they could feel the consequences of the financial crisis when people started to buy only cheap products and the revenues of C2 decreased.

The study from the EBRD (2014) indicates that the engagement of each SME to invest in R&D activities and their willingness to introduce new products and processes are important drivers of innovations as well. Except for C1, all SMEs are constantly engaged in R&D

activities, in new product innovations and in improving the production process with more sustainable machines as C4 declared. Hence, this study confirmed that SMEs engagement in R&D activities acts as an engine for innovations and new ideas.

Therefore, my study tested and confirmed drivers of innovation that previous studies found out. However, other factors that are important for the innovation activities of SMEs were new marketing methods, consumer preferences and an in depth analysis of the market where they operate. These factors were not included in the literature review, but my study found them out.

Regarding the barriers of innovation, my paper supports the same barriers that Tiwari and Buse (2007) analyzed. All 4 SMEs have financial bottlenecks and especially C2, C3 and C4 are constrained by serious bottlenecks before deciding to innovate. It can be very hard for them if an innovation is not successful, because their main goal is to regain the money invested for innovations. Therefore, every innovation is also a financial risk and it is important to plan every step carefully as C4 mentioned. C2 supports the fact that there is always a risk factor in their innovations. Unforeseen problems as the damage of the production machines of C2 can cause difficulties for SMEs. Thus, my study shows that SMEs are vulnerable and also their personell have to work on multiple tasks as Tiwari and Buse (2007) predicted. All 4 companies suffered from multiple work to do and that is time consuming. C2 is even hindered to think of more innovations because of the fact that SMEs do not have special departments. I also tested the problem SMEs have to find qualified personnel. This factors was supported by C1 and C2 as they fear that their job is not attractive for young generations today.

Probably one of the biggest barrier all 4 SMEs face is the enormous amount of bureaucratic procedures. Tiwari and Buse (2007) also signalize that red tape hampers SMEs to innovate. Administrative burden and strict guidelines also resulted in more extra work for all companies distracting them to plan more innovations.

Thus, my study found the majority of barriers for innovations that Tiwari and Buse (2007) found out in there article. In addition to that, my study found out that the process of urbanization can be an obstacle especially for the future of C1 as fertile lands are used for building projects. This barrier can also be part of urban planning strategies and if large

retailers reserved the best places only for them excluding smaller companies to use the space. C1, C2 and C3 complained about the product variety, product imitations and aggressive price competition. These barriers are part of the strategy of the retailers and it is only a barrier for SMEs which operate in the food supply chain as in my study. These 3 factors will be discussed in the next subsection.

Even if C2, C3 and C4 are innovative, they are concerned about the growing concentration in the region. C2 mentioned that SMEs will be discouraged in future and if nothing will be done to counter the increasing power of big retailers it will be likely that in future SMEs will not survive. C3 had to change its whole sales strategy due to concentration and C4 fears the new strategy of one discounter to open a restaurant in the region C4 operates.

5.3 What types of practices of supermarkets have the ability to diminish innovation incentives of SMEs?

The fourth subquestion deals with the practices that retailers use and their effect on the incentives to innovate of SMEs.

The 3 main concerns some SMEs had regarding the practices supermarkets use were the use of product imitations, huge product variety and excessive price competition. Only C4 had nothing to say about bad supermarket practices as the company does not want to supply retailers.

Product imitations of large retailers are a serious threat for SMEs, that are specialized on similar products large retailers offer. Large retailers and especially discounters tend to use cheaper products that have the similar taste as exclusive products offered by SMEs, that are more expensive due to the production costs and animal farming. Product imitations can result in lower turnovers and serious profitability problems of innovations for SMEs. C2 complained about such practices and according to C2 only the consumer can stop this trend. Consumers must be more aware about the production process and where the meat they ate came from.

The second type of practice which is common among large retailers is the excessive price competition strategy they have. The fight for market shares is immense and every retailer wants to attract customers with cheaper products. This can be a serious threat for the incentives to innovate for SMEs as well, because some companies have to sell their products below their production costs and this will also result in lower turnovers and unprofitability of their innovations. C3 had this experience when the company had a collaboration with a retailer, that forced C3 to lower the product prices. However, this was a catastrophe for the sale strategy of C3, because they were not able to get any return on investment, because the retailer tried to push the prices down. Also the exclusivity of their products was in danger if C3 did not refuse the collaboration for the future.

The third obstacle especially C1 faces is the huge product variety supermarkets offer. The immense variety of salads the retailer has in its stock can cause decreasing revenues for C1, if the consumer has more choice and decide to buy other salads and not the salads that C1 supplied.

5.4 Main findings and limitations to the interpretation

In this subsection, the main outcomes of the interviews will be presented. The situation of each SME will be analyzed shortly. The limitations of the outcomes will be presented as well.

5.4.1 Analysis of the innovation incentives of C1

Compared to all other companies, C1 has the least incentives to invest and innovate due to the fact that it receives direct guidelines and recommendations from the retailer how the marketing methods should look like at the end.

The representative of the company also said that it is not their main task to innovate due to the collaboration with the retailer. As long as C1 implements the recommendations of the retailer, it is unlikely that consequences from the retailer will appear. Obviously, the retailer is innovative in new marketing methods, because it constantly tries to make the product packaging modern and addressable for the final consumers. C1 only implements the way the products have to look like. Even the colors are predefined by the retailer. Thus, C1 is dependent on the innovation plans and strategies the retailer has.

Through this example it is also confirmed that despite the oligopolistic market of Germany and Rhein-Main, retailers are still engaged and active regarding the innovation activities to attract more clients.

That is why the innovation activities and incentives for C1 are lower and the company is least innovative compared to all other SMEs. Important to mention here is that its main revenues come from the collaboration with the retailer. Hence, C1 is dependent on a good relationship with the retailer, otherwise C1 would lose an important share of revenues. Interesting is that C1 is in close contact to the concentrated grocery market of Rhein-Main. All the other companies are more flexible and not in such a close contact to one of the most powerful retailers. Not to forget that 2/3 of all revenues C1 has come from the collaboration with the retailer.

Based on the fact that it is conspicuous that C1 is the least innovative firm of all the other companies interviewed, the impact of concentration could be analyzed as negative on the incentives to invest and innovate of C1 and the null hypothesis of this paper could be falsified.

However, due to the small sample size of direct suppliers included in the study, the results regarding the innovation activities of C1 cannot be generalized. Here is the point where future research could focus on. More direct suppliers can be analyzed to see if the close contact to dominant retailers that act in a concentrated market has negative effects on the innovation incentives of direct suppliers.

5.4.2 Analysis of the innovation incentives of C2

The butchery C2 is very innovative and is active to develop new products and sustainable production process to their customers.

Product innovations belong to their core activity and despite the fact that C2 had bad experiences with retailers in the past, C2 is still supplying some of them. The main difference compared to C1 is that C2 is very selective regarding the collaboration with the retailers. All the retailers that asked C2 to start a collaboration were only interested in a special sausage that has a long tradition and standpoint within the region C2 operates. Hence, the exclusivity of the sausage acts as a leverage of power for C2 in the negotiation process with the retailers.

The sausage is famous in the region and a lot of consumer generations know the special reputation their sausage has. The exclusivity enables C2 to be more flexible and selective. Moreover, the sources of revenues of C2 are more heterogeneous as the company is supplying more than one retailers, local shops, gas stations and associations. Hence, C2 is not as dependent as C1 is on only one important source of income and the relationship with the supermarkets is not the core field of activity.

Also the local civil society was active in the past when one retailer sold their sausages above the established price of C2. The consumers told C2 about the unfair price strategy of one retailer. Hence, this example shows that the civil society can be aware and support C2. An active civil society can also increase the bargaining power of C2 and it is not wrong to say that some consumers even identify with the special sausage C2 offers.

5.4.3 Analysis of the innovation incentives of C3

The second butchery interviewed for this paper was also engaged to be as innovative as possible.

C3 is mainly active in product innovations and an in depth screening of the market with the help of direct communication with the local population. Consumer preferences drive the innovation activities for C3. Like C2, also C3 is more engaged in innovations than C1. The butchery has also a partnership with another meat company to ensure the sustainability of their meat products and to ensure the well being of the animals.

New regarding the comparison between the companies is that C3 renounced a collaboration with one of the most dominant retailer of Rhein-Main due to price pressures, low cost products and the fear that the products C3 supplied will lose their exclusivity in the future. It becomes evident that big retailers are in an aggressive price competition to attract clients and to have more market shares. This strategy could be positive for the consumers because of cheaper products but C3 had a lot of problems to gain its return on investments due to this strategy. If C3 had not renounced the collaboration, their incentives to innovate would be much lower and the return on investment of their products would not be profitable.

Afterwards, C3 decided to supply only some small shops and restaurants within their small region they operate.

Also for C3, the exclusivity and reputation of their products act as a leverage of power and an increase in bargaining power towards the retailer. Maybe not every SMEs has the force to renounce a contract with a big retailer where more consumers can be found and where the chances to get closer to the clients are quite high.

5.4.4 Analysis of the innovation incentives of C4

The brewery was one of the most innovative SMEs interviewed for this paper. C4 develops exclusive regional beers and their philosophy is to not become a supplier to the retailers in the future in order to not lose their exclusive character of their products.

Compared to C1 and C2, C4 had not and does not want to have any contact to the retailers. Hence, C4 belongs to the category of SMEs that had the most incentives to innovate.

That can be a possible consequence of their distance to retailers and a key for being so innovative even if their products would reach more people if C4 starts to supply some retailers.

C4 is very flexible and decides for its own what kind of new innovations to start. C4 has a deep consumer based approach before deciding to innovate as they are in constant communication with their clients. Especially compared to C1, C4 acts very independently and has a big leeway regarding their innovations and nobody tells C4 what kinds of innovations to start and how they shall look like at the end.

5.5 What is the impact of concentration on the innovation incentives of local SMEs?

In this research, I wanted to know why companies cannot be innovative to the extent they want to be. Based on the theoretical framework, concentration as a barrier for innovation of SMEs was chosen for the analysis. Therefore, the hypothesis was that concentration has a negative impact on the incentives of local SMEs in the food supply chain to innovate.

Based on the analysis of the interviews, it became evident that the majority of the companies see concentration as an obstacle for their incentives to innovate and their revenues. Only C1 did not complain about growing concentration as the only company that directly supplies a retailer. All other SMEs view growing concentration with suspicion in future. Therefore, growing concentration could be a factor that impedes SMEs to innovate, but other factors can

also influence the innovation incentives of SMEs, such as red tape and high administrative burden, the risk factor, restrictive capacities in space and techniques, the availability of skilled personnel for their company, restrictive financial and capacity scope and unavailability of specialized departments within the companies

This study adds the existing literature with 2 additional barriers. The process of urbanization that goes hand in hand with the loss of fertile land and high rents especially in dynamic metropolitan areas are barriers that previous studies did not find out.

It is conspicuous throughout this study that C1 as a direct supplier has the least incentives to be innovative. The other companies do not really deal directly with the concentrated market and try to avoid being only a single direct supplier. C2, C3 and C4 are companies where most innovation activities take place and they all try to avoid to be dependent on the gatekeepers. They use a different form of distribution how to get to the consumers with their products. Even if C2 has some contacts with retailers, it is very selective and it is not as dependent as C1 is on the retailers. Probably the exclusivity of the sausage provides the company bargaining power and flexibility regarding the retailer selection.

Based on the results of C1, it could be possible to falsify the null hypothesis and to demonstrate that concentration has a negative effect on innovation, but due to the small sample size and the outcomes of the other companies, which are very engaged to be innovative, it would be the wrong approach to falsify the hypothesis based only on one case. However, if nothing will be done in future to stop the process of concentration in German local markets the other 3 companies were afraid of the exclusionary effect of growing concentration that favors only big companies with huge financial resources.

Additionally, C1 and C4 are 2 companies with extreme contrasts throughout this study. C1 is the least innovative SME and C4 was the most innovative SME throughout the study. Both have totally different forms of distribution. C1 gets its main revenues based on the collaboration with the retailer and C4 gets its revenues based on the targeted customer management system without having anything to do with large retailers.

The argument from Argentesi et al. (2016) that a small number of retailers tend to have a dominant position in several local markets is confirmed by this study, that shows the high

degree of concentration in Rhein-Main. However, this study could not confirm their arguments that powerful retailers transfer risks and costs to their supplier. Neither this study tested the effect of concentration on the product assortments.

The use of private labels by retailers was also not tested throughout this study. Thus, I could not confirm the argument of Nicholson and Young (2012) that retailers use private labels to cheat and put their suppliers under more pressure.

With regards to the supplier and buyer relationship of the article of Sutton-Brady et al. (2015), this study showed that the relationship of C1 with their retailer seems to be acceptable, despite the fact that there are some problems with the refunds as C1 mentioned, but apart from that, this study did not confirm that there is an extreme unequal relationship between the supplier and the retailer.

In this section, an appropriate answer to the subquestions and the overarching research question was given. Additionally, all circumstances of the SMEs were analyzed. Their different circumstances were compared and some limitations to the results were presented. The next chapter of this thesis will conclude the paper and will give some suggestions where future research could focus on.

6. Conclusion

The main contribution of this paper was to find out if concentration has a negative effect on the incentives of SMEs in the food supply chain to invest and innovate. In order to be as specific as possible, the level of concentration of a local German grocery market was analyzed, because companies have no outside options to sell their products and they are locked within the local market. The fact that this thesis focused on a local market was different compared to other articles, that analyzed only the national or the European level. Analyzing local markets is interesting, because these kinds of markets have special consumer preferences and some people even identify themselves with local products, that have a huge tradition and reputation within the region.

In order to get the data to answer my research question and the 4 subquestions, an interview with a professor, who is specialized in the situation of the German grocery market and

interviews with 4 companies that belong to the category of SMEs were conducted. All the companies interviewed for this paper were in different circumstances.

One company is a direct supplier, the second company is a supplier of multiple retailers, but is very selective regarding the collaboration with them, the third company was a supplier, but decided to quit the collaboration due to dissatisfaction regarding the requirements the retailer had and the fourth company was not and does not want to be a supplier in the future due to the fact that they want to have exclusive and high quality products.

The different cases selected for this research made the comparison among them very interesting. Except for C1, all companies were and are still very engaged to be innovative and to constantly improve their products to satisfy the preferences of the local consumers. Most innovation activities take place in the SMEs that avoid to deal with the gatekeepers and they use a targeted consumer oriented form of distribution.

Hence, I was not able to clearly falsify the null hypothesis that there is a negative relationship between the level of concentration and innovation. However, it is conspicuous that C1 has the least incentives to invest and innovate, because C1 gets clear guidelines from the retailer how to innovate. Due to the small sample size of direct suppliers, it is not the right approach to use only the outcome of an interview with one direct supplier to falsify the null hypothesis. However, all other companies worry about increasing concentration and the aggressive strategies big retailers have in future. Thus, concentration has the ability to influence the incentives of SMEs to innovate negatively.

Future research could concentrate on interviewing more than one direct supplier that has a close collaboration with a dominant retailer. Interesting to identify would be if direct suppliers are more dependent on the retailer when it comes to innovative activities. Another interesting phenomenon to analyze especially in metropolitan areas would be, if the process of urbanization has a negative effect on the innovation incentives of agricultural farmers. Moreover, future researcher could study if the actual expansive monetary policy of the European Central Bank (ECB) is bad for SMEs due to the fact that many investors decided to invest in real estates especially in metropolitan areas. This phenomenon could pose barriers for SMEs to enter the market due to exorbitant rents, real estate prices and speculative

investments. Urban planning can also be a necessary field to analyze to see if local SMEs can expose their products or if big retailers dominate the most attractive locations of a city or village.

To conclude, SMEs are still innovative even if they operate in a market that is concentrated. The exclusivity aspect of their regional products have the ability to be a leverage of power for them in order to not be dependent on one retailer. Unfortunately, some SMEs and local shops had to give up their business in local markets due to competition and profitability reasons. The process of concentration in the food sector must be analyzed also in the future and competition authorities must act as a watchdog over regional markets to ensure diversity and equal chances to enter the grocery market for all SMEs. A key challenge for the competition authority is to avoid increasing concentration of the big four of the German grocery market. Otherwise, exclusion is likely to start and to affect also SMEs that do not deal with the gatekeepers.

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