INNOVATION IN THE GROCERY RETAIL MARKET

Analysing the critical push and pull factors

Student: Maarten van Enckevort (Reg. nr. 941224224070)
Course code: BSc. Management and Consumer Studies
Specialisation management studies: YSS-81812
First supervisor: prof. dr. Jacques Trienekens
Chair group: Business Management & Organisation (BMO)
Abstract
The number of supermarkets and the total turnover of supermarkets is growing the last years. Also is there an increase of interest in shopping online, the consumer is taking the channel that best suits their needs. To achieve this, innovation becomes a continuous process in supermarkets which is driven by consumers and the supermarket business.

This study will gain insight into the perspective of both business and consumers and what are the critical push and pull factors that play a role in the innovation in the grocery retail market. It aims to give an overview of the types and reasons to innovate and the effect of the innovation in the grocery retail market will be investigated. The following research question was formulated: ‘‘What are the critical push and pull factors of innovation in the grocery retail market?’’ Therefore, push and pull reasons are investigated as well as the characteristics of innovation. To link the push and pull reasons to innovation, various types of innovations will be used, namely; product, process, marketing and organisational innovation.

To answer the main question literature articles and documents are explored. Examples of these documents are annual reports from supermarkets. The implemented innovations are mostly based on supermarkets in the Dutch grocery retail market. Push reasons that are found for supermarkets to innovate are; being competitive, grow further, being corporate social responsible, enter markets or attract new customers, cost saving and financial advantages and the introduction of new technologies. Pull reasons that are found are; an increase of more small families, more awareness of the environment and socially concerned, the consumer is more educated, connected and informed, an increasing need for experience, expertise, efficiency and convenience. To link this to the types of innovation, push reasons have mostly effect on all the four types of innovation. Pull reasons have most effect on product innovation and marketing innovation.

Further research can conduct a survey among the consumers in order to get a more complete overview of the pull reasons. Also, further research could focus to delineate the research more to certain supermarkets instead of the entire grocery retail market. Further research could also do more research into small innovations and which types of innovations arise from the push/pull reasons.
Table of contents

1. Introduction: .............................................................................................................. 4
   1.1 Clarification of technological-push ........................................................................ 6
   1.2 Clarification of market-pull innovation ................................................................. 7

2. Research design ........................................................................................................... 9
   2.1 Research objective ............................................................................................... 9
   2.2 Materials and methods: ..................................................................................... 9
   2.3 Main question of this research paper .................................................................. 9
   2.4 Sub questions of this research paper ................................................................. 9

3. What are the definitions and characteristics of innovation according the literature? ....... 10
   3.1 Several definitions of innovation according the literature ..................................... 10
   3.2 The general idea and goal of innovation ............................................................. 10
   3.3 Categorisation of innovation in business and consumer perspective ..................... 11
   3.4 Innovation and how its emerges ...................................................................... 13
   3.5 Classification of innovation according to Schumpeter ....................................... 13
   3.6 Neoclassical approach of innovation .................................................................. 14
   3.7 Evolutionary approach of innovation .................................................................. 14
   3.8 Systems innovation approach ........................................................................... 15
   3.9 Reactive or proactive approach of innovation .................................................... 15
   3.10 Types of innovation ......................................................................................... 15
       3.10.1 Product innovation .................................................................................... 16
       3.10.2 Process innovation .................................................................................... 16
       3.10.3 Marketing innovation ............................................................................... 17
       3.10.4 Organisational innovation ....................................................................... 17
       3.10.5 Incremental and radical innovations ......................................................... 17
       3.10.6 Bottom up and top down innovations ....................................................... 18

4. What are for companies in the grocery retail market (push) reasons to innovate their business? .... 19
   4.1 A list of push reasons to innovate their business .................................................. 19
       4.1.1 First push reason is to let the company grow ............................................... 20
       4.1.2 Second push reason is to differentiate your company from competitors ............ 20
       4.1.2.1 The role of positioning to differentiate it from competitors ...................... 21
       4.1.2.2 The role of segmentation to differentiate it from competitors ................... 22
       4.1.2.3 Examples of this push reason in the Dutch grocery retail market .................. 22
       4.1.3 Third push reason is to enter emerging markets and attract new customers .......... 23
       4.1.3.1 The four strategies of the Ansoff’s matrix to use for enter emerging markets and attract new customers ........................................... 24
       4.1.3.2 Examples of implementing these strategies in the grocery retail market ......... 25
       4.1.4 Fourth push reason is being corporate social responsibility (CSR) ................... 25
       4.1.4.1 Several themes of CSR programs that can be seen at supermarkets in the grocery retail market .............................................................. 26
       4.1.5 Fifth push reason is to make use of innovation by introducing new technologies .................................................................................................................. 28
       4.1.5.1 Classification of technologies .................................................................. 29
       4.1.6 Latest push reasons are to innovate for cost savings and financial advantages .... 30

5. What are the customer needs and trends (pull) on innovation in the grocery retail market? .......... 32
   5.1 First trend is having more small families with decreasing family size ................... 32
   5.2 Second trend is being more aware of the environment and socially concerned ........... 32
   5.3 Third trend is that consumers are more educated, connected and informed ................ 33
   5.4 The need for experience, expertise and efficiency ................................................ 33
   5.5 The need for having more convenience ............................................................... 34

6. What is the effect of push and pull factors on innovation in the grocery retail market? ............... 35
   6.1 Push reasons and the effect on innovation ............................................................ 36
   6.2 Pull reasons and the effect on innovation: ............................................................ 38

Conclusion ....................................................................................................................... 40

Discussion ....................................................................................................................... 42
   Limitations and future research .............................................................................. 42
   Practical implications .............................................................................................. 42

References: ..................................................................................................................... 43
1. Introduction:
The importance of having a supermarket close to is growing. Therefore, there has been a growth in the number of supermarkets in the Dutch food sector. The number of supermarkets has increased with 3.2 percent between 2008 and 2017, up to 6,000 supermarkets. This may be a reason why the turnover of the supermarkets has also increased. The total turnover of the supermarket sector increased in 2017 with 3.5 percent compared to 2016. This is in accordance with the years before 2017, the turnover of supermarkets in 2017 increased by almost 21 percent compared to 2008 (figure 1). Instead of the food specialty stores, there was a decrease of almost 11 percent in the turnover in this same period (cbs.nl, 2018).

![Turnover Chart](image)

This increase in turnover of the supermarkets is mainly due to the customer. The economic crisis is over and consumers are inclined to buy more groceries. There is also a shift in the consumer purchase behaviour. The consumer is making different choices and does not economize on food and drink. Consumers are set to increase their spending because confidence in the Dutch economy is high (ING, 2018). The consumer choses convenience which is shown by the increase. In 2017 The Netherlands was for the first time the number one in the number of customers of the European Union in buying online foodstuffs. According to figure 2, the share of Dutch customers that buy foodstuff online was with 27
percent in 2017 the highest of the European Union. The increase in buying foodstuff online in the Netherlands compared to a year earlier was 8 percent (cbs.nl, 2018a).

According to Nielsen ‘‘Consumers are no longer shopping entirely online or offline; rather, they’re taking a blended approach, using whatever channel best suits their needs’’ (The Nielsen Company 2015).

The increase in interest in shopping online, can be seen as an indirect effect of innovation. Innovation has simplified online shopping and made it more popular. But success in online shopping does not overcome easily for a supermarket. The competition between supermarkets for market share is huge, so competition plays an important role (The Nielsen Company 2015). Therefore, one of the foremost means of developing a competitive advantage for supermarkets is innovation (Anselmsson & Johansson 2010). This means that innovation is a necessary element in the supermarket business. According to Trott (2008), ‘‘innovation is the management of all the activities involved in the process of idea generation, technology development, manufacturing and marketing of a new or improved product, manufacturing process or equipment’’. This definition describes that innovation is a complex process and involves a lot of activities.
Innovation can provide an edge in creating value for the consumer, it captures consumer interest and attention, and so brings in new customers or fulfil their needs and thus improves loyalty of existing ones (The Nielsen Company 2013). Innovation in supermarkets is a continuous process which is driven by consumers and the supermarket business.

By innovation in a company, customer and user are involved. This interaction creates innovation opportunities in the business field. This can be seen as the push and pull model. Where the company can be considered as the push and the customer as the pull.

1.1 Clarification of technological-push
Technological push: For this innovation the stimulus is coming from internal or external research. In this internal or external research, new know-how is obtained with the purpose of making commercial use of it. The impulse comes from a push of a technical possibility. Which means it does not matter whether a certain demand already exists or not (Brem & Voigt 2009).

![Technology push model](source: rothwell 1994, p. 8)

Figure 3: Technology push model

To give the definition of technology push more substantiation and clarification, figure 3 helps. The starting stage is basic science. A fundamental belief in the literature is “more research and development in, equalled more innovation out”. Emerging technology or the combinations of already existing technologies for innovative products is the driving force behind this innovation process. The technological push innovation process is devoted to basic research, this means that with basic research ideas and opportunities are discovered for realizing the advantages for the final customer. The next phase in this process is the stage of design and engineering. The following phase is “manufacturing”, the manufacturing process will be analysed at various points. The most efficient manufacturing process will be chosen. The last two phases are “marketing” and “sales”, where the intention is to offer the product to the market and reach the target group of customers.
So the main point of the technology-push innovation process is that it is based on the assumption that a company recognizes there is a need before the market comes up with this need. And therefore the company will create a product or service and offers it to the customers (Popov 2018).

1.2 Clarification of market-pull innovation
In market-pull innovation the innovations’ source is a currently inadequate satisfaction of customer needs, which results in new demands. The demands can be in the form of market demands, government or environmental requirements or social needs (Uffelen et. al. 2007).

In the market-pull innovation the role of the market place and market research is important. Due to the increased competition, the customers and their needs have become very important. As a consequence, the company has directed her research and development investments towards those needs.

![Figure 4: Market pull model](image)

*Source: Rothwell, 1994, p. 9*

These needs are the starting point of the market pull model, see figure 4. The approach of the market-pull innovation is trying to acquire as much information about the market and the customers. By market-pull innovation the introducing of new products or services depends very much on differentiation of the needs and attributes of customers. This means that the innovation process starts with the identification of market research, which can be seen as the first stage in figure 4.

This all before conducting any research and development activities, because of preventing failure of new products and services. All these activities will help the company to reduce the uncertainty in the innovation process. It will help because it creates a better understanding of the market and the customers. Therefore, innovations have a higher chance of success. The next phase is “development”, where the information is processed to the research and development department.
The last two phases are ‘manufacturing’ and ‘sales’. In these stages the new products or services are made and offered to the market (Popov 2018).
2. Research design

2.1 Research objective
Taking this introduction into account, the purpose of this study is to gain insight into the perspective of both business and consumers and what are the critical push and pull factors that play a role in the innovation in the grocery retail market. Furthermore, this study aims to give an overview of the types and reasons to innovate. With the help of this overview and the reasons for innovation, the effect of innovation in the grocery retail market will be investigated. Thus, to get an insight in the push and pull factors and which of these push and pull factors lead to more innovation in the grocery retail market.

2.2 Materials and methods:
The methodology that is used in this paper is a literature study. To acquire this literature, the following search engines are used; Scopus, Google scholar and Web of science. Keywords that are used in these search engines are; Grocery retail market, push/pull reason, supermarket, customer/consumer, needs/trends. The used literature comes from various countries. A research institute that is used several times is the Nielsen company. “The Nielsen company is a global and data analytics company that provides the most complete and trusted view available of consumers and markets worldwide” (The Nielsen company, 2019). The innovations in the supermarkets are mostly based on implementations in the supermarkets of AH, Jumbo and Lidl.

2.3 Main question of this research paper
To get an answer on these topics, the following main research question is formulated:

- What are the critical push and pull factors of innovation in the grocery retail market?

2.4 Sub questions of this research paper
To support this main research question, the following sub questions are formulated:

- What are definitions and characteristics of innovation according the literature?
- What are (push) reasons for companies in the grocery retail market to innovate their business?
- What are the customer needs and trends (pull) on innovation in the grocery retail market?
- What is the effect of push and pull factors on innovation in the grocery retail market?
3. What are the definitions and characteristics of innovation according to the literature?

3.1 Several definitions of innovation according the literature
The terms innovation and innovativeness are used randomly in a lot of literature resources. To show the diversity of the different definitions of innovation, the following examples will demonstrate this. The first example is an early and straightforward definition: ‘‘Innovation is the generation, acceptance and implementation of new ideas, processes products or services’’ (Thompson, 1965) Similar, but more recent, definition of innovation was quoted by Wong et al., (2009): ‘‘Innovation can be defined as the effective application of processes and products new to the organization and designed to benefit it and its stakeholders’’. Another example is from Damanpour (1996), where newness is associated with change. This definition is a lot in detail about innovation, but much quoted: ‘‘Innovation is conceived as a means of changing an organization, either as a response to changes in the external environment or as a pre-emptive action to influence the environment. Hence, innovation is here broadly defined to encompass a range of types’’.

In this research paper the definition of de Jong and Brouwer (1999) is preferably used: ‘‘innovation is the development and successful implementation of a new or improved product, service, technology, work progress or market condition, aimed at gaining a competitive advantage’’

3.2 The general idea and goal of innovation
In the rapidly changing global environment, companies have to launch new innovation programs to enter emerging markets or attract new customers. To achieve this, an open mind-set is necessary to understand the culture of the company and consumer behaviour patterns (Rexhepi, G et al. 2013). The company has to invest in people who are investigating the emerging markets. The company has to find out what the strengths and weaknesses are in the market. Moreover, the company have to find out what the new customers need. The company need to know this before it can be successful in the goals of the innovation. Companies have to see the changing world market as an opportunity for those who innovate whereby a good and complete innovation can give the company advantage (Berger strategy consultants (2012).
The general idea of innovation is to speed up the processes and including it also in the production circles to reach the goals. The process that will be speed up is the process that is involved in the innovation. An example is a production process that works faster and becomes more efficient through innovation. The goal of innovation is most of the time: maximize the profit, (sustainable) economic growth and a more efficient processes. Innovation has a path that starts with idea generation and leads to benefits, which is presented in fig. 5 below (Kogabayev & Maziliauskas, 2017).

Figure 5: innovation path from idea generation to benefits.

3.3 Categorisation of innovation in business and consumer perspective
A categorisation of what is innovation and what is not is most of the time based on a certain degree of subjectivity (Traill and Grunert, 1997). Innovation can be approached from different perspectives. The perspectives to take into account are the consumer and the business perspective.

From a business perspective, an innovation is a product not previously produced by a company and introduced by that company into the market. Or it is the presentation by a company of an established product perhaps in a new form or into a new market, which is not previously explored by that company (Fuller 2016). The idea of innovation is that it adds value to the services or goods that the company provides. The change or renewal should seek to be innovative in the business. This can be innovative for the business today, or for future business, it helps the company continuously to improve their strengths (Cornell University, INSEAD and WIPO 2015).
From a business perspective innovation can give advantages to the company. To have profit of these advantages, a successful integration of innovation in the company is necessary. Therefore, the company has to make use of the following concepts (Cleverism, 2017):

- **Sharing the idea**: To create an innovation culture in the company, it is important that the company communicates the idea to the rest of the employees. An innovation will only be successful if the employees know what is expected of them. To achieve that the employees know what is expected of them, it is important that the management of the company shares the goals and objectives to their employees. If it is clear for the employees what is expected from them, it is easier for them to do their job in the best possible way.

- **Teamwork**: Cohesion and concerted efforts towards innovation will make the process work with less struggles. For achieving the cohesion and concerted effort, the management of the company and employees have to work well together. If they work well together, efficiency will increase so the company can get a boost in innovation. For optimising the collaboration between management of the company and the employees, it is required that the potential of each employee is known. With this required information the company can use the strengths and weaknesses of their personnel and can adjust it to each other, in the most efficient way.

The concepts ‘sharing the idea’ and ‘teamwork’ can create a culture of collaboration in the company. These concepts help to align the expectations and cooperation between employees and the management of the company. This culture of collaboration is oriented towards innovation and disposed to innovate (Govinnovators, 2015). A company with an organized culture towards innovation ensures that the company will benefit from their innovation. These benefits will lead to an overall development of the company. Moreover, can this development lead to a development in the field where the company operates. (Cornell University, INSEAD and WIPO 2015).

From a consumers’ perspective, a product is only innovative with the assumption that the consumer considers it to be innovative. For the consumer, the new product should consist of aspects of uniqueness with regard to its functionality, usefulness and features (Lee and O’Connor 2003). To achieve uniqueness, the company must really know the customer deeply. The challenge for employees of the company is to recognize the needs of the customer and understand these needs, so that they can bring them value (Carey et al. 2013).
3.4 Innovation and how its emerges
Another way to make a division in innovation is to have a look at how innovations emerge. A good innovation can start with the analysis of how an innovation emerges and how this could lead to new opportunities. This can also work the other way around, so how new opportunities for the company could lead to more innovation. Most innovations result from a conscious, purposeful search to innovation incentives. Depending on the context, incentives will have different importance at different times. To make a distinction between these incentives, the following classification will be used (Drucker, 2002):

- Incentives can be existing within a company or industry
- Incentives can be existing outside a company

Some incentives can be subdivided into both of the classifications described above, because they have characteristics of both classifications. In order to keep it clear and to make a separation, the other classification is chosen. Four of such innovation incentives exist within a company or industry. These four incentives for innovation are namely (Drucker, 2002):

- unexpected occurrences
- incongruities
- process needs
- industry and market changes.

Three additional sources of incentives exist outside a company. These incentives exist in its social and intellectual environment, namely:

- demographic changes
- new knowledge
- changes in perception

These incentives have some overlap, although they differ in the terms of the nature of their risk, complexity and difficulty, but the potential for innovation may well lie in more than one area at the time. But together, these incentives form the great majority of all innovation opportunities. Moreover, it is important that innovators always analyse what the origin is of the innovation and which incentives play a role in the process.

3.5 Classification of innovation according to Schumpeter
Joseph Schumpeter argued that economic development is driven by innovation through a dynamic process in which new technologies replace the old, a process named ‘creative destruction’ (Uffelen et. Al., 2007). According to Schumpeter (1934), innovation can be considered as one of the following forms:
- Introduction of new products (product innovation)
- Introduction of new production methods (technological innovation)
- Development of new markets (market innovation)
- Acquisition of new sources of raw material (new resources)
- Implementation of new organizational structures (managerial innovation)

The process described above ‘creative destruction’, has according to Schumpeterian a ‘radical and ‘incremental’ view. The radical innovations create major disruptive changes. Incremental innovations just continuously promote the process of change. This approach is following Schumpeter’s view, but there are various other approaches to innovation. The following approaches are also often reflected in the literature.

3.6 Neoclassical approach of innovation
Neoclassical approach: In this approach is mainly the methodological individualism applied. ‘’Methodological individualism is the principle that subjective individual motivation explains social phenomena’” (Heath & Edward, 2015). Three central assumptions are expressed (Weintraub, 2007):
- People have rational preferences between outcomes. This can be identified and associated with values.
- Individuals want to maximize utility and companies want to maximize profits.
- People operate independently on full and relevant information.

According to this approach: innovation can either be an aspect of business strategy or be a part of investment decisions. If the company decides to do an investment, then will this often lead to more capacity for product development or improve efficiency (Bianchi & Henrekson, 2005).

3.7 Evolutionary approach of innovation
Evolutionary approach: In this approach is it important to pay sufficient attention to the processes that encourage companies to create diversity. The evolutionary approach recognizes that the search for new market propositions is inherently uncertain. This is both in terms of the complexity of the product itself and its commercial success. Moreover, it is thought that companies are limited in their search for new opportunities. Also seems an evolutionary approach very useful for providing additional insight into radical technological change. In this process knowledge and technology are developed through interaction between various actors.
and factors. The approach is capable of allowing surprises and considering technological path-dependencies (Uffelen et al., 2007, Rennings, 2000).

3.8 Systems innovation approach
Systems innovation approach: This approach helps by investigating the influence of external institutions on the innovative activities of firms and other actors. The system stands for all important economic, social, political, organizational and other factors that influence the development, diffusion, and use of innovations. It focused about the determinants of innovations, not about their consequences (Lundval, 1992, Nelson, 1993, Edquist, 2001).

3.9 Reactive or proactive approach of innovation
Reactive or proactive approach: This approach includes rational organization perspective, division of labour, bureaucratic theory and contingency theory. This approach maintains the importance of competitive positioning. This means that innovation on the one hand is useful to defend the existing competitive position, on the other hand to seek new competitive advantage. A company with a reactive approach, innovates in a company with the idea of preventing the market share from losing to an innovative competitor. A company with a proactive approach, has as target to gain a strategic market position relative to its competitors (Uffelen et, al., 2007). This is in accordance with the contingency theory, because it claims there is no best way to lead a company or to make decisions. The optimal course of action is dependent upon the internal and external situation. According to the approach, the external situation is most important. In particular, with regard tot the competitive positioning (Friedberg 1997).

3.10 Types of innovation
According to the approaches, perspectives and definition of innovation, it is a comprehensive and complicated concept. The OECD (Oslo manual) for measuring innovation defines the following four types of innovation (OECD 2005):
- Product innovation
- Process innovation
- Marketing innovation
- Organisational innovation
The next types of innovation are based on the intensity. The intensity indicates the degree of innovation that it brings.

- Incremental and Radical innovations (Competence enhancing and competence destroying innovation) (Uffelen et. Al., 2007 & Pannekoek et. Al., 2005)

The last category is based on how an innovation arises. So whether an innovation and its process more driven from the higher segments in a company or does it start already on low segments in a company.

- Bottom up and Top down innovations (Meyer & Thieme, 2010 & Cronin, M.J., 2014)

3.10.1 Product innovation
Product innovation is one of the first things that comes to mind, when people think of innovation. Product innovation can come in two different forms, different types of definitions of product innovation shows this. “Product innovations are significant improvements of current products, can be goods or services or development and commercialisation of new products” (Uffelen, et. Al., 2007). The first part of the definition describes that it is an improvement of the existing product. The second part of the definition describes the second point of product innovation, namely the development of a new product. It can also be a main motive for starting the innovation process. For example, the need to develop a new product, driven by the demands of the customer or following the strategy of the company to penetrate new markets. In other words, anything that is new to the business and its product field is established as innovation (White et al., 1988).

3.10.2 Process innovation
Process innovations are significant changes and improvements on current processes and the improvement and implementation of new processes (Pannekoek et. Al., 2005). Process innovation is a type of process development, which is the development of a companies manufacturing processes. A number of heterogeneous activities are involved by this process, such as introduction of equipment, changes in the production process and new management practices. Process innovation helps the company being competitive against competition. Process innovation gives the company advantages, such as cost efficiency, production speed and quality consistency. The innovation is also important for the increase in productivity (Jederström & Andersson, 2017).
3.10.3 Marketing innovation

"A marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing” (OECD and Eurostat, 2005). The goal of marketing innovation is a better respond to the needs of the customer, to improve the identification process and a profitable satisfaction of customer needs. Implementing new marketing methods is necessary to achieve this. With as aim that the company creates a closer relationship with the customer and brings them in a situation that they become promoters of the company. So they become loyal to the company and recommend it to their reference group. Marketing innovation is based on four instruments of marketing (product, price, place and promotion) and focussing on meeting the consumer needs. So, marketing innovation is the collective name which includes the use of marketing concepts, new marketing strategies and new marketing methods that have never been applied in the company before (Illic et al. 2014).

3.10.4 Organisational innovation

"Organisational innovation is the implementation of a new organisational method in the firm’s or network business practices, workplace organisation or external relations” (OECD and Eurostat, 2005). It refers to the creation or adoption of an idea or behaviour which is new to the organisation. The introduction of something new to the organisation can be for example a new idea, a new method or a new strategy adopted by an organisation (Hage 1999).

3.10.5 Incremental and radical innovations

To make a distinction between these two categories of innovation, the intensity of the innovation plays a role. This means that in the incremental innovation the intensity for implementing an innovation will be less than in a radical innovation. Incremental innovation means implying small improvements. Radical innovation means that it will have a radical impact on current structures (Uffelen et. Al, 2007). Incremental innovations refer to the continual process of improvement of already current produced techniques or products. This innovation can be important for both the company and the customer. Radical innovations refer to products and processes that result from advances in knowledge, which will have a radical impact on the products, processes, and organisation of the firm or even the entire industry (Pannekoek et. Al., 2005). In these radical innovations, there are competence enhancing innovations and competence destroying innovations. Competence enhancing innovations help companies to further extend their resources and capabilities, which is associated with little
environmental disturbance and reduction of market uncertainty. This market uncertainty concept represents the uncertainty of the validity of the market price that is based on the available knowledge (Slovik, 2011). Competence destroying innovations require new skills, knowledge and abilities, which are associated with high environmental disturbance and increased market uncertainty. This innovation is initiated by new market entrants or spin-off companies (Uffelen et. Al., 2007)

3.10.6 Bottom up and top down innovations

The following categorization of innovation is based on the source and the following order of the different stages of innovation development.

Bottom up innovations are initiated in the lower levels of the company by the purposeful behaviour of individuals. The purpose of the bottom up innovation is to cooperate closely with businesses and to create a better relationship with other companies or customers. The idea of this bottom up innovation is to create a more open space where business and culture can meet on everyday level. Thereafter, personnel can discuss everyday problems and identifying needs, innovation potential and possible research activities. The core of this innovation is to start the innovation at the lower levels of the company. This means that the idea is to create a ‘’bottom up’’ innovation instead of a ‘’top-down’’ innovation, based on customer needs and value creation chains. With this bottom up innovation you create a problem-driven structure, which means you investigate ‘’what a company really needs’’ and not organize a top-down innovation where the focus is on ‘’what a company should do’’ (Meyer & Thieme 2010).

The top down innovations are the other way around initiated, thus in the higher levels of the company by top managers or entrepreneurs (Pannekoek, 2004). The top down innovation analyses the innovation leadership role in these higher levels of the company. This approach suggest that the leaders of the organization make use of an integrated framework for innovation initiatives. For example, to use data as an argument to extract value from the innovation. The top down innovation helps the top managers or entrepreneurs align their innovation efforts with organizational goals and visions, with the help of innovation strategies (Cronin, M.J., (2014).
4. What are for companies in the grocery retail market (push) reasons to innovate their business?

The analysis of the reasons is performed by making use of the concepts of innovation. These concepts are described in chapter two of this paper. By analysing the reasons to innovate from a company perspective, a technological push is used. With this technology push is meant that research and development or a technology helps to innovate in the supermarket. The approach of the technology-push focuses on technical issues and problems, it triggers a search for scientific and technical knowledge both within the company and from external knowledge sources and it develops an innovative, technical solution to offer in the marketplace.

Innovators predict changes in the market and provide solutions before people even realize they need them. A company cannot meet the customers needs on a long term basis, unless you are willing to innovate. As a company you cannot stagnate, the urge of innovation has to be present in the company. If the company wants to hold its power in the market, it is important that it comes up with new ideas (INC 2018).

4.1 A list of push reasons to innovate their business
The grocery retail market is a sector where a lot of changes are going on. Companies have to react on these changes in a way that it will impact positively on the company. Innovation is a concept that companies can help to adapt the company in such a way that it brings benefits to the company (The Nielsen Company, 2013). Analysing the literature, these are the most common push reasons for supermarkets to innovate (Collette et al., 2015):

- To let the company grow
- Differentiate the company from competitors
- Enter emerging markets or attract new customers
- Corporate social responsibility
- New technologies
- Margin increase due to process optimisation
- Price reduction due to process optimisation
- Financial advantages
4.1.1 First push reason is to let the company grow

A first reason for companies to innovate is to let the company grow. To let a company grow, it is important that the innovation fits for the company. The following points are necessary for the innovation to affect the growth of the company (Tucker, 2002):

- Innovation must be approached as a discipline. This means that the company has to find a balance between creativity (coming up with ideas) and innovation (bringing value to the company). Even when innovation is practiced as a discipline it gives not the guarantee to get breakthroughs. But like all disciplines, you’ll get better if you practice. In the discipline part is it the thing to make people aware and show them that they can come up with good ideas. If these ideas fits with the goals of the business, can this lead to more growth in the company.

- Innovation must be approached comprehensively. Innovation can not confine to one department in the company. The innovation must become part of the DNA of the entire organization.

- Innovation must be customer oriented. The customer is the one who buys products and ensures that money comes in. The innovation must add value to the customer. Otherwise it will not be purchased with as a consequence that the company will not grow.

For a successful innovation it is important that the innovation becomes a part of the business strategy. This also applies to the grocery retail market. For letting the company grow, all the supermarkets are looking for more market share. The way to achieve this and which innovations will help by this, differs between supermarkets. Innovation creates value, it will also lead to increased competitiveness and new opportunities. An example of the growth of a company is Jumbo with the acquisition of La Place and other supermarkets. Jumbo uses La Place products in their existing supermarkets and offers in this way new products to the consumer (Distrifood.nl, 2018).

4.1.2 Second push reason is to differentiate your company from competitors

In today’s turbulent environment, companies have to survive and be different than competitors. Innovation is a key source of competitive advantage that determines the economic success of the organisation. It is necessary to put every effort into introducing an innovative approach in the company. Innovation can help the company to be unique, relative to the competitors. A good implementation of innovation will help the company. Therefore,
the company has to create an innovation strategy that is better than his competitors (Cohen, 2013).

The grocery retail market is a market with a lot of competitors. Every supermarket aims a greater market share than its competitor. The goal is to achieve this and differentiate the company from the competitors. As a result, achieving growth in the market share. The following concepts are important in this field:

- First of all is it important that the supermarket has its own business’ definition clear. This business definition helps the supermarkets making the choice which the strategic direction they want to follow. It helps the supermarket to choose the right direction on the market and fulfil the needs of the customer on the best possible way. This business definition should describe what is most important for the business activities and define important keywords. It should provide the management team with guidelines for the development of the business operation (Nilsson et al., 2004).

- Another important thing is that the supermarket has to be clear which strategic direction they choose. This means that the supermarket must choose on which customers they focus on. The supermarket must be aware of how they wish the customer will see them. The supermarkets have to do this in the best possible way to fulfil the customer’s expectations even the expectations on the market (Nilsson et al., 2004).

4.1.2.1 The role of positioning to differentiate it from competitors
To do this in the best possible way and to meet the expectations of the customers, segmentation and positioning are important concepts. The position of the supermarket is the profile that the supermarket strives to attain on a market and in the mind of the customer. With the chosen positioning strategy, the supermarket can distinguish themselves from a competitor. The position of the supermarket must be evident and take a special place in the customer’s mind. The position indicates benefits of the supermarket to the customer (Dibb et al, 2001). The supermarket should focus at the segments of the market where they can offer the most. Also should the supermarket be aware that they position themselves and their products in a way that consumers will recognize the benefits (Kotler et al, 2005).
4.1.2.2 The role of segmentation to differentiate it from competitors

Segmentation in the grocery retail market means breaking the market or customers into smaller parts, sub-groups. This segment consists of customers which respond similar to market stimuli. With a good segmentation process, the supermarket is abler to focus on the customer needs. This can help the supermarket to distinguish itself from other supermarkets. This could also lead to development and implementation of a program which meets the unique needs of this segment. An example of this is a marketing program that is allocated in the most effective and efficient way. It helps the supermarket to get a strong position on one part of the market. The supermarket can then better recognize the needs of the customers and fulfil these in the best possible way (Nilsson et al., 2004).

Supermarkets think different about these concepts and as a result, they differ from each other. To illustrate this, the Dutch grocery retail market is a good example. In the Dutch grocery retail market, the competition is fierce for the actual market share. This way, supermarkets are forced to choose a strategy that differs them from their competitors.

4.1.2.3 Examples of this push reason in the Dutch grocery retail market

Albert Heijn is the first supermarket that illustrates this push reason. Albert Heijn is market leader in the market share of the Dutch grocery retail market. It is a full service supermarket and describes itself as a supermarket where both affordable everyday products and more exclusive products can be found. Albert Heijn aspires to offer exclusive products, which normally can be found in speciality stores only. Therefore, Albert Heijn developed an exclusive product line (AH excellent), which includes exclusive products such as real Belgian chocolate or biscuits that are made with traditional ingredients. (Marketings.net 2018). An innovation that shows that Albert Heijn wants to give something more to the consumer, is the vegan cooling shelf. This is a place where existing as well as new vegetable products come together on a shelf to make vegan cooking easier. Albert Heijn offers this to the consumers since vegan products are gaining more and more popularity (Ah.nl, 2018).

Jumbo is the supermarket with the everyday low price-formula and aspires to exceed customer expectations. This supermarket has developed seven certainties for the customer to guarantee that they will have a good shopping experience. A concept at which Jumbo differs from their competitors is that the supermarket guarantees that it offers the lowest price for A-brands. Jumbo aspires to exceed expectations of the customer, hereby offering the lowest
price is an example of this goal (Jumbo.com, 2017). A push innovation which helps Jumbo to differentiate from their competitors is the innovation lab. The jumbo innovation lab asks suppliers and product developers to share good ideas for innovative products. Ultimately, Jumbo will choose those ideas that it considers the best for now and for the future. Thereafter will in collaboration with the supplier the ideas be further developed into new innovative products. Examples of these innovative products are the kale burger, pumpkin- and carrot balls and the breakfast muffins baking mix in a weck jar (Emerce.nl, 2017).

Lidl is a discount supermarket with an assortment that is built from its own quality brands. The Lidl strives for it to offer products from the highest quality for the lowest price. The Lidl offers the customers groceries, but in addition to that the Lidl also offers non-food products for example fashion and cooking stuff. The Lidl want to surprise its customers with a wide variety of products, but still from high quality and affordable (Lidl.nl, 2016). An example that shows this is the award that Lidl won several times in a row for the best supermarket in fruit and vegetables. Lidl does this by working with the same group of farmers and growers for years. Together they are constantly working to further improve the quality of fruit and vegetables, with the aim of delivering only the best fruit and vegetables to the consumer (Lidl.nl, 2018).

4.1.3 Third push reason is to enter emerging markets and attract new customers
The strategy for enter emerging markets or attract new customers is different between supermarkets. A model that can help to described and explain these differences is the Ansoff’s matrix (1957). The Ansoff’s matrix can help business comprehend their development as well as their strategic opportunities. If the supermarket understands these concepts, there are more opportunities to higher levels of growth. The Ansoff’s matrix consist of existing markets and new markets which the supermarkets aim to sell their products. The other part consists of existing and new products or services which will be sold to the customer, as shown in figure 3 below.
The supermarkets have to choose which strategy it will be follow. For the supermarkets there are different opportunities and risks for implementing these concepts. This means that the supermarkets have to be clear which strategy it will be apply and how to implement it (Abeck, 2017).

4.1.3.1 The four strategies of the Ansoff’s matrix to use for enter emerging markets and attract new customers

A first strategy that supermarkets can choose is market penetration. This strategy is implemented by selling existing products in existing markets. This strategy will be used by supermarkets in a growing market or for a market where there is sufficient market. In a market where is sufficient market and the supermarket maintaining the market share, the result will be growth.

The second strategy is the strategy of market development. With this strategy, supermarkets target new markets or new segments of the market, through the sale of existing products to a new group of customers. An option that supermarkets can choose is to sell in new geographical areas. These geographical areas can be in different regions or countries.

Third strategy that supermarkets can implement is product development. This strategy is about the development of new products to sell in existing markets. These new products will be produced through another company then the supermarket. The supermarket sells these new products because it can be efficient for supermarkets who would wish to expand on its range of products.
The fourth strategy is the diversification strategy. This strategy is about developing new products in new markets. With this strategy the supermarket chooses to integrate in new markets with new products. This is the riskiest strategy because it is not knowing how the consumer would respond on the product and the supermarket is also not known with the market. The matrix of Ansoff recommends to use this strategy as a complement to the existing core business.

4.1.3.2 Examples of implementing these strategies in the grocery retail market
Examples of how supermarkets will use strategies of the Ansoff’s matrix in the grocery retail market will be explained in this section. A first example of a strategy that is used is the market development. Some supermarkets choose to open new supermarkets on strategic locations. Examples of these strategic locations are train stations or other locations where people are travelling. AH to go or Jumbo city are examples of these supermarkets. These supermarkets offer convenience for the customer, these stores stand for easy, tasty and healthy. The range of products is less than in a normal supermarket, but the products that are offered are characterized by quality, convenience and freshness. These supermarkets are a solution for customers who want to buy fast, but also want fresh and quality products.

Another example of how supermarkets can attract new customers is to offer more and new products to the target group. Supermarkets can aim to offer a wide range of products to their customers. With an extensive range of products, the supermarket can reach a large number of customers. So, the strategy of a supermarket can be to have a varied range of products in the supermarket in order to have the best chance of engaging new customers.

4.1.4 Fourth push reason is being corporate social responsibility (CSR)
Nowadays, CSR is one of the foundations of business competencies. Being a socially responsible company is much more important than ever before. The society’s expectations have changed and the expectations of partners, employees and customers have altered as well. Therefore, companies have to do more to tackle the issues such as: environmental pollution and climate change. This is because these issues are now far more complex, global and fast-changing than ever before. Companies should be involved in this, otherwise they will receive negative response from the public. For being competitive in the market, it is important that the company conduct sustainable business practice. Thus, innovation is not only stimulated by
consumer demands, new technologies, but also by a considerable global concern for CSR issues. CSR can be seen as a push reason and as starting point for proactive innovation. A lot of companies want to improve their position in the industry. These companies will be the ones in the future that see the challenge of being CSR as an opportunity for innovation, rather than risks to be alleviated (Rexhepi, G et al. 2013).

In the grocery retail market, CSR became more and more important. A CSR program that fits with the expectations of the customer, can add value to the supermarket. To achieve this the supermarket has to integrate a CSR program that fits with the strategy of the supermarket. This add value creates benefits to the supermarket. Examples of these benefits are that the reputation will increase and that the customer is more loyal to the supermarket (Filho et al., 2010).

A CSR program in a supermarket influences a lot of different concepts in the grocery retail market. With a good CSR program, a supermarket can differ from his competitors. The CSR strategy of a supermarket can create competitive advantages if the supermarket used the program properly. A CSR program can be seen as a source of competitive advantage that a supermarket should employ in the quest for being better than the competitor and receiving better results (Filho et al., 2010). To achieve this competitive advantage, the implementation of a strategy is necessary that adds value to the supermarket unlike another supermarket. This competitive advantage can be achieved through internal resources in the company. However, it is important that the CSR program of the supermarket really fits with the customer and society (Husted & Allen, 2001).

4.1.4.1 Several themes of CSR programs that can be seen at supermarkets in the grocery retail market

In the grocery retail market, a lot of different themes are included in the CSR programs of the supermarkets. The themes that mentioned a lot in the CSR program of supermarkets are (Souza-Monteiro, D. & Hooker, N., 2017):

- animal welfare
- environment
- labour
- fair trade and community
In the grocery retail market these themes are different defined in the CSR program of a supermarket. The theme animal welfare can be seen back in the label on the meat. More and more supermarkets strive to offer meat with a better life label to the customer. Differences between supermarkets on this theme can be seen on the fact that one supermarket strives to offer only meat with a better life label to the customer. Whereas other supermarkets choose to let the customer make the choice between meat with or without label (Souza-Monteiro, D. & Hooker, N., 2017).

Environment is a theme that is included in all CSR programs. The theme environment is a wide theme with a lot of different aspects. An example of how the theme environment is applied in a CSR program is that the supermarket has focus on being more sustainable. Lidl invest continuous in making supermarket location more sustainable. For example, they invest in the installation of solar panels on the roof of supermarkets (Lidl.nl, 2016). The installation of LED-lighting will also help the supermarket being more sustainable and try to get the highest possible energy label. Making supermarkets free of natural gas is also a way of being more sustainable.

Another theme that plays a role in a CSR program of a supermarket is the theme labour. Nowadays, supermarkets are more and more focused on the well being of the employees. These are topics that are described in the CSR program. For examples supermarkets introduce a health check for the employees. This health check supports the supermarkets to let the employees have to check themselves on their health. The health of an employee is important for the supermarket, because employees who are healthy enjoy their work more. Another important topic is that employees must feel respected. The employees want more out of a job than just receiving their salary, they want to feel like they are learning, growing and being important for the supermarket. Supermarkets introduce programs for their employees where they can develop themselves and give them growth opportunities. These programs take place in an environment where employees can learn from each other, thereby helping the supermarket to grow and being able to help the customers in a better way (aholddelhaize.com, 2017).

The theme community has become more and more important in the daily life. Customers are becoming increasingly more sustainable and they also expect this behaviour from the supermarkets. With concepts that are described in the theme community they show this to the
customer. A way to do this is for example to reduce food waste. One way to do this is to better coordinate purchasing and sales. If this succeeds, less food will remain at the end of the day. Another way to reduce food waste is to make use of discount labels for products that are almost no longer good because they are almost out of date. Furthermore, supermarkets donate leftovers to food banks. By donating food that is no longer suitable for sale but still can be used for consumption, the supermarket helps the community in combating poverty. Another way in which supermarkets show that they are involved in the community is for example that Jumbo offers people with a distance from the labour market opportunities to work for them. To realize this Jumbo works with a temporary employment agency. If the collaboration is pleasant for both parties, then the people have the opportunity to work at Jumbo for a long time on the basis of a secondment agreement (Jumbo.com, 2017).

Fair trade is also a theme that has become more important for the customer. Supermarkets have to anticipate on this and being aware of this. Supermarkets anticipate on this with the introducing of private label products that competing with the A-brands in the store. These private label products can differentiate from A-brands on the composition of the product. Also is it possible that they can differ in a way that the private label products can use CSR claims (fair trade label). This only with the assumption they are able to claim this (Salnikova et al., 2015).

4.1.5 Fifth push reason is to make use of innovation by introducing new technologies
The reason to make use of innovations in the company is the changing world in technology. There is a constant development in technologies. Due to this constant development in technologies, new technologies will be created and used. An open attitude of the company to these technologies is necessary for the implementation. Implementation of new technologies can be seen as a push reason for innovation. The new technologies give the company new opportunities for innovation. And these innovations can help the company to grow and to be competitive.

The most important reasons are appointed above. In the text that follows, the types of technologies will be discussed further, also will be discussed how and which technologies influence innovations in the grocery retail market.
According to Hopping (2000) the history of retail is also a history of the role of technology in society. Technology has played a role as the primary enabler of change in retailing. Retailers emphasize on implementing new technologies to save costs and to make shopping more attractive to consumers. The use of these new technologies can influence the consumer shopping experience. With these technologies the consumer is exposed to an increasing variety of products. An example that showed this is the technology that comes up with related products because it is linked to products that the consumer has previously purchased. Consumers will not only see the products that they normally buy, but also options that might also be interesting. These new retail technologies have as consequence that the customer has learn to use these technologies. It is important that the new technologies and innovations can be understood for the consumer. If this is the case, it will be able to deliver more consumer convenience (Renko & Druzijanic 2014). Examples will be described in the following chapter.

4.1.5.1 Classification of technologies

All supermarkets implement new technologies into their company, with as aim to get a better insight of the benefits and limitations of the technologies. In the text that follows will the technology innovations discussed and evaluated on benefits and limitations.

According to the technical characteristics, the technologies can be classified in four main categories (Pantano & Viassone (2014) & (Renko and Druzijanic 2014):

- Touch screen displays/in-store totems
- Systems for mobiles (mobile applications)
- Hybrid systems (RFID)
- Interactive information and loyalty programs (e-tailing)

The first category is focused on technologies belonging to the point of sale. A good example of this is the self-service technologies, for example the automatic cash desks. Another examples of this technology is the self-service checkouts. This is based on automatic and interactive interfaces that consumers can exploit without the help of an employee. With the aim of creating benefits in the form of reducing costs of service without losing the quality of service, efficiency will increase.

The second category includes systems for consumers own mobile phones. These technologies are based on interactive contents and services for enriching consumers’ in-store shopping
experience. These technologies do this by offering customized and detailed information to the customer. The technologies are able to search automatically for items that match the consumer’s wish list. Another strength of mobile applications is that give the consumer the possibility to virtually compare the chosen product with other products.

The third category is based on the retailers’ own technologies. It is most of the time based on RFID (radio frequency identification) systems. This RFID system is able to read the bar code of an item that is chosen by the consumer and provides more details of the product to the consumer. The smart trolley is an example of using this technique. It gives the consumer the ability to scan products and to register the price on the screen of the trolley. The smart trolley also provides information of the total purchases and extra information about individual items. This system can help with recognizing a consumer’s profile and match this profile with available purchases, to recommend products.

The last category is based on how customer receive information in the easiest way and how the supermarkets can interact on that. For example, there are electronic shelf labels in the supermarkets, these labels show the up-to date price to customer. Because these shelf labels are electronic it is easy for the supermarkets to update quickly the information about prices and price reductions in case products are for sale. The last thing that is important in this concept are the web portals. Web portals and e-tailing nowadays are really important in giving interactive information to the customer. They are also able to use the information they receive to create customer loyalty programs.

4.1.6 Latest push reasons are to innovate for cost savings and financial advantages
This part consists of the last three push reasons because they interact each other. The company has to develop savings with innovative thinking. On the other hand, innovative thinking is a source of cost reduction as well. This means that these two concepts go hand in hand and are in sync with each other. Innovation is able to save cost per year for the company. Saving costs results that the total costs are lower, which gives the company more profit if the turnover will be the same or higher. Innovation programs can accomplish this for the company. Thus, the company must be aware of this and should investing more in these innovation programs. Participating in the innovation program is important to motivate the personnel. Innovation and especially process innovation can help a company to makes process more efficiency. By making these processes more efficiency most of the time the company
saves some money. This means that production costs for the service or the product will reduce. This means that if turnover remains the same, the margin will rise. An increase in margin and a price reduction are financial advantages for the company (Laton, M. Z. Et al. 2015)
5. What are the customer needs and trends (pull) on innovation in the grocery retail market?

As described in chapter two, innovation in the grocery retail market can be caused by push reasons. Well in this section, the other side of the push-pull model will be highlighted. This chapter will describe the pull reasons on innovation in the grocery retail market. These needs and trends of the customer shows us that it also influences innovation in the grocery retail market.

5.1 First trend is having more small families with decreasing family size
For supermarkets is it important to be aware of the needs and trends of the customer. A first trend that initiated innovation in the supermarket is the fact that there are more small families with decreasing family size (Amaral, J.G. 2013).

- Nowadays the society become more and more individualistic. More households are becoming single-person families. As consequence the efficient use of time is more important and the consumer does his shopping in a different way. People are looking for easier and faster shopping experience (ABN Amro bank 2017).

Innovations that came up with this trend are (Amaral, J.G. 2013):
- New development of products of smaller sizes
- The trend refutes the focus to ready solutions. Examples are products that are ready to cook or ready for take away.
- Queuing is a big issue, as a result you see more and more innovations such as self scanning, self check-out, pick-up points, automatic payment systems.

5.2 Second trend is being more aware of the environment and socially concerned
Another trend is that the consumer is more aware of the environment and socially concerned (Amaral, J.G. 2013).

- Consumers want to see that supermarkets are aware of the importance of the environment. They want supermarkets to behave in a way that is good for the environment but also for the community.
- The consumer is participating in a way that is more and more environmentally friendly. They are looking for responsible companies, brands and products. Overall, they are more interested in fairness and fair deals.
- In the socially concerned environment, consumers consider the local aspect increasingly important. Consumers are more interested in healthier and fresher assortment. The demand for local and organic products is therefore increasing (ABN Amro bank, 2017).

5.3 Third trend is that consumers are more educated, connected and informed
Another trend that emerges among consumers is that the consumer is nowadays more educated, connected and informed (Amaral, J.G. 2013).
- The consumer has a lot of more opportunities to obtain information. The consumer has an increasingly demand for information, because the availability is easier and more transparency.
- Furthermore, the intelligent buying process is increasingly playing a role. Also is having an opinion and receiving feedback a more important concept in today’s supermarket world, the need to have a voice and to hear other opinions.

5.4 The need for experience, expertise and efficiency
The consumer has undergone a clear development in recent years in what is seen as the primary functions of a physical supermarket. Nowadays there is a need for experience, efficiency and expertise (ABN Amro bank 2018).

Shopping experience is important for a physical supermarket. The consumer must see the added value of going to a physical supermarket instead of doing the groceries online. The consumer expects more experiences in physical supermarkets.

Expertise is also more and more important for the consumer. If the consumer is in a supermarket, the expectation is that the employees can help them briefly if the consumer has some questions.

Efficiency is a concept that is becoming increasingly important by consumers. Nowadays people are busier in daily life, therefore doing efficient groceries is becoming increasingly important to save time. This is reflected in the pattern that more and more consumers order groceries online.
5.5 The need for having more convenience
The consumer is looking for more convenience in the supermarkets, the three needs of experience, expertise and efficiency illustrated this. Examples of how the grocery retail market responds to this consumer demand are (The Nielsen Company, 2013) & (ABN Amro bank, 2018):

- The emergence of companies such as Picnic and Hellofresh
- The emergence of more city shop supermarkets such as Jumbo city or AH to go. These supermarkets have most of the time wider and more flexible opening hours than regular supermarkets.
- The emergence of bigger supermarkets such as AH XL. These supermarkets have most of the time more flexible opening hours than regular supermarkets. Also offers these supermarkets seating and dining facilities to the consumer. The addition of food-service elements like Jumbo does with La Place can also be seen often in bigger supermarkets.
6. What is the effect of push and pull factors on innovation in the grocery retail market?

To answer this question, the push and pull reasons of chapter four and five will be used. The table gives an overview of the push and pull reasons and shows which type of innovation it influences.

<table>
<thead>
<tr>
<th>Types of innovation</th>
<th>Product</th>
<th>Process</th>
<th>Marketing</th>
<th>Organisational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Push reasons</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Let the company grow</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Differentiate the company from competitors</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enter emerging market or attract new customers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate social responsibility</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Margin increase and price reduction due to process optimisation and Financial advantages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New technologies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Types of innovation</th>
<th>Product</th>
<th>Process</th>
<th>Marketing</th>
<th>Organisational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pull reasons</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Add value to the customer (customer oriented, club card)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part of the DNA of the entire organization (acquisition of other companies)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More small families with decreasing family size</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ready to eat products -Products in smaller sizes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self check outs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More aware of the environment and socially concerned</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local and organic products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Must be clear which strategy will apply and how implement it</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumer is more educated, connected and informed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Need for experience, expertise and efficiency</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Need for convenience</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Feedback -Making use of big data</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Match and more strategy -Listen to the wishes of the consumer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opening bigger supermarkets</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Overview of what type of innovations arise from push and pull reasons

This table shows the most important relations between the push/pull reasons and the types of innovation. Therefore, not all of the cells in the table are filled but only the most relevant relationships for this research paper are included. Another reason why not all cells are filled is because it is less relevant to include all smaller innovations and relationships because they are
not widely used in the grocery retail market. This is also less relevant for obtaining the important relationships and therefore the answer to this research question.

6.1 Push reasons and the effect on innovation
Let the company grow: by this push reason the innovation is most marketing and organisational oriented.

- By the marketing innovation, it is important that it must be customer oriented. It must add value to the customer, an example of this is a loyalty card for the customer. The AH bonus card is a good example of it. With this card the supermarket gets a lot of data and can improve customer relationship. The supermarket rewards the customer with points or with personal promotions (Ah.nl, 2019).

- For the organisational innovation, it is important that it must become part of the DNA of the entire organization. Let this push reason have an effect on the supermarket it is necessary that the innovation become a part of the business strategy. An example of how the supermarket is searching for opportunities to let them grow is acquisition of other companies. This is showed by the acquisition of La Place by Jumbo (Distrifood.nl, 2018).

Differentiate the company from competitors: By this push reason the innovation is most oriented on product innovation.

- Innovation can help the supermarket being different than the competitor. Product innovation can be useful by this push reason. The development of a new product or improvements on a current product can help the supermarket being different than his competitors. An example that shows this well is the vegan cooling shelf (Ah.nl, 2018).

Enter emerging markets and attract new customers: by this push reason the innovation is most marketing and organisational oriented

- With the use of the Ansoff matrix a supermarket can choose for four different strategies. For implement one of the strategies it must be clear which one to choose and whether it fits with the strategy of the supermarket. This is therefore mainly due to organisational innovation. For enter new markets and attract new customers, the supermarkets often use marketing innovation. Important concepts of this marketing innovation are brand positioning and brand match. If this matches well with the customer, the chosen strategy will be more successful.
Corporate social responsibility: This push reason is most linked to product innovation.

- This push reason can help the supermarket to be different than his competitor. To ensure that you are different from the competition it is important that the CSR program matches with the target group. By a good matching program, the supermarket can create benefits such as the customers becoming more loyal to the supermarket and the reputation of the supermarket will increase (Filho et al., 2010).

- The product innovation that is caused by this push reason is that supermarkets introduce private label products that compete with A-brands. The supermarket can differentiate on the composition of the product compared to the A-brand. It is also possible to give this product a CSR claim (fair trade label), with the assumption that the product is suitable for this claim (Salnikova et al., 2015).

- Another way to make the supermarket more sustainable is to search for innovations to become more sustainable. An example is the installation of solar panels on the roof of a supermarket. Another example is the use of more LED-lighting instead of light bulbs.

Margin increase due to process optimisation, price reduction due to process optimisation and financial advantages: These push reasons interact with each other and they all ensures the same effect.

- The push reasons are deriving from the thought of cost reduction. Innovations can help supermarkets to achieve a reduction in costs. Because of these savings, the company get more value if the turnover will be the same or higher (Laton, M. Z. Et al. 2015).

- The innovations are mainly focused on making the process more efficient. An example of this is the process of paying at a supermarket visit. Nowadays this process is more efficient, which is reflected in supermarkets in the form of self-checkout systems or self-scans. Through this innovation there is less personnel needed therefore increasing the efficiency and reducing the costs.

New technologies: This is a push reason that has the most influences on process innovation (Pantano & Viassone, 2014) & (Renko and Druzijanic, 2014):

- New technologies can help supermarkets to make processes more efficient. It is important that a supermarket has an open attitude to these technologies for implementing it.
Examples of technologies that help supermarkets to make processes more efficient are: self-service technologies and RFID.

- Self-service technologies make the process of checkout more efficient. It is based on an automatic and interactive interface that consumers can exploit without the help of an employee.
- RFID makes the process of obtaining information more efficient. This technology is able to read the barcode of a product and to provide more details to the customer.

### 6.2 Pull reasons and the effect on innovation:

More small families with decreasing family size: This first pull reason has the biggest effect on product and process innovation (Amaral, J.G. 2013).

- Society become more and more individualistic, there is a decrease in family size. The efficient use of time is more important and therefore the consumer does his groceries in a different way.
  - Product innovations that results from this are products of a smaller size (for example, single ready-made meals)
  - A process innovation that came up with this is the self checkouts. Time can be used more efficient due to self-checkouts.

More aware of the environment and socially concerned: consumers are participating in a way that is more and more environmentally friendly. Also the local aspect become more important for the consumer. The consumer wants to see that the supermarkets are aware of this and are committed to this.

- This pull reason has mostly effect on product innovation. Product innovations that result from this have local and organic characteristics (ABN Amro bank, 2017).

Consumer is more educated, connected and informed: for the consumer is easier to obtain information.

- This pull reason has the most effect on the marketing innovation. The consumer is more connected and informed, therefore it is easier for the supermarket to respond to this. It is easier for the supermarket to reach the customer because there is not only a lot more data available for the customer but also for the supermarket. The supermarket
is learning more and more about consumers, partly through feedback (Distrifood.nl, 2018a).

Need for experience, expertise, efficiency: due to changing needs, consumers have different expectations of the supermarkets.

- Due these changing needs, the supermarket has to react on this. A way to do this is with marketing innovation. A supermarket may want to approach other customers. The supermarkets want to fulfil the needs of the customer as well as possible. The supermarkets have to focus of an increase of experience, expertise and efficiency.

Need for more convenience: to fulfil this need of the customer it will affect the organisational innovation.

- Convenience is nowadays more important for the consumer. A supermarket has to react on this, otherwise it will lose customers. An organisational innovation can help to achieve this. The supermarket must be open to new products, processes and other things to be able to offer the consumer more convenience. An example of how supermarkets give consumers more convenience is the opening of larger supermarkets and supermarkets in strategic places (Ah.nl, 2019a).
Conclusion

Before giving an answer on the main question of this paper, shortly the sub-questions will be answered.

The first sub-question is ‘’What are definitions and characteristics of innovation according the literature?’’

- There are a lot of different definitions used for the term innovation. An agreement that all of these definitions have is that it provides something ‘’new’’ to the company. This ‘’new thing’’ could be an idea, product, process and will lead to an implementation and change in a company. Furthermore, there are four different forms of innovation. These forms of innovation are product innovation, process innovation, marketing innovation and organisational innovation. The idea of innovation is that it can be seen as a tool for a company to enter emerging markets, to attract new customers or to be more competitive against competitors. The goal is that this helps the company by maximizing profit, to grow further and to have more efficient processes.

The second sub-question is ‘’What are for companies in the grocery retail market (push) reasons to innovate their business?’’

- According to the literature the following reasons are most common for supermarkets to innovate: Let the supermarket grow further, being different than competitors, enter emerging markets or attract new customers, being corporate social responsible, cost saving and financial advantages and the introduction of new technologies.

The third sub-question is ‘’What are the customer needs and trends (pull) on innovation in the grocery market?’’

- A first trend that is visible by customers is the trend of more small families with decreasing family size.
- Another trend is the customer being more aware of the environment and being more socially concerned.
- A last trend that is visible in the literature is that the consumer is more educated, connected and informed.
- The needs of customers are the need for experience, expertise and efficiency
- Another need that the customer has is that they are looking for more convenience.

The last sub-question is ‘’What is the effect of push and pull factors on innovation in the grocery retail market?’’

- According to table1, push reasons have mostly effect on all the four types of innovation. Innovations caused by push reasons are for example:
- Pull reasons have the most effect on product innovation and marketing innovation. Relevant innovation concepts that are integrated through these pull reasons are products with special wishes, for example organic or ready to eat products. For the marketing innovation concepts, it is important that the strategy match with the consumers. Other examples are listening to feedback of the consumer and making use of data.

With the help of answering the sub questions, the main question will now be answered. The main question is: ‘What are the critical push and pull factors of innovation in the grocery retail market?’

- According to this research the critical push factors are especially being different than competitor, let the company grow and new technologies. These push reasons show that they influence the four types of innovation together. The critical pull reasons according this paper are the emergence of more small families with decreasing family size and that the consumer is more educated, connected and informed. As a result, more needs arise from the consumer. These critical pull reasons have the most effect on product and marketing innovation.
Discussion

Limitations and future research
The findings of this thesis should be read within its limitations. The first limitation is that this thesis is only based on literature research. In this literature research it was especially not easy to properly identify the pull reasons. This may have led to not including all pull reasons and which effect it has on innovation. Recommendation for future research will be to conduct a survey among the consumers in order to get a more complete overview of the pull reasons.

A second limitation is that the study findings are rather global. The push and pull reasons are only emerged from the literature research. A recommendation that follows is to delineate the research more to certain supermarkets instead of the entire grocery retail market. The findings will provide a more concrete effect on how it influences innovation and how this applies to a specific supermarket. For example the research paper of Chhean, S. (2015) shows this well, this research paper shows the innovations of four large supermarkets in the UK.

A third limitation is that table 1 does not provide a complete overview of the type of innovations that arise from push and pull reasons as it could be. This is especially needed to see which small innovations and which types of innovations arise from the push/pull reasons. Also could it help to explore more relationships between the push/pull reasons and the innovations. To get an overview of these innovations and their relationships, further research is needed for it. Some of these innovations can be found in research papers, while others can be obtained from interviews at supermarkets. These interviews make it easier to find out why this supermarket integrates this innovation into their supermarket and why another supermarket integrates another innovation into their supermarket.

Practical implications
This study has practical implications because it shows some critical push and pull factors that play a role in innovation. Also gives this paper an overview of the push and pull reasons and how it has an effect on the type of innovation. This overview shows which type of innovation mostly will be implemented in relation to the push or pull reason. As overall this paper shows what innovation is and how it is influenced by push and pull factors in the grocery retail market.
References:


Berger Strategy Consultants (2012), ‘Innovation: How the emerging markets are driving the global innovation agenda’.


Brem, A., & Voigt, K. I. (2009), Integration of market pull and technology push in the corporate front end and innovation management—Insights from the German software industry. Technovation, 29, No. 5, pp. 351-367.


https://www.academia.edu/11875032/Role_of_Innovation_in_Retail_Supermarket_in_the_United_Kingdom_A_Study_of_Four_Big_Retailers


ECB (2017), European Central Bank: ‘How does innovation lead to growth’,


Jumbo.com (2017),


Pannekoek, L (2004), ‘Key succes factors of innovation in Dutch glasshouse industry’, Master thesis Wageningen University, 134 pp


The Nielsen Company (2015), ‘The future of grocery: e-commerce, digital technology and changing shopping preferences around the world’

The Nielsen Company (2013), ‘Continuous innovation: The key to Retail success’


Uffelen, R. van, Immink V. and Trienekens, J. (2007), Review of scientific literature on performance, innovation and management of supply chains, Wageningen University, ISAFRUIT.

