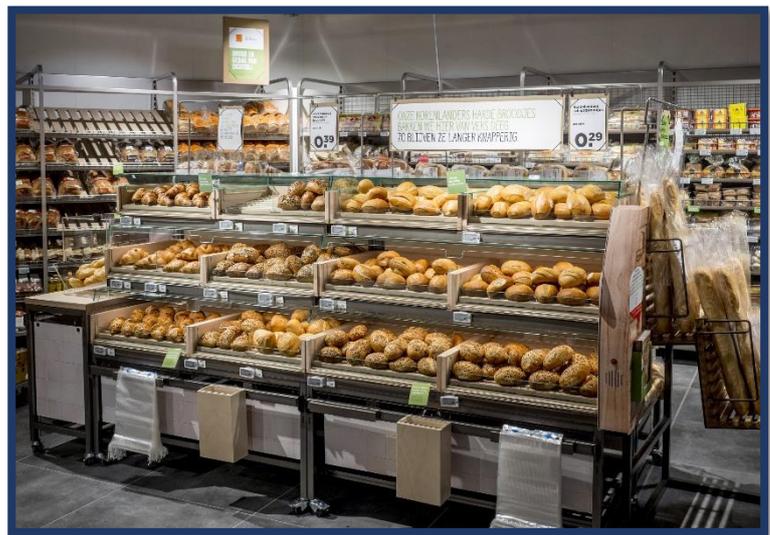


Bachelor thesis MCB

# Supermarket innovation alert!

The effect of the serve yourself bread rolls shelf on consumer purchases in Dutch supermarkets



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## Abstract

### *Background*

More and more, it will be a challenge to keep physical stores successful. Therefore, mass customization can be a useful tool to apply, because it improves customer experience as well as cost control. This thesis examines the influence of mass customization on consumer purchases, through various underlying mechanisms. Because empirical evidence about mass customization in the food domain is missing, this study focusses on applying mass customization in the bread rolls shelf.

### *Research question*

The main research question is: *What is the effect of offering mass customization in the bread rolls shelf on the number of bread rolls bought by a consumer?* This is answered by doing an experiment with 81 students from the Wageningen University.

### *Methodology*

The study describes a between-subject experiment wherein participants were requested to buy bread rolls. Participants were divided between two conditions, manipulated by not allowing or applying mass customization in the bread rolls shelf. In the first condition mass customization was not allowed. Therefore, the bread rolls in this condition were presented in pre-assembled plastic bags. In the second condition mass customization was applied by presenting the bread rolls in a serve yourself shelf. The key dependent variable was the number of bread rolls bought per consumer. In addition, four underlying mechanisms explaining this effect were researched, namely: fitting of unique preferences, the perceived control in the choice process, enjoying the design process and the fresh perception of a product.

### *Results*

Results show that applying mass customization has a positive impact on the number of bread rolls bought per consumer by a high perceived control in the choice process. Whether mass customization was applied, or not, did not directly influence the number of bread rolls bought per consumer. When mass customization in the bread roll shelf was applied, no significant effect was found for the fitting of unique preferences, enjoying the design process and the fresh perception of a product.

### *Discussion*

The results propose that in a situation where mass customization is applied, consumers perceive control in the choice process, which stimulates them to buy more. This thesis provides insights which are interesting for supermarket managers. When applying the knowledge to other domains, perceiving control in the choice process is suggested to stimulate consumers to make healthier and more sustainable product choices. Furthermore, opportunities for future research are given.

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## 1 Introduction

A few decennia ago, most people bought their groceries at a local retailer. Nowadays this has drastically changed because of the internet and e-commerce (Roesler, 2018). Buying goods online becomes an increasingly popular activity (Frag, Schwanen, Dijst, & Faber, 2007). The development of newer technologies will continue in the coming years, which impacts the shopping process (Grewal, Roggeveen, & Nordfält, 2017). This suggests the future of the retail sector is mainly in online shopping instead of physical stores. However, Geuens, Brengman, and S'Jegers (2003) state that the predictions of the future success of online retailing can be inflated. The main argument they give is the importance of the experiential aspect of high – tough products like groceries. A company offering a high customer experience differentiates itself from online stores. Therefore, it remains unsure whether physical stores will keep selling enough product to remain open in the future.

Taking this into consideration, focusing on creating customer experience seems to be the answer for retailers to keep physical stores successful. According to the definition of Gentile, Spiller, and Noci (2007), “the customer experience originates from a set of interactions between a customer and a product, a company, or part of its organization, which provoke a reaction. This experience is strictly personal and implies the customer's involvement at different levels (rational, emotional, sensorial, physical, and spiritual)”. But, according to Krafft and Mantrala (2006) retailers in the 21<sup>st</sup> century will face more challenges like offering customers greater value over competitors, being innovative, and reduce costs throughout the supply chain. Only retailers who pursue on one hand cost control, for example by offering low prices, and on the other hand value differentiation, for example by offering customer experience, will succeed in the coming decade.

For companies, this must result in a paradox choosing between either applying a mass production method to offer low prices or applying a customized production method to offer customer experiences. As a tool for companies to successfully combine these two production methods the theory of mass customization is helpful. Mass customization integrates the customers' personal preference into the production process of a product (customization), which requires interaction between the customer and a product, a company, or part of its organization (Ronteltap, 2007). This interaction stimulates customer experience. Also, mass customization integrates the benefit of cost reduction into the production process of a product, which is done by paying attention to efficiency and capturing scale economies (mass production) (Duray, Ward, Milligan, & Berry, 2000).

Research has shown the theoretical relevance of applying mass customization in supplying goods (Fogliatto, da Silveira, & Borenstein, 2012; Juhl, Kristensen, & Østergaard, 2002; Mahalik & Nambiar, 2010; Ronteltap & Trijp, 2007). When looking to the food domain, mass customization of food has been researched in diverse topics like the services in restaurants (Rahimnia, Moghadasian, & Castka, 2009), food printing (Sun et al., 2015) and food processing (McIntosh, Matthews, Mullineux, & Medland, 2010). All this previous research mainly focuses on the theoretical relevance of applying mass customization. But, empirical evidence on whether mass customization increases the number of goods purchased and possible reasons for this effect is scarce (Franke & Piller, 2004). Moreover, there is a lack of studies that apply mass customization to the food domain. In this perspective, this study sheds some lights on whether mass customization in the retail sector increases the number of goods purchased. Also, possible underlying mechanisms that stimulate this effect are researched.

An example of mass customization consumers encounter in their everyday life is the bread rolls shelf in many Dutch supermarkets. The bread departments of various Dutch supermarkets have changed in the last couple of years (Maarse, 2017; Ravenshorst, 2017). Before, the bread rolls were presented in closed, plastic, see-through, bags. Employees of the supermarket composed these plastic bags, filling

the bags with a few bread rolls. The plastic bags filled with bread roll were presented in a shelf, ready to be sold. Nowadays, the bread rolls are presented in a 'serve yourself'-shelf. This shelf contains see-through boxes, with a different type of bread roll in each box. These bread rolls are produced in large volumes, which is an example of mass production. Consumers can choose a combination of bread rolls by picking the desired bread rolls out of the boxes. In this way, consumers are free to choose the number- and combination of bread rolls they like to buy. The 'serve yourself'-shelf transforms the consumers into co-designers of the product, an example of customization.

Since the innovation of the bread department in Dutch supermarkets, their revenue has increased (S.n., 2015). According to the supermarkets, this is caused by increased sales in the number of bread rolls (Agterhoek, 2015). To examine whether mass customization of the bread rolls increases the number of sales, this study answers the question: *What is the effect of offering mass customization in the bread rolls shelf on the number of bread rolls bought by a consumer?* In addition, four underlying mechanisms explaining this effect are researched, namely: fitting of unique preferences, perceived control in the choice process, enjoying the design process and the fresh perception of a product. These mechanisms are analyzed by a between-subject experiment among 81 students.

The knowledge generated from this study is useful for supermarket-managers because they can apply the knowledge to stimulate purchases and thus increase the stores' revenue. Also, gaining insights on consumer behavior is useful to direct consumer choices in other domains like health and sustainability.

## 2 Theoretical framework

### 2.1 Mass customization as a tool to narrow the gap between producers striving for cost-efficiency and meeting personal consumer preferences

These days when walking into a retail store, not one product in the shelves seems unique. Each product on the shelf is surrounded by some copies of the same product. The supply of all these copies is able by applying mass production techniques. Mass production is a production method which is found in the nineteenth century during the second industrial revolution (Mokyr, 1998). A mass production process is chosen for making standardized products in a high-volume environment where great attention is paid to efficiency and capturing scale economies. Also, product variety is relatively low and customer involvement through market research is sought only to capture standard product design attributes that have wide appeal (Duray et al., 2000). Because consumer purchase behavior is mainly driven by price, applying mass production is an excellent opportunity for producers to produce cost-efficient and meet consumer needs.

But, producers must be aware that consumer needs are changing. In the early 21<sup>st</sup> century, personalization seems to become more and more important for consumers. Consumers want to feel unique, which they express by owning rare goods that help the individual to define themselves as distinct from others (Franke & Schreier, 2008). A production method that gives consumers this possibility is customization. Customization allows the consumer to be the co-designer of the product. Consumers can create products that contain exactly those attributes they want (Ronteltap & Trijp, 2007). This brings producers of goods in a difficult position. On one hand, they should try to be cost-efficient applying manufacturing methods of mass production, on the other hand, they should adapt to the trend of autonomy by supplying unique products of craft manufacturing. This paradox can be solved by applying mass customization (Duray et al., 2000). Mass customization involves the production of units of a manufactured product that have been assembled from a range of mass-produced prefabricated parts, giving the customer a wide choice, based on the large multiplicity of combinations that can be obtained from a relatively modest range of components (Boland, 2006). To implement mass customization in the design and manufacturing of a product, product features should be split between standards and customizable ones (Daaboul & Da Cunha, 2014).

When applying mass customization, companies will be rewarded for the superior value they provide by increasing customer satisfaction (Simonson, 2005). A way to express customer satisfaction is the willingness to pay. Customers receiving higher quality service or who feel better about the product are willing to pay more for it (Homburg, Koschate, & Hoyer, 2005).

Following this reasoning, it is expected that applying mass customization increases the willingness to pay. This research tests this effect by researching the situation of mass customization in the bread rolls shelf. But in this research, it is chosen to express consumers buying behavior in the purchase amount instead of the willingness to pay. This seems to make more sense because bread is a convenient good (Holton, 1958; Voedinscentrum, 2019), which makes spending money on it a daily habit. Therefore it will be easier to interpret changes in consumers buying behavior over a short period of time, when it is expressed in the number of bread rolls bought per consumer, instead of the willingness to pay for bread rolls. In this scenario, it is expected that *H1: Applying mass customization when selecting bread rolls, leads to a higher number of bread rolls bought per consumer*

An empirical example of the effect of mass customization on willingness to pay is the study of Franke and Piller (2004). They analyze the value created by so-called “toolkits for user innovation and design”, which is a method of integrating customers into new product development and design. Two main

experiments were held. In the first experiment, 165 users were offered a variety of design possibilities to self-design a watch. After designing the watch, they were asked about their willingness to pay for the self-designed watch compared to select standard models. In the second experiment, students who did not design a watch themselves were asked about their willingness to pay for the user-designed watches from the first experiment compared to their willingness to pay for comparable standard types. Both experiments test the effect of mass customization since consumers could not influence the possible design alternatives, but they could select and combine a variety of alternatives according to their personal preferences. The results showed that customers willingness to pay for a self-designed watch is €48,50 which is almost twice as high as the €23,20 customers are willing to pay for the best-selling standard model available on the market. The research also showed user preferences are highly heterogenic, which means a lot of standard designs possibilities should be offered when a company wants to perfectly match single customer preferences. Despite the heterogeneity of preference among consumers, some design possibilities appeared to be complementary. Because customer preferences still follow some patterns, it is doable for producers to offer enough design possibilities.

Frank and Pillar argue the willingness to pay for mass customization is higher because of the product's aesthetic and functional fit. They emphasize future research is necessary to theoretically and empirically find evidence for other explanations. Following their advice, this study analyzes four potential mechanisms that explain the effect of mass customization by applying the theory to the empirical context of the bread rolls shelf. This is done by analyzing the presence and effect of the mechanisms 'fitting of unique preferences', 'perceived control in the choice process', 'enjoying the design process', and 'fresh perception of a product'.

## 2.2 Possible explanations for the effect of mass customization

### 2.2.1 Fitting of unique preferences

The first mechanism explaining why applying mass customization delivers customer value is the preference fit (Franke, Schreier, & Kaiser, 2010). In general, consumer personal preferences differ. These individual preferences are caused by different needs consumers try to satisfy. It depends on the product properties such as its physical characteristics and features whether it helps the user to reach their intended outcome in a satisfactory manner (Schreier, 2006). When users of a product are allowed to design the product themselves, it is likely the products closer matches user preferences (Randall, Terwiesch, & Ulrich, 2007). Knowing how to match these individual consumer preferences is easier for the consumer himself because they can come up with a self-designed product solution that is potentially close to their individual needs (Schreier, 2006).

Related to this idea is the study of Franke and Schreier (2008), where they illustrate how a mass customization toolkit helps the consumers that feel a need for uniqueness. They analyze the data of 127 participant customers who had to design cell phone covers with a mass customization toolkit. First, the participants individually designed a case using a toolkit to actively design the entire face. The toolkit offered a relatively high degree of design freedom: design elements could be imported from external sources such as the web, participants were able to develop own designs and upload them to the toolkit, and the participant could choose where to place the design on the cell phone cover. After designing their personal cell phone cover, participants were asked to fill out a short questionnaire. For most subjects, the uniqueness of the cell phone cover carried utility because it allowed subjects to differentiate from other consumers. Then, all the participants were asked to submit binding sealed bids for their self-designed product in order to measure the utility they would derive from a self-designed product. It was found perceived uniqueness has a positive significant effect on the

consumers' incremental willingness to pay. This means that the more unique a consumer perceives a self-designed product to be, the more a consumer is willing to pay for it compared to an off-the-shelf standard item. However, this effect only happened when consumers felt a need for uniqueness. Thus, the mass customization toolkit that gives consumers the possibility to create a unique product, is only effective when a consumer prefers to be different than the rest. In general, a mass customization toolkit will only affect consumption when it succeeds in giving consumers the ability to fit their individual needs.

In the case of mass customization in the bread roll shelf, consumers can compose a bread rolls bag that matches their unique preferences. In practice this means consumers act as co-creators of the bread rolls bag, by choosing the number of bread rolls and the type of bread rolls they prefer. Because applying mass customization in the bread roll shelf gives the consumer the ability to customize the product to their personal preferences, it is expected that *'Compared to a situation where it is not allowed, applying mass customization leads to the higher fitting of unique preferences'* (H2a). It is known that consumers are willing to pay for this higher degree of perceived fit (Randall et al., 2007). Therefore, it is expected that *'The number of bread rolls bought per consumer is significantly positively influenced by the fitting of consumers unique preferences'* (H3a)

### 2.2.2 Perceived control in the choice process

Regardless of the better-perceived fit, consumers experience a sense of accomplishment when creating something on their own. Franke et al. (2010) call this the "I designed it myself" effect. When a consumer has created something on his own, this adds extra value because of the enthusiasm and pride arising from one's own performance (Schreier, 2003). Examples that enhance identification of the self-designed product are 'Dell 4 me', 'My Adidas', and 'My Yahoo because consumers own the created co-brands. These co-brands stress out one's achievement (Schreier, 2006). This feeling of empowerment in terms of improved decision-making and perceived control over the process and product, benefits the individual (Ronteltap & Trijp, 2007). When applying mass customization in the bread department, consumers control the number of bread rolls and the type of bread rolls they find suitable. These aspects of the design process are not decided by the supermarket employer, but by an individual consumer. Therefore, hypothesis H2b says: *'Compared to a situation where it is not allowed, applying mass customization leads to higher perceived control in choice process'*. To test whether the perceived control in the choice process effects consumers buying behavior, hypothesis H3b says: *'The number of bread rolls bought per consumer is significantly positively influenced by the consumers perceiving control in choice process'*

### 2.2.3 Enjoying the design process

People seem to derive an intrinsic process-oriented benefit from 'doing it themselves'. When looking to the do-it-yourself market, the main benefit might not only be the low costs, since relaxation, enjoyment of a creative task or practicing a hobby can also influence outcome benefit. The increase in valuation of self-made products is called the Ikea effect. The study of Norton, Mochon, and Ariely (2012) tests in several experiments the conditions for this IKEA effect. In the first experiment, 52 participants assemble IKEA boxes. Half of the participants had to build the product; the other half only had to inspect the box. The participants were asked several questions, finding builders had a significantly higher willingness to pay for their boxes than the non-builders. To show the IKEA effect occurs in other product categories as well, a second experiment among 106 participants was done. In this experiment, some participants were asked to create either an origami frog or crane after which they had a chance to buy these creations with their own money. Also, a group of non-builder participants was asked to place a bid on the builder's origami. Finally, two origami professionals made

high-quality frogs and cranes and another group of non-builders was asked to place a bid on these expert creations. As expected, builders valued their origami nearly five times higher than what non-builders were willing to pay for the creations. Builders also valued their origami so highly they were willing to pay nearly as much for their own creations as the additional set of non-builders were willing to pay for the well-crafted origami made by experts. To compare participants' bids for their own products with their bids for objectively similar products created by others, another experiment was held. In this experiment, participants were asked to build a Lego set and then told to place bids on both their and their partner's set. The results showed that participants were willing to pay more for the sets that they had been assigned than those assigned to their partners.

These experiments all showed participants saw their amateurish creations as similar in value to experts' creations and expected others to share their opinions. The increase in valuation of self-made products happens regardless of the consumer being an experienced 'do-it-yourselfer' or inexperienced. It is therefore likely the process itself is also a source of subjective value: consumers designing their own product might enjoy the design act itself (Csikszentmihalyi, 1997) and the joy of being artistic. In light of this study, it is expected that in the design process of composing one's own bread rolls bag, more enjoyment is experienced. Therefore, hypothesis H2c reads: *'Compared to a situation where it is not allowed, applying mass customization leads to higher enjoyment of the design process'*

So, the process of performing arises enthusiasm, enjoyment, and pride. These positive process benefit of acting or designing positively impacts the value of the outcome of the process, that is, the customer-designed product (Schreier, 2006). When the value of shopping experience increases by having fun, this fosters customers into a good mood. Being in a good mood results in greater spending and buying something customers had not originally intended to (Krafft & Mantrala, 2006). It is thus reasonable that *'The number of bread rolls bought per consumer is significantly positively influenced by consumers enjoying the design process'* (H3c).

#### 2.2.4 Fresh perception of a product

When looking to the specific domain of fresh departments in supermarkets, it is assumable not only fitting of unique preferences, perceived control in the choice process, and enjoying the design process will impact the outcome benefit. At the fresh departments of supermarkets, the fresh perception of products must also affect whether consumers are convinced to buy fresh products.

In general, consumers buy products to maximize their utility, mainly focusing on liking, need& hunger and convenience when choosing to buy a certain product. (Phan & Chambers, 2016). Most fresh products like bread, meat sausages, and cookies are also available in a tenable version, having a longer shelf life. This means that consumers choosing fresh products do this because they like the fresh version better, because they feel the need and hunger for a fresh version, or because they find the fresh version more convenient. Regardless of which of these focus consumers have, supermarkets must focus on fresh perception when convincing consumers to buy fresh products. An example is baking bread at the bread department in a supermarket, which makes the fresh olfaction spread through the store. The ambient olfaction smell positively changes consumers evaluation of a store, positively changes consumer evaluation of the merchandise and increases consumers intentions to visit the store. But, purchase intentions are not directly influenced (Spangenberg, Crowley, & Henderson, 1996).

This shows assuring freshness is important to influence the consumer, but it does not directly affect the consumers buying behaviour. At first side, it seems therefore not necessary to include fresh perception in this research. However, when combining fresh perception and consumers high need to touch products, an effect on consumers purchase is found (Peck & Shu, 2009). When you touch the fresh product, you will be convinced the product is indeed fresh. An example is Peck and Shu’ experiment of placing oranges in a supermarket, each having a sign saying, ‘feel the freshness’. By touching the product participants were able to pick the orange which they thought to be the freshest. As a result, the number of impulse purchasing increased because of the ability to touch the products and feel the freshness. In light of these findings, fresh perception can influence the outcome benefit of consumers in this research since consumers buying bread rolls are able to touch the products. In the context of this study, the effect of touching and perceiving freshness will be even stronger when mass customization is applied. This is likely because when mass customization is applied, the bread rolls are presented without a plastic bag which makes it easier for participants to experience positive drivers of bread freshness (Heenan, Dufour, Hamid, Harvey, & Delahunty, 2008). It is thus expected that ‘Compared to a situation where it is not allowed, applying mass customization leads to a higher fresh perception of a product’ (H2d). To know if this fresh perception is strong enough to affect consumers purchase in the context of the bread rolls shelves, just as was the case in the study of Peck and Shu (2009), hypothesis H3d reads: ‘The number of bread rolls bought per consumer is significantly positively influenced by consumers perceiving the bread rolls as fresh’.

2.3 Conceptual framework

By testing all the proposed hypothesizes, the effect of mass customization and the mediation of four mechanisms is researched. An overview of this study is given in a conceptual model (see figure 1).

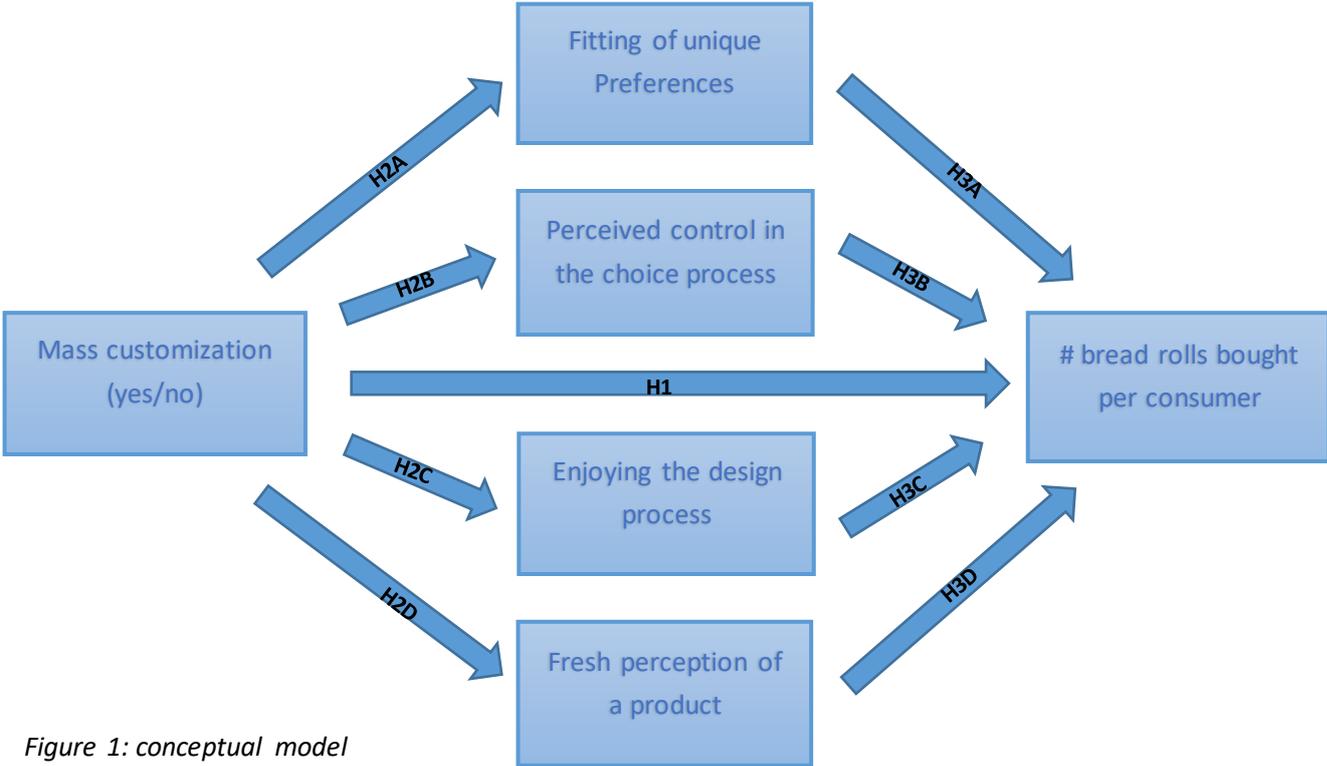


Figure 1: conceptual model

### 3 Design

#### 3.1 Experimental design

In order to measure the effect of applying mass customization in the bread rolls shelf on the number of bread rolls bought by a consumer, a design including two conditions was constructed. Expected is that the presence of one, two, three or all four mechanisms increases the buying behavior of participants (figure 1: conceptual model). To test this, an experiment was held in Forum room 767 for two days. The experiment and the following questionnaire were held in Dutch because the study was conducted at a Dutch university. It took approximately five minutes per participant to finish the experiment and the questionnaire.

In the experiment setting, the way bread rolls were presented was manipulated. The participants were randomly assigned to one of the two conditions (figure 2: visualization of conditions). Depending on the condition, mass customization was applied or not.

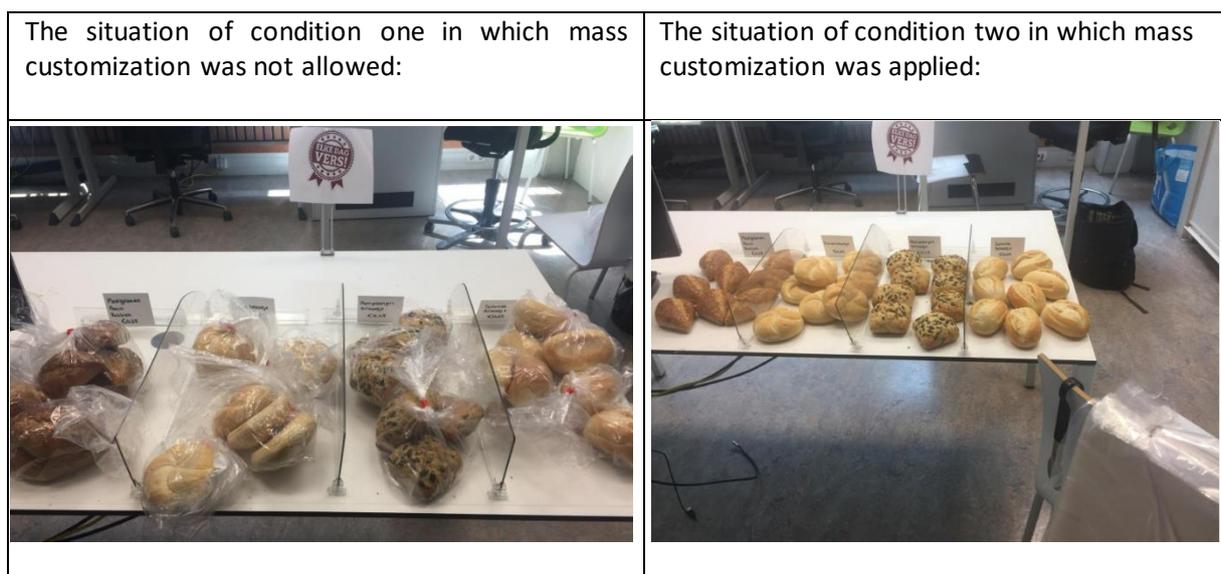


Figure 2: visualization of conditions

In the first condition, the bread rolls were presented in plastic bags, each containing different numbers of bread rolls. The plastic bags were pre-compiled by the researcher. The researcher chose the number of bread rolls in a plastic bag at random, just as an employee of a bakery department in a supermarket would do (Table 1: composition of plastic bags condition 1).

<b>Number in bag</b>	<b>1x</b>	<b>2x</b>	<b>3x</b>	<b>1x</b>	<b>1x</b>	<b>3x</b>	<b>4x</b>
<b>Type of bread rolls</b>	Schnitt	Schnitt	Schnitt	Schnitt	Pompoenpit	Pompoenpit	Pompoenpit
<b>Number in bag</b>	<b>2x</b>	<b>2x</b>	<b>4x</b>	<b>1x</b>	<b>2x</b>	<b>2x</b>	<b>3x</b>
<b>Type of bread rolls</b>	Meergranen panini rustiek	Meergranen panini rustiek	Meergranen panini rustiek	Kaiser	Kaiser	Kaiser	Kaiser

Table 1: composition of plastic bags condition 1

In the second condition, the bread rolls were presented in self-serve baskets. Participants were handed an empty bag in which they had to put the bread rolls by making use of a tong. In both of the conditions, the participants had to choose the number of bread rolls they would buy, given the sketched scenario in the text block below.

Hello,

I would like to ask you to read the following scenario carefully and to get involved in it:

You are a student and you follow a course with a lot of group work. It is just before lunch time and you are on your way to your group work. In advance, you go to the supermarket to bring lunch for the whole group. Your group work group consists, including yourself, of 4 people: 2 men and 2 women. This means you have to buy bread rolls for **4 people** in total, everyone has a normal appetite. Furthermore, you have enough bread toppings at home to meet everyone's needs.

At the moment you are standing at the bread department of the supermarket in your neighbourhood. You are standing in front of the shelf and you have to choose the number of bread rolls you want to buy. You want to pick a number of bread rolls so all 4 of you have enough to eat and start group work with a full stomach.

*Assignment: Now take the number of bread rolls you think is needed in order to have enough lunch. Feel free to take as much time as you need to choose the bread rolls. Also, feel free to take different types of bread rolls. Take the plastic bag(s) of your choice, filled with bread rolls, to the computer in the room. At the computer, please answer a short questionnaire.*

Every participant got the same instructions regardless of the condition they were in, so choices of participants were all based on the same scenario. This avoided the influence of telling different situations on the number of bread rolls a consumer would buy (Franke & Schreier, 2008). In line with this, it was asked to get bread rolls for two men and two women to minimize the effect of gender (Rolls, Fedoroff, & Guthrie, 1991). To make sure every participant was given the same instructions, the researcher typed the scenario (appendix 6.2: scenario in Dutch). To check whether the typed scenario was clear, the researcher asked three students to read the scenario in advance and report any misunderstandings.

Following the scenario, it was important participants felt free to choose a number of bread rolls they found suitable given the sketched situation. Therefore, it was important to have no availability restraint. In order to offer enough bread rolls, a total of 32 bread rolls were available. This was at least three times more than the predicted average bread rolls consumed by four people at lunch (Van Rossum et al., 2016). Participants could choose between four different types of bread rolls, namely: 'schnitt broodjes', 'pompoenpitbroodjes', 'meergranen panini rustiek' and 'kaiser broodjes'. By including different types of bread rolls, the participants got the option of choosing the bread roll types they liked the most. This excluded the influence of liking of bread rolls on the number of food consumption (Eertmans, Baeyens, & Van den Bergh, 2001). Due to cost restraints executing this research, not more than four types of bread rolls were included in this study. All bread rolls were bought at the Lidl in Wageningen. Because the influence of money was excluded from this study, no money constraints were given in the scenario. But, to simulate a real supermarket, prices tags were placed in every shelf. These showed the type of bread and the price, which was €0,25 for any type of bread rolls.

## 3.2 Participants

In total, 60 participants were recruited for the experiment. When recruiting participants, it was made clear that only people who eat bread rolls in daily life were needed. This was explicitly stated to make sure people who are allergic to bread were excluded from the experiment. There were two different conditions: applying mass customization (n=30) and not allowing mass customization (n=30). Among the participants were 31 men and 50 women, divided over the two conditions.

Participants were recruited, by handing out flyers in the Forum building from Wageningen University, by direct messages and by Facebook advertisements. Participants were promised a small reward (chocolate snack) for joining the experiment.

## 3.3 Measures

### Dependent variable

#### *Number of bread rolls bought per consumer*

The key dependent variable in this experiment was the number of bread rolls bought per consumer. This was measured in the questionnaire by asking: "What is the total number of bread rolls you have in your plastic bag(s)?" Participants could answer this by filling in a number between 1 (min number) to 32 (max number available).

### Mediating variables

#### *Fitting of unique preferences*

To know how much the consumer personal preferences fit with the bread rolls bought, the participants were asked to response two statements inspired by the study of Randall et al. (2007): 'I have found a number of bread rolls that exactly matches my preferences' and 'I have found a combination of bread rolls that exactly matches my preferences'. These two statements were measured on a seven-point Likert scale ranging from 1 ('totally disagree') to 7 ('totally agree'). Because the Cronbach's Alpha is too low to make a subscale from these two items ( $\alpha = .508$ ), these two items will be used separately in the analyse.

#### *Perceived control in the choice process*

To measure how much control participants perceived during the process of composing their bread rolls bag, several studies inspired to formulate three items (Armitage & Conner, 1999; Israel, Checkoway, Schulz, & Zimmerman, 1994; Thompson & Schlehofer, 2008). Participants were asked how well the statements: 'I experienced control while choosing the bread rolls', 'I was able to influence the number of bread rolls that I wanted to choose' and 'I was able to influence the combination of bread rolls that I wanted to choose' were applicable. These statements were asked on a seven-point Likert scale ranging from 1 ('totally disagree') to 7 ('totally agree').

The Cronbach's Alpha for the subscale including all three items was .481, which is unacceptable. Therefore, it was chosen to exclude the item 'I experienced control while choosing the bread rolls' from the subscale which resulted in reasonable reliability ( $\alpha = .658$ ) for this subscale. This resulted in creating the variable 'Score on control' by taking the mean of only two scale items.

#### *Enjoying the design process*

To measure how much participants enjoyed the design process of composing their bread rolls bag, three of the 'Attitude Toward the Object (Fun)' statements of Nysveen, Pedersen, and Thorbjørnsen (2005) were used. In their study, they measured the extent that a person views something as providing high arousal and pleasure is modified. When adapting their scale to measure the extent a consumer

enjoyed the design process, three statements were asked: 'I thought choosing the bread rolls was enjoyable, 'I entertained myself while choosing the bread rolls', and 'I thought choosing the bread rolls was fun'. These statements were asked on a seven-point Likert scale ranging from 1 ('totally disagree') to 7 ('totally agree').

The Cronbach's Alpha for this subscale was .905 which indicated excellent reliability. The variable 'Score on enjoyment' was created by taking the mean of the three scale items.

#### *Fresh perception of a product*

To measure how fresh participants perceived the bread rolls, a statement inspired by the experiment of Heenan et al. (2008) was asked: "I thought the presented bread rolls looked very fresh" This statement was asked on a seven-point Likert scale ranging from 1 ('totally disagree') to 7 ('totally agree').

### Control and Background

#### *Feeling of hunger*

This experiment was done in three full days. The time people participated in the experiment differed between the participants, therefore it was likely that people participating just before a meal were hungrier than people participating just after their meal. Because the state of hunger could influence consumption behaviour (Hill & McCutcheon, 1984), it was checked whether people felt hungry at the moment of the experiment. To know whether participants felt hungry they were asked: "How hungry were you before you started this research?", conform Nagpal, Lei, and Khare (2015). This question was asked on a seven-point Likert scale ranging from 1 ('very hungry') to 7 ('very saturated'). In this way, it was made sure that saturation could not influence the number of bread rolls bought in one condition more than in another.

#### *Social demographic characteristics*

The background variables participants were asked to report were their age and gender. They were asked: "What is your gender?", which could be answered by a choice between man or woman. To know their age, participants were asked: "What is your age?", which was answered by filling in a number in years between 16 to 90.

#### *Control*

In the end, all participants completed the questionnaire thus were useful for the sample. The groups were checked on how hungry participants were, gender and average age to make sure these factors had no effect on the results.

### 3.4 Procedure

People willing to participate in the experiment were instructed by the researcher to enter the room of the experiment one by one. Every two hours the two conditions in the experiment were interspersed, the first day starting with condition one and on the second day starting with condition two. When a participant entered the room, they were asked to sign an informed consent (appendix 6.1) to join the study. After signing, they were given a scenario (appendix 6.2), ending with the assignment to choose the number of bread rolls they found suitable to buy in line with the scenario. Depending on the condition, the participant was either able to choose from different pre-assembled bags of bread rolls or from different bread rolls presented in self-serve baskets. This experiment took about three minutes.

After choosing the number of bread rolls willing to buy, the participant was asked to fill in a questionnaire at one of the computers that were placed in the room (appendix 6.3). This questionnaire took approximately two minutes. Depending on the presented condition, there was a paper next to each computer with the number '1' or the number '2' on it. At the start of the questionnaire, the participant was asked to type the number which was visible on the paper. In this way, it was clear which questionnaire outcome belonged to each of the two conditions.

When the full questionnaire was completed, the participant was offered a chocolate snack as a reward for joining the study. Thereafter, the participation ended, and the participant could leave the room.

### 3.5 Data analysis

All the experiments were analysed using version 25 of the program SPSS. A descriptive statistical analysis was used to identify the frequencies of the data set. In order to determine the reliability of the scales measuring the construct 'score on control' and 'score on enjoyment', Cronbach's alpha was calculated. A Cronbach's alpha  $> 0.7$  indicated a reliable measurement scale for the construct (Field, 2009). To check whether gender was equally divided between the two different groups, a chi-square was calculated. To check whether randomization was successful for 'the feeling of hunger' and 'age', a one-way ANOVA was conducted.

First, the direct effect of applying mass customization on the dependent variable 'number of bread rolls bought per consumer' was tested by a univariate ANOVA. The test was significant with a p-value of .05 or lower. To measure the difference of the variables 'fitting of unique preferences', 'perceived control in choice process', 'enjoying the design process' and 'fresh perception of a product' between the conditions of applying mass customization or not allowing mass customization, four univariate ANOVAs were conducted. All these tests were significant with a p-value of .05 or lower. Then, it was tested which of the independent variables 'fitting of unique preferences', 'perceived control in choice process', 'enjoying the design process' and 'fresh perception of a product' had a significant effect on the outcome variable 'number of bread rolls bought per consumer'. This was done by conducting one linear logistic regressions, in which the independent variables were significant with a p-value of .05 or lower.

## 4 Results

### 4.1. A general overview of the findings

Overall 81 participants took part in the experiment. Among the 81 participants, were 31 men and 50 women. The mean age of these participants was 21.19 years (SD=1.87). Also, no outliers were found.

The participants were randomly assigned to the two conditions. To check whether the randomization was successful, a randomization check for age, gender and the feeling of hunger were done. An ANOVA showed that the mean age was not significantly different between the groups ( $F(1,79) = 1.59, p = 0.21$ ), meaning that age had no significant effect on the outcome variable. Also, a chi-square was run, finding gender differed significantly between the two groups ( $\chi^2(2) = 3.88, p = 0.05$ ). In condition one 11 of the participants were man, in condition two 20 participants were a man. Because this indicated only marginal differences between the two groups, it was chosen to not include the variable gender as a covariate in the analyse. Finally, an ANOVA showed a significant difference for the variable of hunger between the groups ( $F(1,79) = 12.36, p = 0.01$ ). In condition two the mean score for hunger on a seven-point Likert scale was 4.05 (SD=1.07), compared to condition one with a mean score of 3.08 (SD=1.4). This means that hunger had a possible confounding influence on the outcome variables and therefore all main analyses included hunger as a covariate.

### 4.2 Mass customization on the number of bread rolls bought per consumer

A univariate ANOVA was done to test the direct effect of applying or not allowing mass customization on the number of bread rolls bought per consumer. Results showed that participants bought 9.07 bread rolls on average when mass customization was applied, in comparing to 8.90 when mass customization was not allowed (Table 2).

Variables	Mass customization not allowed (n=40)	Mass customization applied (n=41)	P- value
<b>Randomization checks</b>			
Age	21.45 (2.0)	20.93 (1.72)	.21
Feeling of hunger	3.08 (1.07)	4.05 (1.4)	.001**
<b>Main effect</b>			
Number of bread rolls bought per consumer	8.90 (1.68)	9.07 (1.56)	.44
<b>Mediators</b>			
The number of bread rolls matched the personal preferences	5.85 (1.33)	5.95 (.71)	.53
The combination of bread rolls matched the personal preferences	5.65 (1.08)	5.54 (1.08)	.62
Perceived control in choice process	5.49 (1.26)	6.51 (.56)	.001**
Enjoying the design process	4.79 (1.22)	4.71 (1.02)	.56
Fresh perception of a product	4.68 (1.37)	4.44 (1.73)	.84

Table 2: Mean (SD) of different effects appearing because of (not) applying mass customization in the bread rolls shelf. The items were measured on a 7-point Likert scale ranging from 1 ('totally disagree') to 7 ('totally agree').

\* significant  $P < .05$

\*\* significant  $P < .001$

The main effect was not significant ( $F(1,78) = .60, p = .44$ ). Applying mass customization did not directly lead to great differences in the number of bread rolls a consumer bought compared to the situation mass customization was not allowed. Because the number of bread rolls bought per consumer was not significantly different in the different conditions, hypothesis H1: *Applying mass customization when selecting bread rolls, leads to a higher number of bread rolls bought per consumer* could be rejected.

#### 4.3 Mass customization leading to the fitting of unique preferences, perceived control in the choice process, enjoying the design process, fresh perception of a product

A univariate ANOVA was done to test the effect of applying mass customization on the fitting of the unique preferences, the perceived control in the choice process, the enjoyment of the design process and the fresh perception of a product (Table 2). The fitting of the unique preference was measured by two variables: the number of bread rolls- and the combination of bread rolls- in line with personal preferences. For both the number ( $F(1,78) = .40, p = .53$ ) as well as the combination ( $F(1,78) = .25, p = .62$ ) of bread rolls no effect was found. Thus, applying mass customization did not lead to a number or combination of bread rolls that fitted consumers' unique preferences better than when mass customization was not allowed. Because both variables measuring the mechanism 'fitting of unique preferences' were not significant, hypothesis H2a *'Compared to a situation where it is not allowed, applying mass customization leads to the higher fitting of unique preferences'* could be rejected. Also, no significant effect was found for applying mass customization on enjoying the design process ( $F(1,78) = .37, p = .56$ ) or for applying mass customization on the fresh perception of a product ( $F(1,78) = .04, p = .64$ ). Therefore, hypothesizes H2c and H2d *'Compared to a situation where it is not allowed, applying mass customization leads to higher enjoyment of design process and to a higher fresh perception of a product'* could also be rejected. For the effect of mass customization on perceived control in the choice process, a significant effect was found ( $F(1,78) = 18.38, p = .001$ ). Applying mass customization did lead to perceiving more control, compared to when mass customization was not allowed. This means that hypothesis H2b *'Compared to a situation where it is not allowed, applying mass customization leads to higher perceived control in choice process'* could be accepted.

#### 4.4 The mechanisms that influence the number of bread rolls a consumer buys

A linear regression analysis was carried out to test simultaneously the effect of all the four mechanisms on the number of bread rolls bought per consumer (Table 3). The proportion of variance of the dependent variable 'number of bread rolls bought per consumer' explained by the independent variables is only 8%. The feeling of hunger had no significant effect on the number of bread rolls bought per consumer ( $\beta = -.08, p = .53$ ), thus whether people felt hungry or saturated had no influence on the outcome.

INDEPENDENT VARIABLES	NUMBER OF BREAD ROLLS BOUGHT PER CONSUMER	
	BETA	T-VALUE *
The number of bread rolls matched the personal preferences	-.07	.57
The combination of bread rolls matched the personal preferences	-.06	-.48
Perceived control in choice process	<b>.28</b>	<b>2.20</b>
Enjoying the design process	.26	1.94
Fresh perception of a product	-.08	-.73
Feeling of hunger	-.08	-.64
Adjusted R <sup>2</sup>		.08

Table 3: Regression coefficients (number of bread rolls bought per consumer)

\*Significant beta-coefficients are bold ( $p < .05$ ). The reported coefficients are standardized.

The results indicated that enjoying the design process ( $\beta=.26$ ,  $p=.06$ ) and the fresh perception ( $\beta =-.08$ ,  $p =.47$ ) of a product had no significant influence on the number of bread rolls a consumer bought. The fitting of the unique preference was measured by two variables: the number of bread rolls- and the combination of bread rolls- in line with personal preferences. The number ( $\beta =-.07$ ,  $p = .57$ ) as well as the combination ( $\beta=-.06$ ,  $p = .63$ ) of bread rolls were both not significant. This means neither enjoying the design process, the fresh perception or fitting of unique preferences were correlated with the total number of bread rolls. Thus, hypothesizes H3a, c, and d *'The number of bread rolls bought per consumer is significantly positively influenced by the fitting of consumers unique preference, consumers enjoying the design process and by consumers perceiving the bread rolls as fresh'* could all be rejected. Looking to the tested independent variables, only the perceived control in the choice process drove the number of bread rolls a consumer bought ( $\beta=.28$ ,  $p =.03$ ). However, this relationship was not very strong, given the  $\beta$  is close to 0. All in all, only H3b *'The number of bread rolls bought per consumer is significantly positively influenced by the consumers perceiving control in choice process'* could be accepted.

## 5 Conclusion and Discussion

The aim of this study is to examine the influence of mass customization on the purchase of a food product. To gain deeper knowledge about this effect, possible underlying mechanisms are researched. The present manipulation in this study is the applying of mass customization. It is proposed that when mass customization is applied, consumers will experience the available products match their unique preferences. Also, consumers might perceive more control when they can participate in the process. Moreover, the process of designing the product can be enjoyable. Finally, it is proposed consumers perceive food products as fresher when mass customization is allowed. An experiment in the bread rolls shelf has been conducted to test the hypotheses and explore underlying mechanisms.

In this study, it is found that in the condition where mass customization is applied, consumers perceive more control in the choice process. The more consumer perceive control in the choice process, the more bread rolls are bought by these consumers. All in all, applying mass customization leads to a higher perceived control which positively affects the number of bread rolls bought per consumer. This is in line with the findings of Ronteltap and Trijp (2007) who state that perceiving control over the product and the choice process, will benefit the individual. In addition, it is also found that the mechanisms 'fitting of unique preferences', 'enjoying the design process' and 'fresh perception of a product' do not increase when mass customization is applied. Also, the mechanisms have no impact on the number of bread rolls a consumer buys. These results differ from the results of other studies. For example with regard to the fitting of unique preferences, Franke and Piller (2004) argue that applying mass customization when selling watches increases the consumers' willingness to pay. They explain this by emphasizing the matched consumer preferences regarding a product's aesthetics and functional fit. Even though this effect seems reasonable, the current research does not confirm this effect. Participants who could compose the bread rolls bag themselves, do not feel the bread roll bag fits their unique preferences better than participants who could not compose their own bread rolls bag. Another example is the study of Norton et al. (2012) explaining the IKEA-effect. They have found people assembling their own IKEA box, have a higher willingness to pay for their boxes than the non-builders. But, in this current study, no enjoyment or increased consumption has been found when participants were able to compose their own bread rolls bag. Also, the expected increase in fresh perception when mass customization is applied differs from the findings of Peck and Shu (2009) about placing oranges in the supermarket. So, based on literature, the results of the current study were not expected.

There are several possible explanations for the difference between the expected and the real outcome of the study. For example, there seems to be a strong existing default for the buying of bread rolls. In the current research, participants in both conditions of the experiment chose to buy approximately 9 bread rolls to have lunch with four people. It seems consumers buy bread rolls count with a default around two bread rolls per person. The shopping behavior for this daily consumption good seems anchored regardless of different shelf settings. Also, the type of product can declare this unexpected outcome. Bread rolls are functional food products thus mechanisms like 'enjoying the design process' and 'fitting unique preferences' might be too weak to influence consumers' shopping behavior. This can differ from previous research about mass-customization applied to watches, furniture, and cellphone covers because these are different kind of products (Franke & Piller, 2004; Franke & Schreier, 2008; Norton et al., 2012). Watches, furniture, and cellphone covers are examples of shopping and specialty products in which consumers want to put effort to gather them, whereas this is not the case for convenient products as bread rolls (Norton et al., 2012). In addition, a methodological explanation might be the unit size of the plastic bags. In the condition where mass customization was applied, participants filled one plastic bag with approximately 9 bread rolls. When the plastic bags would have

been bigger, consumers in this condition might choose to fill it with more bread rolls (Flood, Roe, & Rolls, 2006; Rolls, Roe, Kral, Meengs, & Wall, 2004).

Therefore, it would be rewarding to replicate this study using larger plastic bags than the ones used in this study. In the future, it is recommended to do more field research about mass customization. For the current research, a lab experiment has been a logical choice because it creates the possibility to research underlying mechanisms by conducting questionnaires after the experiment. But, in the future, field research is recommended because participants might show different behavior when buying bread rolls in an actual supermarket (Pham, 2013). Furthermore, research on applying mass customization for shopping goods and specialty goods is recommended. Because consumers spend more time and effort in gathering these goods, it is possible mechanisms like the 'fitting of unique preferences', 'enjoying the design process' and 'fresh perception of a product' do positively influence the shopping behavior of these type of goods (Holton, 1958).

Previous research suggests mass customization stimulates consumers' willingness to pay (Homburg et al., 2005; Piller, 2004; Simonson, 2005). While prior research suggests mechanisms like fitting unique preferences and enjoying the design process cause this effect, a more thorough explanation has been lacking (Franke & Piller, 2004; Franke & Schreier, 2008). This study only finds evidence for the mechanism of perceived control in a choice process. But the question arises whether this is the only mechanism stimulating consumers purchases when mass customization is applied. Future research is needed to provide more clarity.

Other opportunities for further research can be derived from sampling limitations of the experiment. In this study, the male participants are not divided equally between the groups. Because man and woman have a different frame of reference regarding eating amounts, this might have influenced the experiment (Rolls et al., 1991). Also, in the present study, only students are asked to participate. While this makes sense because of time restraints, the overall population of bread rolls buyers is much larger and more diverse. Thus, it will be rewarding to replicate this study using a different sampling frame. Moreover, the participating students are students from Wageningen University. Students from this university are known for their healthy eating habits, preferring brown bread over white bread (Dewettinck et al., 2008). Since the experiment contained only two types of brown bread, it is possible students only chose bread rolls from the 16 offered brown ones. As a result, a mechanism like 'fitting unique preferences' might not be noticeable for participants. For future research, it is recommended to find which type of bread rolls are best to stimulate shopping behavior in the bread rolls shelf.

All in all, this study is quite unique. It is the first one trying to find which mechanisms explain the increased sales of bread rolls in Dutch supermarkets. The results of the study show applying mass customization in the bread rolls shelf lead to a higher perceived control which positively affects the number of bread rolls bought per consumer. Since this is found for the bread rolls shelf, giving consumers control might also stimulate purchases in other domains. In, for example, the health domain, the mechanism of perceiving control might work as a tool to nudge consumers into making healthy and sustainable product choices. Another example is the retail domain, where supermarket-managers can apply this knowledge to gain revenue, by making sure customers perceive control when choosing products in the store. It is important to realize future research is necessary to see whether the mechanisms 'fitting of unique preferences', 'enjoying the design process' and 'fresh perception of a product' also not arise when applying mass customization to other kinds of goods. The results of the current study provide a starting point to stimulate more research into how mass customization stimulates consumers purchases.

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## 7 Appendix

### 7.1: Informed consent in Dutch

#### Toestemmingformulier voor het gebruik gegeven ten behoeve van het onderzoek

**Onderzoek:** Massa customization toegepast op het schap met vers afgebakken broodjes

Hierbij verleen ik toestemming aan de verantwoordelijke onderzoekers van Wageningen University & Research om de informatie die ik geef door het invullen van de vragenlijst te gebruiken voor onderzoek. Dit onderzoek heeft als doel te leren hoe consumenten massa customization ervaren.

Mijn gegevens zullen alleen gebruikt worden voor dit onderzoek en zullen volledig anoniem verzameld en gebruikt worden.

Ik weet dat meedoen aan het onderzoek geheel vrijwillig is. Ik weet dat ik op ieder moment kan beslissen om toch niet mee te doen. Daarvoor hoef ik geen reden op te geven.

Voor meer informatie over dit onderzoek kan ik contact opnemen met Lieke Swinkels ([Lieke.swinkels@wur.nl](mailto:Lieke.swinkels@wur.nl))

Door te ondertekenen gaat u met bovenstaande akkoord.

Datum:

Naam:

Handtekening:

### 7.2: Scenario in Dutch

Goedendag,

Ik wil je vragen om het volgende scenario aandachtig te lezen en je erin te verplaatsen:

Je bent een student en volgt een vak met veel groepswork. Het is net voor lunchtijd en je bent onderweg naar je groepswork. Van te voren ga je langs de supermarkt om lunch mee te nemen voor de hele groep. Je groepswork groepje bestaat inclusief jezelf uit 4 personen: 2 mannen en 2 vrouwen. Je hebt dus **4 personen** voor wie je broodjes moet kopen, iedereen heeft normale trek. Verder heb je voldoende beleg thuis om iedereen naar wens te voorzien.

Op dit moment bevind je je op de broodafdeling van de supermarkt bij jou in de buurt. Je staat voor het schap en moet een hoeveelheid broodjes kiezen om te kopen. Je wil zoveel broodjes pakken dat jullie alle 4 genoeg te eten hebben om met een gevulde maag met het groepswork aan de slag te gaan.

*Opdracht: Pak nu de hoeveelheid broodjes die jij denkt nodig te hebben zodat er voldoende lunch is.* Je hebt alle tijd om rustig te kiezen. Voel je vrij om verschillende soorten broodjes te nemen. Neem de door jou gewenste plastic zakje(s) gevuld met broodjes mee naar de computer in het lokaal. Vul daar een korte vragenlijst in.

### 7.3: Questionnaire in Dutch

Er volgen nu een aantal vragen m.b.t. de gekozen broodjes.

Houd er rekening mee dat je nog steeds een student bent die voor in totaal 2 mannen en 2 vrouwen lunch heeft gehaald.

Het invullen van de vragenlijst duurt ongeveer 2 minuten. Er zijn geen goede of foute antwoorden, wil je invullen wat als eerste bij je opkomt? Als deelnemer aan dit onderzoek blijft je geheel anoniem.

Als bedankje heb je straks de mogelijkheid een chocolade snack te pakken.

Er zijn geen risico's of voordelen verbonden aan het invullen van de vragenlijst. Je kan op ieder moment beslissen om te stoppen met het invullen. Voor eventuele vragen kun je contact opnemen met Lieke Swinkels ([Lieke.swinkels@wur.nl](mailto:Lieke.swinkels@wur.nl))

Door op 'ja' te klikken geeft je aan dat je bovenstaande hebt gelezen en ermee instemt:

- ja, ik doe mee aan dit onderzoek.

Vraag 1:

Welke nummer hangt er op je scherm?

*1/2*

Vraag 2:

Wat is de totale hoeveelheid broodjes die je in je plastic zakje(s) hebt?

*0 tot 32 d.m.v. schuiven*

Breng het zakje(s) met broodjes terug naar de onderzoeker, ga daarna verder met de vragenlijst

Vraag 3:

Geef aan in hoeverre de volgende uitspraken voor jou gelden:

*Totaal mee oneens/oneens/een beetje mee oneens/niet oneens of eens/een beetje mee eens/eens/totaal mee eens*

- Ik heb een hoeveelheid broodjes gevonden die nauwkeurig overeenkomt met mijn voorkeuren
- Ik heb een combinatie broodjes gevonden die nauwkeurig overeenkomt met mijn voorkeuren
- Ik ervoer controle tijdens het kiezen van de broodjes
- Ik kon invloed uitoefen op de hoeveelheid broodjes die ik wilde kiezen
- Ik kon invloed uitoefen op de combinatie broodjes die ik wilde kiezen
- Ik vond het kiezen van de broodjes plezierig
- Ik vermaakte me tijdens het kiezen van de broodjes
- Ik vond het kiezen van de broodjes leuk
- Ik vond de gepresenteerde broodjes erg vers ogen

Vraag 4:

Hoe hongerig was je voor je dit onderzoekje begon?

*Heel erg hongerig/hongerig/een beetje hongerig/niet hongerig of vol een beetje vol/vol/heel erg vol*

Vraag 5: Wat is je geslacht?

*Man/vrouw*

Vraag 6:

Wat is je leeftijd?

*16 tot 90 d.m.v. schuiven*

Vraag 7:

Als je verder nog opmerkingen hebt voor de onderzoeker, schrijf ze dan hieronder:

*Blanc*

Vraag 8:

Aan Wageningen Universiteit worden vaker studies verricht waarvoor wij op zoek zijn naar deelnemers. Mogen wij je hiervoor af en toe (maximaal 1 keer per maand) benaderen per e-mail?

Zo ja, schrijf hieronder je e-mailadres (niet nodig als je al op deze lijst staat):

*Blanc*

Dit waren de vragen. Hartelijk dank voor je medewerking aan mijn onderzoek.

Vergeet niet op het pijltje rechtsonder te klikken. Hierna mag je het lokaal weer verlaten.

Bij de uitgang kun je een chocolade snack pakken als dank voor je deelnamen.

Ik wens je nog een prettige dag!