Drivers of Dutch Consumer Purchase Intentions for Meal Kits and Traditional Meals

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Master Thesis Marketing

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Abstract

Over the years, consumer preference for a meal has changed. The demand for convenience food, which offers a solution to consumers' time constraints, has increased. The concept of "convenience food" has several categories. One of these relatively new categories is a meal kit, which responds to both the demand for convenience and health. The idea of a meal kit is that the consumer receives a box with the right amount of ingredients and a recipe, so consumers can cook the meals themselves. Previous studies have shown that a meal kit is not necessarily the same as the broad term "convenience food," but is only part of it. A meal kit also differs from a traditional meal, namely with regard to shopping (not having to find the correct quantities of groceries) and cooking (not having to come up with a recipe yourself). This study examines whether the drivers (1) "reduced choice overload," (2) "ease of use," and (3) "involving family members" are different for the purchase intention of a meal kit compared to a traditional meal. The study also examines the effect of "lack of time" and "cooking skills" as moderating variables on these relationships. The sample comprised 188 observations. To check the scales, factor analysis and reliability analysis was used. This analysis shows that the scale for "reduced decision making" consisted of two dimensions: (1) "stress about decision making" and (2) "options for decision making." After these checks, the data was analyzed by means of a Multiple Regression Analysis. The results of the study show that there is no evidence that the drivers "stress about decision making," "ease of use," and "involving family members" are different for the purchase intention of a meal kit than for a traditional meal. All these drivers have no significant effect on purchase intention. However, the driver "options for decision making" differs. As the number of sufficient tasty meal options for a traditional meal increases the purchase intention for a meal kit vs. a traditional meal decreases, contrary to the expected choice overload. As the number of sufficiently tasty meal options for a meal kit increases, the purchase intention for a meal kit vs. a traditional meal also increases. The latter is against the expectation that people would have a greater purchase intention for a meal kit than for a traditional meal. A meal kit would limit the choice overload (which a traditional meal does have with an infinite number of choices when one can cook) because one can only choose from a limited number of dishes per week. Furthermore, the results show that no evidence was found that "lack of time" affects the relationship "involving family members" to "purchase intention of a meal kit vs. a traditional meal" and no evidence was found that "cooking skills" influence the relationship "ease of use" to "purchase intention of a meal kit vs. a traditional meal." However, evidence has been found that "lack of time" influences the relationship of "ease of

use of a traditional meal" with "purchase intention of a meal kit vs. a traditional meal." Contrary to expectations, this effect shows that the ease of use of a traditional meal is so high that, even when one suffers from of lack of time, the purchase intention for a traditional meal is still greater than for a meal kit. This is against expectations because consumers are expected to be more inclined to choose a quick easy meal kit as opposed to a traditional meal in case of lack of time. The results provide both additional and first insights into the literature on drivers of meal kit vs. traditional meal purchase intentions. Managers and marketers can use the insights of this study to improve the purchase intention of meal kits and therefore their sales.

Key words: convenience food; meal kit; traditional meal; ease of use; reduced decision making; involving family members; cooking skills; lack of time.

Preface

I proudly present my Master Thesis: “Drivers of Dutch Consumer Purchase Intentions for Meal kits and Traditional Meals.” By means of the thesis, research was done into whether the drivers for purchasing a meal kit are different from a traditional meal. The subject fits perfectly with my interests: nutrition, nutrition and more nutrition. As the daughter of two entrepreneurs in the catering industry, this passion was born from an early age.

The trajectory of the thesis started in December and ended in June. Unfortunately I was delayed midway (around March) due to serious illness within the family. In this way I would like to thank my family and friends for their support, because of this I was able to complete my thesis. They have always believed in me, which has motivated me enormously. I would also like to thank my supervisor Prof. Dr. Gerrit Antonides. The guidance from you was very pleasant, I learned a lot from your experience. In addition, I would like to thank the respondents for completing the survey questions about meal kits vs. a traditional meal. Finally, I would like to thank Fabiënne van de Kolk. She was also in the group of students supervised by Prof. Dr. Gerrit Antonides. Despite the different research topics, we were able to help each other well during the process.

Enjoy reading,

Mel Sanders

Nijmegen, June 2022

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1 Introduction

1.1 Meal kits

Changes in lifestyle, social values, technological innovations and demographic trends over the years have changed consumer meal preferences (Buckley, Cowan & McCarth, 2007; Lee & Lin, 2012). The demand for convenience food has increased, mainly due to lack of time of consumers (Warde, 1999; Lee & Lin, 2012). A traditional meal is defined by Heard, Bandekar, Vassar and Miller (2019) as: buying ingredients from the supermarket with which one can then prepare a meal. Convenience food, compared to preparing a traditional meal, offers a "meal solution" to help people cope with time constraints (RnR Market Research, 2013).

Over the years, the concept of convenience food has changed a lot (Verriet, 2015). A meal kit is a new concept within the category of convenience food that was introduced due to the demand for convenience in combination with healthiness (Yoon, Gao & House, 2022). A meal kit is defined by Heard et al. (2019) as: meal packages in boxes containing a recipe and accompanying ingredients, which are pre-portioned and individually packaged, to cook a meal from scratch.

Jackson and Viehoff (2016) indicate that a meal kit is not necessarily the same as convenience food because "convenience food" is a much broader term. Convenience food has evolved in such a way that there are multiple categories: (1) ready-to-(h)eat meals (i.e., meals that only need to be heated up, e.g., frozen pizza or spaghetti) and (2) ready-to-cook meals (i.e., meal kits) (Jackson & Viehoff, 2016; Levy, 2018). In addition, convenience food is associated by consumers with fast food, resulting in an unhealthy image because fast food contains unhealthy amounts of fat and sugar (Hertz & Halkier, 2017). Meal kits, however, are health promoting. "Meal-kit recipes were found to have health promoting qualities and frequently including vegetable ingredients" (Moores, Bell, Buckingham & Dickinson, 2020, p. 660).

Except that a meal kit is not necessarily the same as convenience food, it is also not the same as a traditional meal. As mentioned above, Heard et al. (2019) define a traditional meal as: buying ingredients from the supermarket with which one can then prepare a meal. Consumers have to look for a recipe themselves and find the necessary ingredients in the right quantities in the supermarket. However, this is not the case with a meal kit. A meal kit is a box that contains a step-by-step recipe with the right amounts of ingredients so that consumers can cook a meal themselves (Heard et al., 2019). As a result, the consumer no longer has to buy all the ingredients separately in the supermarket.

Due to its popularity and therefore high demand, meal kits are a rapidly growing industry. In the US alone, the meal kit industry was estimated to be worth $6.9 billion by 2021. The industry is expected to continue to grow, and it is estimated that the industry could generate well over $10 billion by 2024 (Van Gelder, 2022). Apart from the US, meal kits are also very popular in the Netherlands. Research by Multiscope among 3,500 Dutch people shows that the Dutch spend 700 million euros annually on meal-kit subscriptions (Van Hooijdonk, 2021). To help boosting the growth in this market and add to the literature about this subject, it can be concluded that it is interesting to do further research in the field of meal kits.

It is useful to investigate the fast-growing meal-kit industry as it can provide insight into the adoption of food innovations. A meal kit can be regarded as a type of food innovation, making it a research case. An innovation is related to the characteristics of adoption, as described in the Diffusion of Innovation Theory (Rogers, 2003). This theory "seeks to explain how new ideas or innovations are adopted, and it proposes that there are five attributes of an innovation that affect adoption: (1) relative advantage, (2) compatibility, (3) trialability, (4) complexity and (5) observability" (Scott, Plotnikoff, Karunamuni, Bize & Rodgers, 2008, p. 2). To what extent these general attributes apply to a meal kit will be discussed in Section 2.2.

1.2 Research question

The aim of this study is to investigate what the drivers are for purchasing a meal kit as opposed to cooking a traditional meal. The main drivers include the relative advantage of the meal kit and the possibility of family participation in preparing the meal. The research question to be answered for this is:

> *To what extent do the drivers of meal-kit purchase intentions differ from those of traditional meals?*

In addition, the study takes two possible moderators of these relationships into account, which are "lack of time" and "cooking skills." The degree of presence of these moderators may influence the extent to which a consumer finds a meal kit attractive. These two moderators were chosen because they are in line with the adoption theory by Rogers (2003). The relative advantage (one of the adoption characteristics) of a meal kit over a traditional meal is the time savings and ease of use, making it an interesting purchase for consumes with little time and few cooking skills. The sub question is:

How are the effects of purchase intention drivers moderated by "lack of time" and "cooking skills" of the person who is responsible for the meal within a household?

1.3 Theoretical relevance

This study provides insight into the drivers of meal-kit purchase intentions compared to those of a traditional meal, thereby complementing the literature on home cooking and meal kits. To date, much research has been done on convenience food, but not yet specifically on meal kits. Because of the differences between meal kits and other food, the adoption drivers may be qualitatively similar, as described in Rogers' theory. However, quantitatively the drivers may be different. For example, the relative advantage of meal kits may be higher than for other food for certain family types.

Because meal kits are not the same as convenience food or a traditional meal, studies related to these types of meals cannot be generalized to the concept of meal kits. Little research has been done about meal kits, and the studies that do involve meal kits, have mainly included US respondents, questioning the generalizability of the findings to other markets such as the Netherlands. This constitutes an interesting research gap because the Netherlands is one of the countries where meal kits are used a lot.

1.4 Practical relevance

By providing insight into the drivers for purchase intention of meal kits in the Dutch market, companies that offer these meal kits can adjust their marketing and communication strategies to stimulate purchases (Brunner, Van Der Horst & Siegrist, 2010). Increasing the volume of purchases can then be achieved by having existing customers buy meal kits more often or by attracting new (potential) consumers to the category.

Furthermore, the investigated moderators will give meal kit providers the opportunity to adapt their marketing and communication strategy to different consumer segments. The moderators ("lack of time" and "cooking skills"), which will be explained in Section 3.1. are based on personal characteristics. By examining the effects of moderators, segments can be created effectively, based on personal characteristics that attract a consumer to a meal kit. For example, a consumer with time scarcity and low cooking skills.

1.5 Outline

The remainder of this Master thesis is structured as follows. In Chapter 2 the theoretical framework is discussed, in which a distinction is made between the key concepts of this study.

Chapter 3 discusses the variables of this study and their hypothesized relationships. In Chapter 4, the method used to conduct the study is explained. Chapter 5 discusses the analysis of the data and the results. Chapter 6 focuses on a discussion in which the theoretical contributions and practical implications will be explained. Finally, in this chapter the limitations of the research and possible further research ideas will be explained.

2 Theoretical Framework

In this chapter, the theory on which this research is based will be discussed. A distinction is made between two key concepts: (1) convenience food and (2) meal kits. The consumption of both types of food will be explained together with the corresponding theoretical background.

2.1 Convenience food

Consumer behavior researchers see a growing trend in the consumption of convenience food, being one of the biggest trends in the food industry (Barska, 2018). Consumers eat convenience food as a solution to their problems in planning daily life (Warde, 1999). Although time saving is the most obvious element and is reflected in many studies related to convenience food (Brunner et al., 2010), researchers have also recognized that mental and physical exertion is minimized by consuming convenience food (Man & Fullerton, 1990). For this reason, convenience food is broadly defined as food that allow consumers to save time, and physical and mental effort, in food activities such as grocery shopping, meal cooking, consumption, and post-meal activities (Darian & Cohen, 1995; Candel, 2001; Buckley et al., 2007).

The demand for convenience food has grown strongly over the years, making it important to understand the underlying reasons for consumption of convenience food (Brunner et al., 2010). The concept of convenience food originated in the 1920s (Scholliers, 2015). Technological innovation (e.g., microwave) and social changes are the causes of the growing popularity of convenience food (Scholliers, 2015). Scholliers (2015) refers to the changed household structure, higher labor force participation of women, individualism, inventive manufacturers, time use, and poor cooking skills as drivers of the increased convenience food consumption. Szabo (2011) also sees the higher labor force participation of women, and the fact that women work longer outside the home, as reasons for the increase in convenience food consumption.

Consumer demand for convenience food has made it difficult for companies to compete solely on the basis of the merchandise range (Beitelspacher, Richey, & Reynolds, 2011; Lloyd, Chan, Yip & Chan, 2014). In response to competition, companies have conceived the idea to offer convenience foods in order to meet their wishes and needs better. However, the concept of convenience food products has changed over the years (Verriet, 2015). In the early history of convenience food, it consisted of canned meals, which were only affordable to the wealthy consumers of society. Due to the Second World War, the production of canned food was further developed, causing the price to fall and making it affordable for the average Dutch consumer. However, at the time there was a taboo on convenience meals because women were expected

to be able to cook for the family themselves. From the 1970s this taboo diminished and convenience food became better because of foreign recipes. Manufacturers such as Conimex and Iglo capitalized on this trend (Rich Meals, n.d.; Van De Bor, 2019). Around 1990, ready-to-(h)eat meals arose. Ready-to-(h)eat meals are meals that no longer need preparation, they only need heating prior to dinner (Cho, Bonn, Moon, & Chang, 2020). Ready-to-(h)eat meals can be divided into frozen meals, steam meals, meal salads, microwave meals, and meals from a jar (Rich Meals, n.d.). Traditionally this type of convenience food has a bad image because it is often associated with laziness and unhealthiness (Gofton, 1995). Although attitudes towards ready-to-(h)eat meals are changing, more recent studies confirm that there is still a perception of unhealthiness and lower quality than a traditional meal (De Boer, McCarthy, Cowan & Ryan, 2004; Costa, Schoolmeester, Dekker & Jongen, 2007; Olsen, Menichelli, Sørheim & Naes, 2012). Due to the increasing demand for healthy convenience food, the "meal kit" was developed in Sweden in 2007 (Astner & Gaddefors, 2021; Yoon, Gao & House, 2022). Meal kits belong to the ready-to-cook category of convenience food (Levy, 2018). A meal kit is a food bundle of ingredients that the consumer receives in a box at their doorstep with which they can cook a meal at home themselves (Horning et al., 2021). Food bundling, which is based on the convenience trend, allows consumers to save time by buying multiple products simultaneously instead of having to buy them separately (Grunert, 2017).

Within the food industry it can therefore be concluded that the term "convenience food" has grown and diversified over the years (Hertz & Halkier, 2017). Convenience food has different definitions depending on who uses the term: producers, consumers, or scientists (Scholliers, 2015). Due to the emergence of new types of convenience foods leading to diversification, not all types of convenience foods are exactly the same. For example, a ready-to-(h)eat meal is not the same as a meal kit. It is important to realize that there are different types of convenience food and to distinguish them. In short, convenience food is a multifaceted phenomenon, making it difficult to define unambiguously (Yale & Venkatesh, 1986; Warde, 1999; Costa, Dekker, Beumber, Rombouts & Jongen, 2001; Jaeger & Meiselman, 2004; Marquis, 2005; Hertz & Halkier, 2017).

2.2 Meal kits

In 2007 the meal-kit concept (a ready-to-cook meal (Levy, 2018)) was created in Sweden (Astner & Gaddefors, 2021). A meal kit contains pre-portioned packaged ingredients for preparing a meal from scratch in combination with a recipe that describes how the meal should be prepared (Hertz & Halkier, 2017; Heard et al., 2019). The degree of complexity (Rogers,

2003) is therefore low, the meal kit innovation is relatively easy to understand and use. A meal kit differs from a traditional meal because the tasks that were previously done by the consumer (e.g., composing the meal and grocery shopping based on the ingredients of the meal) are now transferred to the producer of the meal kit, resulting in a higher degree of convenience for the customer (Inman & Nikolova, 2017), which is a relative advantage (Rogers, 2003). In short, companies that offer meal kits are selling the ease with which harried consumers can put a dinner on the table. Some companies even offer the option of adapting the meal kit to individual dietary requirements, such as vegan or vegetarian (Dubin, 2021).

Meal kits are available in various ways. First of all, there are providers that specifically focus on the sale of meal kits, such as HelloFresh and Marley Spoon. Consumers can order a meal kit online from these companies and it will be delivered to their home. Moreover, due to the growing popularity of meal kits, supermarkets have also added this type of food to their range, such as Albert Heijn with the AllerHandebox (Albert Heijn, 2022). The difference between these two types of providers is that the consumer has to take a subscription with the online "specialized" providers of meal kits, while this is not necessary with the supermarkets. Because of this, one could say that a meal kit from a "specialized" provider has a higher degree of compatibility (Rogers, 2003) than a meal kit from the supermarket because the consumer has to take out a subscription. Another difference is that the meal kits from specialized providers have to be ordered online and then delivered at home, and the meal kits from retailers can also be purchased in the physical store (Vos, 2020). Online market research by Multiscope among more than 1,000 Dutch consumers shows that the top-five most popular meal kits include: (1) HelloFresh, (2) AllerHandebox (3) Mathijs Maaltijdbox, (4) Marley Spoon, and (5) Streekbox (Multiscope, 2016).

Meal kits have grown in popularity among the Dutch in recent years. In 2019, 4.6 percent of Dutch households sometimes cooked using a meal kit, and by 2021 it had increased to 5.7 percent (Schelfaut, 2021). In addition to the fact that more consumers opt for a meal kit, the purchase frequency has also increased. According to GfK (Schelfaut, 2021), meal kits were bought on average six times a year in 2019 and more than ten times a year in 2021. The average amount spent was 271 euros in 2019 and 438 euros in 2021. Based on this information, it can be concluded that Rogers' (2003) trialability characteristic is of a high degree. Trying the new meal is easy and involved little risk.

As mentioned in Section 1.3 limited academic research has been done on meal kits, as existing research focuses mainly on convenience food in general. However, due to the

popularity of meal kits among consumers, academic interest has increased. A number of meal-kit studies have already been conducted with different perspectives.

Jackson and Viehoff (2016), Halkier (2017), and Hertz and Halkier (2017) focus on the fact that the definition of convenience food by Brunner et al. (2010) is outdated. The conclusion is that the new term "convenient food" fits better because of the diversified categories that all belong to convenience food, such as the emergence of the meal-kit concept (Hertz & Halkier, 2017).

Research has also been done on the relationship between meal kits and sustainability. Heard et al. (2019) compared the environmental effects between meal kits and regular meals from the grocery store. There is a consumer perception that meal kits have a negative effect on the environment because there is too much packaging in a meal kit (Stein, 2017; Botin-Kowacki, 2019). A meal kit contains pre-portioned ingredients which should reduce food waste during cooking (Heard et al., 2019). However, pre-portioning requires individual packages for all ingredients resulting in higher surface area-to-volume ratios. The results of Heard et al. (2019) prove the opposite: regular meals from the grocery store have greater negative effects on the environment than meal kits. Other sustainability related research on meal kits was done by Gee, Davidson, Speetles and Webber (2019). Food waste is reduced by pre-portioning ingredients, making meal kits save energy. However, meal-kit deliveries can also have a negative effect on sustainability because the supply chain and packaging requirements are different than for a grocery store. Gee et al. (2019) compared meal-kit delivery systems to traditional grocery shopping based on energy needs. The result of the research is that traditional supermarket meals are less energy-intensive than the same meal from a meal-kit delivery service.

Cho et al. (2020, p. 192) investigated the meal-kit attributes of price, convenience, menu variety, and food quality and its effects on the perceived value of meal-kit users, and the intention to use meal kits continuously. The findings are that menu variety and high food quality improve both functional and hedonic consumer value and are therefore the most important meal kit attributes. It also appears that there are differences in the perceived value of these attributes in relation to the size of a household. For single-person households the perceived value of menu variety is more positive and for multi-person households the perceived value of food quality is more positive.

Utter and Denny (2016) and Utter et al. (2019) studied health and well-being as a result of meal-kit use of families in New Zealand. The study showed that meal kits have multiple relative advantages (Rogers, 2013). Meal kits increased the quantity and quality of home-

cooked meals through reduced stress associated with grocery shopping, ease of use, reduced need to meal decision making and convenience. For these reasons, meal kits may have positive impact on home cooking, family meals, and a family's health and well-being. That is why an article was recently published by Fraser et al. (2022) that elaborates on the article by Utter and Denny (2016) and Utter et al. (2019). This article is about the role of meal kits within an Australian family setting: understanding why families use meal kits and what the consequences are for nutrition, family dynamics, social and mental health are central to this study (Fraser et al., 2022). Results of this qualitative study are that (1) families experience food benefits through meal kits (e.g., increased vegetable intake), (2) families see meal kits as an opportunity to improve food literacy, (3) women experience less mental burden due to lower decision-making and, (4) meal kits ensure that the family becomes more involved in the planning, preparation and cooking of a meal. In short: it has a positive effect on the well-being and health of a family, which are all relative advantages (Rogers, 2003). The observability characteristic of Rogers (2003) differs in degree, some benefits of using the meal kit innovation are directly visible and some are not. Less mental burden by women and long-term health, for example, are not directly visible, however more family involvement is.

2.3 Conclusion convenience food & meal kits

It can be concluded that convenience food is a solution to problems in planning daily life. It saves consumers time, and physical and mental effort in food activities. Convenience food has been around for centuries, and its definition has changed a lot over the years. It is difficult to give an unambiguous definition because different types of convenience food can be distinguished. A concept within convenience food that responds to the demand for "health" is a meal kit, which is conceived in Sweden. A meal kit belongs to the ready-to-cook category of convenience food. The consumer receives a box containing a recipe and the correct number of ingredients to prepare a meal from scratch. There are specialized suppliers of meal kits, but due to popularity, supermarkets have also started selling meal kits. Because meal kits are relatively new, little academic research has been done on them, although academic interest has increased. Research in the Dutch market is very limited (while it is a growing market). Recently, the positive effects of meal kits have been investigated (Utter & Denny, 2016; Utter et al., 2019; Fraser et al., 2022), but not whether these are really drivers why people consciously choose a meal kit compared to a traditional meal.

3 Conceptualization

In this chapter the variables that will be used in the research are explained and the hypotheses are formulated on the basis of existing literature. Subsequently, a conceptual model will be presented in which the relationships between the variables are visualized.

3.1 Variables & hypotheses

3.1.1 Dependent variable

Meal kit vs. traditional meal purchase intention

The dependent variable of this study is "meal kit vs. traditional meal purchase intention." It will be investigated whether the independent variables (which are based on Utter & Denny (2016), Utter et al. (2019), and Fraser et al. (2022), mentioned below) are drivers for consumers to have the intention to purchase a meal kit. The "vs. a traditional meal" part of the dependent variable indicates that it will also be investigated to what extent the purchase intention of these drivers will differ for a meal kit compared to a traditional meal. The choice for purchase intention instead of actual behavior is based on Ajzen's Theory of Planned Behavior (TPB). Central to the theory is that actual behavior arises from the intention to perform certain behavior. A person's intention is determined by three elements: perceived behavior control, attitude, and subjective norm. (Ajzen, 1987; Ajzen, 1991). One could say that the variable actually consists of two parts: (1) meal kit purchase intention and (2) traditional meal purchase intention. However, these two will be merged into one for comparison purposes, this is taken into account in the analysis (see Section 5.2.3).

3.1.2 Independent variables & moderators

Reduced choice overload

The simple question of "what are we eating today?" has become a topic of discussion and uncertainty (Daniels, Glorieux, Minnen, Van Tienhoven & Weenas, 2015; Pollan, 2009). Dagbagli, Arruda and Araujo (2015) studied the reasons why consumers choose convenience food. This study has shown, among other things, that consumers consume convenience food because this makes it easier for them to choose a meal. People no longer have to think about the meal themselves because the provider already provides options for the meal choice. According to them, this is the same principle as in a restaurant: when the menu offers a lot of choices to a guest, it is difficult to choose (Johns, Edwards & Hartwell, 2013).

The literature associated with the choice problem, includes the theory about the choice paradox, in which the underlying idea of "less is more" is central (Waldman, 2020; Cunow,

Desposato, Janusz & Sell, 2021). Choice overload is the reason for many to not making a decision at all, and it can even make consumers more dissatisfied with their choice than if fewer options were available (Park & Jang, 2013; De Weerd, 2018). The preparation of a traditional meal requires many choices regarding the composition of the meal, and the choice of ingredients, possibly leading to choice overload.

The question is whether this driver also applies to the purchase intention for a meal kit. Utter and Denny (2016), Utter et al. (2019), and Fraser et al. (2022) indicate that meal kits reduce the need for meal decision-making. For example, a meal-kit provider offers a choice from a limited number of meals (e.g., six). This choice is unlike the one made in the supermarket where one can choose everything that is wanted. If one finds it difficult to make choices, the overwhelming number of products does not make it easy (Burkes, 2021). According to the choice paradox, a pre-set meal composition and fixed ingredients tend to reduce the choice overload, thus making meal kits relatively attractive.

It is interesting to see whether reduced choice overload drives Dutch consumers to purchase a meal kit, especially considering the prediction that the choice overload will increase in the coming years. In contrast to this study, the results of Denny and Utter (2016), Denny et al. (2019), and Fraser et al. (2022) are based on qualitative research and on another population, namely Australian families. Based on the above information, the first hypothesis is:

H1*: Reduced choice overload of a meal kit makes has a positive effect on the purchase intention of a meal kit, compared to a traditional meal.*

Ease of use

It is easy for consumers to prepare a meal at home by means of a meal kit because exactly the right number of ingredients are supplied in the box, including the recipe that they can follow step by step (Levi, 2018; Cho et al., 2020). Because the cooking instructions are easy to follow for consumers, they feel more confident to cook (Levy, 2018). Burke (2021) even mentions that the ease of using a meal kit is one of the biggest reasons to make a purchase. Easiness arises because all ingredients are ready to use. All the consumer has to do is to take the prepackaged ingredients out of the refrigerator and then start cooking according to the recipe.

It is interesting to use quantitative research to see whether Dutch consumers see ease of use as a discriminatory driver for the purchase of a meal kit compared to a traditional meal. Existing literature shows that ease of use is a cause for meal-kit purchase intention, so the second hypothesis is:

H2: *Ease of use of a meal kit has a positive effect on the purchase intention of a meal kit, compared traditional meal.*

Although ease of use is predicted to be positively related to meal-kit purchase intention, lack of time is expected to moderate this effect. Lack of time due to work schedules and other responsibilities is one of the main factors influencing a person's food choice (Bove, Sobal & Rauschenbach, 2003; Stroebele & De Castro, 2004). For example, Tate, Talke, Trofholz, Miner and Berge (2020) indicate that consumers choose quick and easy meals when they experience lack of time due to high work demands. As a solution to lack of time people opt often for easy meal solutions such as ready-to-eat meals or meal kits (Hollywood et al., 2013). On the other hand, research by Food & Retail (2021) shows that when people have more time to prepare a meal, they experiment more with different meals.

The expectation is that when people suffer from lack of time, they prefer to opt for an easy meal, but when more time is available, they opt for more complicated meals by using raw ingredients. The hypothesis is therefore:

H2a: *The positive effect of ease of use of a meal kit on the purchase intention of a meal kit compared to a traditional meal is stronger when one suffers from time constraints.*

In addition to lack of time, cooking skills are also expected to moderate the effect of ease of use on meal-kit purchase intention. Cooking skills indicate the cooking competence of consumers, which ensures that consumers are self-reliant and eat healthy food. Someone who has high cooking skills will experience a less stressful home production process. Hartmann, Dohle and Siegrist (2013) indicate that the lower a consumer's cooking skills, the greater the change of buying convenience food instead of raw fresh food. This is consistent with the results of Brunner et al. (2010). The rationale for this may be the ease referred to by Botonaki, Natos and Mattas: "Convenience food refers to the ease with which a product can be obtained, prepared, stored, served or eaten" (Botonaki et al., 2009, p. 65). The question is whether this also applies to meal kits, because these are ready-to-cook meals including an extensive recipe (Heard et al., 2019). This defines the research gap, which is why cooking skills is included as a moderating variable.

Based on the above information, cooking skills is expected to moderate the effect of ease of use on meal-kit purchase intention. The more cooking skills one has, the lower the

demand for ease of use because one can also prepare more complicated meals. The hypothesis is therefore:

H2b: *The positive effect of ease of use of a meal kit on the purchase intention of a meal kit compared to a traditional meal is weaker when one has less cooking skills.*

Involving family members

Research from 2003 to 2017 on who cooks at home still shows that women cook much more than men (Taillie, 2018). However, meal kits allow women to delegate the cooking of a meal to partners and/or children. This is made possible because the partner and/or children already have the right ingredients by means of the meal kit and because they can follow the recipe step by step (Fraser et al., 2022).

Research shows that consumers find that preparing a meal using a meal kit increases quality time with family because family members are engaged in the production process of the meal in an enjoyable way (Troy & Acosta, 2017) (Cho et al., 2020). Paay, Kjeldskov, Skov and O'hara (2012) also indicate that cooking with family members, in addition to sharing the experience of preparing a meal, is a social activity that improves relationships with each other through talking about daily life and discovering new ideas of food preparation together. Another positive effect of children being involved in meal preparation is that their vegetable intake increases. This is due to the so-called IKEA effect, which means that people tend to like things they make themselves more than someone else makes them (Radtke et al., 2019).

Taking into account this literature, from which it appears that family cooking has various positive effects, it is interesting to see whether involvement of family members also serves as a driver for purchasing a meal kit. The proposed hypothesis is:

H3*: Being able to involve family members in the preparation of a meal has a positive effect on the purchase intention of a meal kit, compared to a traditional meal.*

Although the involvement of family members is predicted to positively relate to meal-kit purchase intention, lack of time is expected to moderate this effect. The workforce has changed over the years. Today's families mainly consist of two earners because, in addition to men, women have started working outside the home. This emphasizes the busy lives of consumers (Lee & Lin, 2012). When a woman (who is still dominant in the kitchen nowadays (Van Vliet, 2019)) suffers from lack of time, other family members can relieve her because a meal kit makes it possible for men and children to cook. The hypothesis is therefore:

H3a: *The positive effect of being able to involve family members on purchase intention is stronger for a meal than for a traditional meal when one suffers from time constraints.*

3.1.3 Control variables

The control variables are discussed below, they relate to the household and personal characteristics of the person within the household who is responsible for the meal.

Age

Age influences the consumption of convenience food. The older a consumer is, the less the consumption of convenience food. Once people retire they have more time, so they do not need food that saves time. In addition, the generation effect is important. For older consumers it is a habit to prepare a meal from scratch because they have learned this from their childhood. When they grew up, not a wide range of different types of convenience food was available. Furthermore, older people are often unwilling to give up habits related to traditional cooking (Brunner et al, 2010).

Age is a necessary control variable because there appear to be differences between the age of consumers and the type of meal they prepare (meal kit vs. a traditional meal).

Income

Consumers who opt for convenience are less price sensitive than people who do not opt for convenience. So it seems that consumers are willing to pay extra for the convenience that is provided to them. However, multiple studies show that there is no relationship between convenience food and income (Brunner et al., 2010).

Nevertheless, with regard to meal kits, research by Multiscope among 1,1013 Dutch consumers shows that seven out of ten people are not interested in a meal kit because they have the perception that meal kits are expensive (MarketingTribune, 2016). Retail Intelligence Lab (Supermarkt Vakblad, 2016) has investigated how much Dutch consumers are willing to pay for a meal kit. The result of this is that the average willingness to pay is €23.21 euros. This amount is much lower than the actual price of such a meal kit, which costs on average between €35 and €40 euros. The most frequent buyers of meal kits are currently high-income households (NFO, 2021).

Because income appeared to play a role in purchasing a meal kit among Dutch consumer (as opposed to convenience food in general), it is necessary to include income as a control variable for this study.

Gender

Nowadays, it is still women who are often responsible for household chores (including cooking meals) (Hartmann et al., 2013; Martins et al., 2021). Women are therefore still dominant in the kitchen, but men are increasingly taking on cooking tasks than before. EenVandaag (Van Vliet, 2019) has conducted research among 23,879 Dutch people, which shows that a third of men indicate that they cook one to three evenings a week, and in four out of ten households the man cooks four times a week or more. Similarly, another study found that the gender gap has narrowed in recent decades with regard to household chores. This is especially the case for Generation X and male Millennials (Vogel, 2018). Moreover, one of the recent studies on meal kits indicates that their focus on women can be seen as a limitation (Fraser et al., 2022).

Based on the above information, it is interesting with a view to the future to look at the difference between men and women in purchasing meal kits, which is why gender is included as a control variable in this study.

Presence of children

Several studies show that there is a positive relationship between the presence of children in a household and the consumption of convenience food (Anderson & Thomas, 1971; Darian, Tucci & Stanton1987; Hall & Schroeder, 1970; Redman, 1980; Tinklin, Fogg & Wakefield, 1972). Lee & Lin (2012) indicate that the need for convenience is greater when children are present. In other words: the more children in the household, the more demand for convenience food (Botonaki, Natos & Mattas, 2008). Moreover, they indicate that the need for convenience food is the greatest during week-days. These studies support the theory of household production: when people spend time taking care of children, they have less time to cook, resulting in a high need for convenience.

In addition, parents often opt for convenience food because the children themselves want it (Rahkovsky, Jo & Carlson, 2018). However, it has also been found that the presence of children in the family generally reduces the consumption of convenience food (Brunner et al., 2010); Candel, 2001). Literature shows that households with children perceive cooking a meal as a social duty and a symbol of the family life (Daniels et al., 2012).

There is mainly existing literature available on the relationship between the presence of children in a household and convenience food. However, convenience is a broad concept and not necessarily the same as a meal kit (Viehoff, 2016; Hertz & Halkier, 2017), making it interesting include the presence of children as a control variable.

3.2 Conceptual model

Figure 1 shows the conceptual model, in which the relationships between the variables mentioned in Section 2.2 are visible (Vennix, 2019). The conceptual model consists of three independent variables "reduced choice overload," "ease of use" and "involving family members" which are all product-related (meal kit) features. The independent variables all affect the dependent variable "meal-kit vs. traditional meal purchase intention".

In addition, there are two moderator variables: "lack of time" and "cooking skills." The moderating variables (also called interaction variables) are variables that influence the relationship between the independent variables and the dependent variable (Vennix, 2019). In contrast to the independent variables, the moderators are personal characteristics and situational characteristics. We believe that lack of time and cooking skills have no direct effect on meal-kit purchase intentions which is why they are not considered as independent variables. In contrast, choice overload, ease of use, and the possibility of family participation, may have direct effect on meal-kit purchase intention which may be moderated by lack of time and cooking skills.

Finally, there are control variables, all of which have a direct effect on the dependent variable "meal-kit vs. traditional meal purchase intention." Due to the estimation of the direct effects, the possible indirect effects via the independent variables or moderators are not taken into account. The control variables are personal characteristics.

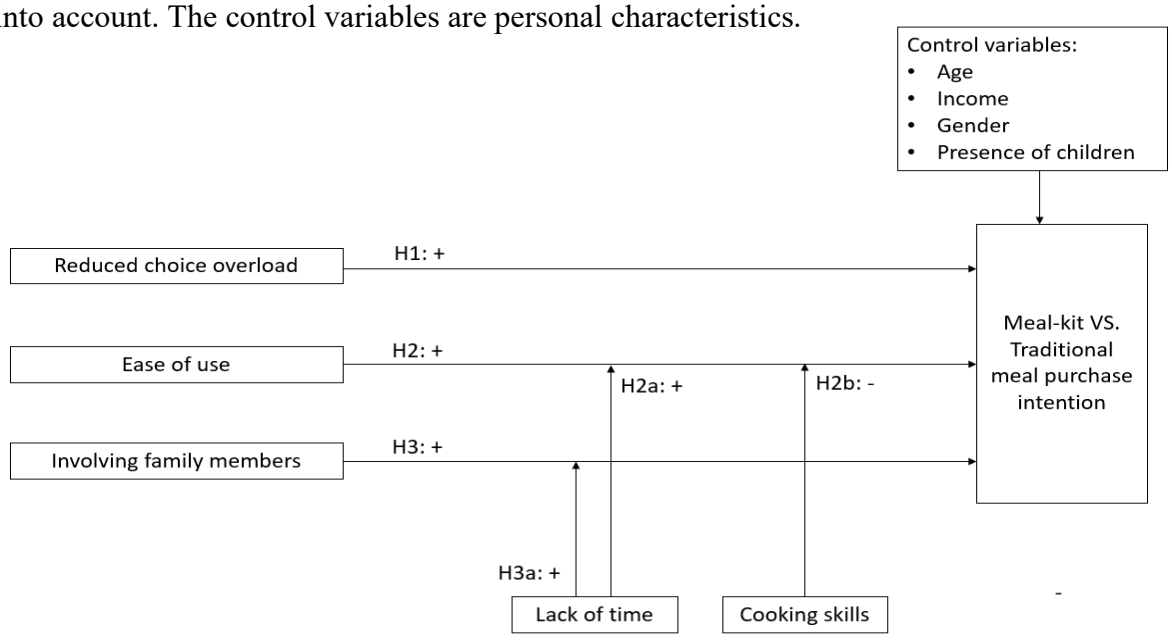

Figure 1: Conceptual model

4 Method

In this chapter, the method of research will be explained. First, the research design and the choice of the sample drawn from the population will be discussed. The measures will also be explained, i.e., how the variables are operationalized by means of scaling. Moreover, it will be explained which research ethics were taken into account during the research. Finally, the analysis procedure is explained, including the statistical technique with which the collected data was analyzed.

4.1 Research design

A study of a quantitative nature has been chosen. Besides the fact that almost no quantitative research has been done in the existing literature on the drivers for meal-kit purchases (as mentioned in Section 1.3), the reason for conducting quantitative research is that the larger sample size increases the external validity (also known as generalizability) of the results (Myers, 2013).

There are several ways to collect data in quantitative research (Vennix, 2019). The data from this study was collected by means of an online survey set up in the Qualtrics program. The choice for an online survey is based on a number of reasons. First of all, many people could be reached in a short period of time, despite the fact that the researcher and respondents are in different geographical locations (Bachmann & Elfrink, 1996; Taylor, 2000; Yun & Trumbo, 2000). In addition, people with certain characteristics could be reached quickly (Wright, 2005). In the Netherlands, consumers who purchase meal boxes are underrepresented (Multiscope, 2020), but it was essential that these people were questioned in the survey. The online survey was placed on online meal-kit related communities of which these consumers are part. Moreover, the use of an online survey has resulted in cost savings (Bachmann & Elfrink, 1996; Couper, 2000). In contrast to traditional written surveys, no costs had to be incurred for, for example, printing paper and shipping (Ilieva, Baron & Healy, 2002). Finally, the collected data could be directly transferred to the statistical program SPSS, so it did not have to be entered manually, which saved a lot of time.

The link to the online survey has been posted on the social media channels Facebook and LinkedIn with the request to complete the survey. Because Multiscope (2020) shows that there are more consumers in the Netherlands who do not use meal kits than consumers who do, a snowballing technique has been used with regard to recruiting respondents who do use meal kits. Snowball sampling is a technique in which the researcher starts with a small group of

contacts that meet the research criteria. In this study, these are acquaintances of the researcher of whom the researcher knew that these consumer use meal kits. This small group was then asked to recommend other respondents who met the research criteria and who might be willing to complete the survey, and so on (Parker, Scott & Geddes, 2019). To avoid that only acquaintances of the researcher would be included in the sample, the survey was also uploaded within Facebook groups and forums for people with meal kits.

A pre-test was performed to ensure the validity of the study. The pre-test was administered to 5 potential respondents, who could possibly belong to the sample but were not included in the actual study. The purpose of this pre-test was to improve the survey in order to make it optimally suited to the target group.

4.2 Sample

The sample consisted of Dutch respondents who did or did not use meal kits for their dinner. It was decided to include both groups in the sample because this is the only way to check whether the drivers for meal-kit purchase are actually discriminatory compared to a traditional meal without a meal kit. The number of Dutch people who buy a meal kit every week is 4% (approximately 560,000 consumers) (Multiscope, 2020). In order to divide the sample equally between meal-kit purchasers and non-meal-kit purchasers, the meal-kit purchasers have been oversampled.

The sample is limited to male and female respondents aged 18 to 65 years. The choice to include both men and women in the sample is stated in Section 2.2.2. With regard to age, a lower bound of 18 years has been chosen based on the fact that most young people in the Netherlands leave their parental home between the ages of 18 and 30 (CBS, 2021). When people start living on their own, dinner must also be cooked for themselves (Gram, Hogg, Blichfeldt & Maclaran, 2015), so from this age it should be possible to purchase meal kits. An upper bound has also been chosen. The elderly have many obstacles in the adoption of new product innovations (Lunsford & Burnett, 1992), which means that they are less likely to purchase new concepts such as a meal kit. In addition, the elderly have a routinized and traditional beliefs regarding their food choice from the age of 65 (Falk, Bisogni & Sobal, 1996), which means that an upper bound of 65 years has been chosen.

The sample size is one of the most important criteria because it gives a certain amount of statistical power in the finding results. In multiple regression analysis, the minimum number

of respondents is 5 for each variable. However, the preferred ratio is 15 or 20 observations to one variable because this gives more power. In this research model there are five variables (three independent variables and two moderating variables): resulting in 5x20=100 required observations. Prior to the execution of the research, non-response was taken into account, the non-response rate is on average 67% (Lindemann, 2021). For this reason, the gross sample size had to be 167 observations.

4.3 Measures

Scales were used to make the variables of this study measurable. Whenever possible, existing scales have been used to increase the validity and reliability of this study, as these scales have already proven their validity in previous literature. When no scale was available, new items were developed. The chosen scales per variable can be found in Table 1 and the complete survey based on these scales can be found in Appendix A.

Table 1: Operationalization

	Items	**Literature**
Meal-kit vs. traditional meal purchase intention (dependent variable)	1) I will buy this [meal kit / traditional meal] 2) Next time I am buying a meal, I will choose a [meal kit / traditional meal] 3) I prefer a [meal kit / traditional meal] to a [meal kit / traditional meal → opposite]	(Mai & Hoffmann, 2015)
Reduced choice overload (independent variable)	1) I experience stress from the number of options I can choose for a meal 2) I spend a long time thinking which dish I want to cook 3) I think the number of options is enough to choose from 4) Between the number of options there is always something I like to eat	No existing literature

Ease of use (independent variable)	1) A [meal kit / traditional meal] will be complicated / will be simple to use 2) A [meal kit / traditional meal] will take a lot of effort / will take a little effort 3) A [meal kit / traditional meal] will be confusing / will be clear 4) A [meal kit / traditional meal] will take a long time / will take a short time 5) A [meal kit / traditional meal] will require a lot of work / will require little work 6) A [meal kit / traditional meal] will be slow / will be fast	(Dabholkar, 1994) (Bruner, 2015)
Involving family members (independent variable)	1) A [meal kit / traditional meal] makes it possible for my children to cook a meal 2) A [meal kit / traditional meal] makes it possible for my partner to cook a meal 3) A [meal kit / traditional meal] makes it possible that I can hand over my cooking task to every person in my family 4) Preparing a [meal kit / traditional meal] motivates to cook together with my family members	No existing literature
Lack of time (moderating variable)	1) "So much to do, so little time"; this saying applies very well to me	(Mittal, 1994) (Andrews & Smith, 1996)

	2) I need more hours in the day to get my work done 3) I feel like I have a lot of time on my hands 4) I feel like no matter how hard I work, I'll never get caught up 5) I am always in a rush	(Davies & Madran, 1997) (Brunner et al., 2010)
Cooking skills (moderating variable)	1) I consider my cooking skills as sufficient 2) I am able to prepare a hot meal without a recipe 3) I am able to prepare gratin 4) I am able to prepare soup 5) I am able to prepare sauce 6) I am able to bake cake 7) I am able to bake bread	(Brunner et al., 2010) (Van Der Horst et al., 2010) (Hartmann et al., 2013)

4.3.1 Dependent variable

Meal-kit vs. traditional meal purchase intention

With regard to the purchase intention of a meal kit versus a traditional meal, the scale developed by Mai & Hoffmann (2015) was used. This scale was chosen because it is based on a recent study (2015) and because the items have a Cronbach's alpha of .85, making it an internally reliable scale. The scale consists of three items, which respondents can rate using a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree) (Mai & Hoffmann, 2015).

4.3.2 Independent variables

Reduced choice overload

No existing scale could be found for "reduced choice overload," so new items were developed. The validity and reliability of these items will be checked in the analysis. As described in Section 3.1.1, unlike a traditional meal, a meal kit would reduce the number of choices for a meal because meal kit providers offer only a few options for dishes (e.g. six different dishes). For this reason, the four items developed are focused on the amount of choice of a meal.

Respondents can rate the amount of choice by evaluating the items with a seven-point Likert scale, which ranges from 1 (strongly disagree) to 7 (strongly agree).

Ease of use

To find out the perceived ease of use of a meal kit compared to a traditional meal, the scale developed by Dabholkar (1994) was used. It is a seven-point semantic differential scale which measures "a person's beliefs concerning the time and effort involved in a specified activity" (Bruner, 2015, p. 285). Dabholkar (1994) reported a Cronbach's alpha of .90 and construct reliabilities of .86 and .92.

Involving family members

No useful scale has been found for the extent to which consumers consider that they can involve family members in preparing a meal. For this reason, new items were developed. In total, four items have been developed which can be assessed by respondents by means of a six-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). The validity and reliability was checked in the analysis.

4.3.3 Moderating variables

Lack of time

The scale developed by Brunner (2010) was used for the variable lack of time. The scale consists of five items which are based on previous scales by Mittal (1994), Andrews & Smith (1996) and Davies & Madran (1997). Brunner's scale has a Cronbach's alpha of .80, making it an internally reliable scale. Respondents can indicate their degree of lack of time by evaluating the items with a seven-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree) (Brunner, 2010).

Cooking skills

The scale used was developed by Hartmann et al. (2013) to measure cooking skills of European adults. The scale consists of seven items, which are based on Brunner et al. (2010) and Van Der Horst et al. (2010). By assessing the items one by one on the basis of a six-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree), respondents were able to evaluate their own cooking skills (Hartmann et al., 2013). This scale was chosen because it was developed fairly recently, it is based on European food (which is in line with this study) and because the scale has been validated by means of a test-retest analysis, confirming that it is a reliable and consistent instrument (Hartmann et al., 2013, p. 125).

4.4 Research ethics

Research ethics refers to a wide range of norms and values that aid in conducting scientific activities (The Norwegian National Research Ethics Committees, 2019). Researchers must meet several ethical standards when conducting research with human respondents (Smith, 2003). “There is a fundamental moral requirement to treat those people in accord with standards and values which affirm their essential humanity” (Oliver, 2010, p. 12). Ethical requirements were continuously taken into account in the various phases of this research, both in the design of the survey, the collection of the data and the analysis and reporting.

When drafting the survey informed consent has been taken into account. Informed consent means that the respondents were informed prior to the survey of the research information that is relevant to them and after which they agreed to participate in the research (Ensie, 2017). The rights of the respondents were stated in the introduction of the survey, with the aim of making these clear to them. First of all, the anonymity of the respondents was taken into account. Anonymity is one of the most important aspects of research ethics which ensures that privacy and confidentiality of the respondents can be guaranteed (Vainio, 2012). When completing the survey, the respondents did not have to enter a name, and further personal data regarding age, gender and income were used exclusively for research purposes. Furthermore, participation in the study was voluntary and respondents had the option to stop completing the survey unfinished, thereby avoiding any obligation (Crow, Wiles, Heath and Charles, 2007). Moreover, only respondents aged 18 years or older were used. In the introduction the question was asked if anyone could confirm this. Because only respondents over the age of 18 were included in the study, the researcher did not have to ask permission from parents of guardians. In the Netherlands, the rule applies that permission is no longer required from the age of 16. However, below this age, consent is needed to provide additional protection, as children are less aware of the risk of sharing their data and less aware of their rights (Europese Commissie, n.d.)

Finally, the data was handled accurately and carefully during the analysis and reporting. The data has been processed solely for the purpose of this master thesis and access to the survey responses is not granted to third parties.

4.5 Analysis procedure

The data collected has been transformed into the online statistics program SPSS. In SPSS, the data was analyzed by means of a regression analysis. The purpose of a regression analysis is to

estimate linear dependence of a dependent variable (Y) on a preselected set of independent variables (X) (Farrar & Glauber, 1967; Hair, Black, Babin, & Anderson, 2014). The regression analysis therefore examined whether the independent variables "ease of use," "involving family members" and "reduced choice overload" have a significant effect on the dependent variable "meal-kit vs traditional meal purchase intention." Because multiple independent variables were used, this is referred to as a multiple regression analysis (Hair et al., 2014).

Subsequently, the moderators "lack of time" and "cooking skills" were included in the multiple regression analysis. According to Hair et al. (2014), adding moderators increases the relevance of the research and increases the complexity of the hypothesized relationships, making the research more realistic. The moderating variables "lack of time" and "cooking skills" are of metric measurement level, because a Likert scale can be treated as an interval scale (Stevens, 1946; Wu & Leung, 2017). All moderators met the assumptions, so the interaction slopes were included in the regression analysis.

5 Results

In this chapter the results of the analysis are presented. First, the descriptive statistics will be presented and discussed. Secondly, the required assumptions for a regression analysis will be explained and checked. Finally, the outcome of the analysis is discussed.

5.1 Sample

The online survey was created using the Qualtrics program. A total of 306 respondents were collected. However, there was one respondent who did not agree with the conditions of the introduction, that was removed from the analysis. In addition, the respondents who indicated that they were not responsible for dinner, who completed the survey incompletely by stopping along the way, and who were above the stated upper bound of 65 years of age, were filtered out prior the analysis. The final sample size consisted of 188 observations.

The descriptive data of the sample size is shown in the first two columns of Table 2. First, there was an unequal distribution in terms of gender, 22.9% of the sample were male and 77.1% were female. This is a predictable outcome since, as mentioned in Section 3.1.2, although men are increasingly cooking women are still dominant in the kitchen (Van Vliet, 2019). With regard to age, the set lower and upper bounds were 18 and 65 years respectively, the mean age of the respondents was 36.52 years. Dividing the scale variable "age" into categorical variables with age categories, the mode was 18 – 25 years, 34.6% of the respondents belonged to this age category. The other percentage scores for age categories are shown in Table 2. Moreover, the mean of number of children in the respondents' households was 2.01. 57.7% of the respondents had no children, 9.6% had 1 child, 25.5% had two children, 8.5% had three children and 3.7% had four children. Finally, the mode regarding the net monthly income of a household was 4001 – 5000 euros. The percentage distribution per income class is shown in Table 2.

The socio-demographic characteristics of the sample are compared with the population. The last two columns of Table 2 represented the Dutch population figures. It can be concluded from the comparison that the sample was not a fully representative reflection of the population. However, given the scope of this study, this is not a problem. Individuals responsible for cooking dinner were studied, which resulted in differences between the sample and the population. For example, due to the scope of the research, the majority consisted of women.

Table 2: Socio-demographic sample and population statistics (CBS, 2020a; CBS, 2020b; CBS, 2020c)

Socio-demographic characteristics sample	**% of total (N) = 188**	**Socio-demographic characteristics population**	**% of total (N) = 17,407.585**
Gender		***Gender***	
Male	22.9	Male	49.7
Female	77.1	Female	50.3
Age		***Age[1]***	
18 – 25 years old	34.6	15 – 25 years old[2]	12.3
26 – 35 years old	19.7	26 – 35 years old	12.9
36 – 45 years old	11.2	36 – 45 years old	11.9
45 – 55 years old	27.1	45 – 55 years old	14.2
55 – 65 years old	7.4	55 – 65 years old	13.6
Number of children		***Number of children***	
0 children	52.7	0 children	66.5
1 child	9.6	1 child	14.3
2 children	25.5	2 children	13.9
3 children	8.5	3 or > children[3]	5.3
4 children	3.7	-	-
Net monthly household income	8.0	***Net monthly household income[4]***	5.1
0 – 1000 euro	8.5	0 – 1000 euro	31.6
1001 – 2000 euro	19.1	1001 – 2000 euro	33.8
2001 – 3000 euro	19.7	2001 – 3000 euro	19.0
3001 – 4000 euro	25.5	3001 – 4000 euro	6.7
4001 – 5000 euro	10.6	4001 – 5000 euro	2.3
5001 – 6000 euro	8.5	5001 – 6000 euro	1.6
> 6000 euro		> 6000 euro	

5.2 Preliminary analyses

Factor analysis and reliability analysis were used to check the scales of the variables, to be explained below. Both techniques aim to find a structure that underlies the items. Reliability analysis looks at the degree of internal consistency and factor analysis looks at dimensionality (Field, 2018). Finally, Section 5.2.3 provides an overview of the descriptive statistics of all variables.

[1] Cumulatively, the percentage of "age" does not reach 100% for the population because only 15-65 years are considered.
[2] In contrast to this study, CBS uses a lower age limit of 15 years.
[3] In contrast to this study, in which categories of 3 and 4 children are separated from each other, CBS uses > 3 children per household.
[4] Contrary to this study, which looked at monthly income per household, CBS reports the annual income level per household. For this reason, the CBS income has been divided by 12.

5.2.1 Factor analysis

As a first step, the items pointing in wrong directions were reversed. Subsequently, the extent to which the items loaded on one factor (an underlying dimension related to the variables of the research) was examined. With regard to each of the variables "lack of time," "cooking skills" and "purchase intention," only one underlying dimension was found. In other words: all items of "lack of time" loaded on one factor, all items of "cooking skills" loaded on one factor, and all items of "purchase intention" loaded on one factor. However, the analysis of two of the independent variables ("ease of use" and "involving family members") showed that the items loaded on two factors. This clearly showed that these variables concerning a "traditional meal" and a "meal kit" became two different factors and therefore served as separate variables, resulting in more independent variables: "ease of use (meal kit)," "ease of use (traditional meal)," "involving family members (meal kit)," and "involving family members (traditional meal)." Finally, factor analysis of the last independent variable ("reduced choice overload") indicated that both the items related to a traditional meal and a meal kit loaded on two factors. The items "I experience stress from the number of dish options I can choice when cooking a traditional meal" and "I think long about which dish I want to cook with I make a traditional meal" together could be seen as the underlying dimension "stress about decision making (traditional meal). The items "I find the number of options of a traditional meal sufficient to choose from" and "Between the number of options of a traditional meal there is always something I like to eat" together could be seen as the underlying dimension "options for decision making (traditional meal)". Moreover, with regard to a meal kit, the items "I experience stress from the number of dish options I can choose from a meal kit" and "I think long about which dish I want to cook when cooking a meal kit" could be considered together as the underlying dimension "stress about decision making (meal kit)". Furthermore the items "I find the number of options of a meal kit sufficient to choose from" and "Between the number of options of a meal kit there is always something I like to eat" together could be seen as the underlying dimension "options for decision making (meal kit)." The final output per variable can be found in Appendix B.

5.2.2 Reliability analysis

After the factor analyses, reliability analyses were performed to check the reliabilities of the scales used. The criterion that is taken into account in a reliability analysis is Cronbach's alpha, and based on this it is decided whether a scale is sufficiently reliable. Cronbach's alpha ranges from 0 to 1, values around .80 are considered as a good (reliable scale) and "values from .60 to

.70 deemed the lower limit of acceptability" (Hair et al., 2014, p. 122). The limiting values of Hair et al. (2014) have been applied in this study. Table 3 showed the corresponding Cronbach's alpha per variable. Note that based on the factor analysis, the variable "reduced choice overload" can be divided into two new independent variables "stress about decision making" and "options for decision making." Moreover, note that based on the factor analysis, each independent variable could be divided into one related to a meal kit and one related to a traditional meal. A traditional meal was abbreviated with TM and meal kit with MK. All variables showed sufficient alpha levels except "stress about decision making (meal kit)." For this reason, care should be taken in interpreting the results of this variable.

Table 3: Reliability analysis

Variable	**Cronbach's α**
Stress about decision making (traditional meal)	.705
Stress about decision making (meal kit)	.582
Options for decision making (traditional meal)	.611
Options for decision making (meal kit)	.746
Ease of use (traditional meal)	.879
Ease of use (meal kit)	.872
Involving family members (traditional meal)	.822
Involving family members (meal kit)	.708
Purchase intention	.847
Lack of time	.790
Cooking skills	.821

5.2.3 Transformation of dependent variable

As mentioned in Section 3.1.1, one could argue that the dependent variable "meal kit vs. traditional meal purchase intention" consists of two parts: (1) meal kit purchase intention and, (2) traditional meal purchase intention. In the survey, the same statements were presented separately from each other (i.e., in separate items) for a meal kit and a traditional meal (see the questions about purchase intention in Appendix A). In order to be able to perform the multiple regression analysis in one go, these "two parts" were converted into one variable: "meal kit vs. traditional meal purchase intention." This is done by reversing item 1 "I will buy a traditional meal" and item 3 "Next time I buy a meal, I will choose a traditional meal," resulting in the

items all pointing in the same direction. The scores on the dependent variable should be interpreted in the following way: a high (positive) score means that the purchase intention for a meal kit is higher than for a traditional meal and a low (negative) score means that the purchase intention for a meal kit is lower than for a traditional meal.

5.2.4 Descriptive statistics

The descriptive statistics relating to variables from the conceptual model are shown in Table 4. For each variable, the minimum, maximum, mean and standard deviation have been calculated using SPSS for both the traditional meal and meal kit. The variable involving family members related to a traditional meal comprised 180 observations and with regard to a meal kit 172 observations, this is due to the answer option "not applicable to me." Respondents who gave this answer were filtered out by defining them as missing values.

Table 4: Sample statistics

	N	**Minimum**	**Maximum**	**Mean**	**Std. deviation**
Stress about decision making (TM)	188	1.00	7.00	3.70	1.61
Stress about decision making (MK)	188	1.00	6.00	2.74	1.15
Options for decision making (TM)	188	1.50	7.00	5.89	1.00
Options for decision making (MK)	188	1.00	7.00	5.01	1.30
Ease of use (TM)	188	1.00	7.00	4.21	1.36
Ease of use (MK)	188	1.00	7.00	4.68	1.36
Involving family members (TM)	180	1.00	6.00	4.24	1.24
Involving family members (MK)	172	1.00	6.00	4.59	.97
Cooking Skills	188	1.83	6.00	4.73	0.80
Lack of time	188	1.20	10.20	6.13	2.53
Purchase intention	188	1.00	7.00	2.95	1.50

5.3 Multiple Regression Analysis

The statistical technique used for this study is Regression Analysis. In the case of one independent variable and one dependent variable, it is called Simple Regression. If there are multiple independent variables and one dependent variable, it is called Multiple Regression. In this study there were eight independent variables (1 = stress about decision making (traditional meal) 2 = stress about decision making (meal kit) 3 = options for decision making (traditional meal) 4 = options for decision making (meal kit) 5 = ease of use (traditional meal) 6 = ease of use (meal kit) 7 = involving family members (traditional meal) and 8 = involving family members (meal kit)), hence the choice for a Multiple Regression Analysis. Multiple Regression is defined by Hair et al. (2014, p. 265) as: "a statistical technique that can be used to analyze the relationship between a single dependent (criterion) variable and several independent (predictor) variables." The purpose of this analysis technique is to predict the values of the dependent variable with the known values of the independent variables. First, the assumptions of multiple regression were explained and checked based on the dataset. Section 5.3.2 discusses the results of the analysis, which show whether or not the hypotheses of this study have been accepted.

5.3.1 Assumptions

In order to be able to perform a valid multiple regression analysis. Several assumptions must be met. Based on the dataset, the assumptions were discussed and explained.

First of all, all variables from the model must have a metric measurement level (i.e. interval or ratio). In the model, the independent variables, moderators and dependent variable are measured using Likert scales. A Likert scale can be treated as an interval scale (Stevens, 1946; Wu & Leung, 2017), therefore all these variables fit the assumption. However, except for "age," the control variables were all categorical variables. The solution was to create dummy variables of these variables. Hair et al. (2014, p. 2) define a dummy variable as: "non-metrically measured variables transformed into metric variables by assigning a 1 or 0 to a subject, depending on whether it possesses a particular characteristic". Appendix C provides an overview of how the control variables "gender," "presence of children," and "income" have been transformed into dummy variables.

Second, the assumption of linearity must be met. This means that there must be a linear relationship between (1) each independent variable and the dependent variable and (2) between all independent variables taken together and the dependent variable. If not, it affects the accuracy of the estimate (Field, 2018).

Third, the data should show homoscedasticity, meaning that the variance along the line of best fit stays the same throughout the line (Laerd Statistics, 2018). Homoscedasticity is also known as "constant variance of the residuals." If this is not the case, there is the opposite, which is called heteroscedasticity (Hair et al., 2014). To check both linearity and homoscedasticity, a scatterplot was used (Figure 2 in appendix D). The scatterplot showed no clear pattern, therefore the second and third assumptions were met.

Fourth, the residuals should be normally distributed. Residuals are also called error terms, they are the differences between the predicted values and the observed values of the dependent variable (Statistic Solutions, n.d.). To check for normality, the histogram and normal probability plot was observed (see Figures 3 and 4 in Appendix D). Based on this it can be concluded that the residuals were normally distributed.

Fifth, the residuals should be uncorrelated. The Durbin-Watson test was used to check the correlation. If the outcome of this test is less than 1 or greater than 3, there is independence (Field, 2018). Based on the dataset, the test returned in a value of 1.924, which means that the assumption has been met (see Appendix D, Table 6)

Finally, the data should not show multicollinearity. "Multicollinearity refers to the correlation among three or more independent variables" (Hair et al., 2014, p. 270). It is important to prevent independent variables from correlating highly with each other. This can cause problems in understanding which independent variable contributes to the variance explained of the dependent variable "purchase intention" (Laerd Statistics, 2018). Multicollinearity has been checked by looking at the tolerance values. If the tolerance value >.20, multicollinearity is not a problem. But if the values are <.20, the researcher should be alert (Field, 2018). Table 7 in Appendix D, showed that not all tolerance scores were >.20 and some VIF-scores were >10. It can therefore be concluded that the assumption was not completely met. Table 8 (Appendix D) shows that the collinearity was due to the interaction terms (xy) correlating strongly with the original variables (x and y). In this case, the coefficients and p-values of the interaction terms are not affected by multicollinearity.

5.3.2 Results

Technically, all assumptions were met, so the multiple regression was allowed to be performed. The reference categories (gender = male, presence of children = 1, and income = 4001-5000 euro) of the dummy variables were excluded from the analysis. Moreover, no respondent indicated having 5 or 6 children or feeling "different from male or female" in terms of gender, therefore these dummy variables were removed from the analysis. To begin with, the F-test was

significant ($F(28,143) = 9{,}278$, $p < .05$) indicating that the model was useful and had predictive power (Field, 2018) (see Appendix E, Table 9). The adjusted R^2 was .575 (see Appendix E, Table 10), which means that 57.5% of the variance in the purchase intention of a meal kit vs. a traditional meal was explained by the independent variables of the model. The percentage of 57.5% indicated that there may be non-included variables that could have affected the dependent variable.

With regard to the hypotheses, the following could be concluded. To begin with, H1 *"Reduced choice overload of a meal kit makes it more likely to be purchased than a traditional meal"* was no longer relevant as the variable "choice overload" consisted of two underlying dimensions: (1) stress about decision making, and (2) options for decision making, each measuring a part of choice overload. Table 5 showed that both stress about decision making for a traditional meal ($\beta = .132$, $p > .05$) and for a meal kit ($\beta = -.119$, $p > .05$) had no significant effect on purchase intention of a meal kit vs. a traditional meal. In contrast, the variables options for decision making for a traditional meal ($\beta = -.442$, $p < .05$) and a meal kit ($\beta = .239$, $p < .05$) both showed a significant effect on the purchase intention of a meal kit vs. a traditional meal. The negative coefficient of options for decision making TM indicated that as the sufficient tasty meal options for a traditional meal increased, the purchase intention for a meal kit vs. a traditional meal decreased. The positive coefficient of options for decision making MK indicated that as the sufficient tasty meal options for a meal kit increased, the purchase intention for a meal kit vs. a traditional meal also increased.

Moreover, Table 5 showed that the ease of use TM ($\beta = .364$, $p > .05$) and ease of use MK ($\beta = -.180$, $p > .05$) had no significant on the purchase intention of a meal kit vs. a traditional meal, which means that H2 *"Ease of use of a meal kit makes it more likely to be purchased than a traditional meal"* was not accepted. Additionally, H2a *"The more people suffer from lack of time, the more ease of use will be a driver for the purchase intention of a meal kit than for a traditional meal"* was also not accepted, because the interaction effect ease of use * lack of time (MK) was not significant ($\beta = .050$, $p > .05$). Conversely, the interaction effect ease of use * lack of time (TM) was significant ($\beta = -.055$, $p < .05$). The negative coefficient means that the ease of use of a traditional meal decreased the intention to buy a meal kit when one has less time. This was a striking result, from which it can be concluded that ease of use TM dominates the effect of time. In Chapter 6 this finding will be discussed in detail. Finally, with regard to ease of use, it appeared that the interaction effect with cooking skills for both a traditional meal ($\beta = -.034$, $p > .05$) and meal kit ($\beta = .000$, $p > .05$) did not show a significant effect for purchase intention of a meal kit vs. a traditional meal, therefore H2b *"The more cooking skills are*

available, the less ease of use will be a driver for meal-kit purchase intention as compared with a traditional meal" was not accepted.

Furthermore, Table 5 showed that involving family members TM ($\beta = .222$, $p > .05$) and involving family members MK ($\beta = .514$, $p > .05$) had no significant effect on the purchase intention of a meal kit vs. a traditional meal, which means that H3 *"Being able to involve family members makes it more likely to buy a meal kit than a traditional meal"* was not accepted. In addition, the interaction effects involving family members * lack of time (TM) ($\beta = -.052$, $p > .05$) and involving family members * lack of time (MK) ($\beta = .081$, $p > .05$) showed no significant results, therefore H3a *"The more one is suffering from lack of time, the more involving family members will be a driver for meal-kit than for a traditional meal purchase intention"* was also not accepted.

Finally, the control variables "age," "gender," "presence of children" and "income" showed no significant effects on the purchase intention of a meal kit vs. a traditional meal (see Table 5).

Table 5: Regression of purchase intention of a meal kit vs traditional meal

Variable	**Hypothesized effect**	**Coefficient**	**Std Error**	**Hypothesis supported**
Constant		4.759	3.113	
Stress about decision making (TR)		.132	.070	
Stress about decision making (MK)	Expired[5]	-.119	.086	
Options for decision making (TR)		-.442*	.091	
Options for decision making (MK)	Expired	.239*	.074	
Ease of use (TM)		.364	.442	
Ease of use (MK)	Positive	-.180	.404	No
Involving family members (TM)		.222	.277	
Involving family members (MK)	Positive	-.514	.301	No
Lack of time		-.074	.229	
Cooking skills		.121	.496	
Interaction effects				
Ease of use * lack of time (TM)		-.055*	.027	
Ease of use * lack of time (MK)	Positive	.050	.028	No

[5] The factor analysis showed that the variable "reduced choice overload" (on which H1 was based) consists of two underlying dimensions: "stress about decision making" and "options for decision making". Because it is reasonable to assume that each of these variables partly measured "reduced choice overload" the partial results were considered.

Ease of use * cooking skills (TM)		-.034	.078	
Ease of use * cooking skills (MK)	Negative	.000	.066	No
Involving family members * lack of time (TM)		-.052	.036	
Involving family members * lack of time (MK)	Positive	.081	.041	No
Control variables				
Gender (female)		.074	.200	
Age		-.005	,007	
Presence of children (0)		.126	.281	
Presence of children (2)		-.382	.301	
Presence of children (3)		.125	.377	
Presence of children (4)		-.577	.496	
Income (0-1000)		-.299	.326	
Income (1001-2000)		-.578	.345	
Income (2001-3000)		-.320	.251	
Income (3001-4000)		-.382	.246	
Income (5001-6000)		.448	.290	
Income (6000 >)		.025	.316	

** Significant at .05*

6 Discussion

Chapter 6 discusses the findings of the study by comparing them with the literature and thereby providing practical implications. In addition, implications for managers and marketers in practice will be mentioned. Finally, the limitations of the research and some ideas for future meal kit research are discussed.

6.1 Theoretical implications

The research aim of this study was to investigate what the drivers are for purchasing a meal kit as opposed to a traditional meal. The first hypothesis stated that the reduced choice overload provided by a meal kit makes it more likely to be purchased than an traditional meal. The factor analysis showed that "reduced choice overload" cannot be seen as one factor, but that it consists of "stress about decision making" and "options for decision making". The regression analysis showed that "stress about decision making (TM)" and "stress about decision making (MK)" have no significant effect on the purchase intention of a meal kit (vs. a traditional meal). On the other hand, the variables "options for decision making (TM)" and "options for decision making (MK)" show significant effects. The negative coefficient of "options for decision making (TM)" indicates that as meal options for a traditional meal increased, the purchase intention for a meal kit vs. a traditional meal decreases. The positive coefficient of "options for decision making (MK)" indicates that as the sufficient tasty meal options for a meal kit increased, the purchase intention for a meal kit vs. a traditional meal also increases. One could argue that this is not in line with the "less is more" or "choice paradox" theory by Johns et al. (2013); Park et al. (2013); De Weerd et al. (2018); Waldman (2020) and Cunow et al. (2021), which centers on the idea that choice overload is the reason for many to not make a decision at all and that it can even make consumers more dissatisfied with their choice than it fewer options were available. This would lead to the conclusion that H1 could be rejected. However, it is reasonable to argue that the variable "options for decision making (MK)" measures the actual variable "reduced choice overload" partially, hence H1 could only be partly rejected.

The second hypothesis, which stated that ease of use of a meal kit makes it more likely to be purchased than a traditional meal, is rejected by the analysis. Previous studies by Levi (2018) and Cho et al. (2020) indicate that the ease of use of a meal kit is high due to the right number of ingredients and an easy to follow recipe. Burke (2021) and Carman, Sweeney, House, Mathews and Shelnutt (2021) showed that ease of use is a major driver for buying a meal kit, in contrast to the findings of this study. Based on this research, it is apparently believed

that when one compares ease of use of a meal kit with the ease of use of a traditional meal, one finds that a meal kit does not stand out. A possible explanation could be that consumers find it a "hassle" to have to take out a subscription with specialized meal kit providers. The effect of ease of use on purchase intention of a meal kit (vs. a traditional meal) is moderated in H2a by "lack of time." H2a stated that the more people suffer from lack of time, the more ease of use will be a driver for the purchase intention of a meal kit than for a traditional meal. This is rejected by the analysis. The interaction "Ease of use TR * Lack of time" is negative, which means that the ease of use of a traditional meal reduces the intention to buy a meal kit more the less time one has. This is a somewhat strange finding that contradicts the literature of Bove et al. (2003) and Stroebele & De Castro (2004) in which they state that lack of time due to work schedules and other responsibilities is one of the main factors that influence the choice of affect a meal. It also contradicts the literature of Hollywood et al. (2013) and Tate et al. (2020) which shows that lack of time causes people to be more inclined to choose a quick easy meal option such as a meal kit. Based on this study, the ease of use is so great that a traditional meal can easily be prepared even in a short period of time. Conversely, the effort to prepare a traditional meal leads to many meal kit purchases, even if one has a lot of time. Moreover, the effect of ease of use on purchase intention of a meal kit (vs. a traditional meal) is moderated by "cooking skills" in H2b. The hypothesis stated that the more cooking skills are available, the less ease of use will be a driver for meal-kit purchase intention as compared with a traditional meal, is rejected by the analysis. This finding fills a research gap in the literature about meal kits. Brunner et al. (2010) and Hartmann et al. (2013) indicate that the lower a consumer's cooking skills, the more likely they are to buy convenience foods rather than raw fresh foods. However, because convenience food is not by definition the same as a meal kit (Jackson & Viehoff, 2016) (see Section 1.1), the question was whether low cooking skills would also be a driver for purchasing a meal kit (vs. a traditional meal), to which the answer is no.

H3 which states that being able to involve family members makes it more likely to buy a meal kit than a traditional meal, is also rejected. Fraser et al. (2022) found in their research that meal kits ensure enhanced family participation in preparing an evening meal. The literature of Paay et al. (2012), Troy & Acosta (2017) and Cho et al. (2020) shows that cooking together with others in the household as several positive effects: (1) it increases (family)quality time, (2) it improves relations, and (3) it increases vegetable intake in case of children. It was interesting to find out whether involving family members could be a driver for purchasing a meal kit compared to a traditional meal, but this does not appear to be the case. Also, the presence of children did not appear to influence the decision to purchase a meal kit more than a traditional

meal. Hypothesis 3 is moderated by “lack of time” in hypothesis 3a, which that states that the more one is suffering from lack of time, the more involving family members will be a driver for meal-kit than for traditional meal purchase intention, is rejected. By means of his outcome of the study, an addition is made to the literature because no research has yet been conducted into the extent to which involving family members is moderated by lack of time as a driver of the purchase intention of a meal kit.

Interestingly, no significant effect was found for the control variables “age,” “gender,” “income” and “presence of children." The effect of age on a meal kit has not yet been investigated, only the effect of age on convenience food. According to Brunner et al. (2010), convenience food is less popular for older people. Contrary to convenience food, no effect was found between the relationship of age and the purchase intention of a meal kit (vs. a traditional meal). Moreover, the finding that “presence of children” has no effect, adds something new to the existing literature because it only examined the influence of presence of children on the consumption of convenience food in general and not of (the purchase intention of) a meal kit. Botonaki et al. (2008) and Lee and Lin (2012) indicate that the more children, the greater the demand for convenience food. Contrarily, Candel (2001) and Brunner et al. (2010) indicate that the demand for convenience food decreases the more children are present in a household. Because there are no significant effects for “age” and “presence of children,” the conclusion can be drawn (in line with Jackson & Viehoff, 2016) that a meal kit is not necessarily the same as “convenience food.” With regard to gender, it was interesting to investigate the effect on a meal kit purchase (vs. traditional meal) because of the trend of men cooking more often (Van Vliet, 2019; Vogel, 2018). Furthermore, this study on meal kits is an addition to the literature with regard to gender because previous research by Fraser et al. (2022) indicate that the focus on only women is a shortcoming. However, the conclusion of this study is that gender has no effect. Finally, the finding that income has no effect on the purchase intention of a meal kit (vs. a traditional meal) contradicts NFO’s research (2021) in which they indicate that meal kits are mainly purchased by high-income households.

In conclusion, the central question of this study was: “To what extent do the drivers of meal kit purchase intention differ from those of traditional meals?” No evidence was found that the drivers “stress about decision making,” “ease of use,” and “involving family members” are different for a meal kit than for a traditional meal. All these drivers (both for a traditional meal and a meal kit) have no significant effect on purchase intention. However, there is one driver that differs for a meal kit from a traditional meal: “options for decision making.” This finding adds to the existing literature. In short, the answer to the question based on this study is that

most drivers do not differ, but one does. Moreover, the sub question of this research was: "How are the effects of purchase intention drivers moderated by "lack of time" and "cooking skills" of the person who is responsible for the meal within a household?" No evidence was found that "lack of time" affected the relationship "involving family members" to "purchase intention of a meal kit vs. a traditional meal" and no evidence was found that "cooking skills" influenced the relationship "ease of use" to "purchase intention of a meal kit vs. a traditional meal." However, evidence has been found that "lack of time" influenced the relationship of "ease of use of a traditional meal" with "purchase intention of a meal kit vs. a traditional meal." The negative coefficient of this relationship means that the ease of use of a traditional meal decreased the intention to buy a meal kit when one has less time. This indicates that, despite the circumstance of people suffering from time constraints, due to the ease of use of a traditional meal, they are more likely to purchase a traditional meal than a meal kit. This finding adds to theory in that it contradicts the findings of other researchers. As mentioned above, based on the literature of Bove et al. (2003), Stroebele & De Castro (2004), Hollywood (2013), and Tate et al. (2020), consumers are expected to be more inclined to choose a quick easy meal option (e.g., a meal kit) as opposed to a traditional meal in case of lack of time.

6.2 Practical implications

The findings of this study provide helpful guidelines for managers and marketers of companies that offer meal kits. Because the direct effects of "ease of use," "stress about decision making," and "involving family members" appear to be non-significant, it can be concluded that (potential) consumers do not see these as drivers to buy a meal kit vs. a traditional meal. The sample consists of both people who already use meal kits and those who do not. Because "ease of use" is not a driver, this means that people who already use meal kits do not experience the ease of use enough that it drives them to make a purchase. Managers of companies that offer meal kits could respond to this by making the ease of use even easier. The people who do not yet use meal kits are also not convinced that the ease of use could be a driver for a purchase. Maybe it is the case that the ease of use of meal kits is not high enough. If this is true, managers could take action in making ease of use even higher, or emphasizing the ease of use advantages over a traditional meal in their communication. With regard to ease of use, it also appears that "lack of time" and "cooking skulls" do not influence the relationship to a purchase. Marketers can learn from this that they do not have to focus on the consumer who suffers from time constraints and the level of cooking skills does not play a role either. They can therefore also add recipes to their menu that take a little longer to prepare and vary in their difficulty. However,

ease of use of a traditional meal turned out to have significant effect on the purchase intention of a meal kit vs. a traditional meal. In case of lack of time, managers can conclude that even with lack of time, a traditional meal is just as easy to prepare quickly. A reason for this could be that due to lack of time one cannot buy a "last minute meal kit" from specialized providers such as Hello Fresh, therefore consumers quickly visit the supermarket to buy a traditional meal. A solution for specialized meal kit provides (e.g. Hello Fresh and Marley Spoon) could sell their meal kits in supermarket in addition to the home delivery option.

Furthermore, because "stress about decision making" has no significant effect on the purchase intention, it does not appear to be a driver to buy a meal kit vs. a traditional meal. Marketers therefore do not have to spend communication on the fact that a meal kit would cause consumers less stress due to the limited choice of meal options. In contrast, "options for decision making" turned out to be significant. Contrary to the hypothesis, consumers are more likely to purchase a meal kit vs. a traditional meal if there are enough tasty meal options to choose from. The expectation was that the limited options (e.g., six choices) would help the consumer to make a choice more easily about what to cook. What managers of meal kits companies can learn from this is that they can expand their options for a meal, because then consumers will be more inclined to purchase a meal kit instead of a traditional meal.

Finally, "involving family members" has no significant effect on the purchase intention of a meal kit vs. a traditional meal. Managers and marketers can learn from this in such a way that they do not have to focus on this in their marketing communication strategies. This also applies to "lack of time" on the relationship between "involving family members" and "purchase intention of a meal kit vs. a traditional meal." Because this interaction effect turned out to be non-significant, marketers do not have to include this in their communication.

In conclusion, the benefits of a meal kit (vs. a traditional meal) should become more apparent, marketers should ensure this. According to (potential) consumers, there are currently not so many advantages to see these as drivers for purchasing a meal kit vs. a traditional meal.

6.3 Limitations and future research

This study has a number of limitations. First of all, no distinction is made between types of meal kits. However, as stated in Section 2.2, a distinction can be made between (1) meal kits from specialized companies such as Marley Spoon and Hello Fresh where consumers take out an subscription online and (2) meal kits from the supermarket that can also be purchased physically, such as the Albert Heijn "Verspakket." In future research it could be interesting to find out whether the purchase intentions differ between these two types.

Moreover, a traditional meal has been compared to cooking using a meal kit. However, the study did not look at how people's conceptions about a traditional meal might differ, while this might be based on culture and ethnic groups (Macdiarmid et al., 2009). Therefore, future research could possibly include cultural / ethnic background as a control variable in the study.

Furthermore, the respondents from the sample are not fully representative of the population. Table 3 shows that the majority of the respondents (34.6%) are between 18 and 25 years old. However, Schoenbauer (2019) indicates that especially Millennials (people between the ages of 26 and 41) and Generation X (people between the ages of 42 and 57) buy meal kits. As can be seen in Table 2, the sample also includes people from these ages categories, but this could be more focused on in future research, for example by focusing only on them.

Besides, it could be seen as a limitation that all respondents had to answer the statements, so about both a meal kit and a traditional meal. This means that the people who stated that they "never" use a meal kit also had to fill in the survey questions about the meal kit. However, it was mentioned that they could fill this in based on expectations of a meal kit. A disadvantage of this is that these answers are therefore based on expectations and not on actual experience, resulting in the answers being less accurate and valid.

In addition to the above, it is striking that no single hypothesized driver appears to have a significant effect. As a researcher, there are doubts about using the above method, in which both respondents who do use a meal kit and respondents who do not use a meal kit are included in the same analysis. In follow-up research an ANOVA analysis could be performed with the dataset to compare the average scores on the drivers of these two groups of respondents. For example, it could be that the drivers for respondents who do buy meal kits (109 observations) have a significant effect on the purchase intention for a meal kit vs. a traditional meal and for non-buyers (79 observations) not, because non-buyers filled in answers about meal kits based on expectations about a meal kit.

Also, H1 "Reduced choice overload of a meal kit makes it more likely to be purchased than a traditional meal" could not be fully checked because the factor analysis showed that the scale developed by the researcher loads on to dimensions rather than only to "reduced choice overload." In the future, a new scale should be developed to measure "reduced choice overload" in a valid and reliable way. The two dimensions that emerge from the factor analysis are "stress about decision making" and "options for decision making." However, these factors are also

questionable because by splitting the scale they are only based on two items, which lowers the validity of the scales.

In addition, as can be seen in Figure 1, by estimating the control variables ("age," "gender," "income," and "presence of children") as direct effects, the possible indirect effects of the control variables through the independents or moderators were not included in the study. However, these indirect effects could potentially be significant, which could be investigated in further research.

Another idea for further research is to investigate whether there may be a three-way interaction effect: "cooking skills * ease of use * lack of time." It could be that when one has mastered cooking skills, the degree of ease of use can be decisive for lack of time, but not if someone has a low degree of cooking skills.

Moreover, it is a limitation that most of the respondents are likely to come from the researcher's network because the survey was posted on social media (LinkedIn and Facebook). Moreover, meal kit users have been oversampled by using snowball sampling. The sample is therefore a non-probability sample, which has the disadvantage that the researcher is not fully able to evaluate whether the population is properly reflected in the sample.

Finally, the study showed that a meal kit purchase intention (vs. a traditional meal) is higher if there are sufficient tasty meal options available for consumers to choose from. However, there is a change that too many meal choices may lead to a choice overload. For this reason, further research could be done on the exact amount of options that meal kit providers should offer in order to be effective and gain preference over a traditional meal without causing choice overload.

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Appendices

Appendix A Questionnaire

Beste meneer/mevrouw,

Bent u degene die thuis voor het eten zorgt? Dan bent u de juiste persoon voor het invullen van deze enquête! Allereerst ontzettend bedankt dat u mee wilt werken aan dit onderzoek. Mijn naam is Mel Sanders, masterstudent Marketing op de Radboud Universiteit in Nijmegen. Momenteel ben ik bezig met het afronden van mijn studie, waarvoor dit onderzoek de eindopdracht is. Het doel van het onderzoek is om de redenen van consumenten te achterhalen voor het kopen van een maaltijd box.

De duur van de enquête is +/- 5 minuten. Graag wil ik u erop wijzen dat uw deelname geheel vrijwillig is en dat u altijd kunt stoppen indien u dat wilt. De enquête is volledig anoniem en de gegevens die u achterlaat zullen uitsluitend voor dit onderzoek gebruikt worden. Wanneer u doorklikt naar de eerste enquêtevraag bevestigt u dat u 18+ bent en dat uw gegevens gebruikt mogen worden.

Succes met het invullen van de vragen.

Koken
Bent u degene die thuis verantwoordelijk is voor het avondeten?

- o Ja
- o Nee

Hoe vaak kookt u door middel van een maaltijd box (zoals HelloFresh, Marley Spoon of de Allerhandebox van Albert Heijn)?

- o Nooit
- o Minimaal 1 keer per maand
- o Minimaal 1 keer per twee weken
- o Minimaal 1 keer per week
- o Meer dan 3 keer per week

Uitleg: vanaf hier zult u koken door middel van een maaltijd box vergelijken met traditioneel koken. Traditioneel koken houdt in dat u door zelf een gerecht bedenkt / opzoekt, zelf de boodschappen hiervoor doet en de maaltijd zelf in elkaar zet.

Keuze mogelijkheden

In hoeverre bent u het eens met de volgende stellingen:

1a. Ik ervaar stress van het aantal opties dat ik kan kiezen voor een maaltijd bij het koken van een traditionele maaltijd

Sterk mee eens						Sterk mee oneens

1b. Ik ervaar stress van het aantal opties dat ik kan kiezen voor een maaltijd bij het koken d.m.v. een maaltijd box

Sterk mee eens						Sterk mee oneens

2a. Ik denk lang na over welk gerecht ik wil koken wanneer ik een traditionele maaltijd ga maken

Sterk mee eens						Sterk mee oneens

2b. Ik denk lang na over welk gerecht ik wil koken wanneer ik een maaltijd box gebruik

Sterk mee eens						Sterk mee oneens

3a. Ik vind dat het aantal opties van een traditionele maaltijd voldoende om uit te kiezen.

Sterk mee eens						Sterk mee oneens

3b. Ik vind dat het aantal opties van een maaltijd box om uit te kiezen.

Sterk mee eens						Sterk mee oneens

4a. Tussen het aantal opties van een traditionele maaltijd zit altijd wel iets wat ik lekker vind om te eten.

Sterk mee eens						Sterk mee oneens

4b. Tussen het aantal opties van een maaltijd box zit altijd wel iets wat ik lekker vind om te eten.

Sterk mee eens						Sterk mee oneens

Gebruiksgemak

1a. Geef per regel uw mening over het gebruik van een traditionele maaltijd

Ik vind het gebruik van een traditionele maaltijd…

Complex								Simpel
Veel moeite								Weinig moeite
Verwar-rend								Duidelijk
Duurt lang								Duurt niet lang
Vergt veel werk								Vergt weinig werk
Gaat snel								Gaat langzaam

1b. Geef per regel uw mening over het gebruik van een maaltijd box

Complex								Simpel
Veel moeite								Weinig moeite
Verwar-rend								Duidelijk
Duurt lang								Duurt niet lang
Vergt veel werk								Vergt weinig werk
Gaat snel								Gaat langzaam

Betrokkenheid gezinsleden

In hoeverre bent u het eens met de volgende stellingen:

1a. Een traditionele maaltijd maakt het voor mijn kinderen mogelijk om een maaltijd te koken

Sterk mee oneens					Sterk mee eens	Niet op mij van toepassing

1b. Een maaltijd box maakt het voor mijn kinderen mogelijk om een maaltijd te koken

Sterk mee oneens					Sterk mee eens	Niet op mij van toepassing

2a. Een traditionele maaltijd maakt het voor mijn partner mogelijk om een maaltijd te koken

Sterk mee oneens					Sterk mee eens	Niet op mij van toepassing

2b. Een maaltijd box maakt het voor mijn partner mogelijk om een maaltijd te koken

Sterk mee oneens					Sterk mee eens	Niet op mij van toepassing

3a. Een traditionele maaltijd maakt het mogelijk dat ik mijn kooktaak aan iedereen in mijn gezin kan overdragen

Sterk mee oneens					Sterk mee eens	Niet op mij van toepassing

3b. Een maaltijd box maakt het mogelijk dat ik mijn kooktaak aan iedereen in mijn gezin kan overdragen

Sterk mee oneens					Sterk mee eens	Niet op mij van toepassing

4a. Het bereiden van een traditionele maaltijd motiveert om samen met gezinsleden te koken

Sterk mee oneens					Sterk mee eens	Niet op mij van toepassing

4b. Het bereiden van een maaltijd box motiveert om samen met gezinsleden te koken

Sterk mee oneens					Sterk mee eens	Niet op mij van toepassing

Tijdgebrek

In hoeverre bent u het eens met de volgende stellingen:

1. “Zo veel te doen, zo weinig tijd”; dit gezegde is van goed op mij van toepassing.

Sterk mee eens						Sterk mee oneens

2. Ik heb meer uren in een dag nodig om mijn werk gedaan te krijgen.

Sterk mee eens						Sterk mee oneens

3. Ik heb het gevoel dat ik veel tijd om handen heb

Sterk mee eens						Sterk mee oneens

4. Ik heb het gevoel dat hoe hard ik ook werk, het werk nooit af is.

Sterk mee eens						Sterk mee oneens

5. Ik heb altijd haast

Sterk mee eens						Sterk mee oneens

Kook vaardigheden

In hoeverre bent u het eens met de volgende stellingen:

1. Ik beschouw mijn kookkunsten als voldoende

Sterk mee oneens					Sterk mee eens

2. Ik kan een warme maaltijd bereiden zonder recept

Sterk mee oneens					Sterk mee eens

3. Ik kan gratin bereiden

Sterk mee oneens					Sterk mee eens

4. Ik kan soep maken

Sterk mee oneens					Sterk mee eens

5. Ik kan saus maken

Sterk mee oneens					Sterk mee eens

6. Ik kan cake bakken

Sterk mee oneens					Sterk mee eens

7. Ik kan brood bakken

Sterk mee oneens					Sterk mee eens

Koopintentie

In hoeverre bent u het eens met de volgende stellingen:

1a. Ik zal een traditionele maaltijd kopen

Sterk mee eens	Sterk mee oneens

1b. Ik zal een maaltijd box kopen

Sterk mee eens						Sterk mee oneens

2a. De volgende keer dat ik een maaltijd koop, kies ik een traditionele maaltijd

Sterk mee eens						Sterk mee oneens

2b. De volgende keer dat ik een maaltijd koop, kies ik een maaltijd box

Sterk mee eens						Sterk mee oneens

3. Ik geef de voorkeur aan een maaltijd box boven een traditionele maaltijd

Sterk mee eens						Sterk mee oneens

Persoonlijk

Wat is uw geslacht?

- Man
- Vrouw
- Anders

Wat is uw leeftijd? ……..

Uit hoeveel kinderen bestaat uw huishouden?

- 0
- 1
- 2
- 3
- 4
- 5
- 6

Wat is het netto inkomen van uw huishouden per maand?

- 0 – 1000 euro
- 1000 - 2000 euro
- 2000 - 3000 euro

- 3000 - 4000 euro
- 4000 - 5000 euro
- 5000 - 6000 euro
- > 6000 euro

U bent aan het eind gekomen van de enquête. Nogmaals ontzettend bedankt voor uw medewerking!

Appendix B Factor Analyses

COOKING SKILLS

KMO & Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		,837
Bartlett's Test of Sphericity	Approx. Chi-Square	435,165
	df	21
	Sig.	,000

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,531	50,443	50,443	3,531	50,443	50,443
2	,913	13,049	63,492			
3	,657	9,390	72,882			
4	,627	8,955	81,837			
5	,554	7,912	89,749			
6	,396	5,652	95,401			
7	,322	4,599	100,000			

LACK OF TIME

KMO & Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		,973
Bartlett's Test of Sphericity	Approx. Chi-Square	304,758
	df	10
	Sig.	,000

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,765	55,301	55,301	2,765	55,301	55,301
2	,944	18,874	74,176			
3	,505	10,090	84,266			
4	,489	9,776	94,042			
5	,298	5,958	100,000			

EASE OF USE → TRADITIONAL MEAL

KMO & Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		,845
Bartlett's Test of Sphericity	Approx. Chi-Square	541,658
	df	10
	Sig.	,000

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,401	68,028	68,028	3,401	68,028	68,028
2	,744	14,889	82,918			
3	,374	7,482	90,400			
4	,280	5,591	95,991			
5	,200	4,009	100,000			

EASE OF USE → MEAL KIT

KMO & Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		,825
Bartlett's Test of Sphericity	Approx. Chi-Square	615,092
	df	10
	Sig.	,000

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,377	67,539	67,539	3,377	67,539	67,539
2	,855	17,101	84,641			
3	,414	8,271	92,912			
4	,216	4,330	97,242			
5	,138	2,758	100,000			

INVOLVING FAMILY MEMBERS → TRADITIONAL MEAL

KMO & Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		,791
Bartlett's Test of Sphericity	Approx. Chi-Square	152,619
	df	6
	Sig.	,000

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,632	65,805	65,805	2,632	65,805	65,805
2	,599	14,981	80,787			
3	,462	11,546	92,333			
4	,307	7,667	100,000			

INVOLVING FAMILY MEMBERS → MEAL KIT

KMO & Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		,696
Bartlett's Test of Sphericity	Approx. Chi-Square	80,503
	df	6
	Sig.	,000

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,189	54,729	54,729	2,189	54,729	54,729
2	,739	18,449	73,178			
3	,695		90,565			
4	,377	9,435	100,000			

STRESS ABOUT DECISION MAKING → TRADITIONAL MEAL

KMO & Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		,500
Bartlett's Test of Sphericity	Approx. Chi-Square	65,202
	df	1
	Sig.	,000

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1,544	77,220	77,220	1,544	77,220	77,220
2	,456	22,780	100,000			

STRESS ABOUT DECISION MAKING → MEAL KIT

KMO & Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	,500

Bartlett's Test of Sphericity	Approx. Chi-Square	39,892
	df	1
	Sig.	,000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1,440	71,994	71,994	1,440	71,994	71,994
2	,560	28,006	100,000			

OPTIONS FOR DECISION MAKING → TRADITIONAL MEAL

KMO & Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		,500
Bartlett's Test of Sphericity	Approx. Chi-Square	38,374
	df	1
	Sig.	,000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1,432	71,614	71,614	1,432	71,614	71,614
2	,568	28,386	100,000			

OPTIONS FOR DECISION MAKING → MEAL KIT

KMO & Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		,500
Bartlett's Test of Sphericity	Approx. Chi-Square	81,706
	df	1
	Sig.	,000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1,597	79,844	79,844	1,597	79,844	79,844
2	,403	20,156	100,000			

PURCHASE INTENTION

KMO & Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		,768
Bartlett's Test of Sphericity	Approx. Chi-Square	519,569
	df	10
	Sig.	,000

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,192	63,848	63,848	3,192	63,848	63,848
2	,970	19,396	8,245			
3	,377	7,531	90,776			
4	,274	5,472	96,248			
5	,188	3,752	100,000			

Appendix C Dummy variables

Gender (male)

Male	1
Female	0
Other	0

Gender (female)

Male	0
Female	1
Other	0

Gender (other)

Male	0
Female	0
Other	1

Presence of children (0)

0 children	1
1 child	0
2 children	0
3 children	0
4 children	0
5 children	0
6 children	0

Presence of children (1)

0 children	0
1 child	1
2 children	0
3 children	0
4 children	0
5 children	0
6 children	0

Presence of children (2)

0 children	0
1 child	0
2 children	1
3 children	0
4 children	0
5 children	0
6 children	0

Presence of children (3)

0 children	0
1 child	0
2 children	0
3 children	1

4 children	0
5 children	0
6 children	0

Presence of children (4)

0 children	0
1 child	0
2 children	0
3 children	0
4 children	1
5 children	0
6 children	0

Presence of children (5)

0 children	0
1 child	0
2 children	0
3 children	0
4 children	0
5 children	1
6 children	0

Presence of children (6)

0 children	0
1 child	0
2 children	0
3 children	0
4 children	0
5 children	0
6 children	1

Income (0-1000 euro)

0-1000 euro	1
1000-2000 euro	0
2000-3000 euro	0
3000-4000 euro	0
4000-5000 euro	0
5000-6000 euro	0
> 6000 euro	0

Income (1000-2000 euro)

0-1000 euro	0
1000-2000 euro	1
2000-3000 euro	0
3000-4000 euro	0
4000-5000 euro	0
5000-6000 euro	0
> 6000 euro	0

Income (2000-3000 euro)

0-1000 euro	0
1000-2000 euro	0
2000-3000 euro	1
3000-4000 euro	0
4000-5000 euro	0
5000-6000 euro	0
> 6000 euro	0

Income (3000-4000 euro)

0-1000 euro	0
1000-2000 euro	0
2000-3000 euro	0
3000-4000 euro	1
4000-5000 euro	0
5000-6000 euro	0
> 6000 euro	0

Income (4000-5000 euro)

0-1000 euro	0
1000-2000 euro	0
2000-3000 euro	0
3000-4000 euro	0
4000-5000 euro	1
5000-6000 euro	0
> 6000 euro	0

Income (5000-6000 euro)

0-1000 euro	0
1000-2000 euro	0
2000-3000 euro	0
3000-4000 euro	0
4000-5000 euro	0
5000-6000 euro	1
> 6000 euro	0

Income (> 6000 euro)

0-1000 euro	0
1000-2000 euro	0
2000-3000 euro	0
3000-4000 euro	0
4000-5000 euro	0
5000-6000 euro	0
> 6000 euro	1

Appendix D Assumptions Multiple Regression

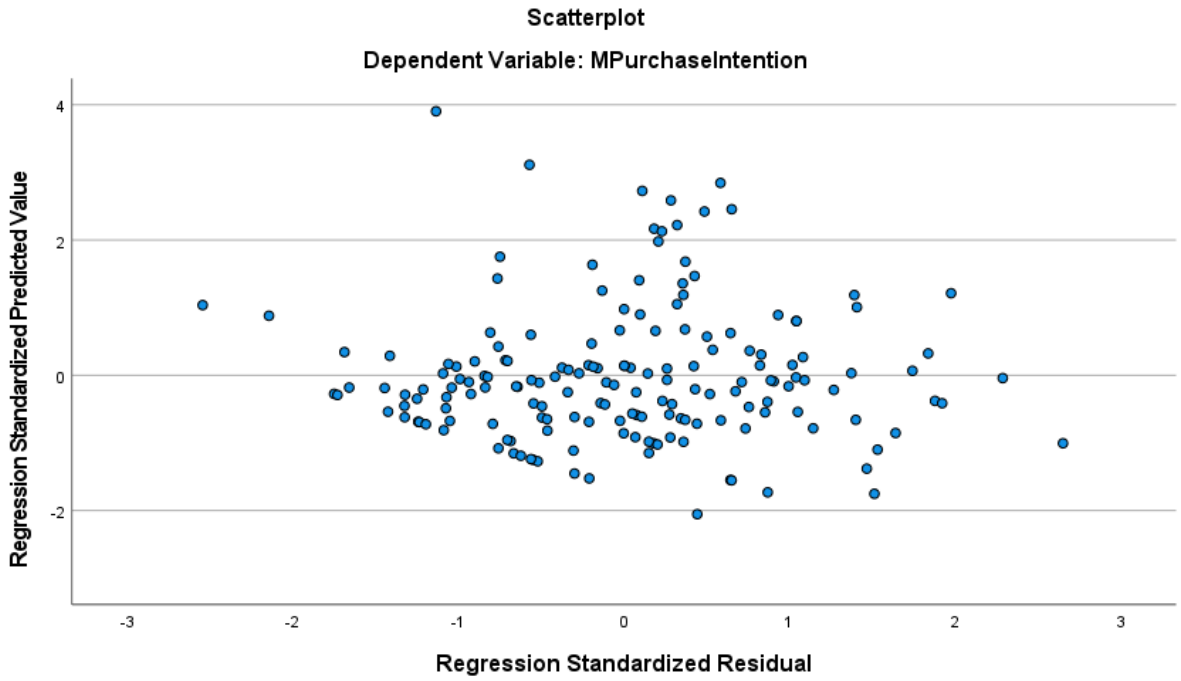

Figure 2: Scatterplot

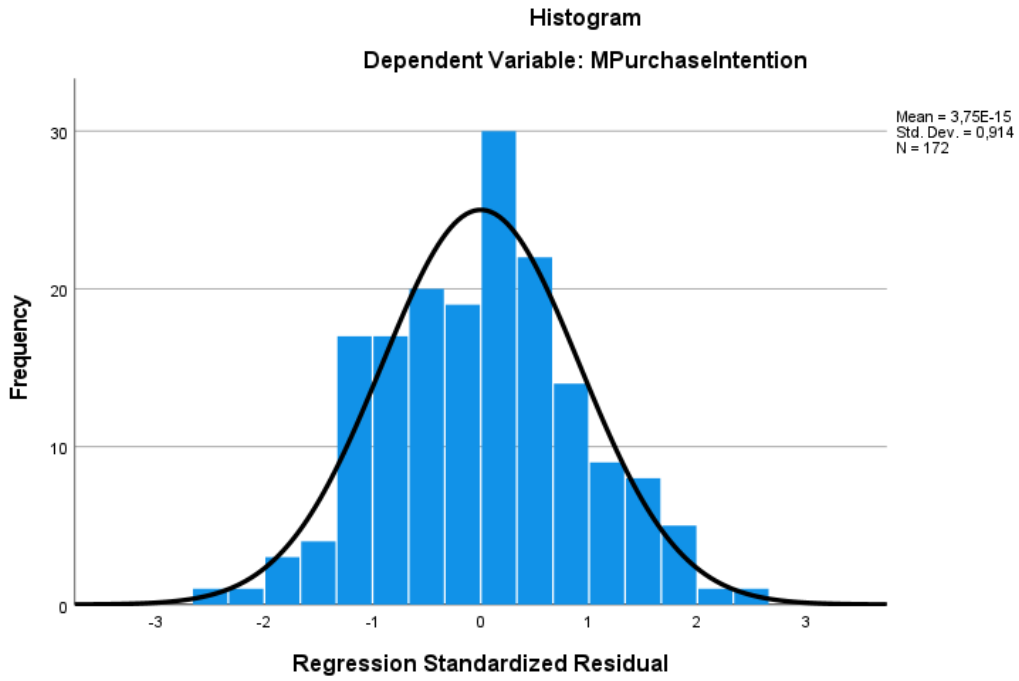

Figure 3: Histogram

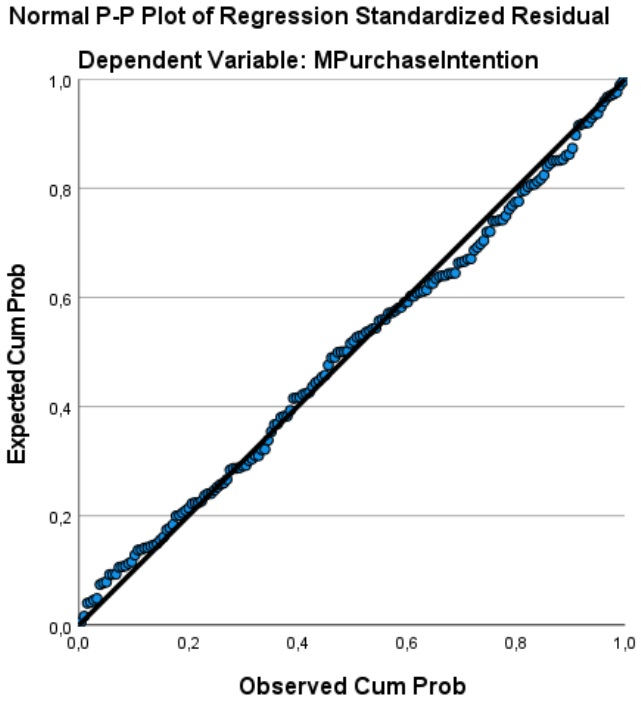

Figure 4: Normal P-P Plot

Table 6: Durbin-Watson Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.803	.645	.575	.97122428	1.924

Table 7: Tolerance & VIF values

Variables	**Tolerance**	**VIF**
Stress about decision making (TR)	.447	2.236
Stress about decision making (MK)	.569	1.758
Options for decision making (TR)	.685	1.460
Options for decision making (MK)	.624	1.602
Ease of use (TR)	.016	64.023
Ease of use (MK)	.019	52.713
Involving family members (TR)	.051	19.639
Involving family members (MK)	.065	15.468
Lack of time	.016	60.809
Cooking skills	.036	27.842
Interaction effects		
Ease of use (TR) * Lack of time	.051	19.653
Ease of use (MK) * Lack of time	.026	37.929
Ease of use (TR) * Cooking skills	.016	62.678

Ease of use (MK) * Cooking skills	.022	44.829
Involving family members (TR) * Lack of time	.032	31.740
Involving family members (MK) * Lack of time	.017	57.794
Control variables		
Gender dummy (female)	.767	1.304
Age	.567	1.763
Presence of children dummy (0)	.278	3.596
Presence of children dummy (2)	.313	3.198
Presence of children dummy (3)	.484	2.065
Presence of children dummy (4)	.662	1.510
Income dummy (1001-2000)	.711	1.407
Income dummy (2001-3000)	.575	1.739
Income dummy (3001-4000)	.584	1.712
Income dummy (5001-6000)	.662	.1511
Income dummy (6000 >)	.649	1.540

Table 8: Correlations (part 1)

Correlations

		Involving family members (TR)	Involving family members (MK)	Ease of use (TR)	Ease of use (MK)	Stress (TR)	Stress (MK)	Options (TR)	Options (MK)
Involving family members (TR)	Pearson Correlation	1	,195*	,387**	-,202**	-,436**	,227**	,258**	-,163*
	Sig. (2-tailed)		,010	,000	,006	,000	,002	,000	,029
	N	180	172	180	180	180	180	180	180
Involving family members (MK)	Pearson Correlation	,195*	1	-,255**	,339**	,237**	-,259**	,136	,297**
	Sig. (2-tailed)	,010		,001	,000	,002	,001	,076	,000
	N	172	172	172	172	172	172	172	172
Ease of use (TR)	Pearson Correlation	,387**	-,255**	1	-,100	-,491**	,205**	-,060	-,140
	Sig. (2-tailed)	,000	,001		,173	,000	,005	,413	,055
	N	180	172	188	188	188	188	188	188
Ease of use (MK)	Pearson Correlation	-,202**	,339**	-,100	1	,334**	-,215**	,130	,228**
	Sig. (2-tailed)	,006	,000	,173		,000	,003	,075	,002
	N	180	172	188	188	188	188	188	188
Stress (TR)	Pearson Correlation	-,436**	,237**	-,491**	,334**	1	-,006	-,120	,150*
	Sig. (2-tailed)	,000	,002	,000	,000		,937	,102	,039
	N	180	172	188	188	188	188	188	188
Stress (MK)	Pearson Correlation	,227**	-,259**	,205**	-,215**	-,006	1	-,077	-,442**
	Sig. (2-tailed)	,002	,001	,005	,003	,937		,294	,000
	N	180	172	188	188	188	188	188	188
Options (TR)	Pearson Correlation	,258**	,136	-,060	,130	-,120	-,077	1	,061
	Sig. (2-tailed)	,000	,076	,413	,075	,102	,294		,405
	N	180	172	188	188	188	188	188	188
Options (MK)	Pearson Correlation	-,163*	,297**	-,140	,228**	,150*	-,442**	,061	1
	Sig. (2-tailed)	,029	,000	,055	,002	,039	,000	,405	
	N	180	172	188	188	188	188	188	188
Lack of time	Pearson Correlation	-,358**	,059	-,303**	,100	,479**	-,029	-,146*	,021
	Sig. (2-tailed)	,000	,443	,000	,170	,000	,692	,046	,772
	N	180	172	188	188	188	188	188	188
Cooking skills	Pearson Correlation	,299**	-,005	,155*	,096	-,226**	-,027	,208**	-,034
	Sig. (2-tailed)	,000	,946	,034	,190	,002	,712	,004	,643
	N	180	172	188	188	188	188	188	188
Involving family members (TR) * Lack of time	Pearson Correlation	,388**	,101	,060	-,120	,119	,202**	-,002	-,096
	Sig. (2-tailed)	,000	,185	,425	,107	,111	,007	,978	,200
	N	180	172	180	180	180	180	180	180
Involving family members (MK) * Lack of time	Pearson Correlation	-,275**	,498**	-,405**	,258**	,549**	-,147	-,069	,174*
	Sig. (2-tailed)	,000	,000	,000	,001	,000	,054	,366	,022
	N	172	172	172	172	172	172	172	172
Ease of use (TR) * Lack of time	Pearson Correlation	,045	-,162*	,461**	-,058	,046	,174*	-,169*	-,105
	Sig. (2-tailed)	,548	,034	,000	,426	,527	,017	,020	,151
	N	180	172	188	188	188	188	188	188
Ease of use (MK) * Lack of time	Pearson Correlation	-,446**	,216**	-,329**	,631**	,581**	-,140	-,045	,148*
	Sig. (2-tailed)	,000	,004	,000	,000	,000	,055	,540	,043
	N	180	172	188	188	188	188	188	188
Ease of use (MK) * Cooking skills	Pearson Correlation	-,005	,272**	,014	,867**	,151*	-,177*	,207**	,152*
	Sig. (2-tailed)	,945	,000	,845	,000	,039	,015	,004	,037
	N	180	172	188	188	188	188	188	188
Ease of use (TR) * Cooking skills	Pearson Correlation	,429**	-,209**	,893**	-,019	-,495**	,153*	,019	-,122
	Sig. (2-tailed)	,000	,006	,000	,795	,000	,036	,793	,097
	N	180	172	188	188	188	188	188	188

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 8: Correlations (part 2)

Lack of time	Cooking skills	Involving family members (TR) * Lack of time	Involving family members (MK) * Lack of time	Ease of use (TR) * Lack of time	Ease of use (MK) *Lack of time	Ease of use (MK) * Cooking skills	Ease of use (TR) * Cooking skills
-,358**	,299**	,388**	-,275**	,045	-,446**	-,005	,429**
,000	,000	,000	,000	,548	,000	,945	,000
180	180	180	172	180	180	180	180
,059	-,005	,101	,498**	-,162*	,216**	,272**	-,209**
,443	,946	,185	,000	,034	,004	,000	,006
172	172	172	172	172	172	172	172
-,303**	,155*	,060	-,405**	,461**	-,329**	,014	,893**
,000	,034	,425	,000	,000	,000	,845	,000
188	188	180	172	188	188	188	188
,100	,096	-,120	,258**	-,058	,631**	,867**	-,019
,170	,190	,107	,001	,426	,000	,000	,795
188	188	180	172	188	188	188	188
,479**	-,226**	,119	,549**	,046	,581**	,151*	-,495**
,000	,002	,111	,000	,527	,000	,039	,000
188	188	180	172	188	188	188	188
-,029	-,027	,202**	-,147	,174*	-,140	-,177*	,153*
,692	,712	,007	,054	,017	,055	,015	,036
188	188	180	172	188	188	188	188
-,146*	,208**	-,002	-,069	-,169*	-,045	,207**	,019
,046	,004	,978	,366	,020	,540	,004	,793
188	188	180	172	188	188	188	188
,021	-,034	-,096	,174*	-,105	,148*	,152*	-,122
,772	,643	,200	,022	,151	,043	,037	,097
188	188	180	172	188	188	188	188
1	-,215**	,690**	,876**	,659**	,806**	-,031	-,335**
	,003	,000	,000	,000	,000	,669	,000
188	188	180	172	188	188	188	188
-,215**	1	-,016	-,217**	-,050	-,123	,553**	,556**
,003		,833	,004	,499	,092	,000	,000
188	188	180	172	188	188	188	188
,690**	-,016	1	,596**	,729**	,407**	-,101	,033
,000	,833		,000	,000	,000	,179	,663
180	180	180	172	180	180	180	180
,876**	-,217**	,596**	1	,460**	,808**	,091	-,416**
,000	,004	,000		,000	,000	,235	,000
172	172	172	172	172	172	172	172
,659**	-,050	,729**	,460**	1	,428**	-,062	,352**
,000	,499	,000	,000		,000	,401	,000
188	188	180	172	188	188	188	188
,806**	-,123	,407**	,808**	,428**	1	,441**	-,307**
,000	,092	,000	,000	,000		,000	,000
188	188	180	172	188	188	188	188
-,031	,553**	-,101	,091	-,062	,441**	1	,261**
,669	,000	,179	,235	,401	,000		,000
188	188	180	172	188	188	188	188
-,335**	,556**	,033	-,416**	,352**	-,307**	,261**	1
,000	,000	,663	,000	,000	,000	,000	
188	188	180	172	188	188	188	188

Appendix E Multiple Regression Analysis

Table 9: F-Test

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	245.057	28	8.752	9.278	.000
	Residual	134.889	143	.943		
	Total	379.946	171			

Table 10: Adjusted R2

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.803	.645	.575	.97122428