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The Influence of the Smiley Scheme on the Brand Value of Danish Restaurants in Relation to Consumers' Decision-Making Behaviour



Master's Thesis

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Abstract

Consumers behave differently depending on their needs in a particular situation. When choosing a certain restaurant, a great variety of factors may play a role in the decision-making process. One way of narrowing down the choice of restaurant can be the smiley-reports issued as part of the Smiley Scheme program provided by the Danish Veterinary and Food Administration. The smiley-reports are a simple way, by the use of smileys, to communicate the outcome of authority inspections related to food risks with particular focus on hygiene within the food service industry.

This master's thesis investigated and analysed the influence of the smiley-reports displayed at restaurants in Denmark on consumer behaviour. Earlier research about symbolic values of brands and marketing within the service industry have been reviewed to gain an understanding of the topic to present and understand the research area. This has been used to construct the practical consumer element of the thesis.

The objective of the research was to gain a better understanding of the influence of the Smiley Scheme on consumers' decision-making behaviour and, thus, the possible effect on restaurant's brand value. The research was inspired by the fact that the Smiley Scheme was presented as highly successful by the authorities because the number of positive inspection reports has increased significantly since the introduction of the Smiley Scheme.

A study was conducted on the Smiley Scheme in terms of how consumers use the information from the reports in connection to a restaurant visit. The study was carried out by the use of a questionnaire with 161 answers.

The results showed that Danish restaurant customers are well-aware of the Smiley Scheme and the smiley-reports as means of communicating the results. However, the main reasons for selecting a restaurant were factors other than the results in the smiley-report. In addition, the findings indicate that the selection process of a certain restaurant also depends on socio-demographic factors, such as the place of residency and age group.

The conclusion from the analysis is that the results from the inspections publicized on the smiley-reports does not have any significant influence on the consumer behaviour related to the selection of restaurants. Consequently, other marketing instruments than a happy smiley-report, as it is designed at the time of the publication of this thesis, would be more successful to attract customers.

Keywords: *Service marketing, consumer behaviour, symbolic value, branding, smileys*

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Preface

This master's thesis is the final part of a two years' master program in Service Management at Copenhagen Business School.

The aim of the thesis was to investigate the smiley-reports under the Smiley Scheme by the Danish Veterinary and Food Administration as a decision-making factor for consumers, and the potential for a subsequent marketing instrument to attract customers within the restaurant business sector.

The present master thesis contains the results from a survey carried out in different regions in Denmark. I would like to take the opportunity to thank all involved in this process for their willingness to participate in the survey, without whom the research on the topic would not have been possible.

During the research process, I met very open-minded contributors who took the time to answer the questions, and willingly shared their own comments as part of the survey. The abundance of new information, especially from the open questioning, clearly showed how the interviewees also were interested in generating new insights. Thereby, I was introduced to additional perspectives in relation to the research problem in the thesis.

Also, for me personally, the surveys led to numerous new findings within the field of consumer behaviour and service marketing, which was a great learning experience.

The collected content and experiences from the survey not only contributed significantly to the development of this work, but also helped to generate general conclusions for future research approaches within this field.

Furthermore, I would like to thank my supervisor, Anna C. Rédei, for her guidance, good discussions and encouragement.

Copenhagen, 15 May 2017

1. Introduction

“The smiley icon is a very strong icon, which is well-known to everybody”¹

Smileys are present in many connections in our lives. A toilet visit may finish with a computer asking you to rate the experience at the exit by clicking on one of the three smileys presented to you. Clicking on the green, happy smiley means that your toilet experience was satisfying, whilst the opposite accounts for the sad, red-faced smiley. Companies use such smileys to receive direct and immediate information from their customers just after their visit to evaluate their product. This may help to improve a product or a service experience for a customer. Such smiley-rating systems are also available at other locations with the purpose of collecting information about the customer.

Yet another example, where a smiley system is used to inform the viewer, can be found in Denmark. Food retailers are obliged to display the result of their recent authority inspection with focus on food safety publicly. The result is presented with smileys that can have different emotions depending on the outcome of the result.

Another form of using smiley icons are text messages, where smileys are used to *“increase the precision and nuance of our often super-brief and open-to-misunderstanding communications”* (Lowell, 2016), the so-called emoticons. Smileys stand for symbols that are easily understood by the viewer and mean the same to everybody. So, they can be used as simple easy to understand rating systems. Symbols represent something that is understood by the same group of people, some symbols are globally understood, and some are only understood by a certain group of people or within one culture.

Famous company brands may also function as symbols. Successful marketing efforts can turn a brand into an iconic symbol. Thereby, brands stand for a symbol that is known to a large group of people (Chandler, 2007, p. 40). McDonald’s, for instance, is identified by the Golden Arches (Miller, 2015) that are clearly visible for people driving by. One could claim that the Arches stand for a symbol of a fast, convenient and cheap meal. Using a sign that has a symbolic value for people can be a successful way to attract customers. However, other factors might have the same influence on customers’ decision-making behaviour.

¹ Translated from: Smiley-ikonet er et meget stærkt ikon, som er godt kendt af alle (Sørensen, 2015)

Attracting customers is challenging as today's consumer behaviour is constantly changing. Therefore, companies need to understand these ongoing changes to be successful against their competitors. At the same time, the world is becoming more and more digitalised. Companies that used to sell their products in a traditional way have now (also) made them accessible on the Internet. In addition, some also state that innovation is an important strategic parameter for their company. Innovation may be the key against competitors and threats from new entrants. Being innovative can have an influence on a firm's profitability and growth. So, by not being innovative, a company risks losing to competitors (Brusoni & Malerba, 2007, p. 25).

In this context, the conditions of brand management and communication also need to be developed and changed. Today, consumers are faced with a massive number of brands connected to different products and services. Therefore, it has become increasingly challenging for companies to build long-term and sustainable customer relationships and to position themselves correctly in the market. The existing brand diversity has created a sensory overload for the consumers, resulting in the fact that consumers have difficulties perceiving and understanding the brand messages correctly (Meffert, 2015, p. 1).

Especially for companies delivering service products, attracting new customers and building trust in their products can be a very significant challenge. The main issue for the consumer is that a service product cannot be tried or tested in advance to the buying process (Mittal, 1999). Instead, it has to be purchased based on trust. For a service product to differentiate itself from the products by competitors, a holistic branding approach is necessary. Consumers increasingly expect a service tailored to their needs (Meffert, 2015, p. 206). Consequently, companies must create relevant approaches and deliver appealing messages to the consumer which is clear and coherent to attract new customers. Another way for the company to attract customers is to control the various contact points, the so-called touch points, between the product and the consumer, so that a consumer-oriented approach can be created and the interest in the product can be increased (Wilson et al., 2015, p. 133-134). In addition, the readiness to change is much higher in the digital age, as one can find the competitors with just a few clicks. The companies therefore need to find a way to stand out from the competition in order to attract customers to a certain product.

Especially within the service sector, however, there might be other factors that can have an influence on the consumers' decision and on how to create trust in the products. Consequently, the companies might distinguish themselves from rivals in ways other than simply with online marketing efforts.

2. Problem Field

“Consumer value drivers are fundamentally changing the food & beverage industry”

(Ringquist et al., 2016)

In Denmark, companies that handle food products are checked via sampling inspections by Danish authorities, in this case the Danish Veterinary and Food Administration (in Danish: Fødevarestyrelsen), with the focus on food hygiene. The administration's responsibilities include *“food safety and health from farm to fork”* (Fødevarestyrelsen, n.d., b). The Danish Veterinary and Food Administration is a section under the Ministry of Environment and Food of Denmark (until 2015: Ministry of Food, Agriculture and Fisheries) to handle food safety and control veterinary inspections. After the inspection, the companies receive a smiley-report² that represents the overall hygiene and food handling level of the company. It is obligatory for every company in the food industry and in food service business to make the report visible to their customers. So, the most recent report must be displayed visibly in a place where customers have the possibility to view it before entering (Fødevarestyrelsen, n.d., b).

The Danish Veterinary and Food Administration introduced the Smiley Scheme³ in 2001 and their aim was to improve the hygiene level at companies that produce and handle food products in Denmark so that *“fewer people [...] become ill from food [...]”* (Fødevarestyrelsen, n.d., e). The Administration describes the Smiley Scheme as a huge success since more and more companies have a high hygiene standard, and therefore receive a “positive” smiley on their reports (Fødevarestyrelsen, n.d., d).

Besides, the idea of the Smiley Scheme was to gain more transparency in the food industry. When a Danish consumer enters a restaurant, supermarket, bakery or canteen, they can directly view the recent results from the official food safety inspectors at the entrance to the company (Fødevarestyrelsen, n.d., b).

² Official translation of “smiley-rapport” (Fødevarestyrelsen, n.d., e)

³ Official translation of “smiley-ordningen” (Fødevarestyrelsen, n.d., e)

2.1 Restaurants as Service Products

Restaurants handle food items and, consequently, Danish restaurants are inspected by the Danish Veterinary and Food Administration. Restaurants can be categorised as companies within the service sector since they offer a service product to their consumers.

Service products call for a customer-orientated marketing strategy. According to former research on service marketing, relevant market information is needed in order to make correct use of marketing instruments to attract new customers and keep existing ones. A successful marketing strategy asks for targeted research on the customers' needs and wishes so that the service marketing strategy can be tailored to the customers. Targeted customer orientation provides the service company with the possibility to gain competitive advantage within that business area and success with the marketing approach (Meffert, 2015, p. 2).

In relation to commercial marketing, Meffert et al. (2015, p. 46) distinguishes between consumer goods, industrial goods and services. General marketing theories cannot be adapted to all sectors, but even within one sector the marketing approach is more successful when targeted to a specific brand or product. Some physical goods might also be sold together with a service to a greater or lesser extent. Consequently, the marketing strategy for a specific product may become very complex. This thesis will among others gather knowledge of key characteristics of a successful marketing strategy at restaurants in Denmark.

2.2 Purpose of the Study

"The smiley-scheme is highly popular among Danish consumers and the food enterprises." (Hoorfar, 2014, p. 389)

According to the Danish Veterinary and Food Administration, the Smiley Scheme is well-known and popular in Denmark. On the official website of the Smiley Scheme⁴, the smileys are presented as highly successful since the level of hygiene has improved over the past years and so, food retailers have increased the focus extensively on the hygiene level (see Appendix F).

In 2011, the European Networking for Rural Development published that the Smiley Scheme scores *"100% on consumer-awareness, [which is why] the smiley-scheme is probably the best-known public schemes in Denmark"* (European Network for Rural Development, 2013).

⁴ www.findsmiley.dk

To follow up on usability towards consumers, the administration has conducted several surveys on the effects of the Smiley Scheme among consumers. The last online survey was carried out in 2008 and 954 respondents participated in the study. The results revealed that around 95% knew the Smiley Scheme either very well or somewhat little. No respondent claims to never have heard of the Smiley Scheme in 2008. The trust in the Smiley Scheme is also very high, according to the survey (Appendix F).

In 2007, the authorities also introduced the elite smiley. Restaurants that have received positive results in the past four consecutive inspections, resulting in four happy smileys in a row, receive an elite smiley on their next hygiene reports. The survey results from 2008, however, showed that only 15% of the respondents know the criteria of the elite smiley (Appendix F).

Another study by the Danish Veterinary and Food Administration was conducted in 2005. It showed that a smiley with an unhappy face does not have an impact on the revenue of a company. This indirectly means that the smiley does not influence the consumers' decision-making behaviour and consequently, the restaurant owners would not need a happy smiley to attract customers (Steen, 2015a, 2015b).

So, the Danish smiley-reports are presented and perceived as successful hygiene reports that are known to the Danish population and apparently very popular. At the same time, studies also show that even though the smileys are famous in Denmark, they do not influence the consumer behaviour (Steen, 2015a, 2015b). With the documented high knowledge level of the Danish consumers on the Smiley Scheme, it seems contradictory that it apparently does not influence the consumer.

Therefore, the intention is to study the effect of the Smiley Scheme on the consumers and the possibilities that the reports generate for restaurants in Denmark when trying to attract customers. It seems obvious that the motivation for a restaurant owner to receive a positive hygiene result would be higher if it can be proven to influence the consumers' buying behaviour.

The service providers, in this case the restaurants, have improved their hygiene level and received satisfying hygiene reports since the Smiley Scheme was introduced (Fødevarestyrelsen, n.d., b). The inspiration for the present thesis came from the identification of the missing analysis of the meaning of the smileys for the consumers' decision-making behaviour.

The focus of this thesis is therefore the effect of the Smiley Scheme on the one hand, and the possibilities that the Smiley Scheme generates to test for other variables that could have more effect on the customers' choice and therefore create higher brand awareness on the other.

Thereby, the question arises in what way the smileys were successful and if the popularity also means that the smileys are used as indicators when choosing where to eat. The purpose of the thesis is to investigate that question. The definition for success by the Veterinary and Food Administration of the Smiley Scheme is not clear and the thesis aims to have a closer look at the research behind this statement.

The reason for choosing the smileys as the case for this thesis is justified by two main arguments. Firstly, the Danish Smiley Scheme can be viewed as an international first-mover in the official hygiene control system and secondly, it has never been analysed of the Smiley Scheme influences the consumer behaviour of Danish customers (Fødevarestyrelsen, n.d., b).

In this thesis, three separate parties are involved in the analysis, namely the Danish Veterinary and Food Administration that creates the guidelines for the Danish Smiley Scheme and inspect the food providers, the Danish restaurants that are given a smiley-report, as well as the potential customers for the restaurants⁵.

2.3 Research Question

Before developing the research question for this thesis, articles about the success of the Smiley Scheme were collected and compared. Hereby, the problem statement was developed and thereof the research question was created.

The research question can also be characterised as the scope of the research and the whole project is based on the foundation of its research question. This is the question that addresses the research problem stated above. The research question reflects what is going to be achieved through the research of this study (Blaikie, 2010, p. 58).

The further aim of this project is to analyse how the smiley-report communicate with the customers and what kind of impact the smiley symbol has on the customers when using the results from the Smiley Scheme as a marketing tool. Thereby, the project seeks to analyse if the

⁵ In this thesis, restaurants are defined as companies that handle food products and serve them to customers onsite, excluding canteens, banquet facilities etc. This is based on the Danish Veterinary and Food Administration's categorization (findsmiley.dk)

smiley-report in Danish restaurants influence people's decisions, and further analyse how the report influences the people that state that they are influenced by it. This will lead to a discussion on how the reporting form could be changed in order for the senders, the restaurant owners, to create more awareness for the receivers, the Danish customers. Finally, the thesis will look at the potential increase in brand value for the restaurants by viewing and analysing this from the restaurants' perspective.

The assumption is that the Danish Smiley Scheme has an influence on people's consumer behaviour when choosing a restaurant. If this assumption is proven to be true, the hygiene level at restaurants should not only be high, but it should also be promoted extensively to potential customers. Therefore, it will be studied how the Smiley Scheme changes the brand value of Danish restaurants in connection to consumers' decision-making behaviour. In order to do so, the analysis will look at earlier results concerning this problem.

Within the research field of this thesis and based upon the problem field statement above, the research question used for this assignment is stated as follows:

How does the Smiley Scheme by the Danish Veterinary and Food Administration influence the consumers' decision-making behaviour when choosing a Danish restaurant?

The following sub-questions have been chosen to answer the stated research question:

What are the variables that influence consumers' choice of a particular restaurant?

What influence does a positive smiley report have on the brand value of a Danish restaurant?

The project will be written within the field of marketing semiotics and consumer behaviour. The subject is highly topical and relevant, since a similar study or analysis has never been conducted on the Smiley Scheme before. Secondary and tertiary sources will be included to be able to constructively reflect on the results from the analysis. The project seeks to analyse these through different models combined with relevant theory.

2.4 Thesis Structure

After the introduction, which includes both the objective and the structure of the work follows a presentation of the research approach to the problem in chapter 3. In this chapter, the limitations will also be outlined. Chapter 4 includes the emergence of the smiley in Denmark and how the smiley is used in other connections.

Chapter 5 elaborates on a detailed description of the theoretical foundation. The focus here is marketing in the service sector and specifically the use of symbols in marketing, which is followed by theory on consumer behaviour. After that, the selected methods and the empirical foundation of the actual analysis are outlined in chapter 6. This is followed by the presentation of the hypotheses. The results of the analysis are presented in chapter 7. Finally, there is a discussion of the results and an outlook on future research possibilities.

3. Research Approach

There are different ways to approach the research question of this thesis. This chapter will outline the research approach that is found most suitable to answer the research question. It is concerned with the approach to knowledge production and the methodical choices that are made in order to answer the research question.

Initially, a clarification of the philosophy that will be conducted including the research strategy, the chosen paradigm and the ontological and epistemological assumptions is presented. This explains the philosophical conviction in relation to knowledge production. The thesis was written within the field of social sciences, which is concerned with the science of people's actions and behaviour and the structure, development and actions of social groups, institutions and the society (Nygaard, 2012, p. 9).

The researcher's preconceived notions are relevant for the project's output, as a researcher within social sciences see the world as a constructive reality, where everything is built up from recent actions and gained knowledge (Birkler, 2005, p. 5). This will be demonstrated in the project when the data is analysed. Here, the preconceived knowledge will be used to gain an understanding of the data.

Research purposes will be outlined to clarify and classify what the thesis aims to analyse. Another reason for outlining the research methods is to gain validity and reliability of the research that is conducted as part of the thesis.

The empirical foundation in this thesis is intended to ensure that the results of the empirical study are justified and documented. The research process can be transferred to similar cases. The analysis will show which analytical results are representative and where limits in the validity of the generated theory occur. The interactive traceability creates the prerequisite for research and evaluation by third parties. Prior to the empirical data collection, the suspected results are formulated in the initial hypotheses.

3.1 The Smiley as a Phenomenon

Within social sciences, the researchers need to keep in mind that society is not a locked system (Nygaard, 2012, p. 57). The findings from the research can therefore not give a completely precise explanation of the phenomena, but they can get closer to the understanding of a specific phenomenon within the society.

The phenomenon that this thesis is looking at is the smileys that are used in the Danish Smiley Scheme connected to the control of consumer risks related to food. Nygaard (2012, p. 55) distinguishes between different structures, forces and mechanisms that form a phenomenon. The smileys' strengths are that they present the hygiene level of a certain restaurant. Therefore, one could argue that the main reason that the smileys exist is to increase the hygiene level of the restaurants. If the smiley is smiling, the hygiene level is good according to Danish Veterinary and Food Administration. An unhappy smiley tells the reader that the restaurant does not live up to the Danish hygiene standards (Fødevarestyrelsen, n.d., b). So, the mechanism of the smiley is transparency and information for the consumers, only concerning the hygiene level of the restaurants presented in a comparable way. The mechanisms behind these forces are applied when potential customers view the smileys. In that situation, the smiley will help the consumers to make their decision. Though, the Smiley Scheme does not present a permanent mood for the smileys, it is rather a snapshot that indicates a tendency of the hygiene level at this particular restaurant. The purpose of that is to make people aware of the connection of a bad smiley and the risk of getting sick. An unhappy smiley can be seen on the same level as food poisoning.

3.2 Inductive Reasoning

This paper is a quantitative study and an inductive approach has been applied. Induction is one of four approaches for producing scientific knowledge on which conclusions can be drawn. The other approaches include deduction, abduction and retroduction (Blaikie, 2010, p. 83). An inductive approach is concerned with a pattern or trend from which the researcher generalises. So, the researcher goes from a certain case to find a specific tendency. The aim of the inductive research strategy is to establish descriptions of characteristics and patterns by collecting data on these matters, and produce descriptions. The point is to relate these assumptions to the research question (Blaikie, 2010, p. 83).

When applying the inductive research approach in the thesis, the aim is to understand the results from the survey through the lenses of general rules. Thereby, patterns among Danish restaurant visitors will be applied to understand consumer behaviour related to a restaurant visit.

The conclusion will be drawn based on the answers from the respondents. Within inductive research, the premises do not prove the conclusion to be true, but they support the conclusion. Inductive reasoning is therefore concerned with some uncertainty, but the premises can still be relevant for the conclusion. So, while the inference is not logically valid, it is still a logically strong inference because it is based on the analysis of the collected data, and so one can generalise from the findings (Blaikie, 2009, p. 88). The survey was set up to get new insights and knowledge about something that is involved in our every-day lives, for some people more conscious than for others. This will give opportunities to evaluate the statistical connection between the variables. It will consider how widespread the awareness and attitudes of Danish consumers are towards the Smiley Scheme and relate them to the problem stated in the beginning.

The research project is based on the observation that restaurants display smileys at their entrances. This is the observation. The inductive reasoning would be: Many smileys can be found around Denmark. Therefore, they have been observed by the author. From this, the hypothesis is generated that the smiley has a significant influence on consumer's behaviour when choosing a particular restaurant.

3.3 Paradigm of Critical Realism

The following presents and justifies the paradigm that has been chosen for the research. The paradigm is the philosophical and theoretical view to interpret the reality and the research question. The paradigm is the eyes in which you see and understand the research question (Blaikie, 2009, p. 97).

The research question demands an empirical study that is based on quantitative research methods. Therefore, the research can follow the paradigm of positivism. The viewpoint of the positivistic paradigm is that reality can be explored in order to gain objectivity (Nygaard, 2012, p. 53). However, the ontological and epistemological viewpoints are not aligned with the paradigm of positivism for this research. So, the philosophy of science applied in this thesis is the paradigm of critical realism, which is found to be the most suitable paradigm for the research question.

Critical realism derives from positivism. Therefore, the paradigm is also referred to as neo-positivism. The underlying ontological and epistemological assumptions are slightly modified compared to the ones that are found within the paradigm of positivism (Nygaard, 2012, p. 52). Just as with the positivistic paradigm, critical realism includes the establishment of hypotheses that can either be accepted or rejected by analysing empirical data, and from that the conclusion is made. This is done with the use of quantitative analysis methods. Critical realism follows the realist, but in a limited way. Whereas the positivistic paradigm seeks for objectivity by using logical-mathematical methods without further speculations about causes and analyses phenomena that must be real and measurable (Brier, 2006, p. 143), critical realism also aims to understand the subjective level of people. Therefore, it includes a limited realist ontology and a modified epistemology (Nygaard, 2012, p. 51). This paradigm sets the standards for the way the analysis will be conducted and how the research question will be answered.

3.4 Limited Realist Ontology and Modified Epistemology

In this part, I will clarify my ontological and epistemological standpoint and explain how these will affect the research that is carried out in the thesis. The inductive research strategy “entails a particular combination of ontological and epistemological assumptions” (Blaikie, 2010, p. 92). Thereby, ontological assumptions “are concerned with the nature of social reality” (Blaikie, 2010, p. 92) and the epistemological assumptions include how we know what we know (Blaikie, 2010, p. 92; Nygaard, 2012, p. 10). When it comes to ontology, the assumption is not a total realistic ontology, but a limited one. This means that research does not really exist completely independently (Nygaard, 2012, p. 52). Generally, researchers with a critical realist

ontology believe that a reality can be explored by collecting objective data (Nygaard, 2012, p. 53). The limited realist believes that human beings' direct access to reality is limited by certain values and power levels, for instance.

The epistemology includes an objective relationship to society. Simultaneously, the objectivity of the researcher is modified since the researcher also aims to criticize the existing society. Besides, the epistemology philosophy is aware of the fact that the researcher cannot obtain complete objectivity (Nygaard, 2012, p. 53). This is aligned with the paradigm of critical realism as stated above.

3.5 Limitations

The following will elaborate on the delimitations in relation to empirical foundation of the thesis in order to clarify the scope of the research in this thesis.

Due to restrictions in space, the theoretical and mainly the data collection had to be carried out in a limited scope. The amount of data that has been collected (N=161) for the thesis is sufficient to draw a conclusion based on the statistical tests and to analyse if the correlation is significant or not.

The research only obtains findings based on consumers' behaviour in connection to restaurants and no other food suppliers or companies that work with fresh food. The reason for that is that it reduced the scope of the project to a more realistic level within the amount of space that is provided for the project. Another argument is that most food suppliers can be categorized as restaurants (Fødevarestyrelsen, n.d., b) and, therefore, it can be generalised from it and thus the findings can be applied to other companies within this field. Lastly, the aim of the thesis is to obtain a master's degree within service management, and this field focuses on the tertiary sector of the economy, which deals with the production of services. Therefore, the choice was made based on the relevance of the study area for the thesis. The research has, to a large extent, also focused on restaurant consumers in Copenhagen and around. This thesis therefore delimits itself to mainly focus on customers in the metropolitan area, and less on consumers from rural areas in Denmark.

This thesis delimits itself to solely concern Danish restaurants. This means that the present thesis does not fill the gap of research at restaurants outside of Denmark, where the Danish Smiley Scheme or similar ones may have been applied.

4. Case: The Smiley Scheme

The first step in the process of answering the research question for this thesis is to outline the case that is being studied. The case in the present thesis is the smileys placed on the smiley-reports by the Danish Veterinary and Food Administration.

The Smiley Scheme was established in 2001. The purpose of the Danish government was to increase transparency and food safety for consumers, and consequently increase the hygiene level at companies that provide the food items to the consumers.

The smiley-reports in Denmark are printed on pale yellow paper with textual elements in green and black. The colour of the smileys is green. All pages of the scheme must be available to the customer immediately after the visit by the authorities. If the restaurant does not meet those requirements, it will result in an unhappy smiley and, potentially, a fine at the next check (Fødevarestyrelsen, n.d., d). The smiley-reports are accessible for everyone, even if the company receives an unhappy smiley. Ever since the launch of the smileys, food suppliers are obliged to display their results visibly at the entrance of the company (Fødevarestyrelsen, n.d., b).

Food control is conducted across the country according to a unified procedure by the Danish Veterinary and Food Administration. On the smiley-report, the last four smileys awarded for a restaurant can be found, so that the development of the results is comprehensible and traceable for the consumer.

In 2008, the elite smiley was introduced. A restaurant receives this smiley after four positive results in a row, which is equal to no annotations within 12 months. Restaurants with elite smileys are checked less often than restaurants with other smileys on their smiley-report. The restaurant would lose the status as “elite” if the Administration discovered failures at the next examination (Fødevarestyrelsen, n.d., a; Appendix F).

In figure 1, the four different hygiene results are presented. A Danish restaurant receives a result on a scale from 1 to 4. Thereby, 1 is the happy smiley, which means that the hygiene level and food safety of the restaurant lives up to the national standards, and 4 represents the unhappy smiley that indicates that the hygiene level was insufficient and should be improved until the next visit of the authorities (Fødevarestyrelsen, n.d., b).

There are four different smileys. They symbolise:

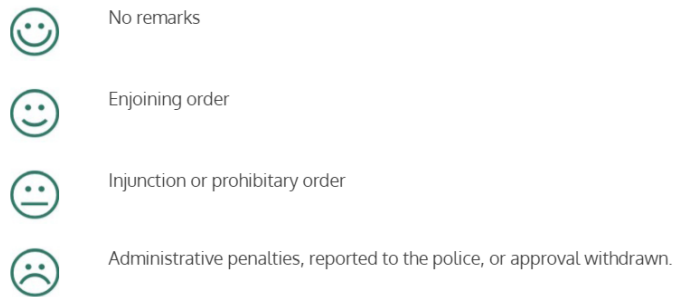


Figure 1: About the Danish Smiley Scheme – What do the smileys symbolise?, retrieved from <http://www.findsmiley.dk/english/Pages/About.aspx> (accessed on 21.12.2016), presentation of the 4 different smiley results, from no remarks (happy smiley) to insufficient hygiene level (unhappy smiley).

Figure 2 presents the current distribution of smileys at Danish restaurants throughout Denmark. From this, it can be said that the percentage of happy smileys is almost 100%. This means that the hygiene level of restaurants in Denmark meets the requirements of the authorities, and restaurants really focus on it.

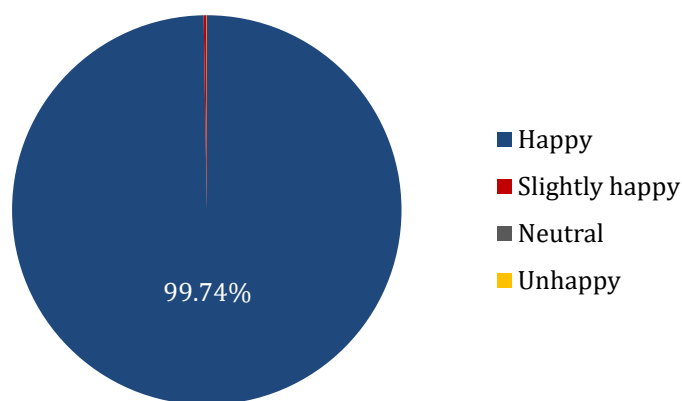


Figure 2: Distribution of smileys in Denmark, January 2017. Own statistics, Excel-sheet sorted by Serveringsvirksomhed - Restauranter m.v., retrieved from http://www.findsmiley.dk/Statistik/Smiley_data/Sider/default.aspx (accessed on 13.01.2017), 99,74% of the Danish restaurants received a happy smiley.

Figure 3 displays the distribution of restaurants with a happy smiley and restaurants that also have an elite smiley. The proportion of elite smileys is more than one third. Restaurants with elite smileys show the viewer that their hygiene standards have been satisfactory over a certain period of time. It does not indicate that the hygiene level is higher than in a restaurant with a happy smiley. A restaurant that just opened does not receive an elite smiley before receiving four happy smileys (Fødevarestyrelsen, n.d., a,d).

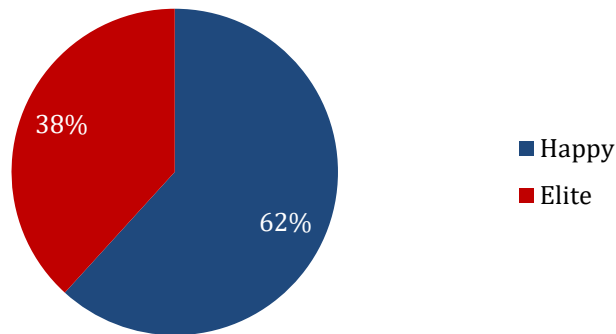


Figure 3: Distribution of happy and elite smileys, January 2017. Own statistics, Excel-sheet sorted by Serveringsvirksomhed - Restauranter m.v., taken from http://www.findsmiley.dk/Statistik/Smiley_data/Sider/default.aspx (accessed on 13.01.2017).

The smiley-report cannot only be found at the entrance of the food producers and suppliers, the company is obliged to refer to it on their website. Besides, online users can search for the smiley-report on www.findsmiley.dk. So, the smileys of the restaurants can be studied before visiting the restaurant or prior to making a reservation.

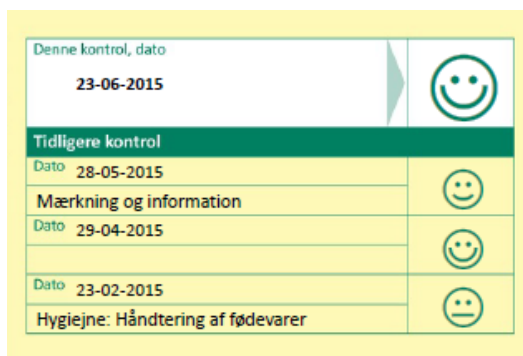
The authorities make use of the smiley to indicate the hygiene level of a restaurant. If the viewer wishes to know more about the choice of a particular smiley, a text can be found underneath that explains the reason. It seems to be an attempt to make the report easy to read and understand at first sight. One can assume that the smiley gives the viewer a quick overview and that the smiley as a symbol is easily read and understood by the viewer. Some might even claim that the smileys are synonymous for food safety in Denmark.

4.1 Smiley Examples

On www.findsmiley.dk, Internet users can search for a name of a restaurant, or look for restaurants in a certain area, for instance. The results can then be categorised according to the smiley received, date and type of company.

In the case below (figure 4), the first smiley that the restaurant received can be described as a “neutral” smiley, which is smiley number 3 in the rating-system. A smiley like the one on the smiley-report can be described as a smiley featuring a straight-and-closed mouth, not giving away any particular emotion⁶. So, the facial expression is unemotional and blank (Lee et al., 2008).

The authorities followed up on the insufficient hygiene level two months later, which resulted in a happy smiley for the company in this example. At the next check, the declaration (*Mærkning og information*) was missing and so the smiley received was only slightly smiling. The follow-up visit resulted in a happy smiley again. In addition to the received smiley and the date of the control, the viewer can also read a short notice on the deficits that the authorities found. Customers will then immediately know if the presented smiley stands for hygiene deviations, declaration mistakes or similar, and then base their decision on that.







Denne kontrol, dato		
23-06-2015		
Tidligere kontrol		
Dato	28-05-2015	
Mærkning og information		
Dato	29-04-2015	
Dato	23-02-2015	
Hygiejne: Håndtering af fødevarer		

Figure 4: Example of a smiley-report under the Danish Smiley Scheme. Company: Monkeys 2, retrieved from www.findsmiley.dk (13.01.2017). Presentation of the smileys on the rating system from 1 to 3.

Geranium in Copenhagen has received three Michelin stars⁷. In 2016, the restaurant received an unhappy smiley after a visit by the authorities. Figure 5 shows Geranium’s smiley-report published shortly after two follow-up investigations on the unhappy smiley. The follow-up check resulted in a slightly happy smiley and at the following visit the restaurant received a

⁶ Information retrieved from <http://emojipedia.org/neutral-face/> (n.a.) accessed 17.12.2016

⁷ www.geranium.dk

happy smiley again. The restaurant would need another three happy smileys in order to gain their status of an elite-smiley-restaurant again. Even though the current smiley is positive, viewers can still see that the restaurant's food handling processes were insufficient two month earlier.

Kontrolrapport

Virksomhed **Geranium ApS**

Adresse Per Henrik Lings Allé 4, 8.
Postnr./By 2100 København Ø
CVR-nr. 36711086

Kontrolleret	Resultat
Hygiejne: Håndtering af fødevarer	1
Rengøring	1
Vedligeholdelse	1
Virksomhedens egenkontrol	1
Offentliggørelse af kontrolrapport	1
Uddannelse i hygiejne	
Mærkning og information	

Denne kontrol, dato **25-11-2016**

Tidligere kontrol

Dato	18-10-2016	
Godkendelser m.v.		
Dato	29-09-2016	
Hygiejne: Håndtering af fødevarer		
Dato		

Tilsynsførendes bemærkninger side 1 af 2
Hygiejne: Håndtering af fødevarer: Fulgt op på bødeforlæg fra tidligere kontrolbesøg. Målt temperatur i

Figure 5: Restaurant Geranium's current Smiley-Report, retrieved from www.findsmiley.dk (30.11.2016).

4.2 Smileys in other connections

In other connections in Denmark, smileys are used to inform the consumer about a product or service. A website, where handymen are rated, makes use of the smiley symbols⁸. Other examples include smileys to rate the work environment⁹ and smiley reports at car repair shops¹⁰.

Outside of Denmark, foreign authorities know about the Danish reporting system in the food industry and some countries have started to apply similar systems. For instance, a Smiley Scheme was introduced at restaurants in Berlin (Schönball, 2014).

Another idea by German authorities has also been to introduce a traffic light system for hygiene reports. A green light would stand for an acceptable hygiene level, whereas a red traffic light would inform the consumer not to enter the food establishment.

⁸ Retrieved from www.anmeld-handvaerker.dk (accessed 13.03.2017)

⁹ Retrieved from www.arbejdstilsynet.dk/da/tilsyn/smiley (accessed 13.03.2017)

¹⁰ Retrieved from www.synshallen.com/godkendelser-smiley (accessed 13.03.2017)

Traditionally in Germany, food providers are regularly checked by the authorities. However, the consumer is not informed about the results, and would therefore not know if the hygiene level is insufficient or the food provider even received a fine. This means that there is no transparency for consumers (Bieber, 2016; Kwasniewski, 2012). Figure 6 shows different smileys that are used as rating scales.



Figure 6: Smileys in other connections in the world, illustration made by author.

5. Theoretical Framework

For the analysis, the following frameworks will be applied to the case of the project in order to find a solution to the research problem stated in the beginning. This section will outline the existing theory that is concerned with the specific research area in this thesis to ensure a unified understanding. Especially regarding traceability, a conceptual basis was outlined for this thesis that is needed to uncover the problem description.

The theoretical framework touches upon two main theoretical research areas, namely marketing and semiotics. The theoretical part aims to clarify the present knowledge about marketing, including online marketing, and symbols in a semiotic system. These research fields will be presented within the context of service products.

Additionally, theoretical background about consumer behaviour will be added. Hereby, the literature search is based upon the databases Web of Science, Google Scholar, and the knowledge of the researchers involved in the process.

5.1 Service Products

A service product can be defined as “all economic activities whose output is not a physical product or construction, [which] is generally consumed at the time it is produced, and [it] provides added value in forms that are essentially intangible concerns of its first purchaser” (Wilson et al., 2013, p. 5). The boundaries between goods and services are very often blurry and, in fact, most goods are produced and bought because they offer the buyer some kind of service or experience connected to it. There are four characteristics that distinguish services from traditional products - intangibility, heterogeneity, inseparability and perishability (Wilson et al., 2013, p. 5). It means as an example that a service cannot be inventoried, it is experienced during consumption and it often involves interaction with a human being. In addition, it cannot be returned or resold compared to a tangible product and the delivery of service and customer satisfaction is not standardised (Mittal, 1999). So, each time the service product is delivered, it might be different, depending on the employee and also on the customer's actions. All this can be very challenging for managers to deal with. From the customers' perspectives, the purchase of an immaterial product includes a risk. As a customer, you cannot experience the product before buying it. Services include among others: insurance, automotive repairs, tourism products and consulting (Meffert et al., 2015, p. 4).

When researchers started to deal with the differences between goods and services, the tangibility spectrum was developed. The tangibility spectrum consists of a horizontal line. The two extremes on the line are tangible dominant on one side, intangible dominant on the other side (Wilson et al., 2013, p. 6). This spectrum is used to present to which degree the product is tangible and intangible, since most products, goods and services are not purely one or the other. In the middle of the spectrum, products can be placed that are equally tangible and intangible. Wilson et al. (2013, p. 7) use the example of 'fast-food outlets' that provide an experience while selling tangible goods.

On the tangibility spectrum, restaurants would be placed halfway towards the term “intangibility”, stating that a restaurant visit is a more intangible product than a tangible product. Restaurants offer a service product that includes the stay at a restaurant where the customers are offered a meal. This means that the product is produced during the purchase. Even though the restaurants offer a service product, the industry should not be placed on the very far right side of the tangibility spectrum. This can be explained by the fact that a restaurant offers tangible products or items to their customers. The served food or food as take-away, for instance, is a tangible item that is part of the restaurant experience (Wilson et al., 2013, p. 7).

Maslow's hierarchy of needs describes how people move from physiological needs, which are basic needs to survive such as food, water and sleep, to the next step that includes safety and security needs. Further on the scale, one can find social needs, ego needs and self-actualisation on the top (Wilson et al., 2013, p. 6). To be able to reach the last step, you need to have fulfilled the first four steps. This can be transferred to service products, such as a restaurant visit. In relation to a restaurant visit, the basic need would be to get some food so that one is not hungry anymore. This is important to survive. This basic need could, however, also be satisfied in many other different ways. For instance, one could acquire food items somewhere else. A restaurant visit is also an experience and often the customer also spends more money than when cooking the same meal at home. Therefore, restaurant owners do not only have the task to fulfil the need of hunger. A service experience must be created around it for the customer to make them willing to pay more for the service.

Active measures for customer loyalty are particularly important in the restaurant sector because it is a very competitive market. Besides, relatively frequent errors occur due to the fact that there are insufficient possibilities to standardise the personal service. This can lead to a greater importance of recommendations by other guests (Wilson et al., 2013, p. 7; Bruhn & Hadwich, 2016, p. 291).

During the last decade, the Internet has also made it possible to see customer reviews of services, which reduces the risk for customers to try new places where they have not experienced the service yet. Rating websites help customers decide whether they want to buy a service from a certain restaurant, for instance, based on the experience of previous customers. From the supplier's perspective, those websites provide immediate feedback that can be used to improve the product (Gao, 2005, p. 228).

5.2 Marketing in the Digital Age

"A brand new game" (Marketing in the Digital Age, 2015)

There are many ways to attract customers. Nowadays, most companies make use of digital marketing channels to promote their products and attract customers. Already in 2001, Porter (2001) argued that "the key question is not whether to deploy Internet technology – companies have no choice if they wish to stay competitive". This statement expresses that whether you want to or not, you need to understand business trends and development in the global market in order to have the instruments to keep your business running. It refers to the development of Web 2.0 that has changed the way people use the Internet and engage socially online.

Excellent online marketing can be the key to increased customer interest and the company's success. The requirements for brand management have changed in the digital age. Digitalisation has opened up for additional and new possibilities for branding a product, and a product can be presented in a great variety of ways. New marketing strategies are faced with the challenge of integrating the digital channels, thereby taking care of the right use of the increased influence of consumers in social networks. At the same time, the challenge is constantly to differentiate yourself from the competition. Digital marketing channels also create the possibility for interaction with the consumers, going from one-way communication to a dialogue communication (Meffert et al., 2015, p. 1).

Besides, online communication offers an additional way to position the product within the consumer environment and to use the interaction for the positive impact on branding. As an example, recommendations on social media or review sites can be used to gain an insight into consumers' minds and to have a dialogue with online users.

An essential success factor of a product is how the product is presented and if the message seems trustworthy and authentic. The consumer can obtain all relevant information online, whereby the Internet user receives positive as well as negative information about the product. The focus today is no longer just on prices and quality, but on the values of a product. Therefore, it is particularly essential to deliver as much information as possible to the consumers so they get the full image of a product (Meffert et al., 2015, p. 5).

On the web, it is now possible to evaluate almost all products and services, such as restaurants, travel and doctors. According to various studies (Gao, 2005, p. 288; Close, 2012, p. 247; Hoyer & MacInnis, 2008, p. 194), many users use ratings from other consumers before making a purchase, especially when buying service products. Customer evaluations are therefore a decisive success factor in the online market. The consumer sees a trustworthy source in evaluations of other customers. Reviews can, however, be manipulated by the companies themselves in order to influence the sale of the products. It is not possible for the user to distinguish between a real or fake evaluation.

5.3 Symbols in Marketing

Sometimes *“a picture is worth a thousand words.”*¹¹

A brand is not just a name or symbol, but also an important element in the relationship between the company and the customer. Strong brands increase brand awareness and lead to customer loyalty and customer identification with the brand. The aim of brand building is to provide a precise communication to achieve a high brand recognition, clear brand positioning and successful differentiation from the competitors.

Therefore, it can be characterised as one of the most significant assets of a company. Brand success is based on a consistent set-up and continuous maintenance of the brand. Thereby, brands form fan groups who identify themselves with the brand (Miller, 2015). The same values can occur for symbols. Some symbols are so well-known to the viewers that everyone perceives it in the same way. A common example is the traffic light. The red light stands for “Stop” and the green light symbolises “Go”.

Successful brands or symbols have the ability to position themselves clearly in the market, which helps against the competition in the long term. If the brand or the symbol is easily understood, it can create an emotional link between its viewers.

Nowadays, the Internet offers a massive amount of information to consumers. Visual information is easier for the online user to process and images or symbols are absorbed faster and better by the brain (Miller, 2015). Therefore, images and videos are increasingly used by companies to promote their brands or products. Product videos, for instance, can increase the trust of the users and strengthen the purchase decision

¹¹ Common English expression

5.4 Semiotic Nature of the Smileys

Communication is the process of transferring data and meaning from a source to a receiver. It can be addressed from three perspectives using rhetoric, semiotics and hermeneutics. Semiotic studies are the study of sign processes and meaningful communication. It also includes the study of signs and sign processes, analogy, metaphor, symbolism and communication. Pictorial semiotics also deals with how a picture relates to other pictures. It is concerned with the social and cultural circumstances under which the picture emerges for a perceiver (Sonesson, 2013; Chandler, 2007, p. 37).

In order to coin a word to refer to something, the community must agree on a simple meaning within their language, but that word can transmit that meaning only within the language's grammatical structures and codes. So, this means that a symbol is a social construction based on the culture you live in, according to Peirce's theory of science (Atkin, 2013).

Semiotics have an influence on the brand value. The companies must be aware of the cultural codes of the individual countries in order to succeed. Advertisements may symbolise something in one culture, but something different in another. Also, advertisements can be understood and interpreted differently depending on the viewer's pre-understanding and culture, for instance.

The smiley stands for a facial expression. A smiley is a sign that describes an emotional expression. A widely-recognised system for describing facial expressions is provided by Paul Ekman's "Facial Action Coding System"¹² (Ekman & Rosenberg, 2005, p. 16). Thereby, a smiling smiley stands for happiness. It is assumed that there are so-called "basic emotions", which each have a specific facial expression. These facial expressions have been observed in many cultures, and they are intended to be interpreted identically throughout the world (Ekman & Rosenberg, 2005, p. 151, p. 414).

The importance of the basic emotions is the same in all cultures. At least in some of the foundations, there is sufficient evidence that they exist across cultures (Ekman & Rosenberg, 2005, p. 158, p. 472).

¹² Recieved from <http://www.paulekman.com/product-category/facs/> (accessed 15.01.2017)

According to Ottobring et al. (2013), textual elements are detected fastest when placed on the left side, whereas the opposite accounts for pictorial elements. In the smiley-report the general information about the restaurant is placed on the top-left side, and the description of the hygiene results is on the bottom of the page, from left to right. The pictorial elements, the smileys from the last four schemes are positioned on the right side. Following this study, the chosen structure is very suitable for the viewer to make sure that it is appealing.

The smiley shows an emotion. This emotion stands for a feeling. An unhappy smiley shows the feeling of the risk of getting sick. The facial expression is sadness, but the tied understanding for the viewer is bad hygiene according to the authorities, which then would result in the customers getting sick in the worst case. In this thesis, it is assumed that restaurant customers in Denmark know that a good hygiene level decreases the risk of getting ill as a result of food intake.

The Smiley Scheme by the Danish Veterinary and Food Administration consists of seemingly simple documents with a combination of text and picture. The smileys would not necessarily emerge in another society. Intuitively, the pale yellow background and green colour of the smiley-report can be identified, from a Dane's viewpoint, as an official document from the authorities.

Therefore, it is not a coincidence that the schemes are green and yellow. It signifies an official document. The design of the schemes is standardised and the consumer can therefore easily compare different schemes.

The pre-understanding by the author is that a person who is brought up in Denmark assumes that Danish restaurants are hygienic. This will be kept in mind when interpreting the results in this thesis. Maybe the Danish Veterinary and Food Administration is wrongly assuming that everyone in Denmark knows the connection between the smiley and getting sick because of an unhappy smiley.

The pre-understanding of a Dane could be that even though the smiley has an unhappy facial expression, the hygiene level is still sufficient. Contrarily, Danes would be more careful in countries where they have had bad experiences themselves with the food hygiene or heard about it from others.

On their website¹³, the Danish Administration for Food and Agriculture call upon site visitors to read the smiley-report before choosing where to eat (taken from: *Læs kontrolrapporten inden du beslutter dig*). The smiley is talking to the viewer. A happy smiley symbolises “It is clean. Please enter”, whereas the unhappy smiley is warning the viewer “Do not eat here”.

5.5 Consumer Behaviour

The web creates a new way of consuming brand and media content so that an emotional optimisation of websites is possible. Companies can use these instruments when communicating with their consumers. Thus, it can have a high impact on the decision-making process of the customer. The company should define a clear core message to help the consumer to make the right choice.

The consumer behaviour in brick-and-mortar shops deviate from consumers who prefer online shops. The better the user can identify themselves with a webpage, the faster positive associations are created. Experiences on the web can be generated by using different tools, such as test reports or reviews. Some online sites work with emotional approaches to their potential customers encouraging them to interact with each other through reviews that can be commented on, for instance. Another method of interactive marketing is to show videos or animations of the product, which is very popular in tourism. As an example, many hotels show videos of their premises. By that, the potential customer can create a virtual image in advance.

This opens up the analysis of online marketing instruments. Google advertisements (Google Inc., Menlo Park, California, USA) and search results can have high influence on people's choices, but those choices are made indirectly. It means that people often do not know that the search engine result influenced their choice. To elaborate on these marketing instruments, a restaurant could investigate how Internet users landed on their webpage, for instance what kind of keywords were used.

According to the touch points when looking for a restaurant online, a potential restaurant visitor would search for “*Greek restaurant Copenhagen*” in an online search engine. Immediately a choice of websites would show up. One could claim that this person then chooses to click on one of the first three choices (Lee, 2013). The next step is to discover the website and then make the choice based on the information presented to the site visitor. If the

¹³ www.findsmiley.dk

person looks for a restaurant at a certain location, a search could be done via Google Maps. Another way of searching for a restaurant could be to look for “Græsk restaurant glad smiley” (in English: Greek restaurant happy smiley). The user would look for a particular type of restaurant whilst being interested in the smiley-report. For a restaurant to be placed at the top of the site when using these search terms, the website should not only present the smiley, but also include some textual elements about it. During research for this thesis, no example of such terms were found on any website.

Figure 7 shows the result when conducting the search on Google. No search results combined all four search terms. The smiley was crossed out. This was also the case when looking for other types of restaurants. It indicates that restaurants do not mention the smiley on their website writing. So, it is not used as a textual marketing instrument. There is only the link to the smiley-report and/or an image of the current smiley face.

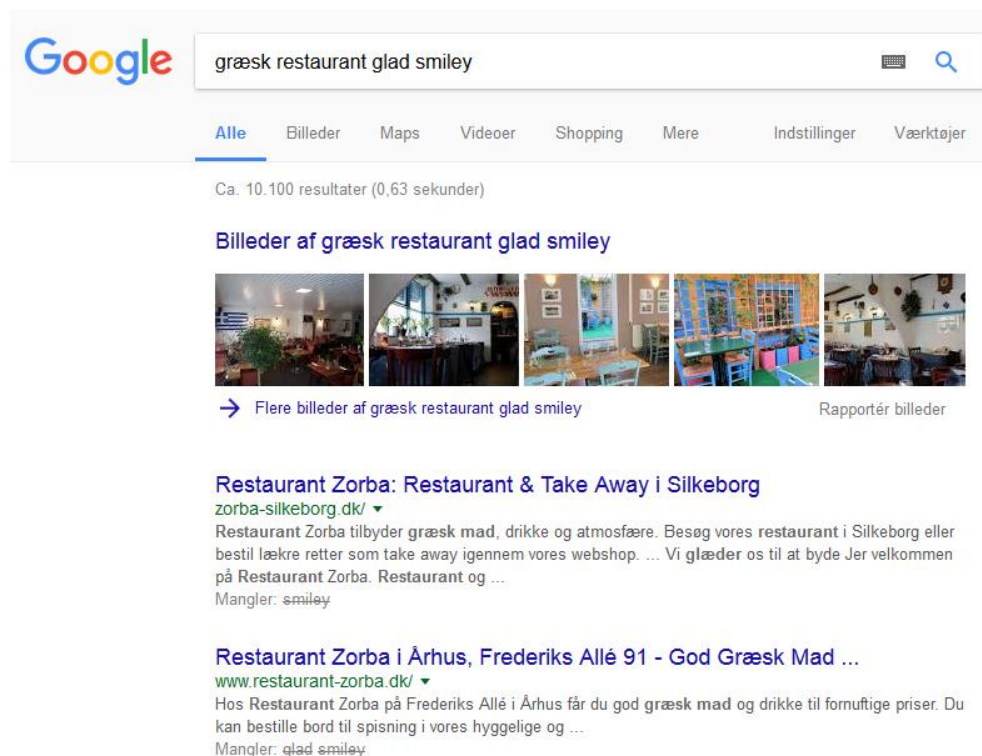


Figure 7: Google results: Græsk restaurant glad smiley, retrieved from https://www.google.de/search?q=italiensk+restaurant+glad+smiley&ie=utf8&oe=utf8&client=firefoxb&gfe_rd=cr&ei=6ScLWf62KK6P8QeM7bvACQ#q=gr%C3%A6sk+restaurant+glad+smiley.

6. Research Design

This thesis is the outcome of a literature study and an experiment with the aim to answer the research question. In the following, the methodological choices that are used to approach the research problem of the thesis will be presented and it will be explained how these methods will be applied. By outlining and verifying the choice of methods, the researcher can obtain reliability and validity for the research of this thesis (Blaikie, 2010, p. 58).

In addition, research design and techniques applied to collect and analyse data will be explained. The aim of the first part of the chapter is to present and describe the data collection and explain how the methodical choices are used to answer the research question. The design of the experiments and the used methods are elaborated on in that section. After having reviewed the role of concepts and theories, as well as having stated the hypotheses for the thesis, the next step is to decide on the data that is chosen to be most suitable for the research. That is the empirical foundation of the thesis.

In order to obtain the necessary information for the thesis, an empirical survey was indispensable. In doing so, a quantitative survey was carried out. Contrarily to pure observation or content analysis, the possibilities of a survey are more diverse. Providing questions and possible answers to consumers can be more reliable than observing a case and the number of respondents is higher and therefore more cases can be compared. However, language as an instrument of transmitting information can be problematic, since questions can be perceived differently and could be misunderstood. To prevent this, answers will be evaluated critically and it will be assessed if the answers are meaningful.

Supplementary to this, the survey deals with a common phenomenon in Denmark that is easy, or at least supposed to be easy, for everyone to comprehend and follow. People were asked to evaluate their knowledge on a common case that is known by almost everyone in Denmark, as seen in the studies by the Danish Veterinary and Food Administration (Fødevarestyrelsen, n.d., b; Appendix F). Therefore, the survey targeted random Danish citizens and not certain specialists within the field.

For the analysis, several statistical tests were applied depending on the number of variables tested and compared. The first part of the statistical analysis is based on the test that analysed differences between two variables. Paired tests were then applied when testing several factors for the restaurant choice on socio-demographic variables. Questions that asked the respondents to rate a phenomenon used a 5-point scale, so that mean ranks of different questions could be compared and tested.

6.1 Quantitative Data Collection

In quantitative studies, investigators use quantitative research questions and hypotheses to shape and focus the purpose of the study. Thereby, a phenomenon of a relationship between an independent and dependent variable is investigated. A quantitative research question regards the matter about the relationships among variables that the investigator seeks to know. Within research of social sciences, they are frequently used, particularly in survey studies.

As stated above, the empirical foundation for the analysis is a survey targeting Danish restaurant consumers. The questionnaire was drafted using elements from former questionnaires formed by the Danish Agency for Food to enable a comparison of the results gained through the two questionnaires (Appendix F).

Before sending out the questionnaire, the procedure of the data collection included several processes of changing and adapting the questionnaire in order to provide the optimal questionnaire that delivers the best quality in responses to answer the research question of the thesis.

The questionnaire was structured in three overall parts. Prior to the first question, the respondents were informed that the questionnaire dealt with behaviour in connection to the choice of restaurant without mentioning the Smiley Scheme. The first part of the survey included socio-demographic questions. The respondents were asked to specify on their age group, gender, place of residence and nationality. The questionnaire did not ask for marital status, income levels or academic degree because it would have increased the scope of the research to an extent that was not possible within the space frame of the thesis.

It was followed by general questions about the respondents' restaurant behaviour in the second part. One question was answered with six pre-formulated answers that asked what factors influence the respondent's choice. Factors like service and good taste were not included because they can only be evaluated after the restaurant visit, and this study deals with attracting potential customers. The Smiley Scheme was a possible answer to this question. Finally, this part ended with a question to rate the emotion of the neutral smiley without referring it to the actual Scheme. Thereby, the smiley was shown to the respondents.

The following question asked whether the respondents are familiar with the Smiley Scheme by the Danish Veterinary and Food Administration. Respondents who claimed not to know about the Smiley Scheme (N=7) were transferred to the last question in the questionnaire due to the lack of capability to answer questions concerning the Smiley Scheme.

The survey shifted from general questions about restaurant behaviour to questions surrounding the smiley symbol and the Smiley Scheme in the following sections. The survey can be found in Appendix A₁. The questions that asked for the rating of a certain phenomenon made use of a 5-stage Likert Scale.

The last question in the survey asked the respondents how much influence certain variables have on their restaurant choice. Thereby, very general variables were chosen. The variables are presented in table 1. In this case, 'service' is included to see if this factor is more important than the other. If a variable such as service has a higher influence on the consumer than the Smiley Scheme, for instance, the consumers would choose to go to a restaurant again because of the good service, thereby ignoring the smiley-report that could have changed since the last visit.

Table 1: List of pre-formulated answers for the question *I forbindelse med dit besøg på en restaurant, angiv venligst, hvad der har mest betydning for dig på en skala fra 1 til 5.* (Translated: In Connection to a restaurant visit, please indicate what is more important to you on a scale from 1 to 5).

Variable 1: *Smiley Scheme*

Variable 2: *Service*

Variable 3: *Price level*

Variable 4: *Have one's fill*

Variable 5: *Local*

Variable 6: *Fine dining*

The survey was carried out from February to August 2016 using the survey program Google Forms which provides the user with an online survey tool, whereby the responses are collected in an online spreadsheet. The respondents were invited by email and the questions could be answered either by using any computer browser or on a smartphone or tablet. This was to make it as convenient as possible for the respondents. The survey was self-answered by the respondents. The anonymity of the respondents was secured and there was no influence from the interviewer.

The data was analysed using descriptive statistics, reliability tests and linear regression. Besides, a non-probability sampling approach was used for this research. Through correlation analysis and regression analysis, the type and degree of the relationship between two variables can be determined. The relationship between the variables can be calculated. The coefficient r

indicates the strength of the relationship between two variables and can range from -1 to +1. Numbers below 0 indicate a negative relationship, and vice versa. A coefficient of 0 indicates that there is no relationship (Field, 2013, p. 285 & 762).

6.2 Sample selection

The selection criteria of the respondents for this research were very limited since everyone in Denmark could be a potential respondent for this survey. So, the targeted group was people living in Denmark. The respondents were randomly chosen by collecting mail addresses from different universities and authorities in Denmark. This can be defined as a convenience sample method.

The questionnaire was only provided in Danish to the respondents. Smiley-reports at the entrance of restaurants are only available in Danish, and so it seemed most relevant only to include Danish-speaking respondents.

Figure 8 shows the annual consumption at restaurants and cafés by Danish households sorted by the five regions in Denmark. From this, it can be said that the highest consumption is in the Capital Region of Denmark. Therefore, it seemed highly appropriate that most of the respondents in the survey were people from this region. For this output, it was not possible to only include consumption at restaurants, since Statistics Denmark combines restaurants, cafés and similar in one variable.

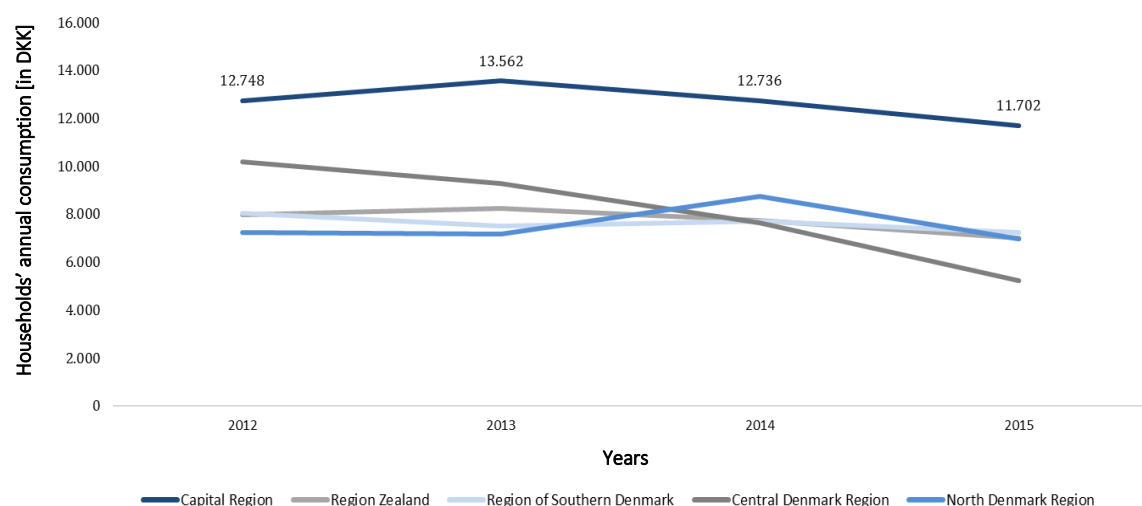


Figure 8: Households' annual consumption: restaurants, cafés, etc., year 2012 to 2015. Statistics Denmark. Households' annual consumption by type of consumption, households and price (DKK per Household) [FU51: Husstandenes årlige forbrug efter forbrugsart, husstandsgrupper og prisenhed], output made by author (11.01.2017) <http://www.statistikbanken.dk/FU51>.

Figure 9 shows the development of the turnover in the restaurant sector in Denmark from 2012 to 2015. The same pattern as in figure 8 can be viewed in this figure. The Capital Region experienced an increase from around DKK 16 Billion to almost DKK 19 Billion within three years. The other regions remained on a level between DKK 3 Billion and DKK 7.000 Billion. Therefore, the restaurants in the Capital Region experience a much higher turnover than restaurants outside of this region. In the figure below (figure 9), the turnover in restaurants was selected and sorted by the Danish regions.

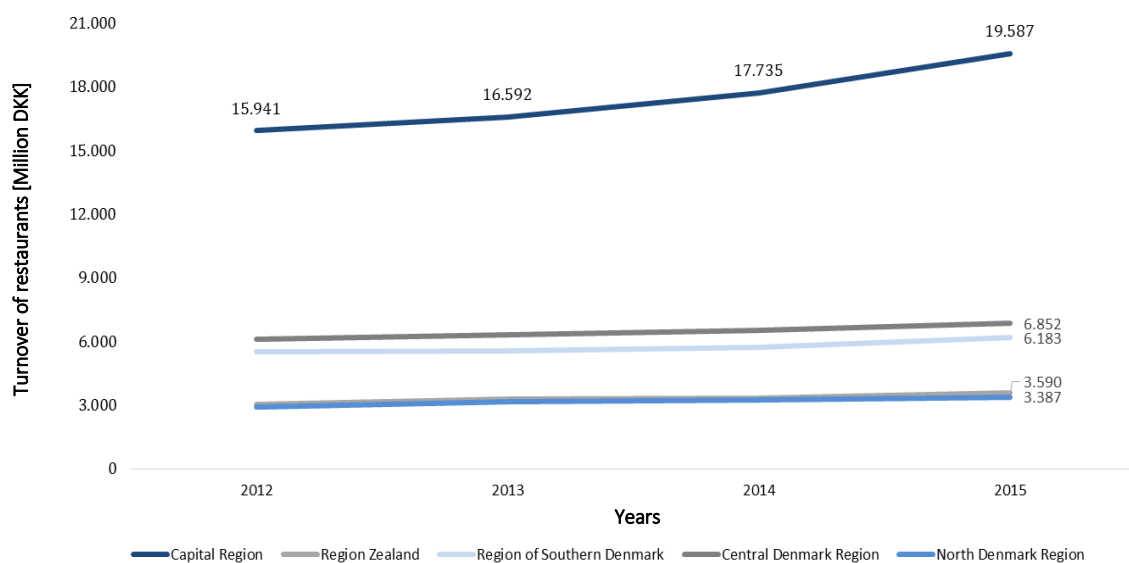


Figure 9: Turnover in the restaurant sector, year 2012 to 2015 (Million DKK). Statistics Denmark. Companies' buying and selling [Firmaernes køb og salg], output made by author (11.01.2017).

6.3 Hypothesis: The Influence on the Consumer

In quantitative studies, investigators use quantitative research questions and hypotheses to shape and focus the purpose of the study. A hypothesis is a question or statement that can be tested. It investigates a phenomenon of a relationship between an independent and dependent variable and hypotheses will be tested in order to answer the problem within the field of social sciences in this thesis (Field, 2013, p. 62 & 76).

To test if the hypothesis can be rejected, a significance level (also p-value) of 5% was chosen. This means that the significance level that is received from the statistical calculation should be less than 0.05 to be significant. If it appears to be significant, the null hypothesis can be rejected, otherwise it failed to be rejected.

The hypothesis formulated to answer the research question was the basis for the statistical analysis. The overall hypothesis is stated that there is no significant relationship between the Smiley Scheme and the consumers' interest in visiting a restaurant in Denmark. The alternative hypothesis is therefore that Smiley Scheme significantly influence the decision-making behaviour of customers in restaurants in Denmark.

The following hypotheses (H1-H3) were tested in the statistical analysis to support the overall assumption:

H1: There is a significant difference between what influences people from the Capital Region to people from other regions.

H2: There is a significant correlation between the Smiley Scheme and other factors that can influence the choice.

H3: There is a significant correlation between the Smiley Scheme and the choice of restaurant.

6.4 Premises

For this research, there is a research question that needs to be resolved. To do so, premises can be made as part of an argument to address the research question.

When choosing the right restaurant, consumers will evaluate different factors about the restaurant. In this evaluation process, the consumer develops different arguments to find the right place to eat. The consumer builds a case for why a certain restaurant is the preferred option.

When finding different arguments for a certain restaurant, one will come up with questions that will lead to the decision. This thesis deals with an every-day life problem that can be converted into the following question: *Where should we eat dinner?*

Premises can be offered as part of the argument to address the question,

Premise 1, *Restaurant A* has a positive smiley. *Restaurant B* has a neutral smiley.

Premise 2, My friends told me that *Restaurant B* has the best seafood in town.

The first premise offered is based on facts that can be proven to be true or false, since the respective smileys can be looked up online or physically at the restaurants. The second premise, however, is based on an opinion that cannot be proven and people may disagree on this premise. However, people might also agree on it and make the decision to eat at Restaurant B based on premise 1 and 2. Thereby, premise 2 is the dominant reason for the decision.

Facts and opinions have different relationships with the conclusion that is drawn and they consequently result in different types of arguments. When choosing a restaurant based on the Smiley Scheme, the consumers make a decision based on facts. In contrast, a decision that is made from reviews or recommendations from friends, for example, is based on subjective opinions and can therefore not be proven to be true. They might, however, still be relevant for the consumer's decision. Therefore, the analysis looks for the relevance of the Smiley Scheme to base the consumer's decision on it.

7. Results

In this thesis, a conclusion will be drawn based on the answers from the respondents. Within deductive research, the premises do not prove the conclusion to be true, but they support the conclusion, which means that the conclusion is supported by the premises. It is therefore not fully proven, but the premises can still be relevant for the conclusion. So, while the inference is not logically valid, it is still a logically strong inference because it is based on the analysis of the collected data and so one can generalize from the findings.

The results of the investigation are presented in the following order,

1. Restaurant behaviour in general
2. Respondents' knowledge of the Smiley Scheme
3. The Smiley Scheme and its effect on the respondents' behaviour

7.1 Descriptive Statistics

A total sample of 161 was reached at the end of the data collection process (N=161). Of the 161 respondents, a total of 101 were female and 60 were male. Thereby, females represent 60% of the sampled population.

As already shown in the surveys conducted by the Danish Veterinary and Food Administration, the knowledge of the Smiley Scheme was very high. In that survey, almost 96% of the respondents claimed to know the Smiley Scheme. The question, however, did not shed light whether the respondents know the Smiley Scheme well or not (Fødevarestyrelsen, n.d., b; Appendix F). A similar question was asked in the survey of the present thesis. First, respondents were asked if they knew about the Smiley Scheme by the authorities. Respondents who selected 'no' for this question (N=7) were forwarded to the last section in the

questionnaire. This was due to the lack of relevance, since the questions that followed dealt with the Smiley Scheme (Appendix C – Interview Guide).

In a different question, the respondents were asked what their knowledge is of the Smiley Scheme on a scale from 1 to 5, whereby 1 means that they do not know it and 5 is that they know it very well. Figure 10 shows the distribution of the results for this question. On the 5-point scale, most respondents (50%) chose 4, and 70% of the respondents chose either 4 or 5, stating that they know the Smiley Scheme very well.

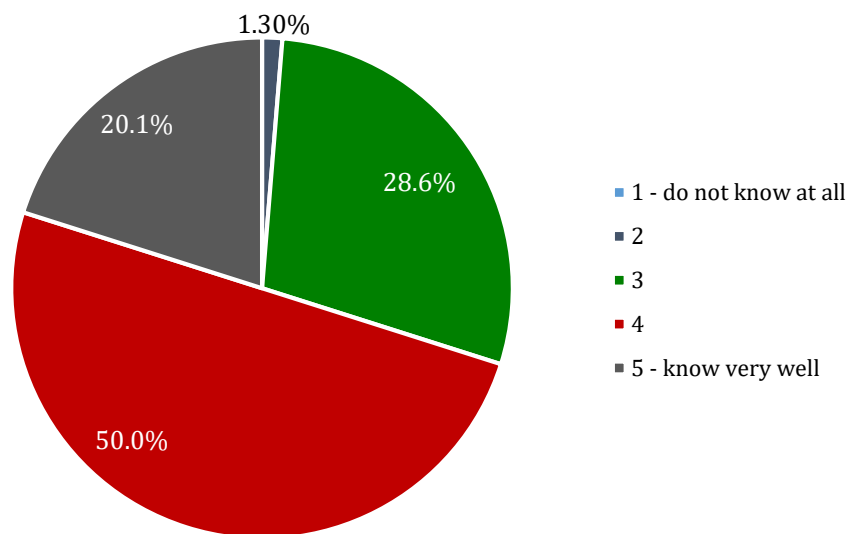


Figure 10: Results from survey question 10: På en skala fra 1-5, hvad er dit kendskab til Fødevarestyrelsens smileyordning? (Translated: On a scale from 1 to 5, what is your knowledge of the Smiley Scheme?). Graphic presents data from respondents.

Figure 11 presents the distribution of age groups among the respondents. More than half of the respondents are placed within the age group 20-29 years (54%). The second largest response groups were people within the age groups 40-49 and 50-59 years (respectively 13%). People between 30 and 39 years and between 60 and 69 years covered 8 and 7.5% respectively of the respondents. The remaining portion is distributed between the lowest age group (15 to 19 years) and the highest age group (above 69 years).

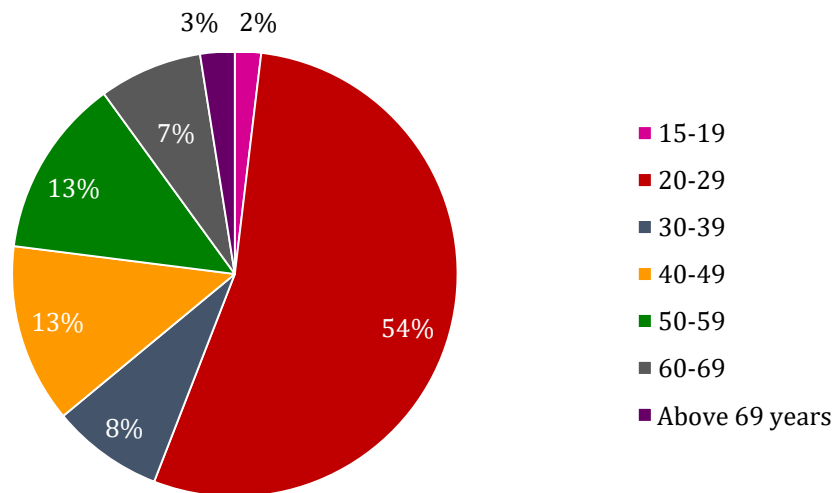


Figure 11: Results from survey question 1: Hvad er din aldersgruppe? (Translated: What is your age group?). Graphic presents data from respondents. The graphic divides the seven age groups (distribution in percent).

After completing the survey, the data from the respondents were transformed and recoded so that the variables could be used for the statistical analysis. The output from the survey was generated and words and sentences were replaced by numbers. For the individual values of a variable (for example 1, 2, 3, 4) understandable names must be given. For example, the variable "gender" should indicate the value of male and female subjects.

For the statistical calculations, the survey questions and answers were reformulated into variables. The list of variables and the corresponding questions can be found in Appendix B.

Besides, new variables were created when needed for a certain analysis. For instance, two additional age variables were generated, where the youngest age group, 15-19 years, was added to the second youngest group, 20-29 years, because of the low number of respondents within this group. Within this new variable, the age group for the oldest generation was added to the age group 60 to 69 years.

A variable list including the variable names for the data file can be found in Appendix E. This includes the coding scheme and the indication of possible value transformations that were used for the descriptive statistics software. All raw data are contained in one single data file and were handled using Microsoft Excel 2016 (Microsoft Corporation, Albuquerque, New Mexico, USA) for calculations and the descriptive statistics. The statistical analyses were carried out using the statistics program IBM SPSS Software (International Business Machines Corp., Armonk, New York 10504, USA).

Prior to the analysis, the data were checked for normality. Parametric tests have requirements about the nature or shape of the population involved. Based on this, the appropriate tests are selected for the statistical analysis.

A parametric test is one that requires data from one of the large catalogue of distributions that statisticians have described. For data to be parametric, certain assumptions must be true. If the data is not parametric, non-parametric tests will be used for the statistical analysis (Field, 2013, p. 213).

Field (2013, p. 19) describes normal distribution as follows: "In an ideal world our data would be distributed symmetrically around the centre of all scores. As such, if we drew a vertical line through the centre of the distribution then it should look the same on both sides".

The number of respondents was higher than 50, and therefore the Kolmogorov-Smirnov test is the appropriate method for the test of normality.

The null hypothesis is formulated as: all variables are normally distributed.

Table 2 shows the test for normality. The results show that $p < 0.00$ and so the null hypothesis is rejected. The variables are not normally distributed. Therefore, only non-parametric tests can be applied for the statistical analysis (Field, 2013, p. 539).

Table 2: Test for Normality for N higher than 50 using Kolmogorov-Smirnov test on selected variables. Calculation of significance level for all variables with N=154.

Variable	Parameter estimates	Sig.
have one's fill	0.225	0.000***
service	0.250	0.000***
local	0.222	0.000***
fine dining	0.199	0.000***
smiley scheme opinion	0.203	0.000***
price level	0.255	0.000***
neutral smiley	0.432	0.000***
smiley scheme knowledge	0.262	0.000***
smiley scheme influence choice general	0.198	0.000***
smiley scheme influence choice prior to reservation	0.196	0.000***
N	154	

***, **, *: Significant at 10%, 5% and 1% levels

7.2 The Smiley Symbol

After the general questions about restaurant behaviour, the respondents were shown a smiley with a straight mouth.

Figure 12 reports the distribution of the answers from the rating scale for the question regarding what kind of feeling the presented smiley expresses. Hereby, 1 stands for very unhappy and 5 for very happy. The results show that almost three-quarters of the respondents (73%) stated that the presented smiley expresses a neutral feeling. Most of the remaining respondents (N=39) claimed that the expression is slightly unhappy. Therefore, the mean has a value of 2.76.

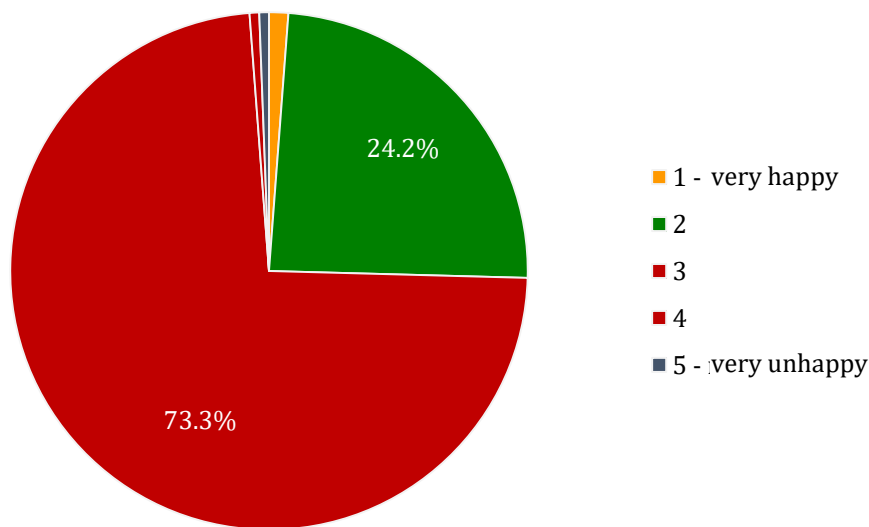


Figure 12: Results from survey question 7: På en skala fra 1-5, hvor 1 betyder 'meget sur' og 5 betyder 'meget glad', hvilken følelse udtrykker denne smiley i din opfattelse? (Translated: on a scale from 1-5, where 1 means 'unhappy' and 5 means 'very happy', what kind of feeling does this smiley express in your opinion?). Graphic presents distribution of the rating scale (1-5), whereby one stands for very unhappy (*meget sur*) and 5 indicates very happy (*meget glad*), presented in percent.

Figure 13 presents the distribution of answers on the meaning of the elite smiley. The respondents were asked if the elite smiley shows higher food and hygiene safety than the happy smiley. As already mentioned, a restaurant with a happy smiley can be as hygienic as an elite restaurant. So, the correct answer to this question is “not necessarily” (nej, ikke nødvendigvis).

Most people responded “yes” to the question. This is another example of the smiley being misleading for the viewer. If the customer thinks that the elite smiley is better, then a restaurant with an elite smiley would be preferred. This will be kept in mind for the discussion.

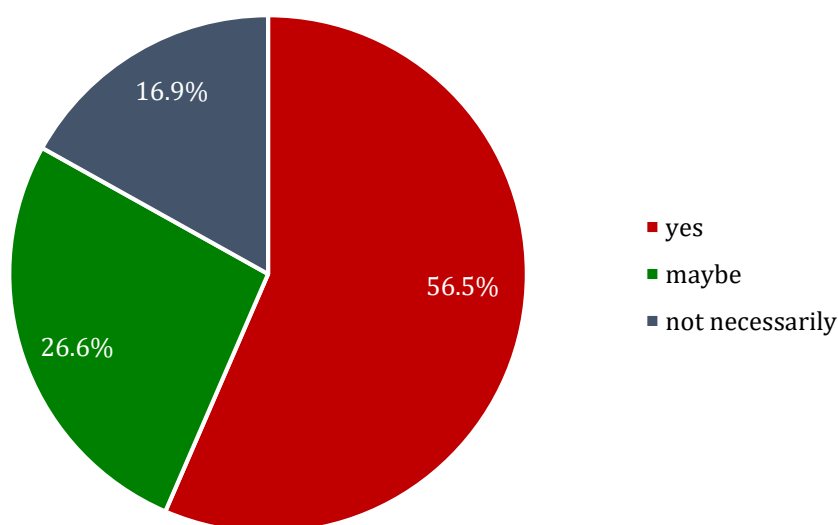


Figure 13: Results from survey question 20: Synes du, at en restaurant med 'elite smiley' har en højere grad af fødevaresikkerhed end en restaurant med en 'glad smiley'? (Translated: *Do you think that a restaurant with an 'elite smiley' has a better hygiene safety than a restaurant with a happy smiley?*). Graphic shows distribution on the three pre-formulated answers (in percent).

Table 3 presents the results from the chi-square test for two variables on the nominal scale. The test was applied on the socio-demographic gender on the question that included the difference between the elite smiley and the happy smiley. The first part of the data analysis used Pearson's chi-square test. When only two variables are applied, the Pearson chi-square test can be used for the analysis (Field, 2013, p. 724 & 742). The test analyses whether these two variables are correlated.

The null-hypothesis for this is that all variables are independent to each other. The p-value appears to be higher than 0.05 ($p=0.165$), therefore the hypothesis cannot be rejected. So, the test shows that the variables are not dependent on each other.

Table 3: Pearson's Chi-Square test, independent variable elite vs happy analysed on the dependent variable gender (female and male). The table shows distribution of respondents between the genders (in percent) with $N=161$.

Variable		Gender	
		Female	Male
elite vs happy	a	50.5%	66.1%
	b	30.5%	20.3%
	c	18.9%	13.6%
Parameter estimates	3.608		
Sig. (2-sided)	0.165		
N		161	

***, ***, Significant at 10%, 5% and 1% levels

7.3 Data Analysis

The hypothesis stated to answer the research question was the basis for the statistical analysis. The overall hypothesis is that there is a significant correlation between the Smiley Scheme and the consumers' interest in visiting restaurants in Denmark. The alternative hypothesis is therefore that the Smiley Scheme significantly influence the decision-making behaviour of restaurant customers in Denmark. The hypotheses that were tested in the statistical analysis will be presented to support the overall assumption.

Figure 14 shows the distribution of the rating on the question of how important the Smiley Scheme is for the choice of restaurant, rated on a scale from 1 to 5. Thereby, 1 means that it is essential for the choice, whereas 5 indicates no importance of the Smiley Scheme.

The data is distributed towards the lower points that the Smiley Scheme does have an influence on the choice (47.4%). Approximately one third of the respondents were undecided as to whether the Smiley Scheme is important. Only 2.6% state that the smileys are not important at all for their choice.

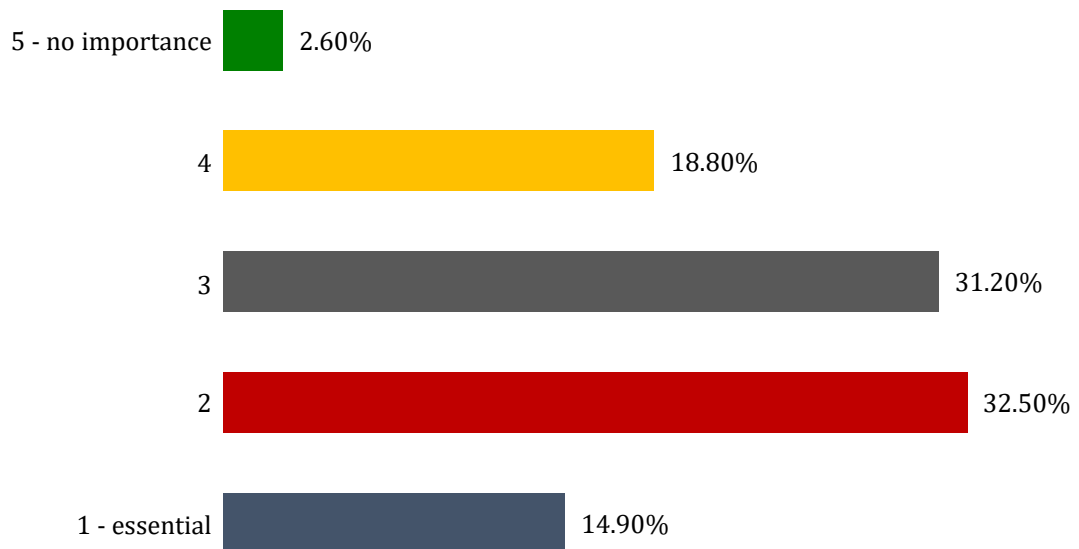


Figure 14: Results from survey question 11: På en skala fra 1-5, hvor stor betydning har smiley-rapporten for dit valg af restaurant? (Translated: *How important is the Smiley Scheme for your choice of restaurant?*). Graphic shows distribution on the 5-point scale (in percent).

7.3.1 General Results

The Mann-Whitney U test is the equivalent test to the T-test for non-parametric variables when analysing two groups. It calculates if there is a statistically significant difference between the mean ranks of the variables (Field, 2013, p. 219).

The null hypothesis is stated as: The means of the two variables are the same.

Table 4 presents the results for the socio-demographic variable gender conducted on selected variables from the question about the factors that influence the consumers' choice of restaurant. The statistical output shows that there is not enough evidence available to suggest that the null hypothesis is false at a 95% confidence level with the p-value above 0.05. So, there are no significant differences between these two variables and therefore the null hypothesis is not rejected.

Table 4: Mann-Whitney-U test on selected variables conducted on the variable *gender*, calculation of significance level for all variables with N=161.

	Parameter estimates	Sig. (2-sided)
have one's fill	-0.848	0.396
service	-0.819	0.413
local	-0.102	0.919
fine dining	-0.746	0.456
smiley scheme opinion	-0.127	0.899
price level	-1.165	0.244
neutral smiley	-0.856	0.392
smiley scheme knowledge	-0.376	0.707
smiley scheme influence choice general	-0.332	0.74
smiley scheme influence choice prior to reservation	-0.435	0.663
N	161	

*, **, ***: Significant at 10%, 5% and 1% levels

In table 5, the significance level for the variable nationality is shown on the same selected variables as in table 4. Also in this case, insufficient evidence was found for the means to be significantly different. It was failed to reject the hypothesis that the means of the variables are the same.

Table 5: Mann-Whitney-U test on selected variables conducted on the variable *nationality*, calculation of significance level for all variables with N=161.

Variable	Parameter estimates	Sig. (2-sided)
have one's fill	-0.332	0.74
service	-0.19	0.849
local	-0.552	0.581
fine dining	-1.095	0.274
smiley scheme opinion	-0.556	0.579
price level	-0.07	0.944
neutral smiley	-1.178	0.239
smiley scheme knowledge	-1.125	0.260
smiley scheme influence	-0.189	0.850
choice general		
smiley scheme influence	-0.018	0.986
choice prior to reservation		
N	161	

***, ***, Significant at 10%, 5% and 1% levels

Table 6a shows the result for the test on the two residence variables (Capital and non-capital). In the following output, the test was conducted on selected variables. In the output, it can be seen that there is a significant difference between the two variables related on *fine dining*.

Table 6a: Mann-Whitney-U test on selected variables conducted on the variable *residence* (Capital and Non-Capital), calculation of significance level for all variables with N=161.

Variable	Parameter estimates	Sig. (2-sided)
have one's fill	-1.726	0.084
service	-0.168	0.866
local	-0.186	0.852
fine dining	-2.025	0.043**
smiley scheme opinion	-1.091	0.275
price level	-1.011	0.312
neutral smiley	-0.696	0.486
smiley scheme knowledge	-1.517	0.129
smiley scheme influence	-1.304	0.192
choice general		
smiley scheme influence	-0.958	0.338
choice prior to reservation		
N	161	

***, ***, Significant at 10%, 5% and 1% levels

Table 6b outlines the mean ranks of the two residence variables distributed on *fine dining*. The mean ranks show a higher value for the respondents from outside the Capital Region. It shows that *fine dining* is more important to this group than to the people in the Capital Region.

Table 6b: Cross tabulation of mean ranks on fine dining distributed by residence variables (Capital and Non-Capital) with N=125

Variable		Residence	
		Capital	Non-Capital
Fine dining	Mean Rank	77.16	94.35
	Sum of ranks	9644.50	3396.50
N		125	36

7.3.2 Restaurant Visits

Pearson's Chi-square test was also applied when looking at the number of restaurant visits based on age. Table 7 displays the results distributed between selected age groups. For the following analyses, the answers to the question about the number of restaurant visits were combined into two groups, either 0 to 3 visits per month (variable 1), or more than 3 per months (variable 2).

Furthermore, changes in the age group variables were undertaken. Hereby, age group 2 combines the two youngest groups and group 6 includes the 2 oldest ones. Restaurant visit group 1 includes 0 to 3 visits to restaurants per month, and group 2 includes more than 3 restaurant visits per month.

The p-value in this case is calculated to be 0.059, which means that the certainty of difference is 94.1%. The fact that it is almost significantly different shows that there is a tendency. This can be seen in the younger age groups. Most of the respondents below the age of 30 visit restaurants more often than the age group 30-39. In this case, more than 60% answered that they visit restaurants less than 4 times per month.

Table 7: Chi-square test, number of restaurant visits sorted by age group. New age group variables created (2 = 15-29, 6 = above 60), the other age groups are equal to pre-formulated answers (3 = 30-39; 4 = 40-49; 5 = 50-59), new restaurant visit variables created (A_1 = 0 – 3 per month; A_2 = *more than 3* per month, distribution of answers (in percent)

Variable		Age group				
		2	3	4	5	6
Restaurant visits (new)	A_1	31.1%	61.5%	57.1%	47.6%	50.0%
	A_2	68.9%	38.5%	42.9%	52.4%	50.0%
Parameter estimates		9.084				
Sig. (2-sided)		0.059**				
N		154				

*, **, ***: Significant at 10%, 5% and 1% levels

Table 8 presents the Chi-square test on the two variables restaurant visit and age group. Both variables have been modified for the test.

Instead of adding the number of visits together in two groups, the age groups were combined. To receive a more representative number of respondents, the age groups were summarized into 'young' and 'old'. Thereby, group 1 was the age group 15 to 39 years, and group 2 included respondents above the age of 40.

The difference is highly significant as $p=0.005$. From the output, it can be stated with a certainty of 99.5% that the younger age groups visit restaurants more often than the older ones.

Table 8: Chi-square Test, number of restaurant visits sorted by two additional age variables. Cross tabulation of mean ranks on fine dining distributed by residence variables (Capital and Non-Capital), new age group variables created (2 = 15-29, 6 = above 60), the other age groups are equal to pre-formulated answers (3 = 30-39; 4 = 40-49; 5 = 50-59), restaurant visit variables from pre-formulated answers (A–D) (in percent)

Variable		Age group	
		1	2
Restaurant visits (new)	A	31.1%	53.5%
	B	47.8%	40.8%
	C	16.7%	2.8%
	D	4.4%	2.8%
Parameter estimates		12.781	
Sig. (2-sided)		0.005*	
N		154	

*, **, ***: Significant at 10%, 5% and 1% levels

In table 9, the respondents were divided into people living in the Capital Region of Denmark and people from all other regions and outside of Denmark to also increase the number of respondents for those variables.

The results of the respondents showed that there was no significant difference between the number of restaurant visits by people from neither the Capital Region and people from the other regions in Denmark, nor people living abroad. In table 9, it is shown that the null-hypothesis is rejected since there is no difference between the variables as the p-value is above 0.05. This means, there is no significant relationship between how older people from the Capital Region of Denmark visit a restaurant to people from other regions in Denmark.

Table 9: Chi-square Test, number of restaurant visits sorted by place of residence (Capital and Non-Capital), new restaurant visit variables created ($A_1 = 0 - 3$ per month; $A_2 = above 3$ per month, distribution of answers (in percent).

Variable		Residence	
		Capital	Non-Capital
Restaurant visits (new)	A_1	40.0%	44.4%
	A_2	60.0%	55.6%
Parameter estimates	0.228		
Sig. (2-sided)	0.386		
N	161		

*, **, ***: Significant at 10%, 5% and 1% levels

In Table 10, the results are shown for the test on the survey question about the elite smiley and the happy smiley. The test was conducted on the variable gender. The result shows if there are differences between the genders in connection to the question if they think that a restaurant with an elite smiley has a higher level of hygiene than a restaurant with a happy smiley. The differences between the two genders are not statistically different ($p=0.165$). Therefore, there is no difference between men and women if they think that the elite smiley shows better food safety than the happy one.

Table 10: Chi-square Test, variable elite vs happy sorted by place of residence (Capital and Non-Capital), sorted by pre-formulated answers (I – III).

Variable		Gender	
		Female	Male
elite vs happy	I	50.5%	66.1%
	II	30.5%	20.3%
	III	18.9%	13.6%
Parameter estimates	3.608		
Sig. (2-sided)	0.165		
N	161		

*, **, ***: Significant at 10%, 5% and 1% levels

7.3.3 Influence of the Smiley

The results from the last section show that there are some significant differences between the socio-demographic groups and selected variables. However, the tests did not show where the differences lie. There might be different reasons for the groups to visit a restaurant. Stating the null hypothesis that there is no difference why people from different areas visit a restaurant, there is a certainty of 95% that the hypothesis is rejected.

Independent variables

The Kruskal-Wallis test is a rank-based nonparametric test that can be used to determine if there are statistically significant differences between two or more groups of an independent variable on a continuous or ordinal dependent variable. It is considered the nonparametric alternative to the one-way ANOVA, and an extension of the Mann-Whitney U test will allow the comparison of more than two independent groups. The test shows rankings of the results and compares the mean ranks. In this thesis, the received data is non-parametric and therefore this test will be applied (Field, 2013, p. 236).

In table 11a, the different variables that can influence the choice of a certain restaurant are presented and sorted by the different age groups.

The null hypothesis is stated as all mean ranks are equal.

Several significant differences are found in the output. The hypothesis is rejected for the variables *local* and *fine dining* at a confidence level of 95% and 99%, respectively. There is a tendency that knowledge of the Smiley Scheme differs among the age groups ($p=0.069$).

Table 11a: Kruskal-Wallis test with grouping variable age, analysing more than two groups on selected variables with N=154.

Variable	Parameter estimates	Sig. (2-sided)
have one's fill	6.885	0.332
service	7.761	0.256
local	15.919	0.014**
fine dining	17.022	0.009***
smiley scheme opinion	10.529	0.104
price level	8.691	0.192
neutral smiley	6.543	0.365
smiley scheme knowledge	11.704	0.069*
smiley scheme influence choice general	5.803	0.446
smiley scheme influence choice prior to reservation	5.226	0.515
N	154	

***, **: Significant at 10%, 5% and 1% levels

The data also shows where these differences are found exactly. When taking a closer look at the means, for the variable “fine dining”, the number increases from age group 1 to 6, and age group number 7 is almost on the same level as the youngest age group. It indicates that fine dining is more important for the elderly age groups than for younger people. However, for people above the age of 60, fine dining is just as unimportant as for the youngest age group.

Table 11b: Cross tabulation of mean ranks on selected variables distributed by age groups on pre-formulated answers.

Variable	Age group						
	1	2	3	4	5	6	7
local	106.33	70.40	68.69	101.38	96.52	94.17	104.50
fine dining	60.67	70.11	87.62	94.64	98.81	109.71	60.25
smiley scheme knowledge	103.00	73.48	56.58	77.15	86.47	102.46	100.83

Table 12a shows the significance levels for different age groups on selected variables. Since the number of respondents is relatively low for the lowest and highest age groups, a new variable [new age group] was generated.

When applying the new age group variables, there is still a significant difference for three variables. The variables *local*, *fine dining* and *knowledge of the smiley* are calculated to have significant differences with p-values under 0.05. *Price level* (p=0.097) and *smiley scheme opinion* have a tendency for a significant difference.

Table 12a: Kruskal-Wallis test with grouping variable: age_new, analysing more than two groups on selected variables with N=154.

	Parameter estimates	Sig.
local	13.880	0.008***
fine dining	13.252	0.010***
smiley scheme opinion	8.115	0.087*
price level	7.849	0.097*
smiley scheme knowledge	10.196	0.037**
N	154	

***, **, *: Significant at 10%, 5% and 1% levels

Table 12b outlines the mean ranks on the variables from table 12a. This shows how the variables are significantly different from each other.

Hence, it can be stated that the higher age groups focus more on fine dining and local restaurants than the younger age groups. In addition, knowledge of the Smiley Scheme is higher for older age groups. The people above the age of 50 know more about the Smiley Scheme than the younger generation. The same observation can be stated concerning the opinion that the smileys are publicised. The opposite applies for the variable “price level”: there is a tendency that the price is more important for young customers than for the older age groups. The mean ranks decrease with increasing age groups up to age group number 5. The mean rank for the highest age group is slightly higher than for age group number 5. The other means in this test are not significantly different and therefore not presented in table 12b.

Table 12b: Cross tabulation of mean ranks on selected variables distributed by modified age group variables (2 = 15-29, 6 = above 60), the other age groups are equal to pre-formulated answers (3 = 30-39; 4 = 40-49; 5 = 50-59).

Variable	Age group				
	2	3	4	5	6
local	71.60	68.69	101.38	96.52	96.75
fine dining	69.80	87.62	94.64	98.81	97.34
smiley scheme opinion	73.71	80.23	99.43	82.21	96.88
price level	87.91	88.31	70.79	62.55	73.81
smiley knowledge	74.50	56.58	77.15	86.47	102,13

Table 13 displays the Kruskal-Wallis test with the socio-demographic variable residence on selected variables from the answers in the survey. The results show that there is a significant difference for the two residence groups in connection to *fine dining* ($p=0.043$). *Fine dining* appears to be more important for the people outside of the Capital Region. There is also a tendency ($p=0.084$) that the satisfaction of one's appetite is more important for the people from the Capital Region than for the people from all the other regions. Here, there is a significant relationship between why people from the Capital Region of Denmark and people from other regions in Denmark visit a restaurant.

There is a significant relationship between the Smiley Scheme and other factors that can influence the choice, such as *recommendation*, *price level*, *review*, *location* and *general information*.

This means that fine dining, for instance, is significantly more important to one age group than another.

Table 13a: Kruskal-Wallis test with grouping variable: residence, analysing more than two groups on selected variables with N=154.

Variable	Parameter estimates	Sig. (2-sided)
have one's fill	-1.726	0.084
service	-0.168	0.866
local	-0.186	0.852
fine dining	-2.025	0.043**
smiley scheme opinion	-1.091	0.275
price level	-1.011	0.312
neutral smiley	-0.696	0.486
N	154	

***, **: Significant at 10%, 5% and 1% levels

In table 13b, the mean ranks for the test above are outlined on the variables. By viewing the output, it becomes clear that the influence of fine dining increases when the age increases. The opposite accounts for the price level: the younger the respondents, the higher the importance of the price, although the price level has a higher influence on the oldest age group than the second oldest. This can also occur because of a low number of respondents in this age group.

Table 13b: Cross tabulation of mean ranks on selected variables, distributed by the socio-demographic variable residence (Capital and Non-Capital).

Variable	Residence	
	Capital	Non-Capital
have one's fill	87.27	69.65
service	81.31	79.92
local	80.65	82.22
fine dining	77.16	94.35
smiley scheme opinion	78.95	88.11
price level	82.88	74.47
neutral smiley	79.94	84.67

Dependent variables

For the following correlation analysis, the null hypothesis was stated as follows: No correlation can be found.

Correlation tests determine if there is a relationship among variables. There are two different types of correlation, bivariate and partial correlation. The bivariate correlation is a correlation between two variables, whereas in the partial correlation one or more variables are controlled to observe the impact of a variable or variables on the relationship, so the effect of other variables is constant (Field, 2013, p. 285).

In the correlation analysis, the correlation coefficient R is presented and lies between -1 and 1, which is the strength of the relationship, also called the goodness of fit. It does not however make any assumptions about dependency, but investigates association. Correlation defines the degree of the relationship between two different variables. It shows that each independent value correlates with a particular dependent value. The dependent values can be calculated for every value and therefore we can predict coherent data without knowing the causality of the two variables (Field, 2013, p. 267).

In table 14, several significant correlations are presented. So, the variables are dependent on each other. For instance, there is a significant relationship between the opinion towards the publication of the smiley-reports and the knowledge of them. The correlation coefficient is

positive, as $B=0.161$. This means that if one variable increases, the other one also increases simultaneously. The opposite applied for *service* and *smiley influence choice prior to reservation* ($B=-0.183$). The correlation between the variables *unhappy smiley* and *smiley scheme* is significant ($p=0.000$), stating that an unhappy smiley would influence if the smiley scheme had an influence on the choice.

In addition to that, Appendix A₂ shows the distribution of answers on the question whether an unhappy smiley on the smiley-report can lead to the avoidance of a restaurant. Almost half of the respondents (44.2%) state that it can definitely make them avoid the restaurant, even if they made a reservation in advance. Only 1.9% chose the pre-formulated answer that it does not make them avoid the place.

Table 14: Correlation analysis on selected variables with $N=154$, presentation of significant differences between the variables.

		have one's fill	service	local	fine dining	smiley scheme	price level
smiley publication opinion	R	-.011	.096	-.004	-.003	0.224	.102
	Sig. (2-sided)	.896	.238	.965	.971	0.005***	.209
smiley scheme knowledge	R	.002	.099	.037	.082	0.225	-.060
	Sig. (2-sided)	.978	.223	.647	.315	0.005***	.458
smiley influence choice general	R	-.063	-.054	-.053	-.007	-.0381	-.059
	Sig. (2-sided)	.440	.503	.514	.928	0.000***	.466
smiley influence choice prior to reservation	R	-.024	-.183*	-.068	-.005	-.541	-.015
	Sig. (2-sided)	.767	.023	.402	.947	0.000***	.853
website link	R	.023**	-.064	.051	-.066	-.085	.024
	Sig. (2-sided)	.778	.429	.529	.419	.292	.764
smiley notice	R	-.034	-.090	.028	.080	-.054	-.091
	Sig. (2-sided)	.678	.268	.732	.326	.000***	.264
smiley_influence_restaurant	R	.009	.097	.096	-.029	0.536	.060
	Sig. (2-sided)	.908	.229	.236	.725	.000***	.462
elite vs happy	R	-.032	.073	.080	.000	-.089	-.014
	Sig. (2-sided)	.694	.366	.327	.997	.273	.859
elite_vs_happy_choice	R	.030	.025	-.138	.027	.099	-.023
	Sig. (2-sided)	.710	.757	.087	.738	.223	.779
unhappy_smiley	R	-.024	-.112	.147	.114	-.0364	.085
	Sig. (2-sided)	.768	.166	.069	.159	.000***	.295
N		154					

***, **: Significant at 10%, 5% and 1% levels

These correlations can be very useful, but from this process one can take a step further and predict one variable from another with the regression analysis:

The regression analysis is a way of predicting an outcome variable from one predictor variable or several predictor variables. Regression analyses the interdependence of a dependent variable on one or several independent variables.

The regression analysis is based on the correlation outcome in table 14 and helps to predict the best possible coefficient for each value. The regression determines the causality of the events observed in the correlation analysis (Field, 2013, p. 762).

Table 15 present a regression analysis for two variables. The null hypothesis for the following is that there is no significant relationship between the answer that the smiley-report is read before choosing the restaurant and if it influences the choice. The regression analysis was conducted on the question if the respondents read the smiley-report before entering the restaurant (question 12) and if the smiley has an influence on their choice (question 13). The regression analysis shows that there is a relationship at a confidence level of 95% between the two variables and therefore the null hypothesis is rejected. R is positive (0.336) and therefore, there is a positive relationship between the variables. This means if *smiley influence choice* increases, then *smiley upfront check* also increases. The respondents who say that the Smiley Scheme influence their choice, also check the smiley-reports before entering a restaurant.

Table 15: Regression analysis on the dependent variable: smiley upfront check, independent variable: smiley influence choice general.

	<i>R</i> ²	R	Sig. (2-sided)
Variable: smiley influence choice	0.113	0.336	0.000***
N	154		

***, **. Significant at 10%, 5% and 1% levels

Comparing groups

When groups are compared, different means of groups are analysed using the t-test. This test was used for the question on what influences your choice on a scale from 1 to 5, whereby 1 means that the factors has no influence on the respondent, and 5 is that the factor has a crucial influence on the choice of a restaurant. In the questionnaire, six different variables were pre-formulated for the respondents and they were asked to be rated. The variable *smiley scheme* was compared to all other variables in the following tests.

The dependent T-test is testing the null hypothesis that there are no differences between the means of the two related groups. A significant result means that the null hypothesis can be rejected.

In table 16, the mean displays the mean rank of the pairs. All factors score more than 3 on average. This means that the respondents (N=161) find all variables to be somehow meaningful for their decision for a certain restaurant.

In the T-test, the p-value for every pair was tested to be under 0.05, and therefore there are significant differences between the means of the groups. The p-value for pairs 1, 4, and 5 are 0.00, so that there is a 100% certainty that the null hypothesis is rejected that there are no differences. Looking at the mean value for pair 1 (0.83), the value is above 0 and this positive number indicates that the mean rank for *service* is higher than for *smiley scheme*. The mean for *service* is 3.88, whereas *smiley scheme* has a mean of 3.05. This confirms the statement that the service at a restaurant is more important for the respondents than the outcome of the smiley-reports. The same significant difference (higher than 95%) applies to all other pairs. So, it can be stated that all other variables have significantly higher ratings than the Smiley Scheme and, therefore, the other five factors have a greater influence on the restaurant choice than the Smiley Scheme.

Table 16: T-test for paired samples on variables from survey question 23, testing the five pre-formulated answers on the variable smiley scheme with N=161

Pair	Pair variables	Mean	Sig. (2-sided)
Pair 1	service – smiley scheme	0.8323	0.000***
Pair 2	local – smiley scheme	0.323	0.003***
Pair 3	fine dining – smiley scheme	0.2795	0.011**
Pair 4	price level – smiley scheme	0.7516	0.000***
Pair 5	have one's fill – smiley scheme	0.5217	0.000***
N	161		

* **, ***: Significant at 10%, 5% and 1% levels

In table 17, the pairs were sub-classified between people from the Capital Region (N=125) and people from other regions (N=36), as well as the two genders.

Some pairs are still significant when the pairs are divided into the two residence groups. In the Capital Region, there are significant differences between almost all factors and the Smiley Scheme as the p-value is below 0.05. Between *fine dining* and *smiley scheme*, there is a tendency of 94.5% (p=0.055) that the difference is significant.

In the other regions in Denmark, significant differences can be calculated between *service* and the *smiley scheme* (p=0.003). There is a tendency that *fine dining* and *price level* differ from *smiley scheme* (p=0.087).

All means achieve an outcome above 0, and, therefore, it can again be stated that all other variables achieve higher rankings than the Smiley Scheme.

Since there was no significant difference between *smiley scheme* and *fine dining*, there is no difference between these two factors, only a tendency that fine dining has a higher effect on the decision.

Table 17: T-test for paired samples from survey question 23, testing the five pre-formulated answers on the variable smiley scheme, distributed on the variable residence (Capital and Non-Capital) with N=161.

Residence	Pair	Pair variables	Mean	Sig. (2-sided)
Capital	Pair 1	service – smiley scheme	0.8960	0.000***
	Pair 2	local – smiley scheme	0.3680	0.003***
	Pair 3	fine dining – smiley scheme	0.2320	0.055*
	Pair 4	price level – smiley scheme	0.8400	0.000***
	Pair 5	have one's fill – smiley scheme	0.6320	0.000***
Non-Capital	Pair 1	service – smiley scheme	0.6111	0.003***
	Pair 2	local – smiley scheme	0.1667	0.461
	Pair 3	fine dining – smiley scheme	0.4444	0.088*
	Pair 4	price level – smiley scheme	0.444	0.084*
	Pair 5	have one's fill – smiley scheme	0.1389	0.536
N		161		

***, ***, Significant at 10%, 5% and 1% levels

Table 18 shows the result on the t-test for the variable gender when analysing more than 2 groups. Similar results are found in the output divided between women (N=101) and men (N=60). In fact, the differences between the variables are either significant or they show a trend to result in a difference. The latter applied to fine dining for women (p=0.093) and local for men (p=0.083). In these two cases, there is no statistically significant difference between the two factors that influence the choice of a certain restaurant.

Table 18: T-test for paired samples from survey question 23, testing the five pre-formulated answers on the variable smiley scheme, distributed on the variable gender (female and male) with N=161.

Gender	Pair	Pair variables	Mean	Sig. (2-sided)
Female	Pair 1	service – smiley scheme	0.8119	0.000***
	Pair 2	local – smiley scheme	0.3366	0.015**
	Pair 3	fine dining – smiley scheme	0.2376	0.093*
	Pair 4	price level – smiley scheme	0.8317	0.000***
	Pair 5	have one's fill – smiley scheme	0.4752	0.001***
Male	Pair 1	service – smiley scheme	0.8667	0.000***
	Pair 2	local – smiley scheme	0.3000	0.083*
	Pair 3	fine dining – smiley scheme	0.3500	0.047**
	Pair 4	price level – smiley scheme	0.6167	0.000***
	Pair 5	have one's fill – smiley scheme	0.600	0.000***
N	161			

*, **, ***: Significant at 10%, 5% and 1% levels

7.3.4 Open Answers

At the end of the survey for this research there was a possibility to comment on the topic. Some of the answers will be applied in the discussion.

Figure 15 presents an outtake from the survey where the respondents had written open comments. The first comment below deals with the visual appearance of the smileys. The respondent states to follow the smiley-report if they happen to it, which seems to be by coincidence, and not by actively looking up the smileys or searching for it at the entrance to the restaurant.

In the other selected comment, the respondent avoids a particular restaurant if there has been a scandal concerning the smiley. A scandal would probably include high media coverage. It could either be a famous restaurant that surprisingly received a bad hygiene result or the authorities discover something at a restaurant that is publicised, and also lead to an unhappy smiley face. This means that this respondent not necessarily notices an insufficient hygiene report that did not lead to a scandal.

Smiley-ordningen er ikke noget jeg tænker over med mindre jeg (tilfældigvis) ser den - og hvis jeg gør det har den stor betydning for mit valg.

Hvis en restaurant allerede har haft en skandale omkring deres smiley-ordning går der lang tid for jeg har lyst at spise der igen.

Figure 15: Open comments from survey question 24, translated by author: 1) The Smiley Scheme are not something I think about unless I see them (coincidentally) – and if I do, they do have a high impact on my choice. 2) If a restaurant already had a scandal concerning their Smiley Scheme, it would take a long time until I fancy eating there again.

8. General Discussion

The evaluation of the collected data was made after the last survey was carried out. Finally, the initial assumption stated in the beginning was investigated by means of the results of the survey to answer the research question. Based on the survey carried out, thorough information could be collected and analysed further. The results were the basis for the quantitative analysis in this thesis. The data was evaluated using non-parametric tests.

As stated above, most turnovers in the restaurant sector is generated in the Capital Region of Denmark, as well as the consumption of Danish households on restaurants or similar is highest in this region. In the survey, 125 respondents were from the Capital Region, meaning 78% of the total population. People in Copenhagen also visit restaurants more often than people from outside the capital area. Therefore, the focus was on responses predominantly from this group of people. 98% of the respondents were Danish citizens and had their current residence in Denmark.

Overall, there were no significant differences between the two genders as well as between people with different nationalities. The number of respondents with a nationality other than Danish was very low, and therefore this test cannot be seen as representative. A larger population for the test could result in stronger differences between the groups. The results showed, however, that there were significant differences between consumers from the Capital Region and outside of the Capital Region in terms of fine dining, whereby people from the Capital Region were less concerned with fine dining when choosing a restaurant.

This was followed by a statistical analysis on the number of restaurant visits on the different socio-demographic groups. The tendency is that the number of restaurant visits differ among the age groups, whereby the younger age groups are more frequent visitors. The target group might also depend on the type of restaurant. Restaurant owners need to focus on their target in their marketing strategy to receive a customer-oriented approach.

A “neutral” smiley indicates that the food inspection found failures in the way the food suppliers handle their products. The result of the Smiley Scheme is, therefore, not “neutral” and the authorities do not find the hygiene level sufficient. The results from the analysis showed that more respondents perceive the symbol as neutral. Therefore, the neutral smiley seems to be misleading to most respondents. So, by using this symbol on the smiley-report, the viewers get the wrong impression of the result. Consequently, one could claim that the customer looks at the smiley in front of the restaurant, and then decides that the smiley indicates that the hygiene level is “ok”, not good, but also not bad.

The results indicate that Danish restaurant customers are not influenced by the Smiley Scheme as much as by other factors. The research focused to a high extent on reasons for choosing a certain restaurant that mainly include factors that can be determined prior to the restaurant visit, just like the smiley-report. Especially, within the Capital Region significant results were calculated that the factors *price level*, *local* and *to have one's fill* are more influential on the choice than *smiley scheme* in relation to selecting a restaurant. The same applied for the factor *service*. Though, this variable can only be evaluated during the restaurant visit. Hence, people might have read about the "exceptional service" on online rating sites or received the information from others.

From this it can be stated that the smiley-report would not be necessary to include in the marketing strategy. The restaurant owners, however, do not make an effort to promote the smiley. If the smileys were part of the marketing strategy, the analysis in this thesis could have different results.

On the other hand, people avoid restaurants with unhappy smileys. It is possible that the customers overact to a certain extent. Some might indicate in the survey that they react more consciously than they actually do when choosing a restaurant. The way the smiley-reports are presented apparently only influences consumers when they coincidentally see an unhappy smiley. A smiley-report with an unhappy or a neutral smiley could, however, also result in the fact that the customers will not enter such an establishment, and even speak to others about the negative smiley-report that has been observed.

9. Conclusion

The aim of this work was to answer the research question based on two main components, namely literature research and through a survey with restaurant consumers as respondents.

As stated in the beginning of the thesis, the assumption was *that the Danish Smiley Scheme has an influence on people's consumer behaviour when choosing a certain restaurant*.

The results from the initial literature review were promising to make the Smiley Scheme an interesting feature for marketing purposes for restaurants in Denmark. Especially the fact that the smiley-reports are available online makes it suitable to be used in the online marketing strategy of a restaurant business. Besides, the Danish smiley-reports are quite unique, globally seen.

Based on the literature study and the performed experiments it can be concluded:

Overall, the conducted survey and hereof the statistical analysis revealed that the smiley-report has no significant influence on the customers' choice. It can, therefore, be concluded that the Danish consumers base their initial decision on other variables than the smiley. This is underlined by the highly significant differences found on the studied variables.

However, the analysis also showed that a customer later in the final decision-making process might change his/her mind because of an unhappy smiley. When viewing this from the authorities' perspective, one could claim that the Smiley Scheme is successful based on the fact that an unhappy smiley does affect people's behaviour to some extent. So, Danish restaurants might lose customers when receiving a bad food safety result. This supports the author's pre-understanding that Danish consumers expect a sufficient hygiene level, and they only react to it when the food safety is on a very low level.

One could suggest, in this context, that the "neutral" smiley should be revised to a slightly unhappy smiley, so that it is not misleading for the viewers.

So, the Smiley Scheme does not have a crucial influence on the consumers when choosing a restaurant in Denmark, but people are well-aware of the Smiley Scheme, especially one with an unhappy smiley. Therefore, positive smiley results can be used as a supportive argument to convince someone to choose a certain restaurant.

In order to have an effect on today's consumers, it could be considered to revise the smiley-reports in terms of colours and layout to make it more appealing to the (online) viewers. The risk may be that the reports do not maintain the credibility that the official status today gives it.

10. Perspectives

The limitations of this thesis lie in a relatively small sample size. So, fluctuations in the results due to the sample size, but also because of the diverse number of respondents in the respective age group and the different residence regions, cannot be excluded. Besides, other potential variables, such as food quality and food type, were selected to be excluded from the study as would have been beyond the scope of the thesis due to limitations in space.

Consequently, the research in this thesis points towards the need for new and further research of the phenomenon. A suggestion for the next step within this research field would be a repetition of the survey with a broader scope. Thereby, other socio-demographic variables could be added. This would give the possibility to explore the Danish consumers more thoroughly. Furthermore, it would be useful to carry out studies internationally to see if the effect of such food safety schemes is higher in other cultures.

Another way to approach this would be to rearrange or redesign the smiley-report and test it on respondents. This would get an insight if a different style of the reports would lead to higher awareness by the viewers. A potential study could be on the message of the green smiley and if an alternative in colour would be more appealing to the viewers, which then results in a faster and clearer understanding of the message. Hence, this would increase the impact on the decision-making process. The pale yellow paper that reminds people of the authorities might be boring, and therefore viewers might be distracted by other information or pictures. Only people that focus on it might follow the recommendations by the Danish Veterinary and Food Administration.

In addition, other factors that influence the selection process in relation to a restaurant can be included. There seems to be a growing trend in sustainable produced food without synthetic ingredients. The research in this thesis did not ask for those variables. Increased interest in organic, green and healthy restaurants could be combined with the promotion of a positive smiley-report. This creates a new research area within the research field of the present thesis. This study can also be expanded to other countries where similar reports have already been applied. Thereby, a broader scope could be achieved.

Within the restaurant industry there is very high competition, and therefore it is even more important for a participant to promote competitive advantages relative to the others. The restaurant industry is continuously improving their marketing efforts and product portfolio to respond to the changing consumer demand of today's customers. Thereby, several parameters are of importance for an improved economic profitability and development of the businesses.

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12. Appendix

Appendix A₁: Smiley Scheme (Example)

Fødevarestyrelsen
Kontrolrapport

Virksomhed **Monkeys 2**

Adresse **Dronningensgade 46, 1. th**
Postnr./By **1420 København K**
CVR nr. **34932921**

Denne kontrol, dato **23-06-2015**

Tidligere kontrol
Dato **28-05-2015**
Mærkning og information **😊**
Dato **29-04-2015**
Dato **23-02-2015**
Hygiejne: Håndtering af fødevarer **😊**

Kontrolleret	Resultat
Hygiejne: Håndtering af fødevarer	1
Rengøring	1
Vedligeholdelse	
Virksomhedens egenkontrol	
Offentliggørelse af kontrolrapport	1
Uddannelse i hygiejne	
Mærkning og information	1
Godkendelser m.v.	
Særlige mærkningsordninger	
Varestandarder	
Tilsætningsstoffer m.v.	
Kemiske forureninger	
Emballage m.v.	
Andet	

Ikke alle regler bliver kontrolleret hver gang

Resultat	Betyder
1 😊	Ingen anmærkninger
2 😐	Indskærpelse
3 😞	Påbud eller forbud
4 😡	Baculering, politianmeldelse, autorisation eller registrering fratrækt

Dårligste resultat bestemmer aktuel smiley

Elite 😊 Ingen anmærkninger på de seneste 4 rapporter og i de seneste 12 mdr.

Kontroltype og -aktivitet
☐ Ordinær kontrol ☐ Kontrolkampagne
☒ Ekstra kontrol
☐ Anden kontrol

Fødevarestyrelsen
Stationsparken 31-33, 2600 Glostrup
Tlf: 72 27 69 00 Web: www.fst.dk

30 min.
Kontrolens varighed

Allevet til Tilsynsførendes underskrift

Mere om fødevarekontrol og klagemuligheder på www.findsmiley.dk

accessed on www.findsmiley.dk (12.12.2015)

Appendix A₂: Results from question 22

If you see an unhappy smiley before entering a restaurant, would you avoid the restaurant?



Appendix B: List of Variables

Table 15: List of variables based on pre-formulated answers in the survey and corresponding questions to the answers, translation of questions can be found in Appendix D.

Variable	Corresponding question
have one's fill service local fine dining price level smiley scheme opinion	<i>I forbindelse med dit besøg på en restaurant, angiv venligst, hvad der har mest betydning for dig på en skala fra 1 til 5.</i>
neutral smiley	<i>På en skala fra 1-5, hvad synes du generelt om offentliggørelse af restauranternes kontrolresultater?</i>
unhappy smiley	<i>På en skala fra 1-5, hvor 1 betyder 'meget sur' og 5 betyder 'meget glad', hvilken følelse udtrykker denne smiley i din opfattelse?</i>
smiley scheme knowledge	<i>Hvis du ser en sur smiley lige inden du går ind på en restaurant, ville dette kunne få dig til at fravælge restauranten?</i>
elite vs happy	<i>På en skala fra 1-5, hvad er dit kendskab til Fødevarestyrelsens smileyordning?</i>
smiley scheme influence choice general	<i>Synes du, at en restaurant med 'elite smiley' har en højere grad af fødevarer sikkerhed end en restaurant med en 'glad smiley'?</i>
smiley scheme influence choice prior to reservation	<i>På en skala fra 1-5, hvor stor betydning har smiley-rapporten for dit valg af restaurant?</i>
smiley upfront check	<i>På en skala fra 1 til 5, i hvor høj eller lav grad påvirker smileyen dit valg af restaurant inden reservering af bord?</i>
smiley upfront check	<i>This combines the respondents for the following two questions: 1)Hvor ofte ville du mene, at du lægger du mærke til kontrolrapporten, inden du går ind på en restaurant i dit lokalområde? 2)Hvor ofte ville du mene, at du lægger du mærke til kontrolrapporten, inden du går ind på en restaurant, når du er på ferie i Danmark?</i>
website link	<i>Vidste du, at restauranterne i Danmark skal have linke til kontrolrapporten på deres hjemmeside?</i>
smiley notice	<i>10) Hvor ofte ville du mene, at du lægger mærke til kontrolrapporten, inden du går ind på en restaurant?</i>
smiley publication opinion	<i>På en skala fra 1-5, hvor 1 er 'synes slet ikke om' og 5 er 'synes meget godt om', hvad synes du generelt om offentliggørelse af restauranternes kontrolresultater?</i>
smiley read report	

Appendix C: Interview Guide – Danish Version

Undersøgelse om dit restaurantadfærd

Det tager ca. 8-12 minutter, og besvarelsene er anonyme.

De første spørgsmål handler om dig som person.

Q1: Hvad er din aldersgruppe?

15-19
20-29
30-39
40-49
50-59
60-69
Ældre end 69 år

Q2: Hvad er dit køn?

Kvinde
Mand
Andet

Q3: Hvor bor du? (*randomiseret*)

Region Nordjylland
Region Midtjylland
Region Syddanmark
Region Hovedstaden
Region Sjælland

De næste spørgsmål handler om dit adfærd i forbindelse med restaurantbesøg.

Q4: Hvor ofte spiser du på en restaurant?

Mere end 6 gange om måneden.
4-6 gange om måneden.
1-3 gange om måneden.
Færre end ovennævnte.

Q5: Hvordan reserverer du typisk bord på en restaurant?

Via telefonen
Via restaurantens online booking
Jeg bestiller ikke bord
Andet: *åbent svar*

Q6: Før du vælger en restaurant, hvilke af de følgende faktorer har indflydelse på dit valg? (*randomiseret*)

Flere svar er mulige.

Tidligere erfaringer med restauranten
Anbefalinger fra familie / venner
Information på Internettet generelt
Billeder og indlæg på blogs og sociale medier

Prisniveau
Online videoer, fx YouTube
Brugeranmeldelser og kommentarer på online rejseportaler som fx TripAdvisor
Indslag og programmer i radio og TV
Reklamer i annoncer, brochurer, radio- og tv-sports eller online
Beliggenhed
Michelin-guide
Smiley-rapport
Andet: *åbent svar*

Symbol

Q7: På en skala fra 1-5, hvor 1 betyder 'meget sur' og 5 betyder 'meget glad', hvilken følelse udtrykker denne smiley i din opfattelse?

1 – meget sur, 5 – meget glad

Billede af neutral smiley



Smiley-ordningen

Q8: Kender du Fødevarestyrelsens smileyordning?

Ja / Nej – *videre til Q20*

Fødevarestyrelsens smileyordning – Del 1

Q9: På en skala fra 1-5, hvor 1 er 'synes slet ikke om' og 5 er 'synes meget godt om', hvad synes du generelt om offentliggørelse af restauranternes kontrolresultater?

1 – synes meget godt om, 5-synes slet ikke om

Q10: På en skala fra 1-5, hvor 1 er 'kender slet ikke' og 5 er 'kender rigtig godt', hvad er dit kendskab til Fødevarestyrelsens smileyordning?

1 – kender slet ikke, 5 – kender rigtig godt

Q11: På en skala fra 1 til 5, hvor 1 er 'afgørende betydning' og 5 er 'ingen betydning', stor betydning har smiley-rapporten for dit valg af restaurant?

1- Afgørende betydning, 5- Ingen betydning

Q12: Benytter du generelt muligheden for at se smiley-rapporterne på internettet?

Ja / Nej

Q13: Læser du kontrolrapporten inden du bestiller bord på en restaurant?

Ja, jeg slår smileyordningen op.

Ja, hvis den er synlig på hjemmesiden.

Nej

Ved ikke

Q14: Vidste du, at restauranterne i Danmark skal have linke til kontrolrapporten på deres hjemmeside?

Ja / Nej

Fødevarestyrelsens smileyordning – Del 2

Q15: Hvor ofte ville du mene, at du lægger du mærke til kontrolrapporten, inden du går ind på en restaurant i dit lokalområde?

Altid – Tit – en gang imellem – sjældent – aldrig

Q16: Hvor ofte ville du mene, at du lægger du mærke til kontrolrapporten, inden du går ind på en restaurant, når du er på ferie i Danmark?

Altid – Tit – en gang imellem – sjældent – aldrig

Q17: Når du ser en smiley-rapport, hvad kigger du på i rapporten?

Jeg ser på smileyen og læser kontrolrapportens tekst.

Jeg ser kun på smileyen.

Jeg læser kun teksten på kontrolrapporten.

Jeg lægger ikke mærke til noget.

Ved ikke.

Q18: På en skala fra 1 til 5, i hvor høj eller lav grad påvirker smileyen dit valg af restaurant inden reservering af bord?

1 – slet ikke, 5 – i meget høj grad

Symboler

Q19: Har du set de følgende symboler før?

Billede af en glad smiley og en elite smiley



Q20: Mener du, at en restaurant med elite-smiley har en højere grad af fødevarerikkerhed end en restaurant med en glad smiley?

Ja – måske – Nej, ikke nødvendigvis

Q21: Hvis du har valget mellem en restaurant med en glad smiley og en med elite-smiley, hvad ville du vælge?

- Restauranten med elite-smiley
- Restauranten med en glad smiley
- Jeg ville vælge ud fra andre kriterier
- Ved ikke
- Andet: *åbent svar*

Q22: Hvis du ser en sur smiley lige inden du går ind på en restaurant, ville dette kunne få dig til at fravælge restauranten? (selvom du måske har reserveret bord)

- Ja, helt sikkert
- Ja, måske
- Nej

Restaurantbesøg

Q23: I forbindelse med dit besøg på en restaurant, angiv venligst hvad der har mest betydning for dig på en skala fra 1 til 5. (randomiseret)

At blive mæt

Service og betjening
Stemning
Lokal smagsoplevelse
Fin gastronomisk oplevelse
Smileyrapporten
Prisniveau

Tusind tak for din deltagelse!

Q24: Har du yderligere spørgsmål eller kommentarer

Klik send for at afslutte undersøgelsen.

Appendix D: Interview Guide – Translated into English

Study on your restaurant behaviour

It will last approx. 8-12 min, and the answers are anonymous.

The first questions deal with you as a person.

Q1: What is your age group?

15-19
20-29
30-39
40-49
50-59
60-69
Above 69 years

Q2: What is your gender?

Female
Male
Other

Q3: Where do you live? (*randomised*)

North Denmark Region
Central Denmark Region
Region of Southern Denmark
Capital Region of Denmark
Region Zealand

The following questions deal with your behaviour in connection to a restaurant visit.

Q4: How often do you eat at a restaurant?

More than 6 times per month.
4-6 times per month.
1-3 times per month.
Less than above.

Q5: How do you reserve a table?

Telephone
Online booking
I do not reserve
Open answer

Q6: Before you choose a restaurant, which factors influence your choice? (*randomised*)

Several answers are possible

Former experiences with the restaurant
Recommendations from family / friends
Information on the Internet
Picture or Informations or Blogs or social media
Price level
Online videos, like YouTube
User comments or ratings on online travel portals, such as TripAdvisor
Broadcasts on the Radio or TV

Commercials or advertisements in brochures, radio/tv-sports or online

Location

Michelin-guide

Smiley Scheme

Open answer

Symbol

Q7: On a scale from 1 to 5, where 1 means 'unhappy' and 5 means 'very happy', what feeling does this smiley express in your opinion?

1 – very unhappy, 5 – very happy

Image of neutral smiley



Smiley Scheme

Q8: Do you know the Smiley Scheme by the Danish Veterinary and Food Administration?

Yes / No – *forwarded to section "restaurant visit"*

Fødevarestyrelsens smileyordning – Del 1

Q9: On a scale from 1 to 5, what do you generally think about the publication of the restaurant's control results?

1 – think very well about, 5-do not like

Q10: On a scale from 1 to 5, what is your knowledge of the Smiley Scheme?

1 – do not know at all, 5 – know very well

Q11: On a scale of 1-5, how important is the smiley report for your choice of restaurant?

1- Essential, 5- No influence

Q12: Do you generally make use of the possibility to view the smiley-reports online?

Yes / No

Q13: Do you read the smiley-reports before reserving table?

Yes, I look it up.

Yes, if it is visible on the website.

No

Do not know

Q14: Did you know that restaurants in Demark must link to the smiley-report on their website?

Yes / No

Fødevarestyrelsens smileyordning – Del 2

Q15: How often would you suggest that you notice the smiley-report before entering a restaurant near you?

Always – Sometimes – Occasionally – Rare - Never

Q16: How often would you suggest that you notice the smiley-report before entering a restaurant when travelling in Denmark?

Always – Sometimes – Occasionally – Rare - Never

Q17: When you see a smiley-report, what do you look at?

I see the smiley and read the text.

I only see the smiley.

I only read the text.

I do not notice anything.

I do not know.

Q18: On a scale from 1 to 5, to what extent does the smiley influence your choice prior to reservation?

1 – not at all, 5 – to a high extent

Symbols

Q19: Have you seen the following symbols before?

Image of a happy smiley and an elite smiley



Q20: Do you think that a restaurant with an 'elite smiley' has a higher degree of food safety than a restaurant with a 'happy smiley'? Yes – Maybe – No, not necessarily

Q21: If you have the choice between a happy smiley and an elite smiley, what would you choose?

- The restaurant with elite smiley
- The restaurant with a happy smiley
- I would choose from other criteria
- Do not know
- *Open answer:*

Q22: If you see an unhappy smiley before entering a restaurant, would you avoid the restaurant? (even if you have reserved a table)

- Yes, definitely
- Yes, maybe
- No

Restaurant visit

Q23: In connection to your visit to a restaurant, please indicate what matters most to you on a scale of 1 to 5. (randomised)

Have one's fill

Service

Atmosphere

Local experience

Fine dining

Smiley Scheme

Price level

Thank you for your participation!

Q24: Do you have further question or comments?

Appendix E: Decoded Survey Output for SPSS

1) Kender du Fødevarestyrelsens smileyordning?

- 1 - ja
- 2 - nein

2) Hvad er dit køn?

- 1 - kvinde
- 2 - mand

3) Hvad er din aldersgruppe?

- 15-19 - 1
- 20-29 - 2
- 30-39 - 3
- 40-49 - 4
- 50-59 - 5
- 60-69 - 6
- 69+ - 7

4) Hvor bor du?

- 1 - Region Hovedstaden
- 2 - Tyskland
- 3 - Region Nordjylland
- 4 - Region Midtjylland
- 5 - Region Syddanmark
- 6 - Region Sjælland
- 7 - Ausland

5) Hvad er din nationalitet?

- 1 - Dansk
- 2 - Ikke dansk

6) Hvor ofte spiser du på restaurant?

- 1 - Mindre end 1 gang om måneden
- 2 - 1-3 gange om måneden
- 3 - 4-6 gange om måneden
- 4 - Mere end 6 gange om måneden

7) Hvordan reserverer du typisk bord på en restaurant?

- 1 - Via restaurantens online booking
- 2 - Via telefonen
- 3 - Får konen til det
- 4 - Har luksus (min familie)
- 5 - Jeg bestiller ikke bord
- 6 - lige ofte telefon, online og personligt fremmøde i god tid
- 7 - online eller bare møde op
- 8 - Alle ovenstående

8) Læser du smiley-rapporten inden du bestiller bord på en restaurant?

- 1 - Ja, jeg slår rapporten op på fødevarestyrelsens hjemmeside.
- 2 - Ja, hvis den er synlig på hjemmesiden.
- 3 - Nej

4 - Ved ikke

9) Vidste du, at restauranterne i Danmark skal linke til kontrolrapporten på deres hjemmeside?

- 1 - Ja
- 2 - Nej

10) Hvor ofte ville du mene, at du lægger mærke til kontrolrapporten, inden du går ind på en restaurant?

- 1 - Altid
- 2 - Tit
- 3 - En gang imellem
- 4 - Sjældent
- 5 - Aldrig

11) Når du ser en smiley rapport, hvad kigger du så på i rapporten?

- 1 - Jeg ser kun på smileyen.
- 2 - Jeg ser på smileyen og læser kontrolrapportens tekst.
- 3 - Jeg ser på smileyen og læser evt. teksten efterfølgende.
- 4 - Jeg lægger ikke mærke til noget specielt.
- 5 - Ved ikke

12) Har du set de to følgende symboler før?

- 1 - ja
- 2 - nej

13) Synes du, at en restaurant med 'elite-smiley' har en højere grad af fødevarerikkerhed end en restaurant med en 'glad smiley'?

- 1 - ja
- 2 - Nej, ikke nødvendigvis
- 3 - Måske

14) Hvis du har valget mellem en restaurant med en glad smiley og en med en elite-smiley, hvad ville du vælge?

- 1 - Jeg ville vælge ud fra andre kriterier
- 2 - Elite-smiley, men afhængig af prisen
- 3 - Restauranten med elite-smiley
- 4 - Ved ikke
- 5 - Restauranten med en glad smiley

15) Hvis du ser en sur smiley lige inden du går ind på en restaurant, ville dette kunne få dig til at fravælge restauranten?

- 1 - Ja, helt sikkert
- 2 - Ja, måske
- 3 - Nej

Appendix F: Online survey

by the Danish Veterinary and Food Administration (in Danish)

conducted 19.01.2009

Results can be found on the following pages:

19. januar 2009

KOMMENTARRAPPORT



Onlineundersøgelse blandt forbrugere

Smiley-ordningens effekt 2008

Fødevarestyrelsen

Jobnr. 27359

Udarbejdet af:
Anne Stürup
Charlotte Egholm Nielsen

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Hovedresultater

Kendskab til smiley-ordningen (Sp.1)

I forbindelse med kendskabsmålingen er der blevet vist et billede af en smiley-rapport samtidig med, at spørgsmålet er blevet stillet.

Kendskabet til smiley-ordningen ligger igen ekstremt højt. Hvor der i 2007 var to respondenter, som ikke kendte ordningen (99,8%) var der i år ingen, der har svaret, at de ikke kender ordningen. Respondenterne fordeler sig således at 60% har svaret, at de "Kender godt" (mod 57% sidste år), 35% at de "Kender lidt til" og 5% (mod 7% sidste år), at de "Har hørt om, men kender næsten intet til". Det gennemsnitlige kendskab er på 3,49. Der er ingen signifikante forskelle i forhold til 2007 på kendskabet til smiley-ordningen.

Kendskab til elite-smiley (Sp.2)

Den 10. marts 2008 indførte Fødevarestyrelsen en elite-smiley, der uddeles til virksomheder, som fire gange i træk har fået den bedste smiley.

Elite-smiley'en blev lanceret ved et pressemøde med fødevareministeren på dagen og fulgt op af en reklame- og PR-kampagne i dagblade, ugeblade, via outdoor-media samt internet-annoncering i ugerne lige efter. Der blev også distribueret godt 400.000 eksemplarer af en lomme-folder med information om den nye smiley-ordning. I folderen er der også en kort omtale af forbrugernes muligheder for at klage over maden m.v.

Der blev endvidere lanceret en ny hjemmeside www.findsmiley.dk, hvor alle kontrolrapporter m.v. nu findes.

Elite-smiley'en er blevet tildelt ca. hver tredje fødevarevirksomhed. Godt 17.000 virksomheder i detail og en gros har haft mulighed for at have den hængende på et synligt sted.

Der blev i 2007 lavet en kontrol/baseline måling, inden elite-smiley'en blev introduceret. Den havde dog været omtalt i medierne, så der var et kendskab til elite-smiley'en ved målingen på samlet set 19%, hvoraf 10% kun havde svaret "Hørt om, men kender næsten intet til".

Ligesom ved kendskabsmålingen for smiley-ordningen blev der vist et billede af elite-smiley'en samtidig med, at spørgsmålet blev stillet.

Der er sket en meget stor udvikling i kendskabet til elite-smiley'en siden sidste måling.

Kun 14% af befolkningen har "Aldrig hørt om", mens de resterende fordeler sig med 33%, der "Kender godt", 36% der "Kender lidt til" og 16%, der "Har hørt om, men næsten intet kender til". Det samlede kendskab er således målt til 85%.

Det gennemsnitlige kendskab er blevet mere end fordoblet - fra 1,30 sidste år til 2,88¹ i 2008.

**Kendskab til
kriterier for at
få en elite-
smiley
(Sp.3)**

På det åbne spørgsmål "Hvad mener du der skal til, for at en butik, restaurant eller en kantine kan få en elite-smiley?" svarer 15% rigtigt at virksomheden skal have 4 smiley'er i træk. 48% svarer, at det er et andet antal smiley'er, der skal til.

Andre svarer, at elite-smiley'en kræver, at virksomheden har en "God hygiejne" (14%), "Rengøringen er i orden" (14%), "God håndtering af råvarer" (7%) samt "God egenkontrol" (5%).

Dette spørgsmål blev ikke stillet i 2007, hvorfor der ingen historik er at sammenligne med.

**Tillid til smiley-
kontrollen
(Sp.4)**

Som i 2007 er der 86% af befolkningen, der "I nogen grad" (61% mod 63%) eller "Meget høj grad" (25% mod 23% sidste år) har tillid til fødevarekontrollen bagved smiley'en.

Den gennemsnitlige tillid er på 3,12 (målt på en 4-pkt. skala).

Tilliden til smiley-ordningen er fortsat høj – og stort set uændret i forhold til målingen i 2007. Selvom der er et par procent flere som svarer, at de har en meget høj tillid og tilsvarende to procent færre som har nogen tillid, er der fortsat plads til forbedringer.

¹ Spørgsmålets fire svarkategorier er tillagt en talværdi fra 1-4, hvor "Kender godt"=4 og "Aldrig hørt om"=1. Ved beregning af et simpelt gennemsnit fås et samlet tal for kendskabet. Gennemsnittet for 2004 (3,24) er højere end for 2003 (3,05). Dette viser, at det gennemsnitlige kendskab i år har bevæget sig i retning af "Kender godt", som har værdien 4, mens sidste år lå meget tæt på "Kender lidt til", som har værdien 3

Hvor kan man klage?
(Sp.5)

Det er en lidt større del af befolkningen, der svarer rigtigt på spørgsmålet om hvor man kan klage. 64% svarer "Fødevarekontrollen/regionen" (mod 61% sidste år). 37% angiver "Butikkens ejer" (mod 41% sidste år). 33% svarer "Fødevarestyrelsen" (mod 34%). Der er således lidt flere, der ved, hvor de skal klage.

Der ses samtidigt et signifikant fald i den andel af befolkningen, der svarer, at man kan klage hos "Forbrugerstyrelsen" (fra 8% til 5%) og "Forbrugerrådet" (fra 9 til 5%). Der er også et fald i andelen, der svarer "ved ikke" (fra 14% til 11%).

Alt i alt en lille positiv udvikling i retning af større kendskab til de rette klagemuligheder.

Hvad kan der klages over?
(Sp.6)

En stor andel af befolkningen har en rigtig god forståelse for hvad der kan klages over: "Dårlig rengøring" (90%, uændret), "For høj temperatur i køledisken" (89% mod 86%), "Maden har gjort dig syg" (74% mod 76%) samt "Varer hvor holdbarheden er udløbet" (74% mod 77%).

Klagemuligheden "Mærkningen ikke er på dansk" er steget signifikant fra 42% til 51%. "Ingen håndklæder på toilettet" er med 24% ikke nær så kendt.

Fejlagtigt mener en signifikant større andel i år end sidste år, at det er muligt at klage over "Tobaksrøg" (fra 24% til 31%), hvilket sikkert kan tillægges den rygelov, der er indført i Danmark i 2008.

På de andre angivne klagemuligheder ses ingen signifikante forskelle i forhold til 2007.

Kendskab til klageblanket
(Sp.7)

På spørgsmålet "Mener du, at der er en klageblanket på Fødevarestyrelsens hjemmeside i forbindelse med smiley-ordningen?", har 24% svaret ja, hvilket er en signifikant stigning i forhold til sidste års kontrolmåling på hele 16% - på et tidspunkt hvor blanketten endnu ikke fandtes. "Ved ikke" er tilsvarende faldet fra 80% til 73%.

Kendskabet må siges at være tilfredsstillende.