

The Important Role of Physical Environment to Customer Satisfaction and Customer Loy- alty in Finland's Fine Dining Restaurants

Abstract

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Abstract <p>The goal of the thesis is to examine the correlation between the quality of the restaurant's physical environment and customer satisfaction and customer loyalty. These physical environmental components included light, colour, aroma, music, spatial layout, and decorations.</p> <p>The research approach was quantitative. An introduction was provided, followed by a review of the theories of each component that had been validly executed. The theoretical study consisted of theory of physical environment components, customer satisfaction and customer loyalty. Based on the theories, four untested hypotheses were developed, which were the basis for the research model. Accordingly, a 22-question survey questionnaire was formed to gather information from people who had previously dined at a fine dining restaurant in Finland. The reliability and validity of the results were assessed by using techniques such as descriptive analysis, exploratory factor analysis, Cronbach's alpha, and multiple regression analysis.</p> <p>The outcome of the analysis is positive, and all the hypotheses are showed supportive. Customer satisfaction and customer loyalty are significantly influenced by the physical environment component. Following was the discussion and suggestions for the study</p>		
Keywords Physical environment, ambient condition, color, lighting, background music, aroma, customer satisfaction, customer loyalty.		

ABBREVIATIONS AND TERMS

AM	Ambient conditions
LAY	Spatial layout
DECOR	Decorations
SATIS	Customer Satisfaction
LOYAL	Customer Loyalty
H (1, 2, 3, 4)	Hypothesis (1, 2, 3, 4)

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1 Introduction

1.1 Objectives

There has been a huge discrepancy in perceptions about how industrialization and modernization have impacted our lives in a variety of ways. People do pay attention to other indirect elements of the food service sector when their perception of the industry is no longer centred on feeding their stomach. According to Jean Anthelme Brillat-Savarin, the reception of this transition started in 1782 with Antoine Beauvilliers, who was the first to combine the essence of restaurant eating elements: an exquisite setting, regulated servers, a magnificent cellar, and outstanding food (Rawson & Shore 2019).

Following a century of evolution in dealing with the ever-changing needs of consumers, as well as the impact of social media, the original criteria of restaurant rating have undergone significant changes. Aesthetic standards are gradually becoming more prevalent throughout the restaurant, not just on the dining table, where white tablecloths, distinct glasses of wine, and eye-catching dishes of food are commonplace. A close coupling of numerous design aspects is also shown to provide clients with comfort in all of their senses. The ambience of a venue may have a greater impact on a consumer's decision-making than the product itself in certain instances. This word, which is also known as "atmospherics," or physical environment refers to settings that are meant to elicit certain emotional responses in a client's head in order to improve the likelihood of a sale being made by the consumer. (Kotler 1973.)

Many past research has revealed that some characteristics of atmospherics include the ambience, spatial layout and decorations. The ambience includes aspects like as light, background music, color, and aroma, all of which are recognised as important variables in influencing the customer's non-visual senses (Mattila & Wirtz 2001). The layout will comprise the positioning of equipment, furniture, and decorations in order to convey the picture that the restaurant is attempting to convey (Ryu & Han 2012). These will include elements that influence the visual perception of a consumer, such as the appearance or attire of the employees; in certain situations, it may even include the way people seem in a throng (Liu & Jang 2009).

In addition, the fine dining restaurant business is growing at a quick pace globally (Romero 2018). In Finland, Helsinki is known as a place has a a diverse range of eateries to suit all tastes, budgets, and moods (My Helsinki 2021). Not just for inhabitants, but also for tourists, the city's marketplaces, market halls, and thriving culinary culture are a gift. As a result, there is a lot of fierce rivalry. In a highly competitive market, businesses must find

ways to stand apart. In addition to providing individualised service, organisations must assess the value chain holistically and include it into their marketing strategies, as well. One of the distinguishing characteristics of food and beverage enterprises is their physical surroundings. In addition to their physical appearance, companies are also concerned about their customers' hedonic experience. Various components are categorised when it comes to the physical environment of restaurants.

Therefore, this research study, titled "The important role of physical environment to customer satisfaction and customer loyalty in Finland's fine dining restaurant" has two primary goals.

First of all, identify the research object in the physical environment that need to be confirmed whether it has a positive impact to customer satisfaction.

The last goal is to determine which aspects of the restaurant will provide highlights and enhance the client experience; what characteristics might be critical to success in hitting a home run that converts diners into regular customers.

1.2 Delimitation and research questions

As stated in the title, the thesis will concentrate on physical surrounding facets rather than external design, despite the fact that the interior is the first and last point of contact with clients. The author will concentrate on the category of fine dining restaurants in Finland which is regarded to be a country with great potential and profitability in terms of researching this sort of restaurant establishment.

The author asks one or two questions to guide himself to the proper focus of the study and explain the central issue raised in the thesis. There is only one main research question dissected:

- How does the physical environment in the restaurant influence the customer satisfaction and loyalty?

In order to support the study of the main question, there will be three sub – questions also asked:

- What kind of experiences would customers want to have when visiting a fine dining restaurant?
- What kind of experiences would customers not want when experiencing in a fine dining restaurant?

- What other than food, customers will feel enough to meet the needs and will have the intention to come back here to eat next time?

1.3 Research method

The author has to gather a large number of customers' views in order to determine the correlations between various aspects and how the physical environment affects customer experiences. This is why this study uses quantitative research methods like surveys with questionnaires (Appendix 1), which have been deemed relevant to the goal of the thesis.

The thesis relies on theoretical research and empirical research for its basis. To build the conceptual framework that guides the thesis, secondary research is undertaken to evaluate ideas and associated concepts from various scientific publications, books, and articles. Using a self-administered questionnaire, respondents are able to complete the form on their own. In light of Dr. Dawson's (2002, 88) discussion of the merits and drawbacks of close – ended and open - ended questions, the author decided to include only one kind of questions in the survey, which is close – ended one. Following Dawson's 98-item questionnaire design checklist ensures that the survey is created correctly. Based on secondary research findings and the case company's current status, we develop the questions.

Primary data will be utilised to assess whether or not the conceptual framework is suitable in the setting of the thesis after data collection and cleaning. It will then be used to determine how customers feel about their restaurants' quality. Based on the final conceptual framework, which has all inapplicable sections removed, the talks will take place.

It is IBM SPSS Statistics that is utilised for the data analysis. SPSS is used to clean and examine data for normality, missing values, and multivariate outliers, among other things. SPSS is also capable of doing a frequency count. To examine the validity and reliability issues in quantitative research, the author employs various related measures (variance inflation factor - VIF, coefficient of determination R², significance value P, outer weights and outer loadings) suggested by Hair (2017, 165) to examine the validity and reliability issues in the adjacent to the conclusion.

1.4 Structure of thesis

There are five primary chapters in this study.

Chapter 1 Introduction.

The aims, research method, and thesis structure are all described in this section.

Chapter 2: Review of the Literature

This chapter also serves as a theoretical foundation. The definition and overview of excellent dining in Finland will be discussed first. Second, the author would discuss the hypotheses and investigations that earlier researchers had successfully done. Finally, in order to suggest hypotheses and conceptual frameworks, the association between all of the components will be explained meticulously and concretely.

Research technique is covered in Chapter 3. The measuring model, questionnaire design, sample design, study design, and data analysis technique are all discussed in this section.

Chapter 4: Survey Results

The impact of the respondent's perception and behaviour toward the presence of physical environment in the restaurant was highlighted in this section. The author employed SPSS 26's analysis techniques, such as Descriptive statistic analysis, Exploratory Factor Analysis (EFA), scale dependability (The Cronbach's alpha reliability coefficient), and Linear Regression, to carry out the result. In this part, all of the results will be analysed using charts and statistics.

Chapter 5: Conclusion

The part summarises the most important material as well as the thesis's conclusion. Furthermore, readers who are interested in additional research will be offered a suggestion.

2 Literature review

2.1 Definition of fine dining restaurant

The concept of a fine dining restaurant, according to Harden (2007), is meant to denote a full-service establishment where the consumer pays a premium for exceptional cuisine and impeccable service. A spectacular view of the city or the sea is possible, but it is not required.

Fine dining restaurants, according to various definitions such as Munir (2014), are defined as a full-service restaurant that serves expressly specialised food. High-quality materials are used in the décor of such establishments, which is meant to evoke the "mood" desired by the restaurant's owner. When it comes to waiter crew, they are often well-trained and dress in a more professional manner. Limited companies, such as fine dining restaurants, are nearly often found in a single location or a small number of locations. Food portions are smaller yet more aesthetically appealing as a result of the decreased portion sizes. Visitors to fine dining establishments must adhere to a set of dietary guidelines.

Luxurious dining, on the other hand, is defined by well-known industry experts as atmosphere, fine dinnerware, and service touches that make the supper a memorable occasion (Harden 2007). First-class silverware, dinnerware (which might be silver), well starched napkins, linens and tablecloths, as well as exceptionally attentive service, are all emphasised at this event. Tastefully designed, the restaurant's personnel have received training at prestigious culinary schools. Guest attire is strictly enforced, and formal attire such as a jacket suit or tuxedo can be needed. Restaurant etiquette and service protocols are strictly adhered to by both the staff and the patrons in a formal dining room setting. For the best chance of getting a table when you arrive, reservations should be made in advance.

There are further definitions for "fine" in the Merriam-Webster (2021) online dictionary that says, "superior in sort, quality and appearance; excellent" and "exceptional" and "extremely nice to look at" that say "showing remarkable skill, subtlety or complexity, especially in creative work; highly subtle." Additionally, the dictionaries describe "restaurant" as "a commercial operation where consumers may buy meals or drinks; a location where food and beverages are sold and supplied to customers."

2.2 The fine dining restaurants in Finland

Due to the dense population dispersion in the Helsinki metropolitan region, a high number of restaurants are often centred in the Finnish capital city of Helsinki. Fine dining establishments, on the other hand, are uncommon in locations other than Helsinki.

The city of Helsinki is home to a total of more than 10 fine dining restaurant. A diverse selection of cuisines is available at these establishments, ranging from traditional Asian food to modern Nordic meals. Exemplifying this are restaurants such as Finlandia Caviar, which specialises in fresh seafood delicacies such as oysters, scallops, and salmon roe, and Farang restaurant, which is one of the world's most celebrated restaurants for successfully capturing the essence of Southeast Asian cuisine in its cooking. It is impossible to overlook establishments such as Inari, which is recognised for its blending of local food with Asian influences. Alternatively, the OLO restaurant, which has been awarded a Michelin star every year since 2011 and is renowned for its Scandinavian cuisine, is another option. Helsinki will feature about seven Michelin-starred restaurants by the year 2021, according to the city's official website (My Helsinki 2021).

2.3 The physical environment

Kotler (1973, 50) was the first to define the physical environment. He classified physical environment components as part of the atmosphere and defined atmosphere as the deliberate design of a place in order to impress customers. Bitner's servicescape idea is another physical environment-related concept. Bitner (1992, 58) describes a "servicescape" as an artificial environment created by humans. As stated by Hoffman and Turley (2002, 35), the physical environment is made up of both visible and invisible elements, including the physical structure, the décor, and the furnishings.

Ozdemir-Gzel and Dinçer (2018) found that physical environment components have a substantial impact on consumer behaviour, including the development of a feeling of quality and image, as well as the achievement of hedonic value. Customers may make a decision on a new business to visit based on the components of the physical environment. Additionally, social media offers businesses with the opportunity to compete, in addition to playing a critical part in promoting consumer satisfaction and loyalty.

Many authors have written extensively on the importance of physical environment components, which have been thoroughly researched in detail. Kotler (1973) defines the environment as a mix of ambience (such as air quality and noise levels). Among classification, Bitner (1992) definition of "Servicescape" physical environment is the most frequently ref-

erenced. The components that contribute to the overall ambience include colour, aroma, background music, and lighting. Everything from furniture and equipment layouts to signage and cultural artefacts is included in the scope of this definition. When it comes to the environment, Turley and Hoffman (2002) looked at it from five different angles: outside environment; overall interior; overall design; purchase decision & decoration; and personnel management. The physical environment's elements differ based on the location being examined as well. According to Lucas (2003), the physical environment of casinos may be divided into the following categories: layout navigation, cleanliness, seating comfort, interior design, and ambient lighting and sound. While Ryu and Jang (2008) mentioned, the physical environment of a luxury restaurant comprises ambient conditions, layout, and decoration, among other aspects

2.4 Ambient conditions

Ambient conditions include elements like color, lighting, music, and scent (Jain & Bagdare 2011). According to Bitner (1992), ambient circumstances are intangible elements of the physical environment that have an impact on an individual's reaction to the environment. Lighting intensity, temperature, scent, and background music are only a few of the physical environment's background features. For example, the importance of ambience in the development of an image, as well as the impact it has on customer pleasure, are particularly important in the hospitality industry (Ryu & Jang 2008).

Environmental circumstances are typical of the service environment and are related to the five senses, as highlighted by Seo et al. (2015) in their study. These factors have an effect on people's emotional health, perceptions, and even attitudes, even if they are not consciously aware of it. A mood is created as a consequence of the environment that is characterized, which is then observed and understood by the consumers. It takes literally hundreds of design components and details to produce the intended service environment, and these elements and details must all work together to achieve the outstanding service atmosphere (Kim & Moon 2009).

As a result of their research on the awareness of customers' dining environments, Ryu and Jang (2008) discovered that a nice physical environment, is a crucial factor in determining the level of overall customer happiness and loyalty (Han & Ryu 2014). Customer satisfaction may be influenced even when a restaurant serves poor cuisine because of its attractive atmosphere (Magnini & Parker 2009). Although various consumers will experience an establishment's atmosphere differently depending on their expectations, objectives, and emotions (Kim & Moon 2009), the general rule is that customers will perceive it differently.

The ambiance of restaurant quality was recognised as having three main aspects by Wells and Foxall (2012), and these qualities were shown to affect customer satisfaction in restaurants. Among them are ambient circumstances (visual components such as lighting, music, and color); layout arrangement and functioning; symbol, symbols, and artefacts.

2.4.1 Color

Individuals perceive and interact with color in both natural and manmade settings, according to Khouw (2004), "and approximately 80% of the information that people absorb via the senses is visual." Color, lighting, and artifacts all have the potential to help create a welcoming atmosphere in a restaurant and make diners want to return. Individual views of restaurant kinds of services include a range of aesthetics such as décor, furniture, artwork, and architecture, based on Bitner (1992). Aside from it, sensory inputs such as light, sound, and temperature are taken into consideration. Like all the elements that go into forming consumers' perceptions of a restaurant, as well as their resulting judgments. As a result, to examine the cognitive effects of artistic facets in these kinds of services, people must first learn many approaches individuals comprehend their environment. Color may be regarded one of the most significant aesthetic characteristics of a restaurant because of its influence on how consumers create initial impressions.

According to Knutson et al. (1995), "when the initial impression is good, it is frequently 22 years simpler to fulfil or surpass consumer expectations." Color has behavioral consequences and impacts how people feel and perceive their immediate surroundings. It also influences how they see themselves and others. The user's emotions of states may be affected, making them joyful and free from the condition if resourcefully utilized in the design of these settings (Kim & Moon 2009). It has been shown that "color influences how people feel as well as giving them objective information." When it comes to generating pleasant emotions like warmth, comfort, and tranquillity in the interior space, color plays an even bigger role. "Color" is a potent visual factor in a physical environment in particular in an indoor surrounding (Babin et al. 2003). Color, is one of the most indisputable visual signals in the physical environment, and research has demonstrated that various hues elicit different moods and feelings in different individuals (Ballatine et al. 2010). Customers may perceive various messages or images depending on the color scheme used in a restaurant (Kuller et al. 2011). Especially in hedonistic consumption, customer reactions to the physical surroundings correlate with their emotional state (Ryu & Jang 2008). Dining at themed restaurants, family restaurant chains, high-end restaurants, or using entertainment services is frequently hedonistic and emotionally focused, even if many services are

pragmatic or practical. Customers's emotional states may be enhanced or inhibited in a restaurant's well-respected service area, and this should be treated seriously.

2.4.2 Music

Background music has been shown to have an effect on consumer behaviour and happiness at dining places, according to a study performed by Yalch and Spangenberg (1993). It was discovered that "music tempo adjustments may have a significant effect on the number of purchases made, the length of time spent at the table, and the anticipated gross margin of the restaurant," according to the results. In addition, music is a physical element that may be manipulated to a larger degree than other environmental components. Various types of music are available, from rock, jazz, indie, classical and so on. Customer reactions to service settings have been found to be influenced by music, according to Jain and Bagdane (2011), with the overwhelming majority of these responses being positive. As Morrison, Dubelaar, Gan and Harmen (2011) pointed out, "playing music in service settings is comparable to adding a favourable feature to a product," with the result being a more forward-looking appraisal of the environment as a result of the music. According to the hypothesis, the presence of music in a restaurant setting would lead to consumers making more favourable judgments about the company when compared to a restaurant environment that does not have music playing at all. Several studies, like Ryu and Jang (2008), it has been shown that melody has an impact on customer perceptions when eating in restaurants, while Morrison et al. (2011) have demonstrated that music may assist to decrease problems linked to idle time in restaurants. In order to do this, restaurant owners should attempt to have music playing in their establishments.

2.4.3 Lighting

People's movement through space may be guided by lighting, as observed by Countryman and Jang (2006). Lighting can also be created in such a manner that it influences the enjoyment of a place, through the perception of that space, as mentioned. According to the findings of the research, there is a connection between people's preferences for lighting levels and their emotional reactions as well as their degrees of pleasure. Under another study, Baron et al. (1992) found that "subjects had greater positive affect in circumstances with low levels of illumination compared to high levels of lighting" and that "the degree of comfort was enhanced at relatively low levels of light, while comfort was reduced at high levels of light" (Quartier & Van 2008).

Furthermore, lighting in restaurants, especially expensive restaurants, may be one of the most potent physical stimulants available to patrons. At contrast to the shiny lighting seen

in fast-food eateries such as McDonald's, which may represent rapid service and cheap pricing, muted and warm lighting may be used to express full service and premium prices (Ryu & Han 2010). Those claims have been backed by Kumar and Alzubaidi (2012), who say that what most of us believe to be true is scientifically proved, namely that bright lighting conditions combined with orange-colored walls elicit emotions of substandard restaurants and low-price judgments. A contrast to this seems to be that soft lighting settings tend to enhance emotions of high quality restaurants and perceptions of high prices. They go on to say that lighting may be utilized to pull recognition away from less appealing parts of a restaurant while simultaneously highlighting certain areas of interest inside the establishment. Lighting aids in the creation of excitement, the alteration of a customer's attitude, and the improvement of the restaurant's image.

2.4.4 Aroma

With the growing popularity of pleasant fragrances as a strong instrument for boosting revenue, retailers and restaurateurs have taken note of the impact they may have on their bottom lines via the use of these aromas. Aroma may influence a customer's willingness to make a purchase, which is something retailers and restaurateurs are well aware of. Customers' moods and buying habits have been found to be influenced by restaurant aromas in studies conducted by Chebat and Mishon (2003), and Spangenberg et al. (2006). They claim that consumers' moods are lifted when they inhale a nice fragrance. Vanilla essence, for example, has been proven to be pleasing to both men and women.

Ambient smells may also just affect a customer's mood, sentiment, or subjective emotions. If one looking at how the physical environment affects consumer behaviour and satisfaction, consider smell along with other environmental signals, such as music. One environmental stimulation is not enough for a person to form an opinion of the physical world as a whole. A complete image is created by combining all of the individual parts. Individuals acquire sensory system information via different contextual signals to create a mental image, which subsequently triggers an emotional reaction (Lin 2004).

2.5 The spatial layout

Spatial layout, according to Baker and Cameron (1995) and Seo et al. (2015), is the arrangement of items in the environment, such as machinery, equipment, and furnishings. An attractive and effective layout may also help fulfil enjoyment demands, similar to how the layout of cheap shops makes it easier to fulfil utilitarian requirements.

It is possible that a room arrangement that makes customers feel confined may influence their quality judgements, levels of excitement, and desire to return. This may be seen in a luxurious restaurant that is intended to improve the customer experience by offering an interesting and engaging atmosphere for exploration and stimulation. Therefore, service or retail establishments intended to offer an exciting and stimulating atmosphere for the customer experience should give sufficient room to allow for this exploration and stimulation. Based on the findings of the author Bitner (1992), who asserts that visitors are more likely than other customers to feel confident and to perceive comfort and security while moving about in a well-organized spatial layout. In a service context, furnishings include all of the items and resources that go into creating the space (for example, furniture). The emotional reaction of comfort may show the effect of furnishings (Seo et al. 2015). More pleasant emotional states will be experienced by customers who are relaxed. Designers and operators have a common aim of making clients feel at home in their restaurants. Customers at expensive restaurants, where they may have to sit for many hours at a time, may place a high value on seat comfort. The physical seat and the distance between seats both have an impact on seat comfort. Depending on their design (hard benches without back support, for example) or condition, certain chairs may be unpleasant (deteriorating or wet). Seats may be unpleasant due to their closeness to those in front of them. Sitting too close to the people next to you may make consumers uncomfortable, both psychologically and physically (Ryu & Jang 2008).

Crammed sitting quarters have been linked to negative feelings of quality and discomfort in the past (Hui & Bateson 1991). Seats with plenty of room, on the other hand, may make it seem less packed. 'Seating comfort' relates to how much physical comfort the customers want from their chairs, and this is influenced by how far apart they are from each other and how much room there is between them. Seating amenity in a casino environment is important for consumers who remain longer in the facility, according to Wakefield and Blodgett (1996) and Lam et al. (2011). Similarly, consumers do not just go to categorised restaurants for fast meals, thus the space and comfort of the chairs were very important. They eat in the facility for a while, taking in the atmosphere.

2.6 Decoration (Signs, symbols, and artefacts)

To assist with cognitive navigation across the servicescape, symbols, artefacts, and signs are used in a variety of ways (Seo et al. 2015). Customers' cognitive activity is aided by the certainty and quantity of such signals, symbols, and artefacts, which simplify and ease movement throughout the dining environment, decreasing feelings of being misplaced (Newman 2007).

For example, no-smoking illustrations are very vital as they guide individuals on moving about and provide essential information that everyone should be aware of. "Customers automatically attempt to deduce meaning from signs and symbols." say Seo et al. (2015). They also get indications from them about what sort of service to anticipate and how good it will be. When navigating the service environment and service process, they rely on them for assistance. Customers get enraged and unsatisfied when they are unable to receive clear indications from the surrounding. They must be used in an appropriate way by service providers to help customers via the service delivery progress (Anthony et al. 2009).

Zeithaml and Bitner (2003) agree with the results, stating the signs are employed to promote a certain picture or guide consumers to specific locations. According to Kim and Moon (2009), signs, symbols, and artefacts are employed to guide consumers to their intended destinations in the real and virtual worlds. Signage on the exterior and inside of restaurants, for example, serves as a clear communication to consumers, alerting them of the location and services of the restaurant. You may label signs with words such as "name of the restaurant" or "location of the restaurant" to help visitors find their way around, such as pointing them in the right direction for the entry or exit, or to communicate rules and regulations.

Although they communicate less clearly than signs, symbols and artefacts provide consumers information about a business despite being less visible (Zeithaml & Bitner 2003). White tablecloths and dim lighting at a fine-dining establishment convey the symbolic meaning of good dining and the high price tag that goes along with it. When it comes to making a good first impression and communicating what sort of services visitors may expect, signs, symbols, and artefacts are critical. To categorise a restaurant and create expectations when consumers are unfamiliar with it, people seek for environmental cues or signals such as tablecloths or table arrangements or menu designs or pamphlet or furniture and décor technique or the way food is served (Kim & Moon 2009).

To back up this claim, Lam et al. (2011) contend that flatware such as dishes and glasses as well as chinaware, silverware, and linen may all have a significant impact on consumers' opinions about how well a restaurant provides service. By arranging the table with an appealing candle and flower, for example, customers may feel as if they are in a high-end restaurant. This characteristic has been largely neglected in previous studies, most likely due to it is so exceptional and only applies at high-end eateries (Lam et al. 2011).

2.7 The correlation between physical environment and customer satisfaction

The physical surrounding or atmosphere is referred to in literature (Bitner 1992). Atmosphere was initially described by Kotler (1973) as 'efforts to build a purchasing environment that may elicit particular emotional impacts in purchasers in order to boost purchase potential.' Bitner (1992) used the term "servicescape" to describe the physical surroundings of the service sector. Objects and physical variables managed by firms that impact workers and consumers are characterised as the physical environment by Bitner (1992). Environmental psychology research on human behaviour often includes factors such as the physical environment (Ryu & Han 2009). Approach and avoidance are examples of two opposing ways individuals show their emotions to the environment, according to Mehrabian & Russell (1974, 216). Whereas approach behaviour (such like choosing to stay, work, and becoming more acquainted) may be considered as a good response to an environment, avoidance behaviour can be perceived as a negative reaction (unwillingness to stay, work and become familiar). Increasing approach reactions and reducing avoidance responses are goals for all tourism-related enterprises and tourist locations. Another study found that physical surroundings had an impact on customers' purchasing decisions, as well as their happiness with associated items and services once they've purchased them (Bitner 1992).

Taking into consideration the findings of research done in the literature, hypotheses were developed based on an assumption that the physical environment has an influence on customer satisfaction:

H1: Decoration has a positive impact on the customer satisfaction

H2: Ambient conditions has a positive impact on the customer satisfaction

H3: Spatial layout has a positive impact on the customer satisfaction

2.8 Customer satisfaction

The aviation business, hotel and tourism, and the food service sector have all revealed an avid interest in customer satisfaction as a subject of discussion

However, prior to the 1980s, the majority of companies did not place a high priority on customers. The emphasis was on goods, and customer happiness was assessed only informally if it was ever monitored at all (Reis et al. 2003).

'Customer gratifications relates to a person's post-purchase emotions of joy or regret,' according to Keller and Kotler (2011, 144)

Since the beginning of commerce and commercial exchange, customer gratification has been critical to corporate success. Customer gratification, according to current theoretical and practical aspects, is amongst the most significant variables impacting an organization's success, as well as a critical component of marketing. In agreement with McQuitty et al. (2000) customer satisfaction is critical in marketing since it predicts consumer purchasing behaviour.

Customer satisfaction might be defined as the "summary of the psychological state that occurs when the emotion surrounding disconfirmed expectations is combined with previous emotions about the customer experience" (Oliver 1999, 28). Oliver (2014, 262) went on to offer a more complete definition of customer satisfaction, saying that it is the consumer's fulfilling reaction. It is a judgement call whether a product or service characteristic, or the goods or services entirely, offers (or is providing) a pleasurable level of consumption-related pleasure. Customer satisfaction is defined by famous marketing scholar Kotler (2000, 36) as a person's delight or discontent with a product's perception of performance or result in relation to his/her expectations. When Kotler (2000) makes customer happiness perception of an explicit component, he identifies an essential factor. Customers' impression is a major predictor of customer happiness even if a company is doing all it can to generate it.

To achieve or surpass customer satisfaction, the most essential issues to consider are the product and its characteristics, capabilities, dependability, and customer assistance. Customers who are pleased with their purchases are more likely to return and purchase more. In addition to purchasing more, they act as a structure to reach out to other prospective consumers by sharing their experiences (Hill et al. 2010). When a company acquires a customer, it should work hard to maintain a positive working relationship with the customer in the future. In the twenty-first century, providing high-quality products and services is not only important for customer satisfaction, but it is also important for maintaining a competitive advantage. Customer consumption of high-quality goods has increased as a result of this (Rebekah & Sharyn 2004)

An in-depth knowledge of customer satisfaction is essential for ensuring that customers continue to be satisfied with the services supplied by the business. Accordingly, the business will have to enhance those aspects of its services that are not up to par, in order to leave consumers with a positive impression (Anderson & Srinivasan 2003, 122-138). As Kotler and Keller (2012, 144) presented a detailed definition of satisfaction, stating that it is a people's sensation of pleasant emotions as a consequence of a comparison between a good's perceived presentation and result and their expectations. This goes to demon-

strate that in the hotel and hospitality business, client happiness is inversely proportional to the quality of the service provided. By presenting his essential formula for customer pleasure, Rai (2008,103) provided us a sense of what consumer happiness benefit greatly is all about.

Customer Satisfaction = Customer Awareness of Service Obtained – Customer Expectation of Service Received

Given that they provide services to their clients, Rai's formula obviously refers to the hotel sector. The emotional reactions of customers, as well as their attribution and perception of equity, according to Zeithaml and Bitner (2003), are all factors that affect their level of pleasure. Consumers who are pleased with the company's goods or services are more likely to repurchase or to suggest the company's products or services to other prospective customers. Customers are at the heart of any business, therefore in order for a firm to be successful, it must be prepared to go the extra mile to ensure that its customers are happy

2.9 Customer loyalty

Notwithstanding the capacity of situational conditions and advertising activities to induce switching behaviours, Oliver (1999,33) defines loyalty as "a deeply held commitment to rebuild and re-patronize a selected product or service in the future. Customer loyalty is defined as the correlation between a person's attitudinal factors and the chance of that person returning like a customer. While client happiness is critical to a company's success, contentment alone cannot propel a business to the top. Customers that are delighted are often more inclined to make patronage, which has a positive financial effect. To build client loyalty, a company must emphasize the benefits of its goods and services and indicate it is engaged in satisfying or growing its relationship with customers (Griffin 2002).

In an increasingly competitive business environment, attracting new consumers becomes more expensive for a firm. This is why many businesses strive to provide excellent service to their clients in order to earn their loyalty. Offering excellent of customer satisfaction and standards as a consequence of which customers are faithful and the restaurant is well-intensified connections may help retain consumers, according to Kotler et al. (2003, 23). A company's ability to attract consumers and retain them as loyal customers is critical to its success. Market share and profit margins are dominated by companies that have been able to adequately satisfy their consumers and keep them returning. Effective customer satisfaction may result in increased client retention, which can be rewarded with more customer loyalty and the development of commercial partnerships (Kotler et al. 2003, 2).

A company's turnover margin is beneficially impacted by customers' trustworthiness. Customer loyalty reduces the likelihood of switching to a competitor's brand based only on pricing and other special incentives. In a single day, loyal consumers may be generated by making design choices that focus on a customer-centric approach. It is important to remember that not all customers who return after making a purchase are returning customers who will remain loyal. When a client is loyal, it indicates that they have a favourable attitude about purchasing the same product or service again and again.

According to Gremler and Brown (1996, 274-289), consumer loyalty may be divided into three types: emotional, behavioural, and purposeful. The customer's perspective on a company and its goods or services is known as emotional loyalty. Behavior loyalty refers to a customer's tendency to make the same purchase again and over, whereas deliberate loyalty refers to a customer's potential buying intentions. It is important to remember that customer loyalty isn't a habit in and of itself.

The mere fact that a consumer makes repeated purchases from a provider does not imply that the customer is devoted. For a number of additional reasons, a customer may keep making purchases from the same provider (Derek 2004, 97-100).

2.10 The correlation between customer satisfaction and customer loyalty

In agreement with Coyne (1986), consumer happiness and client loyalty are linked by two key criteria. Loyalty rises significantly when customers are satisfied, but when customers are dissatisfied beyond a certain point, loyalty plummets just as drastically (Olivia & et al. 1992) The correlation between a restaurant and its consumers is critical. A company's long-haul objective should include customer pleasure and loyalty. Every company wants to improve customer loyalty and generate better financial results, and customer happiness is a critical component of both of those goals. The importance of pleasure in determining loyalty is well established (Dick & Basu 1994).

There is a distinction between the word's "satisfaction" and "loyalty" that customer happiness may be seen as an assessment of the consistency between previous expectations and how well a company delivers on those expectations. Customers' favourable evaluations of the product or service they get are a significant motivation to maintain a connection and an essential pillar in maintaining loyalty to the company's service or goods. Customer satisfaction increases the likelihood of repeat purchases, lowers price sensitivity, and encourages good word-of-mouth recommendations, all of which lead to more loyal consumers.

Keeping customers happy and loyal is critical to a company's long-term growth and profitability. Loyalty doesn't just happen when you're happy; it has to be earned step by step. For example, clients move through stages like awareness, exploration, expansion, and commitment before finally dissolving their relationship with a company (Arantola 2000). Customer happiness is a result that leads to customer loyalty. Customer retention is a result of businesses satisfying their customers (Fornell 1992). When satisfaction reaches a specific threshold, customer loyalty increases substantially, but when satisfaction goes below that point, customer loyalty declines automatically. Additionally, consumers who are very pleased are more likely to remain loyal than those who are simply content. Overall, it is evident that customer happiness and customer loyalty have a strong link. Increased sales and profitability are driven by customer loyalty. (Chi 2005.)

As the consequence, a hypothesis was developed in light of the literature, assuming that customer satisfaction is the most important element in determining customer loyalty:

H4: Customer satisfaction has a positive impact on the customer loyalty

3 Research methodology

It is the primary objective of this thesis to study how the physical environment affects the quality of a restaurant and how it may be improved. Studying restaurant quality and the relationship between customer happiness and behavioural intentions was carried out in an effort to achieve this goal.

According to the survey, customers' views of the restaurant's ambient characteristics are valuable information for authors and interested readers. As a result, an awareness of how each component contributes to customer satisfaction and behavioural intents will aid the author and interested readers in determining to what extent the factors of restaurant quality effect. On the other hand, the relationships and degrees of contribution revealed will help firms decide which elements to focus on.

Also, the researchers aimed to find out why people favour fine dining places over others. The findings will be utilised to develop recommendations for distinctive elements that restaurateurs should consider focusing on in their operations.

3.1 Measurement model

This section gives a theoretical framework for understanding the link between the physical environment, the spatial arrangement, the decoration, customer happiness, and customer loyalty based on current literature.

Based on the study model of Ozdemir-Güzel (2017), the suggested theoretical framework was constructed, however the author has updated it to take into account theories that have been legitimately researched by several earlier authors.

The following hypotheses are advanced on the basis of preceding literatures: Using the conceptual framework shown in Figure 1, researchers were able to design research to examine the influence of the physical environment on customer satisfaction and customer loyalty at a fine dining restaurant.

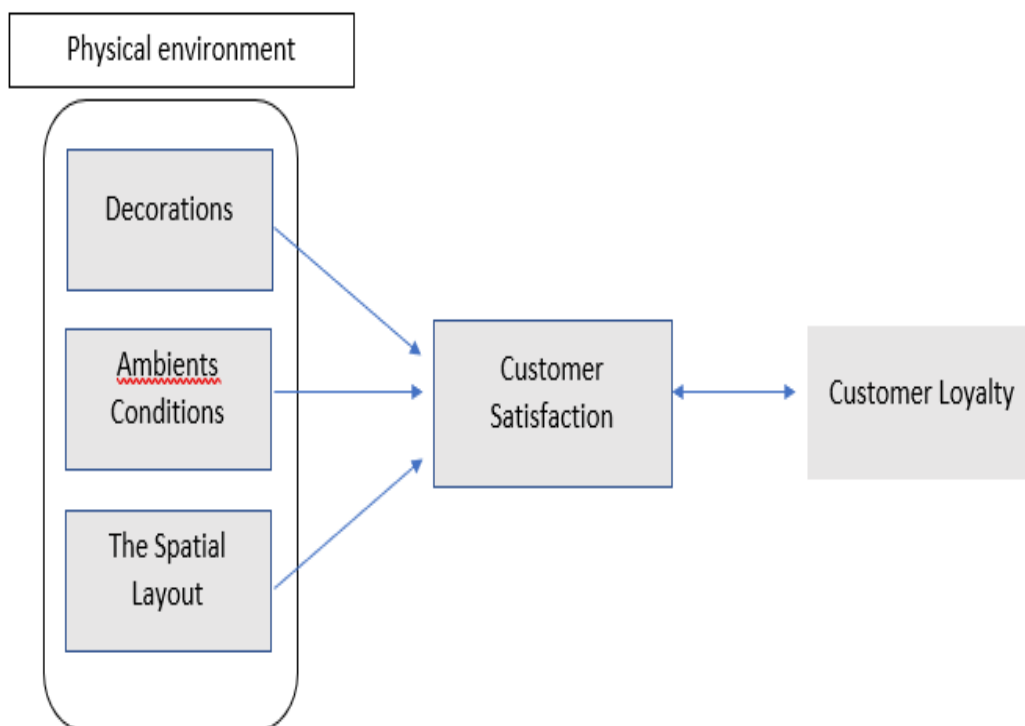


Figure 1 Measurement model. (Baker & Cameron 1995; Namkung & Jang 2008; Jang & Liu 2009; Jang & Ha 2012; Ozdemir-Güzel 2017)

Customer satisfaction and customer loyalty are examined in relation to three characteristics of the physical environment (ambient condition, spatial arrangement, and decorations), as well as the relationship between the two.

On a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), each component of the project was rated (strongly agree). The purpose of this research is to learn what consumers think about fine dining establishments by asking them the following 22 questions: The first question's objective ("Have you ever eaten in a great eating establishment?") is also used to filter the replies to the subsequent questions, which is an additional benefit. The reader is questioned about their eating experience for the second objective, and they are asked to describe why they choose a certain restaurant for the third purpose. This is strongly related to the author's ultimate purpose, which is to comprehend how fine dining establishments might enhance their operations. Once the survey is being formed, it will be distributed across social networking sites (Facebook, Whatsapp, email). It was fully voluntary for participants to participate in a survey, and they were not obligated to do so.

Afterwards, the data is analysed in accordance with the framework, making use of the software programmes SPSS.

3.2 Questionnaire design

Trustable and internally consistent measurement items are required for the variables. Furthermore, the integrity of the theory's substance should be validated before it is put to the test or measured. For this reason, it was required to conduct preliminary research in order to gather suggestions from the sample respondents and to enable for the scales to be tested and altered as needed (Ursachi et al. 2015). A finalized questionnaire was created once the scales were examined, and the material was confirmed.

As stated in Measurement Model 3.1, the author concludes that the survey prepared for this research has two major parts: an introduction and twenty-two analytical questions. The introduction will simply provide a quick overview of the researcher's history (see Appendix 2), as well as the emphasis and aim of the survey in the first place. The second section of the survey consists of twenty-two questions (see Appendix 1) grouped into three groups with distinct aims. The author utilised the first question as a scanning question to differentiate the number of respondents who had been to a fine dining restaurant from the number of people who have never visited before. This. However, before addressing the question, the author gave a short definition of fine dining to provide participants a broad knowledge of the sort of restaurant under consideration. This activity is designed to help respondents properly detect flaws and differentiate various restaurants they may have visited in the past. As a result, persons who do not frequent fine dining venues (1) will no longer be eligible to take part in the research. The participation of (1) persons in the survey, as well as their time in the survey, would be highly appreciated at the end. Those who had attended a fine-dining restaurant, on the other hand, would be asked to complete a demographic survey, which included questions on gender and age.

After this stage was completed, the participants moved on to the last stage, which was critical for the author since it enabled them to obtain insight into the answers to the eight variations: colour, music, lighting, aroma, layout, decoration, customer satisfaction, and customer loyalty. This section is scored on a 5-point Likert scale ranging from "not really" to "absolutely." The questionnaire form was initially written in English, and no other language was used in addition to English in the questionnaire form's development.

3.3 Sampling design

Given that the author's primary purpose is to emphasise the importance of the physical atmosphere in fine dining restaurants in Finland, a focus is given on only people who have visited a fine dining restaurant in Finland.

A typical sample size varies from 100 to 400, which means that the predicted number of observations is up to five times as many as the number of items. Due to the fact that the model has twenty-six measurement scales, the sample size should be at least 130 participants. According to the findings, the greater the sample size, the more accurate the study results. (Vasileiou et al. 2018.)

3.4 Research design

Based on the hypotheses discussed earlier, the study selects four dimensions to examine their relationship with one another and how they influence one another. Physical environment, customer gratification, and customer loyalty are the three characteristics that are being measured. (Table 1)

- Physical environment is measured in four aspects of Ambient conditions, Spatial layout, and Decorations
- Ambient conditions are measured by *using four items*
- Customer satisfaction is measured *by using three items*
- Customer loyalty is measured by *using three items*

	Construct	Item coded	Label	Cited
Ambient condition	Color	AM1	Color used in the restaurant make me feel pleasant	Ryu and Jang (2008)
	Music	AM2	Background music makes me feel pleasant when dining	Ryu and Jang (2008)
	Light	AM3	The right level of light creates a comfortable atmosphere for me	Ryu and Jang (2008)
	Aroma	AM4	I feel stimulated appetite when smelling the typical	Ryu & Jang (2008)

			aroma in the restaurant	
	Layout	LAY1	I do care about the comfortable aisles when entering the restaurant	Ryu & Jang (2008)
		LAY2	I do concern about the seating arrangement whether it gives enough space	Ryu & Jang (2008)
		LAY3	I do care about the layout whether it provides enough privacy in the restaurant	Ryu & Jang (2008)
	Decorations	DECOR1	The murals and decoration affect my comfort in the restaurant	
		DECOR2	The decorations are eye catching and affect my dining experience	
		DECOR3	I would rate restaurant service quality via arrangement of flatware, silverware and linen selected.	
		DECOR4	I think the signs and symbols assisted me in getting acquainted with the restaurant and avoiding felling lost when I am first arrived at.	
Customer satisfaction	Customer satisfaction	SATIS1	The fine dining restaurant always meet my expectation	Ryu & Han (2011)
		SATIS2	Dining in a fine dining restaurant would be the right choice of mine	Ryu & Han (2011)
		SATIS3	Overall, I am satisfied with first class restaurant.	Ryu & Han (2011)

Customer loyalty	Customer loyalty	LOYAL1	I would more frequently visit first class restaurant.	Hutchinson Lai & Jang (2009)
		LOYAL2	I would like to come back to first class restaurant in the future	Ryu & Han (2011)
		LOYAL3	I would recommend first class restaurant to my friends or others	Ryu & Han (2011)

Table 1 Measurement Items

3.5 Data analysis method

The information gathered from the online survey would be examined with the help of the following approaches:

- Step 1: Data requirement
- Step 2: Descriptive statistic analysis
- Step 3: For multivariate analysis, exploratory factor analysis (EFA) is used to compress and summarise data.
- Step 4: Inspect the dependability of scales (The Cronbach's alpha reliability coefficient) to ensure that they are consistent.
- Step 5: Linear regression

3.5.1 Data requirement

The information was gathered via the use of an online website known as Webropol. All of the questions are marked as compulsory, which means that all of the items must be completed before the form can be submitted. After being completed, the data was downloaded into an Excel file, which was then exported into SPSS for further processing.

3.5.2 Descriptive statistic analysis

A descriptive analysis is performed in order to highlight the demographic information and behaviours of the survey participants. In addition, a descriptive analysis may be performed to determine whether or not the respondents agree with the measuring items that influence their satisfaction and then to their retention to the fine dining restaurant environment.

3.5.3 Exploratory factor analysis (EFA)

There are a variety of multivariate statistical approaches for finding the least number of hypothetical constructs (also known as factors or dimensions) that may adequately explain the covariation between a collection of measured variables. One such method is exploratory factor analysis (EFA). Thus, the common elements that explain the order and organisation of observed variables should be identified. Social and behavioural sciences presume that unobservable features of persons reveal themselves in the measured variable's score disparities between different individuals. This work's key EFA components include:

- The sample adequacy KMO (Kaiser, Meyer, Olkin) scale ranges from 0 to 1. Higher KMO values indicate better EFA suitability.
- There must be a minimum percentage of the total variance described that is more than 50%.
- The eigenvalues-greater-than-one rule and the reliability of components.
- The variable's loading factor is greater than or equal to 0.5

3.5.4 Dependability of scales (The Cronbach's alpha reliability coefficient)

Each factor's consistency may be assessed using Cronbach's alpha reliability coefficient. To be regarded acceptable in this research, the variable is expected to have a corrected item-total correlation larger than 0.3 and a corrected item-total correlation coefficient better than 0.6, respectively (Nunnally & Bernstein 1994).

3.5.5 The Linear regression analysis (Multiple Regression analysis)

An analysis of collected data is used to determine the causal relationship between dependent variables and independent factors.

The ANOVA test is used to examine the correlation model's appropriateness. In order to quantify the relevance, we use the modified R-squared coefficient, the t-statistics, as well as the F-statistics to see whether the dependent variable is collinear to all of the independent variables. The R squared is used to calculate the whole model's F-statistics and Sigma, which is smaller than the test's observability, is used to validate the regression model's fit. The importance of components will be determined by the Beta coefficient of the multiple variable regression model developed out from questionnaire responses.

4 Results of the survey

The survey began on November 5, 2021, and finished on November 16, 2021, a span of 11 days. The survey was conducted online. The results of the poll were published by the author on social networking sites such as Facebook sites name 'Du hoc sinh Viet nam tai Phan Lan' where has a community of Vietnamese living in Finland; another site where the survey uploaded called "Finnish Cooking and Culture", where mostly the member are Finnish or non- Vietnamese people. Many positive and constructive features of the participants' responses were obtained in response to the survey's question and answer section.

Following an analysis of the data obtained, it was discovered that the respondents provided a total of 137 replies. On the other hand, there were just 121 respondents who indicated that they had previously visited the fine dining restaurant. Having said that, the author's estimation of a sufficient number of people was correct in this case.

4.1 Respondent's background

The background of the present research sample is described in the following table 2. The number of 45 individuals were male, accounting for 37.2% of the total 121 suitable replies; 56 people were female, accounting for 46.3% of the total 121 appropriate responses; the remaining 20 people would prefer not to disclose their gender, accounting for 16.5% of the total 121 appropriate responses.

There was a total of 60 persons who were between the ages of 25 and 30 years old, accounting for about 49.6 % of all those who took part in the study. Following that comes the age group of 18-24 years old, which has 35 persons and accounts for about 28.9 % of the population. The age group 31-37 years old accounts for 16.5% of the overall number of participants with 20 individuals, while the age group above 37 years old accounts for 5 % of the total number of participants with 6 persons.

Characteristic	Frequency	Percentage
<i>Gender</i>		
Male	45	37,2%
Female	56	46,3%
<i>Age</i>		
18-24 years old	35	28,9%
25-30 years old	60	49,6%
31-37 years old	20	16,5%
Above 37 years old	6	5,0%

Table 2 Background of respondents

4.2 Perception of respondents

Within a fine dining establishment, scanning questions are also used to determine the degree of awareness and understanding of the physical surroundings of the establishment. After being asked if they believe the physical environment (which includes the atmosphere, layout, and decorations) is important in a restaurant or not, only 7,4 percent (9 people) responded that they did not believe it was important, with the vast majority (92,6 percent (112 people) genuinely believing it is essential.

More precisely, in the following question, the author provided a list of particular criteria in the restaurant along with a Likert rating scale from 1 to 5, with 1 being veto and 5 being agree, respectively. In order to determine which components of the environment consumers feel most linked to and influenced by their restaurant experience, this survey will be conducted in the following ways:

The findings demonstrate that

Color – As shown in the table 3, in the color aspect, we can see that the most individuals chose response 3 (Neutral), which accounts for 29.2 percent of the total, which is the most

common. This demonstrates that the quantity of individuals who are interested in this element is on the moderate side of things.

		Frequency	Percent %	Valid percent %	Cumulative percent %
Valid	1	12	10.0	10.0	10.0
	2	30	25.0	25.0	35.0
	3	35	29.2	29.2	64.2
	4	16	13.3	13.3	77.5
	5	27	22.5	22.5	100.0
	Total	120	100.0	100.0	

Table 3 Frequency of color

Background music - As indicated in Table 4, when it comes to the background music aspect, the majority of people selected answer 3 (Neutral), which accounts for 30% of the total, making it the most popular choice. Thus, the number of people who are interested in this aspect is on the moderate side of things, as seen by this statistic.

		Frequency	Percent %	Valid percent %	Cumulative percent %
Valid	1	11	9.2	9.2	9.2
	2	24	20.0	20.0	29.2
	3	30	25.0	25.0	54.2
	4	29	24.2	24.2	78.3
	5	26	21.7	21.7	100.0
	Total	120	100.0	100.0	

Table 4 Frequency of background music

Lighting - Looking at the table 5, in the lighting aspect we can see that the most participants (34 people) chose answer 4 (Significant), which accounts for 28.3% of the total number of people that answered the question. This demonstrates that there are a high number of individuals who are interested in this aspect

		Frequency	Percent %	Valid percent %	Cumulative percent %
Valid	1	10	8.3	8.3	8.3
	2	25	20.8	20.8	29.2
	3	31	25.3	25.8	55.0
	4	34	28.3	28.3	83.3
	5	20	16.7	16.7	100.0
	Total	120	100.0	100.0	

Table 5 Frequency of lighting

Aroma - Looking at the results of the Aroma section of Table 6, we can see that the majority of participants (35 individuals) selected response 3 (Neutral), which accounts for 29.2 % of the total number of persons who participated in this survey in total. Individuals who are interested in this topic are in medium level, as shown by the amount of people who have expressed an interest in it.

		Frequency	Percent %	Valid percent %	Cumulative percent %
Valid	1	13	10.8	10.8	8.3
	2	16	13.3	13.3	24.2
	3	35	29.2	29.2	53.3
	4	30	25.0	25.0	78.3
	5	26	21.7	21.7	100.0
	Total	120	100.0	100.0	

Table 6 Frequency of aroma

Spatial layout - The findings of the Spatial layout portion of Table 7 show that answer 3 (Neutral) was selected by the vast majority of participants (35 people), accounting for about 30.8 percent of all those who took part in the survey. Individuals who are interested in this issue are at a medium level of interest, as shown by the number of people who have expressed interest in it.

		Frequency	Percent %	Valid percent %	Cumulative percent %
Valid	1	9	7.5	7.5	7.5
	2	23	19.2	19.2	26.7
	3	37	30.8	30.8	57.5
	4	27	22.5	22.5	80.0
	5	24	20.0	20.0	100.0
	Total	120	100.0	100.0	

Table 7 Frequency of spatial layout

Decorations – Illustrated in the table 8, among those who participated in the survey, response 3 (Neutral) was selected by the great majority of participants (40 persons), accounting for about 33.3 percent of all those who took part in the survey. It seems that those with an interest in this concern have a moderate degree of interest, as shown by the number of persons who have indicated an interest in it.

		Frequency	Percent %	Valid percent %	Cumulative percent %
Valid	1	9	7.5	7.5	7.5
	2	20	16.7	16.7	24.2
	3	40	33.3	33.3	57.5
	4	26	21.7	21.7	79.2
	5	25	20.8	20.8	100.0
	Total	120	100.0	100.0	

Table 8 Frequency of decoration

4.3 Descriptive analysis

4.3.1 Ambient condition

Table 9 indicates that respondents had responded all four measuring items of the "Ambient condition" factor (almost the fourth level " Significant " on a Likert scale with five levels of agreement), and the responses were as follows:

- **AM1** - Color used in the restaurant make me feel pleasant (MEAN =3,45)
- **AM2** - Background music makes me feel pleasant when dining (MEAN =3,62)
- **AM3** - The right level of light creates a comfortable atmosphere for me (MEAN = 3.83)
- **AM4** - I feel stimulated appetite when smelling the typical aroma in the restaurant (MEAN = 3,8)

	N	Minimum	Maximum	Mean	Std. Deviation
AM1	120	1,00	5.00	3.4583	1,10686
AM2	120	1,00	5.00	3.6250	1,10813
AM3	120	1,00	5.00	3,8333	,99860
AM4	120	1,00	5.00	3.8000	1,04198
Valid N (listwise)	120				

Table 9 Descriptive Analysis of Ambient conditions

4.3.2 Layout

Table 10 indicates that respondents had responded all four measuring items of the "Layout" factor (almost the fourth level " Significant " on a Likert scale with five levels of agreement), and the responses were as follows:

- **LAY1** - I feel stimulated appetite when smelling the typical aroma in the restaurant (MEAN = 3,67)
- **LAY2** - I do concern about the seating arrangement whether it gives enough space (MEAN = 3,84)
- **LAY3** - I do care about the layout whether it provides enough privacy in the restaurant (MEAN = 4,00)

	N	Minimum	Maximum	MEAN	Std. Deviation
LAY1	120	1,00	5.00	3.6750	1.13139
LAY2	120	1,00	5.00	3.8417	1.06901
LAY3	120	1,00	5.00	4.0083	1.08074
Valid N (listwise)	120				

Table 10 Descriptive analysis of layout

4.3.3 Decorations

Table 11 indicates that respondents had responded all four measuring items of the "Decorations" factor (almost the fourth level "Significant" on a Likert scale with five levels of agreement), and the responses were as follows:

- **DECOR1**- The murals and decoration affect my comfort in the restaurant (MEAN= 3.75)
- **DECOR2** - The decorations are eye catching and affect my dining experience (MEAN = 3.55)
- **DECOR3** - I would rate restaurant service quality via arrangement of flatware, silverware and linen selected. (MEAN = 3.95)
- **DECOR4** - think the signs and symbols assisted me in getting acquainted with the restaurant and avoiding felling lost when I am first arrived at. (MEAN = 3.65)

	N	Minimum	Maximum	MEAN	Std. Deviation
DECOR1	120	1.00	5.00	3.7500	,90980
DECOR 2	120	1.00	5.00	3.5583	.97703
DECOR 3	120	1.00	5.00	3.9578	.97701
DECOR4	120	1.00	5.00	3.6583	1.30607
Valid N (listwise)	120				

Table 11 Descriptive analysis of decorations

4.3.4 Customer satisfaction

Table 12 indicates that respondents had responded all four measuring items of the "Customer satisfaction" factor (almost the fourth level "Significant" on a Likert scale with five levels of agreement), and the responses were as follows:

- **SATIS1**- The fine dining restaurant always meet my expectation (MEAN = 3,68)
- **SATIS2** - Dining in a fine dining restaurant would be the right choice of mine (MEAN = 3,92)
- **SATIS3** - Overall, I am satisfied with first class restaurant. (MEAN = 3,875)

	N	Minimum	Maximum	MEAN	Std. Deviation
SATIS1	120	1,00	5.00	3.6833	1.09991
SATIS2	120	1,00	5.00	3.9250	1.09362
SATIS3	120	1,00	5.00	3.8750	1.00889
Valid N (listwise)	120				

Table 12 Descriptive analysis of customer satisfaction

4.3.5 Customer loyalty

Table 13 indicates that respondents had responded all four measuring items of the "Customer Loyalty" factor (almost the fourth level "Significant" on a Likert scale with five levels of agreement), and the responses were as follows:

- **LOYAL1** - I would more frequently visit first class restaurant. (MEAN = 3,76)
- **LOYAL2** - I would like to come back to first class restaurant in the future (MEAN = 3,83)

- **LOYAL3** - I would recommend first class restaurant to my friends or others (MEAN = 3,75)

	N	Minimum	Maximum	MEAN	Std. Deviation
LOYAL1	120	1,00	5.00	3.7583	1.22300
LOYAL2	120	1,00	5.00	3.8333	1.08723
LOYAL3	120	1,00	5.00	3.7583	1.15851
Valid N (list-wise)	120				

Table 13 Descriptive analysis of customer loyalty

4.4 Exploratory Factor Analysis (EFA)

For the purpose of this analysis, exploratory factor analysis (EFA) was performed three times. Three independent elements were tested in the first study: ambient circumstances, layout, and decorations. The results of the first analysis were compared to the results of the second and third analyses. Only the dependent component called customer satisfaction was included in the second study; similarly, only the dependent factor named customer loyalty was included in the final study. With an acceptable absolute value less than 0.5, the Varimax rotation technique of main component extractions were applied.

4.4.1 Result of EFA and Cronbach's Alpha

The result of EFA: Table 14 shows that the KMO coefficient is $0.705 > 0.5$, which is required for factor analysis (Hair et al. 1998). Furthermore, the p-value = 0.000 (< 0.005) indicates that the data is eligible for factor analysis.

Kaiser – Meyer – Olkin Measure of Sampling		0,705
Bartlett's Test of Sphericity	Approx. Chi-Square	443,811
	df	55
	Sig.	,00

Table 14 KMO and Barlett test of three independent elements.

Table 15 includes the total variance measuring scales for three independent factors, the table shows that the Eigenvalue rule and fraction of total variance extract describe 61,166 % (>50%) of the variance (Hair et al. 1998). As a result, three elements should be retained as common. In addition, 11 measurement items had a factor loading of larger than 0.5 (table 16). Consequently, these variables have sufficient reliability and conditions to be preserved and used in the analysis.

Raw	Component	Initial Eigenvalues			Extraction Sums of Squared Loadings	
		Total	% of Variance	Cumulative %	Total	% of Variance
	1	4,296	34,109	34,109	4,296	34,109
	2	1,955	15,525	49,634	1,955	15,525
	3	1,452	11,532	61,166	1,452	11,532

Table 15 Total Variance Explained

The result of Cronbach's Alpha: Table 16 further shows that the credibility of the three factors is substantially above 0.5, and that all observed variables of each factor have a corrected item-total correlation better than 0.3, indicating that they are suitable for a satisfactory degree of credibility in basic research

Factor	Factor loading	Eigenvalue Total	Eigenvalue Variance explained (%)	Cumulated variance explained (%)	Cronbach's alpha
* Decorations		4,296	34.109	34.109	0.844
DECOR3	0.872				
DECOR2	0.845				
DECOR1	0.661				
DECOR4	0.720				
* Layout		1.955	15.525	49.634	0.746
LAY3	0.808				
LAY1	0.803				
LAY2	0.861				
*Ambient conditions		1.452	11.532	61.166	0.541
AM4	0.520				
AM3	0.889				
AM2	0.829				
AM1	0.581				

Table 16 The result of EFA and Cronbach' Alpha of three independent elements

4.4.2 Result of dependent factor (SATIS)

Result of EFA: Table 17 shows that the KMO coefficient is $0.685 > 0.5$, which is required for factor analysis (Hair et al. 1998). Furthermore, the p-value = 0.000 (<0.005) indicates that the data is eligible for factor analysis.

Kaiser – Meyer – Olkin Measure of Sampling		0.685
Bartlett's Test of Sphericity	Approx. Chi-Square	90,510
	df	3
	Sig.	,00

Table 17 KMO and Bartlett's test of customer satisfaction

Result of Cronbach's alpha Table 18 shows that the Eigenvalue rule and fraction of total variance extract describe 67,794% (>50 percent) of the variance (Hair et al. 1998). As a result, this facet can be remained. In addition, three measurement items had a factor loading of larger than 0.5. Consequently, this variable has sufficient reliability and conditions to be preserved and used in the analysis.

Table 18 further shows that the credibility of the factors is substantially above 0.5, and that all observed variables of each factor have a corrected item-total correlation better than 0.3, indicating that they are suitable for a satisfactory degree of credibility in basic research

Table 18 also includes three measuring scales for the dependent factor, based on the findings of factor analysis and Cronbach's alpha test.

Factor	Factor loading	Eigenvalue	Variance explained (%)	Cumulated variance explained (%)	Cronbach's alpha
Customer satisfaction		2.321	67.794	67.794	0.762
SATIS3	0.841				
SATIS2	0.896				
SATIS1	0.901				

Table 18 The result of EFA and Cronbach' Alpha of Customer satisfaction

4.4.3 Result of customer loyalty

Result of EFA: Table 19 shows that the KMO coefficient is $0.699 > 0.5$, which is required for factor analysis (Hair et al. 1998). Furthermore, the p-value = 0.000 (<0.005) indicates that the data is eligible for factor analysis.

Kaiser – Meyer – Olkin Measure of Sampling		0.699
Bartlett's Test of Sphericity	Appox. Chi-Square	96,294
	df	3
	Sig.	,00

Table 19 KMO and Bartlett's test of Customer loyalty

Result of Cronbach's alpha Table 20 shows that the Eigenvalue rule and fraction of total variance extract describe 69,262% (>50 percent) of the variance (Hair et al. 1998). As a result, this facet can be remained. In addition, three measurement items had a factor loading of larger than 0.5. Consequently, this variable has sufficient reliability and conditions to be preserved and used in the analysis.

Table 20 further shows that the credibility of the factors is substantially above 0.5, and that all observed variables of each factor have a corrected item-total correlation better than 0.3, indicating that they are suitable for a satisfactory degree of credibility in basic research

Table 20 also includes three measuring scales for the dependent factor, based on the findings of factor analysis and Cronbach's alpha test

Factor	Factor loading	Eigenvalue	Variance explained (%)	Cumulated variance explained (%)	Cronbach's alpha
Customer loyalty		2.786	69.262	69.262	0.776
LOYALTY1	1.061				
LOYALTY3	0.772				
LOYALTY2	0.952				

Table 20 The result of EFA and Cronbach' Alpha of Customer Loyalty

4.5 Multiple regression analysis

The hypothesized hypothesis for this research was investigated using multiple regression analysis. A total of two multiple regression analyses were performed in this study. For the first study, it was determined that there was a link between the physical environment components (AM, LAY, and DECOR) and consumer satisfaction (SATIS). Second, the link between customer satisfaction (SATIS) and customer loyalty (LOYAL) was explored.

4.5.1 Regression analysis relationship between the physical environment factors and customer satisfaction

The overall fit of the model is as follows: The following are the findings of the regression analysis of the model that incorporates factors that impact customer satisfaction with three independent variables: According to the results of the Multiple Regression analysis, the adjusted R-square was 0.438 (<0.5), indicating that three independent variables (AM, LAY, DECOR) described 43.8 % of the variation in the dependent variable (SATIS). As a result, the model is adequate for the whole test, as shown by the test value of model $F = 30.193$ and $\text{Sig.} = 0.000$ (<0.05). Additionally, Durbin – Watson = 2.145 ($1 < 2.145 < 3$) shown that the model does not exhibit autocorrelation. Thus, the assumptions are considered as correct (table 21).

ANOVA	R Square	F	Sig.	Durbin – Watson
SATIS	0.438	14.528	0.000	2.145

Table 21 The overall fit model between the physical environment (AM, LAY, DECOR) and customer satisfaction (SATIS)

Hypothesis testing: The study's hypotheses are tested using the p-value. Accordingly, any hypothesis may be accepted if the p-value is less than 0.05. (Hair et al. 1998). Table 15 shows the regression analysis results. It is acceptable to accept all the hypotheses as long as their p-value is less than.05. To put it more simply, clients are more likely to be satisfied when they are in an environment that is both comfortable and visually appealing.

Hypothesises	Standardized coefficients beta	t	P value	Result
H1: AM → SATIS	-0.194	-2.095	0.038	Supportive
H2: LAY → SATS	0.353	4.335	0.000	Supportive
H3: DECOR → SATIS	-0.460	5.420	0.000	Supportive

Table 22 The result of hypothesis examination between Physical environment and Customer satisfaction

4.5.2 Regression analysis correlation between the dependent factors of Customer satisfaction and customer loyalty

The overall fit of the model is as follows: The following are the findings of the regression analysis of the model that incorporates factors that impact customer satisfaction with three independent variables: According to the results of the Multiple Regression analysis, the adjusted R-square was 0.623 (>0.5), indicating that three independent variables (AM, LAY, DECOR) described 43.8 % of the variation in the dependent variable (SATIS). As a result, the model is adequate for the whole test, as shown by the test value of model $F = 197,365$ and $\text{Sig.} = 0.000$ (<0.05). Additionally, Durbin – Watson = 1,837 ($1 < 1,837 < 3$) shown that the model does not exhibit autocorrelation. Thus, the assumptions are considered as correct (table 23).

ANOVA	R Square	F	Sig.	Durbin – Watson
SATIS	0.623	.14.528	0.000	2.145

Table 23The overall fit model between Customer Satisfaction (SATIS) and Customer Loyalty (LOYAL)

Hypothesis testing: The study's hypotheses are tested using the p-value. Accordingly, any hypothesis may be accepted if the p-value is less than 0.05. (Hair et al. 1998). Table 16 shows the regression analysis results. It is acceptable to accept all the hypotheses as long as their p-value is less than 0.5. Customers that are satisfied with their service tend to be more loyal to their service providers.

Hypothesises	Standardized coefficients beta	t	P value	Result
H4: SATIS → LOYAL	0.791	14,049	0.00	Supportive

Table 24 The result of the hypothesis's examination between Customer Loyalty (LOYAL) and Customer Satisfaction (SATIS)

5 Conclusions

The purpose of this thesis is to investigate the link between customer happiness and aspects such as décor, layout, and atmosphere, which are all physical environmental components, as well as to determine the relationship between customer satisfaction and loyalty. Consequently, this research has addressed the research question given that the physical environment significantly impacts both visual and non-visual senses of customer experiences. Light, color, music, and decorations are statistically influencing customer satisfaction and customer loyalty. The result also makes a significant addition to the understanding of the link between physical environment and enjoyment as well as long-term commitment. It facilitates comprehension of these linkages, which is very important in the fine dining restaurant industry.

Four hypotheses were created throughout the study, and these hypotheses were then evaluated using structural equation modelling techniques. As a result, all of the hypotheses have been proven correct. It is found that there is a substantial association between the physical environment and customer satisfaction as well as consumer loyalty in the retail industry. This conclusion was consistent with prior research that had showed the importance of physical settings in the restaurant industry (Han & Ryu 2009).

According to the results, customer happiness has a statistically significant impact on customer loyalty. This conclusion was also consistent with the findings of prior research, which found that customer satisfaction was highly associated to customer retention (Ryu & Han 2009).

In addition, the findings reveal a positive relationship between the two variables of customer satisfaction and customer loyalty. The researchers found that their findings are consistent with ideas that have been proposed by earlier researchers (Fornell 1992; Arantola 2000).

5.1 Insights into the consequences

The theoretical contribution of this work is the theoretical explanation derived from theories in physical environment, as well as some empirical evidence supporting the relationship between physical environmental components and customers' satisfaction and loyalty towards it in the context of a fine dining restaurant, as presented in this paper. Furthermore, an integrated model for investigating this link has been proposed, which incorporates information from prior research while also improving on it. The model, like others prior research, investigated the significant correlation between the physical environment

and customer satisfaction as well as customer loyalty (see Figure1). Based on the findings of earlier research and the literature, additional factors have been included into the model to better reflect the current context of advertising. These variables include incentives and relevance, as well as visual design and brand recognition. Consequently, the findings of this study contribute to the literature by confirming and exploring a comprehensive model of the casual relationship between independent variables (AM, LAY and DECOR) and dependent variables (SATIS and LOYAL) that has been revised to fit the modern context of personalised advertising.

5.1.1 Color

Color has a favourable and substantial impact on consumer satisfaction as well as on customer retention and loyalty. It has been discovered that it has the potential to elicit favourable psychological reactions in consumers (such as relaxation, appeal, and enjoyment), and as a result, it has a beneficial impact on customer satisfaction and retention. This conclusion is congenial with previous research on the effect of the physical atmosphere in a restaurant (Ryu & Jang 2008; Jain & Bagdare 2011; Kim & Moon 2009)

5.1.2 Background music

When playing background music, it has a positive and significant impact on the level of happiness of customers. Previous types of research in the field of physical environment have also shown the relationship between background music's ability to relax a client and the client's attitude toward it (Yalch & Spangenberg 1993; Jain & Bagdare 2011). As a consequence, it is critical that this topic get the full attention it deserves. According to the theme of their institution, restaurant owners may benefit from learning about the suitable kind of music to play and the appropriate volume level to play to have a big influence on this section of their establishment.

5.1.3 Aroma selections

The choice of aroma has a favourable and substantial influence on the level of client happiness. The association between fragrance selection and customer pleasure has been shown in several prior studies in the physical environment, but further research is needed. Unfortunately, there was not a lot of theoretical consideration devoted to this subject of study. In this regard, the results about the effect of scent selection on customer satisfaction are critical in giving theories for future research. Consequently, consumers may obtain appealing by inhaling a scent that is distinctive of the restaurant and matches the business's style. This is very vital to the achievement of key customer pleasure.

5.1.4 Lighting

The component of lighting is considered to have a good impact on the client experience, and this has been shown in recent studies as well as in previous research. Lighting contributes to the creation of a certain mood, tone, and atmosphere in a space. It is a great way to bring out the best features of a building and make the most of the available space. Creating an atmosphere of community or closeness might encourage diners to spend more time at a restaurant.

5.2 Suggestions and limitations of the research

This research investigated the relationship between the physical environment and customer happiness and loyalty in the Finnish fine dining industry. In spite of this, there are certain limitations to this investigation. First and foremost, the sample size is too tiny to be considered representative of the population as a whole. Consequently, the findings do not support the applicability of the study paradigm outside the fine dining sector in Finland. Second, the study's target audience is made up of just Finnish citizens who have visited a restaurant in Finland, therefore it does not consider factors such as their geographic region or nationality. SEM (Structural Equation Modelling) should have been used to analyse and evaluate the hypotheses in this study. However, this research only employed multiple regression analysis owing to several restrictions. (Tanaka 1987,134 -146)

To get a more accurate picture of the population as a whole, further study is needed. In addition, demographic characteristics should be analysed to see how various demographic groupings may affect consumers' opinions and acceptance of individualised advertising. The results may also be applied to other contexts, such as other nations or other industries, to ensure the generalizability of the findings and to validate model research. Consumers' purchasing choices may also be examined in future study to see whether tailored advertising values have an impact on customers' behaviour. Instead of using multiple regression analysis, this research might employ SEM for hypothesis testing and analysis.

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Appendix 1 Questionnaire Survey

Questionnaire Survey

Research title: The important role of the physical environment to customer satisfaction and customer loyalty in Finland's fine dining restaurant

*Required

1. As the definition of fine dining as a full-service establishment that specializes in a special cuisine. Such venues use higher-quality materials in their décor, as well as strict eating guidelines that guests must adhere to. Thus, have you ever been to a fine dining restaurant before?

- a. Yes
- b. No

2. What is your gender? *

- a. Male
- b. Female
- c. Prefer not to say

3. Which age group do you belong to? *

- a. 18-24 years old
- b. 25-30 years old
- c. 31-37 years old
- d. Above 37 years old

4 Do you think the physical environment (Ambient conditions, the layout and decorations) has an important impact on the dining experience at a restaurant?

- a. Yes
- b. No

5. What elements in the physical environment (except the food quality) affect your dining experience in a fine dining restaurant?

(1= doesn't affect, 2=somehow effect,3=neutral,4=significantly affect, 5= extremely affect)

- a. Color theme (1-5)
- b. Music theme (1-5)
- c. Lighting theme (1-5)
- d. Aroma selection (1-5)
- e. Spatial layout
- f. Decorations

6. Is the color used in the restaurant make you feel pleasant?

- 1. Not at all
- 2. Somehow
- 3. Neutral
- 4. Significant

5. Sufficient

7. Do you think the background music makes you feel pleasant when dining?

1. Not at all
2. Somehow
3. Neutral
4. Significant
5. Sufficient

8. Do you think the right level of lighting creates a comfortable atmosphere in the restaurant?

1. Not important
2. Somehow
3. Neutral
4. Significant
5. Sufficient

9. Do you feel stimulated appetite when smelling the typical aroma in the restaurant?

1. Not important
2. Somehow
3. Neutral
4. Significant
5. Sufficient

10. Do you care much about comfortable aisles when entering a fine dining restaurant?

1. Not really
2. Somehow
3. Neutral
4. Significant
5. Absolutely

11. Do you concern about the seating arrangement giving you enough space?

1. Not really
2. Somehow
3. Neutral
4. Significant
5. Absolutely

12. Do you mind that the layout of the restaurant gives you enough privacy when you are experiencing it in the restaurant?

1. Not really
2. Somehow
3. Neutral
4. Significant
5. Absolutely

13. Do you feel the murals and decorations affect your comfort in the restaurant?

1. Not really

2. Somehow
3. Neutral
4. Significant
5. Absolutely

14. Do you find the decorations in the restaurant are eye-catching and affect your dining experience?

1. Not really
2. Somehow
3. Neutral
4. Significant
5. Absolutely

15. How would you rate a restaurant's service quality by the arrangement of flatware, silverware, crockery, and linen tablecloths selected?

1. Not really
2. Somehow
3. Neutral
4. Significant
5. Absolutely

16. Do you think the signs and symbols assist you in getting acquainted with the restaurant and avoiding feeling lost when you first arrive?

1. Not really
2. Somehow
3. Neutral
4. Significant
5. Absolutely

17. Does the fine dining restaurant always meet your expectations?

1. Not really
2. Somehow
3. Neutral
4. Significant
5. Absolutely

18. Do you think dining in a fine dining restaurant would be the right choice?

1. Not really
2. Somehow
3. Neutral
4. Significant
5. Absolutely

19. Overall, are you satisfied with the experience you had in the fine dining restaurant?

1. Not really
2. Somehow
3. Neutral
4. Significant
5. Absolutely

20. Would you frequently visit fine the dining restaurant?

1. Not really
2. Somehow
3. Neutral
4. Significant
5. Absolutely

21. Would you like to come back to a fine dining restaurant in the future?

1. Not really
2. Somehow
3. Neutral
4. Significant
5. Absolutely

22. Would you recommend the restaurant to your friends or others?

1. Not really
2. Somehow
3. Neutral
4. Significant
5. Absolutely

Appendix 2 Cover letter

Dear participants,

My name is Khanh, and I'm a third-year student at LAB University of Applied Sciences. I am now working on my graduation thesis, which is titled "The Importance of Physical Environment in Customer Satisfaction and Loyalty in Finland's Fine Dining Restaurant." The poll is directed at persons who have visited this type of restaurant. Through this survey, I seek to gain about your preferences and perspectives on the impact of environmental elements on your experience, as well as whether the impacts have left you happy and eager to return.

This quiz has 22 questions and should take you less than 10 minutes to complete. During the survey, you will not be asked for any personal information. If you have any questions or concerns about this survey, please email me at khanh.dang@student.lab.fi.

Your participation is much valued. Thank you for taking the time to read this!

Best regards

Khanh Dang

