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The Role of Service Design in Supporting Decision-Making for Insurance Consumers in Finland

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Abstract

This thesis investigates how service design can be used to ease the cognitive and emotional challenges Finnish consumers face when selecting insurance policies. The study responds to the growing concern over choice overload in complex service environments, particularly its psychological impacts such as choice paralysis, decision fatigue, and post-decision regret. It aims to identify service design interventions that mitigate these effects and provide actionable recommendations for the insurance sector in Finland.

A qualitative methodology was employed, comprising ten in-depth, semi-structured interviews with seven consumers and three design professionals. Thematic analysis was conducted using a hybrid approach, combining theory-informed deductive coding with inductive insights from participant narratives. Findings revealed that the comparison stage of the insurance selection process was the most cognitively taxing, exacerbated by technical jargon, non-standardized formats, and overwhelming similarity among products.

The study identifies key service design strategies like simplification, progressive disclosure, and empathetic human support as effective interventions to aid decision-making, while noting that organizational and regulatory constraints often hinder the implementation of user-centric solutions. The research concludes that integrating behavioural psychology with service design offers a valuable multidisciplinary approach to managing complexity within services. Practical recommendations are proposed for Finnish insurers aiming to reduce cognitive friction, build trust, and enable more confident and satisfying decisions.

Keywords: Service Design, Insurance Decision-Making, Choice Overload, Consumer Experience, Cognitive Load.

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Last but not the least, I would like to thank the University of Lapland and the SDSI (Service Design Strategies and Innovations) programme for giving me the opportunity to work on this research project, which turned out to be quite enriching. And a special mention goes to my colleagues, friends and family who encouraged me during the entire course of this project by sharing their thoughts, ideas, love and support.

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Abbreviations

AI	Artificial Intelligence
CEM	Customer Experience Modeling
CX	Customer Experience
EU	European Union
FAQ	Frequently Asked Questions
GDP	Gross Domestic Product
GDPR	General Data Protection Regulation
HR	Human Resources
IT	Information Technology
MSD	Multilevel Service Design
RQ	Research Question
SD	Service Design
TV	Television
USA	United States of America
UX	User Experience
VBID	Value-Based Insurance Design

1. INTRODUCTION

1.1. Background of the research

The prevailing narrative in any industrialised capitalistic society has been that if we want to increase the well-being of citizens, we need to maximise individual freedom, and one of the key drivers for that is maximising choice (Schwartz, 2005). It is logical to believe that having more options to choose from can allow consumers to find exactly what they want, and to a certain extent it does hold true, i.e., consumers benefit from the opportunity to choose. Following the same logic, economists concluded that if some choice is good, more can only be better (Schwartz, 2004). However, around the beginning of the 21st century, some scientific studies in the field of economics and behavioural psychology started challenging the conventional wisdom that providing more options is always beneficial for the consumer and the retailer / service provider (Iyengar & Lepper, 2000).

This eventually led to a book named 'The Paradox of Choice: Why More is Less' written by psychologist Barry Schwartz, who suggested that the more options we are faced with, the less satisfied we tend to feel about our decision (Schwartz, 2004). This occurs because deliberating over a large number of options and making a choice requires more cognitive effort, which might lead to choice paralysis and deferral, wherein one is unable to make a choice and delays the decision, decision fatigue, or increased regret over the chosen option (Inbar, Botti, & Hanko, 2011). Some researchers have referred to this phenomenon as 'choice overload' which is defined as the tendency for people to get overwhelmed when they are given too many options to choose from. This happens because presenting people with a large set of options makes it increasingly difficult for them to determine which option aligns best with their needs (Haynes, 2009). Thus, Schwartz argued that instead of increasing our freedom to find what we desire, too many choices often have the adverse effect and limits our freedom (Pilat & Krastev, 2021).

This paradoxical finding that an abundance of choice can be detrimental to decision making generated a lot of interest among researchers who went on to document choice overload and the resulting negative psychological impacts such as paralysis, fatigue and regret faced by consumers in various industries and under different circumstances. Subsequently, there has been some research to identify the boundary conditions and moderators of choice overload, but there are conflicting views and an overall lack of research on ways to mitigate these negative consequences of choice and ease the consumer's decision-making process.

This research aims to explore and outline the role that service design can play in countering choice overload and easing the decision-making process for people having to choose insurance policies in Finland. Therefore, the study adopts an interpretivist philosophy, recognizing the subjective nature of human experiences and the socio-cultural context within which Finnish consumers make purchase decisions regarding insurance. By understanding the meanings and interpretations that consumers ascribe to their choices and the challenges they face in navigating the insurance market, one can try to uncover the underlying factors that contribute to choice overload and how service design can be employed to resolve it. This chapter introduces the study by shedding light on its significance and my personal interest in the research, followed by the research objectives, questions and scope, the structural overview of the thesis and finally, the ethical considerations.

1.2. Research motivation

There has been significant research on the occurrence of choice overload in a variety of product categories and situations (Berger et al., 2007; Chernev, 2003; Huberman et al., 2007; Iyengar & Lepper, 2000; Ketcham et al., 2012), the decision-making process and outcome for consumers exhibiting different behavioural tendencies (Iyengar et al., 2006), and the impact that too many choices can have on consumer satisfaction (Botti & Iyengar, 2004; Diehl & Poynor, 2010). Building on these findings, research moved beyond simply observing choice overload and its consequences, to identifying the key moderators of this phenomenon. This was followed by meta-analytic research to uncover more factors that might influence choice overload and quantify their effect, based on existing empirical evidence (Chernev et al., 2015). However, there hasn't been many conclusive studies on alleviating choice overload among consumers, and that is one of the gaps this research aims to fill, with the help of service design.

In recent years, service design has gained a lot of traction due to its ability to improve user experiences, when applied correctly (Patrício et al., 2018). While service design methodologies have been widely studied in enhancing the journey of consumers, with a focus on general usability of products and services (Stickdorn et al., 2018; Teixeira et al., 2012), there is limited research explicitly linking these methodologies to overcoming psychological barriers (Ostrom et al., 2015; Polaine et al., 2013) like choice paralysis, decision fatigue and post-decision regret.

What makes this study more interesting is the unique insurance market of Finland, where consumers generally demonstrate high digital adoption and trust in institutions. Till now, most

research on insurance decision-making has focused on the U.S. or Asian markets (Barnes et al., 2015; Sreedharan & Saha, 2021), which differ from the Nordics, both in terms of cultural norms and regulatory frameworks. Furthermore, insurance is seen as a 'low engagement' product due to its low frequency of purchase, and existing research on choice overload and its impact has been majorly focused on high engagement sectors like retail, leaving many product categories underexplored.

Lastly, behavioural psychology and economics have been kept separate from service design. This research tries to identify possible intersections between the disciplines and combine them to mitigate choice overload in the Finnish insurance market.

1.3. Research goals and research questions

Given the lack of research regarding the implementation of service design to overcome choice overload and its consequences, this study aims to identify ways in which service design can be applied to help Finnish consumers navigate choices in the insurance sector. The three main objectives of this study are to identify key areas where service design interventions can enhance the insurance policy selection process for consumers in Finland, provide systemic recommendations to address the challenges faced by people going through this process, and contribute to the development of service design principles and guidelines for the Finnish insurance industry, aimed at improving customer satisfaction and reducing the negative effects of choice overload. These goals altogether lead to the overarching research question (RQ), that this study aims to explore and answer:

> How can service design be employed to mitigate the negative psychological impacts of an abundance of choice, particularly choice paralysis, post-decision regret and decision fatigue, on individuals selecting insurance policies in Finland?

This RQ can be further broken down into sub-questions corresponding to each research objective: (1) Which stages of the insurance policy selection process (e.g., information gathering, comparison, final selection) are most vulnerable to decision fatigue or choice paralysis? (2) How can service design interventions reduce stress and cognitive load for consumers selecting insurance products? and (3) What service design strategies, frameworks and principles should guide the Finnish insurance industry to balance business goals with minimizing decision fatigue and regret among consumers?

1.4. Research scope and limitations

This study is restricted to the insurance industry in the geographical context of Finland, shaped by its unique cultural norms and regulations. Therefore, most research participants are Finnish consumers who have purchased insurance policies, with similar socio-economic backgrounds and education levels, though they vary in certain factors like age, digital literacy and so on. A larger, more diverse sample could have provided deeper insights applicable to a broader range of socio-economic groups.

Another potential limitation of this study might be the qualitative methodology employed in the form of in-depth interviews. Due to the subjective nature of human experiences shared by the interviewees, the use of quantitative methods like surveys could have helped validate the identified pain-points and develop more holistic recommendations, that would benefit different types of consumers. Additionally, having more time would have allowed for a greater number of interviews, in turn expanding the sample and leading to richer insights. The current outcome of the study is only applicable to the Finnish insurance sector and further research is needed to test its generalizability and see if it can be relevant for other contexts or industries.

1.5. Thesis structure overview

The first introductory chapter has provided background information on the overall topic, set the context for the research, argued its significance, delved into my personal motivation as a researcher, and laid out the research objectives and questions. The scope, limitations and ethical considerations of the study have also been discussed.

In the second chapter, the existing literature will be reviewed, in order to introduce the theoretical landscape to which this research contributes. The chapter will be looking at the field of behavioural economics and psychology as well as service design, through a theoretical lens. In doing so, it will provide definitions to some of the key concepts and highlight the current changes in understanding of these fields.

The third chapter will introduce the research philosophy in greater detail, go through the research design, and explain the methodology for the study including how the data was collected and analysed. This chapter will aim to bridge previous research knowledge and the implementation of this study, by discussing how it fills the potential research gaps.

The results of the study will be discussed in the fourth chapter. This chapter will begin by stating the overall outcome of the research and go on to describe the gathered data through figures and quotes. Then the data will be analysed, insights drawn from the analysis will be shared and the key findings will be summarized.

The fifth chapter will discuss the findings of the study and outline the recommendations and possible service design interventions that can be implemented by the Finnish insurance industry to minimize choice overload and its negative consequences. Additionally, this chapter will also reflect on possibilities for further research.

And finally, the concluding chapter will evaluate the whole research journey and reflect on the relationship between the questions I set out with and the results I got. The chapter will also elaborate on the connections found between behavioural psychology and service design, and the merits of multidisciplinary research.

The structure of the thesis goes from a general overview to a more detailed explanation. The introduction and theoretical background represent the overall bigger picture. Thereafter, by presenting the research design, I move to a more detailed description of the study and its contexts and results. In the final chapters, I come back to the overall picture by discussing the findings, recommendations and future direction.

1.6. Ethical consideration

The participants of the study have signed consent forms, that were sent to them before the interviews were conducted, wherein they were made aware of their voluntary participation and their right to decline any question they wanted or withdraw from the study at any point without an explanation. Each participant agreed to their conversation being recorded and understood that their responses would be anonymised, to make them unidentifiable in any written material that result from this research. They also granted permission to store the interview recordings under the Data Protection Act (1050/2018) and use the data collected in relevant future research, in an anonymised form.

2. LITERATURE REVIEW

This study deals with three main topics, choice overload and decision-making, service design, and the insurance sector of Finland. Even though these topics have rarely been studied together, significant research has been conducted on them individually. Therefore, this chapter will focus on the existing literature, explore the theoretical landscape, define some of the key concepts relevant to this study and establish the conceptual framework.

2.1. Choice overload

With the advent of industrialisation in society, came an explosion of choices, and for the longest time economists believed that having more options in a choice domain can make our lives better. This seemed obvious because people who didn't care about added options could just ignore them, while people who did care had a higher likelihood of finding a close match to their purchase goals (Baumol & Ide, 1956; Hotelling, 1929). Hence, economists considered the act of adding options to be a "pareto improvement" that makes some people better off, while making nobody worse off. However, recent research in the field of behavioural economics and psychology has repeatedly challenged this notion and concluded that too much choice can lead to suboptimal decision-making for all consumers and can even reduce their satisfaction with the choices they make (Schwartz, 2004). This effect on consumer behaviour is referred to as "choice overload" (Mogilner et al., 2008), "over choice effect" (Gourville & Soman, 2005) or "the problem of too much choice" (Fasolo et al., 2009), having multiple adverse effects, such as lack of motivation to choose or paralysis (Schwartz, 2004), reluctance to continue with a selection (Iyengar et al., 2004), a decrease in satisfaction with the selected option (Chernev, 2003; Iyengar & Lepper, 2000), and an increase in negative emotions like disappointment and regret (Schwartz, 2005).

2.1.1. Benefits of having some choice

Choice is not inherently bad as prior research has shown that consumers prefer and benefit from having some choice. Several studies have found that consumers place a higher value on products when they are offered alongside other options, as opposed to when they are offered only one choice (Bundorf, 2010; Szrek & Baron, 2007; Iyengar & Lepper, 2000). This phenomenon is the subject of Daniel Mochon's research on "single-option aversion" which documents the increase in consumers' desire to search for comparisons when faced with a take-

it-or-leave-it option (Mochon, 2013). This can be better understood with the help of case studies. For example, William-Sonoma weren't able to sell a particular breadmaker model priced at $279, but when they introduced a more expensive model priced at $429, the sales of the cheaper model doubled. In this case the expensive breadmaker acted as a decoy, increasing the value of the cheaper model in consumers' minds. Mochon conducted a similar experiment as part of his research, where he offered DVD players to a group of participants. 9% of them agreed to buy a Sony model when it was the only option. When paired with a Philips model, the number went up to 32%. The mere presence of options quadrupled willingness to buy, and he went on to replicate the finding with TVs and donations (Mochon, 2013).

According to Mochon, having options can heighten distinctions and make consumers more certain of their final choice. Similarly, studies have found that consumers' satisfaction with their health plan selection increased with the expansion of their choice set, as people were less anxious and felt they made an informed decision when choosing among a larger choice set, particularly compared to having no choice (Gawande et al., 1998; Schone & Cooper, 2001). In another study, consumers presented with the same hypothetical insurance policy were willing to pay more for the policy when it was one of two options rather than when it was offered as a single option (Szrek & Baron, 2007).

Even Barry Schwartz accepts that choice overload has some possible limits, like how more options seem to be beneficial for experienced consumers, or how the organization of options into categories can largely mitigate choice overload (Schwartz, 2014). Being able to choose undoubtedly has some important positive effects on consumers. But Schwartz argues that it's only up to a point, as the marginal benefits from each additional alternative tend to decrease with the increase in the number of available options (Chernev & Hamilton, 2009; Oppewal & Koelemeijer, 2005; Schwartz, 2004).

2.1.2. Choices, unhappiness and opportunity cost

Although choices are introduced with the intention of improving the well-being of consumers, a point is reached beyond which increased choice brings dissatisfaction and misery rather than increased opportunity, and according to Schwartz society has long since passed that point (Schwartz, 2004). This argument is also supported by social scientists who found that increased choice and increased affluence have been accompanied by decreased well-being in the United States and most other affluent societies, to the extent that as the GDP has doubled

in the last 30 years, the proportion of the population describing itself as ‘very happy’ declined by almost 5% or by some 14 million people (Lane, 2000; Myers, 2001).

While decreased well-being cannot be attributed to a single factor, many findings indicate that the recent explosion of choice has played a crucial role. This happens because in any choice domain, the quality of a given option cannot be assessed in isolation from its alternatives, and therefore the ‘cost’ of making a selection is losing the opportunities that the other options could have afforded (Schwartz, 2004). Schwartz called this “opportunity cost” and realized when consumers are made to consider lots of alternatives, it is easier for them to imagine how the attractive features of alternatives they reject could satisfy them more than the alternative they choose. Since opportunity costs reduce the overall desirability of the most preferred choice, an increase in the number of alternatives will lead to a deeper sense of loss and consumers will derive lesser satisfaction from their ultimate decision (Schwartz, 2004).

The effect of opportunity cost was demonstrated in an experiment wherein participants were asked to put a monetary value on subscriptions to magazines or flights from San Francisco to attractive locations. Some of them attached prices to a single magazine subscription or a single destination, while others attached prices to the same magazine or destination when it was part of a group containing three other options. The prices assigned by participants were consistently lower when a given alternative was evaluated as part of a group than when it was evaluated in isolation (Brenner et al., 1999). The main reason behind this behaviour is people’s tendency to compare the different options and identify the opportunity costs. Hence, we can assume that with fewer options under consideration, participants had fewer opportunity costs to subtract, which led to them assigning higher value to the given item.

Any particular option will both benefit and suffer from comparison with others, but as we learn from prospect theory (Kahneman & Tversky, 1979), losses or in this case opportunity costs, have far greater psychological impact compared to gains. Early decision-making research by Daniel Kahneman and Amos Tversky revealed that losses make us hurt more than gains make us feel good (Kahneman & Tversky, 1984), and building on that Schwartz and his collaborators concluded that feelings of well-being initially rise as choice increases but then even out quickly as the good feelings satiate. On the other hand, no choice leads to virtually infinite unhappiness and then negative emotions escalate as one goes from having few choices to many. This proves that at some point, added choice can only decrease happiness (Schwartz, 2004).

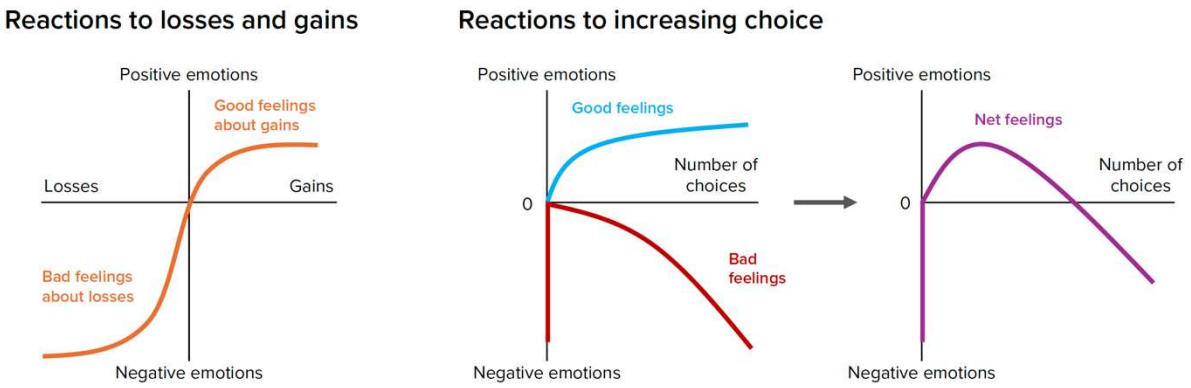

Figure 1. *Feelings evoked by increasing choice*

Note. From "The tyranny of choice" by Schwartz, B., 2004, *Scientific American, 290*(4), 70-75. Copyright 2004 by Scientific American.

2.1.3. Too much choice undermines consumer decision-making

A number of researchers have discovered some tension between consumers' perception of the benefits of choice and their ability to make a choice when faced with too many options. The experiment that initiated this debate involved researchers displaying an array of gourmet jams at a supermarket and enticing shoppers to buy a jar. One group was shown 6 varieties of jam, while another group was presented with 24 options. The larger array was seen to attract more attention from shoppers compared to the smaller one, though in both cases, people taste-tested about the same number of jams. However, when it came to purchasing, 30% of people exposed to the smaller selection purchased a jar, compared to 3% for the larger set. Not only did the smaller array lead to ten times more sales, the people who purchased jam from it also reported being happier with their selection (Iyengar & Lepper, 2000).

A similar study on 401(k) retirement plans in the United States, analysing data from nearly 800,000 employee records showed that the employee participation rate fell when 401(k) plans offered more funds. In fact, with every 10 additional funds, participation reduced by up to 2% (Iyengar et al., 2004). The researchers controlled for other factors such as the amount of employer match, employee wages and so on, but still the retirement plans offering fewer than 10 fund options had much higher participation from employees.

Furthermore, in an interview with PBS News, Barry Schwartz shared two case studies on how companies in very different industries undertook choice reduction in their offerings as a way

to cut down on costs. The first, a large retailer of office supplies reduced the number of options offered in their print catalogue across product categories, in order to save money on production and shipping. Assuming such a change would diminish their sales, they hoped that the savings from manufacturing and distribution would outpace sales losses. However, contrary to their own belief, the company saw the sales increase in almost every category where options had been reduced (Schwartz, 2014).

The second, a very large home builder, with semi-autonomous branches in many different parts of the U.S., reduced the number of fittings and modification options available to home buyers as they went about customizing the house they had purchased. The company had several design centres where consultants would advise home buyers on how they should customize their homes and present them a plethora of options for kitchen counters, floor tiles, ovens, bathtubs, carpets and so on. Naturally, this process was time consuming as consultants had to spend around 20 hours with each home buyer, outfitting their house. But with the company's decision of dramatically reducing options in many of these categories as a cost-cutting measure, the time spent on each customer was reduced to 4 hours, and the streamlining also led to more upgrades, less regret and higher customer satisfaction (Schwartz, 2014).

2.1.4. Cognitive costs

Multiple studies have concluded that after a certain point, more options increase stress for consumers, making it harder for them to reach a decision (Chernev, 2003; Iyengar et al., 2004; Iyengar & Lepper, 2000; McWilliams et al., 2011; Wood et al., 2011). The reason is that people have cognitive limits on how much information they can absorb and analyse at a time, and when the amount of information exceeds a person's capacity to assess it, the cognitive costs impair their decision-making abilities (Lowenstein, 1999).

Cognitive costs can be divided into three broad categories, namely time, error and psychic costs. On average, people require more time to make a decision when faced with too many choices, and a larger, more complex choice set also increases the likelihood of errors in the decision-making process. The psychic costs entail the emotional effort that people expend in deliberating over a large choice set and reaching a decision (Quincy & Silas, 2012).

Researchers have also observed how some external factors might increase cognitive costs. For instance, when choices involve high-stakes decisions related to health, money, livelihood and so on, the stress of decision-making is amplified which can further impair the cognitive abilities

of consumers (Abaluck & Gruber, 2011; Botti & Iyengar, 2006; Bundorf, 2010). Based on this finding we can conclude that the cognitive and emotional / psychic costs of insurance choices are particularly high, because decisions regarding insurance coverage are complicated and carry important implications for a person's financial security (Bundorf, 2010).

Age can also affect cognitive costs, as younger adults seem to perform better than older adults when confronted with a large choice set (Hanoch et al., 2009; Hibbard et al., 2001; Wood et al., 2011). This is because cognitive ability deteriorates with age including a specific ability called numeracy, which determines a person's aptitude to reason with numbers and plays an important role in choosing among numerous options (Tanius et al., 2009; Wood et al., 2011). Subsequently, a study found that even when numeracy skills are high, large choice sets can undermine decision-making. When three groups of young, highly educated medical students and internal medicine residents in the U.S. were given a number of Medicare health plans to evaluate, the group that had to consider 3 options found it easier to identify the best plan, whereas the groups comparing 10 or 20 options were significantly less likely to find the most beneficial plan (Hanoch et al., 2010).

Over the years, researchers have realized how an abundance of choice can lead to a variety of undesirable outcomes. Since a large choice set comes with higher cognitive costs that hamper the consumer's ability to identify the best option, consumers might often: (1) defer or avoid making a decision (Dhar, 1997; Iyengar et al., 2004; Tversky & Shafir, 1992), (2) delegate their choices to others (Hibbard et al., 2001), (3) experience a sense of regret or dissatisfaction with their selection (Chernev, 2003; Iyengar & Lepper, 2000; Schwartz et al., 2002), or (4) be less confident in the choices they make (Botti & Iyengar, 2004; Schwartz et al., 2002).

2.1.5. How behavioural tendencies affect decision-making

In any given choice domain, researchers have observed that consumers fall under two broad categories, maximizers and satisficers. These categories were derived from Herbert A. Simon's research where he introduced the distinction between 'maximizing' and 'satisficing' as choice-making strategies (Simon, 1955, 1956). Individuals who seek out the most optimal option in any given situation are referred to as maximizers, while those that aim to make a 'good enough' choice that fulfils their desired criteria and stop searching once they find an acceptable option are satisficers. This means that maximizers are much more likely to engage in an exhaustive search of all available options, compared to their satisficing counterparts.

According to Simon the limited information processing capacities of humans make maximizing very difficult, and this still holds true in our modern world of unfathomable choice (Iyengar & Lepper, 2000; Schwartz, 2004).

Building on Simon's theories, Schwartz and his colleagues compared the decision-making process of the two groups regarding recent purchasing decisions and found that even though individuals exhibiting maximizing tendencies invested more time and effort during the decision process, exploring more options than satisficers, they were less likely to be satisfied with the outcome of their decision (Schwartz et al., 2002). The study went on to demonstrate how maximizing tendencies are positively correlated with regret and depression, and negatively correlation with happiness, optimism and life satisfaction.

This difference in the subjective choice-making experience can be attributed to maximizers' obsession with choice optimization, unnecessarily complicating the process for themselves. Maximizers often have the urge to examine the maximum number of options because it allows for greater possibilities of finding the elusive 'best' option, but as the choice set expands, the natural cognitive limitations prevent individuals from comparing and evaluating all the options available to them (Iyengar & Jiang, 2003; Miller, 1956). Due to this reason, maximizers are compelled to rely on external or social rather than internal standards to identify the best outcome (Lyubomirsky & Ross, 1997), making them more likely to compare their decisions with those of other people. Later studies also found that maximization tendencies decrease with age (Kliger & Schwartz, 2005), and that maximizers incur far greater opportunity costs than satisficers, in turn experiencing deeper regret (Schwartz, 2004).

Ironically, the worry about future regret pushes most people to become maximizers in the first place, as they feel that making the best possible choice is the only way they can avoid regretting their decision later. The two most notable factors affecting regret are how much personal responsibility one feels for the decision outcome, and how easy it is for them to imagine a better alternative i.e., opportunity cost (Schwartz, 2004). Since maximizers are exposed to more options than satisficers, the moment they face any inconvenience with their chosen option, they think that making a different choice could have helped them feel better. This imagined alternative induces maximizers to regret the decision they made, which ultimately subtracts from the satisfaction they derive from its outcome (Schwartz, 2005).

A few years back some researchers wanted to understand if the same tendencies that render maximizers less content than satisficers with their decision outcomes also enable them to make objectively better decisions. They needed to test the utility of strategies adopted by maximizers like expanding their choice set or analysing the choice-making patterns of others, and for that purpose they went on to observe the job search processes of graduating college students. The team of researchers followed the students for an entire semester of their final year to see how the experiences of students with maximizing tendencies differed from those of satisficers both during the decision-making process and while evaluating their results (Iyengar et al., 2006). The study found that participants with a maximizing orientation anticipated applying for more jobs, relied more on external influences, fantasized about jobs they were not pursuing and reported a desire to consider even more options. At the end of the study period the same participants were able to secure a 20% higher average salary than those with satisficing tendencies but still reported lesser satisfaction with their accepted job offers. This showed that compared with satisficers, maximizers performed better but felt worse.

The researchers concluded that maximizers' pursuit of making the so called 'best' choice convinces them to consider a large number of possibilities, thereby increasing their potential for regret, engendering unrealistically high expectations, and creating mounting opportunity costs (Iyengar et al., 2006). Therefore, no matter how well they perform, maximizers are not as happy as satisficers because they fail to match their own expectations. Moreover, people with high maximizing tendencies often overestimate the benefits of pursuing the best objective outcome, while underestimating the cognitive costs associated with evaluating several options. This study was important as it shed light on the conflict between the subjective well-being of the decision maker and the objective value of the decision outcome, presenting readers with the question of which one should be prioritised (Iyengar et al., 2006).

2.1.6. Antecedents and consequences of choice overload

The term 'choice overload' refers to a scenario where the complexity of the decision problem faced by an individual exceeds their cognitive resources (Simon, 1955; Toffler, 1970). There are multiple factors that can be held responsible for causing choice overload, but the most important one is the availability of too many decision alternatives (Iyengar & Lepper, 2000), also referred to as choice set or assortment (Chernev et al., 2015). Since choice overload is an intangible concept used to explain the subjective state of the decision maker, it cannot be directly observed, and therefore, many researchers have relied on measuring the consequences

of choice overload that generally indicate its occurrence. Over the years, studies have identified seven indicators that either describe the mental state of the decision maker or reflect their observable behaviour (Chernev et al., 2015). Individuals experiencing choice overload are: (1) less likely to be satisfied with their choice (Botti & Iyengar, 2004), (2) prone to high levels of post-decision regret (Inbar et al., 2011), (3) less confident of having chosen the best option (Haynes, 2009), (4) more likely to defer making a choice (Iyengar & Lepper, 2000), (5) more likely to reverse their initial choice (Chernev, 2003), (6) less likely to display a preference for larger assortments (Chernev, 2006), and (7) more likely to choose an option they can easily justify (Sela et al., 2009).

Apart from the consequences, prior research has also established four key factors that can moderate the impact of assortment size on choice overload. Chernev and his collaborators classified these into extrinsic factors made up of 'decision task difficulty' and 'choice set complexity' that define a decision problem and are similar for everyone, and intrinsic factors comprising 'preference uncertainty' and 'decision goal' that reveal a person's knowledge and motivation and are particular to each decision maker (Chernev et al., 2015).

The difficulty of the decision task is described using the general structural characteristics of the decision problem like number of available options, how they are presented, decision accountability, time constraints, and number of attributes under consideration. For instance, limiting the evaluation period can increase the cognitive costs faced by consumers in making a choice, forcing them to conduct a less systematic evaluation of the alternatives (Bettman et al., 1998), and the feeling of being rushed can lead to a greater sense of regret when choosing from larger assortments (Inbar et al., 2011). Similarly, the choice-making process becomes more complicated if the options can be differentiated based on several dimensions or attributes, as the consumer needs to process additional information and put in extra effort in comparing the options before choosing one (Greifeneder et al., 2010; Hoch et al., 1999). Researchers also observed that consumers prefer larger assortments when they have to justify their choice of an assortment to others and prefer a smaller assortment when they are held accountable for their chosen option (Chernev, 2006; Ratner & Kahn, 2002; Scheibehenne et al., 2009). However, arranging the options of a given assortment in a particular order can reduce search costs, in turn decreasing the difficulty of making a choice (Diehl, 2005; Mogilner et al., 2008). Therefore, higher levels of decision task difficulty, operationalized in terms of the aforementioned factors will lead to greater choice overload (Chernev et al., 2015).

The complexity of the choice set is based on the aspects of the decision task that influence the values of the options within an assortment, without altering the structural characteristics of the decision problem (Payne et al., 1993). These factors include the presence of a dominant option, the alignability and complementarity of the alternatives, and their overall attractiveness. The existence of an option that is superior to all others in a choice set can significantly decrease choice overload and increase the probability of purchase, as studies have shown that consumers are more likely to buy from an assortment when it contains a dominant option than when such an option is absent (Boatwright & Nunes, 2001; Broniarczyk et al., 1998; Chernev, 2006; Oppewal & Koelemeijer, 2005). Similarly, adding an inferior option to a choice set that emphasizes the dominance of another option can increase the likelihood of purchase (Dhar, 1997). Furthermore, researchers have observed that larger assortments work if the options within it are differentiated by alignable attributes, whereas assortments containing options with non-alignable attributes tend to be less appealing (Gourville & Soman, 2005). The extent to which the features of options in a choice set complement one another in fulfilling a particular consumer need also affects choice overload. Having too many alternatives differentiated by complementary features can lower the attractiveness of all options in an assortment, in turn leading to greater choice deferral (Chernev, 2005). Therefore, higher levels of choice set complexity, which is a function of the aforementioned factors will lead to greater choice overload (Chernev et al., 2015).

Preference uncertainty refers to the degree to which consumers have clear preferences regarding the decision problem, which depends on their product-specific expertise and the availability of an 'articulated ideal point' (Chernev, 2003). Compared to expert consumers, those who are unfamiliar with the product category not only face more difficulty in choosing from a larger assortment but are also more likely to experience choice deferral and weaker preference for their chosen option. In contrast, expert consumers are likely to face the same issues when choosing from a smaller assortment (Mogilner et al., 2008; Morrin et al., 2012). Besides product expertise and knowledge, consumers benefit from the availability of an ideal point which involves possessing a hierarchical attribute structure and already articulated attribute trade-offs (Carpenter & Nakamoto, 1989; Dhar, 1997; Wansink et al., 1998). It has been observed that preferences based on an ideal point can reduce the structural complexity of the decision task, and since large assortments are usually associated with more complex choices, the differential impact of ideal point articulation is more evident for larger than for

smaller assortments (Chernev, 2003). Therefore, higher levels of preference uncertainty will result in greater choice overload (Chernev et al., 2015).

The decision goal reflects the extent to which consumers seek to minimize the cognitive effort of choosing among the options in a given assortment (Chernev & Hamilton, 2009). In certain situations, consumers might approach a choice set not with the explicit intent of making a purchase but with the purpose of deriving knowledge or pleasure from evaluating the alternatives (Kahn & Ratner, 2005; Kahn & Wansink, 2004), and consumers with a goal of browsing are less likely to experience choice overload when faced with larger assortments (Chernev & Hamilton, 2009; Choi & Fishbach, 2011; Hamilton & Chernev, 2010). Even in situations where consumers approach assortments with the goal of making a decision, they might focus on choosing among the assortments rather than choosing among the available options (Arentze et al., 2005; Kahn & Lehmann, 1991), and in such cases, people tend to benefit from variety in the form of more extensive assortments. In contrast, consumers trying to select a particular option from the given assortments experience greater cognitive costs, which strengthens their preference for smaller assortments (Chernev, 2006; Huffman & Kahn, 1998). Lastly, how consumers conceptualize the decision process can also affect their perception of choice overload. According to the construal-level theory (Trope & Liberman, 2010), individuals who perceive their decision as a high-level, abstract and distant process are less aware of its difficulty and generally prefer larger assortments, compared to those viewing it as a low-level, concrete and proximate process (Goodman & Malkoc, 2012). Therefore, when consumers aim to minimize the strain involved in making a choice, they will encounter greater choice overload (Chernev et al., 2015).

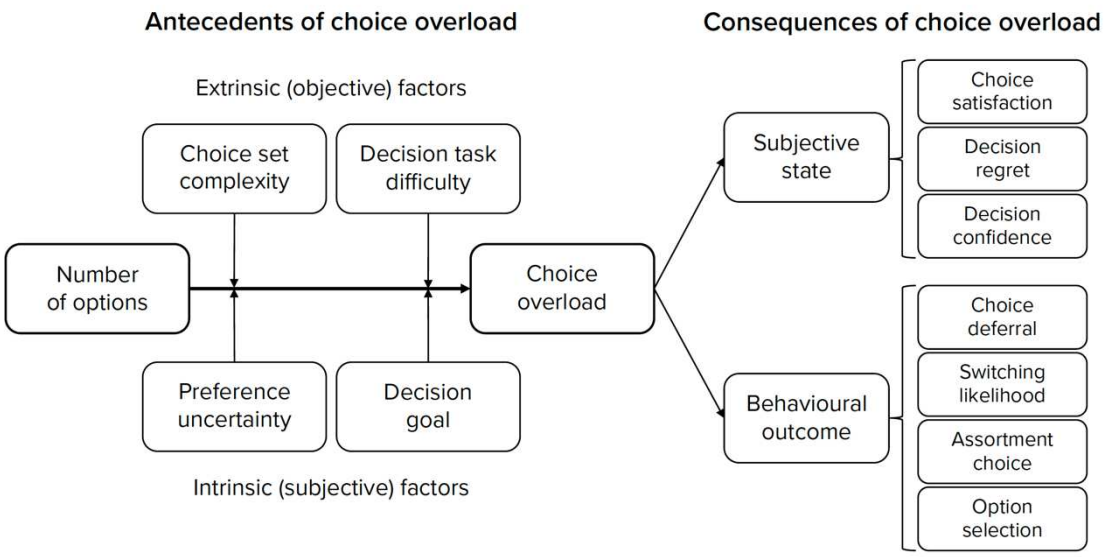

Figure 2. *Conceptual model of the impact of assortment size on choice overload*

Note. From "Choice overload: A conceptual review and meta-analysis" by Chernev, A., Böckenholt, U., & Goodman, J., 2015, *Journal of Consumer Psychology 25*(2) 333–358. Copyright 2015 by Journal of Consumer Psychology.

2.2. Service design

Service design (SD) has recently emerged as a dynamic and interdisciplinary field that merges insights from design thinking, service marketing, operations management, and human-computer interaction. At its core, it is a human-centered, iterative approach for developing service systems that are not only efficient but also engaging and worthwhile for end users. This methodology incorporates empathy-driven research, co-creative ideation, and visual tools to conceptualize and refine service offerings (Patrício et al., 2018).

Traditional design disciplines have focused on tangible outputs such as products or interfaces, while service design deals with intangible experiences like how services are delivered, how interactions unfold over time, and how those interactions can influence user perception. The role of design in services was initially acknowledged in the 1980s, with the introduction of service blueprinting (Shostack, 1982), which visualized service delivery as a set of interrelated processes. Since then, the field has evolved to include more complex tools and frameworks, such as journey maps, stakeholder maps, and personas, enabling designers to systematically uncover user needs and align them with organizational capabilities (Blomkvist et al., 2010). As SD gained more popularity, researchers highlighted the importance of integrating different organizational functions like marketing, human resources (HR), operations, and technology into the service design process to ensure seamless and holistic solutions (Ostrom et al., 2015).

Despite the growing body of research on this topic, service design still faces definitional ambiguity as the boundaries between service design and service innovation are particularly fluid. While service innovation focuses on introducing novel services or processes, service design is the vehicle that brings these ideas to life through user research, prototyping, and testing. Hence, some practitioners argue for the integration of these two domains to amplify their research and societal impact (Patrício et al., 2018).

2.2.1. How customer experience relates to service design

In recent times, customer experience (CX) has become a strategic priority for many organizations across sectors, and service design serves as the key enabler for shaping and enhancing these experiences. CX refers to the holistic perception customers develop based on their cumulative interactions with a specific service provider. These interactions span various touchpoints and include not only functional components like ease of use and efficiency, but also emotional ones like trust and satisfaction (Teixeira et al., 2012).

To model and improve customer experience, researchers introduced the Customer Experience Modeling (CEM) framework, a tool that supports designers in capturing the diverse, and often implicit factors that shape how customers feel throughout their service journey (Teixeira et al., 2012). According to service dominant logic (Vargo & Lusch, 2004), customer experience cannot be designed and must be co-created through interactions between customers and the various service touchpoints. To facilitate a particular experiential outcome, service designers need to carefully put together a set of signals or elements at each point of the customer journey (Berry et al., 2002). These elements constitute the setting for the experience, and along with service activities, they are the basic things designers put in place to encourage a specific kind of experience (Zomerdijk & Voss, 2009). The context includes the elements present at each interaction, while activities enact the experiential process.

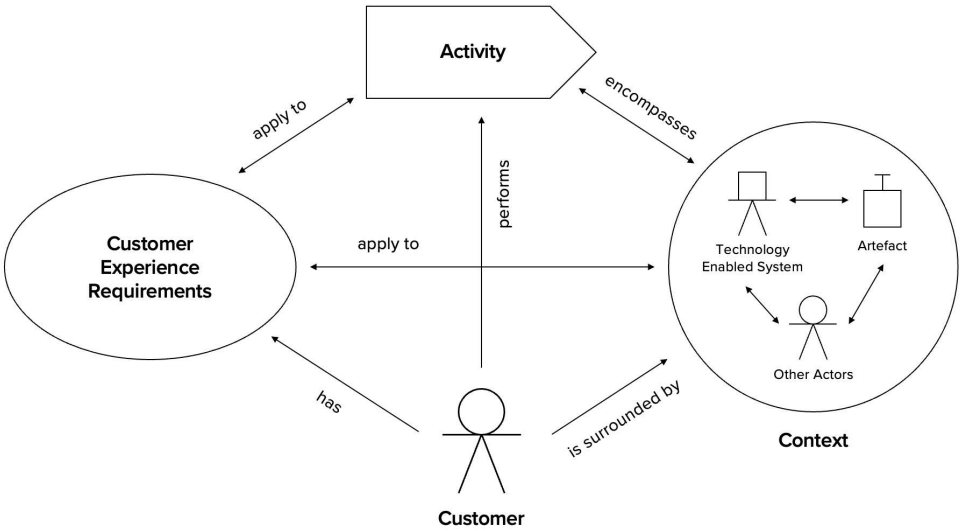

Figure 3. *Customer experience modeling (CEM) framework*

Note. From "Customer experience modeling: from customer experience to service design" by Teixeira, J., Patrício, L., Nunes, N. J., Nóbrega, L., Fisk, R. P., & Constantine, L., 2012, *Journal of Service Management 23*(3) 362–376. Copyright 2012 by Journal of Service Management.

When CEM was applied as part of a service design project at a large Portuguese multimedia company offering cable TV, high-speed internet, phone connections, and video on-demand channels, it helped an interdisciplinary team of designers, software engineers and business analysts to identify pain points and design interventions that improved user satisfaction and retention (Teixeira et al., 2012). The strength of CEM lies in its ability to transition from user research to actionable design solutions, integrating perspectives from systems engineering, interaction design, and service marketing.

In parallel, the Multilevel Service Design (MSD) framework offers a complementary structure by examining services at three hierarchical levels: (1) service concept, (2) service system, and (3) service encounter (Patrício et al., 2011). For example, designing an insurance portal involves considerations at all levels, from the abstract value proposition of simplifying insurance to the interface design of plan comparison tools. MSD thus provides a layered understanding of how different design elements can influence the user experience. Both these frameworks illustrate how service design shifts the focus from isolated touchpoints to orchestrated experiences and goes beyond simply improving usability at individual stages by considering how each interaction contributes to the broader customer journey.

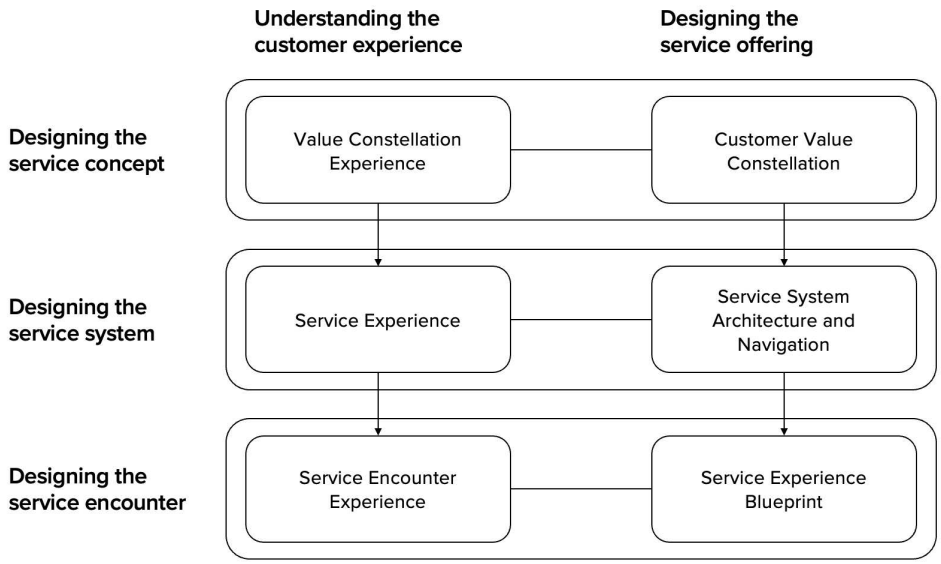

Figure 4. *Multilevel service design (MSD) framework*

Note. From "Multilevel service design: From customer value constellation to service experience blueprinting" by Patrício, L., Fisk, R. P., Falcão e Cunha, J., & Constantine, L., 2011, *Journal of Service Research 14*(2) 180–200. Copyright 2011 by Journal of Service Research.

2.2.2. Designing for choice

In high-stakes service environments, such as insurance or healthcare, consumers are often overwhelmed by the sheer volume and complexity of the available options. This phenomenon called choice overload has been shown to impair decision-making, leading to indecision, regret, and dissatisfaction. Service design offers an opportunity to reframe choice environments in ways that reduce cognitive friction and enhance user agency (Leon & Choi, 2020), as evidenced in multiple case studies.

For instance, when a large European railroad company automatically added seat reservations by default with ticket purchases on their website, requiring users to opt out rather than opt in, it increased uptake of seat reservations from 9% to 47%, generating an additional $40 million in annual revenue (Goldstein et al., 2008). This demonstrated how default options, a concept drawn from behavioural economics can simplify decisions while aligning user behaviour with desired outcomes. Another relevant case involves AT&T's initial iPhone billing setup, where users received itemized bills up to 300 pages long, that eventually triggered public backlash. The company responded by simplifying billing to brief summary statements, a shift in design that eliminated unnecessary information and reduced operational expenses, in turn enhancing overall user satisfaction (Goldstein et al., 2008).

These examples underscore the importance of ‘choice architecture’, a principle that involves structuring the presentation and sequence of options to facilitate better decisions. Service design, through tools such as decision trees, progressive disclosure, and guided walkthroughs, operationalizes this principle in ways that respect user autonomy while reducing decision fatigue. Moreover, design aesthetics can influence perceived complexity, as researchers found that products rated high on attributes like simplicity and modernity were easier for users to evaluate and more likely to be selected (Blijlevens et al., 2009). Following the same logic, visual hierarchies, colour-coding, and iconography can guide user attention and reduce the perceived difficulty of comparing plans on insurance portals.

2.2.3. Alleviating cognitive burdens through service design

Cognitive load is a significant barrier to effective decision-making, particularly in services with complex information or intangible features, and service design strategies aim to reduce this burden by optimizing both informational content and its delivery format. Nowadays service design is not limited to dealing with problems when they arise, as practitioners often

advocate for the creation of ‘supportive service environments’ that pre-emptively address user confusion and uncertainty (Ostrom et al., 2015). Designers try to minimize cognitive effort through ‘touchpoint orchestration’ or arranging service interactions in a logical, intuitive flow (Teixeira et al., 2012) and use tools like service blueprints or journey maps that help them identify friction points and restructure services accordingly (Shostack, 1982). For instance, a blueprint might reveal that users abandon the insurance application process at the comparison stage, prompting designers to simplify filters and highlight key plan differences.

Technology further amplifies service design’s potential to reduce decision fatigue like how recommender systems, chatbots, and interactive FAQs tailor information to user profiles, minimizing unnecessary input and search effort. Recent studies also suggest that digital tools, when grounded in empathic research, can personalize services while maintaining a sense of control and transparency for users (Patrício et al., 2018).

2.2.4. Strategic implications for insurance and other credence-based services

Insurance is a prime example of a credence-based service, which is an offering where quality and utility cannot be fully assessed even after purchase. In such contexts, trust, perceived fairness, and ease of understanding become critical for user satisfaction, as shown by researchers who found that excessive choice in health insurance led to reduced satisfaction and weaker word-of-mouth, particularly when provider interactions were not perceived as supportive (Leon & Choi, 2020).

Service design can address these issues by utilising three main strategies: (1) simplification, (2) personalization, and (3) co-creation. Simplification includes presenting fewer and clearer options, personalization involves tailoring recommendations based on user data, while co-creation ensures that users have an input in designing the solutions they will ultimately use. Few years back some researchers conducted experiments comparing design outcomes from different team compositions and found that co-design teams including users generated more innovative and need-appropriate concepts than those developed by professionals alone (Trischler et al., 2018). In broader ecosystem contexts, service design has the potential to facilitate alignment across actors, and for that reason a public-private partnership working on food waste reduction employed SD to coordinate logistics, stakeholder roles, and user engagement. The result was a scalable intervention that reduced waste and improved food security (Baron et al., 2018). Similar approaches could be adopted in insurance, where

providers, regulators, technology platforms, and advocacy groups must collaborate to simplify the policy selection landscape for consumers.

Moreover, contemporary designers advocate for 'upframing' service design and elevating its role from isolated interventions to systemic transformation (Patrício et al., 2018), which can end up impacting multiple industries. In the Finnish insurance sector, this could entail designing national comparison tools, unified terminology standards, or AI-based advisors, all grounded in behavioural insights and service design principles.

2.3. Choice in the insurance sector

Like in any other product category, insurance providers and policy designers need to acknowledge the established constraints on consumer decision-making and not be persuaded by the common misconception that a greater number of choices invariably yields superior outcomes. In a study examining selection patterns of health insurance products, researchers concluded that the financial and medical ramifications involved in such decisions can amplify the difficulties resulting from an abundance of choice (Hanoch et al., 2010). It has been observed that when consumers are faced with a large choice set and high cognitive costs, they often resort to cognitive shortcuts like brand loyalty or reliance on public opinion (Quincy & Silas, 2012), and this holds true for people purchasing insurance policies as well.

2.3.1. Limiting number of options

Even though multiple studies have argued that minimizing the number of available alternatives can benefit consumers choosing an insurance product (Abaluck & Gruber, 2011; Hanoch et al., 2009; Iyengar & Agrawal, 2010; McWilliams et al., 2011), and provided data on how too much choice can hinder decision-making, very few studies have tried to propose what the 'right' number of options should be. It is hard to determine a specific number as it may vary depending on how complex the decision task is, and the amount of effort required to compare the options (Loewenstein, 1999). However, consumers have not been able to select the best possible insurance plan for themselves when presented with more than 15 alternatives, which has led researchers to believe that the ideal number must be below fifteen (Quincy & Silas, 2012). Among the various types of insurances out there, existing research has majorly focused on choices related to health insurance products, and so it naturally makes up a large part of the available statistics.

During feedback sessions, citizens of Massachusetts reported feeling overwhelmed by the number of plans offered in the state's health insurance exchange. When the authorities took notice of this issue, they tried standardizing the benefit packages and reducing the number of listed plans from 36 to 9, which in turn enabled consumers to easily compare the different options and boosted their overall satisfaction (Day & Nadash, 2012).

Another study dealing with consumer satisfaction and Medicare part D plan choices found that satisfaction with the selected plan increased as the choice set grew from 2 to 16 and decreased thereafter. Although not conclusive, the data indicates that satisfaction was the highest when consumers were given 10 options (Bundorf & Szrek, 2010). A similar study showed that participants performed better when choosing from 6 Medicare part D plans than when they were faced with 24 offerings (Tanius et al., 2009). In a different study, researchers saw the highest enrolment in Medicare Advantage program when participants were offered 15 or fewer plans to choose from. As the number of available plans rose from 15 to 30, enrolment remained the same and beyond thirty options, a drop in enrolment was observed (McWilliams et al., 2011). These studies demonstrate that a larger choice set not only impacts the satisfaction of consumers but can also cause choice paralysis.

2.3.2. Helping consumers manage a large choice set

In certain situations, it may not be feasible or practical to limit the number of available alternatives, and in those cases the insurance provider can try to reduce the cognitive strain experienced by consumers in analysing each plan (Abaluck & Gruber, 2011; Bundorf, 2010; Iyengar & Agrawal, 2010; Kling et al., 2012; McWilliams et al., 2011). The insurer can help consumers manage a large set of choices and reach a decision by: (1) standardizing options (Day & Nadash, 2012; Hanoch et al., 2009), (2) offering screening tools and other decision aids (Botti & Iyengar, 2006; Hibbard et al., 2007; Iyengar & Agrawal, 2010), (3) providing educational materials (Hibbard et al., 2001; McWilliams et al., 2011), (4) presenting specific personalized information (Kling et al., 2012), or (5) recommending a trusted resource that can filter the options based on the consumer's needs (Abaluck & Gruber, 2011).

As part of an experiment to prove that external interventions can lead to more informed insurance choices and impact consumers' plan switching behaviour, researchers provided a letter with personalized cost information to some participants in a group of Medicare Part D beneficiaries, while the others received no such letter. By the end of the study period,

participants who received the letter switched plans 28% of the time, as opposed to only 17% for those who had to rely on their own action to get the same information off the internet (Kling et al., 2012), and the approximate savings from switching reduced the costs to consumers by almost $100 per year. Guided by similar consumer research, many insurance selection portals and comparison websites now provide the 'total estimated costs' for each plan, effectively performing the necessary calculations for the consumer, thereby helping them identify the optimal plan that meets their individual needs (Krughoff et al., 2012).

2.3.3. Consumer preferences and trade-offs in insurance choice

As insurance products become more complex and personalized, consumers need to evaluate trade-offs among coverage, premiums, deductibles, access and provider networks (Determann et al., 2016; Ulbinaitė et al., 2014). Unlike many retail decisions where immediate benefits are clear, insurance products are largely intangible, with their value surfacing only in the event of illness or loss. This makes consumer preference formation highly subjective and susceptible to cognitive biases, as several studies reveal that consumers often struggle to make informed trade-offs due to cognitive overload or lack of domain knowledge (McGarry et al., 2018). Research on Value-Based Insurance Design (VBID) has shown that most consumers would prioritize plans with lower upfront costs over those offering better long-term care at slightly higher premiums, even if their chosen plans imply greater risk or worse health outcomes later (Perez et al., 2019).

Further complicating the situation is the finding that consumers frequently misunderstand policy terms or are influenced by superficial cues, like brand familiarity or plan popularity (Loewenstein et al., 2013). Consumers also tend to avoid engaging with supplementary data provided by insurers, indicating a reluctance to process extensive or technical information (Hibbard & Peters, 2003). These behavioural patterns suggest that buyers may not approach policy selection as a rational economic exercise, instead relying on intuition and low-effort heuristics. Therefore, drawing from contemporary research on decision-making, insurance providers should simplify their communication of trade-offs and potentially design tools that enable individuals to simulate future outcomes based on plan choices.

2.3.4. Empowerment, risk perception and decision confidence

One of the most important psychological factors shaping insurance decisions is the degree of empowerment consumers feel when navigating their options. Some researchers argue

that empowering consumers with comprehensible, trustworthy information can increase their perceived self-efficacy while reducing reliance on gut feeling, and cases of passive deferral (Buehler & Maas, 2018). The same study also demonstrated that perceived control mitigates performance risk anxiety, which refers to fears of one's chosen policy failing to deliver adequate support when needed, and this angst is especially potent in the context of insurance where the consequences of poor decisions are not immediately visible. On top of that, risk perception, particularly fear of financial loss often leads consumers to overestimate worst-case scenarios and select more expensive or redundant coverage (Hanoch & Rice, 2006).

The notion of empowerment is especially relevant in digital environments, where users often face overwhelming amounts of data with little interpretive guidance. Effective digital interfaces can build decision confidence by highlighting key variables, clarifying risk, and demonstrating outcomes visually (Hibbard & Peters, 2003). For example, tools like cost calculators, virtual advisors, or plan visualizations that help consumers understand scenarios under different policy conditions, can enhance users' mental models of risk and facilitate better decisions (Buehler & Maas, 2018). Additionally, involving users in service design processes through customization options or co-creation efforts can significantly increase engagement and decision satisfaction (Prahalad & Ramaswamy, 2004).

In real-world applications, consumer empowerment yielded encouraging results, like how studies regarding the U.S. Medicare Advantage program proved that tailored decision aids, which required users to reflect on personal priorities, led to more confident choices and higher satisfaction (Kling et al., 2012). In Finland, however, the digital transformation of insurers is not fully matched by consumer confidence, as a study found that while Finnish consumers appreciated digital efficiency, they remained cautious about participating in co-creation or sharing sensitive data, citing privacy concerns and unclear benefits (Persson et al., 2019). This gap between technological provision and user engagement calls for more intuitive, transparent design strategies that promote both trust and autonomy.

2.3.5. Insurance in Finland

In Finland, high institutional trust, widespread digital literacy, robust public services, and a strong welfare tradition lay the foundation for a unique insurance market, but despite these favourable conditions, consumers still face several challenges in making confident and informed choices. Researchers have observed that Finnish consumers generally trust insurers

and show openness to digital services, yet simultaneously express limited understanding of how those services impact their decisions or reflect their preferences (Persson et al., 2019). This is particularly relevant now as the Finnish insurance sector undergoes rapid digital transformation, where the risk of alienating users from their own decision-making process becomes real. Further insights into this market come from an economist, who described the early internationalization of Finnish insurance companies as a response to domestic saturation and increasing consumer expectations (Hellman, 1996). While the sector has since evolved, these trends highlight the importance of innovation and responsiveness in consumer-oriented services. Finnish customers expect convenience, clarity, and ethical data practices, making service design a crucial lever for differentiation.

In a comparative study examining the strategic positioning of three major Finnish insurers, LähiTapiola, OP Financial Group, and IF Vahinkovakuutusyhtiö Oyj, the researcher found that while all three companies expanded their service portfolios and incorporated health-related products to meet growing demographic needs, their approaches to service design and consumer engagement differed significantly (Skog, 2018). OP focused on digital customization tools, IF streamlined claims and user interaction processes, and LähiTapiola emphasized its role in long-term care pathways. However, to truly support Finnish consumers, insurers must go beyond specific touchpoints and interface design to create holistic, human-centered ecosystems that consider cultural expectations, decision heuristics, and the psychological costs of complex choices (Skog, 2018). Service design can play a central role in achieving this goal by aligning product structures with user capabilities and reinforcing a sense of control and clarity throughout the decision-making journey.

3. RESEARCH DESIGN

3.1. Research strategy

This study adopts an interpretivist philosophy, grounded in the belief that reality is socially constructed and that human experiences cannot be understood without considering the contextual meanings individuals assign to them (Goulding, 1999). When it comes to Finnish consumers choosing insurance policies, this epistemological stance is especially relevant, as insurance decisions are shaped not merely by rational evaluations but also by emotional, cognitive, and cultural dimensions.

The aim here is not to generalize or predict behaviour using quantitative measures but to interpret the meanings people attach to their decision-making experiences, and how these meanings influence outcomes such as stress, regret, or paralysis. Interpretivism is particularly suitable when exploring lived experiences of consumers in complex service environments, where personal beliefs, emotions, and perceived risks shape not only the outcome but also the process of choice. As several studies point out, this approach allows researchers to access the 'multiple realities' that individuals construct based on their cultural, social, and economic contexts (Darby et al., 2019; Szmigin & Foxall, 2000). In the case of insurance, which is typically considered a low-engagement and credence-based service, understanding how consumers overcome cognitive and emotional barriers is necessary for designers to create better support mechanisms (Buehler & Maas, 2018).

3.1.1. Qualitative approach

Aligned with its philosophical foundation, this study employs a qualitative method, which is appropriate for situations where behavioural and psychological dynamics cannot be reduced to discrete variables but are instead best understood as evolving experiences (Pulla & Carter, 2018). Besides that, service design, as a context-rich and often co-creative process, benefits from qualitative inquiry that captures the nuanced interplay between users and systems. The nature of the topic, choice overload in low-engagement service environments, demands a methodology that enables depth rather than breadth. Unlike high-frequency retail decisions, insurance choices are infrequent, emotionally charged, and often accompanied by limited feedback loops, and for these reasons, semi-structured interviews were selected to generate detailed descriptions of individual experiences, while also allowing for organic

exploration of unanticipated themes. As many researchers have argued, much of the discontent caused by choice overload lies not in the objective properties of the choices available, but in the subjective emotional reactions they provoke (Chernev et al., 2015; Iyengar et al., 2004; Iyengar & Lepper, 2000; Schwartz, 2004), and qualitative techniques are therefore essential for uncovering these reactions and understanding their implications.

3.1.2. Purpose of the research

This research is inherently exploratory. Rather than testing a hypothesis, the goal is to investigate how and why Finnish consumers experience psychological burdens when selecting insurance plans, and ways in which service design could potentially alleviate those burdens. Given the current state of literature, this study tries to fill a few crucial gaps.

While choice overload has been documented across various domains (Berger et al., 2007; Chernev, 2003; Huberman et al., 2007; Iyengar & Lepper, 2000; Ketcham et al., 2012), few studies examine how its negative consequences like decision fatigue or post-decision regret can be proactively mitigated. Even fewer studies have explored interventions grounded in service design, a field that has largely focused on usability and user satisfaction (Stickdorn et al., 2018; Teixeira et al., 2012) but not on cognitive or emotional stress (Ostrom et al., 2015; Polaine et al., 2013). Moreover, as discussed before, most of the existing literature draws on consumer behaviour in high-engagement domains or in non-Nordic contexts, making it less applicable to the specificities of Finland's unique insurance ecosystem.

The chosen strategy allows for the integration of diverse participant voices, including those of consumers and industry professionals, to construct a multi-dimensional understanding of the problem. Consumers are best positioned to speak about their lived experience of navigating insurance choices and dealing with the associated psychological stress, while designers can offer insight into the service strategies, digital tools, and policy frameworks shaping that experience. This dual approach enables a more holistic exploration of the phenomena under study and aligns with service design research that encourages the inclusion of both user and provider perspectives (Trischler et al., 2018).

Finally, this research attempts to bridge theory and practice. While informed by behavioural economics, cognitive psychology, and service design theory, the study is rooted in real user narratives and reflections from professionals within the Finnish insurance sector, a relatively underexplored regional market. This approach not only fills theoretical gaps but also generates

insights with practical implications for designers, insurers, and policymakers aiming to make choice environments more humane, and some of these findings could even apply to comparable markets or sectors dealing with high-stakes decisions.

3.2. Research method

Semi-structured, in-depth interviews were used as the primary data collection method in this study, to uncover how Finnish consumers encounter decision-making challenges when selecting insurance policies, and how service design can make their experience better. This methodology was chosen for its ability to balance structure with flexibility, enabling guided conversations that still allowed for unexpected themes to emerge. Moreover, interviews are especially useful in interpretivist research settings where the focus lies on understanding how individuals interpret and construct meaning within complex service environments.

Interviewees consisted of two types of participants, consumers who had purchased insurance products in Finland and design professionals employed at a prominent Finnish insurance company. This dual perspective was essential for building a comprehensive understanding of the problem from both user and provider sides. While consumers offered first-hand insights into the subjective and psychological difficulties involved in the selection process, designers were able to speak to the underlying logic and constraints of the service structures shaping those experiences. Although preliminary guides were developed before the interviews were conducted, they served more as conversation starters than strict questionnaires. This flexible structure allowed the interviewer to delve deeper into some topics introduced organically by participants, while ensuring consistency across core thematic areas (Rabionet, 2011), such as emotional experience, cognitive burden, comparison challenges, and the usability of existing insurance platforms. According to some researchers, this adaptability is critical in qualitative interviews aiming to elicit rich and reflective data (Bearman, 2019).

The methodological decision to use qualitative interviews was also guided by precedent in behavioural economics and service design research. In studies investigating similar subjects, semi-structured interviews have proven effective in revealing subtle emotional undercurrents and latent user needs, factors that are often overlooked in quantitative studies (Horton et al., 2004). Lastly, the conversational format of interviews mirrors the real-life contexts in which service experiences are constructed, making them particularly appropriate for exploring both internal states and external design influences.

3.3. Research target

The study engaged a total of ten participants, out of which seven were consumers and three were design professionals working within the Finnish insurance sector. This composition was deliberately chosen to enable a more holistic understanding of the problem space from both user and provider perspectives. The participants came from diverse socio-economic and occupational backgrounds, including students, lecturers, entrepreneurs, and mid-senior level professionals. Their ages ranged from early 20s to late 60s, representing a wide generational span in the Finnish adult population, and most of them identified as middle-class or upper middle-class, with the exception of one or two who may be considered affluent. Notably, the educational profile of the sample was relatively high as five out of seven consumers and all three designers held a master's degree. While this may have limited representation of broader demographic segments, it aligns with the study's focus on digital interactions and cognitively demanding choice-making processes, which are more prevalent among educated users. The experts interviewed for this research included one service designer and two user experience (UX) designers working at one of the leading insurance companies in Finland. They brought extensive experience in building and managing customer-facing financial services, and their insights provided a valuable complement to the user-facing challenges described by consumers.

Table 1. *Overview of interview participants and their relevance to the research*

Participant type	n	Who they are	Why they are relevant
Consumers	7	Finnish adults aged 22–67, including students, professionals, lecturers, entrepreneurs; mostly middle-class with relatively high digital literacy and academic qualifications	Represent real-world users of insurance services, offering first-hand insights into decision-making stress, cognitive overload, and unmet service needs
Design Professionals	3	Service designers and UX designers working at a prominent insurance company in Finland	Offer expert perspectives on existing design strategies, internal journey mapping, and systemic design challenges within the Finnish insurance industry

Participants were recruited through purposive sampling, a method that is commonly used in qualitative research to identify people with relevant experience or insight into the research problem (Etikan et al., 2016). Consumer participants were approached through the researcher's personal network, with the primary criterion being lived experience of purchasing insurance

products in Finland. For professional participants, the researcher leveraged an existing industry contact, who facilitated access to suitable individuals within the design team of a reputed insurance company. Though this recruitment strategy carried a risk of selection bias, it was considered appropriate for an exploratory, interpretivist study focused on depth and richness of understanding rather than statistical generalizability.

3.4. Data collection

All interviews for this study were conducted remotely using digital platforms such as Zoom and Google Meet. Each session lasted approximately 35 to 45 minutes, occasionally extending up to an hour depending on the flow of the conversation. English was used as the language of communication and the interviews were recorded with the participants' consent to guarantee fidelity in data capture. The online setting allowed for flexibility in scheduling and made it feasible to include participants from different regions across Finland, without any significant logistical barriers. Before participating, each interviewee was sent an informed consent form outlining the study's purpose, their rights, data protection protocols, and the voluntary nature of their involvement. This consent form also clarified that the interviews would be audio-recorded, and all responses would be anonymised in the final analysis, to ensure participant confidentiality. This approach aligns with the ethical guidelines for social research and adheres to the Finnish Data Protection Act (1050/2018).

The semi-structured format enabled a guided yet open-ended dialogue, allowing participants the freedom to elaborate on topics they found meaningful while also ensuring consistency across key thematic areas. Even though a set of core questions was prepared in advance for both consumer and designer interviews, these guides were used flexibly, as some questions were adapted, omitted, or added spontaneously depending on the person's responses. Such flexibility is generally recognised as a strength in qualitative interviewing, particularly for capturing nuanced insights in experience-based research (Kallio et al., 2016).

3.4.1. Topics explored in the interviews

The interview guide for consumers was designed to trace the full arc of the insurance selection journey, starting from initial intent to post-purchase reflection. Key areas included participants' general approaches to decision-making, emotional and cognitive reactions to the abundance of insurance options, strategies used during information gathering and comparison, and experiences of regret or uncertainty after the decision. For instance, participants were asked

whether they felt overwhelmed by the amount of information available or unsure about how to prioritise between cost and coverage. Post-decision reflections, such as whether participants second-guessed their choice or learned anything that changed their behaviour as consumers, were also explored in depth. A distinct section of the guide was devoted to service design opportunities, wherein participants were invited to reflect on how the overall process could be simplified, what tools would reduce cognitive load, and what principles insurers should uphold to balance customer needs with business objectives.

The interviews with designers focused on service design strategies and institutional responses to consumer decision-making pain points. Questions addressed how the customer journey is mapped internally, where users typically experience confusion or abandon the process, and what tools are currently in place to assist them. Particular attention was paid to identifying any ethical or systemic constraints affecting innovation, and lastly, the professionals were asked to reflect on where they thought service design could add the most value in easing cognitive burden and improving the experience for users.

3.4.2. Data handling

Interview recordings were subsequently transcribed using an AI-powered tool called Riverside, which aligns with EU General Data Protection Regulation (GDPR) requirements, crucial for processing personal data in Finland. The transcripts were then manually reviewed and slightly edited to correct transcription errors and anonymise any identifying details. This process ensured that the data was both reliable and ethically handled, laying the groundwork for thematic exploration and analysis.

4. RESULTS AND FINDINGS

This chapter presents the empirical findings of the study, derived from semi-structured interviews with seven Finnish consumers and three design professionals working within a leading insurance company. The purpose of this chapter is to provide a detailed account of participant experiences, decision-making behaviours, and service perceptions related to the insurance selection process. These findings serve as the foundation for the thematic analysis and synthesis of insights presented in the subsequent sections.

4.1. Data collection results

The interviews revealed a complex landscape of consumer emotions, behaviours, and expectations shaped by the perceived difficulty of navigating insurance options. The responses confirmed that the process of choosing and purchasing an insurance policy in Finland is often marked by uncertainty, limited trust, information overload, and varying degrees of cognitive and emotional stress. Although participants differed in terms of age, educational profile, and professional background, a number of shared patterns emerged.

4.1.1. Interviews with consumers

The participants in this category were at different stages of life, representing a wide range of ages from 22 to 67, and professions including students, engineers, entrepreneurs, and educators. While their insurance needs varied, spanning car, home, travel, pet, and company coverage, their experiences often involved a combination of stress, convenience-seeking, and reliance on informal sources of trust.

Several consumers described insurance as a low-engagement, confusing task, which they approached only when necessary. A 27-year-old student, purchasing car and home insurance after a move to Lapland, remarked that the process was “a bit stressful” and filled with unfamiliar terms. Though she began online, she quickly relied on her parents for guidance, stating: “They've had millions of insurances, so I trusted their opinions.” She admitted to feeling overwhelmed by policy options and fatigued by information overload, confessing: “I probably could have gotten a better insurance plan, but I was just so tired of looking for information and more options.”

Another participant, a 61-year-old lecturer with a background in service design, reflected on the stress of annual policy renewals, particularly because of increasing costs. Despite being familiar with design concepts, she reported a sense of disempowerment in the face of policy complexity: “Small text, unclear coverage terms, self-risk percentage… it’s a lot.” When her dog faced a medical emergency, she felt that the insurer’s communication lacked empathy: “Nobody says, ‘Sorry about your dog.’ It’s all just paperwork.”

Consumers also agreed that they frequently relied on family or friends rather than official platforms or comparison tools. A 41-year-old entrepreneur who has used IF Insurance for a long time said: “98% of my decisions come from intuition, so I trusted my brother’s wife who worked there.” This participant later admitted to abandoning recent attempts to compare new insurance policies for her company: “Too many options… I closed my computer.”

A 22-year-old student, reflecting on her first experience purchasing insurance, described the process as emotionally challenging. They noted: “Even now, I’d feel nervous doing it again. Important decisions stress me out.” While she appreciated having multiple options, she also pointed out the difficulty of understanding technical terms.

Others took a more methodical approach. A 57-year-old engineer, who handles all insurance matters for his family, described himself as a “researcher” who preferred reading policies manually and investigating each company’s history and trustworthiness. He stated: “Spending 30 extra minutes researching saves huge money.” Yet even he encountered frustration with vague policy terms and pressure tactics from sales representatives. When comparing options for his drone insurance, he experienced denial of a claim due to a minor technicality and commented: “Fine print overrides common sense.”

A 67-year-old entrepreneur and investor discussed his approach to revising inherited insurance policies. He emphasized convenience and clarity over loyalty, stating: “Loyal customers get worse deals. I shop around.” He also expressed a preference for insurance companies that proactively provide tailored advice: “No insurer asks, ‘Describe your life.’ They should tailor coverage according to that.”

Across these interviews, there was consistent reference to difficulty comparing policies, lack of clarity, and a desire for simplification. Multiple participants shared that they either gave up on comparison or made decisions based on brand reputation, gut feeling, or what was most

easily accessible. Few had made use of digital comparison tools, and several explicitly stated that they avoided them due to a lack of trust or confusion over terminology.

4.1.2. Interviews with design professionals

The three design professionals interviewed as part of this study, offered insights into how insurance services are conceptualised, designed, and delivered from within the industry. All three designers are employed by a major Finnish insurance provider and have experience in cross-functional collaboration involving product, design, and engineering teams. They confirmed that insurance is perceived as inherently unengaging by most customers, and thus must be made as simple and intuitive as possible. One of them stated: "We aim to be less complex… and communicate things so people understand them." The move from offering wide arrays of unstructured choices to more advisor-based and guided experiences was cited as a key evolution in their approach. They also acknowledged that choice overload and technical jargon were significant friction points in the customer journey, particularly during product comparison and selection. They noted that customers often feel unsure whether they are "correctly insured" and fear discovering coverage gaps only after filing a claim. One designer reflected: "People don't read legal terms, they just want to know what it means for them." To address these challenges, the professionals described some ongoing design interventions, such as: (1) plain-language product pages with progressive disclosure, (2) interactive quizzes and calculators to recommend appropriate coverage, (3) visual comparisons and modular package builders, (4) chatbots for claim reporting and policy questions, and (5) simulators explaining the different claim scenarios.

However, they also highlighted persistent organizational barriers, including legacy IT systems, siloed teams, and a disconnect between product pricing logic and UX best practices. One UX Lead described the internal tension within their company: "Product teams want five tiers, UX teams beg for three. It's a tug-of-war." Legal compliance requirements and the lack of industry-wide standardization further complicates efforts to simplify offerings.

The designers emphasized that while digital tools can reduce cognitive load, they must be paired with human interaction, especially for older users or complex situations. They noted a growing interest in personalized digital journeys but also warned of the ethical risks of nudging too aggressively toward specific outcomes: "We try to avoid manipulation. There's a thin line between helping customers and pushing sales, it's a tightrope."

Table 2. *Summary of observations from participant interviews*

Observation area	Emerging patterns	Supporting quotes
Engagement with Insurance	Insurance decisions are perceived as tedious and approached reactively rather than proactively.	"I only look at insurance when I absolutely have to." – Consumer, 27 "Annual renewals are exhausting." – Consumer, 61
Decision Influences	Participants often relied on informal sources like family, friends, or gut feeling, over formal comparison tools or expert advice.	"I trust my brother's wife more than the website." – Consumer, 41 "My dad helped me get a discount." – Consumer, 27
Emotional Responses	The process triggered emotions like anxiety, regret, fatigue, or confusion, where only few participants felt empowered or confident.	"I cried when a rep called me an idiot." – Consumer, 27 "Even now, I'd feel nervous doing it again." – Consumer, 22
Policy Clarity and Comparison	Legal and technical language caused confusion, and comparing policies across providers was seen as laborious and time-consuming.	"Fine print overrides common sense." – Consumer, 57 "Too many options, I just closed my computer." – Consumer, 41
Preferred Interaction Modes	Younger users preferred online and mobile tools, while older participants showed a preference for human contact or advisory support.	"I need someone to talk to." – Consumer, 41 "Mobile works if it's simple. Otherwise, I get frustrated." – Consumer, 67
Service Design Expectations	There was a strong desire for tools that simplify decision-making, provide tailored suggestions, and explain policies clearly.	"There should be a filter tool where I can check boxes." – Consumer, 61 "Show summaries, not paragraphs of legalities." – Consumer, 22
Industry Design Perspectives	Designers acknowledged user challenges and described efforts to simplify the experience, but noted systemic barriers such as silos and legacy systems.	"It's a tug-of-war between simplicity and product tiers." – Designer, 32 "Legacy systems limit what we can do." – Designer, 49

4.2. Data analysis

To explore how service design can be leveraged to mitigate the negative psychological effects of choice overload in the context of insurance policy selection, a hybrid thematic

analysis was conducted, which allowed for the identification of both deductive (theory-driven) and inductive (data-driven) themes. Thematic analysis is a foundational method in qualitative research used for identifying, analysing, and reporting patterns within data (Braun & Clarke, 2006), and it follows a six-phase framework: (1) familiarization with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) reporting insights. The hybrid approach adopted here aligns with research objectives grounded in existing literature while permitting the emergence of new patterns rooted in participants' lived experiences (Fereday & Muir-Cochrane, 2006).

Deductive codes were initially informed by the literature review and conceptual frameworks discussed previously, especially those related to choice overload, decision fatigue, post-decision regret, and service design strategies for cognitive relief (Bundorf, 2010; Chernev, 2003; Chernev et al., 2015; Patrício et al., 2018; Schwartz, 2004; Teixeira et al., 2012). Simultaneously, inductive codes emerged during the systematic review of interview transcripts and notes, capturing nuanced insights beyond predefined categories.

The analysis was conducted using a manual open-coding process, wherein interview notes and quotations were tagged under relevant codes. These codes were then iteratively grouped into potential themes and refined through constant comparison and reflection. Finally, the codes and emerging themes were validated through triangulation of data between consumers and designers. The following table summarizes the five major themes that emerged from the exercise, including how each of them aligns with the research sub-questions, theoretical constructs, and illustrative data.

Table 3. *Overview of identified themes*

Theme	Description	Linked RQ	Theoretical anchor	Illustrative quote
1. Overwhelm at the Comparison Stage	Consumers experience significant cognitive overload during policy comparison due to complex terminologies and lack of standardization.	RQ1	Choice overload Decision task difficulty (Chernev et al., 2015)	"You have to read through all this jargon and hope you didn't miss anything important."
2. Emotional Load and Future Regret	Fear of making the wrong choice leads to emotional stress and anticipated regret, particularly when support is not available.	RQ1 & RQ2	Post-decision regret (Schwartz, 2004) Risk perception	"Even after choosing, I kept thinking maybe I missed something better."

3. Incomplete Mental Models of Insurance	Consumers lack a clear understanding of policy features and consequences, leading to decision avoidance or reliance on heuristics.	RQ1 & RQ3	Preference uncertainty Cognitive cost (Bundorf, 2010)	"I didn't even know what deductible meant until I asked a friend."
4. The Value of Simplification and Framing	Well-designed defaults, clear visuals, and guided flows significantly reduce consumer stress and encourage confident decision-making.	RQ2	Choice architecture (Goldstein et al., 2008) Progressive disclosure	"When it was just checkmarks and colours, it finally made sense."
5. Designers' Frustrations and Systemic Constraints	Designers understand cognitive challenges but often face institutional inertia or risk-aversion, limiting their ability to implement supportive interventions.	RQ3	Service design constraints Systemic design (Patrício et al., 2018)	"Legal said we couldn't simplify that page because of compliance... but no one reads it anyway."

4.2.1. Overwhelm at the comparison stage

A recurring point of friction across consumer interviews was the comparison stage of the policy selection process. Participants frequently reported feelings of confusion, anxiety, and indecision, especially when confronted with a multitude of options, complex terminology, and subtle differences between the policies. This aligns with established findings on choice overload, which indicate that an excess of similarly attractive options can lead to lower satisfaction and decision avoidance (Iyengar & Lepper, 2000; Schwartz, 2004).

Consumers highlighted difficulties such as interpreting insurance jargon and comparing policy components. Some resorted to choosing a popular provider to avoid analysis paralysis: "They all sound the same… I just picked IF because that's what most people use." Others gave up entirely and delayed their decision. This stage appears to be the most vulnerable to cognitive overload, supporting literature suggesting that decision task difficulty increases significantly when products are not directly comparable (Chernev et al., 2015).

4.2.2. Emotional load and future regret

Several consumers described insurance selection as an emotionally taxing task, driven by the fear of making a poor decision. Anticipated regret, a cognitive bias where individuals

imagine future dissatisfaction with their current choices, came up as a major concern. One participant shared: “Even after choosing, I felt uneasy… maybe there was a better deal out there.” Research in behavioural economics highlights how high-stakes decisions with uncertain outcomes, such as purchasing insurance, often evoke regret avoidance tendencies (Zeelenberg & Pieters, 2007). Emotional stress and fear of future repercussions are exacerbated by the perceived complexity of insurance plans and the absence of personalized guidance.

4.2.3. Incomplete mental models of insurance

Another consequential theme was consumers’ limited understanding of how insurance works. Participants expressed unfamiliarity with important terms like deductibles, exclusions, and coverage limits. The mental models they held were often vague or based on previous poor experiences, hearsay, or informal advice. One participant stated: “I relied on Facebook groups and friends because I couldn’t understand the websites.” Research on preference uncertainty and cognitive limitations (Bundorf, 2010; Simon, 1957) suggests that when users lack internal knowledge structures, they depend heavily on external cues. This was evident in cases where participants trusted branded templates or bundled products without fully understanding what they entailed. Such heuristics simplify decision-making but may result in suboptimal outcomes.

4.2.4. The value of simplification and framing

Contrary to the stress induced by complexity, participants responded positively to well-designed interfaces that employed simplification strategies. Interactive comparison tools, tiered options, and visual summaries were all frequently mentioned as relieving cognitive burden: “Seeing everything side-by-side with icons made it easier to choose.” This finding reinforces principles of choice architecture and progressive disclosure, which argue that structuring choices clearly and deferring detail until needed can greatly ease decision-making (Goldstein et al., 2008; Thaler & Sunstein, 2008). Two out of the three designers interviewed, mentioned efforts to develop guided selling flows, default recommendations, and modular policy designs to aid users in navigating their options without being overwhelmed.

4.2.5. Designers’ frustrations and systemic constraints

The final theme emerged from the interviews with design professionals. While all of them acknowledged the cognitive challenges faced by users, they also pointed to systemic barriers that hindered meaningful change. Compliance requirements, legacy IT systems, and

risk-averse leadership were cited as impediments to simplifying user interfaces or standardizing product terms. One designer lamented: “We proposed a visual comparison matrix, but it was blocked because the marketing team feared it would ‘oversimplify’ complex products.” This illustrates a common tension in applied service design, between user-centric innovation and institutional inertia (Patrício et al., 2018). The professionals who participated in this study, expressed a strong desire to improve decision support for consumers but noted the slow pace of implementation due to interdepartmental misalignment.

4.3. Summary of findings

The thematic analysis presented in the previous section yielded five key themes that collectively provide a comprehensive understanding of how Finnish consumers experience decision-making in the insurance policy selection process, and how service design can intervene to alleviate cognitive and emotional burdens. This section synthesises those findings while critically reflecting on the empirical insights in relation to the theoretical frameworks established in the literature review.

Across the interviews, it became evident that insurance decisions are perceived by consumers as cognitively and emotionally heavy tasks, marked by information complexity, uncertainty, and fear of negative outcomes. These findings align closely with the theoretical constructs of choice overload (Chernev et al., 2015; Iyengar & Lepper, 2000; Schwartz, 2004), decision fatigue, and post-decision regret (Zeelenberg & Pieters, 2007) discussed in earlier chapters. At the same time, the interviews with designers revealed structural and systemic limitations that impede the application of user-centered service design strategies, confirming the challenges described by previous research (Patrício et al., 2018; Wetter-Edman, 2014).

The first theme clearly illustrated that the abundance of insurance options, coupled with inconsistent terminology and tricky conditions, results in significant cognitive overload for consumers. Participants frequently reported abandoning the selection process due to confusion and mental exhaustion, as one of them described: “After browsing three insurer websites, I just closed all the tabs. It was too much, and I couldn’t tell the difference between them anyway.” Similarly, another consumer noted: “There are so many options, but they are so alike that it’s impossible to choose.” This experience resonates with the meta-analysis on choice overload (Chernev et al., 2015), which emphasizes that a large number of similar options increases the cognitive difficulty of distinguishing among alternatives.

In the context of insurance, where stakes are high and product attributes are often intangible, this effect becomes even more pronounced. Moreover, the use of digital tools did not always mitigate this issue. Although several participants appreciated basic comparison tables, many found that they still had to engage in extensive cross-referencing and second-guessing: “Even with a comparison table, you still had to open each policy document to really understand what’s covered.” Thus, while service design interventions such as visual summaries and progressive disclosure help to some extent, they are insufficient if not paired with deeper simplification of the underlying product structures.

The second theme highlighted the emotional consequences of navigating an overwhelming decision environment. Many participants expressed fear of making a wrong choice, which in turn generated decision paralysis or post-decision anxiety. The presence of anticipated regret (Zeelenberg & Pieters, 2007) influenced not only the decision-making process but also post-purchase satisfaction. Some of them reported that engaging with human advisors mitigated their emotional burdens: “Talking to a real person who explained things in simple terms made me feel like I wasn’t making a stupid mistake.” This suggests that empathetic, human-centered service design can play a crucial role in making insurance decisions easier. However, not all experiences with human support were positive, as instances of pressure-selling tactics or misbehaviour undermined trust, reinforcing the importance of consistency and transparency in persuasive system design theory (Oinas-Kukkonen & Harjumaa, 2009).

The third theme showed that participants entered the decision-making process with fragmented or inaccurate understandings of insurance concepts. One of the consumers candidly admitted: “I didn’t even know what deductible meant until I asked a friend, halfway through buying a policy.” This lack of foundational knowledge not only prolonged decision-making but also increased reliance on heuristics, such as choosing the cheapest option or the most popular brand, echoing research on the concept of bounded rationality (Simon, 1957).

Interestingly, participants often substituted formal information sources with informal advice networks: “I asked my friends which insurer they used, because it was easier than figuring it out myself.” This reliance on social proof over product-specific evaluation reflects findings from consumer behaviour studies (Goldstein et al., 2008) that individuals facing complex decisions often resort to heuristic cues rather than engaging in thorough analysis. While understandable, such coping mechanisms expose consumers to potential mismatches between their actual needs and chosen policies, leading to eventual dissatisfaction.

The fourth theme emerged strongly as a positive counterpoint, since participants consistently praised instances where insurers framed their choices clearly, used progressive disclosure techniques, and presented defaults or recommendations transparently: “When the website showed three package options and explained them in a simple table, it was a relief.” Such guided choice architectures align with literature on nudge theory (Thaler & Sunstein, 2008) and information design (Brown, 2010; Lidwell et al., 2010), which advocate for building decision environments that bring down cognitive load without compromising on consumer autonomy. Furthermore, personalization and contextualization were highlighted as powerful aids, as one consumer described appreciating a questionnaire that filtered insurance options based on her needs: “It felt like they understood me, not just threw 20 policies at me.” This upholds service design principles that promote personalization as a means to improve user experience and decision confidence (Teixeira et al., 2012).

However, simplification efforts sometimes clashed with compliance requirements, as revealed by one of the designers: “We wanted to remove unnecessary steps in the claim process, but the legal team said all disclosures had to stay upfront.” This tension between user-centricity and regulatory compliance reinforces the observation that systemic constraints often limit service innovation, even when user needs are well understood (Patrício et al., 2018).

Finally, the fifth theme provided a critical lens on why certain user-centered improvements have not yet been fully realized. All three designers interviewed shared examples where organizational risk-aversion, siloed teams, or outdated technology platforms hindered their ability to implement more supportive user journeys. One of them reflected: “The intention is there. Everyone talks about being customer-centric. But when it comes to execution, it’s easy for projects to get bogged down by fear of non-compliance.” This mirrors broader findings in service design research, which argue that while front-stage experiences are increasingly designed for user ease, the backstage systems and processes often lag behind (Patrício et al., 2018; Wetter-Edman, 2014). Overcoming these barriers would require not just surface-level interface enhancements but deeper change within the company, including cross-functional collaboration and risk-tolerant leadership.

A critical reflection on the findings indicates a tension between individual cognitive limitations and systemic service complexities. While existing literature on ‘paradox of choice’ (Schwartz, 2004) emphasizes the individual’s struggle with abundance, this study shows that structural and systemic factors within service ecosystems significantly exacerbate those struggles. In the

case of Finnish insurance, cultural factors such as high trust in institutions (Kääriäinen & Lehtonen, 2006) moderate but do not eliminate consumer scepticism, when faced with opaque product information or perceived unfair practices.

Subtle generational differences were also noticed. Younger participants preferred self-service tools and digital-first interactions while demanding transparency and simplicity, whereas older participants often sought human assistance and valued personal relationships while being equally critical of confusing paperwork and hidden charges. This suggests that service design strategies must be adaptable to different user profiles without creating parallel systems that increase operational complexity.

In conclusion, the findings confirm that service design holds potential to ease decision-making difficulties in insurance policy selection, but only if interventions are systemic rather than cosmetic. Simplified information architecture, empathetic support, transparent framing, and organizational commitment to user-centeredness are all key ingredients. Addressing choice paralysis, decision fatigue, and post-decision regret requires not only better-designed customer interfaces but also a rethinking of how insurance products are structured, marketed, and supported internally. The thematic insights derived from this study ultimately reinforce the argument that hardships faced by consumers in choosing insurance policies are not solely a result of individual cognitive failings but are created due to complexity and opacity of the service-scape. Service design can offer some tools to bridge this gap but realizing its full potential demands both design interventions and organizational will to prioritize user needs alongside traditional business imperatives.

5. DISCUSSION AND IMPLICATION

5.1. Discussion

The findings from the thematic analysis provide clear, evidence-based answers to the three sub-questions guiding this research and shed light on how service design can be employed to alleviate the negative psychological impacts of excessive choice in the context of insurance policy selection in Finland. The first research question asked which stages of the selection process are most vulnerable to decision fatigue or choice paralysis. According to the analysis, the comparison stage consistently emerged as the most cognitively demanding and frustrating for consumers. Participants expressed confusion and exhaustion, facing multiple plans that appeared similar but differed in subtle, often opaque ways. These difficulties align with the concept of choice overload (Iyengar & Lepper, 2000; Schwartz, 2004), where an abundance of options, especially in high-stakes situations, impairs decision quality and satisfaction. While the information-gathering stage also presented challenges due to unfamiliar terminology and scattered content, it was the evaluation of similar policies side-by-side, that mostly led to paralysis and abandonment of the decision process. This supports the argument of Chernev and his collaborators that the complexity and similarity of options are critical triggers for overload and disengagement (Chernev et al., 2015). In the case of Finnish insurance, where products lack standardization and comparison tools are underdeveloped, these theoretical insights are affirmed, and consumers are frequently left to rely on guesswork, shortcuts, or social proof, all of which introduce risk into an already complex process.

The second research question focused on how service design interventions can reduce stress and cognitive load for consumers selecting insurance products. The findings revealed that simplification strategies like visual comparison tools, progressive disclosures, and default recommendations were effective in lowering the cognitive burden. These interventions directly support the principles of choice architecture (Thaler & Sunstein, 2008) and progressive disclosure (Brown, 2010), both of which emphasize managing the timing and volume of information to improve decision clarity. A layered presentation of choices, where users are not overwhelmed at the outset but are able to access deeper details as needed, was found to be quite helpful. Additionally, participants confirmed the value of guided flows and personalized support in creating a sense of clarity and control. Notably, the presence of empathetic human aid, whether through phone assistance or live chat, also served to relieve emotional stress, reinforcing the role of affective design in complex choice environments.

The third question considered what service design strategies, frameworks, and principles should guide the Finnish insurance industry in balancing business goals with reducing decision fatigue and regret among consumers. The findings underscore the importance of a holistic cross-functional approach to service design, one that can extend beyond surface-level UX improvements to address deeper product, compliance, and organizational issues. Designers interviewed for this study highlighted institutional inertia, siloed departments, and regulatory rigidity as persistent barriers to delivering user-centered services. This confirms existing critiques in service design research about the misalignment between user needs and service ecosystem constraints (Patrício et al., 2018; Wetter-Edman, 2014). Ultimately, Finnish insurers aiming to improve customer experience must view service design not just as a design function, but as a strategic enabler of ethical, effective decision-making.

5.2. Practical implication for insurance providers

This study offers actionable recommendations for Finnish insurance companies seeking to improve customer experience (CX) during the policy selection process. By addressing the cognitive and emotional challenges faced by consumers, insurers can support better decision-making outcomes, increase customer satisfaction, and minimize post-decision regret. These improvements are not only aligned with service design principles but also serve the business objectives of long-term customer retention, reduced churn, and enhanced trust in digital service channels. The findings herein strengthen the need for insurers to go beyond superficial UX enhancements and implement systemic, user-centered touchpoints across the customer journey. The most critical areas for intervention are the policy comparison stage and the reduction of cognitive friction associated with navigating insurance products. By adopting service design strategies grounded in simplification, personalization, and trust-building, insurers can reframe the decision environment to be more accessible and less psychologically taxing.

Moreover, this research highlights the importance of balancing digital autonomy with human reassurance. While Finnish consumers are generally comfortable with self-service tools, many still look for empathetic and trustworthy guidance, especially when facing complex financial decisions. Thus, the optimal strategy is not digital-only or human-only, but rather a blended model that leverages the best of both. The following table summarizes five key service design recommendations for insurance companies, based on the thematic findings of this study. Each recommendation addresses a specific pain point in the decision-making process and includes a rationale grounded in either consumer or designer insights.

Table 4. *Summary of service design recommendations for Finnish insurance providers*

Recommendation	Targeted challenge	Rationale
Standardize terminology and comparison formats	Confusion during comparison stage	Reduces cognitive load by enabling policy comparisons across providers
Implement progressive disclosure	Overwhelm from information density	Presents information in manageable layers for better comprehension
Offer defaults and guided recommendation flows	Lack of confidence in decision-making	Supports user autonomy while lowering effort and choice fatigue
Integrate empathetic human support options	Emotional stress and anticipated regret	Builds trust and reassurance during critical decision points
Enable cross-functional design collaboration	Organizational barriers to user-centered improvements	Ensures SD principles influence product, compliance, and delivery

The Finnish insurance industry stands to benefit from implementing these recommendations in several ways. First, they offer a pathway to improve perceived clarity and fairness, which has become increasingly important as customers migrate to digital-first channels. Second, better decision support tools can help reduce post-purchase dissatisfaction or regret, leading to fewer complaints, as well as stronger customer relationships. Third, as regulatory scrutiny around transparency and consumer protection grows, service design offers a structured approach to aligning compliance goals with user-friendly delivery mechanisms.

From a strategic perspective, integrating service design into core operations enables insurers to transition from product-centric to experience-centric business models. This shift is particularly timely in Finland, where competition among major providers is quite high and differentiation increasingly depends on usability and customer trust rather than pricing alone. Furthermore, the service design mindset encourages iterative improvement and real-time responsiveness to consumer feedback, positioning insurers to be more adaptive in a changing regulatory and technological environment. Finally, this research contributes to a broader cultural shift within the industry, from treating consumers as rational, fully informed agents to recognizing them as individuals navigating complexity under cognitive limitations and emotional constraints. By operationalizing empathy, clarity, and system thinking, Finnish insurance companies can tweak outcomes for both their users and their employees.

5.3. Limitations and directions for future research

This study offers some contributions to the understanding of how service design can mitigate the cognitive and emotional burdens associated with insurance policy selection in Finland. However, like all research projects, it is not without limitations, which should be acknowledged to contextualize the findings and outline opportunities for future exploration. Firstly, the qualitative nature of this study, while suited to capturing depth and subjective experience, limits the generalizability of its findings. The in-depth interviews focused on a relatively small sample comprising seven Finnish consumers and three design professionals, thus prioritizing richness over representativeness. While this aligns with the interpretivist epistemology underpinning this research, future studies could benefit from mixed-method approaches that can combine qualitative insights with broader survey-based validation. Quantitative studies, for instance, could measure the prevalence of decision fatigue across different demographics or test certain design interventions at scale.

Secondly, the scope of this research is geographically and contextually specific to Finland's insurance sector. Finnish consumers tend to have high digital literacy and trust in institutions, which may not be the case in other regions, and therefore, future research could investigate whether similar design strategies are effective in other countries or cultures, particularly where digital adoption or trust is lower. Cross-national studies could help determine which insights are culturally bound and which are more universally applicable.

A third limitation lies in the temporal constraints of the project. Given more time, the study could have engaged a broader variety of stakeholders, such as regulatory bodies, customer support staff, or product managers. These voices may offer additional perspectives on systemic design constraints and how they interact with user experience goals. Future research might adopt a service ecosystem lens to map the influence of all actors involved in shaping the insurance journey. Lastly, although this thesis touches on emotional aspects such as post-decision regret and confidence, there remains scope to explore emotional design strategies in greater depth. Further work could examine how affective cues can be designed to not only inform but reassure and empower users navigating high-stakes decisions.

6. CONCLUSION

This research set out to explore how service design (SD) can be employed to ease the psychological and cognitive challenges faced by Finnish consumers during the insurance policy selection process. At its core, the study was driven by a central research question:

> How can service design be employed to mitigate the negative psychological impacts of an abundance of choice, particularly choice paralysis, post-decision regret, and decision fatigue on individuals selecting insurance policies in Finland?

This question was approached through three sub-questions aimed at identifying the most vulnerable stages of decision-making, determining effective service design interventions, and recommending broader strategic principles for the Finnish insurance industry.

The research journey, rooted in a qualitative methodology, has offered substantial insight into these questions. Through ten semi-structured interviews, the study uncovered five core themes that illuminate the psychological frictions experienced during insurance selection and the systemic constraints that shape service delivery. These findings not only addressed the research questions but also extended the discussion into areas such as emotional reassurance, digital-human service hybrids, and internal barriers to user-centered innovation.

The results demonstrated that the comparison stage is especially prone to choice paralysis and decision fatigue, due to the high number of similar policy options and a lack of standardization in language and format. Thematic findings also confirmed the efficacy of simplification, guided flows, defaults and empathetic support in improving users' overall experience. Additionally, designers highlighted the challenges of implementing these improvements within traditional, compliance-driven institutions, underscoring the need for deeper organizational change as a complement to service design.

This study also provides an opportunity to reflect on the value of interdisciplinary approaches, specifically the intersection of behavioural psychology and service design. By integrating theories such as the paradox of choice (Schwartz, 2004), choice overload (Chernev et al., 2015), choice architecture (Thaler & Sunstein, 2008), and decision fatigue (Baumeister et al., 2007), the thesis enriched its understanding of user behaviour and grounded design strategies in evidence from psychological science. Behavioural psychology helped articulate the underlying causes of consumer struggle, and service design offered practical pathways for intervention.

The application of behavioural insights in design not only informed the choice of research questions but also shaped the analysis and interpretation of the collected user data. Concepts such as bounded rationality (Simon, 1957) and regret theory (Zeelenberg & Pieters, 2007) helped interpret user behaviour, while service design methodologies enabled these insights to be translated into tangible recommendations. This demonstrates the need for multidisciplinary thinking, especially when addressing complex, real-world challenges that sit at the confluence of cognition, emotion, and design.

Reflecting on the research process, this thesis also emphasizes the importance of empathy and systems thinking in designing services that not only meet user needs but also consider the constraints of the organizations delivering them. The dual lens of behavioural psychology and service design allows researchers and practitioners alike to look beyond surface-level usability issues and confront the deeper systemic patterns that shape user experiences.

Ultimately, the findings of this study advocate for a more human-centered approach to design in regulated industries like insurance. Acknowledging and addressing psychological frictions can help organizations move beyond compliance and efficiency toward services that empower users, reduce emotional strain, and build long-term trust in their offerings. In doing so, service design can contribute not only to improved decision-making but also to a more equitable and user-conscious insurance landscape.

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APPENDICES

Appendix 1. Interview Questions for Consumers

Introduction

- Have you purchased any insurance policy in Finland? If yes, what type and how recent was it?
- How would you describe your overall experience with selecting an insurance policy?

Background and Context

- How do you typically approach major purchasing decisions (e.g., research-heavy, intuitive)?
- How important is it for you to make the "best" choice? Does it differ depending on the domain?
- Have you ever regretted having too many options as a consumer? If so, has it ever stopped you from making a decision?
- Can you remember a situation where having more choices has helped you?
- What prior knowledge or experience did you have with insurance before this purchase?
- Did you seek advice from others (e.g., friends, insurance agents) or rely on your own research?

Information Gathering

- How did you begin searching for insurance options? What resources did you use?
- Were there moments when you felt overwhelmed by the number of available options, or the complexity of information being presented?
- What gaps or frustrations did you encounter when trying to understand the policies?
- Did you ever feel uncertain about trusting the information provided?

Comparison Stage

- How did you compare policies from different providers? Did you use tools like comparison websites or checklists to assess the options?
- Did you find it difficult to differentiate between options?
- Did you ever feel stuck or unsure of how to prioritize features (e.g., cost vs. coverage)?
- How confident were you in your ability to make an informed comparison?

Final Decision-Making

- How did you ultimately decide on a specific policy? Was this process tiring?
- Did you feel rushed or pressured at any point? If so, why?
- Were there trade-offs you regretted having to make?
- In the process of choosing, did you ever feel that you are missing out on some attractive features of the alternatives you had to reject?
- How did you feel immediately after finalizing your choice? How about after a few months?

Post-Decision Experience

- After purchasing, did you ever second-guess your decision? If yes, why?
- If you were to do this again, what would you do differently?
- How transparent did the insurer feel after you made the purchase?
- Are you continuing with the insurance plan, or did you ever switch/stop?
- Is there anything you learnt from this purchasing process that changed you as a consumer?

Service Design Opportunities and Reflections

- If you could redesign the insurance selection process, what would you simplify or change?
- What tools or features would have made the process less stressful for you? Is there anything you have seen or experienced in other services that might work for insurance companies?
- How could insurers better balance their business needs with your experience as a customer?
- Is there anything we haven't covered that you think is important?

Appendix 2. Interview Questions for Industry Professionals

Introduction

- What is your current role at the organization, and how does it relate to insurance policy selection?
- How would you describe your company's design philosophy when it comes to simplifying complex decisions for customers purchasing insurance products?

Customer Journey

- How is the customer journey for policy selection currently mapped at your company? What stages (e.g., research, comparison, purchase) do you prioritize?
- Which stages do customers find most overwhelming, based on user feedback or analytics?
- How do you collaborate with other teams in your organization (e.g., marketing, customer service) to ensure a cohesive journey?
- Where in the current journey do you see most users abandoning the process, expressing frustration or contacting customer support for help?

Existing Strategies to Address Choice Overload

- What design strategies have you implemented to simplify policy comparisons or mitigate choice paralysis and decision fatigue?
- How do you offer comprehensive information while avoiding overwhelming customers?
- Have you encountered cases of post-decision regret? What role does transparency (e.g., pricing, coverage details) play in reducing such regret?
- Are there any interactive tools like chatbots or calculators that you've tested or adopted?
- How common is it for competitors to replicate a new feature you design that gains traction?

Service Design Opportunities and Challenges

- Where do you see the biggest opportunities for service design to improve decision-making for insurance customers in Finland?
- Are there any ethical considerations that arise when designing choice architectures (e.g., nudges, defaults) in the context of insurance?
- How can companies balance business goals (e.g., upselling) with minimizing decision fatigue?
- Are there any systemic challenges (e.g., regulatory constraints, legacy systems) that you think can potentially limit design innovation in the insurance industry?

Closing and Reflections

- Is there a project or initiative at your company that you're particularly proud of in this context?
- What's one change you would make to the policy selection process if resources were unlimited?
- Is there anything we haven't covered that you think might be critical for this research?