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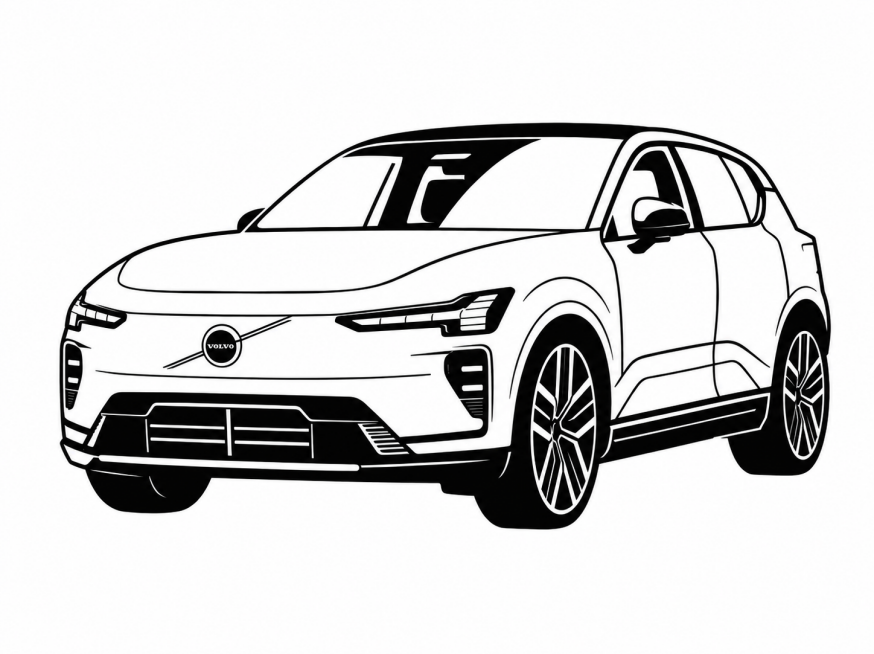

Understanding the relationship between cost reduction and customer satisfaction within a warranty context

A case study at Volvo Cars comparing 2024 and 2025 customer satisfaction data

Master's thesis in Quality and Operations Management

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Abstract

This study contributes to understanding observed patterns between cost efficiency initiatives and customer experience in after-sales service contexts. The aim was to examine whether customer satisfaction changed during the period in which cost reduction initiatives were implemented within the warranty department at Volvo Cars, and to identify factors associated with satisfaction and dissatisfaction in warranty handling by analysing customer pain points. A case study at Volvo Cars was conducted using a mixed-method approach with an exploratory sequential design, combining qualitative analysis of survey data with subsequent quantification. The findings indicate that the share of positive comments in the analysed sample showed a slight increase from 41% to 44% between 2024 and 2025. Since no statistical significance analysis was conducted, this change should be interpreted as an observed pattern rather than evidence of a statistically confirmed increase. Five pain points were identified, primarily related to compensation coverage, warranty process handling, and communication. Two of these were particularly prominent, one of which accounted for nearly 50% of all comments in both years, while another showed a decrease by 30 percentage points in negative sentiment. The study does not identify a short-term decline in customer satisfaction during the period in which cost reduction initiatives were implemented. However, the results highlight the importance of continuously monitoring all identified pain points, as lagged effects may appear beyond the timeframe of the study and new risks may emerge if further cost reduction initiatives are considered in the future.

Keywords: Warranty, Customer satisfaction, Customer pain points, Cost reduction.

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Ingrid Alm & Linus Fredriksson, Gothenburg, June 2026

Contents

List of Figures

List of Tables

1

Introduction

This chapter introduces the background and problem area of the study. It presents the increasing importance of balancing cost efficiency and customer satisfaction in the automotive industry, with a specific focus on warranty handling at Volvo Cars. The chapter further outlines the research problem, the study's aim and research questions, as well as the scope that frame the thesis.

1.1 Background

The global automotive industry has historically been resistant to change, as deeply embedded technologies and structures have made large-scale transformation complex and resource-intensive (Wells & Nieuwenhuis, 2012). The situation today differs, as the industry is undergoing a significant transformation driven mainly by two contributing factors (Forbes Business Development Council, 2025). These two are the considerable push towards electrification and the increase in global competition, particularly from cost-efficient Chinese manufacturers. Together, both these developments have intensified the competitive pressure on manufacturers. Furthermore, the automobile industry does not just produce a car anymore, they now often produce smart connected products that are part of a larger system. Porter and Heppelmann (2014) argue that these new types of products expose companies to new competitive threats and opportunities.

In this increasingly competitive environment, cost efficiency has become a critical strategic priority. Automotive companies face tensions related to geopolitical uncertainty, supply chain fragility and rapidly evolving customer expectations, while simultaneously operating under strong price pressure (KPMG International, 2025). As a result, cost-reduction initiatives are widely pursued to protect margins and sustain competitiveness. However, this emphasis on short-term cost efficiency may risk deprioritising customer satisfaction.

Alongside increasing cost pressures, customer satisfaction and customer expectations have become increasingly important in the automotive industry. Customers now expect higher levels of speed, personalization, and innovation (Kotler et al., 2009). This compels firms to develop more market-specific offerings in order to better tailor products and services to diverse customer needs. However, a strong focus on operational efficiency and short-term cost reduction may limit the ability

to meet these expectations (KPMG International, 2025). As competition intensifies, balancing cost efficiency with customer-centric value creation becomes critical for long-term competitiveness.

1.2 Problem description

This thesis is conducted in collaboration with the warranty department at Volvo Cars. The warranty department's primary functions are to optimise quality while balancing costs and customer satisfaction through activities related to the base warranty and goodwill. Its work includes handling claims within the base warranty, which refers to the standard warranty coverage. The duration of the base warranty varies between regions, but is generally around two to three years. In addition, the department works with goodwill cases, where Volvo Cars offer to cover part of the cost after the base warranty has expired, based on the circumstances.

In 2024, interest grew in improving warranty efficiency to close the gap to competitors. Therefore, in 2025, the company decided to take action and set up a plan for decreasing the warranty budget. The actions taken to reduce their warranty cost affected both the base warranty and goodwill. These actions included stricter policies and closer follow-up of claims during the base warranty period. The actions also involved revised goodwill policies regarding both the period of goodwill support and the extent to which repair costs are covered. By implementing these changes, the company not only met the intended goal, but in fact surpassed it.

As the cost reduction within the warranty department was successful, the executive management team became worried about what effect this would have on the customer. Therefore, understanding the relationship between customer satisfaction, total warranty spend, and customer pain points became increasingly important. This was particularly relevant since these aspects had not previously been measured in relation to one another. Despite strong interest from several departments over the years, analysing the link between warranty costs and customer satisfaction has been postponed due to low prioritisation and a lack of holistic perspective. Decisions have primarily been made through case-based sub-optimisations rather than an evaluation of the overall impact, leading to a reactive rather than proactive approach.

1.3 Research questions

This thesis examines these research questions:

- How have customers' perceptions of warranty satisfaction changed between 2024 and 2025, following the cost reduction activities implemented during 2025?
- What pain points can be identified among customers who use Volvo Cars' warranty services, and which pain points appear most relevant to monitor over time?

1.4 Aim of the study

The main aim for this master's thesis is to investigate the relationship between cost reduction at the warranty department at Volvo Cars and the connected customer satisfaction. To meet the main aim of the study, two sub-aims are addressed.

First, the thesis seeks to investigate if customer satisfaction has been affected between 2024 and 2025 following the cost reduction during 2025. Secondly, the thesis seeks to identify and analyse the pain points shaping customer satisfaction related to warranty, as well as those factors that may be particularly sensitive and should therefore be treated with caution in future changes. This includes the risk of delayed effects and whether a continued focus on cost reduction could risk undermining customer satisfaction over time.

By analysing qualitative customer comments and subsequently quantifying the identified themes, the study creates a structured basis for examining changes in customer satisfaction between 2024 and 2025. This approach makes it possible to uncover patterns in customer perceptions, highlight the factors that appear most influential, and provide an indication of whether the current direction may pose challenges for customer satisfaction over time. Due to the study's before-and-after case study design, the aim is not to establish causal effects of the cost reduction activities, but to analyse observed changes, patterns, and indications in the available customer satisfaction data.

1.5 Scope

This section outlines the scope of the study by clarifying both the delimitations made to ensure focus and feasibility, as well as the limitations that may influence the interpretation of the findings.

1.5.1 Delimitations

To ensure a focused and manageable scope, this study applies several deliberate delimitations. The analysis is restricted to cost reduction initiatives and policy changes implemented within the warranty department. Other organisational functions are not explicitly studied and will therefore be excluded from the result.

The empirical analysis does not encompass all available markets. Instead, four countries, Sweden, the United States, Germany, and South Korea, were selected to reflect varying levels of success in cost reduction during 2025. This selection was intended to capture a broader range of outcomes while still allowing for sufficient analytical depth. The chosen countries also provide representation of different market contexts, thereby supporting a more nuanced and representative analysis.

The SPA2 platform has been excluded from the analysis due to its relative small sample size and quality situation during the studied period. This exclusion was made to avoid confounding effects related to product quality, ensuring that the study remains focused on changes in warranty.

1.5.2 Limitations

As this master's thesis is conducted as a single case study within one organisation, the generalizability of the findings is limited. The results are context-dependent and reflect a specific organisational setting and timeframe. Although the study applies a longitudinal before-after design, it captures only short-term changes between 2024 and 2025 following the implementation of the cost reduction initiatives in 2025. Effects on customer satisfaction may be delayed, and potential long-term consequences, particularly in relation to customer loyalty, can only be estimated within the scope of this study.

The study relies heavily on internal customer satisfaction comments that were not originally designed for the purpose of this research. Since these comments are not directly linked to warranty, they may not fully capture all relevant dimensions of the customer experience related to the implemented policy changes. Furthermore, the internal documentation of cost reduction covers both actions taken within base warranty and goodwill. As a result, the study is limited to treating the two parts as one when investigating the relationship with customer satisfaction.

Although the study aims to examine observed changes in customer satisfaction when comparing 2024 and 2025 data, definitive causal relationships cannot be established. External factors beyond the organisation's control may also have influenced customer satisfaction during the studied period. Finally, access to internal documentation was granted by the company, which introduces a potential risk of selection bias in the available material.

2

Literature framework

This chapter presents the theoretical foundation used to understand the relationship between cost reduction and customer satisfaction in a warranty context. It reviews literature on customer satisfaction, perceived value, customer expectations, customer experience, service recovery, trust, loyalty, and operations strategy. Together, these perspectives provide a basis for analysing how warranty-related changes may influence customer perceptions and long-term customer relationships.

2.1 Defining customer satisfaction

Customer satisfaction is widely regarded as a key determinant of organisational success, particularly in relation to repeat purchasing (Kotler et al., 2009). Satisfied customers are more likely to maintain long-term relationships with firms, which in turn contributes to increased profitability. Oliver (1997) further argues that as markets become more transparent and customers gain more access to information, customer satisfaction becomes an even more critical driver of profitability. At the same time, rising customer expectations make it more difficult for firms to sustain high levels of customer satisfaction. Consequently, Oliver (1997) emphasises that customer satisfaction alone may not be enough for a sustainable competitive advantage.

Despite the importance of customer satisfaction, it is a complex concept that is difficult to define precisely (Oliver, 1997). Oliver (1997, p. 8) defines satisfaction as *"the consumer's fulfillment response. It is a judgment that a product/service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or overfulfillment"*. In this context, pleasure may involve either increased enjoyment or the reduction of negative experiences. Customer satisfaction can therefore occur even when a service restores the customer to a neutral state. The judgement-based definition of satisfaction can be further explained by Oliver's (1980) expectancy-disconfirmation perspective. From this perspective, satisfaction is formed through a comparison between prior expectations and the perceived outcome of the experience, more specifically, whether the outcome is perceived as falling short, meeting, or exceeding the customer's prior expectations. This implies that customer satisfaction does not solely depend on the outcome of the product or service, but also on how the product or service corresponds to prior expectations. To understand customer satisfaction in a

warranty context, it is also necessary to consider how customers evaluate the value of what they receive in relation to what they sacrifice.

2.2 Value perception

While customer satisfaction provides a general understanding of how customers evaluate whether expectations are met, it does not fully explain how customers assess the balance between what they receive and what they give up. Therefore, perceived value is relevant for understanding how customers evaluate warranty-related experiences in relation to costs, effort, time, and compensation. Zeithaml (1988) refers to perceived value as how customers judge whether a service or offering is worth based on what they have to give up in return. It is further argued that value is not solely based on price, but a broader comparison between perceived benefits and sacrifices, including both monetary and non-monetary aspects like time and effort. Perceived value therefore, can be understood as the customer's judgement of the total exchange rather than a single attribute. It is highlighted by Zeithaml (1988) that value is subjective, meaning that different customers may evaluate value differently depending on what they consider most important.

Cronin et al. (2000) further argue that service value, service quality, and customer satisfaction are closely related but distinct from each other. Service quality is more about the customer's elevation of the performance, while perceived value has a larger focus on whether the overall exchange is considered worthwhile (Cronin et al., 2000). Meanwhile, customer satisfaction reflects the overall response after the experience. Perceived value has an important role in shaping behavioural intentions, both directly and indirectly through customer satisfaction (Cronin et al., 2000). This suggests that customers' responses are influenced not only if they are satisfied, but also whether they believe the product or service offered overall good value. However, customers do not evaluate all service attributes in the same way. While perceived value explains how customers evaluate the overall exchange, the Kano model presented in the next section provides another perspective on how different types of expectations can influence satisfaction and dissatisfaction.

2.3 The Kano model and customer expectations

The Kano model is an established framework that categories quality attributes based on how they influence customer satisfaction. According to Kano et al. (1984), as cited by Löfgren et al. (2011), five quality attributes affect satisfaction in different ways, as seen in Figure 2.1. Must-be quality attributes represent basic criteria for the customer and are taken for granted. If these requirements are not fulfilled, the customer will be very dissatisfied, while if the requirement is met, the customer will simply not be dissatisfied. Furthermore, Kano et al. (1984) as cited by Matzler and Hinterhuber (1998), explain that this quality attribute can act as a competitive factor, as customers will not be interested in the product if the requirement is not fulfilled. Drawing on Kano et al.'s (1984) model, Matzler and Hinterhuber

(1998, p. 28) describe One-dimensional quality attributes as *"customer satisfaction is proportional to the level of fulfilment — the higher the level of fulfilment, the higher the customer's satisfaction, and vice versa"*. Attractive quality attributes are described as surprise attributes that are not explicitly demanded nor expected by the customer (Kano et al., 1984, as cited by Löfgren et al., 2011). If these attributes are fulfilled, they lead to high customer satisfaction, whereas if they are not fulfilled it does not result in dissatisfaction. Furthermore, Kano et al. (1984) as cited by Matzler and Hinterhuber (1998), explain that these attributes have the greatest influence on customer satisfaction. Additionally, the Kano model includes indifferent quality attributes which do not affect customer satisfaction and reverse quality attributes where the presence of a feature may lead to dissatisfaction for some customers (Kano et al., 1984, as cited by Löfgren et al., 2011).

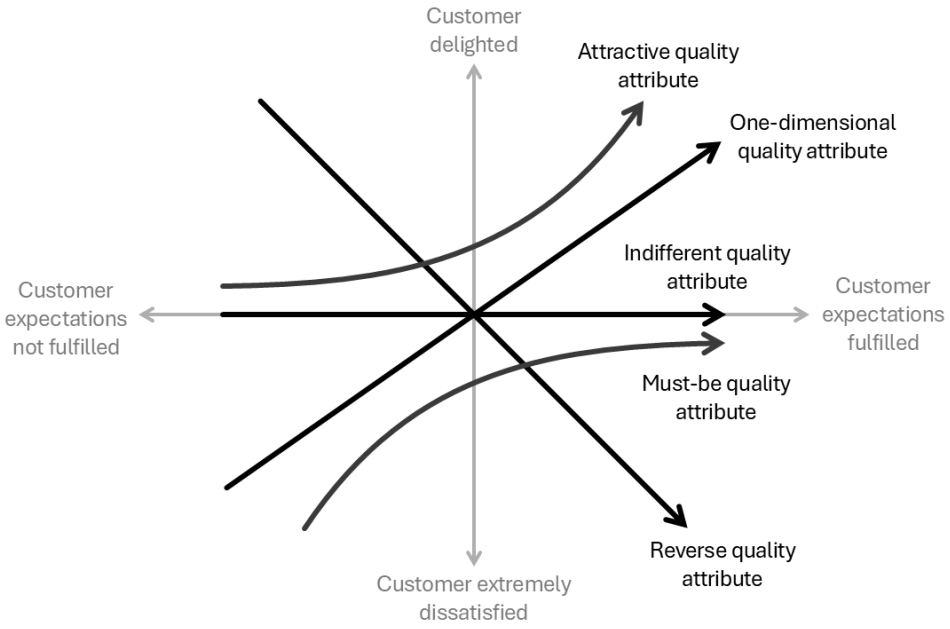

Figure 2.1: Visualization of the Kano model.

According to Kano (2001), as cited by Löfgren et al. (2011), quality attributes can follow lifecycles. This implies that indifferent quality attributes can evolve into attractive quality attributes over time, attractive quality attributes into one-dimensional quality attributes, and one-dimensional quality attributes into must-be quality attributes, as seen in Figure 2.2. Attributes that once gave great satisfaction can therefore over time become expected and taken for granted.

Figure 2.2: Visualization of the lifecycle of quality attributes, adapted from Kano (2001), as presented in Löfgren et al. (2011).

Similarly, Oliver (1997) argues that expectations are shaped by prior experiences, accumulated interactions, and increased access to information, which are seen to result in rising expectations even when service performance remains unchanged. As a consequence, customers may evaluate similar service outcomes differently over time as their reference standards develop. Oliver (1997, p. 4) describes this as *"satisfaction from their satisfaction"*, since satisfying enough is no longer enough. Although the Kano model helps explain how specific service attributes may influence satisfaction, these attributes should not be evaluated in isolation, but rather as part of the broader customer experience across the customer journey.

2.4 Customer experience and customer journey

To understand warranty handling more fully, it is therefore necessary to place customer expectations within the broader customer experience and customer journey. Lemon and Verhoef (2016, p. 71) describe customer experience as *"a multidimensional construct focusing on a customer's cognitive, emotional, behavioral, sensorial, and social responses to a firm's offerings during the customer's entire purchase journey"*. This suggests that customer experience is not shaped by a single interaction, but develops throughout the customer journey over time. According to Lemon and Verhoef (2016), the customer journey starts as early as pre-purchase and finishes post-purchase, including past experiences and external factors. Throughout the customer journey, customers interact with the firm through multiple touch points, some of which are managed by the firm while others are not.

As customer experience is formed by the multiple touch points throughout the customer journey, it is important to understand how these contribute to the customer experience. Lemon and Verhoef (2016) identified four types of touch points impacting the customer experience namely brand-owned, partner-owned, customer-owned, and social/external touch points. This implies that the firm itself cannot control all touch points that the customer experiences. According to Lemon and Verhoef (2016), the importance of a touchpoint may vary depending on where it occurs in the customer journey. This means that the same touchpoint can have a different influence on the overall customer experience depending on the stage at which it is encountered. Furthermore, although complex and difficult, it is important to identify critical touch points, as these have the most significant influence on key customer outcomes and are therefore especially important in customer experience manage-

ment (Lemon & Verhoef, 2016). Within the customer journey, warranty-related interactions are particularly important because they often occur after a product or service problem has already arisen.

2.5 Service recovery and perceived fairness

Service recovery and perceived fairness becomes central for understanding how customers evaluate warranty handling. Service recovery refers to the actions taken by a company in response to a service failure in order to address the problem and restore customer satisfaction (Smith et al., 1999). Customer evaluations depend not only on the service failure itself, but also on how the organisation responds throughout the recovery process, including the interaction and the final outcome (Smith et al., 1999). Therefore, a well-handled recovery can play an important role in restoring satisfaction (Smith et al., 1999) and maintaining the customer relationship (Wirtz & Mattila, 2004).

A central perspective within service recovery is perceived fairness or justice theory, as it helps explain how customers evaluate a company's response after a service failure (Wirtz & Mattila, 2004). Rather than judging recovery only in terms of whether the problem was solved, customers also evaluate whether the response is perceived as fair (Smith et al., 1999). In this context, justice theory suggests that perceived fairness within service recovery efforts is based on three dimensions: distributive justice, procedural justice, and interactional justice. Distributive justice concerns the fairness of the outcome received by the customer, such as compensation, repair, or other forms of restitution following a service failure (Smith et al., 1999). Procedural justice refers to the fairness of the recovery process, including how quickly and efficiently the issue is handled. Whereas, interactional justice relates to the interpersonal treatment received during the recovery encounter, such as respect, empathy, and apology (Smith et al., 1999).

Customer satisfaction following a service failure is influenced by how fair the recovery is perceived to be (Smith et al., 1999). This means that satisfaction depends not only on the final outcome, but also on how the recovery process is carried out and how the customer is treated during the interaction, resulting in distributive, procedural, and interactional justice all play an important role in determining the post-recovery satisfaction. Wirtz and Mattila (2004) further show that these dimensions jointly influence satisfaction, suggesting that customers evaluate recovery as a combined experience rather than through isolated elements. Their findings also indicate that compensation alone may not be sufficient when the recovery process is poor or when the interaction lacks apology and concern.

A warranty context is relevant for service recovery research because warranties shape customer expectations regarding how problems should be handled and resolved (Andaleeb & Basu, 1998). In technical service settings, such as automobile repair, customers are often in a vulnerable position, as they may have difficulty assessing the technical quality of the service itself. As a result, they are likely to rely on other cues when evaluating the service encounter, particularly fairness and relia-

bility (Andaleeb & Basu, 1998). This makes service recovery especially important, since warranty-related situations often involve a problem that requires the company to respond through a recovery process. In such cases, customers are likely to evaluate not only whether the issue is resolved, but also whether the response is fair in terms of outcome, process, and interpersonal treatment (Smith et al., 1999). Service recovery and justice theory therefore provide a useful framework for understanding customer experiences in warranty-related service encounters. Since customers may have limited ability to assess the technical quality of warranty decisions, their evaluations often depend on whether the company's response is perceived as fair, reliable, and transparent.

2.6 Trust in service relationships

Customer perceptions are closely associated with the level of trust established within the service relationship. Trust has become an important concept in service relationships, as Morgan and Hunt (1994, p. 23) define trust as *"existing when one party has confidence in an exchange partner's reliability and integrity"*. They further emphasise that trust is especially important in service relationships because customers typically must buy a service before experiencing it. Trust is also central to successful relational exchanges because it encourages cooperation, long-term orientation, and commitment (Morgan & Hunt, 1994). Johnson and Grayson (2005) further show that trust in service relationships can be understood as both cognitive and affective. Cognitive trust is based on the customer's belief that the provider is competent and reliable, while affective trust is based on feelings of care, concern, and emotional security (Johnson & Grayson, 2005). Furthermore, they demonstrate that satisfaction from previous interactions strengthens cognitive trust, as positive past experiences increase customers' confidence in the provider's ability and willingness to fulfil its obligations in future exchanges. Trust therefore plays a key role in the development of customer loyalty, as Morgan and Hunt (1994, p. 24) argue that *"trust is a major determinant of relational commitment"*. Trust is therefore not only relevant for the immediate evaluation of a service encounter, but also for the customer's willingness to maintain a relationship with the company over time.

2.7 Customer loyalty

Customer loyalty captures the longer-term implications of repeated satisfaction or dissatisfaction. As with satisfaction, customer loyalty is a concept that has been difficult to define (Oliver, 1999). Oliver (1999, p. 34) defines loyalty as *"a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior"*.

In addition to defining loyalty, prior research has examined how customer satisfaction relates to the development of customer loyalty. Oliver (1999) suggests that loyalty

develops over time as customers are repeatedly exposed to satisfaction. However, he also explains that satisfaction is only one of the inputs that can result in loyalty, allowing considerations of other determinants. Moreover, Oliver (1999) emphasises that loyalty remains vulnerable to dissatisfaction and competitive influences. Even customers who are generally satisfied may reconsider their commitment if alternative offerings become more attractive or if dissatisfaction is introduced. Therefore, Oliver (1999) argues that satisfaction alone will not result in loyalty, since customers can feel satisfaction without a full commitment to the firm. Additionally, Hallowell (1996) demonstrates a significant relationship between customer satisfaction and customer loyalty. Their empirical findings indicate that satisfaction explains a substantial proportion of the variation in loyalty, although it does not account for loyalty entirely. Therefore, although a relationship between satisfaction and loyalty has been established, both Oliver (1999) and Hallowell (1996) agree that satisfaction does not immediately translate into loyalty nor guarantee long term-commitment. While satisfaction, trust, and loyalty explain how customers evaluate and respond to service experiences, these experiences are also shaped by operational priorities within the firm.

2.8 Cost reduction in operations strategy

Cost reduction becomes relevant in this context because changes in warranty and goodwill handling may affect the conditions through which customer value, perceived fairness, trust, and loyalty are formed. Cost reduction is described by Porter (1985) as a deliberate and long term approach where organisations seek to strengthen their competitiveness. It is further explained that rather than focusing on isolated cost-cutting actions, cost oriented strategies seek to influence the cost structure of the organisation's activities. This frames cost reduction as a strategic positioning of the organisation rather than a financial adjustment. Although cost reduction should be seen as a strategic positioning, Slack and Lewis (2020, p. 320) also emphasises that *"There are always pressures that lead managers to focus on a shorter-term than may be strategically wise"*. In addition to this, they explain that there will always be tension between long-term and short-term cost reduction. However, they still emphasise that only adapting short-term considerations, at the expense of long-term considerations, can be disastrous.

From the perspective of operations strategy, cost is described as one of the performance objectives of operations, along with quality, speed, flexibility, and dependability (Slack & Lewis, 2020). These performance objectives reflect different ways operations contribute to customer value and competitive position. Misalignment between customer expectations and operational priorities can undermine both customer satisfaction and competitive performance (Slack & Lewis, 2020). While cost often needs to be prioritised, it must be balanced with other performance objectives that support customer value and long-term competitiveness. In service contexts, customers often evaluate service quality based on how reliable and responsive the service is. Reliability refers to whether the service is delivered consistently and as promised, while responsiveness concerns how quickly and willingly the company

helps the customer (Parasuraman et al., 1988). Since perceived service quality reflects the customer's overall judgement of the service, changes in how the service is performed can influence how customers experience and evaluate it. From an operations strategy perspective, this means that performance objectives such as quality, speed, and dependability are important because they help shape the value customers perceive in the service (Slack & Lewis, 2020).

Furthermore, Slack and Lewis (2020) emphasise the existence of trade-offs between performance objectives. Since operations are structurally and capability constrained, improving one performance dimension, such as cost, may reduce performance in others, such as quality or flexibility, unless overall capabilities are increased. Slack and Lewis (2020) explains that excessive focus on one objective risks misalignment with market requirements which can reduce strategic flexibility. Therefore, trade-offs should be managed carefully to avoid undermining long-term competitiveness.

However, Ferdows and De Meyer (1990) argues that the trade off theory is not applicable in all cases. Instead, they argue that different capabilities can be cumulative rather than trade-offs or compromises. It is shown that some manufacturers' improvement programmes aim to build upon one capability instead of replacing one capability for another. From a trade-off perspective, prioritising cost may reduce performance in other objectives such as responsiveness or dependability (Slack & Lewis, 2020). As reliability and responsiveness are central dimensions of perceived service quality (Parasuraman et al., 1988), such trade-offs may influence customers' evaluation of the service provided.

Taken together, the reviewed literature suggests that the relationship between cost reduction and customer satisfaction cannot be understood only as a financial or operational issue. Instead, it needs to be analysed through how cost-related changes may be experienced by customers in terms of expectations, value, fairness, trust, and possible long-term loyalty effects.

3

Methodological approach

This chapter describes the methodological approach used to conduct the study. It explains the case study design, the use of secondary customer satisfaction data, and the mixed-method approach combining qualitative thematic analysis with subsequent quantification. The chapter also presents the sampling strategy, data analysis process, and considerations related to reliability, validity, replicability, and ethics.

3.1 Research design and methodological position

A case study design is a detailed analysis of a single case, such as an organisation, in a specific context (Bell et al., 2022). This project adopts this research design, focusing on Volvo Cars, as the aim for this thesis is to research how customer satisfaction changed during the period in which cost reductions were implemented, within a specific organisational context. A single case enables a deeper analysis rather than generalization, which is suitable when collaborating with an organisation, such as Volvo Cars (Bell et al., 2022).

A case study can be divided into different types of cases (Bell et al., 2022). This project is a longitudinal case study, as the aim is to see how customer satisfaction has evolved as the new operational policies were adopted. With a longitudinal case study approach, the project has the possibility to study a before-and-after situation, which enables an analysis of change that aligns with the research questions of this thesis. Furthermore, this research design enables the analysis of internal documentation and policies related to customer satisfaction in warranty cases.

In line with the case study design, this thesis adopts a mixed-method approach with an exploratory sequential design, in which qualitative data is analysed through thematic analysis and subsequently quantified to identify patterns. An exploratory sequential design refers to a mixed methods research design in which qualitative data are collected and analysed before quantitative data are gathered (Bell et al., 2022). It is particularly appropriate in studies where qualitative findings are used to generate initial insights, which can subsequently be examined or tested using quantitative data. This design was well suited to the project, as it initially involved analysing qualitative data that were subsequently quantified to enable a structured comparison between 2024 and 2025.

3.2 Data collection

The data collected in this study consist only of secondary data, in the form of already existing internal documentation. The data were collected through direct access provided by Volvo Cars, and was continuously reviewed in relation to the research questions. This documentation is partly customer satisfaction surveys, but also internal reports based on economic documents connected to the cost reduction made during 2025.

A theoretical framework was developed both during the initial phase of the study and later as the research progressed. The initial literature search was conducted to gain a broader understanding of the research topic and to identify relevant concepts, theories, and previous findings. Established academic databases, such as Scopus and Chalmers Library, were used to search for relevant literature. This is in line with Bell et al. (2022), who argue that an important purpose of engaging with existing literature is to understand what is already known within the subject area. In the second phase, a more in-depth literature search was conducted based on the material collected during the study. This was done to further develop the framework and relate the study's findings to existing literature.

To gain a better understanding of the cost reductions implemented during 2025, relevant economic documents were reviewed. Together with meetings held with knowledgeable personnel at Volvo Cars, this material was primarily used to establish a foundation for understanding the cost reduction activities introduced during the year, as well as to provide background information on the warranty department.

The customer satisfaction data come from survey results and were obtained from the internal survey portal OneVoice, which captures customers' perceptions of Volvo Cars as a company and its products and services. The data extracted from OneVoice consisted of customer comments as well as several additional data points that were not relevant to the study. All data was transferred from OneVoice to an Excel file, where the irrelevant variables were filtered out. The remaining data points consisted of the customer comments, which served as the source for comparing customer satisfaction regarding warranty between the two years.

3.3 Case selection and sampling

The study was conducted as a single case study in collaboration with the case organisation Volvo Cars. The research problem emerged in connection with ongoing organisational changes, making it a suitable context for examining the differences in customer satisfaction between 2024 and 2025 after the implemented cost reduction activities in 2025. The case was selected based on its relevance to the research purpose and the availability of empirical data, rather than the intention of achieving statistical representativeness. In this thesis, four different markets were selected for analysis, namely Sweden, the United States, South Korea, and Germany. The markets were chosen because they represented varying levels of success following the

implementation of the cost-reduction activities.

The sampling approach for this study consisted of two stages, first criterion sampling and then simple random sampling. Criterion sampling is a purposive sampling method where the sample includes all units that meet a particular criterion (Bell et al., 2022). A criterion-based sample of the comments from the survey portal OneVoice was made by filtering on keywords. By limiting the data collection to entries containing the words *"warranty"*, *"goodwill"*, and *"compensation"* from the years 2024 and 2025, the study excluded many data points considered irrelevant to the research questions. This was done to eliminate comments that were not directly related to warranty and resulted in a reduction from more than 400 000 comments to approximately 3000 per year. However, the criterion-based sampling strategy introduced a risk of keyword bias, as relevant warranty-related comments may have been excluded if customers used other terms than *"warranty"*, *"goodwill"*, or *"compensation"*. Therefore, the sample may not capture the full range of warranty-related customer experiences, but rather reflects the comments identified through the selected keywords.

The customer satisfaction data were extracted from the internal survey portal OneVoice, which captures customers' perceptions of Volvo Cars as a company and its products and services. The dataset consisted of warranty-related customer comments collected from 2024 and 2025. Due to time constraints, it was not feasible to read all comments from each year, and a sample of the dataset was therefore needed. Simple random sampling was chosen, as it is a probability sampling method in which each unit is selected entirely by chance and has an equal probability of being included (Bell et al., 2022). This approach was used to reduce the risk of selection bias when choosing comments for analysis. A sample size of 10% was initially selected, as this was considered feasible to review within the planned time frame. The sample was later expanded by a further 10%, resulting in an analysed sample of 20% of the dataset, as shown in Table 3.1.

Table 3.1: Sample size of the dataset.

	2024	**2025**	**Total**
Total comments	3060	2790	5850
Initial sample (10%)	306	279	585
Analysed sample (20%)	612	558	1170

As shown in Table 3.1, the initial 10% sample would have included 306 comments from 2024 and 279 comments from 2025, resulting in 585 comments in total. By expanding the sample to 20%, the final analysed sample consisted of 612 comments from 2024 and 558 comments from 2025, resulting in 1170 analysed comments in total. The expanded sample was considered beneficial because it increased the empirical basis for identifying recurring themes and reduced the risk that the subsequent thematic analysis would rely on a too limited portion of the available customer comments. The final 20% sample was therefore used as the basis for the thematic analysis and the subsequent quantification of themes and customer pain points.

3.4 Data analysis

The purpose of the data analysis was to find patterns in the qualitative data to be able to answer the research questions of the study. Internal documentation was prepared for the analysis by being scoped in accordance with the research questions and screened using Microsoft Copilot to remove duplicates, ensuring that only relevant and non-redundant comments were included. The data analysis was conducted as an iterative multi-step process combining qualitative and quantitative elements.

Thematic analysis is a flexible approach to analysing qualitative data that focuses on identifying and interpreting meaningful themes within the data in relation to the study's research focus (Bell et al., 2022). In thematic analysis, themes are developed through the researcher's active engagement with the material and are continually reviewed against the data to ensure they are relevant. The comments were analysed manually through close reading and thematic analysis in order to identify recurring patterns and topics within the material. The process of the analysis consisted of several practical stages. First, both researchers familiarised themselves with the dataset to gain an initial understanding of the customer comments. Second, the final sample, corresponding to 20% of the dataset, was divided equally between the two researchers, with each researcher reading and analysing half of the comments from each year. Third, each comment was coded based on its main warranty-related meaning, allowing original themes to emerge during the reading process rather than being predetermined. To preserve the nuance of the data, comments were not forced into previously identified themes. As a result, some overlap between themes emerged, which was addressed in the later stages of the analysis. In addition, each comment was assigned a sentiment classification of either positive or negative in order to enable subsequent analysis of expressed satisfaction across the two years. Comments were classified as positive when they reflected customer satisfaction, appreciation, or a favourable evaluation of the warranty handling. In contrast, comments were classified as negative when they reflected dissatisfaction, frustration, unmet expectations, perceived unfairness, or a negative evaluation of the warranty process.

To strengthen consistency in the coding process, ambiguous comments and uncertain coding decisions were discussed jointly by the two researchers. These discussions helped clarify the boundaries between similar themes, refine the interpretation of theme descriptions, and determine sentiment classification. When disagreements occurred, they were resolved through discussion until a shared interpretation was reached. In cases where comments included both positive and negative elements, the classification was jointly discussed and determined based on the dominant sentiment related to the warranty experience. This procedure was used to reduce individual interpretation bias and enhance coding consistency across similar comments.

To enable a structured analysis of the original themes, a systematic approach was required. Drawing on Kawakita's (1977) model, Scupin (1997) explains that the KJ Method provides a systematic yet flexible approach for analysing qualitative data by grouping observations into themes and higher-order categories, especially when the material is initially fragmented or difficult to structure. In the study the KJ Method

was used as a guiding framework to categorise and cluster all the original themes into higher-level themes and overarching themes. A digital whiteboard was used to support the visualisation and organisation throughout the clustering process. The original themes were clustered based on similarities in the description of the themes, which enabled the development of higher-level themes. Subsequently, an additional round of clustering was conducted on the higher-level themes to generate a set of overarching themes that could support a more structured and systematic analysis. This made it possible to exclude themes that were not directly related to warranty issues nor with the implemented cost reductions and therefore fell out of the scope. Due to limitations when filtering warranty-related comments in the data collection, many comments focused on issues unrelated to warranty. As a result, some initial themes reflected topics that were not relevant for the continued analysis.

Bell et al. (2022) argue that qualitative data can benefit from a degree of quantification. In thematic analysis, the frequency of certain words, incidents, or phrases help determine which themes are identified as important. The subsequent step in the analysis involved quantifying the data to facilitate a comparison of similarities and differences in comments and themes across the two years. This was achieved by focusing on the overarching themes considered relevant to the research purpose and analysing the sentiment expressed within these themes. The proportion of positive and negative comments was then calculated, providing a basis for assessing whether any change could be observed between the years.

Following the quantification of the data, a second round of the KJ Method was conducted to identify customer pain points. This time, only the relevant original themes were grouped based on similarities in how they affected customers. This led to the development of a set of customer pain points related to warranty issues. The identified pain points were then quantified, similarly to the overarching themes, in order to examine differences between the two years. This was done by analysing both changes in sentiment across the pain points and changes in the number of comments associated with each pain point.

3.5 Reliability, replicability, and validity

Reliability of a study relates to the consistency with which data collection and analysis procedures are applied throughout the research process (Bell et al., 2022). To ensure consistency in the data collection, several aspects were taken into consideration throughout the research process. Reliability was addressed in the collection and analysis of the secondary data by ensuring that the comments were interpreted and analysed consistently over time. The data were collected through established company processes that are consistent across the measured periods. As the comments were manually read and categorised into themes by two researchers, there was a risk that individual interpretation could influence the analysis. This was addressed by dividing the sample equally between the researchers and by discussing ambiguous comments and uncertain coding decisions jointly throughout the analysis process. These discussions helped clarify the boundaries between similar themes and

strengthened the consistency of coding across the dataset. These procedures contributed to a structured research process, helping to ensure that the findings were as systematic as possible reducing the risk that decisions were shaped by randomness or individual bias.

Replicability concerns whether another researcher could replicate the study and arrive at similar findings by following the same methodological approach (Bell et al., 2022). In this study it was addressed through a transparent description of case selection, data collection, and analytical procedures. Furthermore, the procedures for data collection were described in a structured manner. Finally, the analytical process was outlined step by step to enable traceability from data collection to interpretation. Together, these descriptions ensured a transparent research process that allows the study to be followed and assessed by other researchers.

Validity refers to whether the conclusions of a study are well-founded and accurately represent what the research set out to investigate (Bell et al., 2022). In this study it concerned whether the selected methods and data sources captured the relationship between customer satisfaction and cost reduction initiatives. The secondary data was suitable as the main empirical basis for the study, as internal documentation regarding customer satisfaction and cost reduction activities reflected the concepts addressed in the research questions. The data was collected as part of the company's regular operational procedure and covered the same time period as the implemented cost reduction initiatives. This enabled a longitudinal before-after analysis of the change in customer satisfaction. The sample size was increased from 10% to 20% of the total number of comments in order to strengthen the validity of the analysis. As sampling error decreases with increasing sample size (Bell et al., 2022), the larger sample was considered important for improving the accuracy of the findings and strengthening the robustness of the results. However, the validity of the findings is still limited by the keyword-based sampling strategy and by the fact that the analysis only includes customers who left written comments. As a result, the findings should be interpreted as patterns within the analysed sample rather than as fully representative of all warranty-related customer experiences.

3.6 Ethical considerations

Ethical considerations were made during the data collection, particularly regarding the handling of internal and sensitive company information. Bell et al. (2022) ethical considerations were used as the guide to make sure confidentiality was maintained throughout the research process. When presenting the findings of the study, information that could be of harm was anonymized or aggregated to ensure that neither individuals nor sensitive organisational details could be identified. Furthermore, all data collection was used solely for the research and not shared or applied in other contexts.

Furthermore, AI or LLMs have been used in this thesis. They have been used sparingly and only used for language refinement, sentence formulation, and to assist in filtering out duplicate entries during data collection. They have not been used in the decision-making process or in generating the insights presented in the thesis.

4

Results

This chapter presents the empirical findings from the analysis of customer comments from 2024 and 2025. It first describes the identification and clustering of original themes into higher-level and overarching themes, followed by the quantification of relevant warranty-related comments. The chapter then presents the identified customer pain points and compares their distribution and sentiment between the two years.

4.1 Identification of original themes

While reading the 20% of the total comments a thematic analysis was executed. The method enabled themes to occur gradually as comments were read. The aim for the thematic analysis was to find recurring themes in the sample. Eventually, no more themes were found, resulting in 38 identified original themes, as shown in Table 4.1. These themes reflect various dimensions of the customer experience in relation to warranty handling, covering a broad range of aspects including coverage, communication, and service delivery. While some of the themes reflect on specific operational experiences, other themes capture a broader experience. Due to the chosen method, where new themes are documented along the way, several themes show a degree of overlap, as explained in Section 3.4.

4.2 Clustering and quantification of themes

While the initial analysis resulted in 38 themes, the relatively large number of themes, as well as the observed overlap, complicated further analysis of the findings in detail. To create a more structured and analytically meaningful framework, the themes were clustered into broader categories using the KJ Method. The KJ Method structured the original themes around similarities between the description of them, as illustrated in Figures 4.1–4.4. In these figures, the original themes are represented by grey coloured boxes, while the yellow and pink coloured boxes indicate higher-level and overarching themes.

Figure 4.1 illustrates overarching theme A, *"Discrepancy between customer expectations and actual coverage"*. Original themes 7 and 19 both capture situations where customers perceived a mismatch between what they expected the warranty

Table 4.1: Original themes identified in the analysis.

No.	Theme	No.	Theme
1.	Irrelevant for the study's research questions	20.	General unhappiness with the warranty experience
2.	The customer expressed that the service is expensive	21.	The customer expressed that it is expensive to own a Volvo after the warranty expires
3.	Need to wait a long time to get a warranty appointment	22.	General happiness with the goodwill experience
4.	The warranty covered more than or as the customer expected	23.	Low levels of goodwill compensation shortly after the warranty expired
5.	Recurring quality issues with the car	24.	Fear of high repair and maintenance costs after the warranty expires
6.	The customer expressed that the warranty repair took too long	25.	The customer expressed that they got no information about what the goodwill covered
7.	The warranty covered less than or not at all what the customer expected	26.	The customer was pleased to receive a loaner car
8.	The customer expressed that they got no information about what the warranty covered	27.	The customer expressed that the communication about warranty was insufficient and non-transparent
9.	The customer got help to ensure the warranty was applied and expenses were covered	28.	General happiness with the warranty experience
10.	Quality issues with the car	29.	The goodwill compensation covered less than or not at all what the customer expected
11.	Too many warranty and quality issues with the car	30.	The customer expressed that the issue was found and solved only after the warranty had expired
12.	The customer expressed that the warranty is expensive	31.	The customer expressed that the warranty period is too short
13.	The repair under warranty resulted in another failure	32.	The customer expressed that the communication about warranty was sufficient and transparent
14.	The customer needed to argue with personnel to ensure that the warranty covered the issue	33.	The customer perceived the goodwill compensation as too low
15.	Missing spare parts for the warranty appointment	34.	The goodwill compensation covered more than or as the customer expected
16.	Poor interaction with service staff	35.	General unhappiness with the goodwill experience
17.	Good quality of the car	36.	The customer expressed that they were not compensated enough
18.	No loaner car was available, or the customer had to pay for one	37.	The customer had to pay for unexpected repairs that had not been communicated in advance
19.	The customer had to pay despite the warranty still being valid	38.	The customer expressed that they were fairly compensated

to cover and what was actually covered. While theme 7 reflects cases where the warranty covered less than expected, theme 19 captures situations where customers had to pay despite perceiving the warranty as still valid. Due to this shared focus on unmet coverage expectations, these themes were grouped into higher-level theme A1, *"Warranty does not cover what customers believe"*. Original themes 8, 14, and 27 capture a different but related issue, namely uncertainty and lack of clarity in warranty handling. These themes include situations where customers lacked information about coverage, had to argue to receive warranty support, or experienced insufficient and non-transparent communication. They were therefore grouped into higher-level theme A2, *"Uncertainties about warranty"*. Original theme 25 was kept as a separate higher-level theme, A3, *"Goodwill does not cover what customers believe"*, because it also concerns a mismatch between expected and actual coverage, but specifically in relation to goodwill rather than the base warranty. Together, A1, A2, and A3 show that overarching theme A is not only about whether Volvo Cars covered a repair or not, but about customers experiencing a discrepancy between their own expectations and the actual handling of warranty or goodwill coverage.

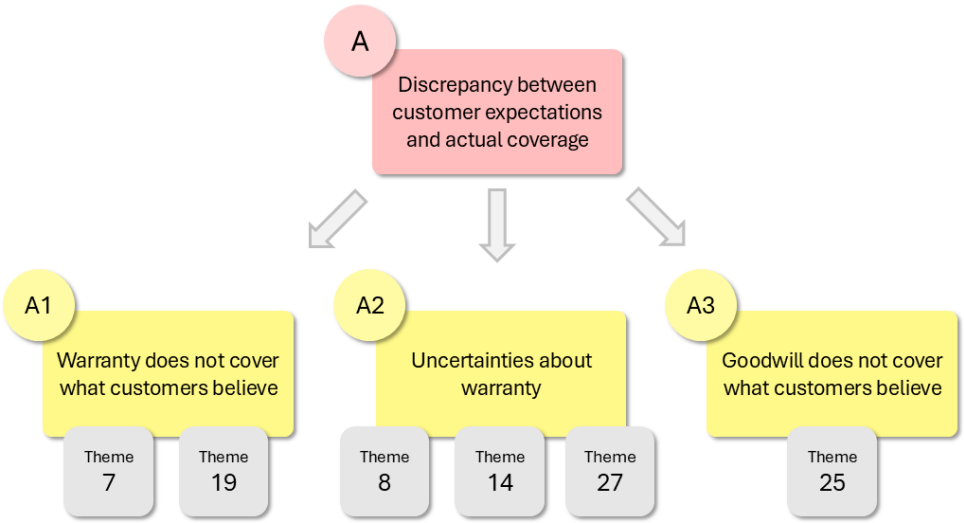

Figure 4.1: Visualization of overarching theme A, *"Discrepancy between customer expectations and actual coverage"*.

Figure 4.2 illustrates overarching theme B, *"High post-warranty costs"*. Original themes 23, 29, and 33 all capture situations where customers perceived the goodwill compensation as insufficient in relation to their expectations. These original themes reflect dissatisfaction with how much financial support was provided after the base warranty had expired, and were therefore grouped into higher-level theme B1, *"Not enough goodwill"*. Original themes 21, 24, 30, and 31 capture a related but broader concern, namely customers' perceptions that owning a Volvo becomes costly once the warranty period has ended. These themes include comments about high repair and maintenance costs, concerns about expensive ownership after the warranty expires, problems being identified only after the warranty had expired, and perceptions that the warranty period was too short. Due to this shared focus

on financial exposure after the warranty expires, these themes were grouped into higher-level theme B2, *"Costly to own a Volvo without warranty"*. Together, B1 and B2 show that overarching theme B captures customer dissatisfaction linked to the financial consequences that arise when the base warranty or goodwill support is no longer valid.

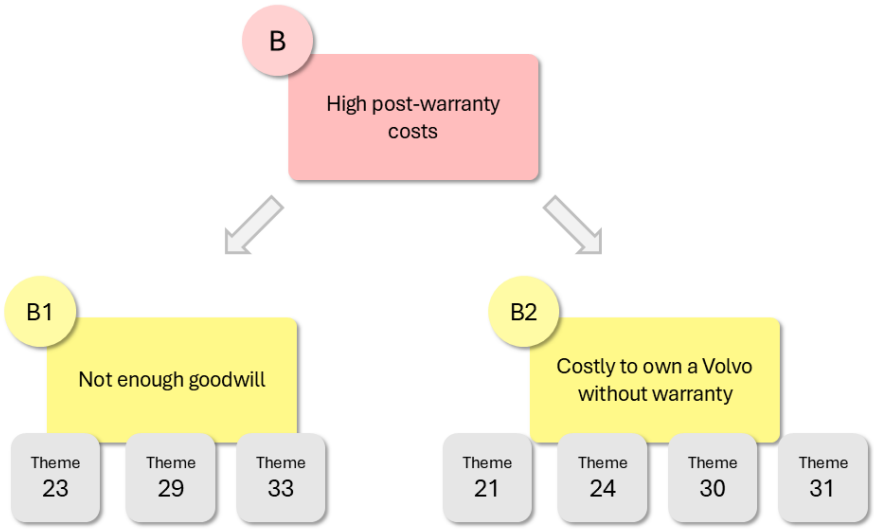

Figure 4.2: Visualization of overarching theme B, *"High post-warranty costs"*.

The overarching theme C, *"Satisfied with compensation"*, is shown in Figure 4.3. Original themes 4, 9, and 32 capture situations where customers expressed positive experiences related to warranty handling. These themes concern cases where the warranty covered more than or as much as the customer expected, where customers received support in ensuring that the warranty was applied, or where the communication about warranty was perceived as sufficient and transparent. Due to this shared focus on positive warranty-related experiences, these themes were grouped into higher-level theme C1, *"Satisfied with warranty"*. Original theme 34 captures positive experiences specifically related to goodwill compensation, where the level of goodwill coverage met or exceeded customer expectations. Since this theme concerned goodwill rather than the base warranty, it was kept as a separate higher-level theme, C2, *"Satisfied with goodwill"*. Together, C1 and C2 show that overarching theme C captures situations where compensation-related handling contributed positively to the customer experience, either through warranty coverage, support in the warranty process, clear communication, or goodwill compensation.

Figure 4.3: Visualization of overarching theme C, *"Satisfied with compensation"*.

Figure 4.4 illustrates overarching themes D, E, F, and G, which were identified during the clustering process but excluded from the subsequent in-depth analysis. These four overarching themes were generated from 21 of the original themes and capture comments that were either too broad, primarily related to product quality and general cost concerns, connected to appointment issues, or outside the scope of the study. Theme D, *"Broad opinions"*, includes general positive or negative statements about the warranty or goodwill experience that did not provide sufficient detail to support a deeper analysis of specific customer pain points. Theme E, *"Problems with quality and cost"*, captures comments concerning product quality or general service cost rather than warranty handling itself. Theme F, *"Appointment related"*, includes comments about waiting times, repair duration, spare parts, and loaner cars, which were not directly connected to the study's focus on warranty coverage and goodwill. Finally, theme G, *"Not within scope"*, includes comments that were not sufficiently related to the research questions. The clustering process helped clarify which parts of the dataset were analytically relevant for continued analysis and which parts could have introduced noise if included, resulting in separating the overarching themes D, E, F, and G from the overarching themes A, B, and C.

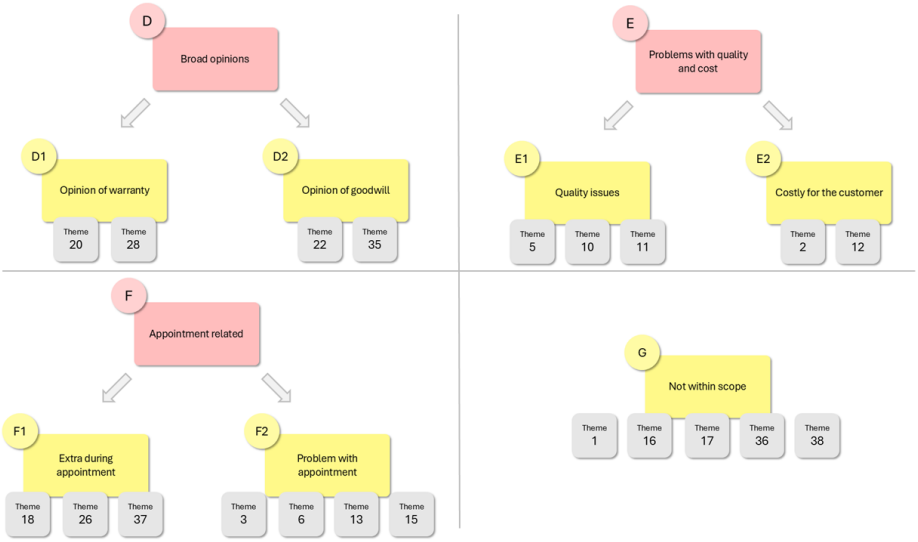

Figure 4.4: Visualization of overarching themes D, E, F, and G.

In order to answer the study's research questions, the comments within overarching themes A–C were quantified and classified according to sentiment. The clustering presented in Figures 4.1–4.4 was therefore an important analytical step, as it made it possible to distinguish warranty- and goodwill-related themes from themes that were outside the scope of the study. As shown in Table 4.2, this quantification enabled a comparison of the number of relevant comments and the share of positive comments between 2024 and 2025.

Table 4.2: Distribution of comments within included themes A–C and excluded themes D–G in 2024 and 2025.

	2024	**2025**
Total comments (Themes A–C)	353	319
Positive comments (Themes A–C)	143	139
Positive comments (%)	41%	44%
Total comments excluded (Themes D–G)	259	239

Table 4.2 shows that 353 comments related to overarching themes A–C were identified in 2024, compared with 319 in 2025. Of these comments, 41% in 2024 and 44% in 2025 were classified as positive. Consequently, 259 comments in 2024 and 239 comments in 2025 were excluded from the continued analysis, as they belonged to the overarching themes D–G. This indicates that the share of positive warranty- and goodwill-related comments increased slightly between the two years, while the exclusion of the overarching themes D–G ensured that the continued analysis remained focused on themes directly connected to the research questions. The quantification of themes A–C therefore provided the basis for the subsequent identification, quantification, and prioritisation of customer pain points.

4.3 Identification and quantification of pain points

Building on the total comments of overarching themes A-C, a second KJ Method was conducted. The aim of the second KJ Method was to identify customer pain points related to warranty handling. In contrast to the first KJ Method, the second KJ Method grouped themes based on how they similarly affected customers. This step resulted in five different pain points visualized in Figures 4.5-4.9 where the original themes are represented by grey coloured boxes, while the blue coloured boxes represent the pain points.

Figure 4.5 illustrates the clustering of pain point A, *"What is included in the warranty"*, formed by the original themes 4, 7, and 19. This pain point reflects both positive and negative customer perceptions of whether the warranty covered what they expected it to cover. This issue is relevant as a customer pain point because it reflects a recurring source of satisfaction or dissatisfaction in warranty handling. While some customers expressed satisfaction with the scope of the warranty, others experienced disappointment regarding what was included. For example, in a comment within the original theme 4, a customer expressed that *"Warranty was provided for failed components and thorough diagnostic was provided"*. On the other hand, in a comment from original theme 19, another customer expressed *"Despite an incredibly long list of serious failures, not all of the work was covered under warranty. Was stuck with an additional $2000 repair bill"*.

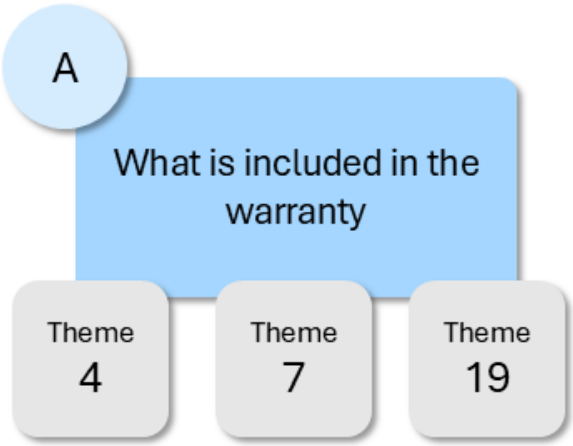

Figure 4.5: Visualization of pain point A, *"What is included in the warranty"*.

In Figure 4.6, pain point B, *"Goodwill compensation"*, formed by original themes 23, 25, 29, 33, and 34 is illustrated. These reflect customer opinions regarding goodwill compensation, in particular coverage and communication. This was identified as a customer pain point because limited or unclear goodwill compensation can create dissatisfaction and negatively shape the customers perception of warranty handling. While four of the original themes indicate negative sentiment, original theme 34

represents positive sentiment in this pain point. For example, original theme 23 have comments as *"A bit lacking in goodwill for issues that broke down just after the warranty expired, even though these are well-known component defects"*, while original theme 34 have comments as *"We submitted the car for a repair that was quite expensive, but your technician contacted Volvo, who covered it as goodwill"*.

Figure 4.6: Visualization of pain point B, *"Goodwill compensation"*.

Figure 4.7 illustrates customer pain point C, *"Ease of warranty application"*, and is formed by the original themes 9 and 14. This pain point reflects on how easy it is for the customer to obtain warranty, more specifically whether they needed to argue for coverage or received assistance from service personnel. This was considered a customer pain point because the ease of the service process can strongly influence customers' perceptions of warranty handling. An example of a comment in original theme 9 is *"He worked on check if the repair would be under warranty. I appreciate the great service and know I can trust Volvo"*. On the other hand, comments from original theme 14 show a negative story, such as *"When the problem (distance sensors blocked) was identified and a repair was booked, we were informed that this would be covered under warranty (which was also noted on the work order). When we later went to pick up the car after the work was completed, we were told that it was not a warranty case. We objected to this, and then it was covered under warranty again"*.

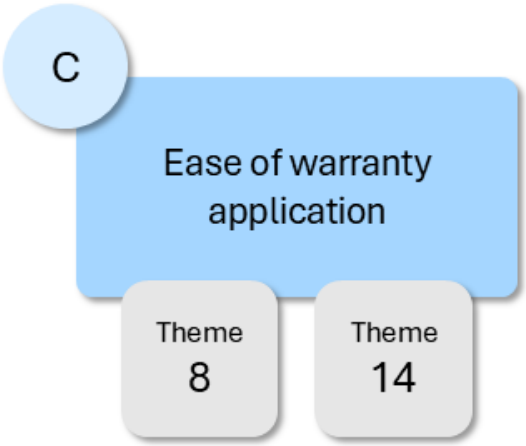

Figure 4.7: Visualization of pain point C, *"Ease of warranty application"*.

In Figure 4.8, pain point D, *"Expenses post-warranty"*, formed by original themes 21, 24, 30, and 31 is illustrated. These reflect how customers perceive Volvo ownership after the warranty period has expired. This was identified as a customer pain point, as the post-warranty process and expenses significantly influences how satisfied customers are with the overall warranty experience. All of the original themes contributing to this pain point reflect a negative perspective, as illustrated in comments such as *"Fortunately, it's only been a nuisance at this point because it is under warranty, but soon it will be off warranty, and I am terrified to know how much it's going to cost to keep fixing the little glitches"* from the original theme 24 and *"My ongoing issue was only properly investigated after the warranty period had expired. … The problem first occurred just 6 months after purchase and has been recurring ever since"* from the original theme 30.

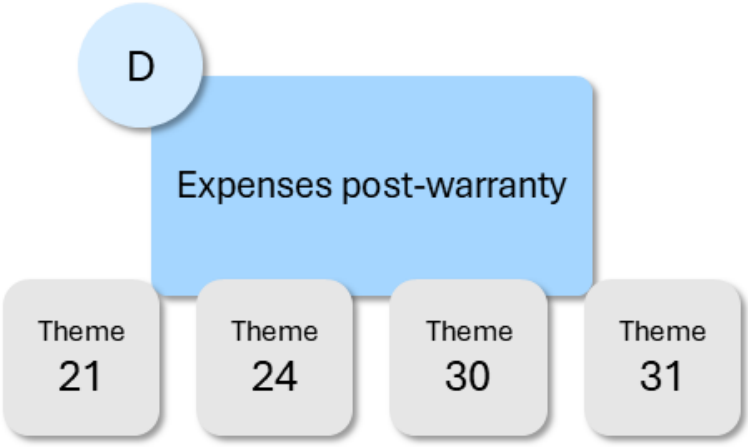

Figure 4.8: Visualization of pain point D, *"Expenses post-warranty"*.

Figure 4.9 illustrates customer pain point E, *"Customers knowledge of warranty coverage"*, formed by the original themes 8, 27, and 32. This reflect that customers see value in having transparent communication about warranty. This is identified as a customer pain point because communication that reaches customers largely determines whether their experience of warranty is positive or negative. While some expressed satisfaction with the communication about warranty, others indicate dissatisfaction when these are missing or lacking information about warranty. An example of a positive experience expressed in a comment from original theme 32 is *"In regards to the warranty work being done on my vehicle. I felt she was being honest and transparent for the warranty services being done on my vehicle"*, while a negative experience is expressed in a comment from original theme 27, such as *"I explained what issue I had with the car, I asked if it would be covered by the emissions warranty, and I provided the model year, mileage, and registration number. He said yes that it would be covered and booked an appointment. But once I was there, he suddenly said it was not covered"*.

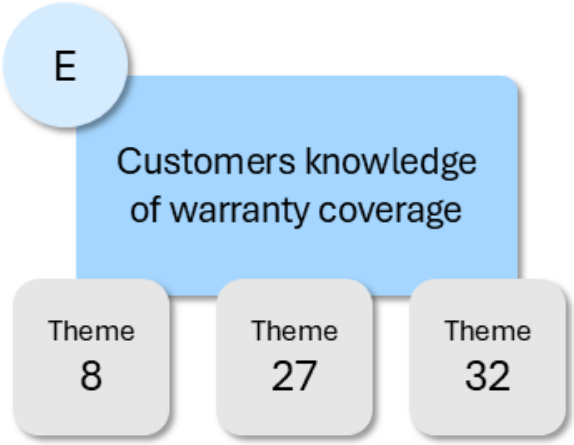

Figure 4.9: Visualization of pain point E, *"Customers knowledge of warranty coverage"*.

After establishing the five different customer pain points a second quantification was done. For both 2024 and 2025, the number of comments in each pain point was identified, after which the percentage by each pain point was calculated, as shown in Table 4.3. The results show that pain point A, accounting for 47% in 2024 and 46% in 2025, is by far the largest pain point in terms of the share of comments. Pain point E represents the second largest pain point, accounting for 18% in 2024 and 17% in 2025. When examining the results, pain points B, C, and D vary in rank between 2024 and 2025. In 2024, pain point B is the third largest, followed by C and then D, whereas in 2025, pain point C ranks third, followed by D and then B. In addition to the changes in ranking, the percentages for pain points B, C, and D differ more noticeably between the two years than for pain points A and E. The largest difference is shown in pain point B where the share of comments

is 5 percentage points lower in 2025 from the year before. Pain point C has a 4 percentage point bigger share of comments in 2025 than in 2024 and pain point D has a 3 percentage points difference between the years.

Table 4.3: Distribution of the comments within pain points A–E.

Pain point	Number of comments 2024	Number of comments 2025	Share of comments 2024	Share of comments 2025	Difference 2025–2024
A–E	353	319	100%	100%	0 pp
A	167	147	47%	46%	-1 pp
B	46	27	13%	8%	-5 pp
C	42	50	12%	16%	+4 pp
D	35	41	10%	13%	+3 pp
E	63	54	18%	17%	-1 pp

Furthermore, in the second quantification, both the number and share of negative comments were calculated for each pain point for 2024 and 2025. This was done to complement the frequency-based distribution presented in Table 4.3, as the most frequently mentioned pain point is not necessarily the pain point associated with the highest level of dissatisfaction. As shown in Table 4.4, the sentiment distribution therefore provides an additional basis for comparing the relative importance of the identified pain points.

Table 4.4: Distribution of sentiment within the pain points A–E.

Pain point	Total comments 2024	Total comments 2025	Number of negative comments 2024	Number of negative comments 2025	Share of negative comments 2024	Share of negative comments 2025	Difference 2025–2024
A	167	147	71	70	43%	48%	+5 pp
B	46	27	28	18	61%	67%	+6 pp
C	42	50	20	9	48%	18%	-30 pp
D	35	41	35	41	100%	100%	0 pp
E	63	54	56	43	89%	80%	-9 pp

The results in Table 4.4 show that pain point D consists exclusively of negative comments in both 2024 and 2025, making it the most negative among the five pain points. The pain point with the second largest share of negative comments is pain point E, with 89% in 2024 and 80% in 2025. Pain point B represents the third largest share of negative comments, with 61% in 2024 and 67% in 2025. In contrast, pain points A and C change position between the two years. In 2024, pain point C

has a higher share of negative comments than pain point A, whereas in 2025, pain point A has a higher share of negative comments than pain point C. This shows a shift in ranking between the two pain points over time. Focusing on the difference between the years, pain points A and B show an increase in negativity from 2024 to 2025, while pain point D remains unchanged. In contrast, pain points C and E show a decrease in negativity over the same period. More specifically, pain point A increases by 5 percentage points and pain point B by 6 percentage points, whereas pain point C decreases by 30 percentage points and pain point E by 9 percentage points.

5

Discussion

This chapter discusses the findings in relation to the literature framework and the research questions. It interprets the observed changes in customer satisfaction and explores how the identified pain points may be understood through concepts such as expectations, perceived fairness, service recovery, and operational trade-offs. The chapter also considers which pain points appear most important to monitor over time and discusses potential long-term risks.

5.1 Customer satisfaction and cost reductions

The findings show that the positive comments increased from 41% to 44%, indicating a slight increase in positive sentiment in warranty-related customer comments between 2024 and 2025. However, this should be interpreted with caution, as the difference between the years is relatively small and should not be understood as statistically significant. Moreover, due to the before-and-after case study design, the results should be interpreted as observed patterns in the data rather than evidence of causal effects. The study can therefore show that no short-term decline was observed in the analysed customer comments during the period in which cost reduction initiatives were implemented, but it cannot establish whether the initiatives caused, prevented, or had no effect on customer satisfaction.

One possible expectation, given the implementation of cost reductions within the warranty department, was that customer satisfaction indicators would decline. From a trade-off perspective, Slack and Lewis (2020) argue that a stronger focus on cost as a performance objective may create tensions with other objectives, such as service quality, responsiveness, and dependability. In contrast, Ferdows and De Meyer's (1990) cumulative capability perspective suggests that cost efficiency and customer-related performance do not necessarily have to move in opposite directions if operational improvements support several capabilities simultaneously. The findings of this study do not provide clear evidence for either perspective. However, the analysed customer comments did not show a clear short-term deterioration between 2024 and 2025. This indicates that the relationship between cost reduction and customer satisfaction should not be interpreted as a direct trade-off, but neither does it prove that the cost reduction initiatives had no negative effect on customer experience.

The findings can be interpreted in two different ways. One interpretation is that the analysed customer comments did not capture any noticeable negative change in the customer experience during the period studied. This interpretation suggest that the cost reduction activities did not visibly affect how customers expressed their warranty-related experiences in the available data. Another interpretation is that customer satisfaction in warranty-related cases is shaped by several mechanisms beyond the final warranty outcome. Expectancy-disconfirmation theory suggests that satisfaction depends on how the actual experience compares with prior expectations (Oliver, 1980). In this context, customers may still evaluate the warranty experience positively if the handling is perceived as reasonable in relation to what they expected, even when the final outcome is not ideal.

This interpretation is supported by service recovery and perceived value literature. Warranty cases often resemble service recovery situations, as customers typically turn to the company when a problem has already occurred. Smith et al. (1999) argue that customer evaluations depend not only on the service failure itself, but also on how the organisation responds to it. Similarly, Zeithaml (1988) highlights that customers assess value through the overall exchange, rather than solely through the monetary outcome. Taken together, these perspectives suggest that customers evaluate warranty handling through several dimensions: whether the outcome matches expectations, whether the process is perceived as fair and supportive, and whether the overall exchange is considered reasonable. Within the scope of this study, these should be understood as possible explanations for the observed pattern rather than as evidence that the cost reduction initiatives had no negative effect.

This broader view of satisfaction is further reinforced by customer experience literature. Lemon and Verhoef (2016) suggest that customer experiences are not shaped by a single interaction, but develop throughout the entire customer journey. In the warranty context, satisfaction may therefore be influenced by several touchpoints, including initial contact, communication with the workshop or dealer, information about the case, the handling process, and the final resolution. This means that customers' overall impression may remain positive even if one specific element of the experience is less favourable. However, the slight observed increase in positive sentiment should not be interpreted as evidence that cost reduction improved customer satisfaction. Rather, the literature suggests that customer satisfaction in warranty contexts is shaped by several mediating mechanisms, including expectations, perceived value, fairness, communication, and process support. The relationship between cost reduction and customer satisfaction should therefore be understood as indirect, context-dependent, and potentially delayed, and should be analysed through how customers experience warranty and goodwill handling rather than through cost reduction alone.

To understand why no clear short-term decline was observed, it is therefore necessary to move beyond the overall share of positive comments and examine the specific pain points through which customers experience warranty handling. The following section uses the literature framework to analyse how these pain points relate to expectations, value, fairness, trust, and customer journey touch points.

5.2 Customer pain points in warranty handling

The result identifies five distinct customer pain points, covering different themes identified in customer comments from the survey platform OneVoice. Together, these pain points suggest that the customer warranty experience is shaped by a limited number of recurring and embedded issues. However, the identified pain points within the study's dataset differ in both frequency and level of negativity. Therefore, both metrics need to be considered in order to understand their relative importance for understanding overall customer satisfaction with Volvo Cars' warranty handling. The pain points are therefore discussed individually below, with focus on whether their importance is primarily reflected in the share of comments, share of negativity, or a combination of both.

5.2.1 Warranty coverage

Pain point A, *"What is included in the warranty"*, is the most prominent pain point in both years, indicating that warranty coverage is a recurring concern in the warranty experience. The increase in negative sentiment indicates that pain point A became somewhat more problematic in 2025, which can be interpreted through several theoretical perspectives. From an expectancy-disconfirmation perspective (Oliver, 1980), this may suggest an increasing gap between customer expectations and perceived warranty coverage in 2025 compared to 2024. This interpretation is also consistent with the Kano model presented by Löfgren et al. (2011), where warranty coverage can be understood as a must-be quality attribute. Customers are likely to have a prior expectation that the warranty should cover their issues and take it for granted, leading to disappointment when this basic expectation is not fulfilled. Service recovery literature (Smith et al., 1999) further suggests that customers evaluate not only whether the problem is solved, but also whether the response is perceived as fair. The increase in negative comments in 2025 may therefore reflect both unmet expectations and a perceived lack of fairness in the service response.

Together, these perspectives show that pain point A operates on several levels. It concerns the formal scope of warranty coverage, but also the extent to which customers perceive the outcome as expected, reasonable, and fair. This makes warranty coverage important not only as an operational issue, but as a central mechanism through which customers evaluate Volvo Cars' reliability and fairness.

5.2.2 Customer knowledge of warranty handling

Pain point E, *"Customer knowledge of warranty coverage"*, is also one of the most prominent pain points in both years, indicating that customers' understanding of warranty coverage plays an important role in the warranty experience. Although the pain point remained associated with negative sentiment, its decline indicates a somewhat more positive evaluation in 2025. As described by Lemon and Verhoef (2016), the customer experience is formed by touch points throughout the customer journey. Pain point E can be understood as a critical touch point in the overall

customer experience, as miscommunication or missing information may create dissatisfaction. When communication or information is unclear, customers may form inaccurate expectations, which can result in dissatisfaction based on Oliver's (1980) expectancy-disconfirmation perspective.

Furthermore, this finding can be understood through the distinction between procedural justice and interactional justice (Smith et al., 1999). From this perspective, unclear information may be interpreted as unfair in procedural terms, while unclear communication may be interpreted as unfair in interactional terms. This suggests that customer knowledge of warranty coverage should not only be understood as an information issue, but as a mechanism that influences expectations, perceived fairness, and trust. In this context, communication is not merely a supporting activity in the warranty process, but a condition for perceived transparency and confidence in Volvo Cars' reliability and integrity, which Morgan and Hunt (1994) identify as central to trust.

The decrease in negative sentiment may therefore indicate an improvement in how customers experienced warranty communication in 2025. However, the high remaining level of negativity suggests that this pain point continues to be a sensitive area to monitor, particularly because unclear communication can create dissatisfaction even when the formal warranty decision is consistent with policy.

5.2.3 Goodwill compensation

Pain point B, *"Goodwill compensation"*, represents a smaller share of the comments, but remains relevant due to its relatively high level of negative sentiment. Although this pain point was mentioned less frequently in 2025, the increase in negativity indicates that goodwill compensation remains an important factor in how customers evaluate warranty handling. This development may be related to the new goodwill policies, as both the level of compensation and the timeframe during which goodwill may be granted were changed.

This pain point can be understood through a fairness perspective, as service recovery is not only evaluated in terms of whether the problem was solved, but also whether the outcome is perceived as fair (Smith et al., 1999). Since goodwill compensation is not guaranteed, customers are likely to place particular emphasis on distributive justice, meaning whether the level of compensation is perceived as fair and proportionate. This may explain why negative sentiment increased among customers who commented on this issue, as the outcome may have been perceived as insufficient after the policy change. At the same time, customers who perceived the compensation as fair may have been less likely to mention goodwill as a concern. Beyond fairness, perceived value theory adds an additional perspective to this interpretation. While justice theory focuses on whether the compensation is perceived as fair, perceived value theory highlights whether the customer considers the overall exchange worthwhile in relation to money, time, effort, and uncertainty (Zeithaml, 1988). This is particularly relevant in goodwill cases because customers may evaluate not only the level of compensation, but also whether Volvo Cars' response appears reasonable

in relation to the age of the vehicle, the nature of the defect, and their previous relationship with the brand.

When the compensation is perceived as insufficient, this can be interpreted as an expectancy-disconfirmation mismatch (Oliver, 1980). In such cases, the outcome does not align with customer expectations, which is particularly relevant as the new policy applies a stricter timeframe for goodwill compensation. The Kano model further adds to this interpretation (Löfgren et al., 2011), as goodwill compensation may be perceived either as an attractive or a must-be quality attribute depending on prior expectations. For some customers, goodwill compensation may be experienced as an attractive attribute because it exceeds formal warranty obligations. For others, especially when the problem occurs shortly after the warranty expires or concerns a recurring defect, goodwill may instead be perceived as expected. This variation helps explain why goodwill compensation can generate satisfaction for some customers and dissatisfaction for others, depending on whether it is perceived as exceeding, meeting, or falling short of expectations.

5.2.4 Ease of warranty application

Pain point C, *"Ease of warranty application"*, represents an important aspect of the warranty experience, as it reflects how customers perceive the process of handling warranty claims. While the pain point became slightly more frequently mentioned in 2025, the most notable change was the 30 percentage point decrease in negative sentiment, indicating a considerably more positive evaluation of the warranty application process. Since this process represents one of the customers' direct interactions with Volvo Cars during warranty handling, pain point C can be understood as a brand-owned touch point within the customer journey (Lemon & Verhoef, 2016). As brand-owned touch points are more directly controlled by the firm, the handling of warranty applications becomes particularly important for shaping customers' evaluations of the process.

If the process of applying for a warranty case is perceived as complicated or inefficient, customers may interpret it as procedurally unfair. This is particularly important in automotive repair settings, which Andaleeb and Basu (1998) describe as often complex and therefore requiring a higher level of customer support. Effective service recovery is therefore essential to reduce the risk of customers perceiving the process as unfair. The substantial decrease in negative sentiment may indicate that customers perceived the application process as more effective and fair in 2025. One possible explanation is increased support throughout the process, as stricter retailer guidelines were introduced alongside the policy changes.

Furthermore, the decrease in negative sentiment can be understood from an expectancy-disconfirmation perspective (Oliver, 1980), as customers may expect to receive support when applying for a warranty case. This also suggests that support throughout the warranty application process may function as a one-dimensional quality attribute, where the quality of assistance strongly influences how customers evaluate the overall service experience. This connects the pain point to cognitive trust, since

customers may interpret an easier and more supportive warranty application process as a sign that Volvo Cars is competent and reliable. In this way, pain point C illustrates how operational process design can influence customer perceptions even when the formal warranty policy remains restrictive.

5.2.5 Expenses post-warranty

Pain point D, *"Expenses post-warranty"*, stands out as a smaller but consistently negative issue. Although it represents a relatively limited share of the comments, the 100% negative sentiment in both years indicates that post-warranty expenses may have a disproportionate impact on customers' evaluation of the warranty experience. Since this pain point relates to the period after the warranty has expired, it can be understood in relation to customer expectations. Customers may still expect or hope for continued financial support when facing vehicle problems, particularly in situations perceived as unexpected or unreasonable. This interpretation is supported by Oliver (1997), who argues that expectations are shaped by prior experiences, accumulated interactions, and increased access to information. As a result, expectations may continue to rise even when the level of service support remains unchanged. From an expectancy-disconfirmation perspective (Oliver, 1980), dissatisfaction may therefore arise when the level of support after the warranty period does not align with customer expectations. From a service recovery perspective (Smith et al., 1999), post-warranty situations may still be interpreted by customers as opportunities for Volvo Cars to respond to problems, even when the formal warranty obligation has ended. If such support is not provided, customers may feel that their concerns are not properly acknowledged, which can reinforce dissatisfaction.

In addition, customers are likely to evaluate post-warranty situations in terms of fairness, particularly from a distributive justice perspective (Smith et al., 1999). Even though the warranty has expired, customers may still perceive the outcome as unfair if they are left with high costs for problems they consider to be beyond their control. This suggests that post-warranty expenses are not only evaluated as financial costs, but also in relation to perceived responsibility and brand expectations. Over time, such unmet expectations and perceptions of unfairness may affect customers' cognitive and affective trust in the firm (Johnson & Grayson, 2005). Compared with the other pain points, post-warranty expenses may therefore be particularly relevant from a long-term relationship perspective, as repeated experiences of high post-warranty costs may weaken trust and reduce loyalty over time, even if they do not immediately dominate the overall sentiment results.

5.3 Prioritisation of pain points

Some pain points show more positive changes in sentiment between 2024 and 2025, particularly pain point C and, to some extent, pain point E. However, this does not necessarily imply that these are the most critical pain points for Volvo Cars warranty department to prioritise and monitor closely. Instead, determining which pain points are most important requires considering not only changes in sentiment,

but also how frequently customers mention each pain point. In addition to frequency and sentiment, some pain points may be strategically important because they can shape expectations, perceived fairness, trust, or loyalty. This means that any pain point may still require attention if it is connected to long-term customer relationship consequences.

From a frequency perspective, pain point A emerges as the most dominant. It represents by far the largest share in both years, accounting for nearly half of all comments related to the identified pain points. Given its large share, pain point A indicates a structurally embedded issue and suggests that warranty coverage can be understood, from a Kano model perspective (Löfgren et al., 2011), as a must-be quality attribute. If customers perceive warranty coverage as a basic expectation, even small negative changes in this area may have an effect on dissatisfaction. Such changes could create an expectancy-disconfirmation gap (Oliver, 1980), as dissatisfaction may arise when coverage decisions are perceived as inconsistent with what customers believe the warranty should provide. Pain point A should therefore be prioritised not only because it is the largest category, but because it concerns a core expectation in the warranty experience.

From a sentiment perspective, pain point C shows the clearest improvement, despite representing a relatively small share of the comments. The share of negative comments within pain point C decreased from 48% in 2024 to 18% in 2025, making it the largest observed improvement among the identified pain points. This suggests that even less frequent pain points can be important to monitor when they show substantial changes in sentiment. From a customer journey perspective, one possible interpretation is that the warranty application process represents a critical touchpoint in the warranty experience, where process efficiency and support may influence how customers evaluate warranty handling (Lemon & Verhoef, 2016). The decrease in negative sentiment also suggests that the application process may function as a controllable touchpoint where Volvo Cars can support satisfaction even under cost pressure. From a service recovery perspective, this indicates that improving procedural fairness and customer support may be one way to reduce dissatisfaction without necessarily increasing compensation levels. However, since the study does not include data from the years before 2024, it is not possible to determine whether this change reflects a normal year-to-year fluctuation, other contextual factors, or a possible relationship with the cost reduction activities. Therefore, pain point C can be understood as the pain point most clearly associated with the observed improvement in sentiment between 2024 and 2025, but not as evidence of a causal effect.

However, this does not mean that only pain points A and C require attention. Since customer satisfaction is shaped by multiple evaluations across the warranty journey (Lemon & Verhoef, 2016), all identified pain points should be continuously monitored. Focusing solely on pain points A and C may risk overlooking changes in the other pain points that later could influence overall customer satisfaction. Furthermore, since the scope of this study only includes comments up to 2025, potential lagged effects should also be considered. Although pain point C shows

the clearest positive sentiment change during the period in which cost reduction activities were implemented, this does not necessarily mean that the other pain points were unaffected. Rather, their effects may emerge later and therefore fall outside the timeframe of this study. This indicates that the relative importance of warranty-related pain points should be understood as dynamic, since their impact may depend not only on their current frequency or sentiment, but also on how they evolve over time.

5.4 Long-term risks and sustaining customer satisfaction

The possibility of lagged effects also makes it important to consider how customer expectations may develop over time. According to Kano, as cited by Löfgren et al. (2011), quality attributes can follow lifecycles, where an attractive attribute may gradually become one-dimensional and eventually a must-be attribute. From an expectancy-disconfirmation perspective (Oliver, 1980), this poses a potential risk for Volvo Cars' warranty department, as customers are likely to experience dissatisfaction when rising expectations are not met. A warranty or goodwill practice that is currently perceived as acceptable may therefore become insufficient if customers begin to treat higher levels of support, transparency, or compensation as normal. The Kano lifecycle therefore helps explain why stable satisfaction in the short term does not necessarily mean that the current level of warranty support will remain sufficient in the long term.

In addition to evolving customer expectations, cost reduction initiatives are likely to remain a central priority within Volvo Cars' warranty department. From a strategic positioning perspective, cost reductions can be understood as a long-term effort to strengthen competitiveness (Porter, 1985), suggesting that future initiatives may continue rather than the activities in 2025 being treated as a one-time event. Since cost is considered one of the five performance objectives (Slack & Lewis, 2020), it is important to ensure that improvements in cost performance do not come at the expense of other objectives, such as quality, dependability, and flexibility, as this may negatively affect customer satisfaction. However, as Ferdows and De Meyer (1990) argue, performance objectives may also be developed cumulatively, meaning that improvements in cost performance can support, rather than replace, other dimensions of performance. These perspectives create a tension that is central to the interpretation of this study. Further cost reductions may create trade-offs if they reduce responsiveness, dependability, or perceived fairness in warranty handling, but they do not necessarily have to harm customer satisfaction if achieved through more efficient and clearer processes. The key managerial implication is therefore not that cost reduction should be avoided, but that it should be evaluated through its effects on customer experience mechanisms, especially expectations, fairness, trust, and process quality.

This highlights a fundamental trade-off between cost efficiency and maintaining customer satisfaction. If potential lagged effects, or future cost reduction initiatives, negatively affect the customer experience, for example through reduced warranty coverage or lower levels of support, this is likely to decrease customer satisfaction. As loyalty develops through repeated experiences of satisfaction and remains vulnerable to dissatisfaction (Oliver, 1999), even small declines may weaken customers' long-term commitment to the Volvo Car brand. This is particularly important in a warranty context, as warranty interactions represent brand-owned touch points that can strongly influence how customers evaluate the firm (Lemon & Verhoef, 2016). Consequently, the main long-term risk is not cost reduction in itself, but cost reduction that changes the warranty experience in ways that customers perceive as less fair, less transparent, or less supportive. This is why the identified pain points should be monitored over time, even though no clear short-term decline was observed in the analysed comments. If negative experiences accumulate across repeated warranty interactions, they may weaken trust and loyalty gradually, rather than appearing as an immediate decline in customer satisfaction.

6

Conclusion

This study contributes to the literature on customer satisfaction and after-sales service by showing how warranty-related cost reduction initiatives can be examined through customer-generated feedback. More specifically, the findings add to the understanding of warranty handling as part of the after-sales experience, where satisfaction is shaped not only by compensation outcomes, but also by expectations, communication, perceived fairness, and process support. In this way, the study provides empirical insight into how cost efficiency and customer experience may interact in after-sales service contexts.

This thesis aimed to examine changes in customer satisfaction during the period in which cost reduction activities were implemented by Volvo Cars' warranty department. More specifically, the study compared customers' perceptions of warranty satisfaction between 2024 and 2025 to examine whether satisfaction had increased, decreased, or remained stable following these activities. In addition, the thesis identified customer pain points among customers using Volvo Cars' warranty services. Due to the before-and-after case study design and the use of secondary survey data, the findings should be interpreted as observed changes and indications rather than evidence of causal effects.

The findings indicate a slight observed increase in positive sentiment within the analysed warranty-related comments between 2024 and 2025. Based on this, the findings may be interpreted as indicating that the cost reduction activities implemented in 2025 did not have a noticeable negative effect on customers' overall satisfaction during the studied period. Furthermore, the analysis identified several recurring customer pain points within warranty handling, mainly related to what is included in the base warranty and the customers' knowledge of the base warranty coverage. Together, these findings indicate that customer satisfaction is not only shaped by the final outcome, but also the way customers experience the warranty process.

The findings can support Volvo Cars' warranty department in monitoring future cost reduction initiatives, but they should not be interpreted as evidence that such initiatives are risk-free. Cost reduction initiatives may coincide with customer satisfaction and should therefore be managed carefully to avoid creating dissatisfaction. More specifically, the identified pain points highlight a need for better alignment with customer expectations regarding compensation, as well as clearer communication.

Therefore, future cost reductions should be evaluated not only in terms of cost savings, but also in relation to their potential impact on customer expectations, transparency, and the overall warranty experience.

As the study has several limitations, the findings should be interpreted with caution. First, although the customer comments provided valuable insights into expressed customer perceptions, the survey was not specifically designed for warranty-related issues and may therefore not capture all underlying reasons for satisfaction or dissatisfaction in warranty handling. Second, the collaboration with Volvo Cars and the use of internally available survey data may have influenced the setting of the study and the aspects of the warranty experience that could be analysed. Third, the study focuses on the changes observed during 2025, meaning that potential lagged effects may emerge later and alter the interpretation of the results. Finally, since the study was conducted in the specific context of Volvo Cars, the findings should be generalised with caution.

Future research could build on this study by examining customer satisfaction over a longer period of time to determine whether changes associated with the cost reduction activities emerge. Further studies could also use data collection methods specifically designed for warranty-related issues, such as targeted surveys or customer interviews, in order to gain a deeper understanding of the underlying causes of satisfaction and dissatisfaction. In addition, future research could include a larger sample of markets to capture a broader perspective, as well as different types of warranty cases to identify specific areas that may be more sensitive to cost reduction.

Overall, this thesis did not identify a short-term decline in overall customer satisfaction during the period in which cost reduction initiatives were implemented. However, maintaining satisfaction requires careful attention to how customer expectations change, and how customers' perception of communication and transparency throughout the warranty process evolve over time. Therefore, cost reduction initiatives should be balanced with a continued attention on preserving customer satisfaction and, in the long term, customer loyalty.

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