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Fairness in Complaint Handling and Its Theoretical Implications for Service Recovery: Evidence from E-Commerce Customers in Denmark

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Abstract: This study explores the relationship between customer complaint management and its impact on customer satisfaction and subsequent purchasing behavior in Denmark. We developed a refined complaint handling model, emphasizing fairness across three key dimensions: distributive justice, procedural justice, and interactional justice. These dimensions are hypothesized to significantly influence customer satisfaction, which, in turn, affects purchasing intentions. Using online surveys, we assessed customer perceptions of complaint handling, focusing on these critical dimensions. Data collected from 250 Danish consumers, each having filed at least one complaint, were analyzed using the Partial Least Squares (PLS) approach. The analysis revealed a significant link between effective complaint management and enhanced customer satisfaction, which notably influences purchasing intentions. Initially, our model did not demonstrate a direct impact on purchasing behaviors, leading to its refinement. The revised model indicates that customer satisfaction with the resolution process predominantly dictates future purchasing decisions, while dissatisfaction with the complaint handling does not directly affect future purchases. This research is distinguished by its innovative complaint handling model and the application of PLS methodology, providing deeper insights into the dynamic interactions between studied variables. The focused and highly relevant sample underscores the study's significance, particularly in the e-commerce sector.

Keyword: Complaint Management, Distributive Justice, Procedural Justice, Interactional Justice, E-commerce, Customer Satisfaction, Purchasing Behavior.

INTRODUCTION

In today's competitive service environment, customer retention increasingly depends on how effectively firms respond to service failures (McCollough et al., 2000). Central to this

process is complaint handling—an area that continues to attract attention within service marketing due to its potential to restore customer trust and satisfaction. While prior research consistently highlights the positive effects of service recovery on customer attitudes (Tax et al., 1998; Smith et al., 1999), empirical findings remain mixed regarding its influence on behavioral intentions, especially repurchase behavior. Thus, a critical theoretical gap persists: *under what psychological and contextual conditions do justice perceptions during complaint handling translate into repurchase intentions?*

Justice theory provides a compelling framework to analyze post-failure recovery. According to Bies and Moag (1986), perceptions of fairness in service recovery are multidimensional—comprising distributive justice (fairness of outcomes), procedural justice (fairness of processes), and interactional justice (fairness in interpersonal treatment). These dimensions significantly shape customer satisfaction (Blodgett & Li, 2007; Chebat & Slusarczyk, 2005). However, scholars have questioned whether satisfaction alone is a sufficient predictor of future purchase behavior, or if deeper cognitive evaluations, such as trust restoration or perceived organizational credibility, are necessary mediators (DeWitt et al., 2008; Gelbrich & Roschk, 2011).

To address this theoretical puzzle, we build on social exchange theory (Homans, 1961) and the expectancy-disconfirmation paradigm (Oliver, 1997) to argue that *customer satisfaction functions as a key mediating mechanism* between justice perceptions and behavioral intentions. Fair complaint handling signals a willingness to uphold customer–firm reciprocity, but unless such fairness translates into renewed satisfaction, the service recovery effort may fail to produce loyalty (Voorhees & Brady, 2005; Maxham & Netemeyer, 2002). Hence, our central proposition is that justice perceptions only matter to the extent that they restore satisfaction—which in turn drives behavioral intention.

Additionally, consumer sentiment and behavioral expectations have shifted significantly post-pandemic, especially in digitally-mediated sectors like e-commerce. As Mirfaqoh et al. (2023) highlight, the COVID-19 era has intensified customer sensitivity to service responsiveness and fairness, particularly when dealing with disruptions or perceived failures in the supply chain. In this context, complaint handling has evolved into a strategic touchpoint—not merely an operational necessity but a source of competitive differentiation.

This study contributes to service marketing theory by integrating justice theory and satisfaction-based models to explain how customers cognitively evaluate complaint handling episodes. We posit that customers do not simply react to the fairness of outcomes or processes in isolation; instead, they assess whether these fairness dimensions collectively produce a recovery experience that is emotionally satisfying and behaviorally consequential. In this sense, we expand the theoretical boundary of complaint management literature by highlighting the conditional role of satisfaction in translating perceived justice into loyalty outcomes.

We empirically test our model in Denmark, a market characterized by high consumer trust and mature digital infrastructure (Melgaard et al., 2024). The Danish context offers a unique opportunity to evaluate whether fairness in service recovery is sufficient to restore purchasing intentions in a digitally sophisticated and expectation-rich environment. Using data from 250 e-commerce customers and Partial Least Squares Structural Equation Modeling (PLS-SEM), we examine both direct and indirect effects between perceived justice, satisfaction, and purchase intention. This study not only refines theoretical understandings of complaint handling but also provides insights relevant to marketers operating in trust-driven, post-digital consumer markets.

Literature Review

The impact of service failures on an organization's reputation underscores the critical need for robust service recovery programs. When customers voice dissatisfaction through

complaints, they provide firms with not only a chance to rectify specific issues but also a unique opportunity to improve systemic service processes (Johnston, 2001). Rather than treating complaints as threats, organizations can view them as valuable feedback mechanisms. Effectively designed recovery programs can foster customer loyalty, improve satisfaction, and positively influence public perception, particularly in service-dominated industries (Zemke & Schaaf, 1990).

Service recovery refers to the organizational response aimed at restoring customer trust following service failure. The process includes complaint reception, investigation, redressal, and mechanisms to prevent recurrence (Johnston, 2001). This restoration process is closely linked to customer judgments of fairness during recovery, which, in turn, shape their satisfaction and future behavior. Tax et al. (1998) emphasize that customer evaluations of recovery episodes hinge on three interrelated justice dimensions: *distributive justice* (fairness of outcomes), *procedural justice* (fairness of the recovery process), and *interactional justice* (quality of interpersonal communication). These dimensions are crucial not only for satisfaction but also for rebuilding emotional and cognitive trust (Smith et al., 1999).

Building on this, McCollough et al. (2000) apply the disconfirmation paradigm, arguing that satisfaction arises when recovery outcomes exceed or meet expectations—especially when fairness perceptions are involved. Stauss (2002) further distinguishes between "cold facts" (e.g., compensation) and "warm acts" (e.g., empathy and responsiveness), showing that both contribute to overall complaint satisfaction. His typology of nine service recovery attributes—fairness, accessibility, friendliness, empathy, individual attention, effort, feedback, reliability, and promptness—provides a granular understanding of what drives perceived justice.

Despite broad consensus that these justice dimensions influence satisfaction, a key theoretical question persists: does fairness itself predict purchase intentions, or is satisfaction a necessary mediator? Recent studies suggest that while fair treatment boosts customer evaluations, its behavioral impact—such as repurchase or positive word-of-mouth—is contingent on satisfaction being fully restored (DeWitt et al., 2008; Voorhees et al., 2020). This highlights the mediating role of satisfaction in the justice–loyalty link, a theme central to the present study.

Furthermore, Voorhees and Brady (2005) propose that the influence of justice dimensions is moderated by service quality and contextual trust levels. Their model, rooted in social exchange theory (Homans, 1961), suggests that customers are more likely to engage in future transactions when they perceive the firm as honoring reciprocal obligations. This interpretation aligns with research by Gelbrich and Roschk (2011), who show through meta-analysis that satisfaction consistently mediates the effect of complaint handling on customer loyalty, though effect sizes vary by sector and service failure severity.

The Danish e-commerce context adds a relevant layer to this discussion. As Melgaard et al. (2024) report, Danish consumers place high value on transparency and fairness, particularly in digital environments. This aligns with findings from Yoda and Kumakura (2007), who argue that perceived "advantageous inequity" (e.g., being treated better than expected) reinforces customer trust, especially in service encounters with initial dissatisfaction. In trust-based markets like Denmark, where consumer rights are protected and expectations are high, fairness perceptions may only influence behavior when satisfaction is fully reestablished.

Nguyen et al. (2012) and Badawi (2012) also demonstrate that informational and procedural justice have indirect effects on loyalty through satisfaction and trust. They advocate for viewing complaint handling as a strategic loyalty mechanism, not merely a reactive function. Their findings emphasize that complaint resolution is not complete until the customer feels both heard and healed—a standard that often involves emotional as well as instrumental justice.

Recent scholarship has extended these insights into digital service environments. For example, Becker et al. (2018) find that justice dimensions interact with perceived platform credibility to shape trust and satisfaction in online complaints. Similarly, Mattila and Yang (2016) show that speed, personalization, and tone in digital responses amplify the effect of justice perceptions. These findings are especially relevant in the e-commerce space, where asynchronous and impersonal channels can undermine the justice-satisfaction link unless managed carefully.

In sum, the literature establishes that distributive, procedural, and interactional justice shape customer evaluations of complaint handling. However, it remains theoretically unsettled how and under what conditions these justice perceptions translate into actual behavioral intentions. This study addresses this gap by testing a conceptual model in the Danish e-commerce sector, where customer expectations for fairness and satisfaction are particularly salient. By focusing on satisfaction as a mediating construct, we aim to contribute to both justice theory in marketing and the evolving literature on service recovery effectiveness.

Figure 1.

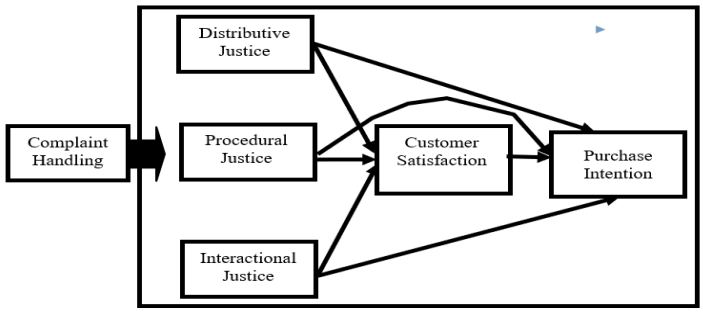

Figure 1. State of The Art Research

Figure 1. State of The Art Reasearch

METHOD

Research Approach

This study employed a quantitative approach using the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique via SmartPLS 3.2.8 software. PLS-SEM was chosen due to its suitability for complex multivariate models involving both reflective and formative constructs (Hair et al., 2017). It is variance-based and predictive in nature, ideal for exploring how exogenous constructs—distributive, procedural, and interactional justice—affect endogenous variables like customer satisfaction and purchase intention (Hair et al., 2019; Chin, 1998).

Data Collection

Data collection for this study was conducted via online questionnaires distributed between March and September 2024. The survey included both open-ended questions to capture detailed respondent profiles and closed-ended questions using a Likert scale to measure perceptions and attitudes related to complaint handling, justice dimensions, satisfaction, and purchase intention.

Primary data were gathered through online questionnaires, using Likert-scale items to measure perceptions and attitudes. Both open- and closed-ended questions were included to capture respondent profiles and responses on service recovery perceptions. The Likert scale ranged from 1 (Strongly Disagree) to 5 (Strongly Agree), enabling nuanced quantitative analysis of justice perceptions, satisfaction, and behavioral intentions (Croasmun & Ostrom, 2011).

Sample and Sampling Technique

Respondents were selected using purposive sampling, targeting adult users (18+) of the S-App platform in Denmark who had previously submitted at least one service complaint. The target locations included Billund, Copenhagen, Vejle, and Aarhus. Structural equation modeling benefits from larger sample sizes to ensure statistical validity (Kelloway, 1998). Following recommendations by Marsh et al. (2004), a sample of 250 respondents was collected, exceeding the minimum threshold for models involving five latent variables (Jöreskog & Sörbom, 1993; Bentler & Chou, 1987).

Data Analysis Strategy

Data analysis involved both descriptive statistics and PLS-SEM. Descriptive analysis profiled the respondents and examined variable distributions. Index scores were calculated based on frequency-weighted Likert responses (Croasmun & Ostrom, 2011).

The measurement model (outer model) was evaluated for:

- Convergent validity, based on factor loadings > 0.5 and AVE > 0.5 (Fornell & Larcker, 1981),
- Discriminant validity, assessed through cross-loading comparisons (Vinzi et al., 2010),
- Reliability, tested using Cronbach's Alpha and Composite Reliability, both expected to exceed 0.7 (Hair et al., 2017).

The structural model (inner model) was tested through:

- R^2 values for endogenous constructs, interpreted as weak (0.19), moderate (0.33), and strong (0.67) predictive power (Chin, 1998),
- Path coefficients, evaluated via bootstrapping to assess significance (Hair et al., 2019),
- Q^2 values, indicating predictive relevance (> 0.35 = high) using the blindfolding procedure (Geisser, 1975; Chin, 2010),
- Goodness-of-Fit (GoF), calculated as $\sqrt{(\text{average AVE} \times \text{average } R^2)}$, with benchmarks at 0.10 (small), 0.25 (medium), and 0.38 (large) (Tenenhaus et al., 2005).
- Variable Operationalization

All variables were derived from established constructs. Distributive justice was measured via perceived fairness in compensation (Smith et al., 1999). Procedural justice included perceptions of responsiveness and process flexibility (Johnston, 2001). Interactional justice was operationalized through perceived empathy, communication, and apology (Bies & Moag, 1986). Customer satisfaction captured the overall emotional evaluation of the service recovery experience (Oliver, 1997), while purchase intention was measured through future buying likelihood and intention, adapted from Bansal et al. (2004).

RESULTS AND DISCUSSION

Results

Respondent Profile

This section presents the demographic characteristics of the 250 respondents who completed the online survey, which was conducted between March and September 2024. All participants were users of *e-commerce Sh* based in Denmark, each having lodged at least one

complaint related to a transaction. The demographic indicators analyzed include gender, education level, and marital status.

In terms of gender, the sample consisted of 134 female respondents (53.6%) and 116 male respondents (46.4%), as shown in Table 4.1. Educationally, the majority of participants held a bachelor's degree (59.5%), followed by postgraduate degree holders (19%), and senior high school graduates (19.5%). Regarding marital status, 48.5% of respondents were married, 47% were unmarried, and the remaining 4.5% were single parents.

Table 4.1. Gender

Gender	N	%
Male	116	46.4
Female	**134**	**53.6**
Total	**250**	**100**

Source: Questionnaire Data Recapitulation, data processed by Researchers, 2024.

Table 4.2. Assessment of Respondents' Answer Scores

Statement	Scores
Strongly Disagree	1
Disagree	2
Undecided/Neutral	3
Agree	4
Strongly Agree	5

Source Reference: Croasmun, J. T., & Ostrom, L. (2011).

A complete summary of all index calculations and structural model results for each construct (Percentage of Respondent Responses), including justice dimensions, customer satisfaction, and purchase intention, is presented in Appendices A, B, and C.

Table 4.3 Path Coefficients

Direct Effects	Original Sample (O)	Sample Average (M)	Standard Deviation (STDEV)	T Statistic (| O/STDEV |)	P Values
Distribtive Justice -> Purchas Intention	-0.572	-0.415	1.004	0.570	0.284
Distributive Justice -> Complaint Handling	0.319	0.319	0.014	22.685	0.000
Interaction Justice -> Purchase Intention	-0.596	-0.361	1.512	0.394	0.347
Interaction Justice -> Complaint Handling	0.491	0.492	0.017	28.990	0.000
Procedural Justice -> Purchase Intention	-0.603	-0.411	1.097	0.549	0.292
Procedural Justice -> Complaint Handling	0.358	0.359	0.014	24.940	0.000
Customer Satisfaction-> Purchase Intention	0.706	0.710	0.078	9.077	0.000
Complaint Handling -> Customer Satisfaction	0.599	0.595	0.056	10.648	0.000
Complaint Handling -> Purchase Intention	1.443	0.951	3.113	0.463	0.322

Source : Data processing Bootsrapping Partia Least Square, 2024

The following structural models illustrate the relationship between justice dimensions, complaint handling, customer satisfaction, and purchase intention, as processed using SEM-PLS.

Figure 4.1.
Structural Model Output from SEM-PLS Analysis

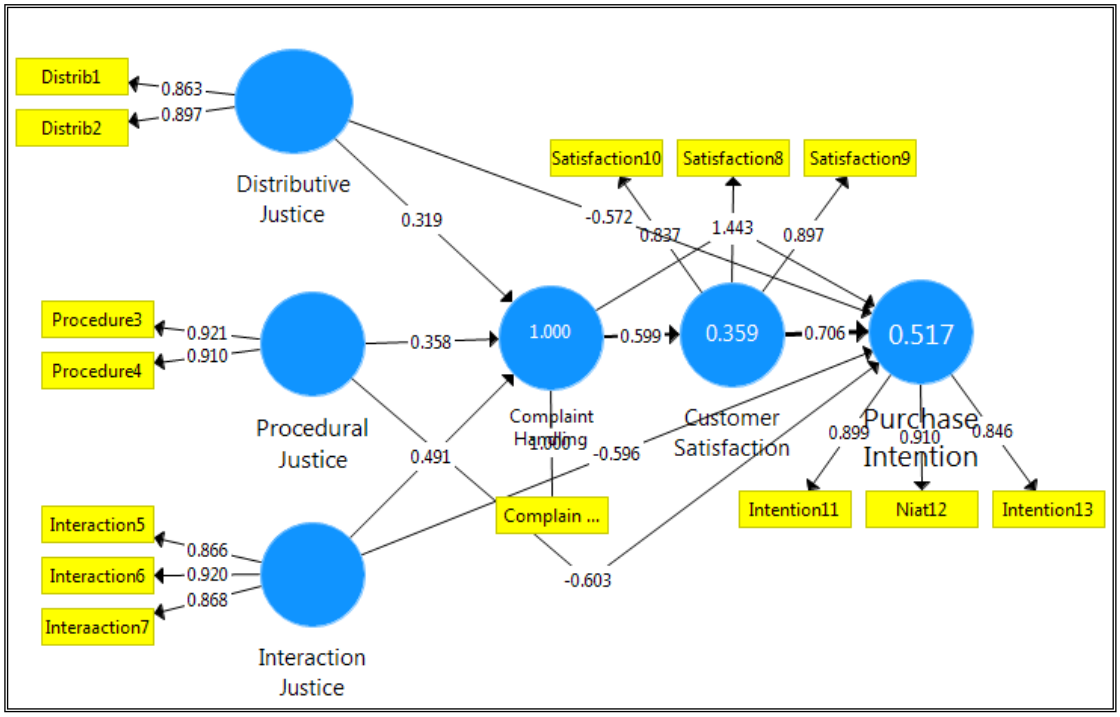

Figure 4.1

Source: Data Processing Using Partial Least Squares (PLS), 2024.

Figure 4.2.
Comprehensive Model of the Impact of Complaint Handling on Customer Satisfaction and Purchase Intention at the App e-commerce Sh Online Store

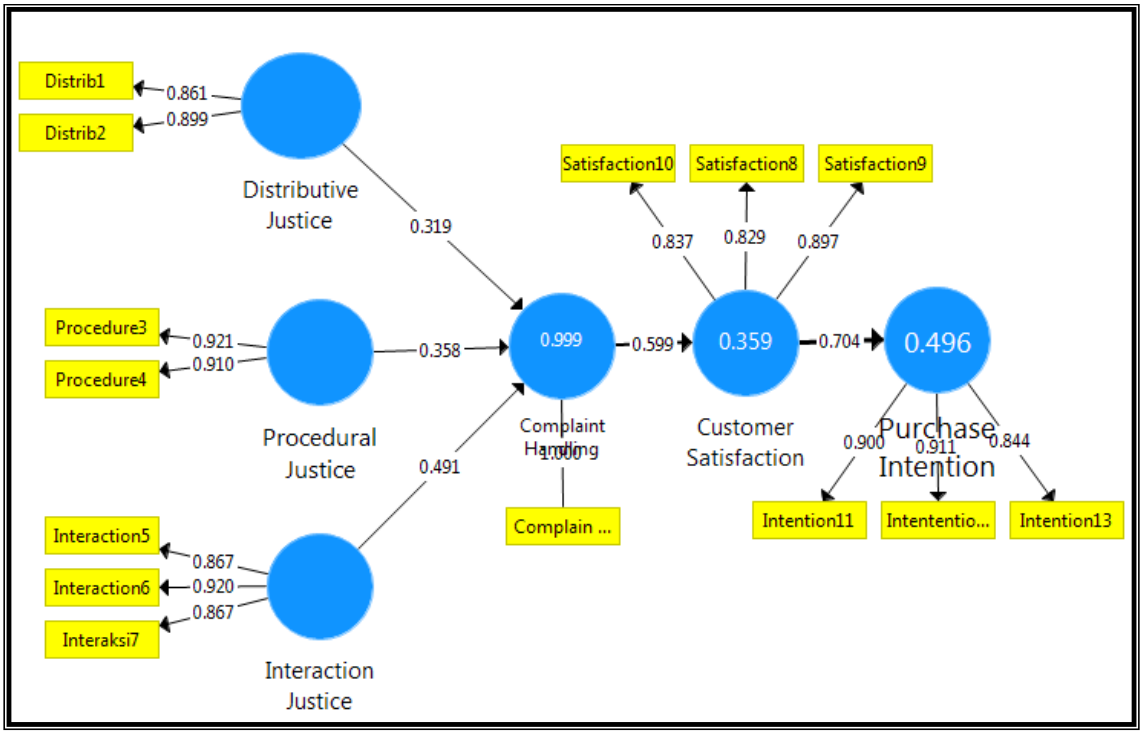

Figure 4.2
Source: Data Processing Using Partial Least Squares (PLS), 2024.

Complete Model of the Influence of Complaint Handling on Customer Satisfaction and Purchase Intention at the e-commerce Sh Online Store (Model 2
Table 4.4 Path Coefficients of the Second Model

Direct Effects	Original Sample (O)	Sample Average (M)	Standard Deviation (STDEV)	T Statistic (| O/STDEV |)	P Values
Distributive Justice -> Complaint Handling	0.319	0.319	0.014	23.541	0.000
Interaction Justice -> Complaint Handling	0.491	0.492	0.018	27.543	0.000
Procedural Justice -> Complaint Handling	0.358	0.359	0.016	23.019	0.000
Customer Satisfaction-> Purchase Intention	0.704	0.703	0.054	13.023	0.000
Complaint Handling -> Customer Satisfaction	0.599	0.598	0.057	10.474	0.000

Source : Data Calculation Bootsrapping Partia Least Square, 2024

Table.4.5 Indirect Effects

Indirect Effect	Original Sample (O)	Sample Average (M)	Standard Deviation (STDEV)	T Statistic (| O/STDEV |)	P Values
Distributive Justice -> Complaint Handling ->Customer Satisfaction	0.191	0.191	0.018	10.767	0.000
Interaction Justice -> Complaint Handling ->Customer Satisfaction	0.294	0.294	0.029	10.199	0.000
Procedural Justice -> Complaint Handling ->Customer Satisfaction	0.214	0.214	0.020	10.729	0.000
Distributive Justice -> Complaint Handling ->Customer Satisfaction -> Purchase Intention	0.134	0.134	0.016	8.604	0.000
Interaction Justice -> Complaint Handling ->Customer Satisfaction -> Purchase Intention	0.207	0.207	0.026	8.077	0.000
Complaint Handling ->Customer Satisfaction -> Purchase Intention	0.422	0.420	0.050	8.408	0.000
Procedural Justice -> Complaint Handling ->Customer Satisfaction -> Purchase Intention	0.151	0.151	0.017	9.133	0.000

Source : Bootsrapping PLS Data Calculation, 2024

Based on the structural model output:

a. Complaint handling has a significant direct effect on customer satisfaction ($\beta = 0.599$; $p < 0.001$).

b. Customer satisfaction has a significant direct effect on purchase intention ($\beta = 0.706$; $p < 0.001$).

c. However, complaint handling does not have a significant direct effect on purchase intention ($\beta = 1.443$; $p = 0.322$).

d. The direct paths from justice dimensions (distributive, procedural, interactional) to purchase intention are also not significant ($p > 0.05$).

Thus, customer satisfaction plays a mediating role, aligning with prior research (e.g., Smith et al., 1999; Voorhees & Brady, 2005).

Mediation Conclusion Using PLS:

- Customer satisfaction mediates the effect of complaint handling on purchase intention.
- Without satisfaction, customers are unlikely to maintain future purchasing behavior, even if procedural improvements are in place.

Discussion

The findings of this study confirm that complaint handling significantly influences customer satisfaction ($\beta = 0.599$; $p < 0.001$), and in turn, customer satisfaction significantly predicts purchase intention ($\beta = 0.706$; $p < 0.001$). However, complaint handling does not exert a significant direct effect on purchase intention ($\beta = 1.443$; $p = 0.322$). Similarly, the direct effects of the justice dimensions—distributive, procedural, and interactional justice—on purchase intention were statistically insignificant ($p > 0.05$).

These results support prior theoretical arguments that satisfaction functions as a mediating mechanism between service recovery efforts and behavioral outcomes (Smith et al., 1999; Tax, Brown, & Chandrashekaran, 1998). While perceptions of justice are essential for customer evaluations of service recovery, they do not directly drive behavioral intentions unless customers experience satisfaction with how the issue is resolved (Voorhees & Brady, 2005; Maxham & Netemeyer, 2002).

In essence, this study provides empirical support for a mediated model of post-complaint behavior, where customer satisfaction acts as the critical link between justice perceptions, complaint handling quality, and future purchase intention. This implies that even technically effective complaint processes will fail to build loyalty unless they also generate satisfaction with the experience.

The results are consistent with previous findings from both developed and emerging markets, reinforcing the importance of satisfaction as a psychological endpoint in complaint recovery (Smith et al., 1999; Voorhees & Brady, 2005). More recently, Yusriani et al. (2024) emphasized that human resource capabilities—particularly soft skills in service responsiveness—play a pivotal role in ensuring that procedural justice efforts are translated into customer-centered outcomes. Their findings from service sector distribution companies in Denmark and Germany support the argument that justice perceptions must be reinforced through effective people strategies and organizational empathy.

Thus, justice in complaint handling cannot be decoupled from employee competence, organizational design, and digital responsiveness. Particularly in e-commerce environments, where face-to-face interaction is limited, the perception of being "heard" and "respected" during digital complaint resolution processes becomes central to rebuilding trust and intention.

Limitations

Despite its contributions, the study has several limitations:

1. Sample Scope: The analysis is confined to *E-commerce Sh* users in Denmark. As a result, the findings may not generalize to users in other regions or to other e-commerce platforms.
2. Measurement Boundaries: Important determinants of satisfaction such as perceived product quality, price fairness, and brand equity were not included, which may limit the explanatory power of the model (Oliver, 1997).
3. Subjectivity of Responses: The data are derived from self-reported survey instruments, which can introduce bias due to social desirability or mood-dependent responses (Podsakoff et al., 2003).
4. Temporal Constraints: Data collection was conducted between March and September 2024, capturing a cross-sectional snapshot rather than the evolution of post-complaint attitudes over time.

Future Research Directions

Building on this research, future work could explore the following directions:

- Cross-Platform Comparison: Compare customer satisfaction and complaint recovery across different e-commerce platforms (e.g., Amazon, Tokopedia).
- Broader Regional Studies: Extend the study to other countries or continents to test cross-cultural variation in justice perception and recovery expectations.
- Include Product and Brand Factors: Incorporate variables such as product quality, price sensitivity, or brand loyalty as additional antecedents of satisfaction.
- Longitudinal Design: Use panel or cohort studies to assess how satisfaction and purchase intention evolve over time following complaint resolution.
- Use of Alternative Methods: Test the model with different SEM techniques such as CB-SEM or Bayesian SEM for triangulation.
- Justice Component Decomposition: Examine how each justice dimension independently affects satisfaction and intention, perhaps moderated by personality traits or complaint severity.
- Technology Integration: Investigate the role of AI-enabled complaint handling (e.g., chatbots, automated resolution) in shaping justice perception.

- Contextual Conditions: Explore situational moderators such as transaction value or complaint severity in shaping outcomes of recovery efforts.

These expansions could provide a more nuanced understanding of how firms can structure complaint handling to optimize customer loyalty.

Implications

For practitioners, these results suggest that:

- Complaint resolution must be customer-centered, with emotional engagement and empathy embedded into procedures (Bies & Moag, 1986).
- Just process alone is insufficient—companies must ensure that the resolution outcomes feel satisfying, not just fair.
- Frontline staff training should emphasize both procedural efficiency and interpersonal warmth.
- Technological solutions (e.g., complaint tracking systems) must be evaluated not only for speed but for their impact on user satisfaction.

For academics, the model contributes to service recovery literature by affirming satisfaction's central role in linking justice and behavior, and offers a replicable approach using PLS-SEM.

CONCLUSION

This study demonstrates that perceived justice dimensions—distributive, procedural, and interactional—positively affect perceptions of complaint handling, which subsequently enhances customer satisfaction. However, purchase intention is influenced only indirectly through satisfaction. That is, satisfaction fully mediates the relationship between complaint handling and future purchasing behavior.

Key findings include:

- Respondents perceive E-commerce Sh's complaint handling procedures to score high on justice and fairness.
- Customers report high satisfaction when complaints are resolved effectively.
- Purchase intention is contingent upon achieving post-recovery satisfaction—justice alone is not enough.

These findings emphasize that successful complaint resolution is not just about fairness in outcome or process, but about fostering emotional resolution and satisfaction.

Recommendations

In light of the results and remaining dissatisfaction expressed in some indicators, the following actions are recommended:

1. Enhance Complaint Transparency: Clearly communicate steps and timelines to customers during resolution.
2. Empower Customer Service Agents: Allow agents the authority to tailor solutions, improving perceptions of flexibility.
3. Monitor Satisfaction Continuously: Integrate short satisfaction surveys immediately after resolution to gather feedback.
4. Emphasize Interactional Justice: Invest in training staff on respectful communication and empathy.
5. Track Repeat Complaints: Identify customers with multiple complaints and prioritize them for proactive engagement.

6. Leverage AI Responsibly: Ensure automated systems still offer options for human assistance when emotional resolution is needed.

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REFERENCES

Bansal, H. S., Irving, P. G., & Taylor, S. F. (2004). A three-component model of customer commitment to service providers. *Journal of the Academy of Marketing Science, 32*(3), 234–250. https://doi.org/10.1177/0092070304263332

Becker, J. U., Greve, G., & Albers, S. (2009). The impact of technological and organizational implementation of CRM on customer acquisition, maintenance, and retention. *International Journal of Research in Marketing, 26*(3), 207–215. https://doi.org/10.1016/j.ijresmar.2009.03.006

Bentler, P. M., & Chou, C. P. (1987). Practical issues in structural modeling. *Sociological Methods & Research, 16*(1), 78–117. https://doi.org/10.1177/0049124187016001004

Bies, R. J., & Moag, J. F. (1986). Interactional justice: Communication criteria of fairness. In R. J. Lewicki, B. H. Sheppard, & M. H. Bazerman (Eds.), *Research on negotiation in organizations* (Vol. 1, pp. 43–55). JAI Press.

Blodgett, J. G., & Li, H. (2007). Assessing the effects of post-purchase dissatisfaction and complaining behavior on profitability: A Monte Carlo simulation. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior, 20*, 1–14.

Chebat, J. C., & Slusarczyk, W. (2005). How emotions mediate the effects of perceived justice on loyalty in service recovery situations: An empirical study. *Journal of Business Research, 58*(5), 664–673. https://doi.org/10.1016/j.jbusres.2003.09.004

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295–336). Lawrence Erlbaum.

Croasmun, J. T., & Ostrom, L. (2011). Using Likert-type scales in the social sciences. *Journal of Adult Education, 40*(1), 19–22.

Davidow, M. (2003). Organizational responses to customer complaints: What works and what doesn't. *Journal of Service Research, 5*(3), 225–250. https://doi.org/10.1177/1094670502238917

DeWitt, T., Nguyen, D. T., & Marshall, R. (2008). Exploring customer loyalty following service recovery: The mediating effects of trust and emotions. *Journal of Service Research, 10*(3), 269–281. https://doi.org/10.1177/1094670507310767

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50. https://doi.org/10.2307/3151312

Gelbrich, K., & Roschk, H. (2011). A meta-analysis of organizational complaint handling and customer responses. *Journal of Service Research, 14*(1), 24–43. https://doi.org/10.1177/1094670510387914

Geisser, S. (1975). The predictive sample reuse method with applications. *Journal of the American Statistical Association, 70*(350), 320–328. https://doi.org/10.2307/2285815

Grégoire, Y., & Fisher, R. J. (2008). Customer betrayal and retaliation: When your best customers become your worst enemies. *Journal of the Academy of Marketing Science, 36*, 247–261. https://doi.org/10.1007/s11747-007-0054-0

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). SAGE Publications.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review, 31*(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203

Homans, G. C. (1961). *Social behavior: Its elementary forms*. Harcourt, Brace & World.

Johnston, R. (2001). Linking complaint management to profit. *International Journal of Service Industry Management, 12*(1), 60–69. https://doi.org/10.1108/09564230110382754

Jöreskog, K. G., & Sörbom, D. (1993). *LISREL 8: Structural equation modeling with the SIMPLIS command language*. Scientific software international.

Kelloway, E. K. (1998). *Using LISREL for structural equation modeling: A researcher's guide*. SAGE Publications.

Marsh, H. W., Hau, K. T., & Wen, Z. (2004). In search of golden rules: Comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu and Bentler's (1999) findings. *Structural Equation Modeling, 11*(3), 320–341. https://doi.org/10.1207/s15328007sem1103_2

Mattila, A. S., & Yang, W. (2016). Response style and service evaluation in intercultural service encounters. *Journal of Service Management, 27*(1), 19–35. https://doi.org/10.1108/JOSM-09-2014-0264

Maxham, J. G., & Netemeyer, R. G. (2002). A longitudinal study of complaining customers' evaluations of multiple service failures and recovery efforts. *Journal of Marketing, 66*(4), 57–71. https://doi.org/10.1509/jmkg.66.4.57.18512

McCollough, M. A., Berry, L. L., & Yadav, M. S. (2000). An empirical investigation of customer satisfaction after service failure and recovery. *Journal of Service Research, 3*(2), 121–137. https://doi.org/10.1177/109467050032002

Melgaard, C. V., Voss, E., Hansen, M. F., Lassen, M., Hvidtfeldt, M., Pandey, S., ... & Thomsen, M. (2024). Danish consumers' knowledge about and willingness to buy dairy products close to the best-before-date. *Food Frontiers, 5*(2), 494–507. https://doi.org/10.1002/fft2.259

Mirfaqoh, V., Yusriani, S., Helmi, T. A., Fadhil, A., Sholihah, F. M., & Kusnadi, K. (2023). Analysis of the impact of the COVID-19 pandemic on stock prices in the construction sector in Indonesia. *Greenation International Journal of Economics and Accounting, 1*(3), 437–442. https://doi.org/10.59653/gijeb.v1i3.174

Oliver, R. L. (1997). *Satisfaction: A behavioral perspective on the consumer*. McGraw-Hill.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903. https://doi.org/10.1037/0021-9010.88.5.879

Smith, A. K., Bolton, R. N., & Wagner, J. (1999). A model of customer satisfaction with service encounters involving failure and recovery. *Journal of Marketing Research, 36*(3), 356–372. https://doi.org/10.1177/002224379903600305

Stauss, B. (2002). The dimensions of complaint satisfaction: Process and outcome complaint satisfaction versus cold fact and warm act complaint satisfaction. *Managing Service Quality: An International Journal, 12*(3), 173–183. https://doi.org/10.1108/09604520210429138

Tax, S. S., Brown, S. W., & Chandrashekaran, M. (1998). Customer evaluations of service complaint experiences: Implications for relationship marketing. *Journal of Marketing, 62*(2), 60–76. https://doi.org/10.1177/002224299806200205

Tenenhaus, M., Vinzi, V. E., Chatelin, Y. M., & Lauro, C. (2005). PLS path modeling. *Computational Statistics & Data Analysis, 48*(1), 159–205. https://doi.org/10.1016/j.csda.2004.03.005

Voorhees, C. M., & Brady, M. K. (2005). A service perspective on the drivers of complaint intentions. *Journal of Service Research, 8*(2), 192–204. https://doi.org/10.1177/1094670505279702

Voorhees, C. M., Brady, M. K., Calantone, R. J., & Ramirez, E. (2020). Service encounters, experiences and the customer journey: Defining the field and a call to expand beyond the core service encounter. *Journal of Business Research, 116*, 420–429. https://doi.org/10.1016/j.jbusres.2019.08.064

Wirtz, J., & Mattila, A. S. (2004). Consumer responses to compensation, speed of recovery and apology after a service failure. *International Journal of Service Industry Management, 15*(2), 150–166. https://doi.org/10.1108/09564230410532484

Yoda, T., & Kumakura, Y. (2007). Customer perception of advantageous inequity in the context of service recovery. *Journal of Services Marketing, 21*(1), 23–29. https://doi.org/10.1108/08876040710726260

Yusriani, S., Rekarti, E., Patiro, S. P. S., & Aftabi, D. (2024). Human resource management and skill development in the service sector within the framework of the SDGs: A study on distribution companies in Denmark and Germany. *Dinasti International Journal of Digital Business Management, 5*(6), 1062–1074. https://doi.org/10.31933/dijdbm.v5i6.2057

APPENDIX

Appendix A – Descriptive Statistics (n = 250)

Appendix A presents the descriptive index values derived from Likert-scale responses on five key constructs: *distributive justice*, *procedural justice*, *interactional justice*, *customer satisfaction*, and *purchase intention*. The high index scores across dimensions reflect positive respondent perceptions of the complaint-handling practices by e-commerce Sh.

1. **Table A1. Index Score of Distributive Justice**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Index
The compensation I receive is fair and appropriate.	1.5%	3.5%	7%	57%	31%	82.5
The issue is resolved thoroughly.	5%	2.5%	7%	45.5%	44.5%	87.1
Average Index Value						84.80

Source: Output SPSS, 2024.

2. **Table A2. Index Score of Procedural Justice**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Index
Complaint issues are resolved quickly in line with expectations.	0.5%	5%	9%	45.5%	40%	83.9
Complaint handling process is flexible and uncomplicated.	0.5%	6%	10%	50%	33.5%	82.0
Average Index Value						82.95

Source: Output SPSS, 2024.

3. **Table A3. Index Score of Interactional Justice**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Index
Sh is highly concerned about customer complaint issues.	0%	5.5%	21%	51%	22.5%	78.1
Sh undertakes appropriate measures to resolve complaints.	0%	4.5%	15%	56.5%	22.5%	78.5
Sh communicates promptly and accurately.	0.5%	5%	17.5%	50%	27%	79.6
Average Index Value						78.73

Source: Output SPSS, 2024.

4. **Table A4. Index Score of Customer Satisfaction**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Index
Sh's handling of my complaint is satisfactory.	0%	7.5%	16%	60%	16.5%	77.1
Sh is my primary choice for online shopping.	0.5%	5%	11.5%	58.5%	24.5%	80.3
I am pleased with Sh's overall service.	0%	3%	12%	61%	24%	81.2
Average Index Value						79.53

Source: Output SPSS, 2024.

5. **Table A5. Index Score of Purchase Intention**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Index
I will continue to purchase from Sh.	0.5%	4%	11%	62.6%	21.5%	79.88
I will continue to seek products on Sh.	0.5%	1.5%	8.5%	66%	23.5%	82.1

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Index
I consistently allocate time to shop on Sh.	0.5%	6.5%	17%	59.5%	16.5%	77.0
Average Index Value						79.66

Source: Output SPSS, 2024.

- **Appendix B – Measurement Model Evaluation**

Measurement model validity was evaluated using outer loadings, cross-loadings, and construct reliability indicators. All results confirmed satisfactory convergent and discriminant validity.

- **Table B1. Outer Loadings (Convergent Validity)**

Indicator	Loading	Validity
Distrib1	0.863	Valid
Distrib2	0.897	Valid
Procedur3	0.921	Valid
Procedur4	0.910	Valid
Interaction5	0.866	Valid
Interaction6	0.920	Valid
Interaction7	0.868	Valid
Satisfaction8	0.837	Valid
Satisfaction9	0.829	Valid
Satisfaction10	0.897	Valid
Intention1	0.900	Valid
Intention2	0.910	Valid
Intention3	0.846	Valid
ComplaintHandling	1.000	Valid

Source: PLS Algorithm Output, 2024.

- **Table B2. Construct Reliability and AVE**

Construct	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Distributive Justice	0.711	0.722	0.873	0.775
Interaction Justice	0.861	0.863	0.916	0.784
Procedural Justice	0.807	0.809	0.912	0.838
Customer Satisfaction	0.815	0.817	0.891	0.731
Purchase Intention	0.862	0.867	0.916	0.784
Complaint Handling	1.000	1.000	1.000	1.000

Source: PLS Algorithm Output, 2024.

- **Appendix C – Structural Model Evaluation**

The structural model shows strong relationships, especially between complaint handling → satisfaction and satisfaction → purchase intention, supporting mediation hypotheses. R^2 and GoF indicate good model fit and predictive relevance.

- **Table C1. R-Square and Adjusted R²**

Construct	R²	Adjusted R²
Customer Satisfaction	0.359	0.356
Purchase Intention	0.516	0.506

Source: PLS Algorithm Output, 2024.

- **Table C2. Predictive Relevance (Q²) and Goodness of Fit (GoF)**
- **Q² = 0.69**
- **GoF = √(AVE × R² avg)**

= √(0.7826 × 0.438)
= √(0.3427788)
= **0.585**

Source: PLS Algorithm Output, 2024.

- **Table C3. Path Coefficients**

Pathway	β	t-Value	p-Value	Significance
Complaint Handling → Satisfaction	0.599	10.648	0.000	✓ Significant
Satisfaction → Purchase Intention	0.706	9.077	0.000	✓ Significant
Complaint Handling → Purchase Intention	1.443	0.463	0.322	✕ Not Significant
Justice Variables → Purchase Intention	~	< 1.0	> 0.05	✕ Not Significant

Source: PLS Bootstrapping Output, 2024.

Notes:

- Interpret the GoF value (0.585) as indicating strong model fit based on Tenenhaus et al. (2005).
- All justice dimensions significantly impact complaint handling, but their direct impact on purchase intention is not significant—confirming a mediated relationship through satisfaction.