

Master's Degree Program in **Information Management**

Specialization in
Digital Transformation

THE SOUND OF DINING.

Creating Value Through Music to Enhance
the Restaurant Experience.

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THE SOUND OF DINING

Creating Value Through Music to Enhance the Restaurant Experience

by

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STATEMENT OF INTEGRITY

I hereby declare having conducted this academic work with integrity. I confirm that I have not used plagiarism, any form of undue use of information or falsification of results along the process leading to its elaboration. I further declare that I have fully acknowledged the Rules of Conduct and Code of Honor from the NOVA Information Management School.

Lisbon, 30th November, 2025

Sílvia Ribamar da Silva Paulo de Sá

DEDICATION

To my husband, my constant anchor, love, and source of strength and inspiration; to my children, now young adults, who are my purpose and to whom I strive every day to build and leave the best legacy; to my mother, whose resilience, courage, and kindness continue to guide my path; and to my dear friends, whose presence, support, and encouragement have been a vital part of my journey.

Everything I achieve begins with you.

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ABSTRACT

This study investigates how Music Enjoyment, as customers' subjective response to background music, contributes to the creation of experiential and economic value in restaurant environments. In digitally mediated hospitality environments, background music is increasingly shaped by platform-based curation, data-driven personalization, and algorithmic recommendations. Building on this context, a theoretical model was adapted and extended from existing frameworks, guided by the Stimulus–Organism–Response (S–O–R) paradigm, where background music acts as the environmental stimulus (S), Music Enjoyment functions as the internal affective state (O), and behaviour outcomes such as satisfaction and willingness to pay represent the response (R). The model empirically assesses how Music Enjoyment influences Perceived Value, Customer Satisfaction, Behaviour Intention, and Willingness to Pay. Data was collected from 205 respondents, through an online survey focused on recent dining experiences, and the proposed model was tested using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results confirm that Music Enjoyment significantly enhances perceived value and is positively associated with Willingness to Pay through this evaluative pathway, demonstrating that emotional enjoyment can be transformed into economic appraisal. Perceived Value emerged as the strongest mediator between Music Enjoyment and both Satisfaction and Willingness to Pay, while the direct effect of satisfaction was weaker, suggesting that customers evaluate the benefits of music as part of the overall value of their experience. These findings extend the theoretical application of the S–O–R model to hospitality contexts while integrating perspectives from value perception and consumer behaviour theories. The study offers practical insights for restaurant managers, background music providers, and the music industry, particularly for rightsholders who benefit from fair and sustainable value remuneration generated through licensed public performance of music. It highlights the potential of background music as a strategic element of customer experience management and can serve as a foundation for deeper exploration of AI-driven personalization tools aimed at enhancing emotional engagement and creating shared cultural and economic value.

KEYWORDS

Background music; Dining experience; Music Enjoyment; Perceived value; Willingness to pay; Customer behaviour; PLS-SEM.

Sustainable Development Goals (SDG):



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LIST OF ABBREVIATIONS AND ACRONYMS

AI	Artificial Intelligence – Technology that enables systems to perform tasks that typically require human intelligence, including pattern recognition, recommendation algorithms and autonomous decision-making.
AVE	Average Variance Extracted – Represents the proportion of variance captured by a construct relative to the variance due to error; values above 0.50 indicate adequate convergent validity.
β	Standardised Path Coefficient – Represents the strength and direction of the relationships between latent variables in the structural model.
BI	Behavioural Intention – Customers' future behavioural tendencies, such as revisiting or recommending the restaurant, based on their overall dining experience.
HTMT	Heterotrait–Monotrait Ratio – A measure of discriminant validity comparing heterotrait–monotrait correlations; values below 0.85–0.90 indicate acceptable discriminant validity.
ME	Music Enjoyment – The pleasure and emotional connection experienced by customers when listening to background music in the restaurant.
PLS-SEM	Partial Least Squares Structural Equation Modelling — variance-based structural modelling technique suitable for exploratory research, complex models, and prediction-oriented studies.
PV	Perceived Value – Customers' overall assessment of the benefits of the dining experience (including music) relative to the perceived costs.
rho_A	Dijkstra–Henseler's reliability coefficient – A reliability coefficient in PLS-SEM that estimates internal consistency using the consistent PLS algorithm.
rho_C	Composite Reliability coefficient – A composite reliability coefficient in PLS-SEM based on indicator loadings; values above 0.70 indicate adequate reliability.
SDG	Sustainable Development Goals – A set of 17 global goals established by the United Nations to promote sustainable development and societal well-being.
S–O–R	Stimulus–Organism–Response — theoretical framework explaining how environmental stimuli trigger internal affective states that influence behavioural outcomes.
ST	Satisfaction – The cognitive and affective evaluation of the dining experience when perceived performance meets or exceeds expectations.

- VIF** Variance Inflation Factor – A collinearity diagnostic indicating how much variance of an indicator is inflated by other predictors; values below 5 suggest no multicollinearity issues.
- WP** Willingness to Pay – Customers' readiness to pay more for a dining experience when the overall value, enhanced by background music, is perceived as higher.



1. INTRODUCTION

Digital transformation reshaped how music is produced, distributed, and consumed, shifting value from ownership to access through platform-based and data-driven models (Eriksson et al., 2019; Wikström, 2009). The rise of digital platforms, algorithmic curation and AI has made musical experiences increasingly personalised and contextual. Streaming platforms personalise listening through data-driven recommendation systems that adapt to individual preferences and situational contexts (Eriksson et al., 2019), reinforcing music consumption as a customised cultural experience shaped by identity and taste (Webster, 2023). In service and consumer environments, music also functions as part of a multisensory atmospheric system that shapes emotions, comfort and behaviour (Jain & Bagdare, 2011). Building on these developments, background music in commercial environments is increasingly shaped by the same data-driven and algorithmic systems, functioning as part of a broader digital service ecosystem that enables adaptive and curated experiences. This shift positions background music not merely as an analogue atmospheric cue but as a digitally mediated experiential layer tailored to customer profiles, moods and contextual factors. This digital evolution also reinforces the behaviour effects documented in earlier research, where background music shapes emotional responses, experience evaluations and spending patterns.

Within this broader digital landscape, background music in commercial environments is no longer a passive or purely analogue atmospheric feature. Instead, digital platforms, algorithmic curation systems and AI-enabled tools increasingly mediate how music is selected, adapted and delivered in physical spaces. As a result, background music becomes embedded in a digital service ecosystem that supports personalised, adaptive and context-aware experiences. This evolution positions background music as both a technological and experiential layer of value co-creation, enabling new forms of innovation in the hospitality sector and reshaping how cultural content is consumed in physical environments.

The perceived value of music has evolved significantly in recent years, driven by digital transformation and new patterns of consumption. Once appreciated primarily for its artistic and emotional meaning, music is increasingly recognised as a strategic asset capable of shaping customer experiences and driving business performance. In service environments, atmospheric cues such as music influence perceptions of quality and overall experience (Jain & Bagdare, 2011; Kotler, 1973). Empirical research shows that background music affects consumer behaviour by shaping emotional states, perceptions of the atmosphere, overall experience quality, and spending behaviour across retail and hospitality settings (Milliman, 1986; North et al., 2003; North & Hargreaves, 1996). These effects contribute to perceived value—the trade-off between quality and cost—and help explain how emotional responses to music translate into satisfaction and economic outcomes (Choo et al., 2021; Wen et al., 2020; Zeithaml, 1988).



Within the restaurant industry, music acts as a powerful atmospheric cue that complements food, décor, and service to create a holistic sensory experience. According to Cue Utilization Theory (Olson, 1972), such environmental cues serve as signals that shape customers' perceptions of quality and value, influencing their overall evaluation of the experience. Foundational studies demonstrated that background music can affect customers' perceptions of time, ambience, and spending behaviour (Milliman, 1986; North et al., 2003). More recent studies extend these findings by demonstrating that emotional enjoyment and sensory engagement operate as predictors of perceived value, satisfaction and willingness to pay (Choo et al., 2021; Ko et al., 2023; Wen et al., 2020). However, despite extensive evidence on how music shapes behaviour, less attention has been given to how customers perceive the value created by music and how emotional enjoyment translates into perceptual and behavioural responses during the dining experience. This gap is particularly relevant because value perceptions operate as key cognitive mechanisms through which experiential cues influence satisfaction and economic responses.

Recent research in hospitality and consumer behaviour has advanced understanding of these mechanisms. Studies such as Choo et al. (2021) and Wen et al. (2020) demonstrate that sensory and emotional stimuli can shape customer satisfaction and behavioural intentions through mediating constructs like perceived value. These findings suggest that emotional enjoyment plays a key role in shaping customers' evaluations and intentions, forming the basis for broader assessments of value and behavioural responses that can influence their willingness to pay. This reflects a broader experiential-consumption logic in which affective reactions act as antecedents to economic judgements.

Building on these insights, this study applies the Stimulus–Organism–Response (S–O–R) framework (Mehrabian & Russell, 1974) and draws on value perception and consumer behaviour theories to model these relationships within restaurant contexts. This integrated approach allows understanding not only the experiential contribution of music but also its economic implications for restaurants. Accordingly, this study addresses the following research question:

“How does Music Enjoyment contribute to experiential and economic value in restaurant settings, and how does it influence customers' Willingness to Pay?”

To address this question, the study pursues the following objectives:

- (I) Analyse the effect of Music Enjoyment on perceived value and Customer Satisfaction in restaurant settings.
- (II) Evaluate the mediating role of perceived value and satisfaction in shaping behavioural responses such as willingness to pay.
- (III) Examine whether Music Enjoyment contributes to willingness to pay as an economic outcome of the dining experience.



(IV) Validate the conceptual model developed in this study—grounded in the S–O–R framework—using PLS-SEM to link emotional enjoyment to evaluative and economic outcomes.

To achieve these research objectives, a theoretical model was developed based on previous literature. This model was subsequently tested through an empirical study using primary data collected at an individual level. The collected data was analysed using a quantitative method PLS-SEM, to examine the relationships between Music Enjoyment (Organism), evaluative responses (Perceived Value and Customer Satisfaction), and economic outcomes (Willingness to Pay and Behaviour Intention). By focusing on the customer's perspective, this study demonstrates how music contributes to experiential and economic value creation in dining settings. It also provides practical insights for restaurant managers and music-curation services by showing that background music can influence customers' emotional and evaluative responses. These findings may also hold relevance for other stakeholders in the music ecosystem, including background music providers and rightsholders, as they highlight how the use of curated music in commercial environments can generate measurable experiential and economic value. However, broader implications for licensing practices or value distribution fall outside the empirical scope of this study and should be addressed in future research.

Beyond its practical relevance, the study also offers important theoretical contributions that advance existing research on sensory environments and consumer behaviour. First, this research advances the Stimulus–Organism–Response (S–O–R) framework by formally positioning Music Enjoyment as the central affective mechanism through which background music shapes evaluative and economic responses in service environments. Although prior studies have examined how music influences atmosphere perception and behaviour, few have modelled emotional enjoyment as the organismic pathway linking sensory stimuli to value judgements and behavioural intentions. Second, the study integrates value-perception theory with musicscape and experiential-marketing research by demonstrating how perceived value and customer satisfaction mediate the relationship between emotional enjoyment and willingness to pay. Although these domains have been examined independently, few studies have empirically integrated musicscape, value-perception and economic outcomes within a unified model applied to dining contexts. This clarifies the mechanisms through which atmospheric cues translate into economic outcomes, strengthening conceptual understanding of value creation in service settings. Third, by empirically testing these relationships in restaurant contexts, the study extends hospitality literature by reframing background music not merely as an atmospheric cue but as a strategic experiential input capable of shaping customers' economic evaluations. Collectively, these contributions refine theoretical perspectives on how environmental stimuli generate value, offering a framework that future research can build upon when examining sensory design and consumer decision-making.

Building on these contributions, the thesis is structured into seven chapters. Chapter 1 introduces the research context, research question, objectives, and theoretical



foundations. Chapter 2 reviews the literature on background music, consumer behaviour, and experiential value, framing the theoretical model. Chapter 3 presents the conceptual model and hypotheses. Chapter 4 details the methodology, including research design, measurement instruments, data collection, and analytical procedures. Chapter 5 presents the empirical results obtained through PLS-SEM. Chapter 6 discusses the findings considering the literature and outlines theoretical, practical, and practical implications, as well as limitations and recommendations for future research. Finally, Chapter 7 presents the main conclusions, emphasising how music contributes to experiential and economic value in restaurant settings.



2. LITERATURE REVIEW

Background music plays a central role in shaping how consumers interpret and evaluate service environments, influencing emotional responses, perceived quality, and behavioural outcomes. This aligns with service-marketing literature, where the servicescape is considered a fundamental component of the customer experience and a contributor to perceived value in service environments (Wirtz & Lovelock, 2016). This perspective is consistent with customer experience literature, which conceptualizes experience as a multidimensional construct integrating sensory, emotional, cognitive, and relational responses (Gentile et al., 2007). In restaurant settings, it operates alongside other atmospheric cues—such as lighting, scent, and décor—to create a holistic experiential environment. This chapter establishes the theoretical foundations of these relationships by reviewing empirical research on how music influences emotions, perceived value, satisfaction, and spending behaviour, thereby supporting the conceptual model developed in this study.

Building on prior research showing that background music influences emotional responses and behavioural outcomes such as time spent or expenditure (Milliman, 1986; North & Hargreaves, 1996), and that positive affective responses enhance value perceptions and satisfaction (Wen et al., 2020) this study positions Music Enjoyment as the affective mechanism through which auditory stimuli translate into experiential and economic outcomes. In this model, background music acts as the environmental cue (Stimulus), Music Enjoyment represents the internal affective response (Organism), and Willingness to Pay reflects the behavioural outcome (Response), extending the S–O–R framework to a value-oriented dining context.

2.1 THE IMPACT OF MUSIC ON CONSUMER BEHAVIOUR

The ability of music to shape the atmosphere goes beyond emotional design. It also translates into measurable effects on customer behaviour. Research consistently shows that background music influences cognitive, emotional, and behavioural responses in consumer environments. (Milliman, 1986) demonstrated that slower tempo music encourages diners to stay longer and spend more, while North et al. (2003) found that specific musical styles can increase perceived authenticity and influence expenditure levels in restaurants. These findings illustrate that music not only alters customers' moods but also shapes perceptions of the atmosphere and their evaluations of the experience.

The concept of musicscape, developed by Jain and Bagdare (2011), expands this understanding by framing music as an integral part of the multisensory environment. According to the authors, “listeners' response to music, as an emotional expression of structural elements, is an important dimension of musical characteristics” (Jain & Bagdare, 2011, p. 291). In restaurant contexts, this suggests that a coherent musicscape can shape customers' emotional states and behavioural patterns, contributing to the perceived atmosphere and overall dining experience. Taken



together, these findings suggest that music can function as an emotional driver and, in some contexts, influence economic-related behaviours such as spending.

2.2 MUSIC ENJOYMENT, PERCEIVED VALUE, AND CUSTOMER SATISFACTION

Building on the understanding that music shapes both emotions and behaviour, this section explores how Music Enjoyment translates into perceived value and Customer Satisfaction. Music Enjoyment refers to affective pleasure and positive emotional responses elicited by background music (Bruner, 1990; Dubé & Morin, 2001).

In consumer behaviour theory, perceived value and satisfaction often function as mediating mechanisms between emotional stimuli and behavioural outcomes. Studies by Wen et al. (2020) and Choo et al. (2021) show that emotional enjoyment strengthens perceptions of value and satisfaction, which in turn drive behavioural intentions such as loyalty or increased spending. Within Kotler's (1973) atmospherics framework and the musicscape concept by Jain and Bagdare (2011), enjoyable music enhances the affective tone of the environment, supporting comfort and positive evaluations, which may in turn reinforce satisfaction and influence customers' willingness to pay.

2.3 THE ROLE OF PERSONALIZATION AND TECHNOLOGY

In the restaurant industry, sensory marketing plays a central role in shaping Customer Satisfaction and loyalty. Satti et al. (2023) demonstrated that sensory cues such as sound, lighting, and scent significantly influence satisfaction, which in turn drives loyalty—highlighting the importance of emotional engagement in service environments.

Building on this foundation, advances in artificial intelligence and data analytics have transformed how music is curated and delivered. As Webster (2023) explains, streaming platforms now predict and tailor what listeners hear, using personalized playlists to sustain engagement. Such technologies are increasingly being adapted to hospitality settings to match musical ambience with customer profiles. At the same time, empirical evidence shows that musical variables like tempo can directly influence emotions and eating behaviour. Migliavada et al. (2024) found that slow-tempo music (85 BPM) evoked low-arousal emotional states (e.g., calm, peaceful, quiet) and increased chewing duration and overall meal time, illustrating how auditory cues shape both perception and behaviour.

Finally, Human–AI collaboration research suggests that algorithmic systems can support creative tasks. Louie et al. (2020) found that AI-assisted composition tools increased users' sense of control, comprehension, and ownership—supporting the view that technology should complement, not replace, the human and emotional dimensions of music. Balancing innovation with authenticity ensures that personalization technologies enhance customer experience while preserving the



creative and experiential value of music in restaurant contexts. These developments align with broader research in Digital Transformation, which increasingly emphasizes the integration of data-driven design, platform-based service delivery, and technology-enabled personalization to enhance customer experience. In this sense, background music becomes a digitally orchestrated experience rather than a static atmospheric input. The capacity to tailor playlists to customer profiles, time-of-day, or brand identity illustrates how AI-assisted curation facilitates continuous and adaptive value creation, supporting service innovation in line with contemporary digital transformation frameworks.

2.4 MUSIC'S VALUE TO STAKEHOLDERS

Beyond personalization and customer experience, understanding how music generates value across the entire ecosystem is essential. When restaurants view music not as a cost but as a strategic asset, they are aligning with atmospherics theory, which highlights sensory cues such as music as tools capable of shaping customer perceptions and supporting experiential positioning (Bruner, 1990; Kotler, 1973). Well-chosen and contextually appropriate music also enhances customers' evaluations of the environment and their overall experience, reinforcing satisfaction and positive behavioural responses within dining settings (Dubé & Morin, 2001; North & Hargreaves, 1996).

Recent research quantifies music's contribution to value creation across stakeholders, extending its role beyond ambience to strategic economic impact in commercial settings (Giachetti et al., 2023). In this perspective, background music may contribute to shared value creation by enhancing emotional experience for customers and supporting experiential positioning for businesses. Recognising music's tangible and intangible value provides a robust foundation for understanding how creativity, technology, and business performance interact in the hospitality sector.



3. THEORETICAL MODEL PROPOSITION

Based on the literature review it was developed a theoretical model. This model was designed to capture the customer's perspective on how curated background music shapes the dining experience, influencing both behaviour and financial outcomes. It explores how the emotional enjoyment of music affects customers' perceptions of value and satisfaction, ultimately leading to greater willingness to pay and stronger behaviour intentions. This approach is particularly relevant for restaurants seeking to enhance customer engagement through atmosphere design, and for rightsholders and other stakeholders in the music and creative industries interested in understanding how curated and legally licensed background music contributes to experiential quality and economic value in commercial environments. Behaviour Intention and Willingness to Pay are the two dependent variables that capture how curated background music influences customer behaviour in dining contexts. Behaviour Intention reflects customers' likelihood to revisit, recommend, or speak positively about the restaurant, serving as a key indicator of satisfaction, loyalty, word of mouth and long-term engagement. Willingness to Pay represents customers' readiness to pay more for a dining experience enhanced by background music. The Music360 project (Giachetti et al., 2023) proposes a framework for quantifying the value that music creates in public venues such as restaurants and retail spaces. It highlights that music contributes both to customer experience and to the broader economic ecosystem of rights management by demonstrating how transparent, data-driven valuation systems can support fair remuneration for creators and producers. Although the study is conceptual rather than behavioural, its approach reinforces the importance of recognizing music as an economic and experiential asset that benefits all stakeholders in the value chain. This research model draws upon two complementary theoretical perspectives: the Stimulus–Organism–Response (S–O–R) framework (Mehrabian & Russell, 1974) and the Cue Utilization Theory (Olson, 1972). Together, these frameworks provide the theoretical basis for understanding how Music Enjoyment may influence perceived value, satisfaction, and subsequent behavioural responses, including loyalty and willingness to pay.

In this study, background music refers to the auditory stimulus present in the restaurant environment, whereas Music Enjoyment is defined as the emotional response elicited by that stimulus. This distinction clarifies that the existence of background music constitutes the environmental cue (Stimulus), while Music Enjoyment reflects the affective reaction measured in the model.

3.1 MUSIC ENJOYMENT

Music Enjoyment represents the pleasure and emotional connection customers experience when listening to curated background music in restaurants. It reflects affective responses triggered by sound, which previous research has shown to influence perceptions of authenticity, quality and overall evaluations of service environments (Bruner, 1990; Dubé & Morin, 2001; North & Hargreaves, 1996). Studies



examining emotional drivers in servicescapes further suggest that enjoyment enhances engagement with the environment and contributes to more favourable assessments of the experience, including authenticity and satisfaction (Choo et al., 2021; So et al., 2021; Wen et al., 2020). Within this research model, Music Enjoyment is conceptualized as the primary independent variable, expected to influence perceived value, satisfaction, and behavioural intention. Perceived value, in particular, is understood as the customer's overall assessment of the benefits received relative to the costs involved (Zeithaml, 1988), and emotional enjoyment is recognised as a determinant of how those benefits are interpreted in experiential contexts (Bruner, 1990; Dubé & Morin, 2001). Understanding how emotional enjoyment translates into measurable outcomes is essential for restaurant managers seeking to design experiences that resonate emotionally with customers, and for music organisations and rightsholders aiming to demonstrate how licensed, high-quality music contributes to satisfaction, loyalty, and economic value creation. Based on findings of the literature, the following hypotheses were proposed:

H1a) Music Enjoyment has a positive impact on customers' perceived value at a restaurant.

H1b) Music Enjoyment has a positive impact on customers' behaviour intention.

H1c) Music Enjoyment has a positive impact on customers' satisfaction at a restaurant.

3.2 PERCEIVED VALUE

Perceived value reflects how customers assess the worth of their dining experience, balancing what they receive against what they give up. Zeithaml (1988) defines it as the trade-off between perceived benefits and perceived costs — a definition still widely adopted in marketing and consumer behaviour research. In this study's context, perceived value captures how music contributes to the overall dining experience, influencing satisfaction, behaviour intention, and potentially willingness to pay. This dominant role is consistent with value-perception theory, which positions Perceived Value as a stronger predictor of behavioural and economic responses than satisfaction alone. According to the Cue Utilization Theory (Olson, 1972), consumers rely on multiple cues—both intrinsic (e.g., food quality) and extrinsic (e.g., music, décor, or brand)—to form evaluations and make judgments about value. Such cues not only guide cognitive evaluations but also elicit emotional responses that shape the perceived meaningfulness and reward of the experience. Recent literature conceptualizes perceived value as a multidimensional construct encompassing utilitarian, hedonic, and social components (Yum & Kim, 2024). In service and experience contexts, companies increasingly create value by staging memorable and emotionally engaging experiences rather than merely delivering functional benefits (Pine & Gilmore, 1998). In dining environments, background music enhances hedonic value of the experience by evoking pleasure and emotional connection, while also contributing to social value through atmosphere and perceived sophistication, and social identity signaling (North et al., 2003; Zeithaml, 1988). In this study, perceived



value is therefore treated as a global construct that integrates these experiential dimensions. In service environments, Patterson and Spreng (1997) found that perceived value strongly influences satisfaction and repurchase intentions, with satisfaction acting as a mediator. Lovelock and Wirtz (2016) emphasise that value creation in services results from integrating functional and emotional benefits, and that consistently delivering superior value is essential to building customer loyalty. In restaurant contexts, Ryu, Han, and Kim (2008) empirically confirmed that perceived value links restaurant image, satisfaction, and behavioural intention. Similarly, North et al. (2016) demonstrated that congruent background music influences consumers' perceptions, product evaluations, and willingness to pay by activating semantically related concepts in memory. Recent evidence further supports this relationship in hospitality settings, showing that experiential value enhances perceived quality and increases customers' willingness to pay when environmental cues reinforce the distinctiveness of the service experience (Ko et al., 2023). Their findings reinforce that music contributes to perceived value not only through emotional enjoyment but also through cognitive associations that enhance the perceived worth of the experience. For this research, perceived value explains how customers evaluate background music as part of the total dining experience and how these evaluations translate into a willingness to reward that experience financially. For collective management organisations, it also illustrates the economic significance of legally licensed, high-quality music in enhancing both customer experience and perceived benefit. Specifically, three hypotheses were proposed:

H2a) Customers' perceived value of music has a positive impact on their willingness to pay more for a dining experience with curated music.

H2b) Customers' perceived value of music has a positive impact on behavioural intention.

H2c) Customers' perceived value of music has a positive impact on their overall satisfaction with dining at a restaurant.

3.3 CUSTOMER SATISFACTION

This construct represents the overall evaluation of the dining experience, shaped by expectations, perceptions, and emotions that arise during the service encounter. According to the Expectation–Disconfirmation Theory proposed by Oliver (1980), satisfaction results from comparing perceived performance with prior expectations: positive disconfirmation generates satisfaction, while negative disconfirmation leads to dissatisfaction. Tse and Wilton (1988) extended this model by demonstrating that satisfaction is jointly determined by perceived performance, prior expectations, and post-consumption evaluation, combining both rational and affective elements. In hospitality research, several empirical studies confirm the central role of satisfaction in shaping behavioural intentions. Ryu, Han, and Kim (2008) demonstrated that restaurant image enhances perceived value and satisfaction, which in turn influence revisit and recommendation intentions. Similarly, Tuncer et al. (2020) validated an



integrated structural model showing that service quality increases perceived value and satisfaction, both of which drive behavioural intentions in restaurants. Jiang and Zhang (2016) further found that perceived service quality significantly affects satisfaction and loyalty, supporting the generalisability of this relationship across service industries. From an experiential perspective, Yuksel et al. (2010) demonstrated that satisfaction encompasses both cognitive and affective components, which strengthen customers' emotional attachment and loyalty. This multidimensional nature is particularly relevant in dining contexts, where sensory and emotional cues — such as food, ambience, and background music — co-create the overall experience. In this study, Customer Satisfaction is defined as the positive evaluative and emotional response that diners experience when the restaurant's overall performance, including legally licensed background music, meets or exceeds their expectations. Satisfaction functions as a mediator between perceived value and behaviour intentions, reinforcing post-purchase emotions, loyalty, and Willingness to Pay. Although Satisfaction plays an important evaluative role, the literature consistently shows that Perceived Value tends to be a stronger driver of behavioural and economic responses. Based on the literature findings, the following hypotheses were proposed:

H3a) Customers' overall satisfaction has a positive impact on their Willingness to Pay more for a dining experience at a restaurant.

H3b) Customers' overall satisfaction with dining at a restaurant has a positive impact on their behavioural intention of visiting the restaurant again in the future.

To examine all hypothesized relationships, a conceptual model was developed and is presented in Figure 3.1.

In this model, the five latent constructs are connected through the corresponding hypotheses, which are tested simultaneously using Partial Least Squares Structural Equation Modelling (PLS-SEM).

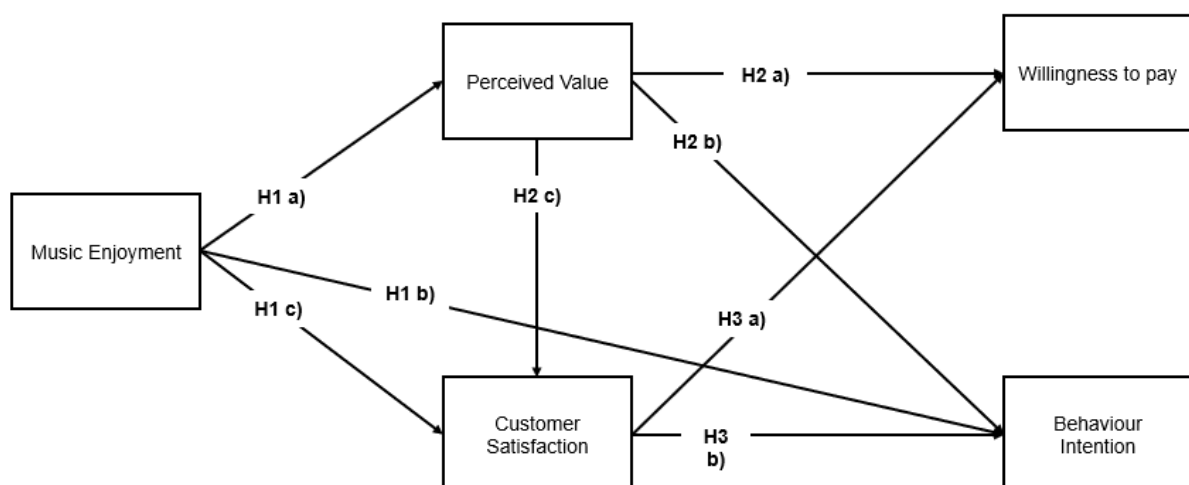


Figure 3.1 - Research model of music enhancement on dining value



This thesis proposes the Research Model of Music Enhancement on Dining Value, extending the Stimulus–Organism–Response (S–O–R) framework (Mehrabian & Russell, 1974) by positioning Music Enjoyment as the affective mechanism through which background music contributes to experiential and economic value in restaurant settings. Prior research has shown that music influences atmosphere perception and consumer behaviour (Milliman, 1986; North & Hargreaves, 1996), and that emotional responses contribute to value judgements and behavioural intentions (Choo et al., 2021; Wen et al., 2020). However, these research streams have been largely examined separately

This study contributes by integrating these perspectives into a unified causal structure tailored to dining settings, conceptualising background music not merely as an atmospheric cue but as a strategic experiential input whose effects materialise through emotional engagement. In doing so, the model connects musicscape and experiential marketing literature with value-creation and consumer-behaviour research. The theoretical contribution lies not in introducing a new construct, but in formally modelling Music Enjoyment as the mechanism that links environmental stimuli to perceived value and willingness to pay, thereby clarifying how background music may act as a driver of economic and experiential outcomes in dining contexts. Positioning Music Enjoyment as the organismic affective response is aligned with the S–O–R tradition, where emotional states function as mediators translating environmental stimuli into evaluative and behavioural outcomes.



4. EMPIRICAL STUDY

To empirically test the conceptual model, a structured online survey was developed using validated measurement scales adapted from prior research. The questionnaire included reflective constructs operationalised through 7-point Likert items, covering Music Enjoyment (Bruner, 1990; Dubé & Morin, 2001), Perceived Value (Zeithaml, 1988), Customer Satisfaction (Choo et al., 2021; Wen et al., 2020), Behaviour Intention (North & Hargreaves, 1996), and Willingness to Pay (adapted from Wen et al., 2020).

The study received ethical approval from the NOVA IMS Ethics Committee (Project No. OTHER2025-4-122772, approved on 29/04/2025), confirming compliance with institutional guidelines on informed consent, data protection, and voluntary participation (see [APPENDIX A](#)).

Following this, data was collected through an online survey distributed to individuals aged 18 and older. To ensure that participants provided thoughtful and contextually relevant responses, the questionnaire began with a brief introduction outlining the purpose of the study and guiding respondents to reflect specifically on their most recent dining experience in a restaurant where background music was present. Respondents were invited to consider how the music was used in that context and how it contributed — or not — including its perceived importance and its influence on the overall dining experience. This introductory framing aimed to create a clear understanding of the study's purpose and encourage participants to respond based on their genuine perceptions and experiences rather than general impressions.

4.1 INSTRUMENT DEVELOPMENT

All measurement items were adapted from validated scales previously applied in hospitality and consumer behaviour research. All indicator loadings, reliability measures and validity criteria were assessed following established PLS-SEM guidelines (Hair et al., 2021). Items for Music Enjoyment, Perceived Value, Customer Satisfaction, and Behaviour Intention were mainly drawn from Wen et al. (2020) and Tuncer et al. (2020). Additional items capturing playlist personalisation and spending intentions were adapted from Ko et al. (2023), Liang and Willemsen (2023), and Lin et al. (2013). Including personalisation aligns with contemporary research showing that tailored auditory environments enhance perceived relevance and emotional engagement, thereby supporting the inclusion of personalisation items within experiential dining contexts. Attitudes toward fair compensation for artists were based on Giachetti et al. (2023). Minor wording adjustments were made to align with the restaurant context, while preserving the theoretical meaning and structure of the original validated scales.

The complete list of items and their respective sources is presented in [APPENDIX B](#). The online survey consists of three sections. Although the questionnaire was presented as a single instrument, its structure can be conceptually divided into three sections for analytical purposes. The first section focused on respondents' most recent



dining experience in a restaurant where background music was present; the second explored their preferences and habits regarding dining frequency, music listening habits, preferred music genres, and the importance of music in their personal life; and the third included demographic and sample characterization questions, such as age, gender, education level, region of residence, and income level. The questionnaire was distributed using Qualtrics and participants used a 7 points Likert scale to respond. A pre-test was conducted with a group of 30 respondents representing the target population to ensure both the clarity of the questionnaire and the accurate operationalization of the research model. This preliminary phase aimed to confirm that each item effectively captured the theoretical dimensions of the constructs before launching the full-scale survey. After the pre-test, the survey was disseminated through social networks, email, and direct invitations. The data collection period spanned from 14th of April 2025 to 8th September 2025. Over 400 invitations were sent out during this time, 267 individuals initiated the questionnaire, and 205 of those (77 %) completed it. Respondents were informed that participation was voluntary, anonymous, and exclusively for academic research purposes. The survey also included demographic and behavioural questions to contextualize participants' responses and allow comparative analysis. These covered age, gender, education level, income level, and region of residence, as well as lifestyle and music-related variables, including how often respondents dine out per week, how frequently they listen to music, and their preferred musical genres. A total of 205 valid responses were collected, representing a diverse sample across demographic and behavioural profiles. Seven-point Likert scales were used in the survey instrument, with participants asked to rate each measurement item from 1, "Strongly Disagree", to 7, "Strongly Agree".

4.2 DATA ANALYSIS

The structural model was estimated using Partial Least Squares Structural Equation Modelling (PLS-SEM), a variance-based approach appropriate for predictive, exploratory and complex research designs (Hair et al., 2021). To proceed with data analysis, a first step to clean the data and identify missing values was conducted. There was one missing value in Income, one in frequency of dining in restaurants and one in frequency of listening to music. These missing values were replaced by the mean of the respective variables, ensuring that the analysis remained robust and reliable.

The sample demonstrates a balanced gender distribution (54.6% female and 44.9% male), ensuring representativeness of the results. In terms of age, the majority were between 36 and 55 years old (67.3%), reflecting a predominantly active population with purchasing power and dining habits consistent with the purpose of this study — to analyse customer experiences in restaurants with music.

Most participants held secondary or higher education degrees and reported monthly incomes between €1,000 and €3,000, representing a middle-income socioeconomic profile. The Lisbon region (65.4%) accounted for most respondents, which aligns with the geographical concentration of the restaurant sector analysed.



Regarding behavioural habits, approximately half of the respondents (49.3%) reported dining out weekly, and 87,3% stated that they listen to music daily, with a similar proportion (89,8%) agreeing that music plays an important role in their lives. These findings reinforce the suitability of the sample for the research objectives, as it represents individual's familiarity with restaurant experiences and highly engaged with music in their daily routines. Further details are provided in Table 4.1.

Table 4.1 - Demographic profile of respondents

Demographic item	n	%	Demographic item	n	%
<u>Gender</u>			<u>Frequency of dining in restaurants</u>		
Female	112	54.6%	Daily	9	4.4%
Male	92	44.9%	Weekly	101	49.3%
Prefer not answer	1	0.5%	Monthly	80	39.0%
			Rarely	15	7.3%
<u>Age</u>			Rarely	15	7.3%
18 - 25	10	4.9%	<u>Frequency of music listening</u>		
26 - 35	34	16.6%	Daily	179	87.3%
36 - 45	57	27.8%	Weekly	17	8.3%
46 - 55	81	39.5%	Monthly	2	1.0%
Over 55	23	11.2%	Rarely	7	3.4%
<u>Education</u>			<u>Music importance (Music is important in my life)</u>		
Primary Education	2	1.0%	Strongly agree	119	58.0%
Secondary Education	84	41.0%	Agree	65	31.7%
Bachelor's Degree	83	40.5%	Slightly agree	12	5.9%
Master's Degree	33	16.1%	Neutral	5	2.4%
Doctorate / PhD	3	1.5%	Slightly disagree	3	1.5%
			Disagree	0	0.0%
<u>Income</u>			Strongly disagree	1	0.5%
0 - 1000	44	21.5%	<u>Music Preferences (% of Strong Agree and Agree)</u>		
1001 - 2000	71	34.6%	Genre	Mean	% (6-7)
2001 - 3000	44	21.5%	Pop	5.08	35.1%
3001 - 4000	21	10.2%	Rock	4.87	52.2%
4001 - 5000	10	4.9%	Classic/ Jazz	4.34	21.5%
Over 5000	15	7.3%	Popular / Tradicional	3.97	18.0%
<u>Residence</u>			Hip-Pop / RAP	3.51	15.6%
Norte	33	16.1%	Eletronic	3.41	18.0%
Centro	22	10.7%			
Lisboa e Vale do Tejo	134	65.4%			
Alentejo	6	2.9%			
Algarve	9	4.4%			
Madeira e Açores	1	0.5%			



5. RESULTS AND DISCUSSION

Following data collection, the empirical analysis was conducted using the Partial Least Squares Structural Equation Modelling (PLS-SEM). This method was chosen because the dataset is non-normally distributed and based on ordinal Likert-scale indicators, conditions under which PLS-SEM is recommended due to its robustness to deviations from normality and suitability for prediction-oriented research (Hair et al., 2011, 2017). Moreover, all procedural steps, thresholds, and methodological criteria follow the PLS-SEM method as described by Hair et al. (2021), in *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, ensuring that both the measurement and structural model assessments adhere to current best practices. In line with these principles, PLS-SEM is applied to test the conceptual model examining how background music influences customers' emotions, Perceived Value, Satisfaction, Behaviour Intention, and Willingness to Pay within restaurant contexts.

5.1 MEASUREMENT MODEL

The measurement model was evaluated following the procedures recommended by Hair et al. (2017) and incorporating the updated guidelines of Hair et al. (2021) regarding reliability and discriminant validity. Internal consistency reliability was evaluated through Cronbach's alpha, rho_A (Dijkstra–Henseler's reliability coefficient), and rho_C (composite reliability). According to Hair et al. (2017), values above 0.70 indicate acceptable reliability. Both rho_A and rho_C provide more accurate estimates of internal consistency than Cronbach's alpha, as they are derived from the indicator correlations estimated by the PLS algorithm. All constructs exceeded the recommended thresholds, confirming internal consistency reliability.

Discriminant validity was first assessed using indicator cross-loadings, ensuring that each indicator loaded more strongly on its associated construct than on any alternative construct, as recommended by Hair et al. (2021). The results confirmed that all indicators met this criterion, supporting construct distinctiveness. The full cross-loading matrix is presented in [APPENDIX C](#).

Convergent validity was examined using the Average Variance Extracted (AVE), which indicates the amount of variance captured by a construct relative to the variance due to measurement error. Following Fornell and Larcker (1981), AVE values above 0.50 demonstrate that each latent construct explains more than half of the variance in its indicators. The results for reliability and convergent validity are presented in Table 5.1.



Table 5.1 - Reliability and Convergent Validity of Constructs

Construct	Cronbach's α	Composite reliability (ρ_A)	Composite reliability (ρ_C)	Average Variance Extracted (AVE)
Behavioural Intention (BI)	0.950	0.954	0.968	0.910
Music Enjoyment (ME)	0.842	0.851	0.894	0.679
Perceived Value (PV)	0.845	0.848	0.896	0.683
Customer Satisfaction (CS)	----	----	----	----
Willingness to Pay (WP)	0.828	0.876	0.882	0.654

The Customer Satisfaction construct was initially measured using four indicators. However, several items exhibited higher loadings on other constructs, compromising discriminant validity. Following Hair et al. (Hair et al., 2017, 2021), only the most representative indicator was retained as a single-item measure capturing overall satisfaction with the dining experience. According to Hair et al. (2017, 2021), single-item measures are acceptable in PLS-SEM when the construct is concrete, unambiguous, and easily understood by respondents—such as overall satisfaction or overall performance—allowing a single indicator to adequately represent the conceptual domain. Reliability coefficients were therefore not computed for this construct, as internal consistency cannot be assessed for single-item measures.

Discriminant validity was evaluated using three complementary criteria, following the procedures recommended by Hair et al. (2017). The results presented in Tables Table 5.2, Table 5.3 and Table 5.4 confirm that all constructs are empirically distinct and free from multicollinearity issues. First, all indicators loaded highest on their associated construct, satisfying the cross-loadings criterion (Götz et al., 2010). Second, the Fornell–Larcker criterion (Fornell & Larcker, 1981) was verified by comparing the square roots of the AVE with the inter-construct correlations; in all cases, the diagonal square root of AVE values exceeded the off-diagonal correlations, supporting discriminant validity. Third, the Heterotrait–Monotrait ratio (HTMT) (Henseler et al., 2015) was below the 0.90 threshold, further confirming construct distinctiveness. Finally, collinearity among predictor constructs was examined using the inner Variance Inflation Factor (VIF). All values were below 5, indicating no multicollinearity (Hair et al., 2017).



Table 5.2 - Discriminant Validity – Fornell–Larcker Criterion

Construct	BI	ME	PV	CS	WP
Behavioural Intention (BI)	0.954				
Music Enjoyment (ME)	0.719	0.824			
Perceived Value (PV)	0.737	0.740	0.826		
Customer Satisfaction (CS)	0.806	0.662	0.711	0.824	
Willingness to Pay (WP)	0.469	0.503	0.597	0.450	0.809

Table 5.3 - Discriminant Validity – Heterotrait–Monotrait Ratio (HTMT)

Constructs	BI	ME	PV	CS	WP
Behavioural Intention (BI)	—				
Music Enjoyment (ME)	0.798	—			
Perceived Value (PV)	0.818	0.874	—		
Customer Satisfaction (CS)	0.825	0.716	0.769	—	
Willingness to Pay (WP)	0.507	0.562	0.679	0.487	—

Table 5.4 - Collinearity Assessment – Inner Variance Inflation Factor (VIF)

Endogenous Construct	Predictor Construct	Inner VIF
Customer Satisfaction (CS)	Music Enjoyment (ME)	2.214
	Perceived Value (PV)	2.214
Behavioural Intention (BI)	Customer Satisfaction (CS)	1.000
Willingness to Pay (WP)	Customer Satisfaction (CS)	2.023
	Perceived Value (PV)	2.023
Perceived Value (PV)	Music Enjoyment (ME)	1.000



5.2 STRUCTURAL MODEL RESULTS

After confirming the reliability and validity of the measurement model, the next step was to assess the structural model, which examines the hypothesised relationships between the latent constructs. Prior to interpreting these relationships, collinearity was re-checked using the inner Variance Inflation Factor (VIF), which remained well below the recommended threshold of 5 according to Hair et al. (2017, 2021), confirming the absence of multicollinearity among predictor constructs. The structural relationships and explained variances (R^2) are illustrated in Figure 5.1, while the detailed results of hypothesis testing are summarised in Table 5.5.

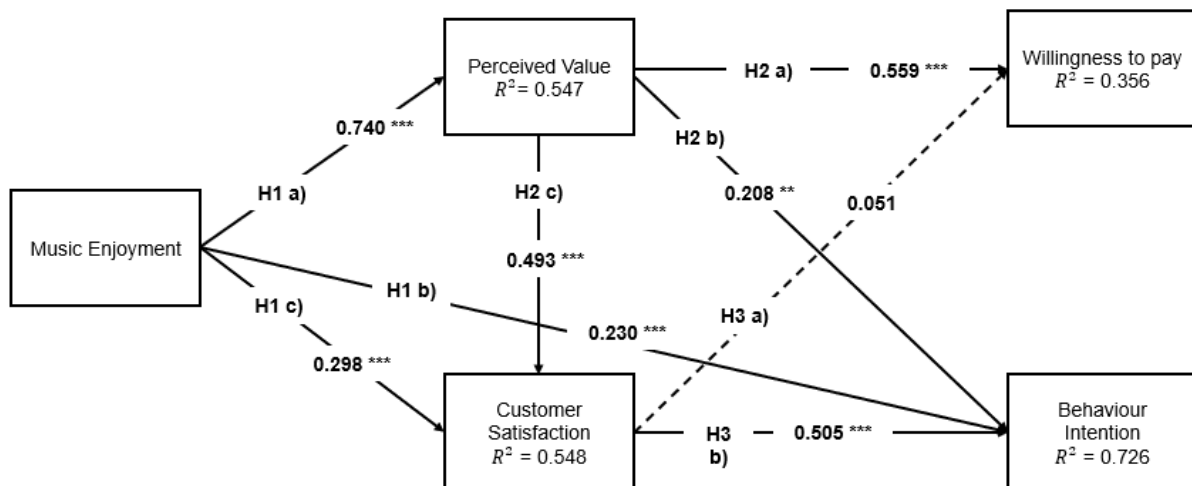


Figure 5.1 - Structural model results

The results, shown in Table 5.5, reveal that Music Enjoyment has a strong and positive effect on both Perceived Value ($\beta = 0.740$, $t = 17.243$, $p < 0.001$) and Customer Satisfaction ($\beta = 0.298$, $t = 4.208$, $p < 0.001$), with the impact on Perceived Value being substantially stronger. Both Perceived Value ($\beta = 0.208$, $t = 3.045$, $p = 0.002$) and Customer Satisfaction ($\beta = 0.505$, $t = 7.009$, $p < 0.001$) have a significant influence on Behavioural Intention, while Willingness to Pay is mainly explained by Perceived Value ($\beta = 0.559$, $t = 6.557$, $p < 0.001$). The direct effect of Customer Satisfaction on Willingness to Pay, however, was not significant ($p = 0.524$).

Table 5.5 - Structural model results

Relationship	Path Coefficient (O)	Sample Mean (M)	STDEV	t-value	p-value	Significance	Supported
Music Enjoyment → Perceived Value	0.74	0.739	0.043	17.243	0	***	Yes
Music Enjoyment → Customer Satisfaction	0.298	0.301	0.071	4.208	0	***	Yes
Music Enjoyment → Behavioural Intention	0.23	0.229	0.06	3.856	0	***	Yes (partial)
Customer Satisfaction → Behavioural Intention	0.505	0.506	0.072	7.009	0	***	Yes
Customer Satisfaction → Willingness to Pay	0.051	0.048	0.098	0.524	0.6	ns	No
Perceived Value → Behavioural Intention	0.208	0.21	0.068	3.045	0.002	**	Yes
Perceived Value → Customer Satisfaction	0.493	0.492	0.069	7.14	0	***	Yes
Perceived Value → Willingness to Pay	0.559	0.558	0.085	6.557	0	***	Yes

When comparing the first estimation of the model (without mediating variables) with the final one, the direct relationship between Music Enjoyment and Behaviour Intention



became weaker, decreasing from $\beta = 0.488$ ($p < 0.001$) to $\beta = 0.230$ ($p < 0.001$) after including Perceived Value and Customer Satisfaction as mediating variables. This reduction shows that part of the influence of Music Enjoyment on customers' behaviour intentions operates indirectly, through these two mediators. Indirect effects were examined using bootstrapping procedures, as recommended by Hair et al. (2017, 2021). In other words, the more customers enjoy the background music, the more they tend to perceive the dining experience as valuable and satisfying, which then strengthens their willingness to return, recommend the restaurant, or pay more. This relationship aligns with the findings of North et al. (2016), who showed that background music congruent with a product or context enhances product evaluations, indirectly, perceived value, and Willingness to Pay through affective and cognitive congruity mechanisms. Such evidence supports the notion that Music Enjoyment operates as both an emotional and semantic cue in shaping economic evaluations. These findings highlight the emotional and experiential pathway through which music shapes consumer behaviour, confirming its role, not only as an environmental element, but as a key driver of perceived value and satisfaction in restaurant experiences. The non-significant direct path from Customer Satisfaction to Willingness to Pay warrants theoretical reflection within the framework of this model. Although satisfaction reflects the emotional evaluation of the dining experience, it may not translate automatically into economic behaviour unless mediated by perceived value. This aligns with research by North et al. (2003), who found that only when background music created a perception of premium quality did customer spending significantly increase. These results reinforce that satisfaction alone may evoke positive emotions, but it is the cognitive appraisal of value that ultimately drives customers' Willingness to Pay.

The model also demonstrates a good level of explanatory power, with $R^2 = 0.547$ for Perceived Value, 0.548 for Customer Satisfaction, 0.726 for Behavioural Intention, and 0.356 for Willingness to Pay. Following Hair et al. (2017, 2021), R^2 values of approximately 0.75, 0.50, and 0.25 can be described as substantial, moderate, and weak, respectively. Taken together, these values indicate moderate explanatory power for Perceived Value and Satisfaction, substantial explanatory power for Behavioural Intention, and context-appropriate explanatory power for Willingness to Pay, which aligns with the generally lower predictability associated with economic outcomes in consumer behaviour and hospitality research.

5.3 DISCUSSION OF RESULTS

The results confirm that Music Enjoyment is a central affective mechanism shaping customers' evaluations of the dining experience. The strongest effect observed was on Perceived Value, indicating that when customers enjoy the music, they not only experience positive emotions but also perceive the overall dining experience as more rewarding and worth paying for. This aligns with the conceptualisation of value as an integration of perceived benefits and experiential quality (Zeithaml, 1988) and reinforces findings that music enhances both emotional and evaluative components of customer experience (North et al., 2016; Pantoja & Borges, 2021; Wang & Li, 2023).



The significant effect of Music Enjoyment on Customer Satisfaction further supports the idea that background music contributes to positive emotional evaluations within service environments. However, this effect was weaker than the effect on Perceived Value, suggesting that satisfaction may be shaped more by customers' cognitive appraisal of overall benefits than by affective reactions alone. This interpretation is consistent with research in hospitality contexts where Perceived Value frequently emerges as a stronger determinant of satisfaction than discrete emotional responses (Wen et al., 2020). Behaviour Intention was significantly predicted by both Perceived Value and Customer Satisfaction, with the strongest contribution coming from Satisfaction ($\beta = 0.505$). While Satisfaction strengthens customers' intentions to return and recommend the restaurant, Perceived Value remains the principal driver of economic behaviour, as reflected in its strong effect on Willingness to Pay ($\beta = 0.559$). Together, these results indicate that positive experiences encourage behaviour engagement, whereas perceptions of value primarily determine customers' readiness to pay more.

The findings also provide empirical support for the Stimulus–Organism–Response (S–O–R) framework (Mehrabian & Russell, 1974). In this model, background music functions as the Stimulus, Music Enjoyment represents the Organism (internal affective state), and the resulting behavioural outcomes—Behavioural Intention and Willingness to Pay—represent the Response. The results reinforce the notion that environmental cues trigger emotional and cognitive reactions that subsequently translate into behavioural consequences.

The non-significant direct path from Customer Satisfaction to Willingness to Pay offers a theoretically meaningful insight. It suggests that although customers may feel satisfied with the experience, satisfaction alone does not necessarily lead to a willingness to pay more. Instead, economic decisions appear to be primarily mediated by Perceived Value, consistent with research indicating that customers evaluate spending based on fairness and perceived benefit rather than purely emotional satisfaction (North et al., 2003). In this sense, perceived value acts as the cognitive mechanism through which emotional enjoyment is converted into economic intent.

The strong mediating role of Perceived Value is particularly notable. When mediators were introduced into the model, the direct effect of Music Enjoyment on Behaviour Intention decreased, indicating that part of the influence operates indirectly. This finding supports prior research showing that congruent or enjoyable music enhances perceived quality and spending intentions through affective and cognitive congruity mechanisms (North et al., 2016; Xu et al., 2024).

From a broader experiential consumption perspective, the results reinforce the idea that customers' perceptions of service environments are co-created through sensory engagement rather than determined solely by functional attributes (Gentile et al., 2007). Background music contributes not only to emotional pleasure but also to cognitive evaluations that ultimately inform satisfaction and willingness to pay. This



dual pathway—ffective and evaluative—highlights the multidimensional role of music within restaurant experiences.

Finally, the model demonstrates moderate to strong explanatory power, with R^2 values consistent with thresholds proposed by Hair et al. (2017, 2021). This indicates that the constructs effectively capture the relationships between sensory stimuli, emotional reactions, perceived value, satisfaction, and economic outcomes in dining contexts.

Overall, the results support and extend existing literature by showing that Music Enjoyment functions not only as an atmospheric cue but also as an economic and experiential asset that shapes customers' perceived value and spending intentions within restaurant environments.



6. CONCLUSIONS AND FUTURE RESEARCH

This study aimed to understand how background music contributes to customers' dining experience, particularly by examining the role of Music Enjoyment as the affective mechanism that shapes Perceived Value, Customer Satisfaction, Behaviour Intention and Willingness to Pay. Four objectives guided the research, and the findings offer a coherent explanation of how emotional responses to music evolve into evaluative and economic outcomes in restaurant contexts.

The first objective was to analyse the effect of Music Enjoyment on perceived value and satisfaction. The results confirmed that higher enjoyment is associated with increased perceived value and, to a lesser extent, higher satisfaction. The effect on perceived value was the strongest, indicating that customers interpret enjoyable music as part of the overall benefit of the dining experience. This suggests that perceived value, rather than satisfaction alone, is the main evaluative mechanism through which enjoyment influences customer perceptions.

The second objective was to examine whether perceived value and satisfaction mediate the relationship between Music Enjoyment and both Behaviour Intention and Willingness to Pay. The results showed that perceived value plays a central mediating role, strengthening both behavioural intention and willingness to pay. Although satisfaction increases with enjoyment, its direct influence on willingness to pay was not significant, suggesting that economic decisions are shaped more by perceived worth and fairness than by affective reactions alone. Importantly, because the perceived value scale included a price-anchored item, the results reflect an economically grounded evaluation rather than a purely subjective impression, strengthening the relevance of the findings for pricing decisions.

The third objective was to determine whether Music Enjoyment contributes to willingness to pay as an economic outcome of the dining experience. The analysis confirmed that enjoyment does contribute to higher willingness to pay, primarily through its impact on perceived value. This demonstrates that customers incorporate background music into their assessment of the experience's worth and use it as part of their reasoning when making spending decisions. The positive responses to the anchored price question reinforce that music is not only emotionally appreciated but also economically valued within the context of the meal.

The fourth objective was to validate the conceptual model grounded in the Stimulus–Organism–Response framework. The model was supported and displayed strong explanatory power, showing that music acts as an environmental stimulus that triggers emotional enjoyment, which then influence evaluative appraisals and lead to behaviour outcomes such as Behaviour Intention and Willingness to Pay. These results reinforce the interaction between sensory cues, emotional engagement, perceived value and economic responses in dining environments.



From a practical perspective, the findings highlight that background music should be treated as a strategic component of restaurant experience design. When aligned with the ambience and customer expectations, music can enhance perceived quality, increase engagement and support pricing strategies that reflect higher perceived value. These insights are also relevant for background music providers and rightsholders, demonstrating how curated and legally licensed music can contribute to both experiential quality and economic performance in commercial environments.

As with most empirical studies in the field of consumer behaviour and hospitality, this research presents some inherent limitations that should be acknowledged. The cross-sectional nature of the data captures perceptions at a single moment, which naturally restricts the analysis of long-term behavioural patterns or changes across repeated experiences. The sample reflects the cultural and musical context of Portugal, which may limit generalisation to other markets, a common consideration in studies rooted in specific cultural settings. Additionally, the reliance on self-reported measures—standard practice in survey-based research—may not fully capture behavioural or physiological responses. The inclusion of a price-anchored item in the perceived value scale may also have influenced responses through contextual cues, an effect documented in value-perception research.

Future research could address these limitations by using longitudinal or experimental methods, incorporating behavioural or biometric indicators, and examining moderating factors such as genre preference, cultural background or music–context congruence. Extending the analysis to other service contexts could also help to understand how music-driven experiential value influences broader areas of the music ecosystem, including licensing practices, rightsholder remuneration and technology-enabled music curation.

Overall, the findings demonstrate that background music is more than an atmospheric element—it is a strategic component of the dining experience. Music Enjoyment emerged as a central mechanism that shapes Perceived Value and Satisfaction, and—through Perceived Value—also influences Willingness to Pay. By showing that customers not only feel the impact of music but also assign economic value to it, the study contributes to a deeper understanding of how sensory experiences influence consumer perceptions, behaviour and economic evaluations.



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APPENDIX A – ETHICS COMMITTEE REPORT

RE: NOVA IMS | Ethics Committee - NEED REVIEW



Ethics Committee

To: Silvia Ribamar da Silva Paulo de Sa; Manuela Aparicio
Cc: Ethics Committee



ter 29/04/2025 11:47

Dear Silvia de Sá,
Dear Professor Manuela Aparicio,

Thank you for filling in the Research Ethics Checklist. After reviewing your request, you can proceed with the study as we do not foresee any major ethical concerns with the project.

Project No.: **OTHER2025-4-122772**

Project Title: **The sound of Dining**

Principal Researcher: **Silvia Sá**

according to the regulations of the Ethics Committee of NOVA IMS and MagIC Research Center this project was considered to meet the requirements of the NOVA IMS Internal Review Board, being considered **APPROVED** on 29/04/2025.



ANNEX B – SURVEY ITEMS

Construct	Ref.	Items	Measurement items	Source
Music Enjoyment	ME1	R	The background music in restaurant was pleasing	Wen et al. (2020)
	ME2		The overall music was positive to me.	Ko et al. (2023)
	ME3	R	I feel that I was connected with the music style/ genre.	Wen et al. (2020)
	ME4	R	I felt that the playlist was personalized to my music tastes	Liang and Willemsen (2023)
	PV5	G	I tend to feel more connected in a restaurant experience with music.	
Perceived Value	PV6	R	I think that the prices that I pay for the overall experience at this restaurant are worthwhile.	Wen et al. (2020)
	PV7		The price was reasonable based on the quality of dining experience with music.	
	PV8		Average price of music in restaurants is less than 0,5€/customer. Based on that I think the price is Reasonable based on the quality that music offers to the overall dining experience.	Tuncer, et. Al. (2020)
Satisfaction	ST9	R	I was satisfied with the atmosphere in this restaurant.	Wen et al. (2020)
	ST10	R	All things considered, I feel good about my decision to dine out at this restaurant.	
	ST11	R	I am very satisfied with the overall experience at this restaurant.	Tuncer, et. Al. (2020)
	ST12	R	I'm happy to have chosen this restaurant.	
Behaviour Intention	BI13	R	I would like to return to this restaurant in the future.	
	BI14	R	I would like to recommend this restaurant to my family and friends.	Wen et al. (2020)
	BI15	R	I would like to speak positively about this restaurant to others.	
Willingness to pay	WP16		I am willing to spend extra money for having dinner with enjoyable background music.	Ko et al. (2023)
	WP17	G	Pay more to listen enjoyable background music at this (a) restaurant is the right idea.	Lin et al. (2013)
	WP18		compensation.	
	WP19		I believe that paying for licensed music is important to ensure fair compensation for music creators.	Giachetti et al. (2023)
Sample Characterization	Age		What is your age?	
	Gender		What is your gender?	
	Education		What is your education level?	
	Resident		What is your region of residence?	
	Income Level		What is your monthly income?	
	Frequency		How often do you usually dine in restaurants?	
	Frequency		How often do you usually listen to music?	
	Music Preferences		Which music genres do you prefer? – I really like Pop music.	
	Music Preferences		Which music genres do you prefer? – I really like Rock music.	
	Music Preferences		Which music genres do you prefer? – I really like Classical/Jazz music.	
	Music Preferences		Which music genres do you prefer? – I really like Traditional/Fado music.	
	Music Preferences		Which music genres do you prefer? – I really like Hip-Hop/Rap music.	
	Music Preferences		Which music genres do you prefer? – I really like Electronic music.	
	Music Preferences		Is music important in your life?	



ANNEX C - Cross-Loadings Matrix

Cross Loadings	Behaviour Intention	Customer Satisfaction	Music Enjoyment	Perceived Value	Willingness to pay
13BI	0.943	0.713	0.667	0.678	0.454
14BI	0.957	0.777	0.697	0.707	0.437
15BI	0.961	0.811	0.691	0.723	0.452
16WT	0.497	0.427	0.574	0.635	0.855
17WY	0.366	0.338	0.407	0.495	0.887
18WT	0.278	0.296	0.271	0.357	0.758
19WT	0.318	0.378	0.276	0.355	0.723
1ME	0.561	0.554	0.793	0.61	0.41
2ME	0.645	0.603	0.877	0.683	0.437
3ME	0.641	0.564	0.844	0.615	0.429
4ME	0.507	0.445	0.779	0.516	0.377
5PV	0.558	0.529	0.651	0.803	0.403
6PV	0.725	0.749	0.614	0.866	0.455
7PV	0.606	0.532	0.621	0.839	0.527
8PV	0.537	0.524	0.566	0.795	0.59
9ST	0.806	1	0.662	0.711	0.45

Data with Purpose.

