

Customer Satisfaction as a Mediator Between Product Quality, Service Quality, Price, and Purchasing Decisions: Evidence from Petrol Stations in Dili, Timor-Leste

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ABSTRACT

This study explores the effects of product quality, service quality, and price on customer satisfaction and purchasing behaviour in Timor-Leste's fuel industry, applying SMART PLS 4.0 for analysis. The findings demonstrate that service quality plays a decisive role in enhancing both satisfaction and purchase decisions, whereas product quality shows no direct influence. Price also does not directly shape purchasing behaviour, yet it contributes positively to satisfaction, which subsequently mediates its effect together with service quality. Overall, the results highlight the central importance of service excellence and transparent pricing in shaping consumer choices, suggesting that businesses must strengthen service delivery, maintain fair pricing practices, and foster customer trust to remain competitive. To enhance generalizability, future studies are encouraged to investigate these relationships across industries and cultural contexts, incorporating longitudinal and qualitative approaches to capture the evolving nature of consumer behaviour in the digital era.

Keywords: *Product Quality, Service Quality, Price, Customer Satisfaction, Purchasing Decisions, Timor-Leste.*

1. Introduction

In today's globalized economy, consumer purchasing decisions significantly shape both local and international markets (Marcal et al., 2020; Nabella, 2021; Crisafulli et al., 2022; Maia et al., 2023; Aditya et al., 2021; Saha et al., 2023; Pi et al., 2024; Saldanha et al., 2024). Prior research highlights product quality, service quality, and pricing as critical determinants of consumer behaviour, directly influencing perceptions, preferences, and loyalty (Kotler, 2007; Truong & Truong, 2022; Jiang et al., 2022; Macall et al., 2021; Saldanha et al., 2021; Coleman, 2019; Carvalho et al., 2020). Businesses operating in competitive markets must therefore deliver consistent quality and transparent pricing to meet consumer expectations and build trust (Tirno, 2021; do Prado et al., 2024).

Customer satisfaction emerges as a central factor in this process, mediating the relationship between these business variables and consumer decision-making (Kim et al., 2019; Olson, 2022; Wichmann et al., 2022; Tahirkheli, 2022; Othman et al., 2021). Evidence shows that when consumers experience superior products, efficient service, and fair pricing, they are more likely to remain loyal and engage in repeat purchases, strengthening long-term business growth (Panda et al., 2022; Rua et al., 2020; Konuk, 2019; Othman et al., 2021; Kim et al., 2022; Saldanha et al., 2023). Nonetheless, some studies caution that high service quality does not always guarantee satisfaction, as external factors—such as weak customer service practices, lack of promotions, or limited discounts—can reduce satisfaction and undermine purchasing behaviour (Prassida et al., 2024; do Prado et al., 2024).

These findings emphasize the complex nature of consumer satisfaction, underscoring the need for firms to balance service quality, competitive pricing, and promotional strategies to strengthen retention and loyalty (Jimenez Mori, 2021; Vázquez-Suárez et al., 2022; Yu et al., 2022). Current evidence further indicates that customer satisfaction mediates the link between product quality, service quality, and pricing with purchasing decisions, though the degree of influence varies across industries (Carvalho et al., 2020; Marcal et al., 2020; Rua et al., 2020; Maia et al., 2023; Da Silva et al., 2022; Saldanha et al., 2021, 2022, 2023, 2024). Sector-wide studies also reveal that inconsistencies in pricing and service delivery substantially impact satisfaction and consumer loyalty (Wang et al., 2023; Kunszab & Vongxay, 2024).

Ultimately, this line of research highlights the strategic importance of embedding customer satisfaction at the centre of business decision-making. By ensuring transparent pricing, maintaining quality standards, and aligning with evolving consumer expectations, firms can foster brand loyalty and secure long-term sustainability (Nilashi et al., 2022; Kwok et al., 2020; Verma et al., 2021; Saldanha et al., 2019; Luan & Wang, 2023).

2. Literature Review

2.1. Conceptual Review

2.1.1. Product Quality

Product quality is a pivotal determinant of success in both manufacturing and service industries, profoundly influencing consumer perceptions, satisfaction levels, and purchasing decision (Kotler & Keller, 2022). It signifies the

degree to which a product aligns with or surpasses consumer expectations, encompassing attributes such as reliability, durability, and overall value (Garvin, 1987). High-quality products bolster brand credibility, foster customer loyalty, and enhance operational efficiency by minimizing defects and reducing production costs (Han & Hyun, 2022). Conversely, subpar products can lead to increased returns, warranty claims, and reputational harm, thereby diminishing a company's competitive standing (Hwang & Kim, 2023). To ensure sustained growth and maintain consumer trust, businesses must adopt strategic quality management practices that emphasize consistency and continuous improvement (Iqbal, Ma & Hasin, 2023).

The significance of product quality is elucidated through two prominent theoretical frameworks: Total Quality Management (TQM) and Expectation-Confirmation Theory (ECT). TQM advocates for an organization-wide commitment to continuous improvement, customer-centric approaches, and process optimization (Deming, 1986). It emphasizes integrating employee involvement, standardizing procedures, and making data-driven decisions to ensure consistent product reliability (Juran, 1989). Companies that effectively implement TQM principles often experience reduced operational costs, enhanced production efficiency, and elevated customer satisfaction (Evans & Lindsay, 2020). This methodology is particularly vital in industries where quality assurance is critical, such as manufacturing and healthcare, as it ensures that products and services consistently meet established standards and fulfill consumer expectations (Rodríguez-Antón & Rubio-Andrade, 2023).

ECT provides insight into how consumers perceive and evaluate product quality (Oliver, 1980). It posits that customers form expectations about a product prior to purchase and subsequently compare their actual experience against these expectations (Dwivedi, Yadav & Singh, 2023). When a product meets or exceeds anticipated standards, positive disconfirmation occurs, leading to higher satisfaction, increased brand loyalty, and repeat purchases (Chakraborty, Srivastava & Mishra, 2023). Conversely, if a product falls short of expectations, negative disconfirmation results in dissatisfaction, which may prompt brand switching and negative word-of-mouth (Kang & Namkung, 2023). This theory underscores the importance of maintaining high-quality standards to ensure products consistently align with consumer expectations, thereby fostering trust and supporting long-term business success (Luo, Xu & Zhou, 2023).

Recent studies have further illuminated the impact of product quality on consumer behaviour. For instance, research indicates that consumers are willing to pay premium prices for high-quality products that offer superior durability, performance, and reliability (Han & Hyun, 2022). In sectors such as electronics and automobiles, quality assessments are based on functionality, safety, and technological innovation, making it a crucial factor in brand preference (Tseng & Wang, 2023). Similarly, in the fuel industry, product quality is evaluated based on engine performance, fuel efficiency, and endorsements from industry experts (Anuar, 2021). Consumers

who perceive a product as high-quality are more likely to develop trust in the brand, leading to repeat purchases and strong brand loyalty (Hwang & Kim, 2023).

So, product quality remains a critical component of business sustainability, affecting not only customer satisfaction but also a company's ability to compete in dynamic markets. Theoretical frameworks such as TQM and ECT offer valuable insights into managing and maintaining quality to enhance consumer trust and drive purchasing decision. As competition intensifies across industries, businesses must prioritize quality assurance, innovation, and customer-driven strategies to differentiate themselves, foster brand loyalty, and ensure long-term profitability (Rodríguez-Antón & Rubio-Andrade, 2023).

2.1.2. Service Quality

Service quality is defined as the extent to which a service meets or exceeds customer expectations and satisfies their needs (Parasuraman, Zeithaml & Berry, 1988). It is a critical factor that influences consumer behaviour, business performance, and overall market competitiveness (Asawawibul et al., 2025). Service quality is often evaluated based on five key dimensions: reliability, which refers to the ability to deliver promised services dependably and accurately; responsiveness, which reflects the willingness and speed with which a service provider assists customers; assurance, which encompasses employee competence, courtesy, and the ability to instil customer confidence; empathy, which relates to personalized attention and understanding of customer needs; and tangibles, which include physical facilities, equipment, and overall service environment (Parasuraman, Zeithaml & Berry, 1988; Zibarzani et al., 2022).

Service quality plays a crucial role in shaping customer satisfaction and influencing purchasing decisions, making it a key strategic focus for businesses seeking competitive advantage. The relationship between service quality and customer satisfaction is well-documented in marketing and service management literature (Shokouhyar et al., 2020). High service quality creates positive customer experiences, fosters trust, and leads to increased satisfaction levels. When customers perceive that a service provider consistently meets or exceeds their expectations in areas such as reliability, responsiveness, assurance, empathy, and tangible aspects, their satisfaction increases, reinforcing brand loyalty and positive word-of-mouth recommendations (Wang et al., 2023). Conversely, poor service quality can lead to dissatisfaction, reduced customer retention, and negative reviews, which can significantly impact an organization's reputation and financial performance.

The link between service quality, customer satisfaction, and purchasing decisions is particularly evident in industries where service interactions play a critical role, such as hospitality, retail, banking, healthcare, and telecommunications. For example, in the hospitality industry, customer satisfaction is highly dependent on personalized service, staff responsiveness, and the overall service environment (Ali, Hussain & Omar, 2021). Similarly, in e-commerce, companies that prioritize seamless customer support, quick issue resolution, and reliable delivery services are more likely to secure repeat purchases and

long-term customer loyalty. As competition intensifies across industries, businesses must continuously enhance their service quality to maintain high levels of customer satisfaction and influence purchasing decisions (Li et al., 2021).

2.1.3. Price

Price is a fundamental element in marketing and economics, representing the monetary value assigned to goods and services. Beyond its transactional role, price significantly influences customer satisfaction and purchasing decisions (Prakash et al., 2020). A key determinant of satisfaction is the perception of price fairness—when consumers believe a price accurately reflects a product's quality and benefits, their satisfaction increases (Jimenez Mori, 2021). Conversely, perceptions of excessive or unjustified pricing often lead to dissatisfaction, particularly in service industries where value assessment is more subjective (Othman et al., 2021). Research indicates that transparent pricing models enhance customer trust and satisfaction, while hidden fees or sudden price surges can diminish confidence in a brand (Kenesei et al., 2022).

Price also plays a crucial role in consumer decision-making, shaping how individuals assess value. Many consumers associate higher prices with superior quality, particularly when limited information is available (Riquelme et al., 2021). However, empirical studies suggest this assumption does not always hold, especially in competitive markets where affordability often outweighs perceived quality (Konuk, 2019). Psychological pricing techniques, such as charm pricing, leverage cognitive biases to make prices appear more attractive (Martín-Consuegra et al., 2007). Similarly, value-based pricing aims to align price with perceived worth, but its success depends on accurately gauging customer expectations (Hallikainen et al., 2022). Misalignment in these strategies can result in reduced sales and customer dissatisfaction (Boadi et al., 2017).

Despite their effectiveness, pricing strategies have sparked ethical debates. Dynamic pricing, where prices fluctuate based on demand, has been criticized for perceived exploitation, particularly in ride-sharing and event ticketing (Kwok et al., 2020). Psychological pricing tactics have also been questioned, with critics arguing that they manipulate consumer perception, potentially leading to regretful purchases (Macall et al., 2021). Alternative models, such as "pay-what-you-want" (PWYW), have been explored as consumer-driven pricing approaches (Macall et al., 2021; Güzel et al., 2025). While PWYW can boost sales volume, studies indicate that it often results in lower-than-market-value payments, making it financially unsustainable unless paired with charitable incentives (Weibel et al., 2024). These debates show the need for businesses to balance profitability with ethical pricing practices to maintain consumer trust (Dentler & Rossi, 2024).

2.1.4. Customer Satisfaction

Customer satisfaction is a fundamental measure of a consumer's post-purchase evaluation, reflecting their overall perception of a product or service. It arises when a product

successfully meets or surpasses customer expectations, fostering positive sentiment, trust, and long-term brand engagement (Gajewicz et al., 2022; Li et al., 2021; Esmailpour et al., 2022; Salamah et al., 2022; Cakici et al., 2019; Carvalho et al., 2020; Marcal et al., 2020; Saldanha et al., 2021). However, satisfaction is not solely based on a product's functionality—it also encompasses emotional and psychological responses that shape purchasing decision, customer loyalty, and advocacy (González-Mansilla et al., 2019). A satisfied customer is more likely to develop a strong attachment to a brand, increasing their willingness to repurchase and recommend the product or service to others. Conversely, when expectations are unmet, dissatisfaction may lead to negative perceptions, complaints, and diminished customer retention (Naser & Abu Sbeat, 2022).

Empirical studies have identified three key indicators used to measure customer satisfaction. The first is satisfaction with the product itself, which evaluates whether it meets quality standards, delivers expected functionality, and provides value to the consumer. The second is the experience of purchasing or using the service, which includes the ease of transaction, service efficiency, staff responsiveness, and overall service quality (Varriale et al., 2023a). The third is overall satisfaction, which integrates product quality, service experience, and price fairness into a holistic assessment of the consumer's experience (Cakici et al., 2019; Carvalho et al., 2020; Marcal et al., 2020; Saldanha et al., 2021). These dimensions are widely utilized in various industries to gauge customer perceptions, identify pain points, and refine business strategies. As competition intensifies, businesses increasingly rely on customer satisfaction metrics to improve service standards, enhance product offerings, and drive long-term loyalty (Carvalho et al., 2020).

The role of customer satisfaction extends beyond individual transactions, serving as a critical determinant of business success. High satisfaction levels contribute to increased consumer trust, brand credibility, and positive word-of-mouth, which can attract new customers and solidify market positioning (Tani et al., 2020). On the other hand, dissatisfaction can lead to reputational damage, reduced customer retention, and revenue decline (Boadi et al., 2017).

To maintain a competitive edge, companies must continuously refine their products and services, ensuring alignment with evolving consumer expectations and industry trends (Brunello et al., 2025). The three established indicators of satisfaction provide valuable insights for businesses, enabling them to implement data-driven improvements that foster customer-centric innovation and sustainable growth (Metwally & Samir, 2024).

2.1.5. Purchasing Decision

The purchasing decision is a crucial element of consumer behaviour, reflecting the probability of a customer acquiring a product or service. This decision-making process is influenced by a blend of cognitive, emotional, and contextual factors, with consumers weighing key attributes such as product quality, price, brand reputation, and perceived value (Staniewski & Awruk, 2022). Consumer expectations play a central role in

shaping these decisions, as individuals evaluate products based on their prior experiences, marketing exposure, recommendations from peers, and cultural influences (Klasa et al., 2018). These elements collectively inform consumer perceptions and determine whether a product aligns with their needs and preferences (Chua & Tsipras, 2024).

Empirical studies have identified five essential factors that drive purchasing decisions. According to Kim et al. (2022) and Narayanan et al. (2022), these include: (1) the product's ability to address a specific consumer need, highlighting its practical usefulness; (2) trust in the company's reliability in consistently delivering high-quality goods or services; (3) the likelihood of recommending the product to others, which reflects overall consumer confidence and satisfaction; (4) assurance in the product's performance, shaped by personal experiences, warranties, and the company's reputation; and (5) perceived value for money, where customers evaluate whether the price paid is justified by the product's benefits, often influenced by prior usage or external endorsements. These factors provide a structured framework for understanding purchasing decision across various industries and market segments (Wang et al., 2023).

Although these factors are central to purchasing decisions, external influences such as social norms, psychological tendencies, and economic conditions also play a significant role (Maharsi et al., 2021). Consumers often compare alternatives based on pricing strategies, product reviews, and promotions (Vasan, 2021; Maia et al., 2023), while emotional connections to brands and perceived status symbols can sometimes take precedence over rational economic considerations (Farid et al., 2023). In many cases, impulse buying and habitual purchasing patterns override logical assessments of value (Marcal et al., 2020; Saldanha et al., 2021). Businesses that seek to enhance consumer purchase intentions must adopt competitive pricing models, maintain transparent communication, and ensure consistent product quality to meet evolving customer expectations (Arantes et al., 2022). A data-driven approach to analysing these behavioural drivers enables companies to refine marketing strategies, strengthen customer loyalty, and sustain long-term growth in an increasingly competitive marketplace (Rua et al., 2020).

2.2. Conceptual Frameworks and Research Model

The Expectancy-Disconfirmation Theory (EDT) and the Theory of Planned Behaviour (TPB) provide a strong foundation for understanding how product quality (PQ), service quality (SQ), and price (PC) shape customer satisfaction (CS), ultimately influencing purchasing decisions (PD). EDT suggests that satisfaction is based on the gap between consumer expectations and actual product or service performance—when expectations are exceeded, positive disconfirmation strengthens satisfaction and brand loyalty, whereas negative disconfirmation leads to dissatisfaction and potential brand switching (Oliver, 2015; Wu et al., 2022). In industries like fuel retailing, consumers evaluate fuel quality, pricing fairness, and service efficiency before committing to a purchase, making this theory highly relevant. On the other hand, TPB emphasizes that

attitudes, social influences, and perceived ease of purchase shape consumer decision-making (Ajzen, 2020; Kim et al., 2023). For example, if a fuel brand has a reputation for high quality and fair pricing, and consumers perceive the purchasing process as convenient, they are more likely to choose that provider. By combining EDT and TPB, this model explains both rational assessments of fuel quality, service, and pricing, as well as the psychological and behavioural motivations driving purchasing decision.

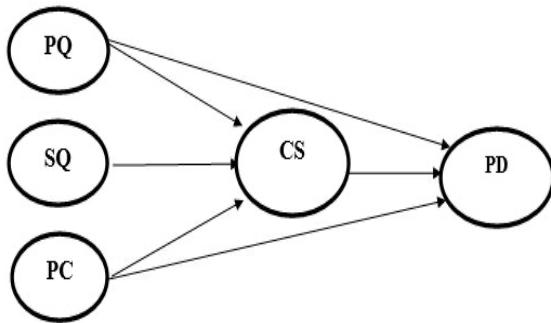


Figure 1. Conceptual Research Model

The indicators employed in this study are adopted from previous studies, product quality from Puerta et al. (2022), Kenyon & Sen (2012), Anuar (2021). Service quality from Sobari et al. (2022), Anuar (2021), Rua et al. (2020), and Saldanha et al. (2021), price from Carvalho et al. (2020), Rua et al. (2020) and Arslan et al. (2014), Customer satisfaction from Cakici et al. (2019); Carvalho et al. (2020), Marcal et al. (2020), Saldanha et al. (2021), while customer purchasing decisions from Wang et al. (2021), and Marcal et al. (2020).

2.3. Hypothesis

2.3.1. Product Quality and Purchasing Decision

Product quality is a fundamental determinant of consumer purchasing decisions, influencing perceptions of value, satisfaction, and brand loyalty. High-quality products meet or exceed customer expectations, reinforcing trust and enhancing the likelihood of repeat purchases (Ribeiro et al., 2023; Panda et al., 2022; Tahirkheli, 2022). Quality considerations extend beyond the core functionality of a product to include factors such as durability, reliability, aesthetic appeal, and sensory attributes (Rua et al., 2020). Packaging and design, for instance, play a significant role in shaping consumer perceptions, particularly in competitive markets where visual appeal can differentiate products and create a strong first impression (Chiaraluce et al., 2024). Well-designed packaging communicates brand identity, ensures product safety, and enhances convenience, all of which contribute to consumer confidence and purchasing intent (Rihayana et al., 2022). When a participant's preferred product was available, performance information and discounts had no effect on decisions. However, when the preferred product was unavailable, the treatments had limited effects on product selection. Prior experience and brand

loyalty stood out as the strongest predictors of seed product selection.(Rutsaert et al., 2024).

In addition to intrinsic product attributes, external business factors such as brand reputation and operational efficiency also influence purchasing decision. Wang et al. (2021) highlight that customers are more likely to make purchasing decisions based on a combination of product quality, business reputation, and the intensity of a company's operations. A strong business reputation, built through consistent product performance and positive customer experiences, reinforces consumer trust and reduces perceived risk in purchasing decisions (Ribeiro et al., 2023). Furthermore, operational efficiency reflected in supply chain reliability, customer service responsiveness, and post-purchase support can enhance the perceived value of a product, encouraging higher purchase intent (Ryan Bagus Priadi et al., 2023).

Empirical studies further support the notion that product quality has industry-specific implications for purchasing decision. Anuar (2021) emphasizes that in the fuel industry, customers' awareness of the benefits of high-quality fuel significantly influences their purchasing decisions. Consumers recognize that superior fuel quality contributes to better engine performance, fuel efficiency, and reduced maintenance costs, making it a critical factor in their choice of fuel providers (Aditya et al., 2021). Given the substantial body of evidence linking product quality to consumer behaviour, it is hypothesized that:

H_1 : Product quality has a significant positive influence on purchasing decisions.

2.3.2. Service Quality and Purchasing Decision

Service quality is a fundamental driver of consumer purchasing decision, influencing perceptions of value, satisfaction, and long-term brand loyalty. Customer expectations, shaped by prior experiences, word-of-mouth recommendations, and marketing communications, play a pivotal role in determining how service quality is perceived (Gajewicz et al., 2022; Rua et al., 2020; El Shiffa et al., 2021). High service quality fosters consumer trust, reduces perceived risks, and enhances purchase confidence, particularly in industries where intangible elements such as customer interactions and after-sales support are central to the consumer experience(Jang, 2021). Reliability, responsiveness, and professionalism are among the most critical expectations consumers have when evaluating a service provider, and purchasing decisions are often contingent on whether these expectations are met or exceeded (Maharsi et al., 2021).

Empirical studies underscore the direct relationship between service quality and purchasing decisions. Saldanha et al. (2021) and Othman et al. (2021) emphasize that service quality that meets or surpasses consumer expectations strengthens customer confidence, increasing the likelihood of purchase. The widely recognized SERVQUAL model identifies five core dimensions that shape service quality perceptions: reliability, assurance, tangibles, empathy, and responsiveness. These dimensions collectively influence a customer's decision to engage with a brand or service provide Reliability, which

ensures consistent and dependable service delivery, builds trust and credibility. Responsiveness, reflected in prompt and efficient customer interactions, enhances consumer satisfaction and purchasing intent (Maia, 2023). Assurance, which encompasses employee expertise, professionalism, and courtesy, further strengthens a brand's reputation, influencing consumer decision-making (Arslan et al., 2014; Ghosh et al., 2023). The tangible aspects of service, such as physical facilities, branding, and product presentation, also contribute to shaping consumer trust and willingness to purchase (Vasan, 2021;Suhardono et al., 2025)

Beyond immediate purchase decisions, service quality plays a crucial role in customer retention and advocacy (Blijlevens et al., 2024).Consumers who receive high-quality service are more likely to return to the same brand, make repeat purchases, and recommend the service to others, amplifying the brand's reputation and market reach (Jang, 2021). Conversely, poor service quality can lead to dissatisfaction, negative word-of-mouth, and diminished consumer trust, ultimately impacting a company's competitive position (Blijlevens et al., 2024). Businesses seeking to enhance purchasing decisions must prioritize superior service experiences, personalized engagement, and effective problem resolution (Kim et al., 2024). These efforts not only foster customer loyalty but also drive long-term business growth in increasingly competitive markets (Budi, 2022). Based on the strong empirical evidence linking service quality to purchasing decision, the following hypothesis is proposed:

H_2 : Service quality has a positive and significant impact on purchasing decisions

2.3.3. Price and Purchasing Decision

Price is a fundamental factor influencing consumer purchasing decision, as it communicates affordability, perceived value, and quality. Unlike a mere cost indicator, price conveys multiple layers of information that consumers process when evaluating a product (Aditya et al., 2021) Research has consistently shown that price is one of the most influential attributes guiding consumer decisions, shaping perceptions of fairness, value for money, and brand positioning (Prakas et al., 2020; Marcal et al., 2020). While affordability remains a key concern, consumers also interpret price as a signal of product quality, influencing their willingness to purchase (Byhaqi et al., 2023).The relationship between price and purchasing decisions is complex, as it is shaped by individual budget constraints, quality perceptions, and marketing strategies such as promotional pricing (Lyu & Forsyth, 2021).

One of the primary ways price affects purchasing decisions is through perceived affordability and value for money. Consumers assess whether a product's price aligns with their budget and whether the benefits justify the cost. When a product is perceived as a "good deal," its purchase likelihood increases (Marcal et al., 2020). However, if a product appears too expensive relative to its perceived value, consumers may hesitate or seek alternative options, even if it offers superior features (Rutsaert et al., 2024). This effect is especially pronounced among price-sensitive consumers, such as lower-

income buyers, who tend to prioritize affordability over premium attributes (Lyu & Forsyth, 2021).

Beyond affordability, price also serves as a signal of quality, influencing consumer trust and purchase intent. In many cases, shoppers rely on price as a heuristic to gauge a product's durability, effectiveness, or prestige (Thakur-Weigold et al., 2024). The price-quality inference suggests that consumers often equate higher prices with superior quality, particularly when they have limited information about a product's attributes (Prakas et al., 2020). Empirical research confirms that premium pricing strategies reinforce perceptions of exclusivity and reliability, increasing purchase likelihood (Lyu & Forsyth, 2021). However, excessively low prices can cast doubt on a product's credibility, leading quality-conscious buyers to question its reliability and longevity (Marcal et al., 2020). The challenge for businesses is to strike a balance—setting prices high enough to signal quality while ensuring they remain within an acceptable range for target consumers Carvalho et al., 2020).

Price promotions, including discounts, coupons, and seasonal sales, further shape consumer behaviour by altering the standard price-value equation. These strategies increase perceived affordability by temporarily lowering the financial commitment required to purchase a product, making it more attractive to price-sensitive consumers (Adolf et al., 2022). Moreover, promotions generate a sense of urgency, with time-limited discounts or exclusive deals prompting consumers to act quickly to secure a perceived bargain Maia et al., 2023). This urgency can drive impulse purchases or accelerate planned purchases, effectively boosting sales (Helinski et al., 2025). Research has also shown that promotional pricing enhances the psychological satisfaction of a transaction—consumers feel they are saving money or receiving additional value, reinforcing their purchase decision (Erdős et al., 2022). Even in premium segments, well-executed price promotions can stimulate demand by balancing perceptions of high quality with the allure of financial savings (Adolf et al., 2022; Erdős et al., 2022). Given the evidence supporting the impact of price on consumer behaviour, the following hypothesis is proposed:

H_3 : Price has a not significant influence on consumers' purchase decisions.

2.3.4. Product Quality and Customer Satisfaction

Customer satisfaction is a key determinant of business success, influencing customer retention, brand loyalty, and long-term profitability. To maintain high levels of satisfaction, companies must continuously assess and enhance their products to align with evolving consumer expectations. Product quality plays a central role in this process, as it directly impacts consumer perceptions of value and overall satisfaction. High-quality products not only meet but often exceed customer expectations, leading to repeat purchases, positive word-of-mouth, and stronger brand reputation (Hoe & Mansori, 2018; Pleerux & Nardkulp, 2023; Cheng & Kao, 2022).

Product quality is a multidimensional construct that extends beyond basic functionality. It encompasses several critical attributes, including performance, which determines

how well a product fulfills its intended purpose; features, which add unique or enhanced capabilities; reliability, which ensures consistent performance over time; and conformance, which measures adherence to established industry standards (Rebualos et al., 2024). Additionally, durability reflects the product's lifespan, serviceability refers to ease of maintenance and repairs, and aesthetics account for visual appeal and design (ANPM, 2022). Another key factor is perceived quality, which is shaped by consumer experiences, brand reputation, and external influences such as marketing and peer reviews (Hoe & Mansori, 2018; Cheng & Kao, 2022).

Empirical research supports the strong relationship between product quality and customer satisfaction, highlighting that when consumers perceive a product as high quality, they are more likely to experience greater satisfaction and develop stronger brand trust (Varriale et al., 2023). Conversely, products that fail to meet quality expectations often lead to dissatisfaction, negative feedback, and potential customer attrition (Rebualos et al., 2024). Businesses that prioritize continuous innovation, quality control, and customer feedback mechanisms are better positioned to enhance satisfaction and sustain competitive advantage (Carvalho et al., 2020). Given this well-established relationship, the following hypothesis is proposed:

H_4 : Product quality has a significant positive effect on customer satisfaction

2.3.5. Service Quality and Customer Satisfaction

Service quality plays a crucial role in shaping customer satisfaction, as it directly influences customer perceptions, expectations, and overall experiences. In highly competitive markets, businesses that prioritize service excellence are more likely to enhance customer satisfaction, build long-term relationships, and achieve higher profitability (Camilleri & O'Callaghan, 1998; El Shiffa et al., 2021; Truong & Truong, 2022). When service quality meets or exceeds expectations, customers develop positive sentiments toward a brand, increasing their likelihood of repeat purchases and brand advocacy (Rejón-Guardia et al., 2023). Conversely, poor service quality can lead to dissatisfaction, negative word-of-mouth, and loss of customer trust, ultimately affecting a company's market position (Rejón-Guardia et al., 2023).

Service quality influences various aspects of business performance, including customer retention, brand loyalty, and financial outcomes. The SERVQUAL model, widely used in service management literature, identifies five dimensions that define service quality: reliability, which ensures consistent and dependable service; assurance, which reflects the knowledge and professionalism of employees; tangibles, which include physical facilities and service presentation; empathy, which relates to personalized customer care; and responsiveness, which refers to timely and efficient service delivery (Ribeiro et al., 2023). These dimensions collectively shape a customer's overall service experience and determine their level of satisfaction (Zibarzani et al., 2022).

Empirical studies consistently highlight the strong correlation between service quality and customer satisfaction.

When businesses invest in superior service quality, they not only enhance the customer experience but also create long-term value by fostering customer loyalty and positive brand associations (Rua et al., 2020; Tani et al., 2021). A satisfied customer is more likely to remain loyal, recommend the brand to others, and contribute to sustained business growth (Flores et al., 2020). Given the well-documented relationship between service quality and customer satisfaction, the following hypothesis is proposed:

H_5 : Service quality has a significant positive effect on customer satisfaction

2.3.6. Price and Customer Satisfaction

Price is a fundamental factor in consumer decision-making, directly influencing customer satisfaction through perceptions of fairness, affordability, and value. While price remains a key determinant of consumer purchasing decision, its effect on satisfaction is often multifaceted and context-dependent. Customers do not evaluate price in isolation; instead, they assess it in relation to product quality, brand reputation, and the overall service experience (Dudziak et al., 2022). When consumers perceive that a product or service offers fair value for the price paid, their satisfaction increases (Tani et al., 2021; Zuliarni et al., 2023). Conversely, if pricing appears unfair, inconsistent, or misleading, it can lead to dissatisfaction, eroding customer trust and loyalty (Carvalho et al., 2020). Empirical research has explored the intricate relationship between pricing strategies and customer satisfaction. Martín et al. (2007) identified price as a major determinant of satisfaction, as consumers assess fairness and affordability when making purchasing decisions. However, research also suggests that promotional pricing does not always lead to higher satisfaction levels (Rutsaert et al., 2024). Customers may perceive discounts as a temporary benefit rather than an indicator of long-term value, or they may associate lower prices with inferior product quality (Dudziak et al., 2022).

Carvalho et al. (2020) emphasize that clear and honest communication about pricing plays a crucial role in enhancing customer satisfaction. Consumers appreciate transparency regarding why a product is priced at a certain level, whether due to superior quality, ethical sourcing, or additional service benefits (Chatterjee et al., 2024). When businesses effectively communicate pricing rationale, customers are more likely to perceive the price as justified, strengthening their trust in the brand (Saldanha et al., 2023). Given the strong relationship between price perception and customer satisfaction, the following hypothesis is proposed:

H_6 : Price has a significant positive influence on customer satisfaction

2.3.7. Customer Satisfaction and Purchasing Decision

Customer satisfaction is a critical determinant of consumer purchasing decision, shaping not only immediate purchase decisions but also long-term brand loyalty and

advocacy (Ribeiro et al., 2023). Satisfied customers are more likely to develop trust in a brand, leading to repeat purchases and positive word-of-mouth recommendations (Salamah et al., 2022). Wang et al. (2021) assert that before making a purchase, consumers assess a product based on their expectations, comparing anticipated benefits with actual product performance. When a product meets or exceeds these expectations, customer satisfaction increases, reinforcing the likelihood of future purchases and brand commitment (Saldanha et al., 2023).

Empirical research has consistently demonstrated a strong positive relationship between customer satisfaction and purchasing decisions. Macall et al. (2021), Saleem et al. (2015), and Staniewski & Awruk (2022) highlight that high levels of satisfaction encourage consumers to make repeat purchases, recommend products to others, and remain loyal to a brand. Satisfied customers not only exhibit a greater willingness to purchase but also serve as brand advocates, influencing new customers through recommendations and positive reviews (Carvalho et al., 2020). Conversely, dissatisfaction can lead to negative feedback, decreased customer retention, and a decline in sales. This underscores the importance of maintaining high service and product quality to ensure customer expectations are consistently met or exceeded (Varriale et al., 2023). Given the well-documented relationship between customer satisfaction and purchasing decision, the following hypothesis is proposed:

H_7 : Customer satisfaction significantly positively influences purchasing decisions.

2.3.8. Product Quality, Customer Satisfaction and Purchasing Decision

Product quality is a fundamental determinant of customer satisfaction, shaping consumer perceptions, experiences, and brand loyalty (Rua et al., 2020; Tani et al., 2021). In marketing, ensuring high product quality is essential not only for meeting consumer expectations but also for sustaining long-term business success. Purohit (2022) and Lyu & Forsyth (2021) emphasize that customers actively evaluate product attributes before making a purchase decision, assessing factors such as performance, durability, reliability, and design. When product quality meets or exceeds expectations, customer satisfaction increases, strengthening their confidence in the brand and influencing their future purchase decisions (Suhardono et al., 2025; Testa et al., 2024).

Empirical research underscores the strong link between product evaluations, satisfaction, and purchasing decision. Chhikara et al. (2021) and Carvalho et al. (2020) found that positive product evaluations lead to higher customer satisfaction, which in turn enhances the likelihood of repeat purchases and brand loyalty. Satisfied customers develop trust in the brand, reducing purchase hesitation and increasing their willingness to recommend the product to others (Marcal et al., 2020). Conversely, perceived deficiencies in product quality can lead to dissatisfaction, discouraging future purchases and potentially harming a company's reputation (Ribeiro et al., 2023; Firoozzare et al., 2024). The influence of product quality

on purchasing decisions, therefore, is not direct but largely mediated by customer satisfaction, as consumers tend to base their purchase decisions on previous experiences and overall product perception (Da Silva et al., 2022). Given the central role of customer satisfaction in bridging product quality and purchasing decision, the following hypothesis is proposed:

H_8 : Customer satisfaction plays a significant role in mediating the relationship between product quality and purchasing decisions

2.3.9. Service Quality, Customer Satisfaction and Purchasing Decision

Service quality is a critical driver of customer satisfaction and purchasing decisions, particularly in periods of market uncertainty and rapid adaptation, such as during the COVID-19 pandemic. During this time, businesses faced unprecedented challenges, requiring them to swiftly adapt their service delivery models to meet evolving customer needs (Borishade et al., 2021; El Shiffa et al., 2021; Li et al., 2021; Maharsi et al., 2021). The ability to consistently provide high-quality service became a key differentiator, influencing consumer trust, satisfaction, and long-term brand engagement (Marcal et al., 2020). Companies that maintained responsive, reliable, and customer-centered service were able to retain consumer confidence, ultimately driving purchasing decisions (Saldanha et al., 2024).

Research in Timor-Leste further reinforces the significance of service quality in shaping consumer behaviour. Tani et al. (2020), Carvalho et al. (2020), and Saldanha et al. (2021) provide empirical evidence that superior service quality enhances customer satisfaction, which in turn increases the likelihood of purchase. High-quality service fosters positive emotional connections with consumers, reinforcing their trust and loyalty to a brand (Gajewicz et al., 2022). Conversely, poor service quality can lead to dissatisfaction, negative word-of-mouth, and reluctance to engage in repeat purchases (Saldanha et al., 2021; Saldanha 2024;). However, the impact of service quality on purchasing decisions is not always direct (Maia et al., 2023). rather, it is largely mediated by customer satisfaction, as satisfied customers are more likely to make repeat purchases and recommend the brand to others (Carvalho et al., 2020; Ribeiro et al., 2023). Given the critical role of customer satisfaction in linking service quality to purchasing decision, the following hypothesis is proposed:

H_9 : Customer satisfaction has a significant influence in mediating the relationship between service quality and purchasing decisions.

2.3.10. Price, Customer Satisfaction and Purchasing Decision

Price is a crucial determinant of consumer purchasing decisions, influencing perceptions of value, affordability, and fairness. A fair price that aligns with customer expectations enhances the likelihood of a purchase, while pricing perceived as too high or inconsistent with the perceived value of a product may deter customers from making a purchase. Hosain (2021)

shows that price is one of the most influential factors shaping consumer purchasing decisions, as customers constantly evaluate whether the benefits of a product justify its cost. However, the impact of price on purchasing decision is often not direct—customer satisfaction plays a crucial mediating role in shaping how consumers respond to pricing strategies (Marcal et al., 2020)

Empirical research supports the notion that customer satisfaction mediates the relationship between price and purchasing decisions. Studies by Mwenda (2016), Zhang et al. (2021), Marcal et al. (2020), and Saldanha et al. (2023) confirm that while price can influence purchasing decisions, its effect is significantly moderated by customer satisfaction. When customers perceive that the price of a product is justified by its quality, performance, and overall value, they are more likely to experience higher satisfaction, which in turn strengthens their purchase intent and brand loyalty (Tirno, 2021; do Prado et al., 2024). Conversely, if a product's price is perceived as unfair or inconsistent with customer expectations, dissatisfaction may arise, discouraging purchases and damaging long-term consumer relationships Saha et al., 2023; Pi et al., 2024; Saldanha et al., 2024). Given the significant role of customer satisfaction in bridging price and purchasing decisions, the following hypothesis is proposed:

H_{10} : Customer satisfaction has a significant impact on the relationship between price and purchasing decisions.

3. Research Method

3.1. Population and Sample

This study was conducted in Dili across 10 fuel stations, representing a customer population of 12,400 individuals. Referring to prior studies (Rua et al., 2020; Marcal et al., 2020; Belo et al., 2020), the sample size was calculated using the Slovin formula with a 3.5% margin of error and a 97.5% confidence level, which produced a required sample of 765 respondents (Saldanha et al., 2021). To reach this number, the study employed accidental sampling, a non-probability technique in which respondents were selected based on their availability and willingness to participate during visits to the stations, ensuring practicality in engaging a large and dispersed customer base.

3.2. Data Collection

To meet the research objectives and test the hypotheses, primary data were collected directly from respondents. This study follows a quantitative approach, with data gathered through a structured questionnaire. In addition to primary data, secondary data were sourced from scientific articles accessed through databases such as Science Direct, Emerald Insight, Google Scholar, and TLJBM. This secondary data helped contextualize the study and supported the selection of relevant variables and indicators. The questionnaire used a Likert scale to measure responses, ranging from "strongly disagree" (1) to "strongly agree" (5).

3.3. Data Analysis

The study examined the relationships between the indicators and the variables, as well as between the variables themselves. This involved testing the validity and reliability of these relationships through the outer and inner model measurements. Data analysis was performed using Smart PLS 4.0 software (Hair et al., 2014; Saldanha et al., 2019). In this research, measurement and structural data were used for reliability employing Cronbach's alpha (CA) and composite reliability (CR). For validity both convergent and discriminant validity were evaluated (Chen et al., 2022; Hair et al., 2017). Discriminant validity was verified using the Fornell-Larcker criterion, cross-loadings, and the heterotrait-monotrait (HTMT) ratio.

After that using structural data indicators, hypothesis testing was conducted using path coefficients. In the Smart PLS method, bootstrapping was employed to calculate T-values and P-values, which determine the statistical significance of the hypothesized relationships. A hypothesis is supported if the T-value exceeds 1.96 and the P-value is less than 0.05 (Hair et al., 2014; Saldanha et al., 2018).

4. Results and Discussion

4.1. Results

4.1.1. Validity and Reliability

The validity test uses two types: convergent validity and discriminant validity. Testing convergent validity uses two parameters: outer loading (OL) and average variance extracted (AVE). A variable is considered valid for convergent validity when the OL value of its item exceeds 0.7 and the AVE value exceeds 0.5 (Hair et al. 2014; Saldanha, 2018).

Figure 1 shows that the OL values of all items in the survey are higher than 0.7, while the AVE values of all items are higher than 0.5 (Table 1). The indicator PQ1, PQ3 and CS4 had outer loading of 0.683, while the indicator PQ3 showed a value of 0.681. Both of these values are just below the optimal threshold, but they are still close enough to be considered for analysis (Magalhaes et al., 2022).

The discriminant validity test uses the Fornell-Larcker criterion (FL) and Heterotrait-Monotrait (HTMT). Table II shows the value of all FL items according to Hair et al. (2014) and all items are below the threshold value of 0.90 as suggested by Henseler et al. (2015), so all variable items in this research are valid to test the relationship between variables. However the validity parameter related to HTMT, as the results generated by SMART-PLS 4.0 did not meet the criteria outlined by Henseler

et al. (2015). Therefore, the researcher decided not to apply this parameter in the analysis.

The reliability test uses Cronbach alpha (CA) and composite reliability (CR). An item/indicator is considered reliable when the CA value exceeds 0.7 and the CR value exceeds 0.7 (Hair et al. 2017; Hair et al. 2014; Saldanha, 2018). Table I shows that the CA and CR values of all items are higher than 0.7, so all items in the research model are reliable to test the relationship between variables (intermodel measurement).

4.1.2 . Inner Model

Based on the research presented in Table II, we observe that the R-squared value, which reflects the explanatory power of the model, shows that over 83,2% of the variation in service quality is explained by the indicators.

Furthermore, the variable "purchase decision" demonstrated a relatively low explanatory power, with only 38.6% (0.386) of the variation explained. This suggests that customers who purchase fuel at PAK 10 in Dili may not be significantly influenced by factors like product quality, price, or customer satisfaction. It reflects the notion that customers recognize fuel as a vital product for their daily lives. (Marcal et al., (2020); Li et al., 2021; Mori, 2021; Carter et al., 2023).

4.1.3. Hypothesis Test

The study examined the direct effects of product quality, service quality, and price on both customer satisfaction and purchase intention. The results indicate that product quality does not significantly influence purchase intention ($T = 0.465$, $P = 0.642$), suggesting that other factors may play a more critical role in consumer decision-making, leading to the rejection of H1. Similarly, price does not have a significant direct effect on purchase intention ($T = 1.208$, $P = 0.227$), implying that while price matters, other elements such as perceived value and brand reputation may carry greater weight, leading to the rejection of H3. However, service quality has a strong direct positive effect on purchase intention ($T = 6.811$, $P = 0.000$), confirming that improved service quality increases consumer willingness to purchase, resulting in the acceptance of H2. When examining customer satisfaction, the results reveal that product quality does not significantly enhance satisfaction ($T = 1.605$, $P = 0.109$), leading to the rejection of H4. Conversely, service quality significantly increases customer satisfaction ($T = 10.865$, $P = 0.000$), highlighting its crucial role in shaping consumer perceptions and reinforcing H5. Additionally, price has a significant positive effect on customer satisfaction ($T = 9.570$, $P = 0.000$), suggesting that fair and transparent pricing strengthens consumer trust and satisfaction, supporting H6.

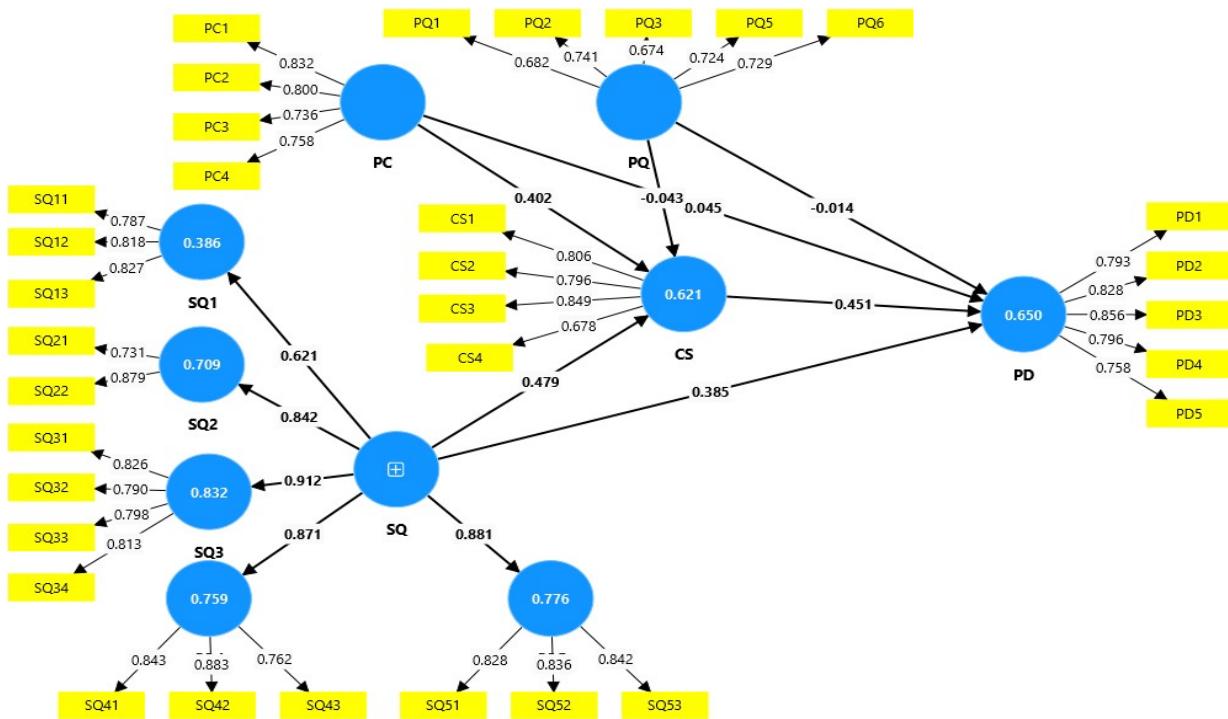


Figure 2. Outer loading for convergent validity derived from Algorithm SMART-PLS 4.0

Tabel I. Cronbach's Alpha (CA), Composite Reliability (CR), Average Variance Extracted (AVE), Fornell-Larcker Criterion and R-Square values.

Item	CA	CR	AVE	Fornell-Larcker Criterion										R ²
				CS	PC	PD	PQ	SQ1	SQ2	SQ3	SQ4	SQ5		
CS	0.791	0.864	0.615	0.785										0.621
PC	0.788	0.863	0.612	0.715	0.782									0.650
PD	0.866	0.903	0.651	0.759	0.627	0.807								0.386
PQ	0.755	0.836	0.505	0.382	0.379	0.395	0.710							0.709
SQ1	0.740	0.852	0.657	0.371	0.362	0.394	0.620	0.811						0.832
SQ2	0.681	0.789	0.653	0.564	0.539	0.564	0.581	0.535	0.808					0.759
SQ3	0.822	0.882	0.651	0.646	0.611	0.682	0.438	0.449	0.796	0.807				0.776
SQ4	0.774	0.870	0.691	0.674	0.656	0.645	0.416	0.423	0.624	0.763	0.831			0.621
SQ5	0.784	0.874	0.698		0.607	0.693	0.457	0.464	0.623	0.727	0.718	0.835		0.650

Lastly, the study confirms that customer satisfaction has a strong direct influence on purchase intention ($T = 8.866$, $P = 0.000$), leading to the acceptance of H7, reinforcing the idea that satisfied customers are more likely to make purchase decisions.

In terms of indirect effects, the study explored the mediating role of customer satisfaction between product quality, service quality, price, and purchase intention. The findings reveal that customer satisfaction does not significantly mediate the relationship between product quality and purchase intention ($T = 1.599$, $P = 0.110$), leading to the rejection of H8. However, customer satisfaction significantly mediates the relationship between service quality and purchase intention ($T = 7.392$, $P =$

0.000), confirming that higher service quality leads to increased satisfaction, which in turn enhances purchase intention, supporting H9. Furthermore, customer satisfaction significantly mediates the relationship between price and purchase intention ($T = 6.228$, $P = 0.000$), indicating that while price alone may not directly influence purchase intention, its impact is strengthened when it contributes to greater customer satisfaction, resulting in the acceptance of H10. These findings highlight that service quality and fair pricing strategies play a crucial role in shaping consumer satisfaction, which in turn drives purchasing decision. Businesses should prioritize service excellence, transparent

pricing, and customer-centric strategies to strengthen satisfaction and enhance long-term consumer loyalty.

Table II. Direct Effect and Indirect Effect for Hypothesis Test (T and P values)

Correlation	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Note
PQ -> PD	-0.014	-0.014	0.029	0.465	0.642	Not significant
PC -> PD	0.045	0.044	0.037	1.208	0.227	Not significant
SQ -> PD	0.385	0.389	0.057	6.811	0.000	Significant
PQ -> CS	-0.043	-0.043	0.027	1.605	0.109	Not significant
PC -> CS	0.402	0.398	0.042	9.570	0.000	Significant
SQ -> CS	0.479	0.485	0.044	10.865	0.000	Significant
CS -> PD	0.451	0.449	0.051	8.866	0.000	Significant
PQ -> CS -> PD	-0.019	-0.019	0.012	1.599	0.110	Not significant
PC -> CS -> PD	0.181	0.179	0.029	6.228	0.000	Significant
SQ -> CS -> PD	0.216	0.217	0.029	7.392	0.000	Significant

4.6. Discussions

Objective 1: Product Quality and Purchasing Decisions

This study found that product quality does not significantly influence consumer purchasing decisions in Timor-Leste's fuel industry, a finding that diverges from traditional consumer behaviour literature, which often positions product quality as a primary determinant of purchase intention and loyalty (Rua et al., 2020; Marcal et al., 2020). A plausible explanation lies in the perception of fuel as a standardized commodity, where consumers assume minimum quality standards are met regardless of supplier, leading them to prioritize practical considerations such as price, accessibility, and convenience over technical performance attributes (Kunszab & Vongxay, 2024). This behaviour aligns with broader behavioural economics perspectives, which argue that in essential, low-differentiation categories, decisions are driven more by immediate financial and functional concerns than by product superiority (Kotler & Keller, 2022; Konuk, 2019). Moreover, limited consumer awareness of technical aspects of fuel quality—including octane ratings, additives, and long-term engine efficiency—further diminishes quality's salience, as studies in developing economies show that low technical knowledge and poor exposure to product information reinforce reliance on price and service-related cues (Chiaraluce et al., 2024; Wang et al., 2023). Similar patterns in other commodity-based sectors, such as electricity and water, demonstrate that products perceived as homogeneous rarely serve as differentiators unless firms actively highlight quality distinctions through communication strategies (Flores et al., 2020; Ribeiro et al., 2023). From a managerial perspective, these findings imply that fuel companies should reposition quality as part of a broader value communication strategy, emphasizing the long-term benefits of high-quality fuel, such as engine protection, fuel efficiency, and reduced maintenance costs, through awareness campaigns, transparent labelling, and

education programs. Leveraging digital platforms, such as mobile applications or interactive campaigns, could further enhance consumer knowledge and engagement, shifting perceptions of fuel from a mere commodity to a differentiated offering with measurable value. Recent evidence suggests that firms which integrate education-based marketing with trust-building communication are more effective in shaping purchase decisions and fostering loyalty in low-differentiation industries (Benaglia et al., 2023; Nilashi et al., 2022).

Objective 2: Service Quality and Purchasing Decisions

The results confirm that service quality is a decisive factor in shaping consumer purchasing decisions, reinforcing its role as a primary determinant of satisfaction and loyalty in service-dominant industries. In the context of fuel retailing, where product differentiation is minimal and price competition is intense, consumers rely heavily on interpersonal interactions to guide their choices, with prompt, reliable, and customer-focused services exerting a significant influence on purchasing behaviour (Carvalho et al., 2020; Maia et al., 2023; Saldanha et al., 2024). However, the findings reveal that efficiency alone does not guarantee loyalty, as consumers place greater value on relational elements such as trust, professionalism, and empathetic engagement than on transaction speed or operational reliability (Zhu et al., 2023; Senali et al., 2024). This supports the broader service management perspective that quality encompasses not only functional efficiency but also social and emotional dimensions, where staff courtesy, competence, and problem-solving capabilities foster trust and reassurance (Asgeirsson, 2024). In industries where products are standardized and quality differences are difficult to discern, service excellence becomes the key competitive differentiator, enabling companies to transform commoditized offerings into unique value propositions; this is particularly relevant in the fuel industry, where consumers assume product uniformity and prioritize convenience, price stability, and risk reduction.

Recent empirical studies reinforce this conclusion, demonstrating that service quality strongly enhances trust, satisfaction, and long-term loyalty, often exerting a greater effect than pricing strategies (Benaglia et al., 2023; Widianita, 2023). For fuel companies in Timor-Leste and similar emerging markets, these insights underscore the need to institutionalize a customer-centric service culture through continuous staff training, transparent communication of pricing and service standards, and loyalty programs, while also leveraging digital tools such as mobile applications for payments, reminders, and rewards to complement interpersonal service delivery. By embedding service excellence into both operational and marketing strategies, firms can achieve sustained competitive advantage in markets where traditional product-based differentiation is limited.

Objective 3: Pricing and Purchasing Decisions

The findings of this study confirm that pricing is a critical determinant of consumer purchase intention, particularly in price-sensitive markets such as Timor-Leste's fuel industry, where affordability and fairness strongly shape consumer choices. When prices are perceived as unfair, inconsistent, or unaffordable, customers are discouraged from purchasing despite acknowledging acceptable product quality (Arslan et al., 2014; Manneh et al., 2020), a behaviour consistent with behavioural economics literature that emphasizes affordability and perceived fairness over technical product attributes (Kotler & Keller, 2022; Dangelico et al., 2022). Transparent and stable pricing enhances trust and loyalty, as customers are more likely to repurchase when prices reflect market conditions and avoid arbitrary fluctuations (Yu et al., 2022; Chen et al., 2022). At the same time, strategic promotional incentives—including discounts, loyalty schemes, bundled offers, and instalment payment options—reduce price sensitivity and strengthen perceptions of value, thereby mitigating the negative impact of higher prices on purchasing behaviour (Senali et al., 2024; Saleem et al., 2023). Recent studies further demonstrate that targeted promotions attract new customers and enhance loyalty by reinforcing perceptions of financial gain (Widianita, 2023), while promotional pricing combined with consistent service quality increases consumer tolerance toward moderate price rises by justifying the overall value received (Benaglia et al., 2023). In the fuel retail context, where product quality is perceived as standardized, price and service quality emerge as the primary differentiators, with affordability becoming particularly salient in developing economies such as Timor-Leste, where income constraints heighten consumer responsiveness to price fluctuations (Kunszab & Vongxay, 2024). Consequently, businesses that adopt transparent, competitive, and customer-oriented pricing policies, supported by loyalty programs, promotional bundles, and digital platforms for real-time price communication or rewards, can reinforce perceptions of fairness and strengthen long-term engagement (Chiaraluce et al., 2024). Overall, these findings underscore that in commoditized and highly price-sensitive industries such as fuel retailing, pricing strategies function not only as transactional mechanisms but also as instruments of trust-

building, consumer retention, and brand differentiation, enabling firms to reduce resistance, enhance satisfaction, and achieve sustainable competitive advantage.

Objective 4: Product Quality and Customer Satisfaction

The findings reveal that fuel quality does not significantly influence customer satisfaction, a result that challenges established perspectives in consumer behaviour literature where product quality is typically viewed as a central determinant of satisfaction and loyalty (Rua et al., 2020; Marcal et al., 2020). A plausible explanation lies in consumers' perception of fuel as a homogeneous product, where technical differences are either assumed to be negligible or beyond the scope of customer evaluation. As Ribeiro et al. (2023) and Firozare et al. (2024) note, limited consumer knowledge of fuel quality distinctions—such as octane ratings, additive formulations, or long-term engine efficiency—diminishes the relevance of intrinsic quality in shaping satisfaction. Instead, extrinsic factors such as price stability, convenience of access, and service quality become more salient drivers of satisfaction, consistent with findings from recent studies in other utility and commodity-based sectors (Wang et al., 2023; Chiaraluce et al., 2024). In developing economies, where income constraints and functional needs dominate decision-making, consumers often prioritise affordability and accessibility over technical product differentiation (Konuk, 2019; Kotler & Keller, 2022). This suggests that in the context of Timor-Leste's fuel industry, satisfaction is better explained through the value-for-money and service experience lenses, where transparent pricing, reliable service delivery, and convenient station access outweigh quality attributes that are perceived as standardized. From a managerial perspective, these findings imply that fuel companies should reallocate resources toward enhancing service quality and ensuring pricing transparency, while simultaneously investing in consumer education campaigns to increase awareness of the long-term benefits of higher-quality fuel. Emerging evidence shows that firms which integrate service excellence and fair pricing with consumer education initiatives are better positioned to differentiate themselves in low-differentiation markets, thereby strengthening both satisfaction and loyalty (Benaglia et al., 2023; Nilashi et al., 2022; Yu et al., 2022).

Objective 5: Service Quality and Customer Satisfaction

Consistent with prior research (Benaglia et al., 2023; Widianita, 2023), this study confirms that service quality is a strong predictor of customer satisfaction, reinforcing the view that in industries with limited product differentiation, the service encounter becomes the central driver of consumer perceptions and loyalty. Attributes such as staff courtesy, responsiveness, and effective problem resolution not only enhance the immediate service experience but also build long-term trust and emotional attachment to the provider, which are critical for sustaining loyalty (Zhu et al., 2023; Senali et al., 2024). Recent evidence further suggests that consumers increasingly value relational dimensions of service—including empathy, professionalism, and proactive engagement—over transactional efficiency alone, highlighting the shift toward

experiential rather than purely functional evaluations of service (Chiaraluce et al., 2024; Asgeirsson, 2024). In the context of the fuel industry, where product quality is widely perceived as homogeneous, service excellence emerges as a key differentiator that allows firms to position themselves competitively in a commoditized market. Accordingly, investments in customer relationship management (CRM) systems, staff training, and service innovation are essential to strengthening customer satisfaction, brand equity, and long-term loyalty (Nilashi et al., 2022; Yu et al., 2022). Moreover, integrating digital service platforms—such as mobile applications for real-time communication, loyalty programs, and feedback systems—can complement interpersonal interactions and create added value for consumers, further embedding service quality as a strategic asset in achieving sustainable competitive advantage (Dangelico et al., 2022; Wang et al., 2023).

Objective 6: Price and Customer Satisfaction

The findings indicate that price has a positive and significant effect on customer satisfaction, underscoring the central role of affordability and perceived fairness in shaping consumer experiences in price-sensitive markets. When consumers perceive that pricing is transparent, stable, and aligned with prevailing market conditions, their satisfaction increases, as pricing fairness is closely associated with trust and loyalty (Yu et al., 2022; Chen et al., 2022). Conversely, inconsistent or unfair pricing practices undermine consumer confidence, generating dissatisfaction and weakening long-term relationships with service providers (Dangelico et al., 2022; Wang et al., 2023). This is particularly critical in the fuel industry, where customers often perceive product quality as standardized, making price and service experience the primary bases of differentiation. As recent studies highlight, consumers in emerging economies exhibit heightened price sensitivity due to income constraints, which amplifies the importance of transparent and competitive pricing policies (Chiaraluce et al., 2024; Kunszab & Vongxay, 2024). From a managerial perspective, fuel providers should institutionalize transparent pricing strategies and complement them with value-enhancing mechanisms such as loyalty programs, periodic discounts, and bundled service packages to reinforce perceptions of fairness and strengthen satisfaction (Saleem et al., 2023; Benaglia et al., 2023). Furthermore, leveraging digital platforms—such as mobile applications that provide real-time price updates, reward points, and personalized promotions—can enhance consumer engagement and mitigate scepticism toward price fluctuations, thereby embedding pricing fairness as a cornerstone of customer relationship management (Nilashi et al., 2022; Widianita, 2023).

Objective 7: Customer Satisfaction and Purchasing Decisions

The findings confirm that customer satisfaction is a powerful predictor of purchasing decisions, reinforcing its widely acknowledged role as a key driver of repurchase behaviour, brand loyalty, and positive word-of-mouth (Park et al., 2019; Nilashi et al., 2022). In the context of fuel retailing,

where intrinsic product quality is perceived as standardized, satisfaction is shaped primarily by service efficiency, transparent pricing, accessibility, and overall convenience, rather than by the technical attributes of the fuel itself (Ribeiro et al., 2023; Wang et al., 2023). This highlights that in commoditized markets, consumer experiences and perceptions of fairness outweigh product characteristics in influencing repeat patronage. Recent studies further demonstrate that satisfied customers are not only more likely to repurchase but also to act as brand advocates through positive word-of-mouth and digital referrals, which significantly enhance competitive positioning in saturated markets (Yu et al., 2022; Benaglia et al., 2023). From a managerial perspective, these findings underscore that satisfaction must be prioritized as a strategic asset, requiring firms to systematically monitor and address its key drivers through customer feedback mechanisms, loyalty programs, and digital engagement platforms. Proactive management of satisfaction not only secures short-term purchase intentions but also builds long-term consumer trust and resilience against competitive pressures, making it a cornerstone of sustainable competitive advantage in the fuel industry (Chiaraluce et al., 2024; Widianita, 2023).

Objective 8: Mediating Role of Satisfaction between Product Quality and Purchasing Decisions

The findings reveal that satisfaction does not significantly mediate the relationship between product quality and purchase decisions, a result that diverges from industries where quality differences are more transparent and thus exert a stronger influence on consumer behaviour, such as food, pharmaceuticals, or electronics (Sun et al., 2020; Hahnel & Fell, 2022). In the case of fuel retailing, the absence of mediation can be attributed to consumers' limited ability to perceive or evaluate technical distinctions in quality, leading them to rely instead on more salient determinants such as affordability, convenience, and service experience (Ribeiro et al., 2023; Wang et al., 2023). This aligns with behavioural economics perspectives, which suggest that in commoditized markets, consumers often simplify decision-making by prioritizing functional and financial considerations over intrinsic product attributes (Kotler & Keller, 2022; Konuk, 2019). Recent studies also emphasize that when consumers are not educated about quality indicators—such as octane ratings, additives, or long-term efficiency—they tend to undervalue product differentiation, thereby diminishing its effect on satisfaction and purchase intentions (Chiaraluce et al., 2024; Firozare et al., 2024). From a managerial perspective, these findings highlight the need for strategic interventions to elevate the salience of product quality, particularly through branding, targeted communication, and consumer education campaigns that link fuel quality to tangible outcomes such as engine protection, fuel efficiency, and cost savings. Evidence from consumer markets shows that firms which successfully communicate technical superiority through trust-building narratives and educational marketing are more likely to strengthen satisfaction as a mediator between product quality and purchasing decisions,

even in low-differentiation industries (Benaglia et al., 2023; Nilashi et al., 2022).

Objective 9: Mediating Role of Satisfaction between Service Quality and Purchasing Decisions

The findings demonstrate that satisfaction significantly mediates the relationship between service quality and purchasing behaviour, reinforcing service quality as the dominant driver of customer loyalty in the fuel industry. This mediation effect indicates that positive service experiences not only generate immediate satisfaction but also translate into repeat purchases and long-term commitment, thereby validating the service–satisfaction–loyalty chain widely documented in service management literature (Flores et al., 2020; Oliveira et al., 2020; Saldanha et al., 2024). In contexts where product differentiation is minimal, such as fuel retailing, customer-centric service strategies become crucial in shaping consumer evaluations and purchase decisions. Attributes such as personalized engagement, responsiveness, empathy, and effective problem resolution build trust, reduce perceived risk, and strengthen emotional bonds with the provider, which are critical for fostering brand loyalty (Zhu et al., 2023; Senali et al., 2024). Recent studies further highlight that service excellence enhances not only satisfaction but also consumers' willingness to accept moderate price variations, thereby driving sustainable sales growth (Benaglia et al., 2023; Chiaraluce et al., 2024). From a managerial perspective, these findings suggest that fuel companies should prioritize investments in staff training, digital service platforms, and customer relationship management (CRM) systems to deliver consistent, high-quality, and personalized service experiences. Embedding these practices into strategic operations will allow firms to leverage satisfaction as a powerful mediating mechanism, strengthening loyalty and ensuring long-term competitive advantage in an increasingly commoditized market (Nilashi et al., 2022; Wang et al., 2023).

Objective 10: Mediating Role of Satisfaction between Price and Purchasing Decisions

The findings reveal that satisfaction significantly mediates the relationship between price and purchasing decisions, indicating that consumers are more willing to tolerate price fluctuations when they perceive fairness, transparency, and added value in the transaction (Anupama et al., 2018; Dangelico et al., 2022; Saleem et al., 2023). Conversely, inconsistent or unfair pricing undermines satisfaction, erodes trust, and weakens purchase intentions, especially in highly price-sensitive markets where affordability is central to consumer behaviour (Yu et al., 2022; Wang et al., 2023). These results underscore the need for businesses to integrate pricing strategies with satisfaction-driven initiatives, adopting transparent communication, loyalty programs, and value-based promotions to reinforce perceptions of fairness and maintain long-term consumer trust (Chiaraluce et al., 2024; Widianita, 2023). Taken together, the evidence from Timor-Leste's fuel industry demonstrates that service quality and pricing—not product quality—are the critical determinants of satisfaction and

purchasing behaviour, with customer satisfaction serving as the central mediating mechanism that amplifies the effects of these factors. This suggests that in commoditized industries where technical product differentiation is minimal, firms must shift their competitive strategies away from emphasizing product quality toward enhancing service excellence, transparent pricing structures, and consumer education programs that clarify the long-term value of their offerings. By embedding these practices into both operational and marketing strategies, fuel providers can not only strengthen satisfaction and loyalty but also secure sustainable competitive advantage in an increasingly challenging marketplace (Benaglia et al., 2023; Nilashi et al., 2022; Chen et al., 2022).

5. Conclusions and Implication

5.1. Conclusions

This study provides new insights into the determinants of consumer purchasing behaviour in Timor-Leste's fuel industry. The findings reveal that product quality does not significantly shape satisfaction or purchase decisions, reflecting consumer perceptions of fuel as a homogeneous commodity where technical differences are not salient. Instead, service quality and price emerge as the dominant factors driving satisfaction and behavioural outcomes. High-quality service—characterized by responsiveness, courtesy, and reliability—strengthens trust and loyalty, while fair and transparent pricing reinforces perceptions of value and reduces scepticism. Importantly, satisfaction is confirmed as a powerful predictor of repeat purchasing and loyalty, serving as a central mediating mechanism that amplifies the effects of service quality and pricing on consumer behaviour. However, satisfaction does not mediate the relationship between product quality and purchasing decisions, underscoring that in commodity-driven markets, extrinsic factors such as service and affordability outweigh intrinsic product attributes. Overall, the study highlights that in Timor-Leste's fuel industry, customer satisfaction hinges more on service excellence and pricing transparency than on technical fuel quality.

5.2. Implications

Managerial Implications

Fuel companies should reallocate resources toward strategies that enhance service quality and reinforce pricing fairness. This includes continuous staff training, investment in customer relationship management systems, and transparent pricing policies supported by loyalty programs or bundled promotions. Consumer education should also be integrated into marketing strategies to gradually reposition product quality as a meaningful differentiator, especially by highlighting long-term benefits such as engine protection and efficiency.

Theoretical Implications

The findings extend the understanding of consumer behaviour in commodity-based industries by showing that satisfaction mediates service and price effects but not quality

effects. This challenges the traditional view of quality as the universal driver of satisfaction and loyalty, suggesting that in low-differentiation sectors, behavioural outcomes are more strongly shaped by relational and transactional factors.

Policy Implications

Regulatory bodies should prioritize transparent pricing frameworks and promote consumer awareness campaigns on fuel standards to protect consumer trust. Collaborative initiatives between government and industry can also enhance public knowledge, ensuring that consumers are better informed and able to make purchasing decisions based on both value and quality considerations.

6. Limitation and Future Research

This study offers valuable insights into the direct effects of product quality, service quality, and price on customer satisfaction and purchasing decisions, along with the mediating role of customer satisfaction. However, several limitations must be considered.

First, the study is industry-specific, focusing on the fuel sector, where product quality is not a primary factor in purchasing decisions. In industries like electronics, luxury goods, or healthcare, where product differentiation is more pronounced, quality may play a greater role in shaping customer satisfaction and purchase intentions. Future research should explore different industries to determine how these relationships vary across sectors.

Second, limited consumer awareness regarding fuel quality attributes (e.g., octane ratings, performance benefits, and environmental impact) may have influenced the findings. Many consumers lack the technical knowledge to assess fuel quality objectively, relying more on price and service quality. Future studies should examine how consumer education, branding, and marketing strategies influence perceptions of product quality, especially in markets where product differentiation is less transparent.

Third, the study is geographically restricted to Timor-Leste, a price-sensitive developing market, limiting the generalizability of findings to other regions with different economic conditions and regulatory environments. Future research should conduct cross-cultural studies to understand how economic, cultural, and market maturity factors shape purchasing decisions across different contexts.

Fourth, the study employs a cross-sectional design, capturing consumer perceptions at a single point in time, making it difficult to assess how satisfaction and purchasing decision evolve over time. A longitudinal study would help track changes in consumer behaviour in response to price fluctuations, service improvements, or marketing interventions. Future research should adopt longitudinal data collection to analyse how customer satisfaction influences brand loyalty and purchase patterns over time.

Fifth, self-reported survey data may introduce response bias, as participants might overstate or underestimate their satisfaction and purchase intentions due to social desirability or

recall limitations. Additionally, perceived price fairness and service quality may not always align with actual purchasing decision. Future research should incorporate behavioural tracking, experimental studies, and observational techniques to cross-validate consumer-reported data with real-world purchasing trends.

Sixth, the study primarily relies on quantitative methods (SMART PLS 4.0), limiting the exploration of deeper consumer motivations and psychological influences. A mixed-methods approach, incorporating qualitative interviews, focus groups, or case studies, could provide richer insights into why consumers prioritize certain attributes over others. Future research should integrate qualitative methods to capture the complexity of consumer decision-making more holistically.

Finally, technological advancements are transforming service industries, yet this study does not account for the impact of AI-driven customer support, mobile payment options, or digital engagement strategies on customer satisfaction and purchasing decisions. As businesses increasingly adopt technology-driven service enhancements, future research should investigate how digital transformation influences service quality perceptions, pricing strategies, and overall consumer behaviour.

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