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Spicing Up Perceptions: Waiting Time Satisfaction in Indonesian Spicy Noodle Chains

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ABSTRACT

This study examines how waiting time satisfaction influences overall customer satisfaction within the emerging 'Spicy Noodle Chain' segment, a localised evolution of Indonesia's fast-food industry. It focuses on cognitive and affective dimensions of waiting time. Data from 195 respondents across various Spicy Noodle Chain outlets were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings emphasise the critical role of cognitive aspects, such as perceived fairness and reasonableness, in shaping customer satisfaction. The attractiveness of the waiting area significantly impacts affective satisfaction, while experience evaluation influences cognitive satisfaction. However, experience evaluation does not significantly affect affective satisfaction, and the affective dimension has minimal influence on overall customer satisfaction. This study introduces the term "Spicy Noodle Chain" to categorise this unique fast-food variation and highlights the importance of cognitive dimensions over affective aspects in enhancing satisfaction. Practical recommendations include improving queue transparency to enhance fairness perceptions and optimising waiting environments to boost satisfaction. Future research could explore the effects of digital tools on waiting time experiences. Findings are culturally specific and may not generalise globally.

Keywords: Spicy Noodle Chain; customer satisfaction; waiting time; cognitive satisfaction; affective satisfaction; waiting area attractiveness.

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Introduction

Customer spends a considerable amount of their time waiting (Lin et al., 2015; Ülkü et al., 2018). In the United States alone, the average time a customer waits to get seated is around 23 minutes, with some even waiting for 40 minutes (FSR Magazine, 2013). Previous studies have found a negative correlation between customer waiting time and customer satisfaction (Baccelli & Hebuterne, 1984; Davis & Heineke, 1998; Davis & Macgard, 1990; Djelassi et al., 2018; Giebelhausen et al., 2011; Rashed et al., 2018). To avoid customer dissatisfaction because of waiting time, there is a growing field of study called wait management. Wait management has been studied for years to increase customer satisfaction, enhance customer perception of the company image, and increase customer intention to consume more (Jacoby et al., 1976; Maister, 2005; Mowen & Mowen, 1991; Ülkü et al., 2018; Van Riel et al., 2012). Considering these points, it's evident that waiting time is a major factor that contributes to customer satisfaction (Iqbal, Withman, et al., 2012).

Wait management is very important in various industries, such as public transport, airports, any service industry, and food and beverages (Dickson et al., 2005; Drabicki et al., 2023; Jones & Peppiatt, 1996; Kim, 2011; Lin et al., 2015; Santos et al., 2017). Specifically within the food and beverage sector, fast food has become a prominent role model. With fast food primarily focusing on efficiently managing customer waiting time (Lee & Lambert, 2000), any effort invested in improving customer waiting time will also increase customer satisfaction (Chou & Liu, 1999; Pruyn & Smidts, 1998). As a result, customers never expect to wait a long time in a fast food restaurant (Chou & Liu, 1999). Another outcome is the increasing popularity of fast food restaurants; one study noted, "Fast food has enjoyed what can only be described as an explosion in popularity over the last three decades" (Chou & Liu, 1999, p. 24). As these restaurants gain popularity and growth, variation emerges. One of the most successful examples of this is McDonald's Corporation's localised menu (Yue, 2023). Other examples are Ippudo, which expanded from Japan to the global market, Ivan Ramen in the United States (Strawn, 2020), and Mie Gacoan in Indonesia (Salsabila í et al., 2022).

Numerous studies have mentioned or even used the Indonesian 'Mie Gacoan' as their study object; however, no authors have provided an exact terminology for the type of business Mie Gacoan and its competitors are (Kompasiana, 2023; Local Guides Connect, 2019; Sulastri, 2022; TIMESINDONESIA, 2023). We propose to call this type of fast food chain the "Spicy Noodle Chain" because it accurately describes what they serve and the way

it's colloquially referred to (Coconuts Jakarta, 2023; minime insight, 2023). Like fast food chains, the spicy noodle chains cannot avoid queues.

Queues and waiting times are common in service industries but differ conceptually. Queues involve individuals waiting in a line, while waiting does not always require a human presence (Bekker et al., 2011; Dufour et al., 2007, 2012; Leonardi et al., 2012). Long waits can negatively impact customer perception, reduce satisfaction (Larson, 1987; Maister, 2005), and lead to queue abandonment, resulting in lost revenue for businesses (Baker et al., 2002; Lu et al., 2013). To address inefficiencies, queueing theory proposes models to optimise wait times (Cooper, 1981; Jin, 2015; Van Woensel & Vandaele, 2007). Companies like McDonald's have adopted self-service technology to improve efficiency (Forbes, 2018; Telpo, 2023; Wavetec, 2024). However, recent studies suggest long waits can enhance customer satisfaction (Giebelhausen et al., 2011; Rashed et al., 2018), signal high-quality service (Tu et al., 2018), and even attract more customers by creating a perception of demand (Raz & Ert, 2008).

Despite extensive research, the negative perception of long waiting times remains dominant (Baker & Cameron, 1996; Katz et al., 1991). However, queuing behaviour is complex, influencing consumption intention (Baker et al., 2002; Ülkü et al., 2018), satisfaction (Davis & Heineke, 1998; Djelassi et al., 2018), and curiosity (Raz & Ert, 2008), while some remain unaffected (Roberts et al., 2020). Given its significance in service industries, further exploration is essential, as Pruyn & Smidts (1998) emphasised the role of waiting time in customer experience.

Given the significance of waiting time, further research on its antecedents and consequences is needed, particularly in Spicy Noodle Chains, which are known for long queues and growing global influence (Ahmad S, 2024; Setyaningrum, 2024). Understanding how waiting time affects customer behaviour is crucial due to its economic impact and queuing challenges in these establishments. This study investigates the impact of waiting time on customer satisfaction in Spicy Noodle Chains. Prior research has explored the effect of waiting time on satisfaction in restaurants, with findings suggesting that long waits can raise expectations and impact satisfaction levels (Davis & Vollmann, 1990). Given their similarities to fast food chains (Salsabila et al., 2022), this study extends the research to Spicy Noodle Chains, resolving an unsolved gap in how waiting time satisfaction affects the localised evolution of a fast food operation. Aligning with Djelassi et al. (2018) and Pruyn & Smidts (1998), this research also investigates the relationship between cognitive and affective aspects of waiting time and customer satisfaction, addressing a gap in the literature and

offering valuable insights for the food service industry. To conclude, this study seeks to answer the following question: How do cognitive and affective dimensions of waiting time satisfaction influence overall customer satisfaction in Spicy Noodle Chains?

Literature Review

Spicy Noodle Chain

The topic of the spicy noodle chain has not been discussed much before. Namely, the term spicy noodle chain isn't the term used every time this topic comes up. Nevertheless, the spicy noodle chain is a notable establishment within the food service industry and academic field, as evidenced by extensive studies in Indonesia (Irawati & Setiawan, 2023; Nuraini & Novitaningtyas, 2022; Permatasari et al., 2024; Salsabila et al., 2022; Sulastri, 2022).

The term “Spicy Noodle Chain” refers to a type of restaurant that specialises in spicy noodle dishes and various side dishes. Another unique characteristic of spicy noodle chains is their focus on their product and services, such as service quality (Sulastri, 2022), price, product quality (Irawati & Setiawan, 2023; Nuraini & Novitaningtyas, 2022), brand image and promotion (Permatasari et al., 2024). In terms of this literature and characteristics, this type of restaurant is closely related to fast food chains (Salsabila et al., 2022). A notable example of this spicy noodle chain in Indonesia is *Mie Gacoan*, alongside others like *Wizzmie, Mie Kober, Mie Judes,* and *Mie Iblis* (Candra et al., 2023; Guntarayana et al., 2018; Johansyah, 2023; Sahabuddin et al., 2023).

Research on Mie Gacoan and similar establishments is more common than on spicy noodle chains, with numerous studies focusing on them as primary subjects (Candra et al., 2023; Sulastri, 2022). However, the terminology remains inconsistent. The term "spicy noodle chain" has been used by a few web pages in 2023 (Coconuts Jakarta, 2023; Minime Insight, 2023); however, the topic gained popularity in 2021, with various studies emerging.

Experience Evaluation

Customer experiences are vital in service industries (Wu et al., 2018). Anderson et al. (1994) demonstrated that positive experience evaluations lead to increased customer loyalty. For instance, in SST, customers act as partial employees, influencing their own experience (Mills & Morris, 1986; Djelassi et al., 2018). Similarly, in food service, customer experience evaluation is shaped by factors such as the physical environment (Bitner et al., 1990), service

quality (Parasuraman et al., 1985), food quality (Ryu & Han, 2010), expectations (Sulek & Hensley, 2004), and waiting time fairness (Baccelli & Hebuterne, 1984; Davis & Heineke, 1998; Giebelhausen et al., 2011). Evaluations can range from positive and beneficial to negative (Djelassi et al., 2018).

Like fast food chains, the customer experience evaluation of spicy noodle chains is influenced by factors such as food quality, service quality, perceived value (Iqbal, L. E., Whitman, et al., 2012; Yaacob et al., 2016), and, most critically, waiting time. Waiting time plays a crucial role in fast food chains, as customers typically do not expect to wait (Chou & Liu, 1999). Fairness and efficiency in waiting time are key factors in improving experience evaluation (Baccelli & Hebuterne, 1984; Davis & Heineke, 1998; Giebelhausen et al., 2011), ultimately enhancing customer satisfaction (Lee & Lambert, 2000).

Customer satisfaction

Customer Satisfaction can be defined in multiple ways. It can be defined as how consumers rate attributes (Gómez et al., 2004), how consumer compares their expectation and actual performance (Anderson et al., 1994; Homburg et al., 2005), or a post-product of consumption and evaluation, containing cognitive and affective factors (Oliver, Varki, et al., 1997). In food service, satisfaction plays a significant role in customers' behavioural intention, willingness to pay, and loyalty (Chen & Peng, 2018; Homburg et al., 2005; Hyun & Han, 2012; Namkung & Jang, 2007). Customer satisfaction is also influenced by factors such as food quality, service quality, physical environment, value for money, and waiting time (Chen & Peng, 2018; Dabholkar et al., 1996; Hyun & Han, 2012; Pruyn & Smidts, 1998; Ryu & Han, 2010). In line with Oliver, Varki, et al. (1997), this current study defines customer satisfaction as a post-consumption and evaluation outcome, encompassing both cognitive and affective factors.

Waiting time satisfaction

Waiting time satisfaction refers to a post-experience judgmental evaluation of waiting time, encompassing both cognitive and affective aspects of waiting (Bielen & Demoulin, 2007; Oliver, Rust, et al., 1997). Pruyn & Smidts (1998) are among the first studies to utilise this construct. The cognitive aspect of waiting time satisfaction involves how consumers perceive their waiting time through a cognitive route (Djelassi et al., 2018). This perception can be measured as acceptable, reasonable, and tolerable (Durrande-Moreau, 1999), as well as long or short (Pruyn & Smidts, 1998). Meanwhile, the affective aspect of waiting time

satisfaction refers to the emotional response of consumers to their waiting time (Arnold et al., 1994; Hui & Tse, 1996), which can be measured as irritation, boredom, frustration, stress, and anger. This distinction matters because Expectancy Disconfirmation Theory (Oliver, 1980) suggest that satisfaction increases when the actual waiting time meets or is shorter than what customers expect. Specific to the spicy noodle chain, this construct became important because, similar to fast food, the spicy noodle chain is also heavily influenced by waiting time (Iqbal, L. E. Withman, et al., 2012; Yaacob et al., 2016). This construct is a good way to measure the influence of waiting time on the customers of the spicy noodle chain. Therefore, this literature will contribute to understanding the role of waiting time in the context of the spicy noodle chain.

Perceived waiting time

Waiting time can be distinguished into two types: objective waiting time and perceived waiting time (Hornik, 1984). In service industries, perceived waiting time is a crucial aspect (Jones & Peppiatt, 1996). Waiting has a subjective aspect to it. Previous studies have referred to and measured this aspect using perceived waiting time (Bielen & Demoulin, 2007; Hui & Tse, 1996). Perceived waiting time can be defined as the duration of time customers believe they have waited (Hui & Tse, 1996).

Research indicates that several factors influence perceived waiting time. These factors include environment (Bitner et al., 1990), expectation (Sulek & Hensley, 2004), engagement and distraction (Katz et al., 1991), information (Antonides et al., 2002), and the objective waiting time itself. Perceived waiting time is a better construct to measure customer experience evaluation and behaviour (Arnold et al., 1994; Barnett & Saponaro, 1985; Davis & Vollmann, 1990). In addition, Tom & Lucey (1997) found that customer satisfaction was more associated with perceived waiting time than objective waiting time.

In spicy noodle chains, perceived waiting time is crucial to customer satisfaction. Like fast food chains, it plays a key role in shaping satisfaction through waiting time and emotional responses.

Waiting area attractiveness

Bitner et al. (1990) highlighted the impact of the waiting environment on the overall waiting experience, influencing perceived waiting time in various ways. Thomas & Weaver (1975) found that explicit distractions can make time feel shorter, while Baker & Cameron (1996) noted that the service environment has an emotional impact on consumers. Pruyn &

Smidts (1998) demonstrated that the attractiveness of the waiting environment significantly impacts consumer appraisal, particularly the affective aspect. Levin et al. (1989) supported this, explaining that distractions during waiting time increase mental activity and divert attention from the passage of time. Van Riel (2014) further noted that the attractiveness of the waiting area influences perceived wait duration and emotional responses.

Chien & Lin (2015) categorised the waiting environment into physical and employee elements. This study focuses on the physical aspect, including intangible factors like lighting, temperature, and music, alongside tangible factors such as colour, furnishings, and layout. These elements are critical in shaping the waiting experience, especially in fast-food chains, which closely resemble spicy noodle chains (Chien & Lin, 2015; Salsabila et al., 2022). Accordingly, this study emphasises physical design, focusing on perceived attractiveness, aligning with Pruyn & Smidts (1998).

Perceived waiting time, affective waiting time satisfaction

This study hypothesises a link between perceived waiting time and affective waiting time satisfaction. Longer perceived waits often trigger negative emotions, such as boredom and frustration, which are central to affective waiting time satisfaction (Arnold et al., 1994; Pruyn & Smidts, 1998). Perceived waiting time, rather than objective time, primarily shapes customer reactions (Hornik, 1984). When customers have unpleasant experiences, they focus more on time, making it feel longer (Djelassi et al., 2018; Hui & Tse, 1996). This aligns with research indicating that longer perceived wait times intensify negative emotions (Katz et al., 1991; Maister, 2005). Similar findings in retail indicate that extended perceived waits result in boredom and frustration (Arnold et al., 1994; Pruyn & Smidts, 1998). Given Spicy Noodle Chains' emphasis on quick service, perceived long waits are expected to heighten negative emotions, reinforcing the importance of managing waiting experiences to enhance customer satisfaction. Thus, we propose:

H1: There is a significant positive effect of long perceived waiting time on affective waiting time satisfaction.

Waiting area attractiveness, affective waiting time satisfaction

The waiting environment has a significant influence on customer satisfaction (Bitner et al., 1990), particularly in shaping the overall waiting experience. Tangible cues and wait-related information help customers form perceptions of waiting time (Bitner et al., 1990;

Oliver, Rust, et al., 1997; Zeithaml et al., 1993). Distractions also impact the experience, reducing perceived wait duration (Thomas & Weaver, 1975). Additionally, the perceived attractiveness of the service environment plays a crucial role (Baker & Cameron, 1996). A lack of engaging elements increases mental activity, making time feel longer (Levin et al., 1989), which aligns with Oliver, Rust, et al.'s (1997) findings on waiting time satisfaction. This study hypothesises that the attractiveness of waiting areas in Spicy Noodle Chains affects the affective aspect of waiting time satisfaction (Pruyn & Smidts, 1998; Van Riel et al., 2012). Given their similarities to fast food chains (Salsabila et al., 2022), an appealing waiting environment is expected to enhance affective satisfaction, reducing boredom and frustration, thus we propose:

H2: There is a significantly negative effect of waiting area attractiveness on affective waiting time satisfaction.

Spicy Noodle Chain experience evaluation, waiting time satisfaction

Customer experience evaluation plays a key role in service industries (Wu et al., 2018). It has been demonstrated in various settings, such as SST (Djelassi et al., 2018) and food service (Bitner et al., 1990; Parasuraman et al., 1985). This demonstrates that experience evaluation, encompassing factors such as food quality, service quality, and the physical environment, has a significant influence on overall satisfaction. Moreover, Pruyn & Smidts (1998) have underscored the complexity of waiting time satisfaction as a component in service industries. Additionally, the author also highlighted the need for businesses to consider both the cognitive and affective parts of waiting time in customers' overall experience. The cognitive aspects of waiting time, such as fairness and reasonableness (Baccelli & Hebuterne, 1984; Davis & Heineke, 1998; Giebelhausen et al., 2011), alongside affective reactions like frustration or boredom (Arnold et al., 1994), influence customers' evaluation of their experience. Given the similarity between Spicy Noodle Chains and fast food chains (Salsabila í et al., 2022) and considering the prominent role of waiting time in a fast-paced industry like spicy noodle chains (Chou & Liu, 1999), we propose:

H3: There is a significant positive effect of Spicy Noodle Chain experience evaluation on affective waiting time satisfaction.

H4: There is a significantly positive effect of Spicy Noodle Chain experience evaluation on

cognitive waiting time satisfaction.

Spicy Noodle Chain experience evaluation, satisfaction with Spicy Noodle Chain

Evaluating customer experience is crucial in shaping consumer satisfaction, particularly in service industries. This is evident in self-service technology (SST) experiences (Djelassi et al., 2018; Mills & Morris, 1986). In food services, key factors influencing experience evaluation include the physical environment (Bitner et al., 1990), service quality (Parasuraman et al., 1985), food quality (Ryu & Han, 2010), and waiting time fairness (Baccelli & Hebuterne, 1984; Davis & Heineke, 1998; Giebelhausen et al., 2011). Waiting time is especially important in fast food chains, where customers expect quick service (Chou & Liu, 1999). Positive experience evaluations enhance satisfaction (Iqbal, L. E. Whitman, et al., 2012; Yaacob et al., 2016), while negative experiences reduce it. Given Spicy Noodle Chains' similarities to fast food chains (Salsabila í et al., 2022), this study hypothesises that customer experience evaluation directly and significantly impacts customer satisfaction. Hence, we propose:

H5: There is a significantly positive effect from Spicy Noodle Chain experience evaluation on Satisfaction with Spicy Noodle Chain.

Waiting time satisfaction, satisfaction with Spicy Noodle Chain

Research indicates that waiting time has a significant influence on customer satisfaction, a post-consumption evaluation that is shaped by both cognitive and affective components (Oliver, Rust, et al., 1997). Satisfaction is influenced by the perceived fairness and reasonableness of waiting time (Pruyn & Smidts, 1998). Expectancy disconfirmation theory (Oliver, 1980) suggests that when actual wait time meets or exceeds expectations, satisfaction improves. Additionally, the waiting environment diverts attention and alters time perception (Levin et al., 1989; Oliver, Rust, et al., 1997). Perceived waiting time can trigger negative emotions, influencing both waiting experience and satisfaction (Djelassi et al., 2018; Hui & Tse, 1996). Given their fast-paced nature, Spicy Noodle Chains—similar to fast food chains—must manage waiting time effectively (Chou & Liu, 1999; Lee & Lambert, 2000). This study hypothesises that both cognitive and affective aspects of waiting time satisfaction impact overall satisfaction, with reasonable wait times and positive emotions leading to higher satisfaction, consistent with findings in retail settings (Pruyn & Smidts, 1998). Hence,

we propose:

H6: There is a significantly positive effect of affective waiting time satisfaction on satisfaction with the spicy noodle chain.

H7: There is a significantly positive effect of cognitive waiting time satisfaction on satisfaction with the spicy noodle chain.

Satisfaction with Spicy Noodle Chain, satisfaction with the store

Djelassi et al. (2018) demonstrated that satisfaction with self-service technology influences satisfaction with specific stores. Similarly, this study suggests that overall satisfaction with a Spicy Noodle Chain affects satisfaction with individual store visits. Key factors, including service quality, waiting time, food quality, and the physical environment, contribute to both overall and store-level satisfaction. Satisfaction is a post-experience evaluation shaped by cognitive and affective factors, influenced by expectations and experiences (Oliver, Rust, et al., 1997; Pruyn & Smidts, 1998). In the context of the Spicy Noodle Chain, overall brand satisfaction likely plays a crucial role in shaping store-specific evaluations. Customers with positive experiences at the chain level may transfer their satisfaction to individual stores, leading to higher store satisfaction. Conversely, negative brand-wide experiences may lead to dissatisfaction with specific outlets. Therefore, this study hypothesises that satisfaction with the Spicy Noodle Chain significantly influences satisfaction with individual stores. Hence, we propose:

H8: There is a significantly positive effect of Satisfaction with Spicy Noodle Chain on Satisfaction with the store.

Figure 1. Conceptual Framework

Source: Author's work (2025)

Methods

Data collection and research instrument

This study employs a purposive sampling approach, targeting consumers of Spicy Noodle Chains in Indonesia, where these chains originated. Purposive sampling was chosen to ensure respondents best represent the customer experiences under investigation (Neetij & Bikash Thapa, 2015). Data were collected through questionnaires distributed via Google Forms, which were completed by customers upon leaving the restaurant. A total of 195 responses were collected through multiple rounds of data collection. The sample size was determined using A Priori sample size criteria (Soper, 2020), which recommended a minimum of 170 responses to account for seven latent variables, 26 indicators, and a 0.3 effect size. This method ensures statistical power and reliable analysis in Partial Least Squares Structural Equation Modelling (PLS-SEM) (Kock & Hadaya, 2018).

This study utilised a questionnaire as the research instrument, structured into multiple sections. The first section provided respondents with research objectives and instructions. The second section addressed the main research questions using a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). The third section also employed a five-point Likert scale, but its meaning varied based on research indicators (e.g., 1 = completely unreasonable, 5 = very reasonable; 1 = unpleasant, 5 = pleasant). Variables, item sources, and scales are detailed in Table 1, with measurement items modified to align with the study's objectives.

Table 1. Variables, Item Sources, and Scales

Variable	Abbr		Items	Sources
Perceived Waiting Time	Pwt		How would you rate your wait time in the Spicy Noodle chain's waiting line?	Adapted (Chien & Lin, 2015; Lee & Chen, 2012; A. C. R. Van Riel et al., 2012)
		Pwt1	The waiting time is longer than expected.	
		Pwt2	The waiting time is too long.	
		Pwt3	Your wait at the Spicy Noodle Chain was: Slow	
Spicy Noodle Chain experience evaluation	Exp		How would you evaluate your experience with the Spicy Noodle Chains?	Adapted (Djelassi et al., 2018)
		Exp1	1=bad / 5=good	
		Exp2	1=unpleasant / 5=pleasant	
		Exp3	1=detrimental / 5=beneficial	
Waiting area attractiveness	Env		How would you rate the waiting environment while waiting in line	Adapted (A. C. R. Van Riel et al., 2012)
		Env1	1=chaotic / 5=neat	
		Env2	1= unorganised/organised	
Cognitive waiting time satisfaction	Cogn		How would you rate your wait time in the Spicy Noodle chain's waiting line?	Adapted (Djelassi et al., 2018; Durrande-Moreau, 1999)
		Cogn1	1= completely unreasonable / 5=reasonable	
		Cogn2	1= very long / 5= very short	
		Cogn3	1 = completely unacceptable / 5=acceptable	
		Cogn4	1= completely intolerable / 5=tolerable	
Affective waiting time satisfaction	Affect	Affect1	I feel frustrated while waiting in line	Adapted (Djelassi et al., 2018; Hui & Tse, 1996; A. C. R. Van Riel et al., 2012)
		Affect2	I disliked my time in the queue.	
			How would you assess your feelings in the Spicy Noodle chain waiting line?	
		Affect3	(Stressed) 1= completely disagree / 5= completely agree	

		Affect4	(Annoyed) 1= completely disagree / 5= completely agree	
		Affect5	(Angry) 1= completely disagree / 5= completely agree	
		Affect6	(Irritated) 1= completely disagree / 5= completely agree	
		Affect7	(Boredom) 1= completely disagree / 5= completely agree	
Satisfaction with Spicy Noodle Chain	Sat	Sat1	How satisfied are you with the Spicy Noodle Chain after waiting in line	Adapted (Lahap et al., 2018; Sivadas & Baker-Prewitt, 2000; Westbrook, 1980)
		Sat2	If you had the opportunity, how likely would you be to recommend the Spicy Noodle chain to a friend or relative	
		Sat3	I am satisfied with the service provided by the staff of the Spicy Noodle Chain.	
		Sat4	The Spicy Noodle Chain is among the best.	
Satisfaction with the store	Satstor		How would you assess your satisfaction with the Spicy Noodle Chain you have visited	Adapted (Djelassi et al., 2018)
		Satstor1	I am satisfied with my decision to go to this store.	
		Satstor2	If I had to do it all again, I would go to this store.	
		Satstor3	My decision to go to this store was a wise one.	

Source: Author's work (2025)

There are 195 responses, of which 58.8% are female, 38.2% are male, and the remaining 3% prefer not to specify their gender. Most participants fall within the 16–22 age range, which represents 72,3% of responses. Regarding the Spicy Noodle Chains they visited, a vast number of brands were named. Of the 195 responses, 90.5% have visited "Mie Gacoan", 89.9% have visited "Wizzmie", 28.6% have visited "Mie Kober", 11.6% have visited "Mie Iblis", and 8.8% have visited elsewhere.

Data analysis

The data was analysed using the Partial Least Squares Structural Equation Modelling (PLS-SEM) technique via SmartPLS (v. 3.2.9), as recommended by J. Hair et al. (2022). PLS-SEM is widely used in similar studies and provides reliable outcomes (Lugosi et al., 2023). For the measurement model, Average Variance Extracted (AVE) was used to assess convergent validity, as it measures the variance captured by a construct relative to measurement error (J. Hair et al., 2022). To establish discriminant validity, two methods were employed: cross-loading and the Fornell-Larcker criterion (Hair et al., 2022). Additionally, Henseler et al. (2015) proposed the Heterotrait-Monotrait Ratio (HTMT) to confirm discriminant validity. Cross-loading ensures that each latent variable's indicator is more strongly related to its own construct than to any other. The Fornell-Larcker criterion compares the square root of AVE with inter-construct correlations, where higher square roots of AVE confirm discriminant validity (Fornell & Larcker, 1981). For the structural model, the study measured the path coefficient and coefficient of determination (R^2). The path coefficient evaluates the predictive relationships between variables, thereby determining the support for a hypothesis. Meanwhile, R^2 measures the model's explanatory power, indicating how well it accounts for variability in the outcome constructs (J. Hair et al., 2022).

Results

Evaluation of the outer measurement model

Kline (2018) and J. F. Hair et al. (2019) suggested various statistics used to calculate the reliability and variability of the study's outer model. These include "composite reliability" (CR); "internal consistency reliability" (Cronbach's alpha); "convergent validity"; and "discriminant validity". According to Table 2, Cronbach's alpha values ranged from 0.713 to 0.927, and the composite reliability values ranged from 0.839 to 0.943, indicating that the scale has acceptable internal reliability (Kline, 2018). Additionally, referring to Table 2, each item has outer loading values above 0.7, except for Affect2, with 0.609, and Sat4, with 0.588, which are below 0.7. These items were deleted to further ensure internal reliability. Next, convergent validity was assessed by verifying whether each variable has an AVE value exceeding 0.5 (J. F. Hair et al., 2019). As shown in Table 2, all variables have AVE values above 0.5, thereby establishing convergent validity.

To measure discriminant validity, the Fornell-Larcker criterion, cross-loading, and HTMT were examined (J. Hair et al., 2022; Henseler et al., 2015). First, as shown in Table 3,

the AVE (bolded) should be higher than the inter-variable correlation below it, indicating high discriminant validity. Referring to Table 4, HTMT values are lower than 0,90, indicating adequate discriminant validity, which aligns with Leguina (2015). Finally, cross-loading can be examined in Table 5. As shown, the outer loading (bolded) should be higher than the cross loading to achieve discriminant validity. Together, these findings confirm the reliability, convergent validity, and discriminant validity of each variable and its items in the outer measurement model.

Table 2. Outer loading, Cronbach α, CR, and AVE

Variable	**Item**	**Outer Loading**	**Cronbach α**	**CR**	**AVE**
Perceived waiting time	Pwt1	0,888	0,905	0,940	0,839
	Pwt2	0,942			
	Pwt3	0,919			
Waiting area attractiveness	Env1	0,946	0,806	0,909	0,834
	Env2	0,878			
Spicy Noodle Chain experience evaluation	Exp1	0,889	0,865	0,917	0,787
	Exp2	0,894			
	Exp3	0,878			
Affective waiting time satisfaction	Affect1	0,821	0,927	0,942	0,733
	Affect3	0,870			
	Affect4	0,905			
	Affect5	0,874			
	Affect6	0,882			
	Affect7	0,793			
Cognitive waiting time satisfaction	Cogn1	0,855	0,901	0,930	0,770
	Cogn2	0,840			
	Cogn3	0,908			
	Cogn4	0,904			
Satisfaction with Spicy Noodle Chain	Sat1	0,867	0,713	0,839	0,635
	Sat2	0,752			
	Sat3	0,768			
Satisfaction with the store	Satstor1	0,881	0,855	0,912	0,775
	Satstor2	0,882			
	Satstor3	0,878			

Source: Author's work (2025)

Table 3. Fornell-Larcker Criterion

	Fornell-Larcker Criterion						
	1	2	3	4	5	6	7
1-Affect	**0.856**						
2-Cogn	-0.056	**0.877**					
3-Env	-0.329	0.234	**0.913**				
4-Exp	-0.235	0.447	0.620	**0.887**			
5-Pwt	0.461	-0.476	-0.056	-0.107	**0.916**		
6-Sat	-0.141	0.464	0.437	0.625	-0.157	**0.797**	
7-Satstor	-0.250	0.346	0.496	0.648	-0.161	0.688	**0.880**

Source: Author's work (2025)

Table 4. HTMT Result

	HTMT						
	1	2	3	4	5	6	7
1-Affect							
2-Cogn	0.071						
3-Env	0.369	0.247					
4-Exp	0.260	0.489	0.743				
5-Pwt	0.490	0.537	0.071	0.124			
6-Sat	0.161	0.551	0.563	0.776	0.190		
7-Satstor	0.277	0.385	0.601	0.751	0.175	0.867	

Source: Author's work (2025)

Table 5. Cross Loading

	Affect	Cogn	Env	Exp	Pwt	Sat	Satstor
Affect1	**0.821**	-0.045	-0.296	-0.213	0.450	-0.136	-0.298
Affect3	**0.870**	-0.068	-0.275	-0.221	0.377	-0.189	-0.218
Affect4	**0.905**	-0.007	-0.264	-0.238	0.331	-0.064	-0.192
Affect5	**0.874**	-0.049	-0.313	-0.187	0.380	-0.133	-0.222
Affect6	**0.882**	-0.072	-0.278	-0.177	0.415	-0.132	-0.210
Affect7	**0.779**	-0.039	-0.256	-0.172	0.393	-0.053	-0.122
Cogn1	0.018	**0.855**	0.039	0.274	-0.455	0.312	0.219
Cogn2	-0.041	**0.839**	0.138	0.357	-0.451	0.379	0.305
Cogn3	-0.055	**0.908**	0.278	0.452	-0.384	0.442	0.318
Cogn4	-0.094	**0.905**	0.298	0.443	-0.406	0.463	0.347
Env1	-0.344	0.237	**0.943**	0.567	-0.079	0.380	0.455
Env2	-0.243	0.183	**0.882**	0.572	-0.013	0.430	0.456
Exp1	-0.240	0.420	0.574	**0.889**	-0.102	0.614	0.595
Exp2	-0.198	0.446	0.528	**0.893**	-0.142	0.489	0.537
Exp3	-0.182	0.317	0.545	**0.879**	-0.036	0.552	0.591
Pwt1	0.333	-0.447	0.000	-0.035	**0.886**	-0.037	-0.053
Pwt2	0.444	-0.461	-0.092	-0.112	**0.942**	-0.183	-0.192
Pwt3	0.467	-0.408	-0.051	-0.129	**0.919**	-0.185	-0.175
Sat1	-0.174	0.497	0.494	0.610	-0.212	**0.867**	0.614
Sat2	-0.056	0.252	0.210	0.441	-0.058	**0.752**	0.555
Sat3	-0.090	0.330	0.303	0.416	-0.080	**0.768**	0.461

Satstor1	-0.271	0.246	0.388	0.554	-0.207	0.618	**0.878**
Satstor2	-0.168	0.356	0.449	0.599	-0.072	0.645	**0.884**
Satstor3	-0.224	0.309	0.478	0.556	-0.151	0.544	**0.878**

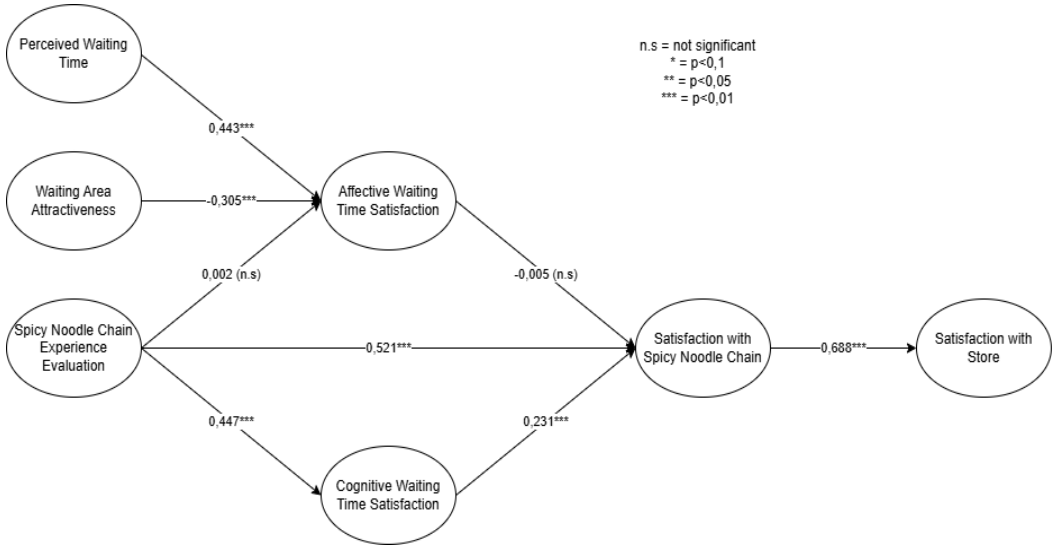
Source: Author's work (2025)

Assessment of the structural inner model

To test the study's proposed hypothesis, a structural equation investigation is used. The primary purpose is to assess the study model's ability to explain and predict how changes in the independent variable impact the dependent variable (J. Hair et al., 2022). Furthermore, to ensure satisfactory model fit, Chin (1998) suggested a minimum R^2 threshold of 0,10. Accordingly, the dependent variable achieves an R^2 value of 0,304, Cogn achieve an R^2 value of 0,200, Sat achieves an R^2 value of 0,433, and Satstor achieve an R^2 value of 0,473, therefore suggesting that it adequately represents the collected data. Next, to ensure a good model fit to the data, J. Hair et al. (2022) recommend a threshold of less than 0.08 on the SRMR value. Accordingly, this study achieves an SRMR value of 0.064, indicating a good fit.

Finally, a bootstrapping method was employed using SmartPLS (v. 3.2.9) to determine the path coefficient. This study proposed eight hypotheses, all of which are direct relations. The result of the PLS estimation is shown in Figure 2. The result reveals the relationship between both Env (β=-0,305; p = 0,000) and Pwt (β=0,443; p = 0,000) and Affect, thus supporting H1 and H2 respectively. But the estimation doesn't find a significant relation between Exp (β=0,002; p = 0,985) and Affect, thus rejecting H3. Next, this study finds the relation between Exp (β=0,447; p = 0,000) and Cogn, thus supporting H4. Next, the relations between Exp (β = 0.521; p = 0.000) and Cogn (β = 0.231; p = 0.003) are shown to significantly influence Sat, thus supporting H5 and H7, respectively. On the other hand, this study doesn't find a relation between affect (β = -0.005; p = 0.928) and SAT, thus rejecting H6. Last, this study finds a relation between Sat (β=0,688; p = 0,000) and Satstor, thus supporting H8. The result of the hypothesis testing is illustrated in Figure 2.

Figure 2. Result of the Hypothesis



Source: Author's work (2025)

General Discussion

This study examines the relationship between waiting time and customer satisfaction at Spicy Noodle Chain, with a focus on the cognitive and affective dimensions of waiting time. Results indicate that cognitive aspects, such as perceived fairness and reasonableness, significantly influence satisfaction, aligning with prior research (Hui & Tse, 1996; Pruyn & Smidts, 1998). This finding supports the idea that customers assess waiting experiences not only by how long they wait but by whether the wait feels justified and managed fairly, suggesting that transparency and communication play crucial roles in shaping satisfaction. These findings also support Djelassi et al.'s (2018) insights on the importance of fairness in self-service technology usage and emphasise the need for consistency across the chain to enhance customer satisfaction with individual stores. Consistency ensures that customer expectations formed at one branch are met at others, thereby strengthening brand trust and perceived service reliability across the network.

The study highlights that a neat, organised environment positively affects affective satisfaction with waiting time, consistent with findings from Van Riel et al. (2012) and Pruyn & Smidts (1998). A well-managed environment is likely to reduce negative emotions, such as anxiety or irritation, helping customers perceive the waiting period as less stressful, even when the actual waiting time remains unchanged. However, experience evaluation, while critical to cognitive waiting time satisfaction and overall satisfaction, does not significantly

influence the affective dimension of waiting time satisfaction. This may indicate that affective responses operate more automatically and are less influenced by rational judgments about service quality or process efficiency. In other words, emotions such as frustration or impatience may arise as time passes, regardless of service quality or fairness. Customers who have had negative experiences and perceive a longer wait tend to focus more on the passage of time (Djelassi et al., 2018; Hui & Tse, 1996), suggesting that negative affect heightens time awareness, causing even short waits to feel disproportionately long and unpleasant.

Interestingly, the affective aspect of waiting time satisfaction has minimal impact on overall satisfaction. This suggests that while emotions may colour the immediate service encounter, they do not necessarily translate into lasting judgments about the brand or the entire dining experience. While emotions like boredom or stress may momentarily affect the experience, cognitive factors such as perceived fairness and efficiency seem to play a more critical role. Customers likely prioritise tangible elements like food quality, service speed, and value (Wu et al., 2018; Anderson et al., 1994), aligning with the chain's focus on quick service. Hence, managing operational efficiency and product consistency remains crucial to maintaining customer satisfaction, particularly in time-sensitive dining environments where customers expect prompt service. This highlights the significant impact of cognitive satisfaction on customer perceptions and loyalty. Cognitive satisfaction, built on fairness and efficiency, tends to foster repeat patronage and positive word of mouth, demonstrating that logical appraisals outweigh fleeting emotions in shaping enduring customer relationships. Overall, the study reveals that cognitive aspects of waiting time significantly shape customer satisfaction, emphasising the importance of perceived fairness and reasonableness. Positive experience evaluations further enhance cognitive satisfaction, highlighting the critical role of customers' overall experience assessments. However, experience evaluation does not significantly impact the affective aspect of waiting time satisfaction, and affective satisfaction itself has a limited effect on overall satisfaction. These findings offer valuable insights into the dynamics of customer satisfaction in the food and service industry, providing practical implications for enhancing service quality and fostering customer loyalty.

Conclusion and Suggestion

This study makes several theoretical contributions to the fields of wait management, service management, and customer satisfaction research. It introduces the term "Spicy Noodle Chain", a distinct fast-food chain variation specialising in noodle dishes and sides.

While commonly used outside academia, its incorporation into this study provides a novel perspective, highlighting an underexplored market segment.

Theoretical contributions include: (1) This study applies the concept of *Spicy Noodle Chain* as a new concept of this fast food variation and research category; (2) refining the concept of satisfaction transferability from brand-wide to individual stores; and (3) emphasizing waiting time satisfaction, a construct explored only in limited studies (Djelassi et al., 2018; Oliver, 1980; Pruyn & Smidts, 1998). This study reinforces the dual nature of waiting time, distinguishing cognitive aspects—such as fairness and reasonableness—from affective aspects, including emotions like boredom. (4) The findings of this study broaden understanding of service waiting experiences, revealing that in fast-paced dining contexts, customers pay greater attention to cognitive aspects like fairness and efficiency than to emotional reactions.

In summary, this research deepens the understanding of fast dining experiences by integrating previously underexplored constructs, such as waiting time satisfaction. It provides empirical evidence of the cognitive dimensions' role in shaping satisfaction and establishes Spicy Noodle Chain as a distinct research category. These insights contribute to improving service management models, emphasising waiting time satisfaction in fast dining research.

This study emphasises the importance of addressing waiting time satisfaction, comprising cognitive and affective aspects, to improve customer satisfaction in fast dining experiences such as Spicy Noodle Chains. While the cognitive aspect showed a significant influence, this still provides valuable insights for the industry.

Spicy Noodle Chains should prioritise fairness and reasonableness in the waiting experience. Implementing queue numbers with real-time progress updates and estimated wait times can enhance perceived fairness, reducing customer frustration. Transparency in wait management improves customer expectations and satisfaction. Additionally, applying environmental psychology can enhance the waiting experience. A well-organised restaurant layout and an optimised queue system can positively impact the satisfaction with waiting time. Simple adjustments, such as decluttering or improving spatial design, create a more pleasant atmosphere, leading to better overall experiences.

Maintaining brand-wide satisfaction is also essential. This study highlights that overall brand satisfaction has a significant influence on individual store satisfaction. Standardised service quality across outlets can ensure consistency and improve customer perceptions. Although affective waiting time satisfaction did not significantly impact overall

satisfaction, emotions like frustration, boredom, and stress remain relevant. Addressing these factors can indirectly enhance satisfaction. Future research should explore the effects of digital tools on waiting experiences, considering cultural differences in customer expectations.

Despite the valuable insight, several limitations must be acknowledged. First, this study doesn't consider any digital tools, such as self-order applications or automated queueing, which are relevant in a fast dining environment. Future studiesstudies could incorporate the influence of these technologies on waiting time experience and satisfaction. Second, the valuable insight provided may be culturally specific, as the Spicy Noodle Chain derives from localised variation. Future research may apply the same concept and explore similar chains to identify potential similarity in customer satisfaction dynamics. Third, this study endorsed a revised and improved definition of "Spicy Noodle Chain". Despite the growing popularity, future research may explore the previously undiscovered aspects of the Spicy Noodle Chain, revising and refining the definition of the Concept. Additionally, a new similar term that might cover any cultural specification may be necessary to further improve wait and service management studies. Lastly, the composition of the study sample limits the generalizability of the findings, because data collection only included respondents' most visited Spicy Noodle Chain, age, and gender, and respondents could choose not to specify their gender. Future studies could take this into account, because it may affect the results.

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