CHAPTER 1

INTRODUCTION

1.1 Background of Study

The evolution of self-service technology (SST) in the restaurant industry has been significantly influenced by technological advancements, began with vending machines in the late 19th century and progressed to automats in the early 20th century *(History Associates, n.d.)*. The mid-20th century fast-food industry furthered this trend by streamlining menus and customer interaction, paving the way for automated ordering.

The rapid advancement of digital technology has continuously transformed self-service technology in restaurants. In the 1980s and 1990s, computerized POS systems laid the foundation for digital ordering. The 2000s saw the rise of self-ordering kiosks, allowing customers to customize their meals and pay without the need for a cashier. By the 2010s, mobile apps enabled remote ordering, further streamlining the process. More recently, in the 2010s and 2020s, contactless payment systems have made transactions even faster and more convenient.

The adoption of self-service technologies is driven by four main factors: Operational Efficiency to reduce labor costs and streamline order processing *(Gao & Su, 2018)*; Customer Experience to meet the growing demand for convenience and personalization; Technological Advancements in touchscreens, Artificial Intelligence, and Internet of Things (IoT) have made these technologies more affordable and effective; and the COVID-19 Pandemic Influence accelerated the adoption of contactless and self-service systems to reduce physical contact and ensure safety *(Rathjens et al., 2023)*.

The adoption of self-service technology is evident in major U.S. fast-food chains. For example, Olive Garden has introduced tabletop tablets, while

McDonald’s has implemented self-service kiosks to enhance the dining experience. These technologies give customers greater flexibility in placing and customizing their orders, improving both convenience and efficiency *(Jorge, 2015; Whitten, 2018)*.

In Indonesia, International fast-food chains like McDonald's, Burger King, and KFC have been at the forefront of introducing self-ordering kiosks in Indonesian cities *(Tempo.co, 2018)*. These kiosks allow customers to browse the menu, customize their orders, and make payments independently, often reducing wait times and enhancing the overall customer experience. While initially slower to adopt SST, upscale and mid-tier restaurants in Indonesia are gradually implementing self-service options.

1.1.1 Types of SST

There are multiple types of SST introduced to the market for Dine-in restaurants, such as Self-Ordering Kiosks previously mentioned, often equipped with touch screens and intuitive interfaces, allow diners to browse the menu, customize their orders, and place their orders directly and pay immediately after. Another popular mode usually found in Sushi restaurants is Tabletop Tablets, this tablets are placed on the table and allow diners to browse the menu, place orders, and even play games or access entertainment while they wait. Additionally, QR code menus have become increasingly popular, considered having the lowest investment, diner can simply scan a QR code with their smartphones to access the restaurant's digital menu, view item descriptions and images, place their orders directly from their devices, and in some cases, they can also pay directly after. This requires the customer to bring their own device, which may or may not capable to interact with the service, with varying degree of user experience.

1.1.2 Adoption Issues with SST

From all these types, some of the types of SST are not easy to implement, the initial setup costs for self-ordering kiosks, including purchasing kiosks or other hardware, software development or licensing, and integration with existing

systems, can be substantial. These high upfront costs can be a significant barrier, especially for smaller businesses with limited budgets. While many customers are comfortable with technology, some may not be familiar with using SST *(Rosenbaum & Wong, 2015)*. This lack of digital literacy can lead to frustration, errors, and a negative customer experience and businesses may need to provide additional assistance or training to help customers adapt to the new technology. Self-service technologies also requires ongoing maintenance to ensure it functions correctly and remains up-to-date, this includes software updates, hardware repairs, and regular cleaning. These maintenance tasks can be time-consuming and costly, potentially leading to downtime if not managed effectively.

One of the main criticisms of self-service technology is that it reduces face-to-face interaction between customers and staff *(Meuter et al., 2000)*. This lack of human touch can be detrimental in industries like hospitality, where personalized service and building relationships with customers are crucial *(Solnet el al., 2019)*. While self-service technology can improve efficiency and convenience, it may not always provide the same level of customer engagement as traditional service models.

Since the 1980s, technologies supporting the restaurant industry have gained significant traction in countries like Japan. However, their adoption in Indonesia has been relatively slow, especially in dine-in restaurants. In contrast, app-based food delivery platforms experienced rapid growth, particularly during the COVID-19 pandemic, despite higher costs and delivery fees *(Prasetyo et al., 2021)*. This trend highlights how technologies that improve accessibility can strongly influence customer behavior. In this case, the convenience offered by food delivery applications has led to a generally positive customer attitude toward their use *(Aslam et al., 2021)*. This begs the question whether the adoption of SST in restaurants was not considered convenience enough, not considered to improve accessibility, or there are other factors that prevent adoption.

1.2 Problem Statement

The Lee & Yang (2013) study on Quick Service in retail showed that Interpersonal Service Quality (ISQ) significantly affects SST adoption. However, this phenomenon is reversed in the restaurant industry, where Fast Food Restaurant (Quick Service) customers adopt self-service technology more readily than Dine In (Seated Table) Restaurant customers.

Even though the result shows that customers using self-order technologies experience reduced waiting cost and increased order demand *(Gao & Su, 2018)*, the technology adoption is still not as robust, indicating that restaurants are reluctant to adopt the them. This could very well be caused by customer's preferences to ISQ compared to using SST *(Leung, Josiam, & Moody, 2020)*. It appears that the intention to use the self-ordering system are negatively influenced by the quality of service provided by the waiting staff. Previous past research shown that age and experience affects this phenomena *(Kincaid & Baloğlu, 2005)* but in recent study, age, gender, and experience no longer have an effect *(Leung, Josiam, & Moody, 2020)*.

This study seeks to investigate whether Interpersonal Service Quality moderates the relationship between intention to use SST and and actual use of SST in dine-in restaurants in Greater Jakarta Area.

1.3 Research Questions

According to the analysis of the background and problem identification, this study aims to address the following issues:

1. How does Performance Expectancy affect the Intention to use SST?
2. How does Effort Expectancy affect the Intention to use SST?
3. How does Social Influence affect the Intention to use SST?
4. How does the Intention to use SST affect the Actual Use of SST?

5. How does Interpersonal Service Quality moderate the effect of Intention to use SST on Actual Use of SST?
6. How does Facilitating Conditions moderate the effect of Intention to use SST on Actual Use of SST?
7. How does Intention to use SST mediate the effect of Performance Expectancy on Actual Use of SST?
8. How does Intention to use SST mediate the effect of Effort Expectancy on Actual Use of SST?
9. How does Intention to use SST mediate the effect of Social Influence on Actual Use of SST?

1.4 Research Objectives

The objective of the research is to understand the impact and relationship between factors as follows:

1. To examine the effect of Performance Expectancy on Intention to use SST
2. To examine the effect of Effort Expectancy on Intention to use SST
3. To examine the effect of Social Influence on Intention to use SST
4. To examine the effect of Intention to use SST on Actual Use of SST
5. To examine the moderating effect of Interpersonal Service Quality on the relationship between Intention to use SST and Actual Use of SST
6. To examine the moderating effect of Facilitating Conditions on the relationship between Intention to use SST and Actual Use of SST
7. To examine the mediating effect of Intention to use SST on the relationship between Performance Expectancy to Actual Use of SST.
8. To examine the mediating effect of Intention to use SST on the relationship between Effort Expectancy to Actual Use of SST.
9. To examine the mediating effect of Intention to use SST on the relationship between Social Influence to Actual Use of SST.

1.5 Scope of The Study

1.5.1 Population & Sampling

This research focuses on the sample that consists of diners who have dined in restaurants within the Greater Jakarta Area that already employ self-service technology. Convenience sampling was used via restaurant communities and professional networks. The sample is expected to include random age, gender, and income level.

1.5.2 Limitation

This study focuses on evaluating the Interpersonal Service Quality moderating effect. Accordingly, age, gender, and experience moderating effect therefore were not evaluated.

1.6 Significance of Research

1.6.1 Benefits of Research Theoretical Aspects

By integrating interpersonal service quality into models like the Unified Theory of Acceptance and Use of Technology (UTAUT), this study could help expand the understanding of how human elements interact with technological factors. This would provide a more holistic view of technology adoption. This study may also provide a more robust understanding of how different forces work together in shaping customer decisions.

It allows future researchers to develop context-specific adoption theories, particularly relevant in industries heavily reliant on personal interactions, like hospitality and retail.

1.6.2 Benefits of Research Practical Aspects

By investigating how interpersonal service quality influences the use of SST, businesses can discover new factors that impact customer behavior. These

findings can help businesses tailor their strategies to improve relationships with customers.

With the pandemic accelerating the adoption of SSTs, understanding the human factors involved can help businesses retain customer trust and loyalty in a predominantly automated service environment. The findings could assist in developing safe yet engaging interactions, blending technology with elements of empathy and care.

1.7 Thesis Structure

Chapter I – Introduction

This section details the requirements for an investigation and is comprised of several parts, including research background, problem identification, research questions, research objectives, research scope, and research significance.

Chapter II – Literature Review & Hypotheses

This section presents a theoretical review to guide the investigation. It defines key concepts and reviews the results from previous studies. The literature sources that support this research include books, journals, newspapers, and other relevant information sources.

Chapter III – Research Methodology

This section details the research methodology, including the type of research, population and sampling technique, data analysis and hypothesis testing.

Chapter IV – Findings, Analysis, & Discussion

This section details the data analysis process, an integral component of this study. It outlines the procedures used to process the data, presents the results of this processing, and provides an analysis of these results.

Chapter V – Conclusion and Recommendations

This chapter provides a summary of the analysis presented in this study, and offers recommendations for future researchers, academics, marketing professionals, and higher education management.