Customer resistance of self-service kiosks in the South African fast-food industry

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ABSTRACT

Self Service Kiosks (SSKs) have recently been introduced into the fast-food service setting in South Africa. They provide customers with a different method of service delivery where customers can place fast-food orders without the need to interact with a cashier. Customers however continue to resist using SSKs despite businesses investing in such technology. Businesses do not invest in technology with the intention that it will not be used. This study explored why customers resist SSKs at fast-food outlets in South Africa and whether there are context specific reasons for such resistance.

Although innovation resistance research is gaining more attention than it previously has, in a South African context such research is scarce. Innovation resistance in respect of SSKs has also not received significant research attention. A majority of the SSK research is focused on adoption.

A qualitative research design that was exploratory in nature was adopted for this study. A qualitative approached allowed for a deeper understanding of why customers resist SSKs and provided an opportunity to gather new information in a South African context. Data was collected at a singular level, being that of fast-food customers only. Multiple methods were adopted to recruit participants and included posting on social media and utilising the snowballing approach. All research participants were selected according to a purposive sampling method. To be eligible to participate in the research they had to have chosen not to use a SSK in a fast-food outlet in South Africa. Sixteen semi-structured interviews were conducted. Most of the interviews were conducted online. The interviews were recorded, and transcribed, and thematic analysis was used to analyse the data.

The findings revealed that customers resist SSKs for a variety of reasons and that resistance and adoption can co-exist. Further to this, the findings also confirmed that resistance can occur in many forms and does not always result in rejection. For instance, customers may be opposed to using the SSKs but still have to use it where they have no other alternative but to use it. The reasons for SSK resistance that were identified, fall into groups that relate to SSK

characteristics, customer characteristics, situational factors, and social factors. With reference to the SSK literature, similar groupings of reasons are considered for innovation adoption thus highlighting the complex relationship between resistance and adoption.

The resistance reasons that related to SSK attributes included that the SSK was not easy to use especially when the orders were large, complex, or required customisation. Participants also resisted using the SSK because they could not pay with cash at the SSK, because of SSK system issues, hygiene concerns and because alternative ordering options were perceived as better options. The reasons for resistance that related to situational factors included that the SSK waiting time and queue length was longer than alternative ordering options, the SSK option was slower than other ordering options, it gave rise to concerns related to time pressure and there was misalignment between the cashiers and SSK at certain fast-food outlets. The reasons for resistance identified in the findings that related to customer characteristics included the need for interaction and discomfort using the SSK.

Job loss potential was identified as a reason for resistance however it is important to note that despite it being a concern for multiple participants, that concern did not always lead to resistance behaviour.

The study contributes to understanding what drives SSK resistance in a fast-food context in South Africa. Strategies to reduce SSK resistance are recommended which include avoiding the forced use of SSKs and increasing customer confidence in the SSKs.

KEY WORDS

Self Service Kiosk, self-service technology, resistance, fast-food, barriers

DECLARATION

I, Samantha Anderson, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in the field of Digital Business at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Name: Samantha Anderson Signature: 

Signed at Johannesburg

On the 26th day of February 2023

DEDICATION

For Reign and my darling husband, Blake.

ACKNOWLEDGEMENTS

I would like to thank my supervisor Ayanda Magida for her patience and guidance. I would also like to thank Samandree Padayachee for assisting with guidance and editing.

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LIST OF ACRONYMS

IDT: Innovation Diffusion Theory

IRT: Innovation Resistance Theory

SSK: Self-service Kiosk

SST: Self-service Technology

TAM: Technology Acceptance Model

CHAPTER 1. INTRODUCTION

1.1 Purpose of the study

This study explored why customers in a fast-food setting resist using self-service kiosks (SSKs).

1.2 Context of the study

SSKs have been introduced across various industries in South Africa. For instance, in the airline industry, customers can use SSKs to check in for their flights; in the entertainment industry, customers can use SSKs to book movie tickets. More recently, SSKs have been introduced in the fast-food industry in fast-food outlets across South Africa, enabling customers to order and pay for their fast-food using the SSK. Despite introducing new technologies, not all customers choose to use them. (Meuter et al., 2003). High failure rates of innovations have been revealed in innovation literature, and the primary cause of such failure is customer resistance (Leong et al. 2021). A growing interest in innovation resistance research has developed, and the research is entering a new maturity phase (Huang et al., 2021).

Service delivery traditionally involves customers interacting with service employees. Traditionally, the service employees provide the service outcome for customers, but technology has changed how services are delivered (Galdolage, 2022; Meuter et al., 2005). Services which involved social interactions now involve customer interaction with technological interfaces (Christ-Brendemühl & Schaarschmidt, 2019). Self-Service Technologies (SSTs) allow customers to independently produce a service outcome without interacting with a service employee, and eliminate interpersonal interaction (Meuter et al., 2000; Curran & Meuter, 2005). SSTs are "*technological interfaces that enable customers to produce a service independent of direct service employee involvement*" (Meuter et al., 2000, p.50).

SSKs are recognised as a type of Self-Service Technology (Vakulenko et al., 2018). Only recently have SSKs started being deployed in the South African fast-food industry. Fast-food giant McDonalds has started deploying SSKs in its outlets across South Africa (Davis, 2019). Other fast-food restaurants like KFC have followed suit and started introducing SSKs into certain South African KFC outlets (de Villiers, 2019). In South Africa`s fast-food industry for instance, there have been reports that South African customers are concerned about the impact of SSKs on employment and whether SSKs will result in unemployment because they will replace cashiers (Davis, 2019).

There is a popular narrative that SSTs, which include SSKs, eradicate jobs (Johnson, 2018). Concerns about the impact of automation on employment date back to the early twentieth century, when there was a fear that new technology would displace employees. Similar concerns continue to exist (Andrews, 2018).

In South Africa, the introduction of SSTs in retail chains has been met with resistance from organised labour due to the belief that the SSTs would ultimately result in unemployment (my broadband, 2018). Pick ‘n Pay, a local supermarket chain ended up abandoning its self-service check-out trial as a result of resistance (Gavaza, 2019). In the South African context, unemployment is a key challenge considering that the unemployment rate in the last quarter of 2022 was 32,9% in South Africa (Stats SA, 2022b).

SSTs are less appealing for certain customers, particularly those with a need for interaction (Curran & Meuter, 2005). This research examines why customers in the fast-food industry resist using SSKs and examines whether the potential for job loss is one of those reasons.

1.3 Research problem

SSTs continue to face resistance among customers (Van de Sanden et al., 2022). The research problem being investigated was why customers resist SSKs, particularly in a fast-food setting in a South African context. The reasons for such resistance were explored in this research study.

SSTs provide customers with an alternative method of service delivery where the customer can perform the service on their own without needing to interact with employees (Galdolage, 2022). In some instances, SSTs completely replace the traditional full service and customers are essentially forced to use the SST to access the service (Reinders et al., 2008). However, even in circumstances when the SST doesn't replace the traditional full service offering and customers are given the choice of whether to use an SST, they may still show resistance to it SST (Feng et al., 2019)

The problem with customers not using the SSKs is that businesses invest significantly in installing the SSK technology. Some SST implementation succeeds, while others don't (Bitner et al., 2002). Technology is not installed with the intention that it will not be used. SSTs are introduced for various reasons but primarily to reduce costs (Bitner et al., 2002). Realizing the benefits that SSTs can provide is challenging when enough customers can't be convinced to use them (Van de Sanden et al., 2022). Implementing and managing SSTs is more difficult than it seems, and many businesses have incurred losses as opposed to cost savings after implementing SSTs (Bitner et al., 2002).

1.4 Research objectives

Research objective 1: explore the reasons why customers resist using SSKs in the fast-food industry in South Africa.

Research objective 2: understand whether perceptions regarding job loss potential in South Africa is a reason why customers resist using SSKs in South Africa in the fast-food industry.

1.5 Significance of the study

The literature highlights that SSKs are recognised as a type of SST. Researchers however tend to treat SSKs the same as SSTs and consider SST findings generalisable to SSKs. However, it has been argued that SSKs need to be

conceptually differentiated from SSTs (Vakulenko et al., 2018). Most SSK-specific research is conducted in the USA, Europe and Asia with limited studies in Africa and on SSKs in the fast-food industry (Vakulenko et al., 2018). Since the introduction of SSKs in the fast-food industry in South Africa is still relatively new, there is limited research on SSK adoption in the fast-food industry in Africa, let alone South Africa (Vakulenko et al., 2018). Research has largely focused on reasons for adoption and studies on customer resistance are scarce (Talwar et al., 2020). Research is also limited on the external factors that impact innovation resistance (Huang et al., 2021).

This study contributes to literature on customer innovation resistance by focusing on a specific type of technology in a specific context. Product-specific resistance barriers are necessary as innovations differ from one another (Wang et al., 2023). This study considers whether the reasons for resistance are the same as identified in other research or different by virtue of the specific nature of the SSK. Further to this, the specific context and whether there are other external factors that contribute to resistance were explored. This research is useful to both those fast-food chains considering implementing SSKs in South Africa and those who have already deployed SSKs in the service process. An understanding of why customers resist SSKs in a South African context, is important because it can assist fast-food business owners to take steps to address such resistance barriers and to promote SSK use. SSK use could ultimately move the fast food business owner closer to achieving the outcome that drove their initial reason to invest in such technology whether that reason be related to costs saving or another reason.

1.6 Delimitations of the study

This research is focused on:

I. A specific type of SST, being an SSK. Other types of SSTs in the fast-food service industry, like tablets or mobile applications, were not considered as part of this research;

II. SSKs in the fast-food industry. The reasons why customers resist SSKs in other industries like hospitality and transport was not considered;

III. The customer's reasons for resisting SSKs. Resistance to SSKs by unions and employees in the fast-food industry was not considered.

1.7 Definition of terms

Fast-food restaurants are enterprises selling food and drinks ordered from a menu prepared at the premises for the customer to take away in a packaged format, with or without available customer seating (Stats SA, 2019a).

Resistance: behaviour which can take the form of rejection, postponement or opposition (Kleijnen et al., 2009)

Self-service kiosks are interactive self-service stations intended to be used by the public and can process information (Vakulenko et al., 2019).

Self-service technology is "technological interfaces that enable customers to produce a service independent of direct service employee involvement" (Meuter et al., 2000, p.50).

1.8 Assumptions

The following assumptions inform the study:

- Customers exist in the South African fast-food industry that resists SSKs. This is critical to the research outcome because if all customers adopt SSKs, then a study cannot be conducted on why customers in South Africa resist using SSKs.

- Customers have a reason for resisting SSKs. This is a reasonable assumption, as there have been reports on South African customers being divided over the introduction of SSK in the fast-food industry (D. Davis, 2019).

1.9 Chapter outline

Chapter 1 outlines the research problem and significance of this study. Chapter 2 will review the academic literature to understand what research has been done relating to the resistance of self-service kiosks. Based on the research that has been done, propositions will be suggested. Chapter 3 will set out the research methodology and explain how the data will be collected. Chapter 4 will present the findings of the qualitative research study on customer resistance of SSKs in fast-food outlets in South African according to themes identified in the data. Following this, chapter 5 will contain an interpretation of the findings. The main conclusions in relation to the research propositions will be included in chapter 6 along with recommendations for future studies.

CHAPTER 2. LITERATURE REVIEW

2.1 Introduction

Self Service Technology (SST) literature primarily focuses on SST adoption and much less on resistance. Generally, customer resistance studies are scarce (Talwar et al., 2020). This research will look to innovation literature to identify why customers resist innovations. It will then focus on SST research to identify why customers resist SSTs. The final section of the literature review will focus on whether job loss potential has been identified as a reason for SST resistance in the literature.

2.2 Background discussion

Various types of SSTs are used for various purposes (Meuter et al., 2000). Well-known examples include automated teller machines, self-check-in counters in the airline industry, and self-service kiosks in the hospitality and fast-food industries. Mobile applications are also a type of SST that allows customers to own aspects of the service delivery process, for instance, purchasing (Newman et al., 2018). In the fast-food industry, the SSTs include SSKs and mobile food ordering applications.

Meuter et al. (2000) suggested classifying SSTs according to the SST's purpose and technology type. According to Meuter et al. (2000), SSTs can be used for various purposes, including transactions, customer service and self-help. SST technology interfaces also vary and can include telephone-based technology, internet-based-technology, interactive kiosks, and video technologies. Using this classification method of SSTs, a self-service kiosk (SSK) would be classified according to its purpose, which is transactional, and according to the technology interface which is an interactive kiosk. Technology advancements do not render this classification method superfluous but require further separation according to new technology interfaces and functions (Vakulenko et al., 2019).

This research is focused on a specific type of SST, an SSK. SSKs are recognised as one of the most diverse types of SSTs (Vakulenko et al., 2019). SSKs are described "*as an SST that is interactive, intended for public use and able to process information*" (Vakulenko et al., 2018, p.509). Food ordering kiosks are an example of a SSK (Vakulenko et al., 2019). SSKs are used when it is not possible to put the service entirely online and when the service is centered around a physical object, such as purchased products in a fast-food context (Cserdi & Kenesei, 2021).

Vakulenko et al. (2018) argue that although most service research conceptualises SSKs as an SST, SSKs ought to be separated from the wider concept of SSTs because not all SST features are suitable to every type of SSK. For example, technology anxiety levels could differ according to SST type (i.e., ATM versus M-commerce). Situational factors like queueing time will not be applicable to some types of SSTs, such as internet self-services (Vakulenko et al., 2019). The consequence of conceptualising an SSK as an SST is that SST findings for a specific type of SST may not be generalisable to SSKs, and to make findings more applicable it is necessary to differentiate between SSTs and SSKs (Vakulenko et al., 2019).

2.3 Reasons for customer resistance of SSKs in the fast-food industry in South Africa

The following paragraphs will review and highlight how innovation literature focuses on why customers adopt innovations and how research on reasons for resistance has not received the same research attention. It sets out what innovation resistance is as well as the applicable theoretical frameworks.

2.3.1 Adoption versus resistance

SST researchers have looked to innovation adoption literature for factors that explain customer innovation adoption behaviour (Meuter et al., 2005). Most customer technology adoption research focuses on why customers adopt an

innovation, while the research on why customers resist innovation has not received the same attention (Kleijnen et al., 2009; Huang et al, 2021). Customer resistance studies are scarce (Talwar et al., 2020).

The current literature demonstrates pro-innovation bias in that it is predominately focused on adoption of innovations with little focus on innovation resistance. Pro-innovation bias is the implication in innovation diffusion research that all innovations are better than existing alternatives and as such should be adopted. (Huang. et al., 2022). One explanation for this could be the view that the reasons for adoption and resistance overlap and that the reasons for resistance are simply the opposite to the reasons for adoption (Kleijnen et al., 2009).

Other researchers, however, argue that the reasons for technology resistance differ from the reasons for technology adoption and resistance is not just a by-product of non-adoption (Ram, 1987). Innovation adoption studies are generally concerned with highlighting the benefits of the innovation whereas in innovation resistance, customers are focused on the adverse consequences as part of their decision making (Kleijnen et al., 2009). Huang et al., (2021) suggest that there is a complex interaction between adoption and resistance and that resistance is often discussed together with adoption and the two can co-exist.

2.3.2 Innovation resistance

According to Talwar et al. (2020), the concept of customer resistance is in its infancy and despite a few definitions being available, it lacks well-articulated definitions. For instance, it has been defined as the customer's resistance to an innovation because it may require a change from the status quo or conflicts with the customer's beliefs (Ram & Sheth, 1989, p.6). Resistance does not necessarily mean non-adoption and it can co-exist with adoption (Kuisma et al., 2007).

In an SST context, SST introduction into the service process requires customers to change the way they do their business, and such customers must be convinced that the change is worth their time and energy (Curran & Meuter, 2007). Resistance has different degrees of manifestation (Talwar et al., 2020). It can

present itself in different types of behaviour, namely postponement, rejection and opposition (Ram & Sheth, 1989).

Rejection is the strong disinclination to adopt the innovation and is driven by social, functional and economic risk (Kleijnen et al., 2009). Postponement, the weakest form of resistance, is where the customer finds the innovation acceptable but does not adopt the innovation at that point (Kleijnen et al., 2009). The late adoption, despite the customer finding the product acceptable, is due to certain situational factors or because customers want to see the innovation mature over time (Ghosh, 2022). Opposition is driven by the personal and societal environment of the customer and is where customers have negative feelings towards the innovation and for example, launch an attack on the innovation launch by bad word of mouth against the innovation (Kleijnen et al., 2009).

According to Kleijnen et al., (2009), opposition as a form of resistance is the strongest form of resistance and appears to be tied up with the idea of the “citizen” within the customer to the point where customers feel they need to be pro-active where society values are threatened. Two forms of innovation resistance are identified in the literature: Active Innovation resistance (AR) and Passive Innovation resistance (PR) (Talwar et al., 2020; Talke & Heindenrich, 2014). PR arises before the innovation is evaluated and is attributed to a predisposition to resistance to change and satisfaction with the status quo (Talke & Heindenrich, 2014) AR, on the other hand, arises from an unfavourable evaluation of an innovation’s attributes resulting in functional barriers to the innovation and the formation of negative attitude which then leads to resistance (Talke & Heindenrich, 2014).

2.3.3 SST Specific literature

Within SST literature, there has been a focus on the factors that influence SST use and adoption. Studies have explored the influence of SST attributes, situational factors and customer characteristics on SST use (Guan et al.2021). The research has investigated how the SST characteristics like perceived ease of use, perceived usefulness and perceived risk impact SST use (Feng et al.,

2019). The influence of customer characteristics on customer's attitudes towards adopting SST has also been explored (Kaushik et al., 2015).

2.3.3.1 SST specific attributes

Past research on SST attributes have considered the role of perceived ease of use, usefulness, convenience, perceived control, and perceived risk. (Sharma et al., 2021). In SST research, researchers have looked to customer attitudes to predict adoption behaviour (Meuter et al., 2005). The Technology Adoption Method (TAM) appears to have been the predominant theoretical framework for SST adoption (Shin & Perdue, 2019). In the SST context, research has confirmed that the TAM constructs of perceptions of ease of use and usefulness of SSTs are positively associated with attitude towards the SST and significantly impact adoption behaviour (Taufik & Hanafiah, 2019). Again the focus is on adoption behaviour. How easy an SST is to use is a critical factor, if it is not easy to use, there will be resistance towards it (Curran & Meuter, 2005). In the fast-food context, El-Said and Tall (2020) found that most customers are concerned about the ease of use of the SSK and its performance as an alternative to interpersonal services.

Although perceptions about the innovations' attributes may ultimately result in a negative attitude, the ability of attitude to predict behaviour is inconsistent despite it being among the top independent variables in information systems adoption models used to predict behaviour (Kroenung & Eckhardt, 2015). For instance, the Gelderman et al. (2011) study found that a positive attitude toward the SST does not mean there will be an automatically increased use of the SST. This finding was supported in research which showed that in situations where the customers have a choice of multiple service delivery options, the attitude-behaviour link is weak and attitude on its own does not determine the customer's choice of the service delivery option by the findings of Wang et al., (2012).

According to Collier et al., (2015) the decision on whether to acually use the SST at the time of the transaction will be made by many customers based on situational factors despite their predisposition to either avoid or use an SST.

Claudy et al. (2015) argue that in adoption decisions, customer's beliefs about the characteristics of innovation are not necessarily salient factors in their decision to adopt. The focus should be on context-specific reasons for and against adoption. Oh et al. (2016) recognises that different technologies and the situations in which such technologies are adopted, may introduce broader determinants of use that are not merely related to the attributes of the technology.

2.3.3.2 Situational factors

Ram, (1987) recognises that situational factors affect customer resistance. A situation is defined as all those factors that are particular to a place and time of observation, which have a demonstratable effect on current behaviour and exclude environmental factors like cultural values that are not specific to a time or place of observation (Belk, 1974, p.154). Situational factors will vary depending on the context. SST literature reveals that situational factors play an important role in explaining customer SST usage and have also been shown to influence customers' choices between self-service and personal service delivery options (Gelderman et al., 2011; Wang et al., 2012). The types of situational factors that have been found to influence customers intention to use an SST instead of an alternative service delivery option include the length of waiting for lines at alternative service delivery options (Oh et al., 2016).

In the fast-food context, waiting time is a relevant situational factor (Dabholkar, 1996). In a study done in the context of a fast-food restaurant, where customers were given a scenario to choose to use a touch screen to order food or to order verbally with a service employee, waiting time was found to influence the customer's intention to use a SST option and their choice of service delivery option (Dabholkar, 1996). Perceived waiting time is a strong deterrent to SST use and despite having favourable attitudes towards the SST. Dabholkar and Bagozzi (2002) suggest that with increased waiting times customers will select other service delivery options despite favourable attitudes towards the SST. Differential waiting time was found to influence preference for the service option and where the waiting time is longer at the staff service option, the SST option is preferred Simon & Usunier (2007).

Time pressure may also affect a customer's choice to use an SSK. According to Collier et al., (2015) a customer's perceived time pressure negatively influenced their attitudes towards the SST. Time pressure could arise from crowdedness around the SST which could make the customer feel rushed to complete the order or fear of other customer's impatience while waiting to use the SST. In other words, if a customer feels pressured to complete an order quickly because there are other people waiting to use the SST, this can negatively influence if they choose to use an SST. Collier et al., (2015) suggested that the SSTs may be better suited for quick orders opposed to large orders that take extra time to complete.

Crowdedness is another situational factor applicable to onsite self-service (Dabholkar & Bagozzi, 2002). Crowdedness may be perceived by the customer positively or negatively depending on the context and may lead to social anxiety if the customer feels that others are watching them navigate the unfamiliar technology (Dabholkar & Bagozzi, 2002). In an airport setting, perceived crowdedness was found to strongly impact SST usage and the choice of service delivery option (Gelderman et al., 2011).

According to Collier et al., (2015) there is a strong influence of shopping effectiveness on a customer's SST attitude. If the customer perceives that the shopping effectiveness is increased by using the SST because using the SST will be faster or more convenient, the customer's perception of effectiveness will positively influence their attitude toward the SST. The influence of external factors, such as culture or social influence, on innovation resistance is an under-researched area (Huang et al., 2021). Understanding the influence and interactions of external factors with other factors on customer resistance is critical (Huang et al., 2021).

2.3.3.3 Customer characteristics

In relation to SST research, it is suggested that if customers are uncomfortable with using the SST they may avoid using them despite acknowledging benefits of using them (Meuter et al., 2003). Customers may be uncomfortable with the SSTs

for a variety of reasons. The customer-specific reasons identified in SST research for customers avoiding SSTs include technology anxiety and the need for interaction (Meuter et al., 2003; Dabholkar, 1996; Dabholkar & Bagozzi, 2002). Technology anxiety relates to the customer's state of mind regarding his/her ability to use the technology and has been found to better predict SST use than demographic characteristics (Meuter et al., 2003.) Increased technology anxiety has been found to decrease SST use (Meuter et al., 2003).

Gelderman et al. (2011) found the need for interaction to have a significant impact on the customer's choice on whether to use an SST. Certain customers may prefer to deal with people and consider the service encounter a social experience (Curran & Meuter, 2005). It has also been shown to be a relevant factor for SST avoidance as customers with a higher the need for interaction will avoid SSTs (Dabholkar, 1996; Dabholkar & Bagozzi, 2002). The need for interaction is the need that certain people have to interact with humans in the service encounter (Dabholkar, 1992). Dabholkar (1992) suggests that the need for interaction is an antecedent of attitude towards SSTs and negatively impacts the adoption of SSTs.

For customers with a high need for interaction, the SST alternative option would have to be much easier to use and its attributes would need to be stronger than they would for a customer with a low need for interaction (Dabholkar & Bagozzi, 2002). According to the research, there are instances where customers do not want to interact with people, leading them to use the SST (Meuter et al., 2000).

a. Preference for full-service options

Simon & Usunier (2007) explored the factors that determine the preference for the use of SSKs over the staff service option. They considered the effect that thinking style, perceived service complexity and differential wait times had on choice of service option.

Regarding service complexity, they indicated that customers anticipate that using an SST will require a significant amount of cognitive effort, especially for complex services. They anticipated that because of the perceived increased cognitive

effort customers may prefer using a service involving humans. They suggested this was because customers can face difficulties with navigating the SST interface and because features of human communications cannot be duplicated on an SST. For example, staff can provide their opinions and feedback. Although their study found that customers anticipate significant cognitive effort when using SSTs especially with complex services, the data did not support their hypothesis that perceived service complexity has a negative effect on SST preference.

Convenience has also been identified as an important factor that influences use off SSTs, and it plays an important role in whether the customers choose to use the SST or the traditional service option (Collier & Sherrell, 2010)

2.3.3.4 Forced use of SSKs

When companies replace traditional human service with SSTs, they are forcing customers to accept SSTs and customers are not always willing to change or accept new technology (Feng et al., 2019). Forced use of SSTs can trigger customer resistance and negatively impact customer adoption of the SST (Cserdi & Kenesei, 2021). Forcing customers to use SSTs leads to an increase in technology anxiety which negatively affects behavioural intention (Liu, 2012). Customers may feel that they are forced to learn a new technology (Feng et al., 2019). Reinders et al., (2008) investigated the impact of forcing customers to use SSTs. They found that forced use led to negative attitudes towards the SST and indirectly impacted behavioural intention and suggested that forced use was likely move customers away from using the SST.

2.3.4 Proposition 1

Customers may resist SSKs for reasons related to SSK attributes, specific customer reasons, or situational factors present in the fast-food setting.

2.4 The role of job loss potential in SSK resistance

This part of the literature review explores what the literature says about the influence of job loss potential on SSK resistance.

2.4.1 Technology introduction and job loss

Ram (1987) recognised that cultural and social factors also affect innovation resistance. The need to conduct additional research on other factors that may influence innovation resistance such as ethical and moral considerations and cross-cultural differences has been highlighted in the literature (Huang et al., 2021). Santos and Halkais (2021) reported challenges with rapid diffusion of innovations in Africa to include the fear that technology will cause further unemployment and displace unskilled workers and that acceptanace of an innovation depends on its compatability with social norms within the context of the local needs, skills and knowledge.

In the SST context, Liu and Hungs (2021) research explored preferences for SSTs relative to the traditional employee provided service. Labour issues, among others, were identified as an environmental contextual factor that could influence preferences for SSTs. They developed a framework that introduced environmental context as a factor influencing preference for SSTs. To the researcher's knowledge, the role of potential job loss as a social factor driving resistance in a global or South African context has not received significant research attention. There is a popular narrative that SSTs, which include SSKs, eradicate jobs (Johnson, 2018). There is no empirical proof of mass job loss due to SSK introduction. Despite, the lack of proof, media reports have predicted that the introduction of SSTs is a labour cost saving mechanism that will result in job loss for the service employees (Rensi, 2018; Duke, 2019).

Job loss is a big issue in South Africa, because the unemployment rate is high (Stats SA, 2022b). The demand for jobs exceeds job supply. The narrative that technology threatens employment appears to have been adopted by labour unions in South Africa. The introduction of SSTs even on a trial basis in retail

contexts has been met with resistance from unions on the basis that it would result in job loss (Madubela, 2021). Similarly, in the banking sector in South Africa, the unions threatened mass strike action over retrenchments which the unions attributed to the introduction of technology (Brothwell, 2019). Media reports allude to this narrative being adopted by some customers in South Africa (Benjamin Roberts et al., 2019).

Lincoln et al. (2020) conducted qualitative research on customers' attitudes towards SSTs and self-service check outs in a South African context and investigated the customer's perceptions of potential job loss. It was included in the study because job loss is a sensitive topic in South Africa that poses an element of social risk. The research found that it was possible that job loss potential was exaggerated as an obstacle to SST introduction. It was acknowledged that further in-depth research is required regarding the significance of potential job losses as a barrier to SST introduction.

One explanation for Lincoln et al. (2020) research outcome was that job loss potential may be an exaggerated obstacle. The outcome could lie in the difference between beliefs about an innovation and reasons for adoption or non-adoption of the innovation and the different impact each construct has on customer behaviour. According to Claudy et al. (2015) reasons for non adoption differ from beliefs about an innovation in that reasons are context specific and directly connected to explaining behaviour. In essence, even though customers may believe that the SSK has job loss potential which in a South African context is very problematic given the unemployment rate, that belief may not result in SSK resistance as other reasons may drive behaviour.

According to Johnson et al., (2021), within the retail context for instance, SSTs in the form of self-checkout kiosks are increasing while the number of full-service staff are reducing, and customers are often left with either having to coproduce the service by using the SST or wait in a long queue for the full-service option. Johnson et al (2021) considered whether concerns regarding technology driven job loss was a factor that results in customer coproduction resentment. Co-production resentment is the resentment a customer feels due to their

coproduction in the service. This study was one of the first studies to find that technology driven job loss significantly positively affected coproduction resentment and co-production resentment was found to affect self-checkout continuance intention. Social influences have been found to influence customer adoption in an SST context (Curran & Meuter, 2007)

2.4.2 Proposition 2

The job loss potential pursuant to SSK's introduction is why customers resist using SSKs.

2.5 Theoretical framework

2.5.1 Innovation Resistance Theory

Ram (1987) first proposed the Innovation Resistance Theory (IRT) (Talwar et al., 2020). In his innovation resistance model, he identified factors that affect resistance as the customer’s perception of the innovation’s characteristics, the customer characteristics and marketing mechanisms. Ram (1987) also recognised that cultural, situational and social factors also affect resistance.

The IRT was modified by (Ram & Sheth, 1989) to identify customer resistance through different barriers (Talwar et al., 2020). According to IRT, customer resistance arises when the innovation changes the customers’ routines or belief systems (Ram & Sheth, 1989). In terms of the IRT, AR has five categories of barriers. These are use, value, risk, tradition and image. These categories fall into two barrier groups, the functional barrier group and the psychological barrier group. The barriers do not have the same level of importance across geographic settings (Ghosh, 2022).

2.5.2 Functional barriers to innovation adoption

Functional barriers relate to the usage, value and risk associated with the innovation and are more likely to arise where the innovation changes the customer's routine or the way they do things (Ram & Sheth, 1989). Functional barriers as identified in the IRT arise when customers perceive that adopting the innovation will result in significant changes that are inadequate for the user (Ram & Sheth, 1989; Talke & Heindenrich, 2014). They relate to the usage, value and risk as perceived by the customer when evaluating the attributes of the innovation (Ram & Sheth, 1989).

Usage barriers refer to the innovation's incompatibility with the customer's existing habits, requiring the customers to change to adopt the innovation (Ram & Sheth, 1989). Sheth (1981) argues that customers will resist adopting innovations where such innovations require them to change their existing behaviour and habits in circumstances where customers are happy with the status quo. In the Kleijnen et al. (2009) study, the impact of the change in behaviour brought about by the innovation played a crucial role in the rejection of the innovation. In Ghosh (2022) study, the usage barrier was found to be the greatest barrier to Mobile Payment Services. The value barrier refers to the innovation not having a strong performance or price saving value relative to an alternative to the incentive to use the innovation over the substitute (Herbig & Day, 1992).

Risk barriers are related to the amount of physical, social, or economic risk the customer perceives the innovation adoption requires (Ram & Sheth, 1989). Kleijnen et al.'s (2009) study revealed that perceived risk was a significant factor and economic, functional, and social risks are important drivers of innovation rejection. Adoption is likely to be postponed if customers anticipate risk until such time that they know more about the product or service (Ghosh, 2022). Notably, other categories of functional barriers are found in the literature such as compatibility, convenience, and visibility (Santos & Ponchio, 2021). Innovation resistance arising from an innovation's characteristics is the most studied area of innovation resistance (Huang et al., 2021).

2.5.2.1 Psychological barriers to innovation adoption

The Psychological barriers relate to the tradition, norm, and perceived image associated with the innovation. These barriers are more likely to arise where the innovation conflicts with the customer's belief systems (Ram & Sheth, 1989). Tradition barriers relate to how things have always been done and the more customers have to deviate from tradition the more the innovation will be resisted (Ram & Sheth, 1989). Customers are familiar with paying cash after a purchase or going to a physical store and when an innovation disrupts this tradition the traditional barrier is invoked (Ghosh, 2022). Image barriers are related to the customer's negative associations with the innovation that drive resistance behaviour (Ram & Sheth, 1989). According to Leong et al. (2021) tradition is the strongest barrier followed by risk and value barrier.

An expanded typology of AR barriers has been proposed (Talke & Heindenrich, 2014; Joachim et al., 2018). In a mobile payment services context, researchers have identified and studied additional resistance barriers like surveillance, habitual use of cash and technology to explain resistance behaviour (Ghosh, 2022). Emotional barriers have also been considered as a third category of barriers and were found to positively influence resistance to digital banking services (Santos & Ponchio, 2021). Wang et al., (2023) point out that despite barrier extensions, the barrier dimensions remain limited to functional and psychological barriers. Wang et al., (2023) identified eight resistance barriers to service robots at hotel front desks which could be categorised into functional, social and aesthetic barriers. Perceived cost barrier and complexity barrier have also been identified as additional resistance barriers (Leong et al. 2021).

In research, IRT has been used together with other theoretical frameworks like the Technology Acceptance Model. TAM, on the other hand considers factors that influence behavioural intention towards the innovation.

2.5.3 Technology Acceptance Model

TAM (Davis et al., 1989) is based on Fishbein and Ajzen (1975) theory of reasoned action (TRA) and has been used by innovation researchers to explain innovation adoption (Claudy et al., 2015). TRA predicts behavioural intention is based on attitude toward that behaviour as well as on subjective norms. Regarding the TRA, a person's attitude is formed due to their beliefs about the consequences of performing the behaviour.

TAM, unlike TRA, considers two specific customer's beliefs about the technology attributes to determine the person's attitude toward the technology (Davis et al., 1989). In terms of TAM, a person's beliefs about how useful or easy to use the technology is, influences their attitude towards using the technology, and their attitude determines their behavioural intention towards the technology (Davis et al., 1989). Since TAM is focused on the attributes of the innovation, the influence of the customer's other beliefs on the customer's attitude toward innovation does not feature.

According to Talwar et al., (2020), the two specific TAM constructs of ease of use and usefulness of the innovation have a significant association with resistance. Related to TAM is the Diffusion of Innovation Theory (DIT), as it shares the view that adoption of an innovation is determined by how customers perceive the innovations attributes (Hubert et al., 2019).

2.5.4 Diffusion of Innovation

According to the literature Rogers Diffusion of Innovation Theory, should not be ignored when it comes to innovation resistance as it can offer useful insights (Kleijnen, 2009) In terms of DIT, the rate of adoption of an innovation can be explained by how adopters perceive five specific attributes of the innovation. These five attributes are: relative advantage, compatibility, complexity, trialability and observability. According to Rogers (1995, p.15), the relative advantage of innovation is "… the degree to which an innovation is perceived as being better than the idea it supersedes." The advantage is the benefit derived from adopting

the innovation, which can take the form of economic profitability and time and effort savings (Rogers, 1995 p.217).

Compatibility relates to the degree that an innovation is perceived as consistent with existing values, past experiences, and the needs of potential adopters (Rogers, 1995 p. 223). Compatibility extends to the innovation's alignment with adopters' cultural values, previously adopted ideas, and the adopter's needs. The complexity of an innovation "…is the degree to which an innovation is perceived as relatively difficult to understand and use" (Rogers, 1995 p.230). Trialability relates to the degree to which an innovation may be experimented with on a limited basis and observability is the degree to which the results of an innovation are visible to others (Rogers, 1995). Existing theoretical frameworks focus on certain factors and do not take into account external actions thereby limiting their explanatory power (Liu & Hung, 2021).

2.6 Conclusion of Literature Review

Some of the main SST researchers have looked to innovation adoption literature for factors that explain customer innovation adoption behaviour (Meuter et al., 2005). SST research has also found customer characteristics and attitudes to impact adoption behaviour (Meuter et al., 2005). The literature confirms that attitude alone does not predict behaviour and situational factors play an important role in resistance behaviour. The research is focused on factors that influence adoption and reasons for innovation resistance have not received the same attention.

According to innovation resistance literature, customers resist innovations because they require a change from a satisfactory status quo or because they differ from the customer's beliefs. Resistance barriers to innovation adoption fall into two main groups, namely the functional barrier group and the psychological barrier group. The barriers do not have the same level of importance across geographic settings (Ghosh, 2022).

The role of potential job loss attributable to the SSK introduction as a barrier to SSK adoption has received almost no research attention. In a South African context where unemployment is high and a concern for many South Africans, the significance of perception of potential job losses has been recognised and further in-depth research is required to determine whether it is a reason that customers avoid SSKs in the fast-food industry.

Proposition 1: Customers resist using SSKs for reasons relating to SSK attributes, for customer specific reasons or due to situational factors present in the fast-food setting.

Proposition 2: The job loss potential of SSKs is a reason why customers resist using SSKs.

CHAPTER 3. RESEARCH METHODOLOGY

3.1 Introduction

The research methodology used in this study will be set out in this Chapter. The first part of this chapter will present the qualitative research approach used in the study together with the reasons for this choice. This chapter will also detail the research design and reasons for the design. The population and sample selection will be discussed as well as the procedure used for data collection. The chapter will conclude with an explanation of how the data was analysed and why the research is credible and dependable.

3.2 Research approach

This research adopts a qualitative approach to explore why customers resist SSKs in a South African fast-food context. A qualitative approach allows the exploration of beliefs and explanations as to why behaviours occur (Castleberry & Nolen, 2018). Qualitative research also embraces contextual conditions which may influence human affairs (Yin, 2016). According to Claudy et al. (2015) qualitative methods can be used to obtain customer's context specific reasons against adoption.

A qualitative approach is appropriate for this study because, essentially, it provides an opportunity to collect new information in a different context. The research is conducted in South Africa, a location that has received limited research interest on SSK resistance in a fast-food context. A qualitative approach assists in gaining an understanding of why customers resist SSKs in South Africa, whether those are the same or similar to the reasons identified in other jurisdictions and whether there are new context specific reasons that exist in a South African context.

A qualitative research approach, particularly where the technology is still new, assists in obtaining an in-depth understanding of people's attitudes towards the

SSKs and assists in determining whether any unique reasons exit in a South African context that explain why users resist SSKs.

A quantitative approach would be limited to testing research variables that have already been identified in past literature and that approach does not cater for exploring whether any new context specific resistance reasons exist.

3.3 Research design

A qualitative research process includes identifying the research problem, reviewing literature related to the problem and asking questions (Creswell, 2007). It also includes interrelated activities which involve collecting, organising, and analysing data systematically and methodically to make sense of it and answer the research questions (Creswell, 2007).

The overall study design adopted was a qualitative research design that was exploratory. Rotchanakitumnuai and Speece (2003) used a similar research design in researching barriers among corporate customers adopting internet banking in Thailand. They recognised that a qualitative approach provides rich detail of viewpoints in the early stages of research, allowing the researcher to understand the problem better and conducting in-depth semi-structured interviews with corporate customers.

The research was exploratory in nature and aimed at getting a detailed insights on why customers resist SSKs particularly in a fast-food setting in South Africa and to see if there are any new reasons that exist in a South African context. The design involved obtaining in-depth information pertaining to a particular context which assisted in answering the research questions. This was particularly important because previous research has proven that situational factors play a role in SST use behaviour and situational factors differ in different contexts (Gelderman et al., 2011). The research philosophy that underpinned the research was interpretivism. According to Saunders & Lewis (2018), this philosophy relates to understanding social phenomena in their natural

environment. It is appropriate to understand why customers behave the way they do towards SSKs in a fast-food setting in South Africa.

The research approach adopted was an inductive approach. Where there is not a lot of literature that exists, as was the case with innovation resistance, it was appropriate to adopt an inductive approach and to collect data, analyse themes and then theory and conclusion development (Saunders & Lewis, 2018). Semi-structured interviews were conducted to get a detailed understanding of the customer resistance. The study was a cross-sectional study in that data was collected over one period of time (Saunders & Lewis, 2018).

3.4 Data collection methods

The method used for data collection was semi-structured interviews where the researcher collected primary data through semi-structured interviews.

3.5 Population and sample

3.5.1 Population

Saunders & Lewis (2018. p138) define a population as “the complete set of group members”. The population for this study was fast-food customers who had resisted using SSKs in a fast-food outlet in South Africa. The parameters of the population were underpinned by the research propositions. Data was required at an individual level from individuals who were fast-food customers, had resisted using a self-service kiosk in a fast-food outlet and the resistance must have taken place at a fast-food outlet in South Africa.

3.5.2 Sample and sampling method

Saunders and Lewis (2018. p138) define a sample as “a sub-group of all group members or the whole population”. Data were collected at a single level, being that of the fast-food customer. The rationale for this was that the research was

aimed at understanding why customers resist SSKs. Participants were not selected on a random basis. They were selected according to a purposive sampling method where participants that could provide rich insight into the research questions were intentionally selected (Farrugia, 2019). This was the appropriate sampling method as it focused on sample selection according to customers that would provide relevant information for the study. The participants that were selected for the study were fast-food customers who had resisted the SSK option at a fast-food outlet in South Africa.

Although, according to Yin (2016) there is no formula to define sample sizes in a qualitive inquiry. The researcher will stop interviews when new insights are no longer being yielded in line with the approach described as the point of saturation (Lowe et al., 2018).

3.6 The research instrument

An interview guide was developed as the research instrument. The guide contained questions that were aimed at obtaining answers to the research propositions. The interviews were semi-structured interviews comprising of predetermined questions developed from themes identified pursuant to the literature review. The themes in the interview guide related to SSK use and SSK attributes, customer characteristics and situational factors.

The advantage of using semi-structured interviews is that they enable specific issues to be addressed by the interviewer (Zikmund et al., 2013) The specific issues related why the customers resisted the SSK and whether those reasons related to the SSK attributes, the customer's individual characteristics and situational factors and whether any other reasons for resistance existed. Appendix A contains the Interview guide.

3.7 Procedure for data collection

Ethical clearance was obtained prior to the collection of any data, scheduling, and commencement of interviews. Participants were recruited for interviews. Multiple methods were adopted to recruit participants. The methods included posting on social media calling for volunteers willing to be interviewed and utilising the snowballing approach. The eligibility criteria was set out in calls for interview volunteers and required that in order to be eligible to participate in the research, volunteers had to have chosen not to use a SSK at a fast food outlet in South Africa. Participants who were willing to participate in the study confirmed their participation in the study through social media messenger, telephonically, email or WhatsApp. A suitable interview time was then scheduled with the participants, and consent forms were sent to them to sign. Appendix B contains a template consent form. All interviews, save for one interview, was conducted virtually. Virtual interviews were conducted through online platforms like Microsoft Teams (Teams), Zoom or WhatsApp. All interviews were recorded. The recordings were then transcribed for analysis.

3.8 Data analysis and interpretation

Data was analysed by using thematic analysis. This form of analysis is a common strategy used to analyse data and involves identifying, analysing and reporting on themes arising from the data (Castleberry & Nolen, 2018). Castleberry and Nolen (2018), describe the process as one which involves compiling data into an organised format, for example by transcribing the data from interviews. Separating data into meaningful groups through coding which is done by identifying differences and similarities in the data. From the codes, themes are formed. The themes are defined and relationships between the themes is considered. During the process, the researcher aims to interpret the data to identify themes and to answer the research questions posed in the preceding chapters.

Braun and Clark (2006) developed guidelines for doing thematic analysis. These guidelines set out six phases of analysis. The first phase involves becoming familiar with the data which involves repeated reading of the data to look for patterns. The second phase involved creating an initial list of codes. The guidelines describe codes as identifying something interesting in the data and are the most basic element of the phenomenon. In third phase involves separating codes into different themes. In the fourth phase the themes are refined and in the fifth phase they are defined and named. In the last phase final analysis is done.

Thematic analysis was appropriate for the research study because it presented the opportunity to categorise a large amount of data into data themes. As suggested by Braun & Clark (2006), all the interviews were transcribed and read through before coding began. The transcripts were uploaded onto ATLAS.ti software and that software was used to code the data. Codes were then organised into themes and the themes were reviewed and refined. The themes were then named. Thematic analysis was appropriate for the research study because it presented the opportunity to categorise a large amount of data into data themes.

3.9 Transferability and dependability

3.9.1 Transferability

Transferability refers to whether findings of a particular study can be used to in respect of a different group or setting and it is achieved when the reader can determine whether the findings apply to new situations and transfer the result to a different situation (Polit & Beck, 2010).

In order to make the findings transferable, rich and descriptive detail was provided in findings of this study to enable readers to determine whether the findings can apply to different contexts (Polit & Beck, 2010).

3.9.2 Credibility

Several strategies can be adopted to increase credibility. Some strategies apply in the research design phase while others apply during the data collection and analysis phases (Krefting, 1991). During the data collection phase during the interview process, credibility can be enhanced in the interview process by reframing questions and repeating questions (Krefting, 1991). The researcher used this technique during the interview process. Rich verbatim descriptions of the Participant 's accounts increase credibility (Noble & Smith, 2015; Tracy, (2010). The in-depth interviews allowed the researcher to record in depth descriptions of why participants resist SSKs in the South African fast-food context. During the analysis phase, the researcher detailed the decisions made relating to the coding procedure and the development of themes. All the data has been stored and is also available for inspection.

3.9.3 Dependability

Dependability refers to having enough information to follow the researcher's decision trail (Thomas & Magilvy, 2011). It is suggested by Thomas and Magilvy (2011) that dependability can be achieved by having research contain descriptions of the research purpose, participants selection criteria, data collection methods, data analysis strategy, findings and a discussion on credibility techniques. The researcher has included a thorough description of research methods and decisions to maximise dependability.

3.10 Ethical considerations

Ethics refers to the standards of behaviour that guide choices and govern behaviour (Saunders and Lewis, 2018). The study was conducted ethically at each stage of the research process.

3.10.1 Consent

Regarding interviews, consent was sought from all participants for them to participate in the research and have their interviews recorded. All participants were informed that they were participating in a research study, and the nature of the study was explained to them (Creswell, 2007). Interview participants were required to complete a consent form.

3.10.2 Confidentiality

The researcher took all the necessary steps to keep the identity of the participants confidential and not to have their identities disclosed in the researcher's report, including assigning aliases to participants (Creswell, 2007).

3.10.3 The interviews

The interview times were schedules at convenient times for the participants and such time arrangements were respected with careful consideration given to not running over the agreed interview time.

3.11 Conclusion

To explore why customers, resist SSKs in a South African fast-food context a qualitative research approach was adopted which enabled in-depth information to be obtained. Sixteen semi structured interviews were conducted with fast-food customers and the data was collected over one period. The interviews were transcribed, and coded and thematic analysis was used to analyse the data. To ensure quality, the findings contained rich detail and the research process was thoroughly described.

CHAPTER 4. PRESENTATION OF FINDINGS

4.1 Introduction

This chapter will present the findings of the qualitative research study on customer resistance of SSKs in fast-food outlets in South Africa. As detailed in Chapter Three, semi-structured interviews were conducted with fast-food customers. 16 Semi-structured interviews were conducted. The interview guide in Appendix A was used to guide the semi-structured interviews with fast-food customers who had resisted using a SSK in a fast-food outlet in South Africa. The questions in the guide aligned with the research propositions set out in Chapter Two. The findings arising from the interviews will be presented in this chapter according to each research proposition and such findings will be supported by quotations that reflect the Participant's answers to interview questions.

4.2 The sample

The sample comprised a total of 16 fast-food customers that were interviewed. The research required an understanding of why customers resisted using a SSK in a fast-food setting in South Africa. As such, interviews were only conducted with fast-food customers who had at least once resisted using a SSK in a fast-food outlet in South Africa. During the interview process, it became apparent that Participant 4 had not resisted using a SSK and Participant 4's interview was thus excluded from the data. The researcher had an additional three fast-food customers lined up to be interviewed, however those interviews did not take place because, although initially the customers agreed to be interviewed, a suitable time for such interviews could not be agreed or they failed to revert to the researcher with availability to be interviewed.

Table 1 sets out the interview sample. For confidentiality and anonymity reasons, the names of the participants will not be set out in the table.

Table 1: Description of sample

No	Age	Title	Gender	Employment status	Fast-food customer who resisted SSK
1	52	Participant 1	Male	Self-employed	Yes
2	38	Participant 2	Female	Self-employed	Yes
3	43	Participant 3	Female	Employed	Yes
4.	39	Participant 4	Male	Employed	Yes
5.	60	Participant 5	Female	Employed	Yes
6.	59	Participant 6	Female	Employed	Yes
7.	38	Participant 7	Female	Employed	Yes
8.	22	Participant 8	Male	No - Student	Yes
9.	32	Participant 9	Male	Employed	Yes
10	36	Participant 10	Female	Employed	Yes
11	35	Participant 11	Male	Employed	Yes

12	43	Participant 12	Female	Employed	Yes
13	34	Participant 13	Male	Employed	Yes
14	40	Participant 14	Female	Employed	Yes
15	32	Participant 15	Female	Self-employed	Yes
16	35	Participant 16	Female	Employed	Yes

(Source: Researcher)

4.3 Data preparation

All interviews, apart from one, were conducted virtually with the participants. One interview was conducted in person. The other interviews were conducted on Teams, Zoom or WhatsApp. The selection of the appropriate interview platform for each interview was dependant on what platform the participant had access to and preferred. All interviews, including the interview that was conducted in person, were recorded on either Microsoft Teams, or Zoom and simultaneously recorded on an iPhone under the voice memos application as a backup.

Interviews were automatically transcribed in Teams or by the researcher. In Teams, the transcription services are embedded into the software. WhatsApp and Zoom do not have similar functionality. In respect of the Zoom and WhatsApp interviews, those interviews were simultaneously recorded on Teams thereby enabling them to be transcribed using the embedded transcription services. In respect of the Teams transcriptions, the researcher listened to each recording simultaneously while reading the Teams transcription to ensure the transcription was captured accurately. During this process, where any inaccuracies were noted such inaccuracies in the transcript would be corrected.

Each Participant was allocated a separate computer file which was named according to which number interview it was. For example, a file was created for the first Participant that was named Participant 1. In this file, the video recording, the Teams transcript, and the consent form was saved and allocated to the Participant. The backup voice recordings of each interview were saved on the researchers iPhone using the same naming convention.

A detailed record of information was kept relating to when the interview data was obtained, where it was recorded and when and how it was prepared. Appendix B is a table that sets out the interview process information. For confidentiality reasons, the names of the participants are not set out in the table.

4.4 Coding and Themes

Each transcript was read line by line and in ATLAS.ti codes were then allocated to statements made by each Participant. Each code captured the essence of each statement. The process was an iterative one and the transcripts were revisited multiple times and allocated codes were refined as the coding process progressed. Initially, over 100 codes were identified in the transcripts from the data collected. The codes were then organised into broad categories based on similarities or connections between the codes. Each category was allocated a colour. The categories were then grouped into thirteen main code group types. Four main themes were identified from the code group types with sub-themes within them. The themes were easily identifiable from the code group types.

The themes related to reasons customers resist SSKs, employment considerations, feelings towards SSKs and the fast-food context.

4.5 Results pertaining to Proposition 1

RP1: Customers may resist SSKs for reasons related to the SSK attributes, customer specific reasons or situational factors.

An understanding of why customers resisted using a SSK in fast-food setting in South Africa was required. All the participants were asked whether they had been to a fast-food outlet in South Africa that uses SSKs. All the participants answered in the affirmative. All the participants confirmed that they had used an SSK to place an order at a fast-food outlet in South Africa, even if it was only on one occasion.

4.5.1 Fast-food context in South Africa

An insight that emerged from the research was that participants go to fast-food outlets in South Africa for the convenience of getting food fast and easily. In the interviews, the participants described instances where they had gone to fast-food outlets. Some descriptions included how after a long day in a meeting the fast-food outlet was the only place that they could find, how they were getting food for multiple young children or how they would quickly drive to a fast-food outlet in their pajamas to get some food.

> *"…you don't go to McDonalds because you really want McDonalds. You go there for convenience, and I find, there are 100 places you can go to for a better burger, McDonalds is fast. That's all you can say about it. So now I want fast convenient food and now I got to go to a self-service kiosk that is not user friendly and defeats the point of me going to McDonalds."* (Participant. 1)

> "*…you know I had a meeting the whole day and when I came out all I could find was a McDonalds, because I was stuck in the middle of nowhere and I got to press these buttons and eventually I lost hope and went to an Engen garage to get a packet of chips and a coke…"* (Participant. 1)

> *"With a lot of time and effort which you don't really want to do at a fast-food place, the point is you want fast-food."* (Participant. 2)

“For me, it’s all about convenience, there’s no bigger factor …”
(Participant. 7)

The participants were asked whether they had ever chosen not to use a SSKs at a fast-food outlet in South Africa and they were asked to provide reasons for this choice. All Participant s, apart from Participant 4, had at least on one occasion chosen not to use a SSK at a fast-food outlet in South Africa. Participant 4’s interview was excluded from the data set on the basis that Participant 4 could not provide information related to reasons why customers resist using SSKs in a fast-food outlet in South Africa as Participant 4 had not chosen to not use a SSKs in a fast-food outlet in South Africa.

The Participant s described that despite their choice not to use the SSK, at certain outlets it was the only in-store ordering option and in essence they were forced to use the SSK even where they did not want to.

*“I’ve actually never chosen to use the self-service kiosk unless the cashier told me I’ve got to order through the kiosks…” (*Participant. 1*)*

“So, I was actually forced to use it and I struggled a lot, so one of the ladies that works there actually just ended up doing it for me.” (Participant. 10)

“Because at McDonalds, they make it kind of mandatory to use those kiosks, because they will ask you to go straight to the till. They even ask you did you use the kiosk?” (Participant. 14)

“So, if it wasn’t a forced thing, I don’t think I would actually use it, but now because they’re actually forcing us to use it, that’s why I actually use it.” (Participant. 16)

Some participants abandoned their fast-food order while others selected the drive through or online application option when faced with the mandatory option of having to use the SSK to place the fast-food order in store.

"…inevitability I've needed somebody to come and help me or the last two occasions I actually just left, I went to the garage and got a pie um that's what it did to me." (Participant.1)

On a more extreme level, some participants avoided fast-food outlets with SSKs altogether.

"So that's why now when I want this fast-food, I go to the places where there is no machine." (Participant. 6)

4.5.2 Feelings toward the SSK

In the data, the experience of using a SSK was often described as frustrating particularly when it appeared that the Participant struggled to use the SSK.

"How do I feel about using a self-service kiosk? Um I would say frustrated. Ja the minute I see them, I just think this is going to be frustrating and if you go to the counter, I think the normally redirect you back to the kiosk. So, it's a no-win situation…" (Participant. 1)

"It was too slow and frustrating and the line for the food ordering, well the line in which the food was being ordered seemed to be a lot easier with to interact with the personal one-on-one person and was a lot moving faster than I was able to get my order going, so I got frustrated." (Participant. 2)

"…as soon as I see that people are having issues with it, I don't, ill rather wait in the queue for longer than use something that's going to actually irritate me more when I'm already hungry. Um, its it just frustrates you and I'd rather deal with the person." (Participant. 8)

"…the most frustrating part was the paying part. Um where it, you couldn't access the option to pau the wanted…" (Participant. 9)

It is noteworthy that despite feelings of frustration towards the SSK, this frustration would not always result in continued rejection of the SSK.

4.5.3 Reasons for resistance

Although the data illustrated that there were common reasons among the participants as to why they resisted the SSKS, a significant insight from the data is that the participants' reasons did vary and were often not limited to a single reason. In some instances, the participants explained why they had chosen not to use the SSKs with reference to a particular previous occasion, while in other instances they described the reasons that they continue to resist using SSKs in fast-foods outlets in South Africa.

The below reasons were identified in the data as reasons the customers resisted using a SSK in a fast-food outlet in South Africa. The initial codes allocated to the data were grouped together into code groups and groups of reasons for resistance were then identified.

4.5.3.1 Group 1: Reasons that relate to the SSK's attributes

a. Not easy to use

A common reason identified from the data was that the customers resisted using the SSK because it was not easy to use. Most of the participants felt that the SSKs were not easy to use. The SSK was described as not being user intuitive and user friendly.

> "…*So now I want fast convenient food and now I got to go to a self-service kiosk that is* ***not user friendly*** *in my opinion which the defeats the point of me going to a McDonalds."* (Participant. 1)

> *"So,* ***I didn't find it user friendly*** *on the first experience. I found that it didn't provide all the options I wanted*." (Participant. 9)

> *"I suppose that one time that I did use it, what I found was that I didn't, in as much as the if, if your order is simple and you're able to find things, it makes sense, but um I suppose the user interface isn't, as well* ***I didn't find the user interface to be as streamlined and as user friendly.****"* (Participant. 13)

The participants resisted using the SSKs when their orders were large, complex or required customisation. For these types of orders, the SSKs were considered not easy to use and often too labour intensive for a fast-food order.

> *"…and also, I mean, I think this one time, I wanted to customise my order and I couldn't do that I think on the Kiosk. I didn't try, but I was like,* ***no I'm not going to use it.*** *I'm just going to go to the people because I want a special order*." (Participant. 7)

> *"I just feel like I'm doing too much if I have to navigate that menu and try to figure out, you know what type of happy meal this child is having? Does it come with what type of juice and. And so, I'm clicking and I'm adding. I'm doing a lot of labour for something that is otherwise very easy because all I need to say please, I have a cheeseburger. Happy Meal. Girl toy. Boom. Oh, and an orange juice to drink. That's three seconds of my time versus probably another 15 seconds punching through things, making mistakes, removing things, adding things.* ***Um So it just it feels like it's a lot of work****, like you're just. You're asking too much for me at this point. I want fast-food. I want to order fast. I want my food to come fast and I want to be fast."* (Participant. 10)

> "*Because it was a big order. It was for a lot of people, and it was for kids, so they had just different orders, so we just wanted to maybe go to the to the thingy, to the cashier and just say out the order instead of choosing****. So, there's a bit difficult to choose the orders on and some of the items are not available in the kiosk option****."*
> (Participant. 16)

Participants referred to needing assistance to operate the SSK. It however appeared that the assisting staff members also struggled to use the SSK.

> *"… Inevitably I've needed someone to come and help me or the last two occasions I actually just left, I went to the garage and got a pie, um that's what it did to me*." (Participant. 1)

*"Yes, somebody did come and help. Um and **she struggled as much as I was struggling**. So really it wasn't a case of I'm being difficult and um she also struggled*." (Participant. 10)

An insight that was identified from the data is that customers would need to learn how to use the SSK and extend effort to do so and this was perceived as a complex and an unnecessary burden on them that they didn't need.

*"…**It seemed more complicated** than just going and speaking to somebody to now I have to use some sort of electronic system to choose the food I wanted…"* (Participant. 11)

*"…Firstly, **you need to learn how to use it. So, it's additional thing that I don't need in my life**, stress that I don't need…"* (Participant. 12)

b. SSK system issues

Participants also chose not to use SSKs due to SSK system issues. The system issues that were identified related to fast-food items not being available on the SSK menu despite being available if ordered at the cashier, system slowness and latency, and menu unavailability after loadshedding.

"…Um what often happens as well is due to loadshedding I haven't used it because when the kiosk starts back up again its starts back up with the incorrect programming, so it doesn't have the menu available." (Participant. 8)

"… So that items that I initially wanted were not showing up on the screen. And when I asked the guy that was trying to assist me, he said that no, they actually do have those products in store. So, it's better if I just order it from the counter and then I think the second time it had to do with a payment method or something or the other. But Ja, I've never had. I've never really had a pleasant time using it, so I'd rather just sit through, sit in the car, and go through the drive through and just be assisted by a human being." (Participant. 15)

“Ja. Exactly and sometime there’s you know, there might be that on the system, on the self-service kiosk your options are more limited that what’s actually available.” (Participant. 11)

The SSK system latency issue highlighted by Participant 8 related to the SSK system lagging in reflecting the order that the customer had inputted thus causing frustration and increasing the time it would take to make an order.

“So, if I'm trying to order multiple items, multiples of the exact same item. It won't reflect that I've selected multiple and so then I click it again and now to I put one too many or two to many depending on how many times I click it and so that latency causes frustration. So, I’d rather just go to a person and deal with it there or if necessary or go through the drive through even to avoid using the machines.” (Participant. 8)

c. Hygiene

An insight derived from the data related to hygiene concerns that customers have regarding using the SSK. More than one Participant indicated that concerns relating to hygiene was a reason that they did not use the SSK. The concern related to the Participant s having to touch the SSK screen in circumstances where other customers touched the same screen to place their orders and it being unclear how often the SSK screens were cleaned.

“I didn't want to be touching that screen which everybody else touches.” (Participant. 9)

“So I remember the first McDonalds that had a self, self-service kiosk in um I was still living in Durban and this was pre- COVID, um and I will see, I will see the kiosk and literally look in my bag to see if I've got any wipes that I can use to clean the screen and if I don't then I definitely will not go near it and back then they still have the option of ordering at the normal counter so I don't know when it changed actually to forcing people to order at the self-service.” (Participant. 10)

"…Second, because it didn't seem that hygienic if you know every person was coming there and touching that screen, especially since it's kind of post COVID world now, and we're all more sensitive to that kind of thing. So that was also a big factor." (Participant. 11)

d. Payment process and payment options

The fact that you could not pay with cash at the SSK, and payment could only be made by card was another reason that was identified in the data that SSKs were not used. One Participant was also particularly concerned about having to use their card to pay for the order.

"The most frustrating part was the paying part. Um where it, you couldn't access the option to pay the way you wanted as easy as possible and ***on that particular day I wanted to pay via cash*****."** (Participant. 9)

"Can you see that the other people they are going to cafes, or I rather go there because I know that I'm going to pay cash. ***No-one is going to use my card***." (Participant. 6)

An insight that was identified from the data was that when a customer pays for the order with cash, the customer would have to use the SSK to place the order but then would nevertheless have to go to the cashier to pay for the order, so it was unclear why the transaction had been split between two places.

"But I think it was when I was first introduced and maybe there was the glitches and the slowness that happening and because you had to in any event pay the teller so what's the point in going to the teller in any event where you could have ordered anyway. So, you're going to stand in that teller line so now you are standing in two queues. You are standing in a queue to get on the uh to order then another queue to pay order whereas you can stand in this one queue to pay the teller and order at the same time." (Participant. 2)

“There’s times I would have like if I'm paying cash, if I have, I don't know why, but if I have cash in my hand, I will prefer to just start the transaction at the till, at the, at the cashier, rather than doing a kiosk and then having to go over and pay.” (Participant. 14)

e. Existence of a perceived better alternative to the SSK

Where alternative ordering options were perceived as better by the Participant s either because they were easier, quicker or more convenient to place the order, the Participant s would instead opt to use the alternatives to place the order instead of using the SSK. Cashiers, the drive through or online ordering applications were identified as alternatives to using the SSK.

“… Like I say, if there's no line walking straight up to a person and saying give me a burger and chips is easier than applying my mind on a kiosk but it's neither here nor there for me. It's whichever is easiest actually.” (Participant. 7)

“...the more and more issues I experience the less, the more I actually resist using them um to the point where I’d even rather just use uber eats then using going into the store, I’d rather drive past the place and order to my house which would be more expensive than actually using the machine.” (Participant. 8)

“…if I could see the franchise is full, I’ll just go in the drive through, just sit in there, cos there is minimal contact with any screens or anybody there.” (Participant. 9)

“It just seems simpler and quicker to speak to a person that to use a kiosk.” (Participant. 11)

“So typically, at the McDonald's in Sandton or Woodmead, there's a big one somewhere there. They are typically very busy, and if you go into the store, they pretty much have someone standing there forcing you to or

directing you to go to the self-service kiosk. So that's why I use the drive through at that branch specifically." (Participant. 13)

"I suppose that as much as I enjoy tech, there is a human element that I still enjoy about ordering, and I suppose these days orders are so customisable that it sort of makes it easier to speak to a person." (Participant. 13)

"…I've never really had a pleasant time using it, so I'd rather just sit through the drive through and just be assisted by human a being." (Participant. 15)

"Yes, I always use the drive through. I prefer the drive through more than the kiosk, more than actually going into the shop because then they can just place your order at the cashier, and I can then just get it quickly. So, if the drive through is available and it's not packed, then I would use the drive through over the kiosk." (Participant. 16)

An insight from the data was that Participant s preferred to place an order with a person rather than use the SSK either because they considered ordering with the person easier or quicker than using the SSK.

"I'd go to the people because its quicker…" (Participant. 1)

4.5.3.2 Situational reasons

a. Waiting time and length of SSK queues

The length of the queue to use the SSKs was identified as one of the reasons why a SSKs would not be used to place the order for fast-food. Participants described circumstances where they would not use the SSK to place an order because the queue for the SSK was longer than the queue for the cashier.

Among the reasons that Participant 8 gave regarding his choice not to use the SSK, he stated that "…*the queues for the self-service kiosks end up being quite a lot long longer than the queue for the normal line*." He also stated that "*if I can*

see that the queue is faster for the normal queue I'll just stand in the normal queue." (Participant. 8)

b. Speed

Where the SSK was perceived as taking longer to use than alternative options it would be avoided.

"*I'd go to people because its quicker…"* (Participant.1)

"*…it just seems simpler and quicker to speak to a person than to use a kiosk.*" (Participant. 11)

c. Time pressure

In describing why, he prefers using the Uber Eats Mobile application or the cashier to place an order over the SSK as an ordering option, Participant 13 stated he when using the Uber Eats application, he was not rushed in deciding what to order. He described how on the Uber Eats Application he could take his time to decide what he wanted to order. In relation to ordering at the cashier he described how that the cashier could give more information and that would make the decision process faster and that there was less of a rush.

In relation to ordering at the SSKs, he stated that "*so when I'm standing at the kiosk, it sort of feels like an ATM and there's a long queue of people behind me and everyone is busy stamping their foot because this person is taking long.*" (Participant.13)

d. No alignment between the Cashiers and SSK

One Participant indicated that although she generally used SSKs, she avoided them at a particular fast-food outlet because the staff at that outlet and the SSK systems did not work well together and inevitably this would result in her having to repeat the order to the staff again despite inputting it in the SSK. She stated that it felt like the staff were not prepared to deal with Kiosk orders.

"*KFC, they are the ones that I will sometimes not use or most of the times do not use. Simply because the cashiers never seemed to know or the people that are supposed to give you food never seem to know how to handle the order. Or they did not record it, it's almost like you have to give them the whole order again at the front*." (Participant. 14)

4.5.3.2 Customer Characteristics

a. Need for human interaction

The need for human interaction was among the reasons Participant 11 gave for avoiding SSKs.

> *"…I mean that is one of the main reasons I would avoid it. It is because I still want to speak to somebody and have a conversation. I mean you use your phone enough; you use your computer enough in your day to day life, just having more screens and more digital you know, I know it adds a lot of benefit generally but in this particular instance I feel like that human connection is an important one. So yes, I would avoid it for that reason alone".* (Participant. 11)

However, not all the participants felt that human interaction was important in the ordering process.

Participants still however expressed a preference to place an order with a person. That preference was driven by convenience and what was easier and not necessarily the need to interact with a human. In response to a question whether he would avoid a SSK because he wanted to interact with fast-food outlet staff, Participant 9 stated that "*I wouldn't say that. I'd say I'd avoid using the kiosk because I don't want the complications of it. Its simpler just to talk to a service member"*

> *"…From a selfish perspective I would look at whichever process is most convenient for me, so I don't need human interaction*." (Participant. 1)

b. Uncomfortable using the SSK

Participant 3 avoided using the SSK because she felt uncomfortable with the machine.

> "*I don't use them because I don't feel comfortable with the machine.*" (Participant. 3)

Proposition 1 was supported by the findings. The reasons customers resisted SSKs in a South African fast-food context could be grouped into reasons that relate to SSK attributes, situational factors, and customer characteristics. However, the findings revealed that reasons for resistance were not limited to the groupings identified in the proposition and that there were also broader social and environmental factors that could explain why customers resist SSKs in the South African fast-food context.

4.6 Results pertaining to proposition 2

RP2: The job loss potential pursuant to SSKs introduction is why customers resist SSKs adoption.

Potential job loss and unemployment pursuant to SSK introduction into the fast-food ordering process was raised as a concern among certain participants. In essence, their concern was that the introduction of SSKs into the food ordering process could lead to people losing their jobs. This concern was raised with specific reference to the constrained job market in South Africa.

> *"And, we already have a high unemployment rate, so…"* (Participant.12)

> *"I do think it leads to jobs, to unemployment and I think it complicates life unnecessarily*." (Participant. 12)

> *"So, what happens, because like for example, the McDonalds at Fourways which the one has self-service that I have been to, there used to be like 6 or so tellers and now there' s like* 2." (Participant. 12)

> *"…and I also just feel like its maybe replacing the workforce. So, I was worried about people losing their jobs*." (Participant. 16)

The research revealed that some participants who were concerned about job loss potential and unemployment avoided the SSK because of these concerns.

> *"You know to be honest for me not to use this machine I feel like its replacing people, people lose their jobs because of the machines, so if you use a machine you don't have to hire many staff or whatever so that's why I'm not comfortable with it and I don't use it because I feel pity for people who lose their jobs because of a machines."* (Participant. 3)

> *"Yes, I think based on being consistent with my previous answer, I think that is a concern for me and I'd want people to continue doing this job and I'd also avoid the kiosk for that reason."* (Participant. 11)

Other participants who also had concerns regarding job loss potential and unemployment would prefer not to use the SSK because of their concerns but felt like they had no choice but to use the SSK as the SSK was the only in-store ordering option.

> *"If it really wasn't forced, I would absolutely not use it because of that reason. So, even the first time I saw it I was with someone, and I was just like people are going to lose their jobs once this gets into full force, once people start using the kiosk. There was one shop, Pick 'n Pay I think, one of the Pick 'n Pays also had one and I was just like I'm not even going to use it. It might be convenient, but I just feel like people eventually will lose their jobs".* (Participant. 16)

Most of the participants would however not resist using the SSK because of concerns related to unemployment or job loss.

> *"So, for instance, if McDonald's had self-service kiosks and Burger King did not, I wouldn't specifically go to Burger King because they don't*

have self-service machines versus McDonald's who does." (Participant. 10)

In respect of certain participants, although their unemployment concern did not lead to the decision not to use the SSK when ordering in-store it remined a concern for them and was something that they thought about.

> *"It kind of does, you know that you are contributing to someone not having a job or another person not being hired, it doesn't even necessarily mean someone is fired, it's just someone not getting hired".* (Participant. 14)

> *"Okay, so It does not have an impact, however, the job security will always be at the back of my mind."* (Participant. 15)

Proposition 2 was supported by the findings. The findings revealed that job loss potential was mentioned as a reason by some participants as to why they resisted using the SSK in a fast-food setting in South Africa. However, from the findings it appeared that job loss potential was not a dominant nor sole reason for the SSK resistance.

None of the participants who were concerned about job loss potential and unemployment explained their resistance to SSK in a fast-food setting solely with reference to their concerns relating to job loss potential or unemployment. They all had other reasons which accompanied the reason related to job loss and unemployment concerns.

In response to the initial question why they had not used a SSK in a fast-food setting in South Africa, none of the Respondents referred to job loss potential and unemployment.

4.7 Summary of the results/findings

Participants resisted SSKs in a fast-food setting in South Africa for various reasons. Resistance was often accompanied by feelings of frustration towards

the SSK. The resistance took different forms among the participants. On one end the resistance took the form of rejection in that end some participants avoided the SSKs altogether and on the other end participants used the SSKs, but they felt they were forced to due to a lack of any other in-store ordering option. In respect of certain Respondents resistance co-existed with SSK adoption.

The reasons for resistance included those that related to the SSK attributes. These included that the SSK was not easy to use because it was noy user friendly, it was complex and labour intensive; the SSK had system issues; posed a hygiene risk for the participants and had limited payment options. The SSK was not perceived to be a better alternative to ordering options.

Other reasons that participants resisted using SSKs included because the lines for the SSK were longer than other ordering options, it took longer to use the SSK, and certain participants felt time pressure when using the SSK. The need for interaction and discomfort with the SSK was another reason that participants resisted using the SSKs.

Among the reasons for resistance was the reason that the SSKs may result in job loss and contribute to unemployment. This reason led to some participants resisting the SSKs. Other Respondents who had a concern that SSKs pose a social risk of unemployment for staff who previously provided the service now provided by the SSK still continued to use the SSK, but the social risk remained a concern for them. Table 2 summarizes the findings set out in this Chapter. It creates a visual representation of the themes identified in the data and it shows how those themes link to the propositions that are set out in Chapter 2 and the research objectives set out in Chapter 1.

Table 2: Description of propositions and themes

Objectives	**Propositions**	**Themes (4)**	**Subthemes (22)**
Objective 1: Explore the reasons why customers resist SSKs in the fast-food industry in South Africa.	Proposition 1: Customers resist using SSKs for reasons relating to SSK attributes, for customer specific reasons or due to situational factors present in the fast-food setting.	Fast-food context in SA	Nature of fast food; SSK use; benefits of SSK; change; consequences
		Feelings towards SSKs	Disliked using SSK; frustrating; indifferent; preference to place order with staff; would avoid if had a choice.
		Reasons customers resist SSKs	Resistance: situational factors; Resistance: SSK attributes; Resistance: better alternatives; Resistance: Customer Characteristics
Objective 2: Understand whether perceptions regarding job loss potential in South Africa is a reason why customers resist SSKs in South Africa in the fast-food industry.	Proposition 2: The job loss potential of SSKs is a reason why customers resist using SSKs	Employment considerations	Belief that technology replaces jobs; unemployment concern; did not avoid SSK because of belief that SSK replaces jobs.

(Source: Researcher)

CHAPTER 5. DISCUSSION OF FINDINGS

5.1 Introduction

This research was aimed at understanding why customers in the fast-food industry in South Africa resist using SSKs. Pursuant to the literature review, it was proposed that the reasons for resistance relate to SSK attributes, customer characteristics and situational factors. The findings of this study showed that customers' reasons for resistance vary and are often not limited to a single reason. In this chapter the findings, as set out in chapter 4, will be discussed in detail with reference to the literature as set out in chapter 2. This chapter will deal with each research proposition and key themes identified from the data will be addressed under each research proposition.

5.2 Discussion pertaining to Proposition 1

Research proposition 1: Customers may resist SSKs for reasons related to SSK attributes, specific customer reasons, or situational factors present in the fast-food setting.

The aim of this research proposition was to understand why customers in a fast-food setting in South Africa resist using SSKs and whether those resistance reasons related to SSK attributes, situational factors, or specific customer reasons.

5.2.1 Theme: Fast-food context in South Africa

Customers eat at fast-food outlets because it is quick to do so, and the outlets are easy to get to. The decision is driven by accessibility and speed (Rydell et al., 2008). The findings in this study revealed that participants went to fast-food outlets for the convenience of getting food quickly and easily. The participants described how they had gone to fast-food outlets and such descriptions centered around convenience and the need of getting food fast.

Multiple participants reiterated that their ordering decisions at the fast-food outlet stemmed from what was most convenient for them in the circumstances, whether that be going instore, using the SSK, using the drive through option or a food ordering application to place the order. This finding aligns with Kimes & Collier (2015) finding that customers choose SSTs based on the belief that it will be more convenient for them and that if convenience is made evident SST adoption will happen quicker. In the findings, convenience appeared to be driven by ease and speed of ordering and receiving the fast-food order. This supports Collier and Kimes' (2012) suggestion that convenience in a SST context relates to how much time and effort must be put in to achieve the task and that convenience is a more comprehensive construct than ease of use perceptions.

All the participants in the study, apart from one, confirmed that they had resisted using a SSK in a fast-food setting in South Africa. Some participants described that they were forced to use the SSK due to a lack of alternative in-store ordering options. The forced use of the SSKs led some participants to avoid the fast-food outlet, abandon their order or opt for another ordering option like the drive through or mobile application option. This is consistent with the literature that forced use forced use was likely move customers away from using the SST (Reinders et al., 2008)

5.2.2 Theme: Feelings toward the SSK

A theme that emerged in the data was that when participants resist using the SSKs in fast-food outlets such resistance is often accompanied by feelings of frustration toward the SSK. In the findings, one of the sources of frustration related to SSK system issues. This is consistent with the literature that self-service failures lead to customer frustrations and have pushed customers to use full-service options (Collier et al, 2017).

5.2.3 Theme: Reasons for resistance

Existing literature indicates that resistance and adoption can co-exist, and that resistance can reduce how often the innovation is used (Huang et al., 2021). Resistance can occur in many forms and does not always result in rejection (Kuisma et al., 2007). The findings in this study support the notion that resistance and adoption can co-exist, whether by customer choice or circumstance. The findings also illustrate how resistance does not always result in rejection and can take multiple forms.

In the findings, resistance did not always result in an outright and continued rejection of the SSKs. It existed on a continuum. On one extreme, some participants rejected the SSK and refused to use it in future after initially only trying it once. On the other extreme, there were some participants that did not want to use the SSK. However, because they were forced to due to the unavailability of alternative in-store ordering options, those participants did then use the SSK. In the middle were those participants who chose the most convenient ordering option, resulting in occasions when they used the SSK and other occasions where they chose not to use the SSK and opted for an alternative ordering option.

Various reasons for resistance were identified in the findings and each time there was resistance, the reasons were not necessarily the same and not always limited to a single reason. A theme that arose in the data was that among the reasons for resistance were those related to the SSK's attributes. Innovation resistance literature does recognise that customers may resist an innovation due to their perceptions relating to the innovation’s characteristics (Talwar et al., 2020).

5.2.3.1 Reasons related to SSK Attributes

a. Not easy to use

The participants resisted using the SSKs because they did not perceive the SSK as easy to use, particularly when their orders were non-standard orders, large

orders or required customisation. The SSK was perceived as complex and labour intensive in that it required additional effort to navigate and learn how to use. The participants did not find the SSKs easy to use for various reasons these included because the interface was not user friendly, streamlined, or intuitive to use; the SSK was confusing; it wasn't easy to customise orders and it was not easy to navigate the menu. The findings revealed that often the participants required staff assistance to help place the order or to navigate the SSK. participant 16 described how she had written down a large order and ultimately ended up giving the order on a paper to the cashier for the cashier to place the order on the SSK. It also appeared from the data that it was not only the participants, as customers, who battled with the SSK. One participant described how the staff member who assisted her battled to use the SSK.

Where participants had to use SSKs when they had non-standard or complex orders the SSKs were not perceived as easy to use and this was given as a reason for resistance. The findings in this regard support the literature that ease of use of an SST is an essential factor and if the SST is not perceived as not easy to use, there will be resistance towards it (Curran & Meuter, 2005). The findings also support the El-Said and Tall (2020) research that customers are concerned with how easy the SST is to use.

It is suggested in literature, albeit in a self-service check-out context, that the more items a customer purchases, the more inclined they are to use the full-service option. Customers may consider smaller orders more suitable to use the SST (White et al.,2012). The findings support this, in fact Participant 13 indicated that that it made sense to use the SSK for simpler orders. Participant 16 confirmed that the that she did not mind using the SSK for small orders.

Related to ease of use is complexity. Perceptions about an innovation's complexity may limit SST adoption (Curran & Meuter, 2007). Research has found that complexity is highly related to innovation resistance (Wang et al., 2023). In the findings, where participants found that the SSK was not easy to use they would resist using it especially where they had non-standard orders. However, the findings in this study differed from Simon and Usunier's (2007) that service

complexity did not negatively affect SST preference. In this research, where participants had complex orders, they resisted using the SSKs and preferred to use the traditional full-service option. Certain participants felt that they would need to learn how to use the SSK to place an order and this would require additional effort which was unnecessary and not ideal in a fast-food context. This aligned with Simon and Usunier's findings (2007) that customers anticipate that using an SST will require a significant amount of cognitive effort, especially for complex services.

The findings also indicate that the participants go to fast-food outlets for the convenience of getting food fast and easily. The SSKs were not considered easy to use. The findings suggest that these perceptions of the SSK's attributes are inconsistent with a fast-food customers' needs of convenience. According to Rogers (1995), the compatibility of an innovation impacts its rate of its adoption, and it refers to the extent to which an innovation is perceived as consistent with existing values, past experiences, and the needs of potential adopters. The findings suggest that the SSKs are incompatible with the Participant's needs of getting fast-food quickly and easily.

b. System Issues

Multiple system issues were highlighted in the data. The system issues identified by the participants related to fast-food items not being available on the SSK menu despite being available if ordered at the cashier, system slowness and latency, and menu unavailability after loadshedding. These system issues were a source of the participants' frustration towards the SSKs. The system issues were given as a reason why participants would resist using the SSK.

An interesting observation is the effect that loadshedding had on SSK resistance. Loadshedding is when the electricity supply is interrupted for a period of time. Participant 8 described that after a period of loadshedding, when the SSK would start up again, it would have the incorrect programming and the menu would not be available. In these circumstances, he would choose not to use the SSK.

c. Hygiene

According to the IRT, the physical, social or economic risk associated with the innovation is a factor that affects innovation resistance (Ram & Sheth, 1989). Physical risk strongly leads to avoidance (Kleijnen et al., 2009). In the research, the perceived physical risk associated with using the SSK was a significant factor that led to SSK resistance. Participants resisted using the SSK due to hygiene concerns and considered the SSK unsafe as a result thereof. For instance, hygiene was identified by Participant 11 and 9 as a key concern relating to the use of SSKs. Their concerns related to having to be in contact with surfaces that other customers had physical contact with and where it wasn't clear how regularly the SSKs were cleaned. Although the concerns existed pre-covid, it appears to be exacerbated in the current covid climate.

In terms of the literature, perceived risk was found to be a significant driver of innovation rejection (Kleijnen et al., 2009). The findings supported that physical risk concerns were a driver of SSK resistance in the fast-food context. The role of hygiene as a reason for innovation resistance appears to be largely ignored in literature. This could be because innovation resistance research is scarce and because online innovations do not pose the same hygiene risks as offline innovations likes SSKs in that online innovations are largely contactless.

d. Payment process and payment options

The findings also identified economic risk as another reason for SSK resistance. In this regard, participant 6, in particular, was concerned about using her card at the SSK to pay for her order because she was unfamiliar with SSKs and hadn't seen one before. Her concern was that the SSK would take her money. She wanted to pay cash for her order and cash payment was not an option on the SSK. This ultimately led to her abandoning her order and avoiding the fast-food outlet altogether on the more extreme end. This finding supports the literature that perceived risk relating to innovation adoption is a resistance barrier (Kleijnen et al., 2009).

Participant 6 was not the only participant who wanted to pay cash for the order. From the data, however, it appeared that the other participant's reason for

resistance differed from that of participant 6 in that it was not related to economic risk but to SSK functionality and convenience. According to the other participants, when they wanted to pay cash because the SSK did not allow for cash payments it meant that ordering process was complicated in that it would start at the SSK, but payment would need to be made at a different location at the cashier. This would result in having to stand in two queues, one queue for the SSK and another for the cashier to pay.

The limited functionality of the SSK in relation to its inability to receive cash payments appeared to be a functional barrier against its adoption and incompatible with the participant ’s needs to pay cash. This is an issue particularly in a South African context where cash is a preferred payment method. According to 2022 Payments and Open Banking Survey conducted with respondents across South Africa, Kenya, and Nigeria, one third of the respondents confirmed that their preferred payment method was cash (Maritz et al., 2022). These findings support the literature in that perceived economic risk is a resistance barrier and confirms risk's important role in innovation resistance (Kleijnen et al., 2009). These findings also confirm that compatibility is another type of functional barrier to resistance barrier (Santos & Ponchio, 2021).

e. Existence of a perceived better alternative to the SSK

The traditional practice for ordering at fast-food outlets includes that the order can be placed and paid for in-store at a cashier or via the drive through. Introducing the SSKs into the ordering process offers an alternative to these traditional practices. Mobile food ordering applications are also identified as an alternative ordering option. Interestingly, mobile ordering applications are also a self-service technology, but the difference is that they are an online alternative, not in-store, as with SSKs.

According to Chen and Kuo (2017), and flowing from the IRT, the value derived from the innovation must be higher than that which currently exists to entice customers to change. In other words, in an SST context, to get the customer to use the SST, the SST must provide more value than existing options. That value

can be in terms of performance or price (Herbig & Day, 1992). Where there isn't better performance over alternative options or a relative advantage to using the innovation, this may give rise to a value barrier against adopting the innovation. (Hazée, S., et al., 2020).

From the findings, it appeared that participants resisted using the SSK where they did not perceive the SSK option to be better than the alternative of ordering with the cashier or ordering through the drive through. The SSK was not considered better than the existing options of a cashier or drive through because the SSK was considered more complicated to use, slower or less convenient. In essence, it appeared that using the SSKs over the traditional cashier or drive-through option provided no benefit. This aligns with literature which states that a customer's perceptions about the relative advantage of an innovation may limit those who adopt the innovation (Curran & Meuter, 2007).

When customers made judgements about SST preferences, they compared their SST experiences to those involving human staff (Liu & Hung, 2021). For some participants, the cashiers were considered a better option to order from than the SSKs for multiple reasons. These reasons included that the cashiers could do things that the SSKs could not do which things would ultimately benefit the customer, like informing the customer of specials or better alternative options suitable for that customer. A common finding was that the cashiers were considered easier and simpler to communicate with and articulate an order, especially when the orders required customisation or rectification. This aligns with Simon & Usunier (2007) suggestion that features of human communications cannot be duplicated on an SST. For example, staff can provide their opinions and feedback whereas an SST can't. The findings support the literature that states that customers will choose the service option that has the greatest ability to complete their transaction efficiently (Collier et al., 2015).

The data also revealed that certain participants felt that placing an order with the cashiers also required less cognitive effort than the effort required to learn to use and navigate the SSK. This aligned with the suggestion in literature that customers anticipate that when they use an SST it will require a significant

amount of cognitive effort especially for complex services and because of the perceived increased cognitive effort customers may prefer using a service involving humans (Simon & Usunier, 2007).

For other participants, the drive-through option was a better ordering option to the SSK and would be used to avoid the SSKs. The drive through option was considered a better option because it was a means of being able to access staff and place the order with a person, it was also a means of ordering quickly and avoiding a full fast-food outlet and having to touch screens. It is however important to note that the drive-through option was not always used by the Participant s to avoid the SSKs, but rather because it is considered a convenient option that did not require the customer to go in-store or get out of their car.

The findings also revealed that certain participants preferred the mobile ordering application option over SSKs. Participant 8 indicated that the more issues he experienced with the SSK the more he would resist using them to the point that he would drive past the fast-food outlet and instead use a mobile application to place the order even though ordering on the mobile application would be more expensive. This finding illustrates that the SSK option did not have a stronger performance value relative to alternative options like the mobile application and this was a barrier to adoption.

According to the IRT, functional barriers relate to the usage, value and risk associated with the innovation. The resistance reasons identified in the data relate to the usage, value, risk and compatibility associated with the SSK. The findings of this research support the IRT and illustrate the significant role of functional barriers play in relation to SSK adoption in the fast-food industry.

5.2.3.2 The role of situational factors in SSK resistance

In line with the literature, although perceptions of the SSK attributes impacted the participants' choice to use the SSK, the Participant 's reasons for resistance were broader than just their perceptions of the SSK attributes. They resisted SSKs for situational reasons. The literature states that situational factors significantly explain customers' preference to use SSTs (Gelderman et al. 2011). From a

resistance perspective, the research states that situational factors affect customer resistance of innovations (Ram, 1987).

In the fast-food context, waiting time, has been found to be a relevant situational factor (Dabholkar, 1996). Differential waiting time has also been found to influence the choice of service option (Simon & Usunier, 2007). This study's findings supported the research showing that waiting time was a relevant situational factor in the fast-food context. It was apparent from the data that waiting time was linked to queue length. The longer the queue, naturally the more the waiting time whereas the shorter the queue the shorter the waiting time. Multiple participants referred to queue length as a factor that drove their choice on whether to use the SSK. Where the SSK queue was longer, customers would seek alternative ordering options that would enable them to place their order quicker. This is consistent with what one would expect in a fast-food ordering context where a customer would want to be get food fast and with Dabholkar and Bagozzi's (2002) suggestion that customers will select alternative ordering options when there is an increased waiting time and that customers do not like to wait.

Another situational factor identified in the data was that of time pressure. Alternative ordering options to SSKs were chosen to avoid time pressure, to feel less rushed when ordering, and to avoid frustrating people in the SSK line waiting to use the SSK. From the perspective of those waiting in the SSK line, multiple participants explained how a user's inability to operate the SSK would increase waiting time for those behind them in a line. According to Collier et al., (2015), time pressure is a situational factor relevant to customers attitudes towards SST experiences.

One participant, however, indicated that using the SSK would give her more time to figure out her order because when ordering at the cashier there was time pressure as there was a queue building behind her when she was ordering at the cashier. In this study, the reasons given by participants for resisting using an SSK included situational factors such as the waiting time and length of the SSK queue, speed, time pressure and no alignment between the cashiers and the SSK. The

research findings are consistent with literature in that they confirm that context specific situational factors do in fact influence customer use of SSKs (Gelderman et al. 2011; Dabholkar & Bagozzi, 2002). The misalignment between the cashiers and the SSK was identified as an additional situational factor relevant to the South African fast-food industry.

5.2.3.3 The role of customer-specific factors in SSK resistance

a. Need for human interaction

According to Oh et al. (2011), a greater need for interaction likely decreases the willingness to use the SST. The participants in this study gave the need to interact as a reason for SSK resistance. There were participants who would avoid using a SSK because of their need to interact with staff at the fast-food outlet. Then there were also those participants who felt that the need to interact with a human in the ordering process was important, but this need was not necessarily the reason that they resisted using the SSK. Lastly some participants felt that there was no need for human interaction in the ordering process. These findings are consistent with literature that customers with a stronger the need for interaction are more likely to avoid the SST and customers with a weaker the need for interaction the more likely to use the SST (Dabholkar and Bagozzi 2002).

For participants who needed to interact with a human during the ordering process, this need was an important need and was one of the reasons they avoided using the SSK in a fast-food setting. This aligns with the literature that a strong need for human interaction will result in a reluctance to use an automated process (Gelderman et al. 2011). One Participant, for instance, had a strong need to Interact with the fast-food staff. He indicated that he wanted to speak to someone and have a conversation with them and that it was part of what he enjoyed when ordering in-store. He indicated that interaction was part of being human and that he would avoid using the SSK for this reason alone. It is noteworthy though that it was not his sole reason for SSK resistance.

Other participants confirmed that they had a need to interact with fast-food outlet staff. The need to interact was not however the reason they resisted the SSK.

Although generally participants preferred to place an order with a person, the findings show that the preference was driven by convenience and what was easier and not necessarily the need to interact with a human. The preference for the ordering option involving human interaction appeared to be perceived as easier and more convenient than the SSK option. Lastly, there were those participants who did not have a need to interact with staff in the ordering process. For instance, one participant confirmed that he goes to the fast-food outlet for convenience and to get fast food. He stated that when customers go to fast-food outlets, they are not going there because they expect ambience and interaction.

b. Uncomfortable using the SSK

One Participant indicated that she was uncomfortable with the SSKs and that was the reason that she did not use SSKs. This finding was consistent with the SST research that if customers are uncomfortable with using the SST they may avoid using the SST even when they can see the benefits of using the SST (Meuter et al., 2003).

5.3 Discussion pertaining to Proposition 2

Research proposition 2: The job loss potential pursuant to SSKs introduction is a reason why customers resist using SSKs.

This research proposition aimed to understand whether jobs loss potential was a reason that the customers in a fast-food setting in South Africa resist using SSKs.

5.3.1 Theme: SSKS and employment considerations

The findings show that job loss potential and unemployment pursuant to SSK introduction into the fast-food ordering process was a concern among some participants. The concern was raised within the context of the high unemployment rate in South Africa. The narrative among those participants who were concerned about job loss potential appeared to relate to the SSK replacing or reducing the number of fast-food outlet staff in an environment where job loss was a concern.

In determining the significance of job loss potential on customer's resistance behaviour, the study revealed that there were those participants who resisted using the SSK because of this reason while there were those participants who had the same concern but who did not resist the SSK because of it.

Concerning those participants who resisted the SSK due to their concern of job loss potential, it is noteworthy that they were in the minority. Although three participants indicated job loss potential was a reason, they resist SSKs in the fast-food outlets, the findings show that job loss potential was never specified by them as the reason for resistance at the outset of the interview. Instead, it was offered as a reason as the interview progressed to deal with questions relating to technology and employment. It was only offered as a reason for resistance after and in addition to mentioning other reasons. It was nevertheless a reason in terms of the findings for resisting SSK use in the fast-food context.

The participants indicated that they resisted using SSK due to potential job loss concerns does however align with literature that other social and contextual factors may ultimately influence innovation resistance (Ram, 1987). Why potential job loss influences resistance is not the topic of this research. However, it could potentially be explained with reference to the impact social factors have on a customer's attitude towards using the SSK or aligned with Lincoln et al. (2020) research it could be because it is perceived as posing an element of social risk. Perceived risk is, according to Kleijnen et al., (2009), an important driver of innovation rejection or because it is incompatible with social norms.

There were also those participants who were concerned about job loss potential but still used the SSK. They revealed that their concern for potential job loss would not be why they resisted the SSK. Although it was a concern, it did not lead to them not using the SSK. The perceived impact of SSK on jobs wasn't ignored and appeared to remain a concern but did not impact behaviour. In this regard, Participant 10 clarified that the concern would remain in the back of her mind, but it would not influence her, and she would not avoid a fast-food outlet because they use SSKs. Participant 15 also indicated that the concern would remain at the back of her mind. Participant 14 confirmed that it would be a reason for

resisting the SSK, but she did not necessarily feel good using it because of the concerns relating to job security. This supports the literature which states that reasons for adoption or non-adoption of an innovation are context-specific and directly connected to explaining behaviour and reasons for non adoption are different to beliefs about an innovation (Claudy et al. 2015). It also supports the literature stating that customers can have negative attitudes towards an innovation but still use it (Huang et al, 2021).

Some participants who had concerns about job loss potential and still used the SSK revealed that they used the SSK despite these concerns because they had no choice whether to use the SSK as there was no in-store ordering alterative and they were essentially forced to use the SSK. It appeared from the findings that the fact that they used the SSK did not mean that they were not opposed to it as they had no option but to use it in the circumstances. This finding supports the literature that resistance and adoption can co-exist (Huang et al, 2021). Participant 16 stated that if she was not forced to use the SSK, she would not use it because of her concern about potential job loss. This finding reinforces the literature which states that the ability of attitude to predict behaviour is weak and attitude towards an innovation, does not on its own determine the customer's choice of service delivery option and that context specific reasons must be considered (Wang et al., 2012; Claudy et al., 2015). In this regard the relevant context specific reasons are the fact that the participants did not have a choice on whether to use the SSK and that explains the SSK use behaviour.

According to the literature, concerns regarding technology driven job loss was a factor that results in co-production resentment and such resentment affected self-checkout continuance intention (Johnson et al. 2021). Based on literature, it is likely that the concerns around job loss potential and the forced use of the SSK in these circumstances could contribute to co-production resentment which would impact SSK use. It is important to note that although job loss potential was a concern among some participants, it was not the common or dominant reason provided in the findings for resisting the SSK. These findings suggest that

although job loss potential is a concern among fast-food customers, it is not necessarily the primary reason they resist using an SSK.

5.4 Discussion of findings in relation to the theoretical framework

The literature focuses on why customers adopt innovations and less on why they resist them. A possible explanation for this is the belief that there is an overlap among adoption and resistance reasons and the view that the reasons for resistance are simply the opposite to those of adoption (Kleijnen et al., 2009). From the findings, it appears that there is an overlap between the groups of factors identified in prior research said to influence innovation resistance and those said to influence innovation adoption. This supports the view that there is an overlap between resistance and adoption factors and that there is a complex interaction between adoption and resistance (Kleijnen et al., 2009; Huang et al, 2021).

To illustrate the overlap, from an innovation resistance perspective, initially the Innovation Resistance Model, identified that three categories that it suggested affected innovation resistance. These were customer perceptions of the innovation's characteristics, customer characteristics and marketing mechanisms (Ram, 1987). The IRT was then developed which focused barriers to innovation adoption. These barriers included functional barriers which also considered the impact of innovation's attributes on resistance. Innovation adoption literature on the other hand also focuses on similar groups being the innovation's attributes and the customer's characteristics to explain innovation adoption. Both TAM and DIT focus on the attributes of an innovation and their impact in relation to either adoption or innovation diffusion.

Specifically in respect of SST adoption, the literature is also focused on the impact of SST attributes, individual customer traits and situational factors. Research has identified that the TAM constructs of perceived ease of use and usefulness of SSTs significantly impact adoption behaviour (Taufik & Hanafiah,

2019). Customer traits of technology anxiety and the need for human interaction have also been identified to impact technology adoption. In a fast-food context, waiting time was found to be a relevant situational factor impacting adoption (Dabholkar, 1996).

The findings aligned with the literature in that resistance was found to be driven by factors relating to the SSK, by personal factors and by situational factors. The findings for proposition 1 show that, similar to reasons for technology adoption, reasons for customer resistance of SSKs can be attributed to reasons related to SSK attributes, customer characteristics and situational factors.

The findings in relation to proposition 2 suggest that although job loss potential is a concern among fast-food customers, it is not necessarily the primary reason that customers resist using a SSK.

5.5 Conclusion

The findings highlighted that there are a variety of reasons for SSK resistance. The reasons for resistance could be grouped into reasons relating to the SSK attributes, customer characteristics, situational factors and social factors.

The reasons that related to the SSK attributes included that the SSK was not easy to use particularly for non-standard or large orders, that the SSK had system issues, it presented a level of physical and economic risk and was incompatible with the customer needs. There also appeared to be no relative advantage to using the SSKs. Among the resistance reasons that related to customer characteristics was the need to interact with outlet staff. The situational reasons for resistance included waiting time and queue length.

Job loss potential was another resistance reason identified in the data. This confirmed that social factors impact SSK resistance. Although job loss potential was a concern for multiple participants, it is important that it did not always lead to resistance. The findings also showed that resistance does not always result in complete and continued rejection of SSKs. In some circumstances, resistance

may co-exist with the adoption, and it may simply result in a reduction of SSK use.

CHAPTER 6. CONCLUSIONS & RECOMMENDATIONS

6.1 Introduction

In this chapter, the main conclusions will be presented in relation to the research propositions. The conclusions will be presented based on the findings detailed in Chapter four and the analysis in Chapter five. Research limitations and recommendations and suggestions for future research will follow the conclusions.

The research had two objectives. The first was to understand why customers resist using SSKs in the fast-food industry in South Africa and the second was to understand whether perceived job loss is a reason why customers resist using SSKs. Essentially, the research was aimed at understanding why customers resist SSKs in a specific context and whether job loss potential was one of those reasons. The importance of understanding SSK resistance was set out in Chapter one. The research objectives where related to the research propositions. Based on the information obtained in the literature review propositions to the research objectives were suggested.

6.2 Conclusions regarding research objective 1

The first research objective was to understand why customers resist using SSKs in the fast-food industry in South Africa. Following a review of the literature, the proposition was made that customers resist SSKs for reasons related to SSK attributes, specific customer reasons or situational factors present in the fast-food setting. From the findings it was evident that there was not only one reason or group of reasons responsible for SSK resistance. The findings highlighted that various reasons explained why customers resist using a SSK in a fast-food outlet in South Africa. They also highlighted that the reasons for resistance were not necessarily the same each time that there was resistance to the SSK in a fast-food setting and that resistance and adoption could co-exist. Sometimes they co-

existed due to a lack of alternative in-store ordering options. For example, where the fast-food outlet replaced the full-service option with SSKs and forced the customers to use the SSKs, despite not wanting to use them, some participants felt they forced to due to a lack of an alternative in-store ordering option.

The various resistance reasons identified in the data could be grouped together according to common themes identified in the literature. The groups of reasons identified in the findings aligned with those proposed in proposition 1. The groups identified were those that related to the attributes of the SSK, the specific situation where the resistance took place and customer characteristics. However, broader social reasons that related to job loss potential was also identified.

The reasons for resistance identified in the findings that related to SSK attributes included that the SSK was not easy to use especially when the orders were large, complex or required customization. This appeared to be a common reason among the participants. Participants also resisted using the SSK because they could not pay with cash at the SSK, because of SSK system issues, hygiene concerns and because alternative ordering options were perceived as better.

The reasons for resistance identified in the findings that related to situational factors included that the SSK waiting time and queue length was longer than alternative ordering options, the SSK option was slower than other ordering options, it gave rise to concern related to time pressure and the was misalignment between the cashiers and SSK at certain fast-food outlets. The reasons for resistance identified in the findings that related to customer characteristics included the need for interaction and discomfort using the SSK.

Although overall, proposition 1 was supported by the findings, the findings revealed that reasons for resistance were not limited to the groupings identified in the proposition and that there were also broader social factors that explained why customers resist SSKs in the South African fast-food context.

6.3 Conclusions regarding research objective 2

The second research objective was to understand if perceived job loss potential was a reason why customers resist using SSKs in the fast-food industry in South Africa. The proposition was made that job loss potential was a reason that customers resist SSKs in a fast-food setting in South Africa.

Proposition 2 was supported by the findings. The findings revealed that job loss potential was mentioned as a reason by some customers as to why they resisted using the SSK in a fast-food setting in South Africa. However, from the findings it appeared that job loss potential was not a common dominant reason for the SSK resistance. For other participants, although they were concerned about the SSKs impact on job loss, this concern was not the reason why they resisted using the SSKS, other reasons that related to the SSK attributes, customer characteristics or situational factors were the reasons that lead to their SSK resistance. The findings do however identify a new barrier to innovation resistance in the fast-food context.

6.4 Limitations of the study

The fact that the researcher knew some of the participants personally could have led to interview bias. Interview bias was alleviated using the interview guide that was developed. The interviewer also anonymised the data by removing references to the participant's identity when saving and naming information related to the participant. For instance, instead of referring to the participant's name files were named according to which number interview it was. For example, the name for the first participant was participant 1 opposed to his/her identity.

Unfortunately, permission could not be obtained from fast-food outlets to conduct research on-site. This meant that participants could not be recruited upon observing that they did not use a SSK and there was not an opportunity to get real time insight into reasons for resistance. Real time research may have exposed other reasons for resistance.

Resistance was not limited to a particular period. Participants could provide reasons for resistance from any period that they resisted an SSK. This could lead to outdated information insofar as systems or circumstances have since changed.

6.5 Recommendations

The findings of this research will be useful to fast-food outlets that are considering implementing SSKs in South Africa as well as to those that have already deployed SSKs into their service process. The findings reveal there were various reasons that customers resisted using SSKs in a fast-food setting. The SSK was often described as frustrating. On the extreme end, resistance could result in the customer abandoning the order altogether or avoiding the fast-food outlet.

To reduce SSK resistance, the following recommendations are made:

- The forced use of SSKs should be avoided in fast-food outlets. By its nature fast-food is centred around the convenience of getting food fast and easily. The findings show that SSKs are better suited to smaller simpler orders. Where the orders are large, complex or require customisation, placing an order with a staff member appears to be regarded as a better alternative to SSK because it is easier and simpler to do so. Forcing the customer to use the SSK, which may result in the ordering process taking longer and being more complex, may ultimately end up undermining the convenience that the customer seeks in a fast-food outlet. It may also lead to co-production resentment among customers.
- The forced use of the SSK also leads to impracticalities like having to stand in the SSK queue to order and then in another queue to pay cash to the cashier. In essence the customer is standing in two queues whereas the same thing can be achieved, in less time and with less effort if the order is made at the cashier. Again, this ultimately undermines the convenience customers require in a fast-food context.
- By giving the customer a choice on whether to use the SSK or the cashier to place the order, convenience is not undermined when large or complex

orders are made, impracticalities and time pressure can be eliminated, and customers' needs for interactions can be satisfied.

- In respect of job loss, businesses that have implemented or intend to implement SSKs must reduce the perceived social risk relating to job loss. According to (Kleijnen et al., 2009), this can be done by increasing customer confidence. Businesses can communicate that SSK introduction has not resulted in job loss.

6.6 Suggestions for further research

Firstly, future studies should consider the reasons for resistance in different geographical contexts. The literature states social and environmental factors influence adoption. The findings support this. Different cultures and environmental contexts may result in the discovery of different reasons for resistance. Qualitative research is necessary to determine whether any different context specific reasons for resistance exist in different environments. Secondly, future studies should consider the reasons for resistance in different industry contexts. Only recently, have SSKs been deployed in fast-food outlets in South Africa. Other service industries in South Africa where SSKs have been deployed should be examined. For instance, movie ticket SSKs in the entertainment industry. Thirdly, reasons for resistance should be considered from an employee perspective in South Africa. The findings illustrate how employee resistance can impact customer adoption of the SSK.

Research can also be done to determine whether the resistance barriers are the same for online and offline SSTs.

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Appendix 1: Interview guidelines

1. Introduction

    - *Prompt*: switch on recording device
    - *Prompt*- researcher details: My name is Samantha Anderson and I'm a masters Candidate at Wits business school. I'm conducting research on self-service kiosks in the South African fast-food industry and particularly reasons why customers resist SSKS in the South African fast-food industry.
    - *This interview will be recorded*.
    - *Prompt*: Please can you complete the consent form. The information you give me will be used in a research report, but your identity will not be disclosed in that report.

2. Topics:

2.1. Participant background questions:

- What is your name?
- Are you from South Africa?
- What is your age?
- What is your gender?
- Are you employed?

2.2. Topic: Food ordering and SSK use?

- Have you gone inside a fast-food outlet in South Africa that has a Self-Service Kiosk?
- Do you use the Self-Service Kiosk to order the food?
- Did the introduction of the Self-Service Kiosk change the way you order food? If yes, how?
- Are you happy with the change to the ordering process now that Self Service Kiosks have been introduced?
- How do you feel about using Self Service Kiosks at a fast-food to place an order?
- are you happy having Self Service Kiosks as part of the food ordering process at fast-food outlets?
- Why do you feel that way?
- Have you chosen not to use a Self-Service Kiosk?
- Why did you choose not to use the Self-Service Kiosk?
- When you avoided the Self-Service Kiosk, did you continue to place an order at the fast-food outlet and how?
- Have you ever delayed or postponed using a Self Service Kiosk at a fast-food outlet? If yes, why? When you postponed using the Self-Service Kiosk, did you continue to place an order and how?

- After you delay or postponed using the Self-Service Kiosk did you eventually use it?
- Do you always avoid Self Service Kiosks when ordering?

2.3. Topic: resistance reasons

2.3.3 Prompt: Sub-topic _ Self Service Kiosk attributes

- Do you think the Self-Service Kiosk at the fast-food outlet is easy to use?
- Do you believe that you can navigate the Self-Service Kiosk?
- Do you think the Self-Service Kiosk at the fast-food outlet is useful?
- Is there a benefit to using a Self-Service Kiosk in a fast-food setting?
- Do you think the Self-Service Kiosk at the fast-food outlet is safe to use?
- Do you trust a Self-Service Kiosk?

2.3.4 Prompt: Sub-topic customer characteristics

- Do you use uber eats or another online ordering app to order fast-food?
- What is different between using the App and the Self-Service Kiosk?
- Do you feel you need to interact with the fast-food outlet staff when ordering?
- Do you think using the self-service process is better than interacting with a human?
- Do you believe that humans should rather be taking the order?
- Do you believe that technology replaces jobs?
- Do you avoid Self Service Kiosks because of this belief?

2.3.5 Prompt: Sub-topic _Situational factors

- Have there been circumstances where you have used the Self-Service Kiosk at a fast-food outlet?
- Can you describe the conditions in the fast-food outlet when you used the Self-Service Kiosk?
- What was different about those circumstances to the time that you did not use the Self-Service Kiosk?

Closing:

Thank you for your time.

Prompt: Can I leave you with my contact information in case you think of any other information you would like to share with me. Are you comfortable that I contact you again if I need to ask you additional questions or clarify any answers.

Appendix 2: Template consent form

To Whom It May Concern,

I am currently a student at the Wits Business School and completing my research in partial fulfilment of a Master of Management in the field of Digital Business.

I am conducting research relating to customer resistance of self-service kiosks in the South African fast-food industry. I am trying to understand why customers choose not to use the self-service kiosk when ordering fast-food. The interview should take no more than 30 minutes of your time.

Your participation is voluntary, and you can withdraw at any time without penalty. Your participation is anonymous and only aggregated data will be reported. You consent to the interview being recorded. By completing the interview process, you indicate that you voluntarily participate in this research. If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher Name:

Email:

Phone:

Research Supervisor:

Email:

Phone:

Signature of Participant:

Date:

Signature of Researcher:

Date:

Appendix 3: Interview process information

Participant	Interview date	Platform	Recording location	Duration	Consent	Transcribed	Coded date
Participant 1	5 January 2023	Zoom	iPhone	24:39	Yes	Yes	17/01
Participant 2	9 January 2023	Zoom	Recorded on iPhone, teams and zoom	14:39	Yes	Yes	17/01
Participant 3	9 January 2023	Zoom	Recorded on iPhone, teams and zoom	13:04	Yes	Yes	18/01
Participant 4	9 January 2023	Zoom	Recorded on iPhone, teams and zoom	13:55	Yes	Yes	No coding
Participant 5	9 January 2023	WhatsApp call	Recorded on iPhone, teams and zoom	16:58	Yes	Yes	18/01
Participant 6	9 January	In person	Recorded on iPhone and teams.	09:13	Yes	Yes	17/01
Participant 7	10 January	Teams	Recorded on iPhone and teams.	12:08	Yes	Yes	17/01
Participant 8	10 January 2023	Zoom	Recorded on iPhone, zoom and teams	24:34	Yes	Yes	17/10

Participant 9	10 January 2023	Zoom	Recorded on iPhone, zoom and teams	14:32	Yes	Yes	18/01
Participant 10	10 January 2023	Zoom	Recorded on iPhone, zoom and teams	29:17	Yes	Yes	17/01
Participant 11	11 January 2023	Zoom	Recorded on iPhone, zoom and teams	19:38	Yes	Yes	17/01
Participant 12	11 January 2023	Teams	Recorded on teams and iPhone	15:46	Yes	Yes	17/01
Participant 13	11 January 2023	Teams	Recorded on teams and iPhone	22:49	Yes	Yes	18/01
Participant 14	12 January 2023	teams	Recorded on teams and iPhone	23:43	Yes	Yes	18/01
Participant 15	13 January 2023	teams	Recorded on teams and iPhone	21:09	Yes	Yes	18/01
Participant 16	13 January 2023	teams	Recorded on teams and iPhone	20:32	Yes	yes	18/01

(Source: Researcher)

Appendix 4: Ethics approval notification

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

SCHOOL OF GRADUATE SCHOOL OF BUSINESS ADMINISTRATION ETHICS COMMITTEE CONSTITUTED UNDER THE UNIVERSITY HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)

CLEARANCE CERTIFICATE **PROTOCOL NUMBER:** **WBSIBA802380/709**

PROJECT TITLE [redacted]

Consumer resistance of self-service kiosks in the South African fast food industry

INVESTIGATOR	Ms Samantha Anderson
SCHOOL/DEPARTMENT OF INVESTIGATOR	MM (Digital Business)
DATE CONSIDERED	09 October 2020
DECISION OF THE COMMITTEE	Approved unconditionally
RISK LEVEL	LOW RISK

2022-10-21

EXPIRY DATE [redacted] Date of submission of the research report

ISSUE DATE OF CERTIFICATE 23 October 2020 **CHAIRPERSON** _____
(Dr MDJ Matshabaphala)

cc: Supervisor: Ms Magida

DECLARATION OF INVESTIGATOR

To be completed in duplicate and **ONE COPY** returned to the Chairperson of the School/Department ethics committee.

I fully understand the conditions under which I am are authorized to carry out the abovementioned research and I guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee.

Signature Date 24, 10, 22

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES