SCHOOL OF ECONOMICS AND MANAGEMENT

One-stop-shop

Will super-apps disrupt multi-touchpoint consumer journeys?

by

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Abstract

This research investigates consumer behaviours within the context of Super Applications (Super Apps) usage, specifically examining Millennials and Generation Z in Sweden utilising the super app, Klarna.

Utilising Digital Practice Tracking (DPT) methodology, coupled with observational techniques and post-phenomenological interviews, this research began by identifying patterns in consumer behaviour during super apps usage. Following this, it determined the touchpoints facilitating the interface between the business and the observed behaviours. In this research, five main behaviours that emerged from the use of Klarna: navigation, browsing, checkout, payment and tracking. Although consumer behaviours typically fall within predictable patterns, this research discovered a common occurrence of these behaviours unfolding in diverse sequences and combinations throughout the consumer journey. This unpredictability is attributed to super apps' integrated functionality and convenience, challenging conventional consumer behaviour assumptions.

Thus, the findings of this research offer valuable insights into the behaviours and touchpoints of Millennials and Generation Z consumers within the super apps domain, thereby shedding light on the potential disruptive impact of super apps on the multi-touchpoint journey. Furthermore, these results equip operational managers and super app developers with critical knowledge to better understand and enhance the user experience of consumers engaging with super apps.

Keywords: Super apps, Klarna, consumer behaviours, touchpoints, consumer journey.

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1 Introduction

As the beginning of the final thesis, this chapter introduces the chosen topic's background and the research direction.

1.1 Background

1.1.1 The Rise of Super Apps

With the rise of digital retailing, mobile devices have become indispensable shopping assistants for consumers (Fuentes, Bäckström & Svingstedt, 2017), used as a result of personal entertainment (Sandberg, Sjöberg & Andersson, 2021), socialising online, and using digital technologies for research, browsing and purchasing (Fuentes et al., 2017). Then, consumers are accelerating the shift from physical store shopping to online shopping during the pandemic (Sandberg et al., 2021).

The proliferation of smartphones and the shift of consumers towards online shopping has resulted in mobile applications have become a leading player in shaping the consumer experience in today's environment in an iterative consumer journey (Stocchi, Pourazad, Michaelidou, Tanusondjaja & Harrigan, 2021). Meanwhile, consumers have an increasing demand for convenience, personalisation and integration in mobile applications (Fuentes et al., 2017).

As a result, Kim (2019) found that many downloaded mobile applications remain unused on consumers' mobile devices, as users spend most of their time on a handful of apps. In addition, according to a survey by Statista (2022a), 62% of global consumers have expressed their desire to integrate grocery and retail shopping into mobile applications and over half of the consumers express the desire for mobile applications to integrate various functionalities such as dining, entertainment, payment, health and travel.

Thus, as consumer demand for super apps continues to grow, many businesses seek to provide integrated digital platforms for consumers to stand out in the market competition and meet the growing expectations of consumers (Roa, Correa-Bahnsen, Suarez, Cortés-Tejada, Luque & Bravo, 2021).In this context, super apps are created to meet the huge consumer demand for mobile channels (Han, Li & Hwang, 2022), to enable a seamless cross-platform shopping experience for consumers (Steinhoff & Zondag, 2021).

1.1.2 Super apps a conquering the world

Super apps have permeated various aspects of our lives, whether social, ride-hailing services or digital payments. These mobile applications intertwine with each other to form a complex but feature-rich ecosystem (Fasnacht, 2021). As Steinberg, Mukherjee and Punathambekar (2022) have stated, a super app is "super" because it offers a wide range of services through a platform. When it comes to the origin of super apps, it can be traced back to Mike Lazaridis, who first coined the term in 2010 (CrackBerry, 2010). Subsequently, as increasingly representative super apps enter the market and gain popularity for providing digital integration services (Steinberg et al., 2022). For example, WeChat has expanded beyond just social services into several e-support services; as well, Grab started with a single ride-hailing service and gradually broadened into food delivery services as well as e-commerce services. Consequently, super apps can be defined as multifunctional digital ecosystems (Fasnacht, 2021), that enable multiple services and functions, such as social communication, messaging, online shopping and mobile payments, all in one integrated platform (CrackBerry, 2010).

Since 2011, super apps first emerged in the Chinese market, represented by super apps such as WeChat and Alipay (Jia, Nieborg & Poll, 2022). The primary reason is the convenience of those super apps meets the core user demand for "efficiency" caused by the characteristics of Chinese society (Huang & Miao, 2021). Chinese customers can integrate everything they need in their daily lives, including online shopping, checking logistics, payments, socialising, booking travel, paying bills, healthcare, etc., through WeChat (Fasnacht, 2021). Another reason is that, unlike other social platforms such as Facebook, Sina Weibo, and Twitter, WeChat satisfies Chinese people's need for social interaction with acquaintances and is more likely to provide customers with a sense of security when using the app (Huang & Miao, 2021). Currently, WeChat has over 1 billion users in China, reaching approximately 1.31 billion active users in 2018 (Statista, 2022c). Based on the influence of distinctive Chinese society culture, the emergence of these super apps in the market has resulted in changing the way Chinese customers purchase, socialise and interact with various services (Huang & Miao, 2021).

Furthermore, beyond Asia, super apps are also impacting the lives of American consumers. According to Statista (2022b), US consumers spend up to US$802 billion a year on PayPal. Coincidences happen, as super apps have had a significant impact on consumers in several other countries. For example, Korea's Kakao Talk, initially started as a socially focused software but is now in use by consumers for online shopping (Han et al., 2022). Another example is Line, which serves East Asia, which has produced a cultural carrier with sticker packs as new content that is widely spread in consumers' lives (Steinberg, 2020).

1.1.3 Super app in EU: Consumer attribution

Currently, the ability of super apps to expand their business in Europe remains controversial (CNBC, 2021). According to Statista (2022b), PayPal has only 69 million users in Germany, less than one-fourth of the total users in the United States. CNBC (2021) believes that a major possible reason is the cultural differences between Europe and Asia. This is because European consumers have deep-rooted habits and personal preferences when it comes to mobile

applications (CNBC, 2021) and are cautious about data privacy and security (Fasnacht, 2021). However, due to the high level of integration and convenience in payment and usage, consumers remain at risk in terms of data security and privacy concerns (Romanova, Grima, Spiteri & Kudinska, 2018). Once super apps do not do a good job in data security and privacy, there will be more negative effects. For example, Kakao Talk has been criticised on several occasions for collecting cookies [1]from users, such as search data, history, visited websites, etc. (Han et al., 2022).

However, another perspective is that consumers believe that super apps that offer digital payments bring a greater perception of security (Johnson, Kiser, Washington & Torres, 2018). 72% of consumers show interest in super apps because using a trusted app avoids sharing private data with most organisations, as the research of PYMNTS (2022) about PayPal. In addition, Fasnacht (2021) also mentions that for the Millennials and Generation Z, they prioritise convenience over security, as they rely heavily on smartphones to manage almost every aspect of their daily lives. Super apps provide the convenience of easily ordering various offerings and services, and making payments through digital wallets (Fasnacht, 2021).

As a result of the debate, it is worth further reflection on how European consumers perceive the use of super apps based on digital payments and whether European convenience is also a priority for Millennials and Generation Z consumers. In this context, this research has chosen "super apps" as a broad research topic due to their role as platforms that provide one-stop shopping experiences. The focus of this discussion is on the controversial perspectives of Millennials and Generation Z consumers using super apps as one-stop shopping platforms. This serves as a further topic to narrow down the scope and determine the direction for in-depth investigation.

1.2 Previous research on super apps

In fact, although the term super apps have been proposed since 2011, most of the research on apps in the consumer journey has been about the impact of online channels and mobile applications on the consumer journey (Chen & Lamberti, 2016; Lemon & Verhoef, 2016; Fuentes et al., 2017; Lim, Xie, Haruvy, 2022; Stocchi et al., 2021). Until 2018, due to the successful integration of super apps into consumers' daily lives, some scholars began to develop studies with individual cases of outstanding super apps, contributing to the interaction between super apps and consumers (Chen, Mao & Qiu, 2018; Johnson et al., 2018).

Based on the fact that most super apps are not global apps but are popular within a regional scope. Steinberg et al. (2022), Szurawitzki (2022) and Statista (2023) all believe that the services provided by super apps to consumers should be tailored to match the region where they

[1] Cookies are small text files stored on a user's computer by a web browser, often used to retain user preferences, track browsing behaviour, or enable website functionality (Fiebrandt, 2018).

are located. To review previous studies, there is extensive research on super apps from various countries, such as WeChat and Alipay in China (Chen et al., 2018; Huang & Miao, 2021; Jia et al., 2022), LINE in East Asia (Steinberg, 2020), Kakao Talk in South Korea (Han et al., 2022), PayPal in the US (Johnson et al., 2018; Grüschow, Kemper & Brettel, 2016) and Grab in Singapore (Kee, Rusdi, Mokhtar, Ridzuan & Abdullah, 2021). Firstly, these studies also shed light on the antecedents and consequences of the rise of super apps in a given market through literature review and historical review, including WeChat's economically and politically driven emergence as the leading super app in China (Huang & Miao, 2021), and the popularity of the super app: LINE based on the same consumer following of stickers in Japan and Southeast Asia (Steinberg, 2020).

Finally, the researchers also compared the impact of super apps on local consumers in different regions (Fasnacht, 2021; Steinberg et al., 2022; Szurawitzki, 2022). These researches illustrate that different super apps do not offer exactly the same functions to local consumers in different regions (Szurawitzki, 2022), and that successful super apps offer functions and services that are matched to the needs and habits of consumers in a certain geographical area (Fasnacht, 2021; Steinberg et al., 2022).

1.3 Problem Statement

Although research has been conducted in this field, the rapid development and growth of super apps indicate that there are still many aspects that need to be explored." In particular, the business of super apps in the European region is still controversial (CNBC, 2021). The contradiction lies in the fact that, as emphasised by (Szurawitzki, 2022), cultural differences have led to varying habits among consumers when it comes to using mobile phones and mobile applications. However, Fasnacht (2021) argues that Millennials and Generation Z consumers rely almost on smartphones to manage almost every aspect of their daily lives, prioritising convenience over privacy security or adhering to traditional habits. Secondly, current academic research has not yet fully understood how super apps affect European consumers' journey. Most of the opinions come from insights found on the internet (CNBC, 2021; Kumar & Kaur, 2021). Thirdly, research on super apps that offer digital payment services has focused on the exploration of financial security and financial solutions (Grüschow et al., 2016; Johnson et al., 2018; Romanova et al., 2018), rather than from the perspective of consumer shopping behaviour. Therefore, there is a research gap in that there is no practical example of consumer use of super apps that offer digital payments in the European market.

As a result, this research continues to explore the impact of the functions of the Swedish super-app Klarna on users along the lines suggested by Szurawitzki (2022) in his text. In detail, it is continuing to explore the behaviours and consumer journeys of Millennials and Generation Z living in Sweden using Klarna. By filling this research gap, the research will help to reveal common and similar behaviours of Millennials and Generation Z consumers living in Sweden when using the digital payment-based super apps, thereby providing practical and theoretical support for the European rollout of the Klarna and super apps for similar businesses. Together, this will provide insights into consumer behaviour and consumer journey in the super app

domain, using Klarna as a case. This also will enable managers to understand customer needs better, optimise the consumer journey, provide a one-stop-shop and develop effective customer relationship maintenance strategies.

1.4 Aim and research question

Based on the research context and problem statement, this research aims to explore the behaviours exhibited by Millennials and Generation Z when using super apps offering digital payment services, as well as the touchpoints where brands connect with consumers. Consequently, this research seeks to explore how super apps offering digital payment services are crafting more seamless one-stop shopping platforms for multi-touchpoint consumer journey. This includes gathering individual case experiences and managerial insights from the implementation of super apps in the Swedish market.

To achieve this research aim and to understand consumer behaviour, the first research question is posed：

- Research question 1: What behaviours do consumers in Sweden exhibit when using super apps?

In order to answer research question 1, it is necessary to obtain data on consumer behaviour. Although consumer behaviour is usually studied by collecting data through field observations and interviews, based on this research with online consumers, the researchers used the digital practices tracing (DPT) proposed by Audy Martínek, Caliandro & Denegri-Knott (2022) as a methodology to guide the data collection methods including observation and post-phenomenological interviews. By using DPT as a methodology, researchers have access to a large amount of data in order to summarise the behaviour of consumers during their use of the super app and the reasons why they think that behaviour occurs.

In order to further analyse and uncover the touchpoints through which consumers interact with the brand when using super apps, which leads to the consumer's behavioural path, the second research question is posed:

- Research question 2: Which touchpoints establish the connection between the brand and the behaviours?

In order to answer this question, the researchers need to further integrate the consumer behaviours that occur during the use of super apps based on the answers to research question 1. The researchers are then able to answer research question 2 based on the analysis of the touchpoints involved in the consumer's behavioural path.

In conclusion, the two research questions follow a progressive relationship, starting with understanding consumer behaviour, followed by analysing the touchpoint using super apps and ultimately identifying strategies to provide a seamless, cross-platform consumer journey.

1.5 Intended contribution

We anticipate that after answering the research questions, the research will discuss its intended contributions from three perspectives: theoretical, practical and managerial.

From a theoretical perspective, this research will contribute to theories of consumer behaviour and multi-touchpoint consumer journey. By exploring the behaviours and touchpoints that appear when Millennials and Generation Z use super apps that offer digital payment services, it may provide new insights into existing theories of consumer behaviour and the multi-touchpoint consumer journey. In addition, based on the homogeneity of the development of digital and mobile devices in Sweden and Klarna's presence across Sweden, the theory is expected to be applicable to the mobile application and diffusion of super apps across the European region.

From an empirical point of view, by exploring the behaviour of consumers using Klarna and their experience of using it, the research helps to provide insight into the behaviour and needs of consumers living in Sweden during their consumer journey when they use the Super Apps.

From a management point of view, this research will provide recommendations for super apps managers in the Sweden market. Based on the findings of this research regarding the impact of super apps on the consumer journey. The research will provide managers of super apps in the Sweden region with a realistic picture of the current consumer journey under the influence of super apps and thus make recommendations to further improve the consumer journey and provide a one-stop-shop service.

1.6 Outline of the thesis

Following the introduction chapter, this report has seven further chapters: literature review, theoretical framework, methodology, empirical data, analysis, discussion, and conclusion.

Literature review: This chapter reviews previous research on the topic of super apps, mobile applications, and consumer journey through a keyword search to provide background knowledge.

Theoretical framework: Based on the collation of previous research, a theoretical framework is constructed in this section to guide the collection and analysis of the empirical data that follows.

Methodology: In this chapter, the research uses DPT as a methodology to capture consumers' perspectives during the use of the super apps and observes screen-recorded videos and interviews to collect primary data under the philosophical assumptions of relativism as an ontology and social constructionism as an epistemology.

Empirical data: Empirical data describes the results collected separately by different methods. This chapter presents the results of the interviews and the results of the observations. This chapter shows directly all the behaviours and reasons why consumers use Klarna.

Analysis: This chapter combines an analysis of the empirical results with answers to the research questions and explains how the research supports the conclusions. Finally, three research questions are answered.

Discussion: In relation to the aims of this research, this chapter reflects on the findings, assesses the research methods used and the empirical data from the mobile phones, and discusses the theoretical, practical and managerial implications of the research.

Conclusion: In this chapter, the findings and contributions of the research are reiterated, and the limitations of the research and future research are discussed.

2 Literature Review

This research aims to explore the behaviours exhibited by Millennials and Generation Z when using super apps offering digital payment services, as well as the touchpoints where brands connect with consumers. This chapter first outlines concepts related to the consumer journey as these contexts contribute to understanding consumer behaviour in this research. Then, this chapter reviews the arguments of super apps in previous literature and discusses individual cases of super apps that have been studied.

2.1 Consumer Journey

In the previous literature, the concepts of 'customer' and 'consumer' have often been used interchangeably (Kotler & Armstrong, 2010; Court, Elzinga, Mulder & Vetvik, 2009). Customers are often defined as individuals who actually purchase a product or service, while consumers include users who are involved in the purchase decision and use the purchased product or service (Kotler & Armstrong, 2010).

In addition to the debate on definitions of 'customer' and 'consumer', there is also a certain overlap and interaction between the concepts of the 'customer journey' and the 'consumer journey'. In contrast to the customer journey, focusing on the consumer experience pre-purchase and purchase, the consumer journey extends the scope of this to include post-purchase experiences and potential loyalty (Lemon & Verhoef, 2016). The customer journey, as explained by Lemon and Verhoef (2016), is the process customers go through with a company during a purchase, influenced by prior experiences and loyalty. In addition, the research on consumer journeys focusing on the long-term evolution of the consumer experience across multiple service cycles (Siebert et al., 2020).

Although the consumer journey has received less attention from researchers, there are still a number of recognised and used models relating to the consumer journey. Firstly, in 2009, Court et al. introduced the concept of the consumer decision journey, which comprises four stages: initial consideration, active evaluation, the brand selection at the moment of purchase, and consumer experience to inform the next consumer decision journey. Then Lemon and Verhoef (2016) summarise the consumer journey into three steps: pre-purchase, purchase and post-purchase. Expanding on this theory, Özbük, Ünal and Oktay et al. (2020) elaborate on the five steps of the consumer journey: need recognition, search, evaluation, during purchase, and post-purchase.

The consumer journey is typically predictable (Siebert et al., 2020), starting from one of the multiple touchpoints of marketing where consumers become aware of their needs, then begin

searching and evaluating products, ultimately choosing to purchase and obtaining a consumer experience (Yuruk-Kayapinar, 2020). After each iteration of the consumer journey, which happens n times, the post-purchase stage is affected by the consumer's satisfaction, loyalty, and impressions, which influence the next iteration of the consumer journey (Yuruk-Kayapinar, 2020). Finally, the current iteration of the consumer journey is influenced by previous experiences and new in-app marketing and interactions, leading to a new post-purchase experience that further affects the consumer journey (Lemon & Verhoef, 2016).

However, in the current business environment, businesses still face challenges in predicting consumer behaviour (Nunes, Bellin, Lee & Schunck, 2013). Siebert et al. (2020) break with previous research that has concluded that the consumer journey can be fully predicted. They believe that the consumer journey and consumer behaviour are mostly a combination of predictable and unpredictable patterns (Siebert et al., 2020). While some aspects of the consumer journey are predictable (Siebert et al., 2020), such as touchpoints or stages of the purchase, the digital consumer's buying behaviour and the process of generating consumer experience are complex (Kumra, 2006). Therefore, Siebert et al. (2020) develop the Sticky Journey model to help businesses bring unpredictable stimuli to consumers on the basis of a common consumer journey. By stimulating consumer interest, consumer experience and loyalty will increase dramatically on the basis of a smooth consumer journey (Siebert et al., 2020).

2.1.1 Touchpoints in the consumer journey

In the consumer journey, touchpoints are the trigger points that lead the consumer to start, continue or stop the consumer journey (Lemon & Verhoef, 2016). In a broad sense, there are four touchpoints that connect brands to consumers, namely brand-owned, partner-owned, consumer-owned and social/external/ touchpoints (Lemon & Verhoef, 2016).

These touchpoints have a significant impact on consumer experience, satisfaction and loyalty (Özbük et al., 2020). Throughout the consumer journey, consumers become part of their purchased product or service experience by communicating and interacting with the company through various touchpoints (Adan Gök, 2020). Özbük et al. (2020) emphasise the importance of touchpoints in the consumer decision journey, as these touchpoints are hidden in the consumer's decision-making process. Kall (2021) states that consumers have varying degrees of attention to the brand at different stages of the consumer journey, which is closely related to the type and visibility of touchpoints. Therefore, classifying and researching touchpoints in the consumer journey helps businesses better understand the relationship between consumer experience, satisfaction, and loyalty, thereby developing more effective marketing strategies and optimising consumer relationships.

2.1.2 Result of shaping a positive consumer journey: loyalty

Typically, Oliver (2014) defines consumer loyalty as "a deeply held commitment" which leads to consumers consistently buying the same brand of products and services repeatedly. However, as the purchasing behaviour of loyal consumers is complex and diverse, loyal consumers cannot

be generalised. According to Nunes et al. (2013), there are four types of loyal consumers: emotional loyalty, inertia-based loyalty, conditional loyalty and genuine transactional pursuit.

Among the early developments in loyalty theory, Jacoby (1971) first distinguishes between repeat buying behaviour and consumer loyalty. In other words, repeat purchase behaviour is a consequence of consumer loyalty rather than a criterion for judging consumer loyalty (Jacoby, 1971). Oliver (1999) then summarises the process by which consumers build loyalty, starting from the initial cognitive stage, where consumers buy the same product again based on the positive experience of their first purchase until the consumer prefers and firmly chooses the brand on an emotional and volitional level. In the process, loyalty gradually deepens, and eventually consumers become accustomed to buying the brand without considering other competing brands (Oliver, 1999). Therefore, in order to build consumer loyalty, companies need to meet the needs of different consumers according to each consumer's habits and preferences and provide them with seamless and uninterrupted service at the right time and right place (Nunes et al., 2013).

Factors that influence consumer loyalty include word-of-mouth (Kall, 2021) and consumer experience (Adan Gök, 2020). Firstly, an excellent consumer experience can increase consumer satisfaction, thereby increasing loyalty (Adan Gök,2020). A deeper understanding of consumers' needs and wants helps to meet their expectations and thus increases satisfaction and loyalty (Adan Gök, 2020). Secondly, when consumers are satisfied with a brand and become loyal users, they are more likely to recommend the brand to others (Kall, 2021). According to Yuruk-Kayapinar (2020), when digital consumers share positive reviews and experiences online, they not only increase their own loyalty to the brand but may also attract other potential consumers. This will help companies to build a more stable consumer base and thus increase overall loyalty.

2.2 Super Apps

In order to gain a better understanding of the topic of this research: super apps, it is necessary to conduct a literature review to provide a theoretical foundation for subsequent research.

Super Apps is a comprehensive mobile application designed to provide users with a one-stop solution and an efficient experience (Han et al., 2022). Super apps act as an ecosystem which integrates many mobile applications (Han et al., 2022) to meet their different daily needs without having to download other mobile applications (Roa et al., 2021). A full-featured super app would combine consumers' spiritual needs (social, travel), shopping needs (e-commerce, logistics, payments) and lifestyle needs (healthcare, top-ups, restaurant reservations) to ensure that people can use just one super app to do all the tasks in their lives on their smartphones and the internet (Fasnacht, 2021). Typically, the core functions of super apps usually include e-commerce, delivery, payment and social functions (Roa et al., 2021).

2.2.1 The transformation of super apps

Integrate mobile applications

With the advent of the digital age, retailers are facing the challenge of balancing digital retail and physical stores (Rigby, 2011). Physical stores can provide more interactive and unique experiences, while digital stores provide rich information and convenient comparison opportunities (Rigby, 2011). Therefore, many businesses are undergoing digital transformation, incorporating online channels and mobile applications into their business models (Chen & Lamberti, 2016). With the digitisation process, retailers should fully leverage the advantages of physical and digital stores and achieve coordinated development of online and offline channels in the future (Lemon & Verhoef, 2016). Mobile channels should complement offline channels, and vice versa, to provide a more comprehensive and convenient shopping experience (Lemon & Verhoef, 2016). With the widespread acceptance of mobile channels, consumers are demanding a more seamless experience (Özbük et al., 2020). In this context, super apps have emerged to facilitate a one-stop and personalised shopping experience for consumers on the mobile channel (Roa et al., 2021).

Both conceptually and functionally, as a type of mobile app, the reason super apps are called "super" is that this one app can meet the needs of consumers for four types of mobile applications (Steinberg et al., 2022). Single-function mobile applications solve specific problems for consumers, while a super app is a mobile application that integrates various functions (Fasnacht, 2021). The relationship between mobile applications and super apps is shown in Figure 1. Therefore, in studying super apps, the impact of mobile applications on consumers and consumers' experiences of using mobile applications in the consumer journey can provide valuable insights and references for this research. By understanding how consumers' use of mobile applications affects consumer behaviour and meets consumer needs at various stages, researchers can gain a deeper understanding of the role and potential of super apps throughout the consumer journey.

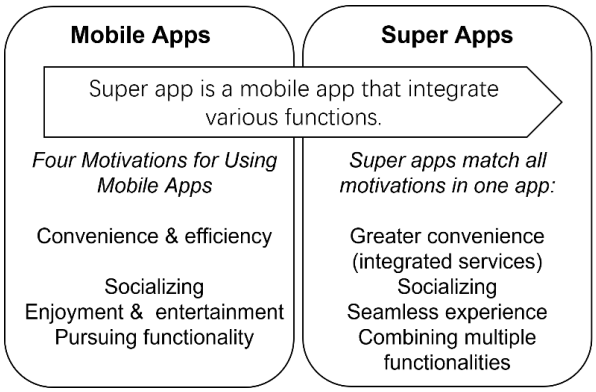

Figure 1: The relationship between mobile applications and super apps.

Development of super apps

The originator of the widely recognised Super apps is WeChat from China (Jia et al., 2022). Since its launch in 2011, WeChat has continuously iterated and evolved into a super app that integrates functions such as chatting, contacts, discovery, and personal centre through

continuous iteration and function enrichment (Szurawitzki, 2022). WeChat is widely used globally, especially among Chinese people and ethnic Chinese both within and outside China (Sun & Yu, 2022). Tracing the last decade in China, the Internet industry has grown rapidly due to the focus on industrialisation, urbanisation and modernisation, and businesses have increasingly demanded the convenience of super apps in their quest for efficiency (Huang & Miao, 2021). The development and success of WeChat as a pioneer of super apps has inspired the rise of other super apps, leading to an increasing number of mobile applications being integrated into super apps, providing a seamless consumer journey (Roa et al., 2021).

Nowadays, super apps are becoming increasingly important because they meet the modern consumer's need for convenient, integrated and mobile services while providing companies with valuable data on consumer behaviour (Fasnacht, 2021). User satisfaction and engagement with super apps have a significant impact on their adoption and use, and those who find super apps enjoyable and provide access to a variety of services are more likely to adopt and use them (Salehi, Miremadi, Nejati & Ghafouri, 2023). Thus, super apps, which integrate multiple mobile applications, meet consumers' needs for convenient, integrated mobile services (Fasnacht, 2021).

2.2.2 Super apps: localisation or globalisation

While super apps are becoming increasingly important and have many advantages, super apps face huge challenges and opportunities in terms of globalisation.

On the positive side, localised super apps have been able to grow rapidly in their target geographies by fitting in with the cultural and geopolitical context (Steinberg et al., 2022). Therefore, super apps created based on local geopolitics (Jia et al., 2022), culture (Steinberg, 2020), and consumer demand (Kibaroğlu, 2019) have the opportunity to outperform the leading apps to capture a geographic market. For example, based on East Asian culture, LINE, through the spread of the culture of stickers, overtook popular super apps platforms such as PayPal, Facebook and WeChat in China and the US, accelerating the transformation of these super apps from ordinary social media to a one-stop platform and successfully breaking the era of one-stop platform hegemony in the US and China (Steinberg, 2020). Furthermore, in addition to growing locally, super apps still have the opportunity to spread their business globally based on full functionality and cultural integration (Negro & Hu, 2022). For example, despite the European focus on information privacy, super apps were widely used by Italians to maintain social security and to teach classes to all students during the pandemic blockade (Negro & Hu, 2022).

On the negative side, due to cultural differences, the popularity of super apps is uneven, and different super apps are popular in different regions (Statista, 2023). As Steinberg et al. (2022) point out, the Asian region is uniquely diverse, influenced by different national and regional institutional forms, with each country developing a very different relationship with its large user base. Further, the greater consumer needs and language differences between the West and the Asian region make super apps difficult to replicate. Fasnacht (2021)mentions that the younger generation in China is more inclined to use integrated and mobile financial services, while Western users value security, discretion and data protection more. A typical example is

that 14 of the 16 most popular apps used in Italy are from the US, with WeChat and TikTok being the only ones from China (Negro & Hu, 2022). Such differences may therefore make it difficult for super apps that are successful in a particular region or country to replicate their success in other regions, as user needs, habits, and culture differ in each region and country (Steinberg et al., 2022).

2.2.3 Geo-Specific of super apps

The paragraph above highlights the severe limitations that localisation places on super apps. For this reason, this paragraph systematically expands the super apps for different areas.

Overall, the various ways in which companies in different regions bundle services, as well as the interweaving of communication and currency transactions in populous countries, have led to super apps being combined in different forms in different regions (Fasnacht, 2021). Figure 2 shows the differentiation of super apps. The geo-specific of super apps can be divided geographically into paths of development in Asia or in other regions, respectively, the integration of digital payments into existing functional platforms and the integration of multiple functions and services into existing mobile digital payment applications (Steinberg et al., 2022). These super apps have a profound impact on local consumers. They enable users to efficiently manage various aspects of their daily lives on a unified platform, thereby changing their communication habits and lifestyle (Huang & Miao, 2021).

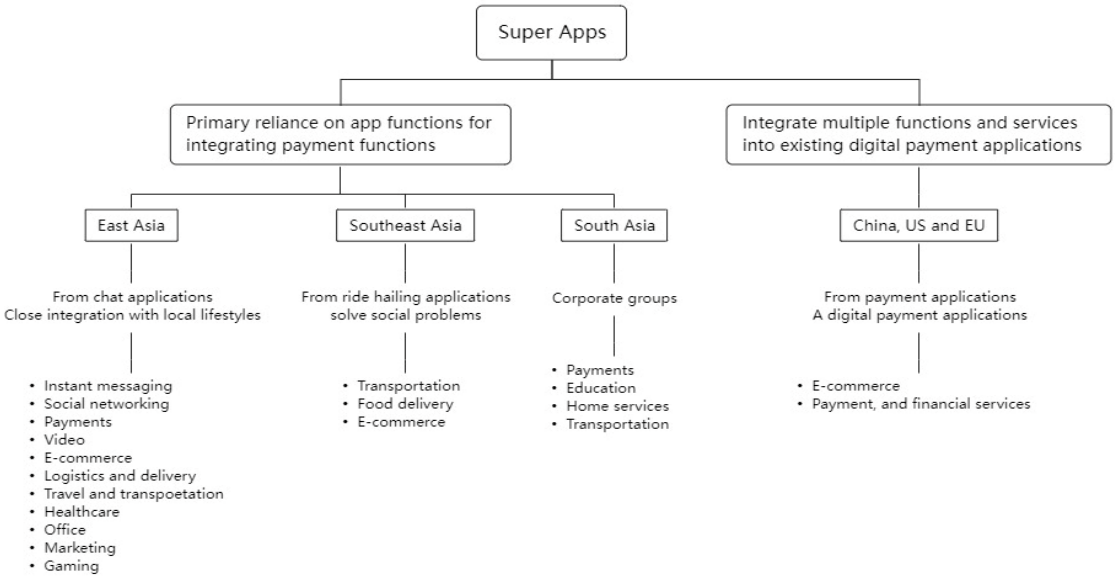

Figure 2: The differentiation of super apps.

In Asia, super apps primarily rely on the functions of the mobile application itself to provide consumers with new payment options or integrate existing mobile payment applications (Fasnacht, 2021). Super apps can further divide the development of super apps into three situations according to geographical location, including super apps originating from chat

applications in East Asia, super apps with delivery and transaction as the core in Southeast Asia, and super apps rising in a family of applications model in South Asia (Steinberg et al., 2022).

First, chat applications such as WeChat, Kakao Talk and Line in East Asia have evolved into multifunctional super apps (Steinberg et al., 2022). The growth of super apps developed from social software in East Asia is due to their highly integrated versatility and close integration with specific regional cultures and values (Steinberg et al., 2022). strong stickiness, government controllability (Chen et al., 2018), culturally appropriate functional design and close integration with local lifestyles (Steinberg et al., 2022). These super apps offer a wealth of diverse functions such as instant messaging, social networking, payments, video services, e-commerce, logistics, travel, healthcare (Fasnacht, 2021), office, marketing (Steinberg, 2020) and gaming (Han et al., 2022). In addition, they feature unique stickers and emojis, such as the LINE stickers, which highlight cultural changes related to their host environment (Steinberg, 2020).

Secondly, Grab and Go Jek in Southeast Asia started as a ride-hailing service and later expanded into food delivery and digital payment businesses, prompting the incorporation of digital financial services into super apps (Kibaroğlu, 2019). In contrast to East Asia, ride-hailing software, such as Grab and Go Jek, have succeeded in the Southeast Asian market by creating consumer super apps that are fully adapted to Southeast Asia (Kibaroğlu, 2019). Firstly, they solve the problems that people encounter in their daily lives in Southeast Asia by integrating multiple services, this type of super apps provide services including transportation, food delivery, shopping and more (Kee et al., 2021), have a positive social impact on local communities and provide users with convenient and affordable options (Kibaroğlu, 2019). Furthermore, Grab's success is also attributed to its in-depth understanding of the local market and hyper-localisation strategy (Kee et al., 2021). Analysing the experience and assessing the needs and habits of local consumers helps improve service quality for consumers (Kee et al., 2021), user experience, usefulness perception, and ease-of-use perception providing highly satisfactory services to users (Seman & Ahmad, 2022).

Finally, the Jio Platform in South Asia is integrated with multiple consumer platforms to serve Indian consumers in multiple verticals, including payments, education technology, home services, and transportation (Momaya, 2022). Based on the fact that India has corporate groups that are willing to explore and invest in diversified businesses, such as Tata and Reliance, which provides a rich resource and a unique competitive advantage for super apps (Momaya, 2022).

Building on the three types of super apps summarised by Steinberg et al. (2022) and Fasnacht (2021) also suggests that there is a type of app that aims to integrate multiple functions and services into existing mobile digital payment applications. This type of super apps is widely popular in China, US and the EU, such as Alipay (Roa et al., 2021), PayPal (Romanova et al., 2018), Revolut, Klarna, and so on. These super apps primarily provide consumers with personalised consumer journey, including e-commerce, payment, and financial services (Roa et al., 2021). With the proliferation of digitalisation and mobile devices, this generation of consumers increasingly trusts the data security and privacy of apps, perceiving super apps as secure applications (Johnson et al., 2018). In addition, these super apps provide users with a seamless customer experience by offering services that are more advantageous than traditional payment methods, such as faster transaction speeds, higher security and privacy protection

(Grüschow et al., 2016). Therefore, although this type of super apps does not provide consumers with many functions and services compared to other types of super apps, they influence consumers' one-stop and personalised shopping experiences on mobile channels (Roa et al., 2021).

3 Theoretical framework

In this chapter, we establish the theoretical foundation for our research. Along the lines of exploring consumer behaviour and touchpoint during the different stages of the consumer journey while using super apps, this chapter selected several theories in the consumer journey about the factors that influence consumer behaviour and the touchpoints that guide consumer behaviour.

Super apps as the research subject are temporarily set aside here for two main reasons: First, super apps have been extensively reviewed in the literature review section; second, the results based on super apps vary depending on the region and different consumers, and previous studies on super apps can be cross analysed and interpreted with our research instead of guiding its progress directly.

3.1 Factors impacting consumer behaviour

In the consumer journey of using mobile applications, there are many factors that cause consumers to exhibit different behaviours or different purchasing behaviour paths. These mainly include whether consumers are engaged in high or low involvement purchases (Yuruk-Kayapinar, 2020), how consumers perceive the usefulness and ease of use of the mobile application (Davis, 1989), what rewards consumers can get from using the mobile application (Steinhoff & Zondag, 2021), as well as the satisfaction and loyalty of consumers towards mobile applications based on previous experiences (Kall, 2021; Siebert et al., 2020)

High or low involvement purchase

In general, as consumer journey through mobile applications, digital consumers typically make purchases in two different ways: high involvement purchases and low involvement purchases (Yuruk-Kayapinar, 2020). High involvement purchase refers to a cautious consumer journey where consumers go through all the buying processes, including problem recognition, information search, evaluation, purchase decision, and post-purchase, as stated by Yuruk-Kayapinar (2020). On the other hand, low involvement purchase is a casual and streamlined consumer journey (Yuruk-Kayapinar, 2020). Hence, the consumer's behavioural path to purchase probably differs depending on the value of the target product.

Perceived usefulness and ease of use

Early on, according to Davis (1989), factors that influence digital consumer behaviour in the consumer journey include perceived usefulness and ease of use. Kim and Lee (2018) further

evaluated these two factors, and they believe that users' attitudes towards a mobile application may be influenced by their perceived usefulness and ease of use, which in turn may affect their intention to use the mobile application.

On the one hand, usefulness implies that consumers believe that they can get some of the value they need through the use of technology (Davis, 1989). When consumers perceive that a brand offers a poor mobile experience, such as poor operation, this can lead to negative attitudes (Watson, McCarthy & Rowley, 2013). In response to different consumer motivations for using mobile applications, Kim and Lee (2018) group them into four categories: pragmatists, socialisers, hedonists and functional. Companies need to take into account the needs and preferences of these users when developing mobile applications to meet their expectations during the consumer journey.

First of all, pragmatists focus on the convenience and efficiency of mobile applications (Kim & Lee, 2018). Secondly, socialisers value the social interaction benefits provided by mobile applications (Kim & Lee, 2018). Thirdly, hedonists focus on the entertainment and enjoyment of mobile applications (Kim & Lee, 2018). Alnawas and Aburub (2016) believe that when consumers experience fun and seamless shopping through mobile channels, they are more likely to develop purchase intentions and satisfaction. As Watson et al. (2013) argue, providing entertaining mobile applications helps to enhance consumers' positive perceptions of the brand. Fourth, functionality is motivated by the specific functions provided by the mobile application (Kim & Lee, 2018), and preference is given to apps that actually do something.

On the other hand, ease of use implies that consumers have the ability to use a particular technology (Davis, 1989). According to Watson et al. (2013), 72.2% of digital consumers have a positive attitude towards mobile applications that look good and are easy to use. This is because only when consumers can effortlessly use mobile applications they have the opportunity to rely on smartphones for all their various functions (Watson et al., 2013). Therefore, businesses should always provide useful and easy-to-use mobile applications to showcase the advantages of the mobile channel.

Reward

By creating excitement for consumers, consumers may be motivated and improve significantly on a smooth consumer journey (Siebert et al., 2020). Steinhoff and Zondag (2021) argue that rewards help to drive consumer purchases and generate loyalty. In particular, reward activities create a positive consumer experience in the pre-purchase stage (Steinhoff & Zondag, 2021).

Satisfaction

According to Kall (2021), a key criterion for assessing consumer experience is consumer satisfaction, which refers to the feelings and emotions that arise when consumer compare their brand experience with their expectations. This is because satisfaction is not an objective evaluation of products and services but rather a subjective feeling that arises from the relative perception of the brand's offerings or services compared to expectations (Kall, 2021). Particularly for female consumers, emotions are also one of the important influencing factors, although cognition and behaviour mainly affect consumer satisfaction (Kim & Ah Yu, 2016).

Consumer emotions arise during the interaction between a consumer and a company's brands and products, leading directly to different consumer experiences (Shaw & Ivens, 2002). Creating a positive consumer experience at each touchpoint is an important factor in the consumer's decision to purchase and deepen their impression of the brand (Lemon & Verhoef, 2016). Therefore, understanding consumer expectations and meeting those expectations is also a factor in increasing brand loyalty and promoting purchase behaviour.

Loyalty

In the consumer journey, loyalty is a key factor in influencing the consumer's purchase decision (Siebert et al., 2020). As a result of a positive consumer experience, consumer loyalty further influences all stages of the consumer decision journey (Steinhoff & Zondag, 2021). Consumer satisfaction increases when a good cognitive, behavioural, emotional, and relational bond is built with the brand during the purchase process, thus laying the foundation for consumer loyalty (Kim & Ah Yu, 2016). Positive and highly satisfying consumer experiences make it easier for brands to build effective connections with consumers, which in turn leads to loyal brand supporters (Gentile, Spiller & Noci, 2007).

3.2 Touchpoint for consumer journey

In the digital age, consumer behaviour and shopping habits have changed considerably. According to Yuruk-Kayapinar (2020), the consumer journey of digital consumers is the same as those of ordinary consumers, but the difference between them lies in the different touchpoints through which digital consumers interact with businesses (Yuruk-Kayapinar, 2020). The specific differences lie in the factors that influence consumers before they make a purchase, the tools they use during the purchase and the way they influence others afterwards (Yuruk-Kayapinar, 2020). As Wang, Kim & Malthouse (2016) claim, the brand's mobile applications provide additional touchpoints for the interaction between companies and consumers.

Based on the consumer journey of the three stages: pre-purchase, purchase, and post-purchase, Lemon & Verhoef (2016) summarise four types of touchpoints between companies and consumers, including brand-owned, partner-owned, consumer-owned, and social/external touchpoints. Firstly, brand-owned touchpoint refers to any marketing channels that the brand itself owns, including, among others, self-media accounts, loyalty programs, advertising, and websites (Lemon & Verhoef, 2016). Secondly, partner-owned touchpoints refer to customer interactions during the experience that is jointly designed, managed, or controlled by the brand and the partner. Thirdly, customer-owned touchpoints are the spontaneous behaviours of consumers, such as needs, actions, choices of payment methods, and reviews, etc., which cannot be controlled or influenced." Finally, social/external touchpoints refer to the business environment, peer influence, social word-of-mouth, independent information influence, etc. (Lemon & Verhoef, 2016).

First, in the pre-purchase stage, brands are marketing to consumers through mobile applications (Lemon & Verhoef, 2016). Consumers often need to be aware of, search for, and evaluate the

existence of a brand (Kall, 2021) and match it with their own needs (Pinar Yuruk, chapter 5, 2020). Firstly, at the beginning of the consumer journey, at this stage, brand-owned, partner-owned, and social/external touchpoints play a major role in providing information to potential consumers, including the brand, the shelf (Kall, 2021), multi-channel advertising (Chen & Lamberti, 2016), loyalty programs (Steinhoff & Zondag, 2021), web rooming and showrooming (Raife, 2020, chapter 6). In addition, regarding digital marketing touchpoints, Anderl, Schumann & Kunz (2016) summarise seven touchpoints to guide consumers through the pre-purchase stage, including direct type-in, branded search, generic search, price comparison, display, retargeting, affiliation and email.

It is noteworthy that, according to Kim, Lin & Sung (2013), mobile applications are also one of the touchpoints for brand marketing. Interactive mobile advertising can lead to positive consumer purchase attitudes, intentions and behaviours (Wang et al., 2016). The topic of whether consumers are mobile marketers has been hotly debated by scholars. Watson et al. (2013) argue that consumers will resist mobile marketing because they want to be in control of their interactions with brands. Wang et al. (2016) support the idea that the first thing mobile applications do is ensure that they earn and maintain consumer trust, and ensure that the messages sent to consumers provide value. However, research by Kim and Ah Yu (2016) counter this view by arguing that when consumers download an app, it means that they themselves are the ones driving the start of the communication with the brand, and therefore the interaction is controlled.

Next, the purchase stage involves the consumer's decision to purchase and pay for the product or service (Özbük et al., 2020), and the main touchpoints involved include staff and payment methods (Lemon & Verhoef, 2016). On the one hand, during the purchase stage, the brand app provides a unique and positive user experience through interactive functions such as vivid graphics, sound, animation and customisation. Yasav (2015) suggests that for brands with a mobile marketing strategy, customers' in-store use of mobile technology does drive the behaviour of a segment of the population. During the purchase process, consumers do not perceive their engagement with a brand's mobile application as a form of advertising (Kim et al., 2013). On the contrary, increased engagement with the brand's mobile application contributes to heightened brand engagement (Kim et al., 2013). On the other hand, the consumer's choice of payment method is one of the touchpoints by the consumer during the purchase stage.

Finally, in the post-purchase stage, consumers use and experience the product or service and express their consumer experience to the company and others through consumer-owned and social/external touchpoints (Lemon & Verhoef, 2016). In the post-purchase stage, a positive consumer experience often increases digital consumer satisfaction, and user stickiness, resulting in brand loyalty (Adan Gök, 2020). Loyal consumers tend to buy consistently from the same website, spread positive feedback and recommend the business to new customers (Yuruk-Kayapinar, 2020). When consumers frequently use a brand application and consider it as a part of their daily life, habitual loyalty emerges (Wang et al., 2016). At this stage, loyal consumers' behaviour includes word-of-mouth communication and reviews. Consumers interact with the brand and other consumers in the community by commenting within the mobile application (Kim, Yoon & Han, 2016). According to Yuruk-Kayapinar (2020), word-of- mouth

for brands is generated when consumers communicate their experiences and experiences with each other in digital communities, influencing the attitudes and consumer decision journeys of all consumers within the community towards the brand.

Thus, touchpoints in the consumer journey are scenarios where consumers interact with brands, products and services, playing a key role in the pre-purchase, purchase and post-purchase stages (Lemon & Verhoef, 2016).

4 Methodology

This chapter first shows the methodology chosen for this research, the reasons for it and the logic behind it based on the research objectives and research questions. It then describes in detail the process of collecting and analysing the data in the empirical research.

4.1 Research design

The purpose of this research is to explore the behaviours exhibited by Millennials and Generation Z when using super apps offering digital payment services, as well as the touchpoints where brands connect with consumers. To gain empirical evidence based on this purpose, a variety of methodologies can be employed to collect human behaviour data, including but not limited to case studies and ethnography (Easterby-Smith, Jaspersen, Thorpe & Valizade, 2021). In this research, the qualitative DPT methodology is chosen to collect information on consumers' behaviour in using super apps and their interpretations of these behaviours.

According to Audy Martínek et al. (2022), DPT is a methodological framework for understanding the daily practices of digital consumers online. Evolving from traditional ethnographic methodology, DPT combines the principles of ethnography with the use of digital tools, such as screen recordings, to capture and analyse the digital practices of informants in their natural environment (Audy Martínek et al., 2022). Specifically, this methodology combines digital methods with post-phenomenological enquiry to understand both digital and consumer online daily practices, drawing from observational ethnographic research while maintaining ethnographic sensitivity in analysing data and utilising video capture to document and understand consumers' daily online behaviour (Audy Martínek et al., 2022).

As a result, for this research, choosing DPT as a research methodology is appropriate because this methodology offers a comprehensive and naturalistic approach to contributing to this research by collecting the daily practices of digital consumers in super apps (Audy Martínek et al., 2022). Although there are also methods for collecting the behaviour of digital consumers, such as the walkthrough method (Light, Burgess & Duguay, 2018), a method in which the researcher personally operates and records the behaviours path of using the mobile application. By combining video recordings of observing informants with post-phenomenological interviews, DPT not only avoids the subjectivity of in-person practice by the researcher, but the researcher also collects detailed and rich behavioural data on consumers' use of the mobile application.

Guided by DPT, the two methods of collecting data, namely observing screen recordings and post-phenomenological interviews (Audy Martínek et al., 2022). In this research, the data obtained from observing the screen recording video and the post-phenomenological interview are respectively used to answer research questions.

Based on the six steps for practising DPT established by Audy Martínek et al. (2022), this research developed a further research protocol based on the current situation. Figure 3 depicts the research protocol, which is composed of three stages: planning research, data collection, and analysis.

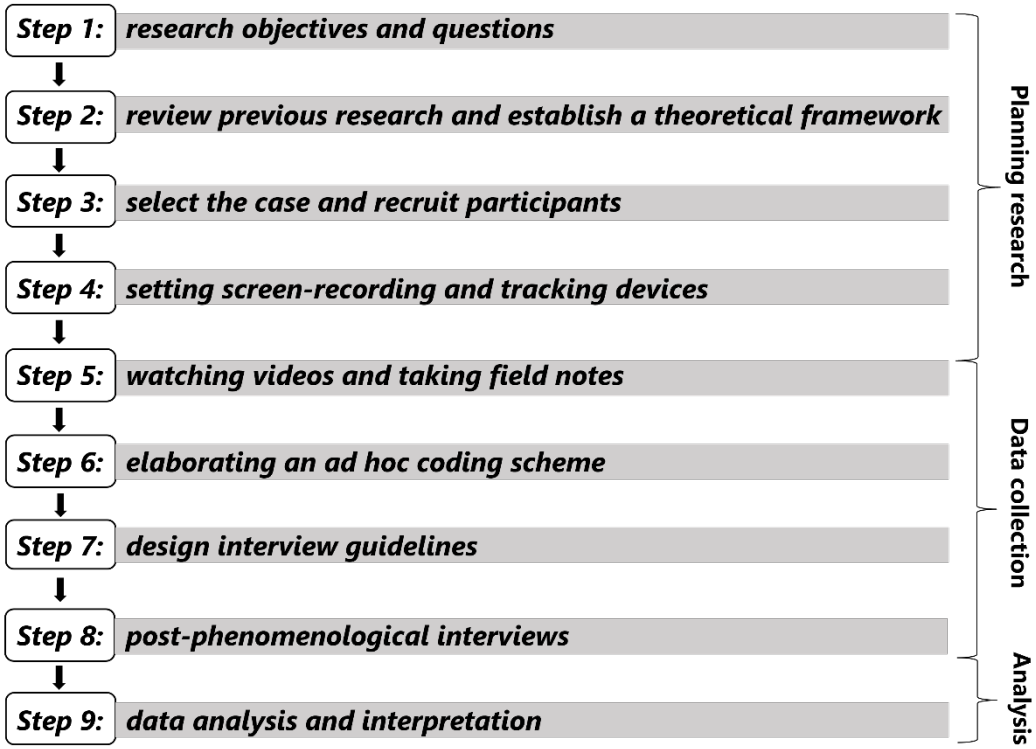

Figure 3: The protocol of the research.

During the planning research stage, the first step is to establish the research objectives and questions. The second step involves reviewing previous research and summarising the theoretical background to ensure that the empirical experience collected is linked to the theory. These steps have been completed in the previous section. The third step is to identify the research subjects and recruit informants. In the fourth step, informants are asked to record their purchase process through screen recording to Explore their behaviour and touchpoints for using the super app.

Next, the actual data collection process begins. In the fifth step, the researchers watch and analyse the videos to answer research question one and inform subsequent interviews with the informants. In the following sixth and seventh steps, a specific coding scheme is developed in conjunction with the theoretical background, and interview questions are designed based on the coding obtained.

Finally, after the interviews are completed, the research will further analyse the data based on the specific coding scheme. The goal is to understand and interpret consumers' daily use of Klarna behaviour and touchpoints working for consumers, thereby answering the research question.

4.2 Philosophical stance

In research, it is vital to clarify the philosophical stance to help researchers to understand the nature of inquiry into the world and to improve the quality of research (Easterby-Smith et al., 2021).

This research takes a relativist ontological stance and a social constructivist epistemological stance, focusing on consumers' interpretations of their behaviour. Relativism primarily guides this research by looking at things from different perspectives and social constructivism dictates that the results of this research are determined by human beings (Easterby-Smith et al., 2021). As in this research, the researchers first observe the behaviour of participating consumers using super apps, then interview consumers about these behaviours, and finally the researchers collate these behaviours and consumers' interpretations towards these behaviours to further structure and analyse the results of the research. Furthermore, based on the fact that the research aims to explore the behaviours exhibited by Millennials and Generation Z when using super apps offering digital payment services, as well as the touchpoints where brands connect with consumers, the research delves into consumer behaviour and the potential impact of touchpoints, rather than gathering facts and obtaining general patterns. Therefore, a relativist ontological stance and a social constructivist epistemological stance is more appropriate for this research.

4.3 Research strategy

With the philosophical underpinnings of relativism and social constructionism, the research methodology should be predominantly qualitative, focusing on the consumer's perspective and experience. According to Patton (2014) and Easterby-Smith et al. (2021), qualitative research allows for an open and flexible approach to data collection, which can lead to rich and detailed insights into the behaviour and experiences of consumers. This is particularly important in the context of this research, where the aim is to explore consumer behaviours and touchpoints when using super apps in Sweden.

There are two reasons for choosing qualitative research. Firstly, qualitative research is a suitable strategy for exploring the complexities of the consumer journey and the role of super apps in creating a seamless and integrated experience. In previous research, researchers have used in-depth interviews and case study to explore the motivations and preferences of super app users and to observe how consumers use super apps in their daily lives. These studies have demonstrated the relevance and usefulness of qualitative research in this field. Through the use

of methods such as interviews and observations, qualitative research enables the researcher to delve deeper into the perspectives and behaviours of consumers and capture the richness of their stories (Patton, 2014).

In addition, qualitative research provides the greater opportunity for informants to offer detailed and in-depth responses (Mack, Woodsong, MacQueen & Guest, 2005). As stated in the literature review, there have been many studies conducted on an individual or a few super apps which have had varying degrees of impact on consumer culture, habits, and shopping patterns in specific geographic regions. Therefore, this approach aligns with the research objectives of this research, which is well suited for the research questions and objectives of this research, which seek to conduct an in-depth exploration and understanding of the behaviours and touchpoints of consumers.

4.4 Research approach

This research combines inductive and abduction reasoning approach to achieve the research purpose and answer the research questions. Firstly, based on the theoretical background of this research, which shows that there are no general regularities regarding the impact of super apps on consumer behaviour and consumer journey worldwide, therefore, inductive reasoning is the most appropriate method of reasoning at the beginning of the analysis of the data. Inductive reasoning involves identifying patterns in data to deduce general principles or theories (Saunders et al., 2019). According to Saunders et al. (2019), this method is suitable for qualitative research and is influenced by an interpretive philosophy that emphasises the importance of subjective interpretation. Guided by the inductive approach, the research focuses on a specific case, the outstanding super app Klarna that has developed in Europe, in order to gain an in-depth understanding of the effects of the super app on user purchasing behaviour. By closely observing the behaviour of 12 selected informants using Klarna and conducting interviews on these behaviours, this research has summarised the purchasing behaviour and multi-touchpoints consumer journey of consumers living in Sweden during the use of the super app "Klarna".

In addition, due to the abundance of theoretical knowledge on consumers purchasing through mobile channels in previous research, abduction reasoning is an appropriate method of inference in the analysis phase. It connects the empirical data gained from this research with the previous research. Abduction reasoning helps to improve the results obtained from empirical data by connecting theory when the current observed results are insufficient to fully explain the phenomenon (Easterby-Smith et al., 2021). In this research, the further results were summarised and analysed by developing a theoretical framework regarding the touchpoints of the consumer journey and the image factors of consumer behaviour that guided the results.

4.5 Data collection

This section explains in detail how the data has been collected in this research as guided by the DPT to further understand the explanations and motivations behind the observed behaviours.

4.5.1 Primary and secondary data

Guided by the DPT methodology, this research utilises both primary and secondary data. Primary data includes screen recording observations and post-phenomenological interviews, while secondary data involves the analysis of existing textual materials. According to Easterby-Smith et al. (2021), secondary data can serve as supporting evidence for primary data. Therefore, in this research, the theoretical framework is first reviewed to guide the observation and the development of the post-phenomenological interview guide.

4.5.2 Document analysis

Before starting data collection, it is an essential step to understand the topic by collecting and analysing relevant articles (Easterby-Smith et al., 2021). To conduct a comprehensive search for relevant literature, Scopus is used to search and collect journal articles, while LubSearch is used to search for academic books.

Next, it is important to identify the search keywords. To gather the available secondary data, Easterby-Smith et al. (2021) suggest that the use of Boolean operators helps with careful reflection and selection of the scope and depth of search results. Figure 4 shows the relationship between the search keywords. The set of keywords 1 includes customer/consumer journey and consumer experience. The set of keywords 2 is usually used in conjunction with keywords 1 or 3 to narrow the range, i.e., multichannel/omnichannel. Finally, the set of keywords 3 that provide the most relevant background knowledge on the topic of this research in the form of apps, mobile apps, super apps, and individual super apps, have been chosen to ensure a wide range of literature relevant to the research question. In total, 33 journal articles and seven books were collected and used in the literature review and theoretical framework chapters of this thesis.

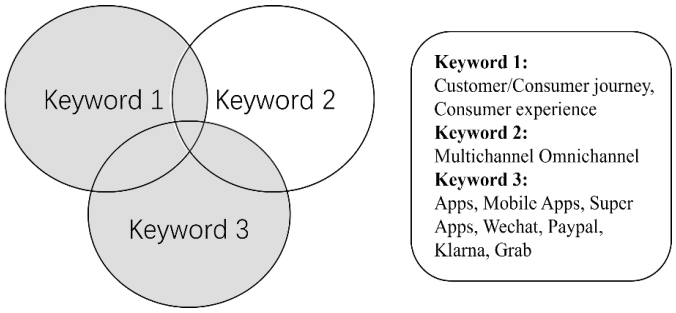

Figure 4: The relationship between the search keywords.

In addition to selecting reliable search engines and keywords, this research also judges the availability of journal articles and books by reviewing peer reviews in academic circles, examining the number of citations, and evaluating the publishers.

Finally, these secondary data are organised and collected using Endnote and summarised in the literature review and theoretical framework sections according to their respective purposes.

4.5.3 Case selection

This research has selected the Swedish super app Klarna as the case due to Klarna has recently become popular in Europe (Kumar & Kaur, 2021).

Klarna, a Swedish-based financial technology company that offers various services to its customers, is recognised as a super app in the industry press (Stoopendahl, 2022). Currently, with 1.2 million active users, Klarna provides consumers with a comprehensive shopping experience by integrating various functions, such as search and payment (Klarna, n.d.).

Based on Klarna's own platform describes the functions involved in payment and e-commerce and aims to provide a seamless shopping experience for consumers (Klarna, n.d.). Thus, this research has chosen it as a case platform to track the purchasing behaviour and consumer journey of consumers residing in Sweden who use Klarna.

4.5.4 Informant Selection

In qualitative research, it is essential to establish the background of the informants to enhance the credibility of the findings, as highlighted by Patton (2014) and Easterby-Smith et al. (2021). To ensure the collection of the most comprehensive and insightful data, this research employs the purposeful selection of informants suitable for DPT. In addition, based on the limited time and the number of informants, the purposeful selection of informants in qualitative research is beneficial for obtaining in-depth and rich data (Patton, 2014). Therefore, this section describes the criteria for recruitment and the selection standards for informants in this research.

In this research, the criteria for recruiting informants are mainly evaluated in two aspects to determine whether they are suitable for DPT: demographic variables and the use of mobile applications.

Regarding the demographic variables, this research specifies the age and place of residence of informants. According to (Fasnacht, 2021), Millennials and Generation Z are avid users of smartphones and have high expectations for mobile interaction. Therefore, the target age range for informants is defined as Millennials and Generation Z. Additionally, informants should reside in Sweden because the research aims to explore consumer behaviour and experience when using super apps in Sweden.

In terms of Klarna usage, this research stipulated that informants must have a Klarna account, have used the platform to make purchases, and have accessed it at least three times per week.

In addition, based on the fact that the region defined for this research is Sweden, it was possible to find informants who currently live in different cities in Sweden. To ensure that potential informants met the criteria, the recruitment phase began by approaching individuals who might meet the inclusion criteria. Initially, five informants were identified and confirmed to meet the criteria. These five individuals then used a snowball approach to recommend other potential informants, and the final 12 informants were selected after confirming that they met the criteria.

Table 1 presents the descriptions of the informants in this research. To protect their privacy, informants' names are removed, and anonymous numbers are assigned to them. According to Patton (2014), selecting diverse informants within limited criteria can increase the universality of the research. Therefore, during informant recruitment, the researchers contact individuals living in different cities throughout Sweden. For privacy reasons, these locations are obscurely described. These informants range in age from 22 to 28 and cover two age groups, Millennials and Generation Z. In addition, all informants confirmed that they had already had a Klarna account and had shopped on Klarna before participating in the research.

Table 1：The descriptions of the informants in this research.

Participant ID	Age	Gender	Location	Klarna account	Ever shopped at Klarna
P1	25	Female	Southern Swedish city on Lake Vättern	Yes	Yes
P2	23	Female	Southern Swedish city on Lake Vättern	Yes	Yes
P3	24	Female	The largest city in southern Sweden	Yes	Yes
P4	25	Male	The largest city in southern Sweden	Yes	Yes
P5	22	Male	Eastern Swedish city near Öland	Yes	Yes
P6	22	Male	Eastern Swedish city near Öland	Yes	Yes
P7	26	Female	Major port city on Sweden's west coast	Yes	Yes
P8	28	Male	Major port city on Sweden's west coast	Yes	Yes
P9	25	Female	Historic university city in southern Sweden	Yes	Yes
P10	23	Male	Historic university city in southern Sweden	Yes	Yes
P11	26	Male	Northern Swedish city near the Arctic Circle	Yes	Yes
P12	23	Female	Southern Swedish city surrounded by lakes	Yes	Yes

4.5.5 Scope of Primary data collection

According to Audy Martínek et al. (2022), we considered three key issues, namely technology, behaviour and task, to determine the scope of data collection. Since the object of investigation is super apps, the screen recording software and the device used are mobile phones and the built-in screen recording function. In addition, OneDrive is used as a means of sharing and storing video files. Each informant's video file will be named with their informant ID to facilitate management by the researchers.

Secondly, behaviour means considering which behaviours of informants should be recorded during screen recording, such as screen touches and sound recording (Audy Martínek et al., 2022). The research advocates not requiring consumers to turn on the microphone during screen recording. The main reason for this choice is that after observation, the research will conduct post-phenomenological interviews with each informant to give them an opportunity to express their views. In addition, another reason for turning off the microphone is that the resulting noisy sound may interfere with the researchers' observation, leading to biased results. In addition, since logging in and making payments on Klarna in Sweden requires the use of BankID

verification, informants will be asked to stop recording during any tasks that involve Bank ID verification.

Finally, tasks-related should be considered in determining the scope of informants' recordings (Audy Martínek et al., 2022). As the purpose of the research is to explore consumer behaviours and touchpoints when using super apps in Sweden, informants are asked to screen-record themselves for two weeks while performing any actions related to using Klarna. This includes but is not limited to browse, search, and check out.

4.5.6 Observation: watching video

Observation is a valuable tool for collecting qualitative data, particularly in studies that focus on human behaviour and experience (Easterby-Smith et al., 2021). In DPT, observation is an essential step in collecting data (Audy Martínek et al., 2022). During this phase, the researchers play and replay the videos while combining the theoretical framework's insights to identify and understand recurrent patterns in informants' use of the super app. This method allows researchers to capture a rich and nuanced understanding of the phenomena under investigation, as it enables them to directly observe informants' practices (Easterby-Smith et al., 2021).

In this research, the total length of screen recordings obtained from individual informants ranged from one hour to 11 hours, with a total of approximately 76 hours of video recordings obtained from 12 informants. Table 2 displays the statistical information of the screen recordings.

Table 2: The statistical information of the screen recordings.

Participant ID	Age	Gender	Location	Klarna account	Ever shopped at Klarna
P1	25	Female	Southern Swedish city on Lake Vättern	Yes	Yes
P2	23	Female	Southern Swedish city on Lake Vättern	Yes	Yes
P3	24	Female	The largest city in southern Sweden	Yes	Yes
P4	25	Male	The largest city in southern Sweden	Yes	Yes
P5	22	Male	Eastern Swedish city near Öland	Yes	Yes
P6	22	Male	Eastern Swedish city near Öland	Yes	Yes
P7	26	Female	Major port city on Sweden's west coast	Yes	Yes
P8	28	Male	Major port city on Sweden's west coast	Yes	Yes
P9	25	Female	Historic university city in southern Sweden	Yes	Yes
P10	23	Male	Historic university city in southern Sweden	Yes	Yes
P11	26	Male	Northern Swedish city near the Arctic Circle	Yes	Yes
P12	23	Female	Southern Swedish city surrounded by lakes	Yes	Yes

After assembling all the recorded videos, the observation of all videos is started. Based on the theme of this research, the consumer journey, which emphasises the process of consumers during their use of Klarna, this research combines the observation method from the original DPT methodology with the walkthrough method proposed by Light et al. (2018) by observing recorded videos of other informants in order to track and record all actions generated by consumers on screen. The researchers chose to observe and record the video recordings in this

way as it was the most appropriate way to collect details of the functions used by informants in using Klarna, the behaviours that occurred and the sequence in which they occurred.

Table 3 presents the behavioural presents for converting video data into a textual dataset. In order to make the video data explicit, a series of predefined behaviours were used with the aim of unifying the representation and facilitating the encoding of the consumer's behavioural paths in the video.

Table 3: Behavioural presents for transforming video data into text datasets.

Description of transaction	**Behaviour**		
Step 1 - Initial record	Pre-purchase stage	Purchase stage	Post-purchase stage
Use pen and paper to record the	*Recognise needs*	*Purchase decision*	Checked payment status
behavior path in the video as much as	Received email and open Klarna	Selected size/attributes	Checked deliver info and status
Step 2 - Recording info	Browsed the recommendation page and	Added to bag	Viewed order history
Basic information for informants	Browsed "category"	Clicked on the bag	Updated order list
Number of videos	Browsed the front page	Directly added same "brand" and series	Added delivery address
Number of purchases	Clicked on "brand" or recommended	Removed similar products from the cart	Marked as "delivered"
Whether to use ‘buy first, pay later’	Browsed the recommendation page and	Added "producst" from favorites to the	Clicked "part pay"
	Clicked to go to "brand" page	Proceeded to checkout	Checked part payment account and
	Search	*Pay*	Checked purchase
	Search "brand" or "product"	Checked postal code	Clicked and went to "Klarna Card"
	Browsed listing page	Filled in address	Clicked on "My Klarna"
	Clicked on a product image to enter the	Selected shipping company	Tested purchase"
	Sort by	Scheduled delivery time	
	Filter product attributes	Added discount code	
	Filtered by price range	Booked a time to visit the store	
	Copied the website address	Checked the details of the six-month	
	Open link with google	Used Klarna to connect to Swish for	
	Translated from Swedish to English	Used Klarna card for direct payment	
	Evaluate	Paid with Google Pay	
	Slid through product images	Click "bank and card" and pay the history	
	Expand and view product details	Click " Pay| Klarna"	
	View shipping info	Creat and use a one time card	
	Clicked on different colour	Copied the bank card info	
	Viewed size chart	Use interest-free payments	
	Slid through categories	Clicked on Buy first, Pay later with Klarna	
	Clicked to open the product picture	Checking Orders and Payments	
	Zoomed images		
	Added to "favourite"		
	Viewed "favourite"		
	View reviews		
	Clicking on "price check"		
	Turned off "only in stock"		
	Browsed price comparison		
	Clicked on "i" for quick viewing of		
	Shared with friends		

Firstly, the informants' behaviours, A3 paper and pen were used to record their performance during the consumer journey. It is important to clarify here that the recording of consumer behaviour on the paper was done using the researcher's native Chinese language, based on the fact that the researcher's native language is not English. The videos need to be played on a computer, the number of videos is large, and the total length of time is long, so a paper and pencil record is easier to administer and further organise than using a computer to record directly.

Secondly, to facilitate further analysis, each informant's basic information is first recorded in the file, including informant ID, gender, age, place of residence, date and time of recording. In addition, the document records the number of videos, number of purchases, and whether "Buy first, Pay later" in all videos submitted by informants.

Following the three stages in the consumer journey proposed by Lemon & Verhoef (2016): pre-purchase, purchase and post-purchase, all behaviours are marked on A3 paper in yellow, blue and green, respectively. The researchers then worked together to confirm the method of describing the behaviours, with the aim of standardising the way consumer behaviours are recorded and inputting it into the Microsoft Word document.

As consumers display a large number of behaviours during the pre-purchase and purchase stages, the pre-purchase stage is first classified. Based on the summary of Özbük et al. (2020), behaviour during the pre-purchase stage is divided into three parts: recognise needs, search and evaluate. According to Özbük et al. (2020), which describe the purchase stage as including the consumer's decision to buy and the payment process, behaviour during the purchase stage is divided into two parts: purchase decision and payment. Following these categories, predefined behaviours are classified and then standardised into consumer behaviour paths. Next, the two researchers revisited all the videos separately to minimise the possibility of missing data due to manual paperwork. And after confirming the final behavioural phrases, all behaviours were grouped into Table 3 according to categories.

Finally, all consumer behaviours recorded on paper were matched according to the predefined behaviour table presented in Table 3, and the behavioural path of these informants was recorded in a document named after 12 informants IDs with standard consumer behaviour paths.

4.5.7 Post-phenomenological interview

The methodology employed in this research follows the DPT framework proposed by Audy Martínek et al. (2022), which involves collecting observation data through screen recordings, followed by post-phenomenological interviews to highlight the motivations behind consumer behaviour. Specifically, in this research, based on the consumer behaviour observed in the use of Klarna, the researcher will ask informants to explain the antecedents and consequences of 'this behaviour'. At appropriate times, the researcher will ask further questions to explore the true motivations or investigate the context of certain behaviours. In qualitative research, interviews are a common method of collecting primary textual data to gather respondents' insights in a purposeful and in-depth manner (Easterby-Smith et al., 2021). Therefore, the choice of interviews was particularly appropriate in this research, because interviews can provide rich and detailed information about experiences and understandings.

In this research, the interviews were semi-structured, and the researcher prepared individual interview guides for each informant based on the observations. The interview guide was created after first-order coding of the observational data. Based on the summary of consumers' purchase behaviours path during the use of Klarna, the questions in the interview guides were set to ensure that the informants' interpretation of their behaviour was understood. In addition, all

consumers were asked to evaluate the functionality of Klarna. Twelve interview guides will be included in Appendix A. All interviews were done through video calls or voice calls via chat apps. Using Otter.ai, all interviews were recorded and transcribed. In this research, a total of 12 interviews were conducted, and each interview took approximately 7-11 minutes. Table 4 shows the schedule of the interviews.

Table 4: The schedule of the interviews.

Informants ID	Interview format	Interview's tool	Interview data (MM-DD)	Time of interview (HH:SS)
P1	video call	Wechat	05-01	08:12
P2	video call	Messenger	05-02	07:33
P3	video call	WhatsApp	05-03	10:01
P4	video call	WhatsApp	05-03	06:50
P5	video call	WhatsApp	05-04	07:02
P6	video call	Messenger	05-05	07:18
P7	video call	Messenger	05-02	07:47
P8	video call	WhatsApp	05-07	09:11
P9	video call	WhatsApp	05-08	07:17
P10	video call	WhatsApp	05-08	09:33
P11	video call	Wechat	05-10	05:50
P12	video call	Wechat	05-09	07:01

4.6 Data Analysis

In this research, empirical data from observations and interviews are cross analysed to gain insight into the behaviour of consumers in Sweden using Klarna to reveal their consumer journey. The observational data is collected in the form of visual videos. Before starting the interviews, the researcher converted the video data into textual data and created documentation of the 12 observations of the informants. Then, the researchers proceed to analyse the observational data first. The empirical data from the post-phenomenological interviews were collected as text transcripts, representing informants' interpretations of their 'behaviour' in the videos and insights into their use of Klarna.

To further summarise the collected video data, the researcher guided the inductive analysis of the data by referring to the Gioia method developed by Gioia, Corley & Hamilton (2013). The Gioia method is a common systematic analysis method used to guide the analysis of qualitative data, emphasising a systematic and rigorous theory of induction based on empirical data (Gioia et al., 2013). Based on the topic of this research, 'super apps', the functions and effects on consumers differ by geography, the use of this analytical approach allows for the development of new and exciting theories to emerge from the data and allows for comparisons to be made with past theories. It is, therefore, appropriate to choose to analyse the observations along the framework proposed by the Gioia method and to generalise the consumer journey regarding the use of super apps by consumers in Sweden.

According to Magnani and Gioia (2023), there are three key steps in developing a data analysis using the Gioia method in general, which are the creation of 1st-order and 2nd-order, deriving a grounded theoretical model. The steps in the data analysis are illustrated in Figure 5

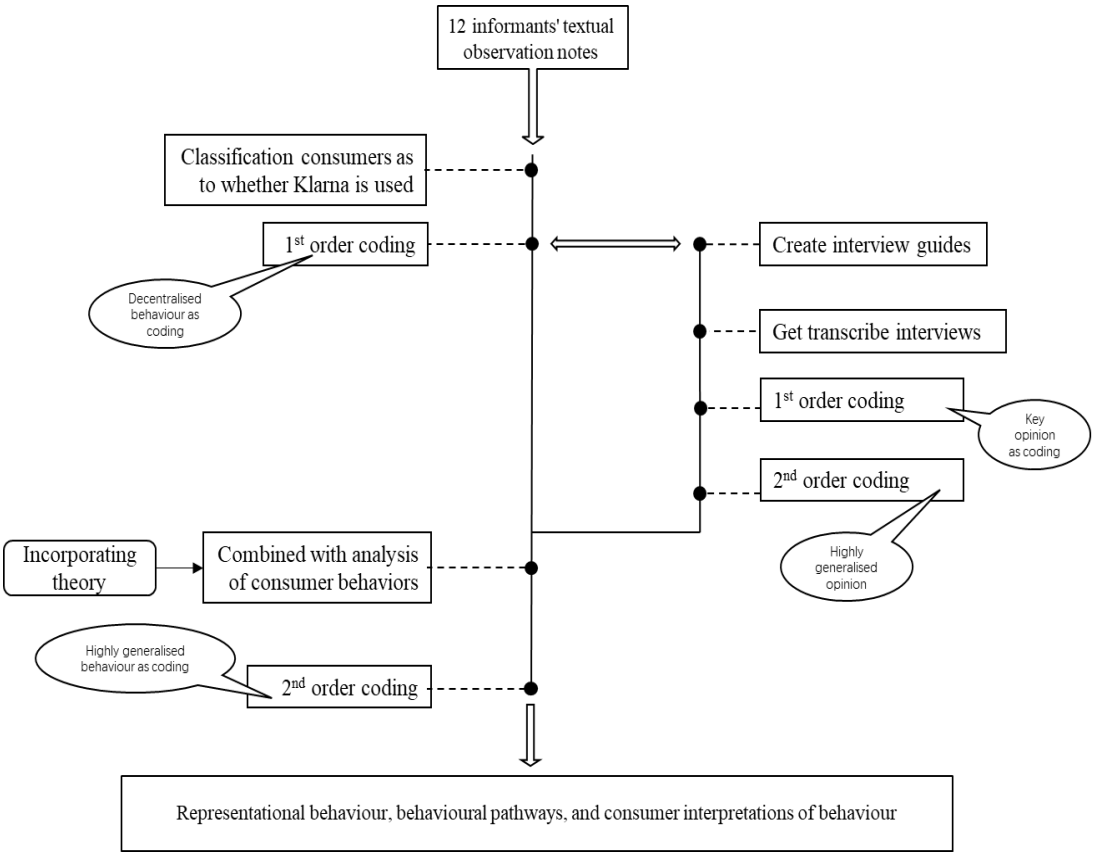

Figure 5: The steps in the data analysis.

Once the observation data had been collated, the analysis of the data began. The database for the first-order coding was 12 informants' textual observation notes. Before the first-order coding observations were recorded, consumers were first grouped based on whether they had used Klarna's key function "Buy first, Pay later" in the video. The aim is to present a comparative result to verify whether consumer behaviour and consumer journeys are affected by the use of a different function offered by Klarna and other super apps, namely "Buy first, Pay later".

The first-order coding of the observed data then begins. The first-order coding of the observed data then begins. By combining individual behaviours, a large number of behaviours can be grouped into multiple purchase behaviours paths, which is first-order coding. A consumer receives an email, opens the Klarna and starts viewing the push page" is an example of first-order coding. At the same time, a consumer purchase behaviours path based on first-order coding was summarised during the use of Klarna and interview guides were written in advance to ensure that informants' interpretations of their behaviour were understood.

After all the informants had been interviewed, the researchers read through all the interview transcripts and conducted first-order coding. During the coding process, the researchers carefully read through the transcripts and extracted the points that the interviewees wanted to

express. This involves categorising the interviews according to core viewpoints and retaining the original sentences of informants for the presentation of empirical data. Next, in order to answer research questions 1 and 2, the observed textual data and first-order coding of the interview transcripts were analysed in conjunction with the theoretical framework to obtain information about Swedish consumers who do or do not use Klarna's "Buy first, Pay later" function, the behaviour displayed by using super apps Klarna and the reasons for this.

Then, the first-order coding is done by further summarising the observed textual data and interview transcripts. Second-order coding is the use of simple phrases or sentences to present informants' behaviour and explanations for their actions.

Finally, consumer insights on super apps and touchpoints influencing consumer behaviours were derived based on second-order coding from the analysis of observational and interview data.

In order to fully understand the new consumer journey model and its insights regarding Swedish consumers' perceptions of super apps, the similarities, differences and contributions of the new findings to previous research were identified.

4.7 Validity and Reliability

According to Easterby-Smith et al. (2021), in the context of social constructionist epistemology of qualitative research, three concepts should be considered in judging the quality of research, respectively validity, reliability and generalizability. In this context, validity relates to the extent to which the research accurately reflects the phenomenon it claims to represent, reliability relates to the consistency of the findings, and generalizability relates to the extent to which the findings are applicable.

Firstly, as the researcher first reviewed previous literature before collecting the empirical data, and this literature contributed to the subsequent analytical coding process, it was necessary to explore the validity and reliability of the secondary data used in this research. Next, our research methodology, the DPT, brings together observation and post-phenomenological interviews, was designed with these factors in mind, and a variety of strategies were employed in the data processing process to ensure the reliability and validity of the analysis.

4.6.1 Validity

From a constructivist philosophical perspective, the validity of research refers to the extent to which data collection and analysis methods actually measure and describe the phenomena they are intended to describe (Easterby-Smith et al., 2021). Firstly, regarding the validity of secondary data, the use of databases such as Scopus and LubSearch, renowned for their wide range of academic resources, further enhances the effectiveness of the search. Additionally, peer review of journals and books, checking citation counts and evaluating publishers serve as quality indicators for the sources. These steps ensure that the sources are not only relevant to

the research question but also considered valuable contributions to the academic field, thereby increasing the validity of the collected secondary data.

Secondly, we considered the data collected to be valid. The researchers selected 12 informants, differing in their frequency of use of Klarna and their geographical location within Sweden, to ensure a rich set of data, each offering a unique insight into the Klarna user experience. The integration of these different angles provided a comprehensive understanding of the consumer journey within the super app, thereby increasing the validity of the research.

Thirdly, the validity of the research was enhanced by collecting data through both observation and interview methods to collect data from the perspective of both the researcher and the informants in two different capacities. On the one hand, the researcher began by asking informants to record any video of their use of Klarna during a two-week period by using the screen recording function on their smartphones and to observe their behaviours and record it from the researcher's perspective. On the other hand, during the post-phenomenological interview process, the researcher asks informants about any behaviours that were unclear or particularly interesting to ensure a proper understanding of their insights. In addition, data collection was designed to be as non-invasive as possible. The use of one's own smartphone as a tool for informants to record data went some way towards allowing respondents to relax and behave in the same way as they normally would. In addition, the use of microphones was prohibited so as not to cause unnecessary disruption to their normal usage patterns.

Finally, during the data analysis, the researcher synthesised the behaviours of informants during observations, interpretations during interviews, and previous research based on consumer journey, consumer behaviour, and consumer purchase using super apps, all three sources, to justify the results.

4.7.1 Reliability

Based on a constructivist philosophical stance, the reliability of the research is the extent to which the findings are reproducible under similar conditions (Easterby-Smith et al., 2021). In this research, reliability relied on the data being collected in an objective manner and analysed in a rigorous manner, thereby reducing the subjectivity of qualitative research.

Firstly, in terms of the reliability of the secondary data collection, a framework is provided by dividing the keywords into three groups: consumer journey, application, and super app, along with the use of Boolean operators. This ensures that the selected material is indeed relevant to the research topic and that other researchers can replicate the framework to produce similar results. Additionally, storing identified sources in Endnote facilitates retrieval and verification of the sources, enhancing traceability and thereby improving the reliability of the secondary data collection process.

In addition, the use of digital tracking data provided an objective record of the user's interaction with Klarna, reducing the influence of researcher bias. In addition, the iterative process of data coding and the use of the Gioia method for data analysis, which involved multiple rounds of coding and data classification, contributed to the systematic and replicable approach of the

research. This is because the induction and analysis of data along the analytical steps of the Gioia method helped the research to be conducted in a rigorous and systematic manner (Magnani & Gioia, 2023). Therefore, it is reasonable to expect that another researcher following the same methodological steps would have reached similar conclusions.

4.7.2 Generalizability

In the context of social constructs, generalizability refers to the extent to which the findings can be applied to other contexts or groups (Easterby-Smith et al., 2021). When it comes to generalizability, the researcher acknowledges that the findings in this research only ensure that it is representative of the Swedish region and that it has value within the European region. The desire to extend the applicability of the findings of this research requires careful consideration of context and consumer groups. The reasons for this are as follows:

Firstly, the Swedish company Klaran was chosen for the research platform because of its importance as a "super app" that was popular during the pandemic and served mainly European consumers. In addition, the research was conducted with 12 informants living in different Swedish cities. The informants were carefully selected according to clear criteria: They had to have a Klarna account, use the platform for shopping and visit the platform at least three times a week. The research was, therefore, geographically limited to Sweden. Although the sample is not representative of all Klarna consumers in Europe or of all consumers using super apps, the rich data that can be thoroughly generated by qualitatively exploring 12 informants provides insight into the use of super apps by Swedish consumers.

4.8 Limitations

From a generic perspective of the research, there are inherent limitations to any qualitative research, despite efforts to ensure validity and reliability (Easterby-Smith et al., 2021). In this research, a total of four elements contributed to the research limitations.

Firstly, based on the limited range of databases used in the research, that is, the research relied on Scopus and LubSearch to collect secondary data, the collection did not necessarily include all journal literature related to the keywords in the book. In addition, based on the research's use of citation counts and peer review as criteria for screening journal literature, the use of literature may introduce bias, as newer, less cited studies or studies published in lesser-known journals may be overlooked. As a result, there are limitations in the collection of theory.

Secondly, due to constraints in the allocation of research resources, Klarna was chosen as the single case for this research. The findings of the research are, therefore, specific to Klarna and its use in Sweden and may not be generalisable to other contexts or different categories of super apps. Thirdly, the researchers, also limited by resource constraints, screened for age and use of Klarna when recruiting informants, i.e., Millennials and Generation Z consumers with the experience of using Klarna as informants. This means that the researchers tacitly assume that

the results of the research are aimed at those who are already using mobile applications, even the young group that uses super apps.

Finally, due to privacy concerns, the research did miss some key information, such as the use of BankID, from being presented in the empirical data during the payment phase of the consumer journey of informants using Klarna, as it relates to the privacy of informants.

4.9 Consider with ethic

In line with the emphasis laid by Easterby-Smith et al. (2021) on considering ethical issues in the design, data collection, data analysis, and reporting of research results, many ethical considerations were upheld throughout the research process.

Before the data collection process, potential informants were contacted via a chat application. They were given a brief overview of the research purpose, research questions, anticipated contributions, research design, and data collection plans. Additionally, we discussed the potential applications of the research, the expected audience for the presentation, and the potential readers of the paper. Informant candidates who voluntarily agreed to participate were then formally established as informants for this research, ensuring informed consent. See Appendix B for the informed consent form for participation in the research.

We carefully respected the informants' privacy and confidentiality in all ethical aspects. All data collection procedures were conducted with the informants' full knowledge and consent. Given the research design, the paper disclosed the cities where the informants reside; however, this was done only after obtaining prior consent. To protect informants' privacy, identifiers were used instead of their real names. The process involving BankID was concealed to further safeguard privacy. In terms of video contributions from informants, no obligations were imposed on the number or duration of videos, and no purchases were mandated during this period. Moreover, to ensure the informants' right to comment on the research, the informants and researcher jointly reviewed the observation notes that had undergone secondary coding. Informants' opinions were sought to verify the accuracy of the information, ensuring a faithful representation of their behaviours in the videos.

Lastly, as Dawson (2019) suggests, ethical research involves not only ensuring privacy, informed consent, and the right of informants to comment on the research but also the secure handling of the collected data. In this research, the video data submitted by the informants were uploaded and stored on OneDrive, with access restricted to the informants who sent the videos and the two researchers. Thus, barring a data breach from Microsoft OneDrive, the secure storage and use of the data can be ensured.

To sum up, we maintain the ethical integrity of our research process, demonstrating respect for the rights, privacy, and opinions of our informants.

5 Empirical data and Analysis

The research collected a large amount of behavioural data by agreeing with 12 informants and observing their video recordings using the super app "Klarna" over a period of two weeks. The age range of these informants is 22-28 years old, with an equal gender ratio of 50% and their residential locations are distributed across seven different geographical regions in Sweden, encompassing the Southern Swedish city on Lake Vättern, The largest city in southern Sweden, Eastern Swedish city near Öland, Major port city on Sweden's west coast, Historic university city in southern Sweden, Northern Swedish city near the Arctic Circle and Southern Swedish city surrounded by lakes. Although informants were recruited with a brief understanding of their use of Klarna and to ensure that the inclusion criteria were met, the 12 informants used Klarna for varying lengths of time, frequency and number of purchases. Overall, the majority of purchases increased with the duration of use and frequency of access to Klarna. Table 5 shows the submissions of the 12 informants using Klarna over a two week period.

Table 5: Submissions from 12 informants using Klarna over a two-week period.

Informants ID	Number of recordings (times)	Purchase Times in two weeks (Times)	Whether used "Buy first, Pay later"
1	12	4	No
2	8	4	No
3	11	3	No
4	17	6	Yes
5	6	1	No
6	14	3	No
7	10	2	No
8	12	4	No
9	14	5	Yes
10	17	8	Yes
11	15	7	Yes
12	8	2	No
Total	**144**	**49**	

In order to achieve the research objectives and answer the research questions, the following section first shows and analyses separately the behaviour of the informants as consumers using the super app and the touchpoints that occur in the consumer journey. Then, a description is given of whether and how the super apps affect the consumer journey. In this chapter, consumers are used to representing those informants who were observed and interviewed, as the informants are involved in the research as consumers of Klarna when presenting the findings and analysis.

5.1 The behaviour using Klarna

In order to achieve the research objectives and to answer research question 1, we divided the behaviours involved during the use of Klarna by informants in Sweden into a total of five representative behaviours: navigating, browsing, checking out， paying and tracking. They are referred to as representative behaviours rather than steps, as the observations of this research have revealed that these five behaviours may occur in a different order in different situations along the consumer journey. In the following, the purchase behaviours path and the reasons for the emergence of each representative behaviour are described and analysed separately.

5.1.1 Starting a new consumer journey: Navigating

In this research, the first representative behaviour of informants using Klarna's consumer journey is navigating to the front page. Whether jumping to Klarna's front page from opening a mobile phone, from other software or from another interface in Klarna, navigating to the front page is the first behaviour of the consumer to start a new consumer journey.

This behaviour is similar to but different from the step 'recognise needs' described by Özbük et al. (2020), as it does not necessarily occur only when the consumer opens the Klarna app, nor is it necessarily purposeful.

The research found that the behavioural paths for navigating to the front page can be divided into two types: directly opening Klarna's front page and jumping back to Klarna's front page from somewhere. Table 6 shows some examples of behavioural evidence of consumers navigating to Klarna's front page.

Table 6: Some examples of behavioural evidence of consumers navigating to Klarna's front page.

Behaviour	Evidence
Navigate to Klarna's front page directly	Sometimes, if I see an email that catches my interest, I'm inclined to take a look. *(Informant 1 - Transcript of interview)* Opened Klarna - searched Nike ..... (Informant 9 - Observation Notes) I open it when I have to buy something. I browse around after completing my shopping. *(Informant 4 - Transcript of interview)* I often just browse Klarna like I'm strolling down a pedestrian street downtown, looking at things that pique my curiosity. *(Informant 1 - Transcript of interview)* Before, I would only buy what I needed, but now, after using Klarna, I often find myself drawn to the recommended items and spend more time shopping online.*(Informant 9 - Transcript of interview)*
Navigate back to the Klarna front page at any time during their product or brand page	When I don't have a specific product in mind, I browse through everything. I guess that's probably why I go back to the homepage. *(Informant 3 - Transcript of interview)* … perhaps it's just habit. (Informant 10 - Transcript of interview) I browse around after completing my shopping. (Informant 4 - Transcript of interview)

As Kumra (2006) mentioned, digital customers' purchase behaviour and the process of generating customer experiences are complex. As observations show, consumers can open Klarna directly by external or self-initiated efforts, while consumers may also navigate back to the Klarna front page at any time during their product or brand page to begin a new consumer journey.

On the one hand, the example of informants navigating directly to the Klarna front page is a common behaviour. This behaviour is probably due to the fact that hidden in the consumer journey, some touchpoints connect the consumer and the business (Özbük et al.,2020). One example is when informant 1 receives a push email and opens Klarna to browse. Another example is when informant 4 navigates directly to the Klarna front page several times because he can find the product he needs there. Another example is when the informant habitually navigates directly to Klarna because he wants to have a casual look.

On the other hand, for those who are navigating back to the Klarna front page from elsewhere, this behaviour may be due to the fact that consumers do not have a specific goal in mind when browsing the various products, as informant 3 said:

"When I don't have a specific product in mind, I browse through front page and try to find any offerings."

Another reason is because the navigating back to the front page may be a habitual behaviour, consumers can navigate back to Klarna's front page to begin a new consumer journey after processing or viewing a historical order. As a super app, Klarna offers consumers integrated functionality and a seamless experience (Fasnacht, 2021), which leads to habitual behaviour, as stated by informant 10:

"It's just habit."

This is the demonstration of a loyal consumer. It has been observed that represented by informants 10 and 4, they do not quit the Klarna app after browsing through the history of purchases or processing payments and often continue to browse even when no additional purchases are planned. As Oliver (1999) points out, when a consumer becomes accustomed to a brand, he has loyalty to that brand. Referring to Table 5, informants 10 and 4 both use Klarna for a longer period of time and make far more purchases in a two-week period than most consumers. This means that consumers may not know what they really want, but due to loyalty they will navigate to the front page for no reason.

5.1.2 Explore and discover: Browsing

According to the results of the research, the second behaviour representative of the consumer journey for informants using Klarna is browsing. Following the consumer is presented with a series of behaviours to explore and discover possible offerings after navigating to Klarna's front page.

After navigating to the Klarna front page, consumers begin browsing on their mobile phones. This behaviour consists of the 'awareness of need', 'search' and 'evaluation' phases, as defined by Özbük et al. (2020), in the pre-purchase stage. However, there are many other activities involved in browsing, such as aimless browsing.

The researchers found that after navigating to Klarna's front page, informants' behavioural paths fall into three main categories: firstly, consumers browsing aimlessly; secondly, consumers browsing purposefully; and thirdly, consumers leaving Klarna for some reason during the browsing period. Each of these behavioural paths is described below.

Aimless browsing

Firstly, the consumer may be aimlessly browsing through Klarna's recommendation page (see Figure 6). Observational data show that consumers browse the recommendation page, open the relevant recommendation link, access the website, scroll on the screen quickly and return to the recommendation page on Klarna to continue browsing. Aimless browsing like this is usually a long and repetitive process. As informant 5 stated：

"I often browse Klarna as if I were strolling down a downtown pedestrian street, looking for something to arouse my curiosity. “

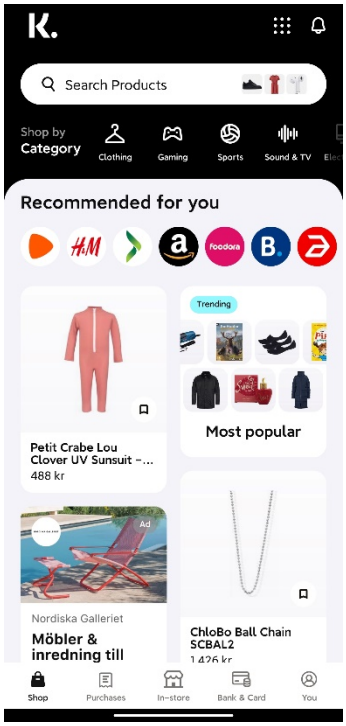

Figure 6: An example of recommendation page.

Özbük et al.'s (2020) perspective reinforces the claim of informant 5, who argue that the added reason for omnichannel consumers to purchase products and services is to enrich their lives. In addition, informant 8 confirmed that:

"Yes, that's right. Usually, I just browse and check out interesting products. I find it very relaxing ..... but of course, when I do need something, I will definitely buy it."

It can be inferred that consumers equate browsing on Klarna with shopping on a pedestrian street, so they repeatedly browse through the various products displayed on the recommendation page and access the online shops of different brands.

This behaviour is widespread, and consumers claim to browse aimlessly because they are using the recommendation function to find purchase inspiration, as informant 9 states:

"I often find myself drawn to the recommended items and spend more time purchase online."

Purposeful browsing

In addition to aimless browsing, another type of consumer browsing behavioural path is based on a specific purpose. At this point, the consumer already has a brand or a product in mind that they want to search for. As the touchpoints between brands and consumers are not identical in every consumer journey (Özbük et al., 2020), purposeful browsing by consumers may be focused on a brand, a product or a category. As Table 7 illustrates, examples of purposeful browsing behaviour are shown.

Table 7: Examples of purposeful browsing behaviour.

Category	Behaviour	Evidence
Access a brand's website	Browse aimlessly through Klarna's recommendations page	Opened Klarna - browsed through the recommendation page - clicked on Adidas Football …... *(Informant 6 - Observation Notes)*
	Directly searching for brand or product names and entering the official website	Informant 9: Opened Klarna - searched Nike…... *(Informant 1 - Observation Notes)*
Filter the products that best match consumer's needs	Using brand website's filters and categories to find target products	Returned to Klarna - searched Adidas - clicked on Adidas' logo - browsed the front page – filter by product category "Shoes" - filter by size 42 in stock - filter by white - sort by discount - clicked on a shoes image to enter the product page - viewed product details - selected size - added to bag..... *(Informant 10 - Observation Notes)*
	Consumers start browsing the listing page before clicking on or searching for a specific product	Returned to the front page - browsed the listing page - clicked on the product image to enter the product page - looked through the product details – zoom the image –exiting /repeated the process/ → Returned to the front page – search Kérastase …... *(Informant 3 - Observation Notes)*
	Comparing prices through Klarna's 'price check'	What I appreciate about Klarna is that it allows me to compare prices across different stores. *(Informant 8- Transcript of interview)*

In the first part, there are two ways for consumers to access a brand's website: by clicking on the brand page from the recommendation page and by searching for the brand page.

Firstly, when consumers access a brand's website from recommend page, they naturally begin to browse the listing page and click on or search for specific products. This is also a common course of action. As informant 3 repeatedly browsed the listing page in one video, clicked on

the product image to access the product page, looked through the product details, zoomed the image, returned to the front page, and returned to the front page. A specific brand, "Kérastase", was then searched for. This process aligns with the conclusion from Özbük et al. (2020) that the first step for consumers pre-purchase should be recognising their needs." Although this step is not the first action consumers take when opening Klarna, it occurs as consumers realise their needs during the browsing process.

In addition, consumers were observed searching for brands directly within the Klarna app platform and going to the official website. For example, informant 9 begins their shopping trip on Klarna by explicitly searching for "Nike". This behaviour indicates that consumers' purchase activity on e-commerce platforms such as Klarna is significantly influenced by their perception of a particular brand or product. This action emphasises the important role that brand loyalty plays in driving online consumer behaviours, a theory supported by Yuruk-Kayapinar (2020). Yuruk-Kayapinar (2020) advocates that loyal consumers tend to buy consistently from the same brand. Furthermore, another possible reason is that, as reported by informant 2, the advice given by Klarna did not always match their immediate needs, leading to having to search for them themselves. Therefore, one suggestion is that Klarna should consider continually improving the push function of the software system to give consumers quick access to their favourite brands or products.

The second part is when the consumer goes to the brand's official page and then starts browsing the listing page. The consumer may use filters and sorting functions to filter the products that best match their needs, go from the listing page to the product details page, and compare prices in Klarna. These three actions can happen recursively, but they can also occur independently or irregularly.

Firstly, consumers were observed to use filters and categories on the brand's website to identify targeted products within the Klarna app platform. It has been observed that some consumers tend to use filters such as product categories, sizes, colours and discounts strategically to simplify their search. For example, when looking for a shoe, informant 10 first use the filter function to select the product category 'shoes', filter by size in stock, then further filter by colour and sort by discount. This category of consumers perfectly matches the functionality consumers described by Kim and Lee (2018), namely that functional consumers tend to use a variety of functions during shopping. The use of filters in the Klarna app context, therefore, not only speeds up the search process, but also helps to provide a personalised shopping experience.

Secondly, another important behaviour is to access the product detail page and then learn about the product by a variety of common means. Common means of understanding the product include clicking on the product image on the listing page to access the product page, viewing product details, sliding through product images, expanding and viewing product details, viewing shipping info, clicking on different colours, viewing size chart, open the product picture, zoomed images. Based on the variety of products to be browsed and the different needs of consumers, a consumer is used to repeatedly going through these means in order to be systematically informed about the product. This systematic approach to understanding products emphasises the importance of detailed product information in influencing consumer decisions. informant 10 mentioned：

"I clicked on the product image to go to the product page, enlarged the image, checked the size chart, chose my size and then added it to my shopping bag."

This complex process reflects the integral role of comprehensive product detail in facilitating informed consumer decisions. Özbük et al. (2020) describe this behaviour as a pre-purchase assessment by consumers, aiming to show that consumers check and evaluate in a number of ways to ensure that they have purchased a product that matches their needs before deciding to make a purchase. Nevertheless, in the course of assessing the product, consumers demanded the ease of use and perceived usefulness of Klarna. This indicates that the findings related to consumer perceived usefulness and ease of use examined by Davis (1989) are also applicable to super apps. This is probably due to the fact that Klarna, being a super app, is a mobile application in its own right. As informant 4 expressed some of the product images in Klarna could not be easily zoomed in:

"Oh, damn, Klarna, I have to say I was trying to zoom in on the product image. It wasn't me staying there; my fingers were trying to zoom the picture, but there was no response."

This confirms Watson et al. (2013) argument that when consumers do not perceive a mobile application as usable, negative attitudes can be generated, leading to a negative consumer experience. Additionally, informant 8 has complained that Klarna has too few images:

"Klarna seems to have fewer images than I'd prefer, so I rely heavily on consumer reviews. "

The description of informant 8 confirms that the usefulness of the app also has a significant impact on the consumer experience (Watson et al., 2013).

Finally, one of the key actions that consumers take when browsing for information on specific products in Klarna is to compare prices using Klarna's integrated functionality. This is a function that is often praised by users of Klarna as a super app. Many informants appreciated this function, revealing the important role that price comparisons play in their purchasing decisions. For example, informant 8 emphasised the importance of comparing prices in different shops before making a decision and said：

"*What I appreciate about Klarna is that it allows me to compare prices in different shops."*

Another example comes from an interview with informant 9:

"Klarna is very helpful for me to find the best prices and discounts."

Possible reasons explain the popularity of this function are that it satisfies both the convenience and efficiency required by the pragmatic consumer (Kim & Lee, 2018), and the hedonistic consumer's requirement for seamless shopping (Alnawas & Aburub, 2016). However, it is worth noting that due to consumers' demand for convenience and seamlessness, Klarna's price comparison function is still being complained about due to some overlooked situations. On the one hand, while Klarna's 'Price Check' function is valuable for price comparisons, it is less effective for hotel bookings. informant 10 illustrated that although they used Klarna more

frequently to search for hotels due to the upcoming holidays, they felt that the hotel price comparisons on Klarna were not as detailed as Google Maps. And informant 2 repeatedly searched for Mango and Zara in Klarna and browsed for similar offerings. Although this may seem like unusual browsing rather than comparing prices, informant 2 admitted in the interview that.

"…… at the time, I was probably comparing prices."

This evidence likewise points to the problem of the ease of use of the mobile application, as highlighted by Davis (1989). Therefore, Klarna could further improve its price comparison function, particularly in areas such as hotel bookings, to meet consumer expectations and enhance its purchase experience.

Quit Klarna during browsing

Despite the complex and varied behaviour observed in Klarna, it is also common for consumers to quit Klarna during their browsing.

The most likely reason for consumers to quit Klarna is that for a specific product, consumers would like to check reviews or quit Klarna to search for the same product on another platform or webpage. Informant 10 explains their use of Klarna in conjunction with a search engine to gather more product data:

"I often use Klarna in conjunction with a search engine. This is because some products on Klarna have few or no reviews. If I want more information, I can check the reviews on YouTube or Google. This helps me to make a more informed decision."

In addition to the common behaviours, there are five individual behaviours quit from the Klarna that occur.

Firstly, the research also uncovered a special behaviour. Informant 8 demonstrated the behaviour of copying product details and translating them into English when viewing a product description. The observation that he uses a translation tool to verify product specifications emphasises how consumers can find ways to overcome language barriers to ensure the accuracy of their purchases. As he explained this behaviour in the interview：

"I need an English translation to confirm the product specifications. The TV is expensive, and it would be a lot of trouble if I bought the wrong one."

A possible inference is that consumers do not rigorously trace all product information, however, expensive products lead to more careful evaluation by consumers and the issue of language barriers are involved during evaluation. This reflects the high involvement purchases and low involvement purchases of digital consumers (Yuruk-Kayapinar, 2020).

Secondly, informant 1 quits Klarna in the middle of browsing as the site takes too long to load and can be a deterrent to consumers. In the observation notes, informant 1 waits for more than 20 seconds before closing Klarna. This is not a coincidental situation, as informant 1 stated:

"Yes. I was not happy, so I left. In fact, I often have this problem and quit it. Sometimes it doesn't' load."

This suggests that factors such as page load times can lead to the creation of negative consumer emotions, which can affect the online purchase experience and consumer satisfaction (Kall, 2021).

Thirdly, informant 8 showed the behaviour of stopping browsing after receiving a message. This situation reflects the impact of interruptions on the online purchase process, as explained by informant 8:

"Sometimes, I check important messages, and then I'd forget about my previous purchases, but start over when I remembered."

The statements of informant 8 confirm Siebert et al.'s (2020) argument for the unpredictability of the consumer journey. While Siebert et al. (2020) only describe in a positive light that consumers can start the consumer journey in an unpredictable form due to stimuli, the behaviour of informant 8 complements the evidence on the flip side that consumers can also quit unpredictably due to external interruptions.

Fourthly, selecting a product, informant 8 exhibited the behaviour of thinking for a while after selecting a product. As informant 8 emphasised, when faced with an expensive purchase, he needed to take some time to think about it, emphasising the role of cognitive deliberation in the purchase decision:

"Well, it's quite an expensive product, so I backed out at the last moment because I later went to the store to see the product in person, but I still haven't decided to buy it. "

The behaviour of taking time to consider before proceeding with a purchase, especially for expensive items, matches Yuruk-Kayapinar (2020) regarding highly involved consumers being cautious about buying expensive products.

Finally, informant 3 describes the behaviour of shifting attention away from current product information due to other inspirations:

"I guess I was considering buying the MacBook but then for some reason, probably because they are both electronics, I thought of the Kindle. "

As it turned out, during the product search, she shifted her attention to different products. Here, the inspiration, as described by Siebert et al. (2020), "stimulates" the navigating consumer to start a new consumer journey.

5.1.3 Make a decision: Checking out

Observations show that the third consumer representative behaviour is checking out. The consumer adds the products to the shopping bag and then makes a purchase decision and jumps

to the payment stage. Table 8 shows a few examples of consumer behaviour regarding checking out.

Table 8: A few examples of consumer behaviour regarding checking out.

Behaviour	Evidence
Consumers to decide to add a product to their shopping bag and then pay for it directly	Returned to Klarna – search "mugs" – [browsed the listing page - clicked on the product image to enter the product page - looked through the product details - added to favorites – go back to search results] /repeat the process/ - go to favorites - selected a mug - added to bag - processed to check out..... *(Informant 2 - Observation Notes)*
Paste the discount code, After entering the postcode, add the information and select the delivery method	… added to bag - Click Deals- copy Promo codes- Go to Willys shopping cart - check out ….. *(Informant 4- Observation Notes)*
Find a near store and make an appointment/select to visit	I didn't complete the order online because the shipping fee was 399. So, I decided to buy it in-store instead.*(Informant 1 - Transcript of interview)*

Firstly, the most common behaviour is for consumers to decide to add a product to their shopping bag and then pay for it directly. The first step in the consumer's behavioural path to checkout is to add to bag. For example, Informant 1 navigates back to the listing page, repeatedly browses, clicks on product images, access and exits product pages, finally selects the right product to add to bag and goes to check out. As Court et al. (2009) proposed, in the consumer decision journey, the consumer initially considers, actively evaluates and thus determines the purchase decision before making a purchase decision.

However, as argued by Siebert et al. (2020), sometimes consumer behaviours are unpredictable. In order to make better decisions, it was observed that the consumer might selectively add items to the shopping bag from the favourites list or redecide in the shopping bag. For example, informant 2 adds a number of cups to her favourites list as she browses through the cups, then, at the end of her browsing, she goes to favourites plus and adds only one cup to her shopping bag. Informant 1 claims this is the wish list:

> *"I usually save items to my 'wish list', while adding to the chart means I like it and want to buy it. However, the final purchase still depends on my needs."*

This behaviour indicates the importance of the 'favourites' or 'wish list' function in the purchase process. This function allows consumers to save items they are interested in for future consideration or purchase, thus enhancing the personalisation and convenience of the purchase experience. Another possible reason for this is that this signifies the iterative nature of online purchases and emphasises the fluidity of consumers' decision-making processes as they constantly re-evaluate their needs and wants during the purchase process (Lemon & Verhoef, 2016).

Then, as for the payment process, in general, the checkout process included entering a postcode, adding delivery information, and selecting a delivery option. In addition, consumers also use the discount code at checkout if possible. They add the item to their shopping bag, visit the "deals" section (see Figure 7), copy the promo code, return to the shopping bag and proceed to checkout. Observations have shown that consumers typically use the auto-fill function to fill in

information such as address, name and phone number. The exception to this was when the informants purchased food, which required them first to enter their address and postcode to determine the shop's deliverability. Although no informants commented on this in the interviews, the silky smooth checkout process for informants is in line with Davis' (1989) emphasised that consumers agree that the ease of use of mobile applications creates a good consumer experience.

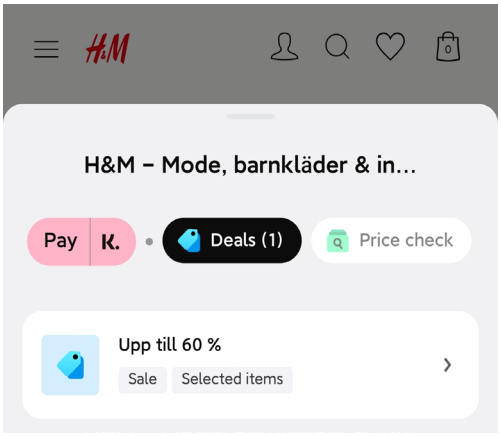

Figure 7: An example of "Deals" in Klarna.

Although online payment and delivery to address are most common for the mobile channel, after browsing or booking online, consumers may choose to buy or collect in-store. One possible reason for this is that consumers do not want to pay the high shipping costs. As informant 1 responded:

> *"I didn't complete the order online because the shipping fee was 399. so, I decided to buy it in-store instead."*

Furthermore Yasav (2015) also gave another possible reason that omnichannel brands can combine mobile and offline channels to interact with consumers and thus drive consumption.

5.1.4 Choose payment method: Paying

The fourth representative behaviour is paying. When the process comes to the payment stage, it is at this stage that the general consumer and the loyal consumer begin to behave differently. As a super app, Klarna offers consumers a seamless consumer journey by linking online purchases with the convenience of mobile payments. Therefore, different levels of mastery and trust in Klarna's functionality may lead them to choose different means of payment. Table 9 shows a few examples of behaviours of consumers' payment habits and preferences.

Table 9: A few examples of behaviours of consumers' payment habits and preference.

Behaviour		Evidence
General consumer	Check the instructions for interest free payment and proceed to Swish/google payment	I use Swish because it's the most convenient. I don't want to use the "buy now, pay later" option, as I think it's risky. I often see complaints on TikTok about not being able to repay or forgetting to repay, and you know, I don't want to bring myself more trouble. I have to keep thinking about the repayment date. If I forget, my credit may suffer. I don't want this to happen. I have to pay sooner or later, why not pay now. *(Informant 1 - Transcript of interview)* Entered the postal code - used Google to autofill the address - checked the delivery options – pay with google pay.....*(Informant 3 - Observation Notes)* I know this is the main function of Klarna. But my friend told me he forgot to pay back the money and had expensive late fees. I don't want to use it and I'm worried I'll pay late fees. *(Informant 6 - Transcript of interview)*
Loyalty consumers	After creating a one-time card return to the purchase screen and use the card to checkout	→ Returned to Klarna - create a one time card – copy the card information → Returned to Nike's store – enter the postal address - choose deliver method – proceeded to checkout – paste card information – processed to checkout.....*(Informant 10 - Observation Notes)*
	Select buy now pay later and then select pay in one month	Entered the postal code - autofill the address - choose deliver method - clicked on Get first, Pay later with Klarna.....*(Informant 4 - Observation Notes)*
	Choose to pay in instalments after selecting Buy Now Pay Later	..... check out- selected a payment method - chose Klarna's "4 interest-free payments" - proceeded to checkout .....*(Informant 10 - Observation Notes)*

Based on the records of the 12 informants shown in Table 5, we found that the informants who used "Buy first, Pay later" were ahead of other consumers who did not use it, both in terms of the number of entries to Klarna and the number of purchases carried out. As Klarna's (n.d.) self-evaluation, the functional advantage of Klarna as a super app is that it offers consumers "Buy first, Pay later" payment and financial services. "Buy first, Pay later" can be seen as a function that may increase consumer loyalty. As a result, consumers were divided into two categories, general consumer and loyal consumer, based on whether the informants used the "Buy first, Pay later" "function in the submitted videos as a criterion to differentiate the groups. The reason for naming the consumer groups as such is that the general consumer group means that they, as consumers, see Klarna as a super e-commerce, while the loyal consumers use Klarna as a super app for a variety of functions, e-commerce, payment, and financial services. The general consumer has eight categories, including informants 1, 2, 3, 5, 6, 7, 8 and 12. Loyal consumers have four, including informants 4,9,10, and 11.

Group of general consumers

The general consumer prefers to use instant payment methods such as Swish or Google Pay. They are concerned about the potential risks and late fees associated with late payments. Informant 6's concern comes from his friend:

> *"My friend told me he forgot to pay back the money and had expensive late fees. I don't want to use it and I'm worried I'll pay late fees."*

Informant 1 had the same concern due to comments she saw on TikTok, said:

> *"I often see complaints on TikTok about not being able to repay or forgetting to repay, and you know. I don't want to bring myself more trouble."*

These responses reflect the influence of perceived risk on the choice of payment method. As informant 12 stated:

"... as an individual user you may be concerned about security and privacy issues when using Klarna to pay ".

Although Alipay, which offers the same type of financial services, has not been challenged in this way in China (Steinberg et al., 2022), Fasnacht (2021) emphasised that European consumers are more concerned about privacy and digital security than Asian consumers. Therefore, whether the lending services offered by super apps can be trusted and accepted by all within the Swedish region still needs further research.

Loyal consumer groups

Loyal consumers usually choose to "Buy first, Pay later". Observations show that there are two ways in which informants "Buy first, Pay later": the first is to create a one-time card directly at the checkout, and the other is to simply choose to "Buy first, Pay later".

Firstly, loyal consumers may use Klarna to create one-time cards for online and in-store payments. An example is that after informant 4 has selected the products they want to buy, they create a one-time card through Klarna, copy the card information, return to the brand's online store, and use the one-time card to check out." In the interview, informant 4 explained this behaviour in the interview:

"Because of security. in fact, is I have enough time, I will create a one-time card payment so that I don't have any information to give out."

This behaviour reflects the critical role of security in online payments, as the use of one-time cards may be a strategy to minimise the risk of potential fraud, which is consistent with research conducted by Johnson et al. (2018) on the importance of perceived security in online transactions.

Seventh, loyal shoppers may also choose to "Buy first, Pay later" and pay back the full amount within a month. They enter their postcode, auto-fill their address, choose a delivery method and then select the option "Buy first, Pay later" with Klarna. A possible explanation for this is that consumers are certainly willing to accept a more flexible payment method when they feel that the payment method offered by Klarna is safe (Johnson et al., 2018).

In addition, loyal consumers may also choose to pay in instalments. This approach highlights the impact of financial convenience on payment method choice and consumer understanding of the financial services offered by Klarna. As informant 10 experienced, despite similar concerns about late payments, he has ensured payment security and enjoyed flexibility by developing a habit of checking his debt repayments and using Klarna to manage his expensed:

"I've developed a habit of checking my account before any purchase .... There's a progress bar there to ensure that I don't overspend each month. If I see that I've spent two-thirds of my limit mid-month, I might cut down on purchasing non-essential items. "

Informant 10, as a typical example demonstrates that consumers are more likely to accept a payment-oriented super app when they perceive it as safe and notice its outstanding benefits. This is in agreement with the conclusion of Johnson et al.'s (2018) study that perceived security and awareness of the advantages of the app have a positive impact on consumer acceptance of the app. Furthermore, for the loyal consumers in the 12 informants of this research who used "Buy first, Pay later", Fasnacht's (2021) study provides an explanation that this is because Millennials, despite their focus on safety, are more focused on convenience and on the ability of the application to integrate everything and to access and pay anytime, anywhere. Therefore, one of Klarna's approaches to developing loyal users is to alleviate general consumers' concerns about the mobile payments provided by Klarna and to let them see the advantages inherent in them.

5.1.5 Fulfilment of the order: Tracking

The final representative behaviour in the consumer journey of informants using Klarna is Tracking. This is contained in line with the post-purchase stage as described by Lemon & Verhoef (2016). In the pre-purchase stage, the main consumer activities include tracking and reviews (Lemon & Verhoef, 2016). However, as there is no discussion community for reviewing products in Klarna, this line is not discussed in this research. Table 10 represents The behaviours of consumers tracking using Klarna.

Table 10: The behaviours of consumers tracking using Klarna.

Behaviour	Evidence
Consumers open the Purchase page to check their orders	You can see the package shipping information in the software as well. Orders paid for with Klarna or not can be seen on the software. This is quite convenient for people who rely on Klarna, as they can see several parcels in the same application.*(Informant 3 - Transcript of interview)*
Loyal consumers check the Monthly budget and payment deadlines for purchases	I can set a monthly expenditure limit for myself. There's a progress bar there to ensure that I don't overspend each month.(Informant 4 - Transcript of interview) ...clicked on payments - clicked on purchase in progress – browsed purchases – clicked on an order which “due in1day” .....*(Informant 10 - Observation Notes)*

Firstly, consumers may be tracking their orders after purchase. Benefit from the fact that Klarna is an integrated platform that enables consumers to track multiple packages in one spot. As informant 12 exclaims:

> *"You can see the package shipping information in the software as well. This is quite convenient for people who rely on Klarna, as they can see several parcels in the same application."*

In addition, informant 4 used "Buy first, Pay later", who demonstrated the behaviour of monitoring their monthly budgets and payment deadlines for purchases. They have demonstrated their ability to manage their finances by setting a monthly expenditure limit for themselves to prevent overspending and regularly checking payment dates to prevent late payments. As informant 4 said:

"I can set a monthly expenditure limit for myself. There's a progress bar there to ensure that I don't overspend each month."

This habit illustrates the growing trend towards financial self-management and self-literacy among online purchasers. Echoing Fasnacht's (2021) research, more and more consumers are integrating digital banking and payment services into their daily lives through "super apps" that include financial services, further seamlessly integrating personal finance management into their lifestyles.

5.1.6 Summarising consumer behaviours

To answer research question 1: "What behaviours do consumers in Sweden exhibit when using super apps?" based on the behaviours shown by the 12 informants during their use of Klarna and their interpretation of their behaviours. Figure 7 shows that the consumer journey of consumers using Klarna, a super app, in Sweden consists of five main representative behaviours. The five representative behaviours are navigating, browsing, checking out, paying and tracking. Based on Klarna's role as a super app, offering consumers a wide range of functional services and a readily accessible platform, there are differences in the sequence of consumer behaviours when using Klarna.

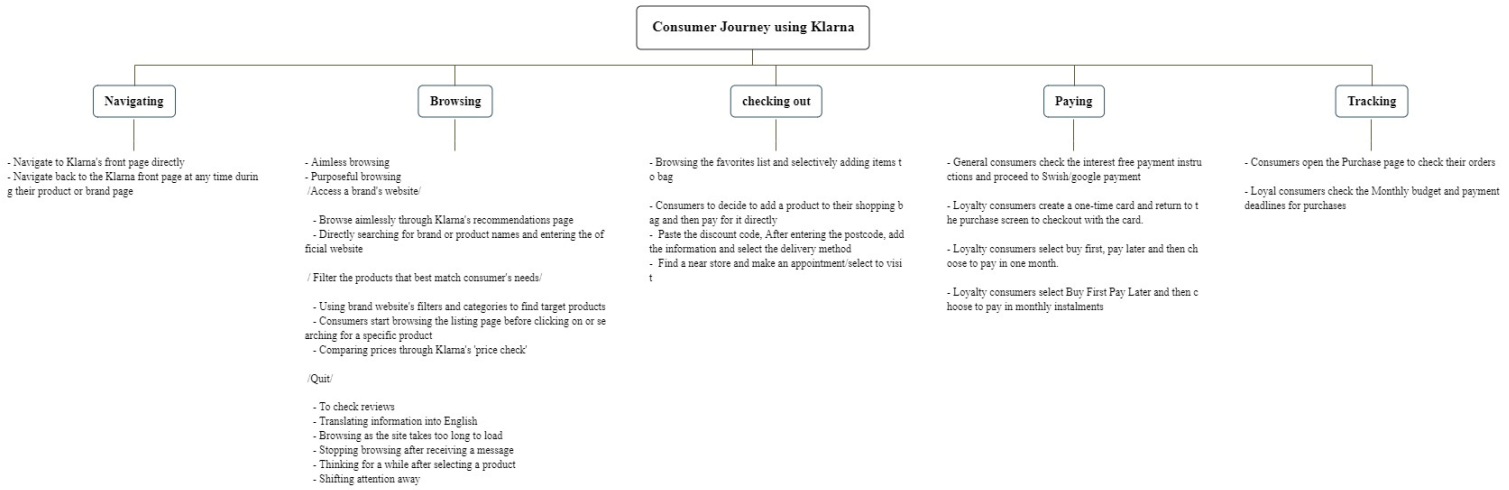

Figure 8: The consumer journey of consumers using Klarna.

It's particularly worth mentioning that in this research, based on whether they used "Buy First, Pay Later", twelve informants were grouped. We found that the group that used "Buy First, Pay Later" demonstrated a high level of loyalty to the Klarna super app, as inferred from their purchase frequency, browsing time, and insights into some habitual behaviours during

interviews. These loyal consumers are much more active than general consumers in purchasing and proficiently using Klarna's functions. They have mastered nearly all of Klarna's buying and payment functions, making their consumer journey on Klarna incredibly smooth. This embodies the deep interactive engagement that Klarna has achieved with its consumers by continuously providing services. Meanwhile, general consumers showcase how they navigate their consumption journey by using a full-featured e-commerce super app.

In summary, based on the behavioural paths demonstrated by the informants as consumers found and understood in this research, consumers' behaviour during their consumer journey doesn't always follow the general sequence of purchasing decisions. This perspective supports the results of Siebert et al. (2020), namely the uncertainty of the consumer journey. This is because, considering the convenience of mobile channels, starting on a new consumer journey is no longer riddled with difficulties. On the contrary, through mobile phones and super apps, whether the consumer is on a consumer journey or the consumer is experiencing the previous consumer journey, navigating to the front page and starting a new consumer journey can happen at any time. This is mainly due to the one-stop, seamless shopping experience provided by mobile phones and super apps, making it easy for consumers to enter into new consumer journey.

To give a clearer view of the behaviours of Millennials and Generation Z consumers using Klarna, a super app that provides digital payment services, in the research. Figure 9 further illustrates the possible behavioural paths for consumers to jump between the five represented behaviours. In Figure 9, the dashed arrows represent potential behavioural paths, meaning that a user may or may not follow this path. The solid arrows imply that once an action is taken, another action will invariably follow.

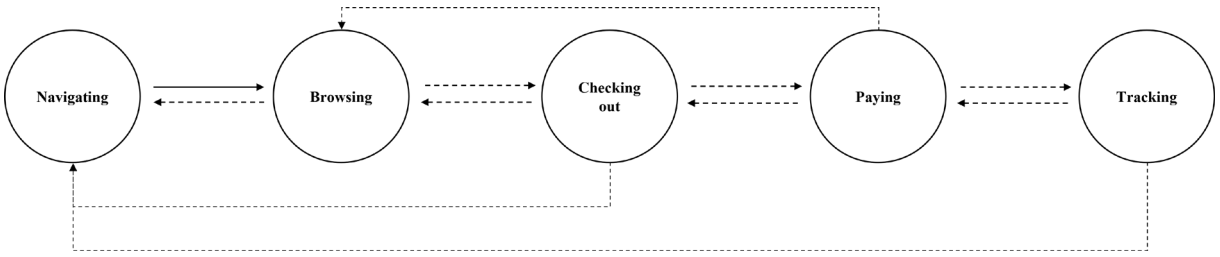

Figure 9：The possible behavioural paths for consumers to jump between the five represented behaviours.

5.2 Multi-touchpoint consumer journey

Having demonstrated and understood consumer behaviours, following Lemon & Verhoef (2016) proposed four touchpoints between business and consumer. The next section summarises and describes the touchpoints between the 12 informants and the Klarna. As a super app, Klarna is a touchpoint between consumers and brands, marketing to consumers, providing them with inspiration, helping them consolidate the information needed for decision making, and offering an integrated platform for shopping, payment, and tracking.

In general, touchpoints in the consumer journey can be divided into four categories, namely brand-owned, partner-owned, consumer-owned and social/external touchpoints (Lemon & Verhoef, 2016). Following the five representative behaviours summarised in research question 1 and thus answering research question 2, which is "Which touchpoints establish the connection between the brand and the behaviours?". Figure 10 shows the touchpoints that correspond to the five representative behaviours of consumers using Klarna.

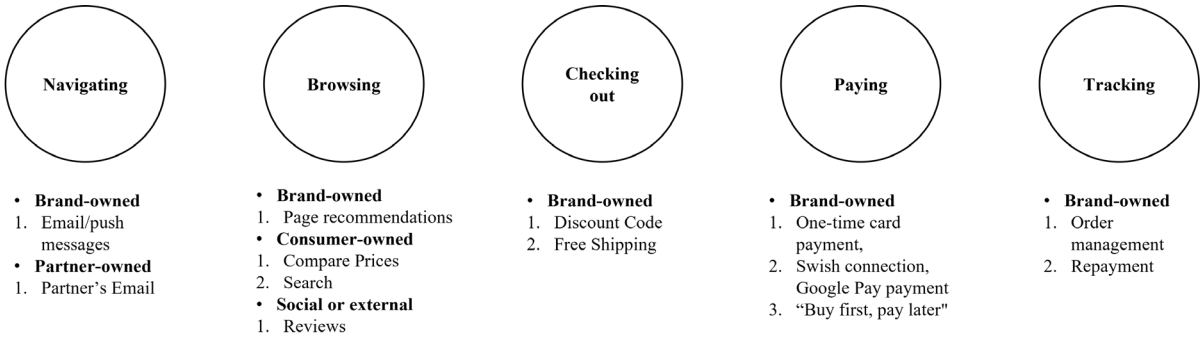

Figure 10：The touchpoints corresponding to the five representative behaviours of consumers using Klarna.

5.2.1 Navigation: brand-owned and partner-owned touchpoints

This research found that Klarna's touchpoints that trigger consumers to start a new consumer journey include brand ownership and partner ownership.

Firstly, the brand-owned touchpoint implies the company's own marketing channels. In this research, it was Klarna's emails and push messages that inspired consumers to navigate to the front page. The consumer opens the Klarna app in response to receiving a push email from Klarna and pop-up windows on their mobile screens. As shown in the screenshot of the Klarna Email (see Figure 11). When considering Klarna's advertising emails as brand touchpoints, researchers can identify that the decision of consumers to open the app after seeing the email may be influenced by the relevance of the email content. This is because researchers have observed that what is recommended to consumers in emails is often an item they have viewed in a previous video or a similar item. Therefore, the relevance of the content of the email to the consumer's current needs is likely to be one of the main drivers.

Figure 11:Screenshot of Klarna's email push.

Furthermore, the response from informant 5 provides a possible reason for this behaviour, suggesting that the pushed content was sufficiently attractive to the recipients to prompt them to navigate and browse Klarna's front page. This is consistent with Wang et al. (2016), who observed that consumers are willing to receive advertisements sent to them that can provide value.

Combining viewpoints from the literature, this behaviour may be influenced by the potential satisfaction of consumers. As Shaw and Ivens (2002) stated, when consumers generate positive emotions with a business, satisfaction naturally arises, prompting them to voluntarily choose this business. Over time, this may even accumulate into brand loyalty.

In addition, consumers are not only approached and opened to Klarna through Klarna's own direct marketing activities, but also potentially through partnerships with other brands. The presence of the Klarna payment logo on the email page also acts as a trigger for consumer behaviours when a consumer receives an email from the partner brand. For example, informant 1 notices the information in an email from a sports brand that he can pay with Klarna, which inspires him to open the Klarna app and search for the brand. On the one hand, this may be because the presence of the Klarna payment logo in partner brand emails obviously strengthens consumers' cognition of Klarna. On the other hand, consumers may therefore consider shopping with Klarna more convenient because they can avoid downloading additional mobile applications or turning on their computers. As Davis (1989) believes, perceived ease of use is one of the key factors determining whether consumers are willing to continue using this technology. This involves the perceived ease of use that may be an important factor prompting them to choose Klarna for shopping.

5.2.2 Browsing: consumer-owned, brand-owned, social/external touchpoints

The browsing stage of the consumer journey in the Klarna app involves consumer-owned, brand-owned, and social/external touchpoints. Together, these touchpoints shape the bridge between the consumer and Klarna during the browsing of the Klarna app.

In terms of consumer-owned touchpoints, price comparison and search functions are widely used. This result is consistent with the touchpoints of online marketing channels summarised by Anderl et al. (2016), where consumers want to use the search and price compare functions provided by the platform to get more information to make the best shopping decision. The price compare function provides a convenient platform tool that allows consumers to choose among different suppliers, thereby seeking the most cost-effective products. Moreover, the behaviour of using the search function directly reflects the needs and purchasing goals of consumers and can help consumers quickly find the products they want. For those consumers who have specific needs and tend to conduct specific information searches, their use of Klarna seems to be more purposeful and efficient. They know what they want, and they know how to use Klarna to satisfy their needs. This indicates that these consumers are already familiar with Klarna, are used to using its search and purchase functions, and may also be loyal users of Klarna. As informant 4 explained in the interview that the intention to collect information was already present when

Klarna was opened. This shows that consumers have a clear understanding of their needs and have started to collect information in a systematic way. Here, as Özbük et al. (2020) emphasise, the first two steps of the consumer journey are when consumers become aware of their needs and start searching for information based on their needs.

Regarding the touchpoints that the brand owns, such as the recommended products/brands displayed on the product details page, this represents Klarna's active way of guiding consumers. This redirection strategy not only helps to enhance the shopping experience of consumers by showcasing products they may be interested in but also guides consumers to extend their browsing time, increasing the likelihood of their purchases (Anderl et al., 2016). The interview with informant 2 demonstrates the act of adding other recommended products displayed on the page to the bag immediately after adding the product. Informant 2 said:

> *"Yes, I always eat products from this brand and have tried all the flavours. This behaviour enhances the role of brand loyalty and product familiarity in purchase decisions, as well as the potential effectiveness of timely and relevant product recommendations in prompting additional purchases. "*

This behaviour is consistent with Yuruk-Kayapinar's (2020) argument that loyal consumers tend to buy consistently from the same website.

With regard to social/external touchpoints, consumers look for reviews outside of Klarna. There is evidence that consumers are influenced by consumer reviews. As Interview statement by informant 8:

> *"It's hard. All I can say is that if a product has a lot of bad reviews, I won't buy it."*

As a result, if consumers cannot find enough reviews, they will turn to other platforms for more information. This confirms the importance of social/external touchpoints, as emphasised by Lemon & Verhoef (2016). Consumers decide whether to purchase a target product by finding out what others have to say about it. However, it is worth mentioning that the observations and interview results of all 12 informants did not confirm Yuruk-Kayapinar's (2020) argument that positive word-of-mouth helps consumers make purchase decisions. This may be because such a conclusion requires a more in-depth exploration of consumers' subconscious, which cannot be obtained solely through observation and interviews.

5.2.3 Checkout: brand-owned touchpoints

During the checkout process by consumers, the brand-owned touchpoints mainly manifest in the form of two incentive measures: discount codes and shipping fee reductions. These two strategies are key touchpoints that the brand controls and can adjust and optimise.

Firstly, discount codes, as a powerful incentive measure, can entice consumers to increase their purchase amount or to buy certain products. The use of discount codes not only reduces

consumers' perceived prices, thus increasing their willingness to purchase products, but also enhances consumers' shopping experience by incentivising them to make additional purchases.

Secondly, free shipping is another effective incentive measure. As researchers have observed, consumers, after learning about the minimum spending required for free shipping, return to the product list to continue browsing. This demonstrates that consumers take shipping costs into account when weighing their purchasing decisions. In order to qualify for free shipping, consumers might increase their purchase volume or seek out additional worthwhile goods to buy. As informant 2 has stated about getting free shipping:

> *"I wanted to take advantage of the free shipping if there was anything else I needed. So, I was browsing the discount page to see what was available…. I don't want to buy unnecessary items just for free shipping. But I will try to see if there's anything worth buying."*

This behaviour is in line with research by Steinhoff and Zondag (2021), who stated that offering appropriate incentives, such as free delivery at the pre-purchase stage, can create a positive consumer experience and increase consumer loyalty.

5.2.4 Paying: consumer-owned touchpoint

According to Lemon & Verhoef (2016), one of the consumer-owned touchpoints is the consumer's choice of payment method. As Klarna's diverse payment methods provide an important touchpoint that reflects consumers' personalised needs for payment options. These payment methods not only meet the different payment needs of different consumers but also meet the payment needs of different shopping scenarios. For those consumers who are more comfortable with instant payments and prefer a one-time payment, they can choose to pay with a one-time card or connect to Swish or Google Pay. These payment methods offer an immediate and convenient payment experience, meeting the needs of consumers who want to shop instantly. However, for consumers who want more flexibility in managing their shopping spend and prefer to pay in instalments, Klarna's "Buy first, Pay later" lending offers an attractive option. This method provides a shopping credit that allows consumers to enjoy the product at the time of purchase, while payments can be completed late or in instalments, which undoubtedly increases consumer shopping convenience and shopping satisfaction. For consumers, this payment diversity may have increased their identification with and loyalty to Klarna (Özbük et al., 2020), as they can find a payment method that meets their needs on one app platform.

5.2.5 Tracking: Brands-owned touchpoint

Both order tracking management and the payback process constitute important touchpoints for the brand in the consumer journey, and both are core aspects of the brand's interaction with the consumer. As observed, consumers can navigate back to Klarna's front page to start a new consumer journey after processing or viewing a historical order.

On the one hand, these touchpoints provide transparency and a sense of control over orders, which can help consumers remove uncertainty from the purchase process while enhancing their perceived security with Klarna (Johnson et al., 2018). This feeling of security positively influences their satisfaction with purchases and purchase decisions, which in turn may increase their loyalty and drive them to choose to use Klarna again to start a new consumer journey after completing one.

However, while most consumers are likely to be positive about Klarna's integration of their order information, others may express concern that it may pose a threat to their privacy. For example, some consumers have mentioned that they are concerned that Klarna may track too much personal information, which could negatively impact their privacy and security. As informant 12 claimed:

> *"But on the other hand. I worry that the software might be tracking too much of my personal information and I would be concerned about my privacy and security."*

5.3 The potential for super apps to disrupt the multi-touchpoint consumer journey

Having understood and analysed consumer behaviours and their touchpoints with businesses, we found that consumers use the Klarna Super App and that consumers have identified and applied a range of functions to improve the quality of the consumer journey. For example, the price compare function integrates prices, shipping methods, shipping amounts, stock, etc., for the same product from various websites.

The research found that Millennials and Generation Z consumers living in Sweden are aware of some of the benefits of Klarna to make shopping more convenient and do not show as much concern for data privacy and security as Europeans have been speculated to have (CNBC, 2021). Indeed, they may have such concerns at times, but as Fasnacht (2021) stated, Millennials and Generation Z consumers are more interested in convenience, integration of everything and access without the time and geographical constraints than security. Therefore, based on the dual identity of the consumers in the research, namely those living in Sweden and those of the Millennials and Generation Z cohorts, it can be inferred that super apps have the potential to rebehaviours multi-touchpoint consumer journey, but this does not mean that they will completely replace them.

On the one hand, the advantages of super-apps reshaping multi-touchpoint consumer journey include three points: integrated functions and one-stop services, flexible payment and financial management, and personalised recommendations.

Integrated functions and one-stop-shopping

The most praised function of Klarna is the integration of several mobile applications. This means that in the minds of Swedish consumers, Klarna has fulfilled the definition of a super app base by integrating multiple functions and services into an existing digital app (Fasnacht, 2021). Klarna acts as a touchpoint to connect brands with consumers, offering them the ability to browse multiple brands in one app through its powerful integration capabilities. As informant 7 revealed, integration is important because of the convenience and efficiency it brings to consumers:

> *"One of the features I appreciate the most about the Klarna App is that it allows me to avoid downloading multiple apps or having to use my browser for shopping. It's a convenient all-in-one platform that saves me time and effort."*

The viewpoint of informant 7 explains the core value of Klarna as a super app: integration and convenience. Apparently, Swedish consumers represented by the informants in this research have accepted and become accustomed to the advantage of super apps integrating various functions and services into existing digital mobile applications (Fasnacht, 2021). Consumers can browse multiple brands' stores in one app without the need to download a large number of apps taking up mobile phone storage space. They can complete shopping, compare prices of commodities from different stores, get discount coupons, make payments and track service all through Klarna. Further, we can see that integration has influenced consumer habits. Offering a variety of services on one platform makes it easier for consumers to discover and try new brands and products rather than being limited to the brand apps they are familiar with or have already downloaded. In this sense, Klarna can be considered a platform system that, by providing a seamless experience across different brands and services, stimulates users' desire to explore, thereby further enhancing its position in the shopping ecosystem.

As a result, considering the convenience of super apps, online channels that directly access official websites through web addresses may be eroded. This is entirely consistent with the conclusion of Lim et al. (2022) that adapting to a one-stop shopping platform means consumers no longer need to switch between multiple apps or websites, thereby saving their time and energy and also enhancing the convenience of shopping.

However, it should also be noted that, although consumers appreciate Klarna's integration, there is still a gap for Klarna to fully become a super app that is an integral part of consumers' lives. Once the functions provided by Klarna cannot meet the convenience requirements of consumers as much as single function apps, consumers will still choose specialised apps. For instance, when comparing prices of different types of rooms in different hotels, one informant left Klarna and searched for information in the Google Map application. Therefore, despite Klarna's solid steps on the road to becoming a super app, it needs to continuously discover and adapt to consumer needs to maintain its advantage in the fiercely competitive digital market.

Flexible payment and financial management

The second function that is reshaping the consumer journey is Klarna's integration of multiple payment methods, thereby providing consumers with more choices. This could change the payment touchpoints in the consumer journey, as they can now choose the most convenient and

suitable payment method according to their needs and preferences. This change is firstly reflected in the transformation of payment touchpoints. Previously, consumers often faced limitations when choosing payment methods during the consumer journey. However, Klarna's diverse payment options provide more choices for consumers. They can choose the most convenient and suitable payment option according to their needs and preferences. For instance, informant 11 exclaimed:

"Well, I absolutely love Klarna. ……, the payment process is so smooth, it really makes shopping online a breeze."

For Klarna, in particular, the "Buy first, Pay later" function has had a significant impact on the Millennials and Generation Z consumer journey in Sweden. This payment method allows consumers to shop without the pressure of immediate payment, which could potentially influence their consumption decisions. This method is a clear stimulus that influences consumers' purchase decision process by changing their payment experiences (Siebert et al., 2020). Without the economic pressure of immediate payment, consumers may overlook the price of goods when buying, which could further lead to excessive shopping. This is confirmed by informant 1 concerns about the use of "Buy first, Pay later":

"I often see complaints on TikTok about not being able to repay or forgetting to repay, and you know. I don't want to bring myself more trouble."

Therefore, while the "Buy first, Pay later" payment method offers more convenience to consumers, it can also carry some potential risks. For instance, consumers might overly rely on this payment method and neglect their financial situation, which could lead them to be unable to repay their debts on time. They may eventually have to pay more in late fees or even completely lose the opportunity to pay and shop on Klarna.

Personalised recommendation

As more and more consumers use Klarna to browse and purchase, their browsing paths and viewed products are all recorded. As a super-app, this model gives Klarna the ability to acquire consumer data in a more comprehensive and accurate way, not only providing a broader scope of data collection than other brand applications but also significantly more in quantity than traditional methods. By analysing various consumer behaviour data on the platform, Klarna can gain deep insights into consumers' shopping habits and needs, thus offering more precise personalised recommendations and further enhancing user stickiness. In other words, this mechanism is gradually changing the decision making path of the consumer journey. The traditional consumer shopping decision process is often dominated by consumers actively searching for and evaluating products. However, in the Klarna super-app, consumers increasingly rely on personalised recommendations provided by the app for shopping decisions. As informant 9 agreed that the Recommendation page influenced his consumer journey:

"I absolutely love the Klarna App! …… the recommendations based on my search history are often spot on, which introduces me to new products that I might like."

This is a significant shift from consumers actively searching to passively receiving recommendations, which also simultaneously changes the way brands interact with consumers. Personalised recommendations in the super app have become an important way for brands to actively reach consumers and enhance the browsing experience of consumers within the app. Over time, consumers will become more and more dependent on finding inspiration from personalised recommendation pages and then form a habit of browsing Klarna even without a specific goal.

On the other hand, although super-apps provide convenience to consumers in many ways, they cannot completely overturn the multi-touchpoint customer journey for three reasons: insufficient functionality, concerns about data, and increased susceptibility to external disturbances.

Insufficient functionality

Firstly, consumers may have clear needs for certain functions that may not be met due to the design or limitations of the Klarna super app. For instance, consumers might quit Klarna to view reviews on other websites if Klarna's review system is not adequate or lacks sufficient reviews. This situation indicates that consumers do not always choose the most convenient method during shopping; their decisions are also influenced by perceived usefulness (Davis, 1989).

Worries about data

Secondly, a small percentage of consumers may still be cautious about using super-apps like Klarna because these apps can collect a variety of behavioural data during the consumer journey. This raises concerns among some consumers that their personal information might be misused or leaked. In such cases, these worries may hinder them from relying entirely on super apps, thus preserving multi-touchpoint customer journey to some extent.

Easy access to external interference

Lastly, despite Klarna offering extreme convenience and constant availability as a one-stop shopping platform, this very situation might actually make consumer journey more susceptible to external distractions. For example, while browsing through Klarna, consumers may receive a message from someone and naturally quit the app. Therefore, super apps attempt to integrate all possible purchase touchpoints to optimise the consumer experience. However, other digital activities and real-life events often interrupt the consumer journey by distracting them during the consumer journey via mobile, leading to the termination of the journey or a longer and more uncontrollable consumer journey.

6 Discussion

6.1 Comparison with previous research

In our research, we explore in depth the potential of super apps such as Klarna to reshape the multi-touchpoint consumer journey. In total, the research identifies five representative consumer behaviours when using Klarna: navigating, browsing, checking out, paying and tracking. Among all these behaviours, browsing involves the largest variety of touchpoints, including brand-owned, consumer-owned and social/external touchpoints. Secondly, the touchpoints involved in navigating, including brand-owned and partner-owned touchpoints. Finally, checking out, paying and tracking all involve brand-owned touchpoint only.

These findings somewhat overturn traditional purchase decision theories, such as those of Court et al. (2009) and Özbük et al. (2020). This is because we found that in the context of super app, consumers typically jump back and forth between these behaviours.

Lemon & Verhoef's (2016) research concluded that the types of consumer touchpoints may vary at different stages of the consumer journey. Our findings support this view. We found that in a highly integrated super apps, different types of touchpoints may interact and influence consumer behaviours. Furthermore, completely in line with Siebert et al.'s (2020) results, it's believed that the consumer journey is a mix of predictability and unpredictability. We found that although we can predict potential consumer behaviours and touchpoints, we cannot fully predict the development of the consumer journey.

Lastly, although we did not analyse the consumer journey based on the model proposed by Lemon & Verhoef (2016), the results we obtained and the behavioural paths we observed do not conflict with the perspectives on consumer journey proposed by Lemon & Verhoef (2016). Regardless of what actions consumers take during the consumer journey, and how they transition between these actions, the consumer journey in the research aligns with the pre-purchase, purchase, and post-purchase stages.

6.2 Limitations of the research results

Our research has certain limitations. The samples for our research primarily consist of Millennials and Generation Z consumers in Sweden. Different results might emerge if these findings are applied to consumers in other regions or age groups.

These limitations are that we cannot because we cannot guarantee that their perception and acceptance of potentially disruptive functions of super apps are the same as those of the subjects in this research. In such cases, consumers might be reluctant to accept new functions. Thus, a prerequisite for generalising the results of this research is that the group in question has already accepted the functions of the super app.

Moreover, due to the research following a methodology of DPT, by first observing and then conducting post-phenomenological interviews, data on consumers' behaviours and their insights into the actions they perform are collected and understood. Therefore, the interpretations of behaviours during the consumer journey and the results of the multi-touchpoint consumer journey, which are summarised based on the interview data, are insights from the perspective of the individual consumer. Although researchers have combined the insights from previous research to interpret consumer insights jointly, the results of the research are still somewhat subjective. Therefore, Caution should be exercised in applying these results to a broader group of consumers or practical situations.

6.3 Implication

Despite the limitations in our research, its theoretical and practical contributions are significant and far-reaching.

From the theoretical perspective, this research provides new perspectives for understanding consumer behaviour patterns in the super apps context, which helps to deepen and expand our understanding of consumer behaviour theory. This research focuses specifically on the use of super apps such as Klarna by Millennials and Generation Z consumers in Sweden. This research focuses specifically on the use of super apps such as Klarna by Millennials and Generation Z consumers in Sweden. More specifically, our insights into the behavioural patterns of Millennials and Generation Z consumers when using super apps that offer digital payment services will help us to expand and deepen our current theories of consumer behaviours, especially in the emerging field of digital payment and super apps, and these findings may open up new perspectives for our theoretical understanding.

From a practical and management perspective, our research provides important insights into the development and optimisation of super apps, which will be of great value to software development engineers and super app operators. The research is based on empirical research providing an exhaustive range of data on consumer behaviours when using the Super App. Within this research framework, we can explore in depth which touchpoints effectively connect brands with consumers. Within this research framework, researchers can explore in depth which touchpoints effectively connect brands with consumers, so that we can understand how consumers make decisions across touchpoints, and how they plan and execute their consumer journeys. The researchers' in-depth analysis of the data has provided substantive recommendations for optimising the consumer journey, as well as new insights into how to provide a one-stop-shopping service. We firmly believe that these findings have important practical significance for building better super apps and providing higher quality services.

7 Conclusion

In this research, we systematically analyse consumer behaviours when using super apps like Klarna and identify five main behaviours: navigation, browsing, checkout, payment and tracking. Next, we followed Lemon & Verhoef's (2016) research to further investigate the impact of different touchpoints, such as brand-owned, partner-owned, consumer-owned and social/external touchpoints on the multi-touchpoint consumer journey. Surprisingly, consumer behaviours show higher uncertainty when using super apps, which is mainly due to the integration of multiple functions in super apps, significantly reducing the cost for consumers to switch between different behaviours, thereby increasing the variability of consumer behaviour. In addition, the research found three advantages of super apps in reshaping the multi-touchpoint consumer journey: one-stop shopping, flexible payment and financial management, and personalised recommendations. Within these, flexible payment and financial management are particularly relevant for super apps that offer digital payment services.

The innovativeness of this research lies mainly in the fact that we did not simply apply existing consumer journey theories but instead used DPT to collect a large amount of original data through observations and interviews. This method enables us to explore new behavioural patterns and types of touchpoints that emerge in the consumer journey in the context of super apps. This not only helps us to gain a deeper understanding of consumer behaviours when using super apps but also provides a valuable reference for brands and super app developers in optimising app design and enhancing the consumer experience.

While our research provides new insights into understanding the behavioural patterns of consumers when using super apps, however, we must acknowledge that there are some limitations to the research. Firstly, our samples were selected from consumers living in Sweden, which to some extent, limits the generalisability of the results. Consumer groups in Europe are diverse and widely distributed, and consumers in a single country may not be fully representative of European consumer behaviour as a whole. In future research, we recommend expanding the sample to include more European countries and regions in order to obtain more comprehensive and representative findings.

Secondly, the data we collected was mainly based on consumers' self-reports, which may lead to some subjective bias. Consumers may answer questions consciously or unconsciously, modifying or missing out on real behaviours and attitudes for various reasons. Future research could try to collect data from other sources, such as practitioners' perspectives, to obtain more objective data and thus minimise any bias.

In addition, our research did not explore in-depth consumers' concerns about privacy issues in super Apps and their impact on consumer behaviours. In modern society, privacy issues are increasingly attracting public attention, especially in the context of applications involving personal information processing, where consumers' privacy perceptions may significantly

impact their behaviours. Therefore, we suggest that future research should explore more deeply consumers' privacy issues, understanding and analysing how it influences consumer behaviour patterns in super apps, as well as how brands and application developers can provide quality one-stop shopping services while respecting consumer privacy.

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Appendix A： Interview guideline

Informant 1

1. As a user, how do you think about the Klarna App? What features do you like?

2. Have you purchased the chair you searched for on [redacted] after entering your post code but not completing the order online? Can you explain why or why not?

3. When selecting this [redacted], you initially added three chairs to your shopping cart but ultimately only kept one. Could you please explain why you did this?

4. I noticed that you always chose to pay through Klarna and link it to Swish. Are you aware of other payment methods? Have you ever considered using Klarna's "buy now, pay later" option?

5. In a video, I saw you browsing the recommended page on Klarna. Did you have any shopping goals at the time? If not, what prompted you to open Klarna?

6. I saw that you once waited a long time for Klarna to load, but then exited the app. Can you share your feeling at that time?

7. In an experience of buying curtains, you entered Klarna 3 times before completing the purchase, and once you browsed for a long time, but finally left. Can you tell me if you had any concerns at the time?

8. In the last video you gave me, you added [redacted] sanitizer to your bag and you left, can you tell me why?

Informant 2

1. As a user, how do you think about the Klarna App? What features do you like?

2. Can you tell me why you went to [redacted] in the middle of your Mango shopping?

3. When you were shopping, you added all items from your favorite to your bag. Is this something you typically do? Do you end up buying everything you add to your favorite?

4. While shopping at [redacted], you spent a long time browsing the discount section. What were you looking for at the time? You spent over an hour on the discount page - what caught your eye there?

5. During one shopping trip, you purchased two products from the same brand and series but with different flavors. Can you tell me the reason for your decisive purchase?

6. You viewed the six-month installment details but still chose the swish option for your purchase. Can you tell me why?

7. I noticed that the items you ultimately purchased were things you had directly searched for. However, even though you also browsed the recommendation page, you never made a purchase from it. Do you think the recommended items were not what you were looking for?

Informant 3

1. As a user, how do you think about the Klarna App? What features do you like?

2. You spent a long time browsing H&M, then went to [redacted] and made a purchase there. Can you tell me why?

3. When you bought facial cleanser and conditioner, I noticed you browsed several stores and finally purchased from [redacted]. Can you tell me why?

4. You added many items to your cart on [redacted] but didn't make a purchase. Can you tell me why?

5. A few days later, you browsed [redacted] again and then left. What made you open the webpage again?

6. You spent a lot of time browsing [redacted] Can you tell me why you ultimately decided not to buy one?

Informant 4

1. As a user, how do you think about the Klarna App? What features do you like?

2. Why did you think of using Klarna to browse food, like when you were browsing [redacted]?

3. You often use Klarna to search for products, but you still close the app and open the browser to use Google search. Why is that?

4. Why did you stay on a product page for a long time during one of your journeys? I can show you the video.

5. The amount of time you use Klarna varies a lot. Can you explain why?

6. We've noticed a pattern in your behavior where you often go back after comparing prices rather than continuing to search and view products. Could you explain why you do this?

7. Do you have any other opinions or additional information about the Klarna App?

Informant 5

1. As a user, how do you evaluate the Klarna app? What features do you like?

2. We noticed in two of your videos that you were looking at running shoes. Whether directly searching for the product or looking for a particular brand in a shop like [redacted] you were viewing [redacted]. But you didn't buy any. Can you explain why you repeatedly browsed this series without purchasing?

3. We saw you browsed [redacted] but left quickly. Why was that? We saw you browsed [redacted] but left quickly. Why was that?

4. We also noticed you used Klarna to access [redacted] and make [redacted] Could you tell us why you used Klarna to open [redacted]?

5. We saw you viewing a [redacted], comparing prices, and finally checking out a [redacted] near you. How do you evaluate this comparison behavior? Why did you choose to go to the store in the end? Did you make a purchase?

Informant 6

1. What factors made you decide not to continue paying for an order while shopping?

2. Have you considered using buy now pay later?

3. How did you choose which store to buy if you found that all stores had the same price through Klarna's price check?

4. We noticed several times that you spent a long time on Klarna's price comparison page, but you didn't actually click on any links or make a purchase. May I know the reason behind this?

5. You made the purchase, you only briefly compared and looked up specific information about the [redacted] What were you thinking at that time? What made you decide to purchase it quickly?

6. As a user, how do you think about the Klarna App? What features do you like?

Informant 7

1. As a user, how do you think about the Klarna App? What features do you like?

2. At first, you searched for underwear in [redacted] however, then you started to browse other. Why did you do that?

3. I noticed that you ordered takeaway at [redacted]nd it was canceled. Then the next day, you buy it again. Canceled again. Why did you buy again after it was canceled on the first day? Will you try it again in the future?

4. I see that you repeatedly click and view various styles of clothes in a brand. How do you explain that you only look at one brand?

Informant 8

1. As a user, how do you think about the Klarna App? What features do you like?

2. You seem to enjoy browsing the recommended products, yet sometimes you search for items completely unrelated to the recommendations. Could you share why you do this?

3. When you're shopping with Klarna, do you typically select a product and then check the price, or do you set a price range first and then look for a product within that range?

4. When searching for a specific item on Klarna, do you lean more towards the recommended page, the search function, or navigating via categories? Why?

5. Among the product details such as images, specifications, and customer reviews, which ones do you find most helpful when deciding to make a purchase?

6. I noticed you were looking at an [redacted] and you stopped just before entering your postal code. Could you share why you didn't complete the purchase?

7. When you were browsing the [redacted] video. Why did you suddenly return to Klarna's homepage and search for a completely different item?

8. You purchased a TV from the Samsung store but chose to pick it up at an authorized dealer's store. Why didn't you just buy it through the dealer's website?

9. I noticed that you were translating some Swedish when browsing [redacted] Why did you use English translation while browsing? You don't seem to use the translation feature all the time.

10. When choosing payment and delivery options, what factors do you prioritize, like quick delivery, in-store pickup, etc.?

11. When shopping with Klarna, do you often use coupons or discount codes? If so, where do you usually get them from?

12. Have you ever been distracted by social media messages while shopping? If so, does this affect your shopping experience or decision-making?

Informant 9

1. As a user, how do you think about the Klarna App? What features do you like?

2. Why do you compare prices before purchasing the same product and abandon it before searching and purchasing it again?

3. Why do you suddenly close Klarna when browsing products? Is it because you are tired of it? Will you come back later to buy the product?

4. When using Klarna to browse and purchase products, which features or characteristics of Klarna do you find most helpful or attractive?

5. Did you encounter any difficulties or inconveniences when shopping with Klarna? If so, please describe these issues and their impact on your shopping experience.

7. When shopping on Klarna, have you noticed price differences between different brands or merchants when comparing prices and searching for discounts? Does this affect your purchase decisions?

8. How do you think Klarna has influenced your shopping decision-making process?

Informant 10

1. As a user, how do you think about the Klarna App? What features do you like?
2. We noticed that you added a luxury hotel to your favourites, but later removed it and did not make a booking. Could you explain your thought process during this?
3. We also saw that you shared [redacted]ith a friend and continued to brows[redacted] Could you explain why you did that?
4. You've compared a [redacted] prices using Klarna's Price Lookup feature and found a better deal elsewhere. Would you choose to continue using Klarna to book hotels?
5. We observed that you searched for the same hotel on Google after finding it on Klarna. What was the reason behind this?
6. Also, on several occasions, I have seen you leave Klarna for Google and when you return, you delete things that you had originally bookmarked. May I know why you did this?
7. Do you often use Klarna for other purchases or mainly for [redacted] searches? How does your usage vary, if at all, depending on the type of purchase?
8. I saw a video of you paying off a product that had one day to run in advance. Can you tell us how you usually plan and manage your financial services through Klarna?
9. let's watch this video together (video 7) where you replace a lump sum payment with a three month instalment, can I know why?
10. You are seen twice trying to order a takeaway in Wolt, only to leave at the last minute without making a purchase. Can you expand on your reasons for doing this?
11. We saw you go back to the recommendations page after paying and checking your previous order. Can you explain your reasons for doing this?

Informant 11

1. As a user, how do you think about the Klarna App? What features do you like?
2. Why did you choose to go from Klarna to [redacted] in the video?
3. You compared the price twice with Google and Klarna and found that it was slightly cheaper on another platform, but you still returned to [redacted]n Klarna to place an order. Why?
4. I see that you looked at the dress twice, but searched through the [redacted]e page. Have you considered using Klarna to directly search for dresses?
5. Do you think Klarna's interest-free loan will speed up your buying decision?
6. Do you have anything else to add?

Informant 12

1. As a user, what do you think of the Klarna App? What features do you like?
2. why would you like to enable magic and sync your purchases from other online platforms to Klarna?
3. You seem to spend a lot of time browsing and buying [redacted] can you tell us about your shopping experience in this regard?
4. Did you consider buying a Ray Ban product before opening the app?
5. I notice that you always choose to pay through Klarna and link it to Swish. Do you know of any other payment methods? Have you considered using Klarna's "buy now, pay later" option?
6. In one of the videos, I saw you browsing the recommendations page on Klarna. Did you have any shopping goals at the time? If not, what prompted you to open Klarna?
7. Is there anything else you would like to add?

Appendix B: Informed consent form

INFORMED CONSENT FORM

Thank you for agreeing to participate in this study, which will take place from May to June, 2023. This form details the purpose of this study, a description of the involvement required and your rights as a participant.

The purpose of this study is:

- to explore the behaviors exhibited by Millennials and Generation Z when using super apps offering digital payment services, as well as the touchpoints where brands connect with consumers.

The benefits of the research will be:

- To better understand the consumer behaviors and touchpoints where brands connect with consumers.
- The impact of super apps on millennial and Gen Z consumer lines and multi-touchpoint consumer journeys in Sweden.

The methods that will be used to meet this purpose include:

- Digital practice tracking (including observation of a two-week process of documenting the use of Klarna, one-to-one semi-structured interviews)

You are encouraged to ask questions or raise concerns at any time about the nature of the study or the methods I am using. Please contact me at anytime at the e-mail address (a9n9g4e6l@gmail.com) or chat application.

Our discussion will be audio taped to help me accurately capture your insights in your own words. The tapes will only be heard by me for the purpose of this study. If you feel uncomfortable with the recorder, you may ask that it be turned off at any time.

During the two week screen recording period, you have the right to decide what information you want to withhold (e.g. accounts, addresses, bank details). We will also not ask you to turn on your microphone while you are viewing Klarna and recording your screen.

You also have the right to withdraw from the study at anytime. In the event you choose to withdraw from the study all information you provide (including tapes) will be destroyed and omitted from the final paper.

Insights gathered by you and other participants will be used in writing a qualitative research report, which will be read by my professor and present at classroom in Lund university. Though direct quotes from you may be used in the paper, your name and other identifying information will be kept anonymous.

By signing this consent form I certify that I agree to the terms of this agreement.

_____ _____

(Signature) (Date)