THE USAGE OF LIVE STREAMING
IN AFFECTING
CUSTOMER PURCHASE INTENTION

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(HONOURS)

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BY

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DECLARATION

I hereby declare that:

(1)   This undergraduate FYP is the end result of my own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.

(2)   No portion of this FYP has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

(3)   Sole contribution has been made by me in completing the FYP.

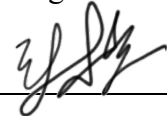(4)   The word count of this research report is 13,280 words.

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DEDICATION

I would like to sincerely dedicate this research to my beloved supervisor, Dr. Mandy Yeong Wai Mun, who has been my mentor, providing invaluable advice and selfless support from the inception of the research project to its final submission. She has been a key guide to my research and has had a profound impact on my personal and project outcomes. I am deeply indebted to her for her help, without which this study could not have been completed so successfully.

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LIST OF ABBREVIATIONS

ANOVA   Analysis of Variance

CS   Customer Satisfaction

DV   Dependent Variable

IS   Informativeness

IV   Independent Variable

PI   Purchase Intention

SMC   Social Media Celebrity

SPSS   Statistical Package for the Social Science

UGC   User-Generated Content

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PREFACE

Live e-commerce is a new type of retail model developed on the basis of the Internet and e-commerce, where products are displayed and sold through a live broadcasting platform, combined with live content to attract users to participate in interactive shopping business forms. With the rapid development of the mobile Internet and changes in consumer shopping habits, live e-commerce has gradually emerged in recent years and become the focus of attention of the business community and consumers. Live streaming has become an inseparable section of e-commerce. Many companies want to grab market share in live e-commerce, so they try to differentiate themselves from their competitors through different strategies.

The aim of this thesis is to delve into the factors on which viewers in live streams base their customer purchase intentions. Live streaming e-commerce is not only an emerging sales model, but also a new consumer experience that combines entertainment and shopping. This study on the usage of live streaming in affecting customer purchase intention is explored through SOR Model. Consideration will be given to whether social media celebrity, informativeness and user-generated content in live streaming does affect purchase intention through mediator customer satisfaction.

ABSTRACT

The purpose of this study was to explore the factors that influence customers' purchase intention in live streaming, including social media celebrity, informativeness and user-generated content. Customer satisfaction will then be explored as a mediator.

A total of 317 questionnaires were distributed to the respondents for this study, and the data were subsequently measured and the results calculated through the Statistical Package for the Social Sciences (SPSS). After analysing the data, this paper found that apart from social media celebrities do not show a significant effect on customer satisfaction. However, informativeness and user-generated content significantly influence customer satisfaction. When customer satisfaction is used as a mediator, all variables through customer satisfaction will affect purchase intention. The main target population of this study is the viewers in live streaming. The limitations and recommendations of this piece of research will also be discussed at the end of the article. These recommendations will provide valid suggestions for further research in the future.

Chapter 1 RESEARCH OVERVIEW

1.0 Introduction

This research is going to evaluate the usage of live streaming in affecting customer purchase intention. In this chapter, the background issues of the study will be stated, the research questions and objectives of the study will be indicated, and the scope and significance of the study will also be covered.

1.1 Research Background

In the last two decades, the internet and social media have permeated the lives of the vast majority of people. Social media and the internet began as a tool for entertainment and recreation, but their penetration has led to a change in habits. Online shopping has become more and more familiar to the public. In recent years, the live streaming feature on social media has been added to the shopping function.

According to a report by EMarketer, a leading global market research organization, global e-tailing transactions reached $4.938 trillion in 2021. In China, the country's e-tailing turnover reached US$2.56 trillion in 2021, accounting for 51.9 per cent of the global e-tailing market (Xin & Hao, 2023). CNNIC (2022) data shows that 469 million people those who have watched live e-commerce in June 2022 in China. In 2021, China's live streaming e-commerce market size has exceeded RMB 2 trillion and is expected to exceed RMB 4.9 trillion in 2023. On the flip side, many tech industry leaders in the US have recognized the huge potential of live-streaming e-commerce, and Walmart has already partnered with TikTok to offer its users products through live-streaming sales. The live shopping market size in the US is predicted to grow to $55 billion by 2026 (Chen & Shen, 2023). According to Market

research reports (2023), the global live streaming market size is predicted to grow at a compound annual growth rate of 13.47% between 2022 and 2027, and the market size is expected to increase by $29,057.07 million.

Based on the growing global e-commerce market, the live streaming economy may already be an integral part of the market, given the growing importance of the live streaming e-commerce market.

Live streaming is gradually changing consumers' shopping patterns and consumption scenarios in a new manner (Zhang 2022). Nowadays, all the major social and business platforms have their own live interfaces. These platforms have become a way to drive economic growth and sell products, regardless of the form of live streaming (Ye, 2023).

According to Malthouse (2016), when the customer is actively involved in the interaction, the company and the customer can create value for both parties. When this interaction occurs, customers may generate a higher level of enthusiasm, promoting their desire to buy. In the present day, the combination of live streaming and marketing techniques has fueled a thriving e-economy (Sun and Shao, 2020).

Live streaming means uploading a real-time video content by a particular user, while being able to interact with the viewers during the broadcast to better answer their questions. Live streaming content generally includes merchandise banding, games, talent shows and daily life (Hamilton, 2014).

The emergence of live shopping represents a change from traditional social e-commerce. In traditional online shopping, customers are unable to know exactly what the product is through text and mutation, but in the live streaming model, the

anchor will show the product in real time, thus giving the customer a better understanding of the product and information (Wongkitrungrueng & Assarut, 2020).

The most immediate impact of this has been to break down the barriers between traditional retail and traditional e-commerce, successfully creating a new sales model (Verleye. 2014). The customer interactivity of live streaming indirectly leads to customer engagement, such as from reacting to what the blogger has posted, commenting and sharing it with others. In the case of customer engagement with live streaming, which is the behavior of their personal resources, from an objective point of view, and this viewing of live streaming has value for the e-commerce business, while the purchase behavior occurs from external emotional or cognitive factors (Zheng, 2022).

The Shopee platform in Malaysia with its live streaming as an example, which has facilitated the integration of local Malaysian sellers and local talent in the marketplace, and has had a far-reaching impact on the e-commerce ecosystem as a whole. Over the past year, Shopee Live has become a notable focal point, where Malaysian users have watched more than 34 million hours of live streaming and interacted with local high-profile presenters more than 3.5 billion times. This live streaming format has been crucial for sellers who sell more than RM500, 000 on the platform, as they have found that live streaming orders account for 10 to 40 per cent of overall orders (Malay Mail, 2023)

However, the framework to examine the usage of live streaming in affecting customer purchase intention. This article attempts to model social media celebrity, informativeness, user generated content, customer satisfaction and purchase intention through SOR. Moreover, it also attempts to justify whether the use of live streaming can influence customer purchase intention through these features.

1.2 Research Problem

According to Li & Liu (2023), a lot of research has been done on live sales strategies for enterprises, but the competition in live streaming market is extremely high. Academic research on e-commerce live streaming has shown rapid growth, but these studies focus more on the current status of e-commerce live streaming, marketing cases, and the characteristics of the hosts or platforms, and less on how consumers may be influenced by live streaming and thus their purchase intention. (Su, 2019). Users' willingness to participate in watching and purchasing in live streaming, and why users purchase goods or services through live streaming are worth exploring. While Wang, Lu et. al. (2022) provide an in-depth study on how live streaming affects consumers' shopping decisions from both technological and human perspectives. Chen & Dou (2023) made a study on the role of live hosts in live streaming and identified the relationship between live streaming traffic and live hosts, as well as pointing out that the total amount of turnover is related to the amount of followers and the quality of followers of live hosts.

Several current studies have focused on identifying predictors of purchase intent from the perspective of IT platforms and consumers (Sun & Shao 2019, Chen & Benbasat 2017, Li & Guan 2018 & Xu & WU 2019). Therefore, this article will look at factors in the live streaming environment to identify whether other factors in live streaming such as social media celebrities, informativeness and user-generated content can influence customer satisfaction, which can act as a mediator that in turn influences customer purchase intention.

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1.3 Research Objective and Research Question

1.3.1 General Objective

In general, the research objective it to examine the usage of live streaming in affecting customer purchase intention with SOR model.

1.3.2 Specific Objective

In specific, there 7 objective proposed to examine the relationship between live streaming and customer purchase intention.

- To examine whether there is a significant relationship between social media celebrity and customer satisfaction.
- To examine whether there is a significant relationship between informative and customer satisfaction.
- To examine whether there is a significant relationship between user-generated-content and customer satisfaction.
- To examine whether there is a significant relationship between customer satisfaction and purchase intention.
- To examine whether customer satisfaction is a mediator between social media celebrity and purchase intention.
- To examine whether customer satisfaction is a mediator between informativeness and purchase intention.
- To examine whether customer satisfaction is a mediator between user-generated-content and purchase intention.

1.3.3 Research Question

- Does social media celebrity during live streaming affect customer satisfaction?
- Does the informativeness during live streaming affect customer satisfaction?
- Does user-generated content during live streaming affect customer satisfaction?
- Does customer satisfaction during live streaming affect customer purchase intention?
- Does customer satisfaction mediate the relationship between social media celebrity and purchase intention?
- Does customer satisfaction mediate the relationship between informativeness and purchase intention?
- Does customer satisfaction mediate the relationship between user-generated content and purchase intention?

1.4 Research Significance

The impact of live streaming on consumers' purchase intention is an important topic that has attracted much research attention in the field of e-commerce today, with significant academic significance and practical value. Firstly, the study of live streaming provides insights into consumers' willingness to engage in the live shopping process, including being influenced by the social media celebrity, informativeness and user-generated content interactivity on consumer purchase intention.

Consumer behavior is a topic that examines the impact of live streaming on consumers' purchase intentions and can provide a deeper understanding to help researchers understand the factors that influence consumers' purchase intentions

during the shopping process. By analyzing the factors in live streaming, researchers can reveal how consumers are attracted to these factors, which in turn affects their willingness to buy. This understanding has significant implications for developing marketing strategies and improving sales results.

This study may help e-commerce platforms and brands to provide strategic guidance on which types of live streaming information, anchor or interactions are most likely to increase purchase intent, thus optimizing e-commerce strategies and improving sales results. In the highly competitive e-commerce market, understanding the impact of live streaming on purchase intent can help companies gain a competitive advantage. This competitive advantage is likely to be sustainable in the long term, as it is based on an understanding of consumers' buying intentions and flexible market responsiveness.

1.5 Conclusion

In conclusion, this chapter serves as an introductory chapter to give the reader a basic understanding of the background of the study, the problem statement and the significance of the study. The next chapter will further discuss the definitions of each factor and discuss the literature review.

CHAPTER 2 : LITERATURE REVIEW

2.1 Introduction

Literature review explains and summaries the topic and current state of understanding found in past academic books and journal articles. This chapter discusses in detail the current interpretations of each factor and attempts to derive hypothesis development through modelling. The chapter review at the all relevant theoretical models, literature, conceptual framework, and to formulate hypothesis development.

2.2 Stimulus-Organism-Response Model (SOR)

The Stimulus-Organism-Response (SOR) model was first introduced by Mehrabian and Russell in 1974 and was first applied in the field of psychology (Mehrabian & Russell, 1974). This concept is used to illustrate how stimuli from the external environment shape an individual's mental perception, which in turn facilitates the relationship between individual behavior and response. In this process, S represents the external stimulus, which exerts some influence on the knowledgeable organism (O), while R represents the corresponding response of the subject through mental activity after being stimulated (Deng, 2021).

The S-O-R model, which establishes a link between external stimuli and human behavior through organic components. The components include biological factors such as sense organs, nervous system, and muscular system. Psychological factors such as learning, perception, emotions, motivation and thinking. In this model, mental activities, including emotions, thoughts, and imagery in mental states and

judgement and self-reflection in mental processes, play a key role between stimuli and behavior. Interactions between stimuli and organismic components lead to emotional states, motivation, and resulting behaviors, especially in interactions with others. Overall, the S-O-R model is a comprehensive framework for understanding human behavior (Buxbaum, 2016).

2.3 Review of Literature

2.3.1 Social Media Celebrity Influence

A celebrity is a person who has fame in society and outshines the vast majority of the population. Modern celebrities, on the other hand, are mostly dependent on electronic mass media, the entertainment industry and the consumer market. Furthermore, the rise of social media, it has taken celebrity culture in another direction. It allows ordinary people to achieve celebrity status through self-celebrity, bypassing traditional media and the entertainment industry. And these celebrities whose fame stems from social media are known as a new type of celebrity, and they have a significant presence in the online shopping space (Hou, 2019).

Marketers have been using celebrity endorsements as a marketing tool for their brands or products since the last few decades and using celebrity influence has become an excellent practice for strategic marketing, more so than other mass media (Li, 2012).Celebrity influence can lead to an increase in the credibility of the advertisement and consumer recognition of the brand. It makes the company's brand image independent from similar competitors, which can also influence customer purchase intentions (Ranjbarian, 2010).

For millennials (Generation Y), they are more brand savvy and have a higher level of access to smartphones, tablets and the internet than other generations. Because of this, most millennials are more familiar with a new type of celebrity (Barton, 2014). Celebrity endorsements will have an impact on consumer attitudes and purchase intentions towards products. Celebrity endorsements on social media will have a greater potential to attract Generation Y consumers, which will lead to Generation Y consumers emulating the celebrity and thus buying the product in question (McCormick, 2016).

In addition, there is a segment of consumers who want to establish values and lifestyles based on celebrities they love or consider successful. Fans of these celebrities choose and buy goods or services by imitating the celebrities, the brands they normally use and their dress code (Sami, 2006).Since celebrity influence is what makes people buy a product or service based on the celebrity, it makes people pay exceptional attention to their unique status and credibility. In the field of advertising, celebrities make advertising more influential and thus lead to a shift in people's purchasing intentions (Brajesh, 2011).

On the other hand, Byrne and Breen (2003) suggest that celebrity influence can save a lot of time in transferring value from the product to the brand by accelerating the building of credibility with consumers and enhancing the brand effect. The effectiveness of celebrity influence as a strategy for successfully influencing consumers' desire to buy a product is determined by Friedman (1979), Tripp (1994) and Moraes, (2019). .Especially when celebrities interact with people in social media, it generates interpersonal relationships between celebrities and their fans, which is effective for the celebrity effect(Nouri, 2018).Therefore, due to the celebrity effect can stimulate fans as well as consumers to buy goods online through celebrities.

Based on the impact of social media celebrities on their fans. The influence of social media celebrity influence can be used as a stimulus (S) factor for consumers. Which is considered to be external influence on an individual according to the SOR model.

2.3.2 Informativeness

Information drives consumers to watch and shop on live streams (Cai, 2018). The process by which people interact with information is known as information behavior, and it is the major way in which people access information on a daily basis. The active or passive seeking of information and the use of information constitute communication in human life. Information behavior covers most daily human activities. In social media networking services, people present themselves or interact with other people. This is sometimes asynchronous, but in live streaming, this transfer of information is synchronized. Information in live streaming is mainly characterized by the simultaneity of communication, due to the fact that this is all happening in real time (Scheibe, 2016).

In live streaming, the anchor reaches out to consumers in a two-way interaction and communication in a real-time interactive manner. There are many ways in which anchors bring information to viewers, such as product information, models and promotions. All of this information is designed to reduce consumer uncertainty, ease their concerns and increase their purchase intention (Chou, 2023).

According to Julien& Michels (2000), human sources of information have a certain relevance to everyday life. After that, the community of users in social media is much larger compared to the community people normally live in. Therefore social media can be used as a source of information about life. Based on a previous Morris, Teevan & Panovich (2010) research, it has been shown that those who participated in the study sought out the information or opinions and alternatives they needed in

the network. As of now, only humans can provide certain types of information, such as opinions and recommendations. Individual users consider the source of information to be genuine and trustworthy. When a user seeks legal assistance or doctor's advice, social media pushes information shared by authoritative doctors or lawyers to the user. Users can get the answers to their questions by getting the information they need in a professional's post (Khoo, 2014).

The multi-sensory nature of live streaming to consumers enhances the authenticity of the information and fulfils the consumer's need for product information. In addition, the live chat feature allows viewers to ask questions at any time during the live broadcast. As a result, the anchor can answer specific questions and provide information about the target product almost immediately. This real-time streaming and viewer interaction enhances the informational aspect of the live stream (Ma, 2021).

Based on the impact of informative of live streaming between streamer and viewer. The influence of informative can be used as a stimulus (S) factor for consumers. Which is considered to be external influence on an individual according to the SOR model.

2.3.3 User-Generated Content

Based on the previous study of Krumm (2008), user-generated content is data, information, or media voluntarily contributed by ordinary individuals and subsequently accessed by others in a valuable or captivating form, usually through online platforms such as restaurant ratings, Wikipedia, and videos. In general, consumer online reviews are often perceived to be more credible and reliable than information provided by product and service providers, possibly because consumers are perceived to provide more honest feedback (Cox, et. al. 2009).

The UGC in general is divided into two forms, emotional UGC and rational UGC. For emotional UGC, it is widely recognized that appeals to emotional information can be effective in facilitating an emotional connection between consumers and products, especially for products that are highly experiential and pleasurable (Lwin, et.al. 2014). Emotions UGC are usually entertaining and engaging. Conceptualizing emotional UGC as positive content rich in emotional expression created by Internet users can help foster a positive atmosphere, trigger pleasurable emotions, as well as enhance enjoyment of products and services (Cheung, et. al 2022). Rational user-generated content consists of user-perceived attributes of products and services, which help to promote positive attitudes towards practical products. It consists of Internet users sharing practical information about the functions, values, attributes, and specifications of products and services, with an emphasis on their practical effectiveness (Cheung, et. al 2022).

Many consumers are beginning to trust and measure the goods or services they are interested in against the reviews of other consumers. Electronic Word of Mouth (eWOM), on the other hand, is also a type of user-generated content, where user reviews influence consumers' attitudes and willingness to spend. Both useful and useless reviews are captured and used by consumers (Filieri, 2018).

The assessment of experience can be positive or negative, which in turn can radically affect others (Gillian, 2001). User using apps to interact with user-generated content (UGC) communities has become a new consumer lifestyle as well as a preferred information and entertainment channel, especially among millennials (Chen, 2019). In the realm of user-generated content, it's common to follow the 90-9-1 rule, and most Internet users fall into different categories. About 90 per cent of users are considered lurkers, meaning they primarily read or observe content but do not actively contribute. Another 9% of users participate occasionally because other priorities often take up their time. The remaining 1% of users are highly engaged and contribute the most to the spread (Gasparini, 2020).

As people are motivated to use social platforms for a variety of reasons. The ability to reach out to specific groups of interest in social platforms, such as a celebrity's fan base. And exchanging ideas and distributing users' opinions is easier to achieve in social media. Therefore, people using social media may be entertained by live streaming and in the process, users share their opinions. These opinions often depend on the content of the live stream (Friedlander, 2017).

Based on the impact of UGC on other user. The influence of user-generated-content can be used as a stimulus (S) factor for consumers. Which is considered to be external influence on an individual according to the SOR model.

2.3.4 Customer Satisfaction

Customer satisfaction is the degree of consumer fulfillment, which often depends on products and services. The level of satisfaction is determined by the positive or negative emotions experienced at the end of the consumption behavior. The consumer's expectations of the product or service will also influence the level of satisfaction (Oliver, 2010).With the development of the Internet today, the rise of e-commerce has made competition very fierce. And in this, the provision and maintenance of customer satisfaction is the key to the survival of the business in the competition.

According to Miao & Jalees (2022), consumers decide whether or not they will make repeat purchases based on their satisfaction with the purchases they make on the web. Consumer perceived value is a measure of the level of consumer satisfaction, the gap between what consumers pay and what they get. Positive and negative gaps in satisfaction affect consumers' willingness to make subsequent

purchases. When consumers are dissatisfied with a product or service, dealing with them appropriately is a way for companies to regain consumer satisfaction. Because of the advent of social media, reachability of customer satisfaction is coming more efficiently than ever before. Businesses are using social media to engage with consumers, creating a connection so companies can hear their thoughts better and pass through the communication to solve the problems (Agnihotri & Dingus, 2016).

Consumers spend a lots of time on social media, a company's online social media performance lead directly to a change in a consumer's purchasing decision. Traditionally, companies have resolved problems with poor goods or services privately with consumers. In social media, disgruntled customers post negative comments to express their dissatisfaction. Companies need to respond quickly and offer solutions to restore customer satisfaction (Gu & Ye2014).

Company's remedial wage for goods or services allows a company to properly resolve a customer's problem after which the customer's satisfaction will be as high as or even higher than that of an otherwise satisfied customer, strengthens the customer relationship, and allows for customer retention (Kim, etc. 2009). Consumer satisfaction, as the emotional value of a user's goods, can be used to measure a consumer's emotional state.

Then consumer satisfaction can be used as an organism (O) factor. Which is considered to be intermediate influence on an individual according to the SOR model.

2.3.5 Purchase Intention

The tendency of a consumer to buy a certain product under certain conditions is known as purchase intention. Customers' purchase intention is usually related to the consumer's behavior, perception and attitude towards the brand. The majority of consumers do not consider cheaper, simpler packaging and lesser known products worth buying as consumers question the quality of these products. Consumers always use price and brand to confirm the quality of the product or service they want to buy (Gogoi, 2013).

Purchase intention refers to the customer's preference to purchase a product or service. It means the final willingness to buy the product after the customer's evaluation. There are many factors that influence consumer decision making and the final choice depends on the consumer's willingness, which can be influenced by various external factors. Also customer's knowledge about the product or service plays a role in purchase intention (Younus & Rasheed, 2015).

Online social media interactive marketing impresses consumers with the seller's unique presentation. As the consumer experience improves, so does their engagement, focus and enjoyment, which positively impacts purchase intentions. The idea of being able to get rid of queues or other annoyances in online social media. Customers can happily interact with sellers from the comfort of their home or wherever they are, and are therefore more willing to spend their shopping time and effort in this environment. As a result, customer thought processes are influenced by positive emotional states and are therefore more willing to accept the environment created by online social media. This changes the way consumers' psychological orientation and thus increases their purchase intention. (Zhang 2023).

Moreover, in the S-O-R framework, purchase intention can be used as a response (R) factor. This is due to the fact that purchase intention is the outcome of user's behavior. Which is considered to be internal influence on an individual according to the SOR model.

2.4 Conceptual Framework

Figure 2.1 Conceptual Framework
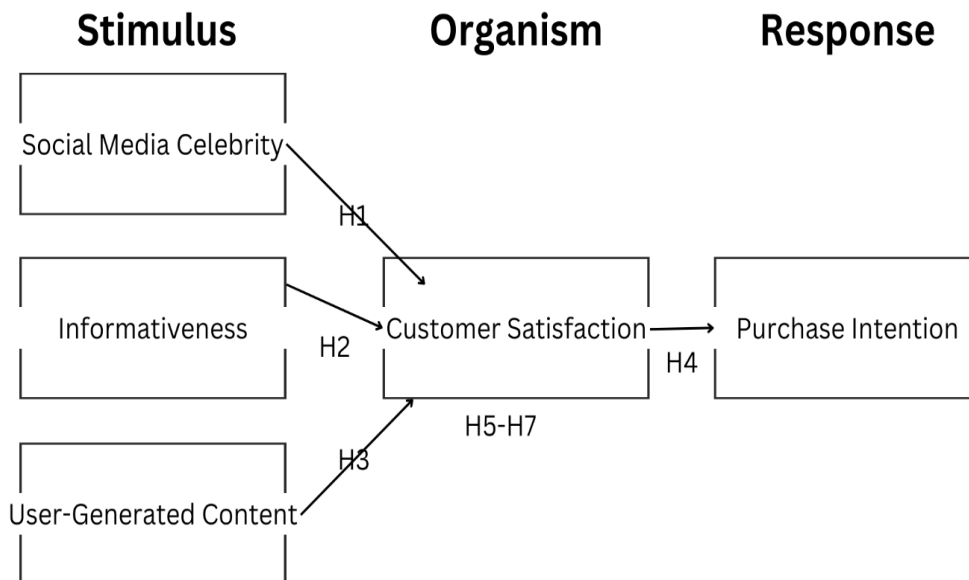
Note: H5-H7 is the test of mediator.

The main aim of this research is to measure the impact of live streaming on customer satisfaction and customer purchase intention by examining different factors in live streaming such as social media celebrity, informativeness and user generated content. Therefore, the external factors such as social media celebrity, informativeness and user-generated content are considered as stimulus (S) in the SOR model, the psychological factor of customer satisfaction as organism (O) in

the SOR model and customer purchase intention as response (R). In this way, we try to investigate whether live streaming can influence consumers' purchase intention.

2.5 Hypothesis Development

2.5.1 Social Media Celebrity and Customer Satisfaction

The influence of celebrities allows celebrities to cause consumers to identify, conform and internalize. Identification refers to the fact that consumers imitate the behavior of a person or group of people, which makes them feel that they want to be like that person. When identification occurs, the consumer is then influenced by the celebrity to give great feedback, which is known as conformity. When this happens all the time, it changes the attitude or behavior of the consumer, which is the case with internalization (Prasad, 2013). Customer satisfaction is influenced by a variety of factors, including products or services endorsed by celebrities. Satisfaction with products and services, on the other hand, is very complex as it involves various tangible and intangible elements (Shieh, 2023).The same applies to live streaming, from which it is possible to understand that famous people have an impact on customer satisfaction. When people follow, like or subscribe to celebrities on social media. These celebrities usually endorse or like certain products or services, which can influence their satisfaction with the same product or service due to it's a product or service that same as celebrity used (Dwivedi, 2016). When social media celebrities appear on live streams, it is due to the fact that live streams can give viewers the most intuitive interaction.

Therefore, this study proposes the hypothesis:

H1: Social Media Celebrity on live streaming is positively related with consumer satisfaction.

2.5.2 Informativeness and Customer Satisfaction

The interactivity of information plays an important role in influencing consumer buying decisions. The highly interactive nature of live streaming makes consumers feel as if they are talking face to face with the anchor. Customers can enjoy better service as the anchor can answer their queries about the product in real time, thus increasing their satisfaction. The professionalism of live anchors is reflected in their deep knowledge of the products they promote, including product attributes and uses. This directly affects consumers' perception of the product information provided, which in turn affects their satisfaction (Chen & Lu, 2020).

Therefore, this study proposes the hypothesis:

H2: Informativeness on live streaming is positively related with consumer satisfaction.

2.5.3 User-Generated Content and Customer Satisfaction

User-generated content is formed by user, such as any relevant reviews and testimonials that do not go through the brand or company. Online reviews and shares allow for effective customer satisfaction assessment, while certain keywords in customer-generated content can influence consumer satisfaction (Fu & Wei, 2022). UGC is also a fundamental factor in consumer satisfaction, which is when consumers develop expectations of a product or service through the content of others. This produces results before, during and after the service. In social media, the UGC of different social relationships then has an impact on consumer

satisfaction, and the consumer's perceived ability to perceive a product or service changes as a result of the expectations generated by the UGC (Narangajavana Kaosiri, 2019). During the live streaming, viewers will post their opinions and views in the comment section based on the anchor's products and services. These comments on user-generated content have the potential to influence consumers.

Therefore, this study proposes the hypothesis:

H3: User-Generated Content on live streaming is positively related with consumer satisfaction.

2.5.4 Customer Satisfaction and Purchase Intention

Customer satisfaction has an impact on purchase intentions and is usually a combination of responses following the purchase and consumption of a product/service. Perceived quality is a major predictor of customer satisfaction, although it usually precedes customer satisfaction, when the consumer from the live broadcast of the information obtained, will naturally feel that the product or service received is consistent, if there is a deviation may affect the subsequent customer's purchase intention. (Dash, 2021). Customer satisfaction is the combined result of perceptions, evaluations and psychological reactions to the experience gained from consuming goods or services. To realize that a consumer wishes to purchase a product or service means that the company or provider must meet the consumer's expectations. Satisfied consumers are more likely to have purchase intentions than dissatisfied consumers (Ilyas & Rahmi, 2020).Base of the study of Engel (1986), customer satisfaction based on post-purchase can enhance consumers' positive perceptions of a particular product or service, thereby increasing their purchase satisfaction. This applies to online shopping as well (Collier & Bienstock2006 & Lee & Lin 2005). In live streaming, customers who have already purchased goods

or services will likely increase their willingness to buy based on their satisfaction with the product or service.

Therefore, this study proposes the hypothesis:

H4: Customer satisfaction on live streaming in e-commerce is positively related with purchase intention.

2.5.5 Celebrity Influence, Customer Satisfaction and Purchase Intention

Customer satisfaction affects the relationship between celebrity and customer purchase intentions. Similarly, the relationship between the characteristics of a social media celebrity and his or her ability to be able to influence consumer satisfaction and purchase intentions. The traits of celebrities can predict whether there will be a statistically significant and positive change in a customer's purchase intention. However, this predictive relationship is influenced by the moderation of the level of customer satisfaction with the products offered on the air. (Domfeh, 2018). Celebrity influence has been identified in previous studies as an important indicator in determining purchase intentions. Between them, customer satisfaction is considered to be the intermediary, i.e., purchase intention is consumers are influenced by celebrities and determine their purchase intention through customer satisfaction (Rehman & Bano, 2019). In live streaming, the customer's liking for the anchor may be a factor that influences their purchase intention. However, customers who have purchased goods or services with a certain level of satisfaction may be more willing to buy, thus influencing their purchase intention.

Therefore, this study proposes the hypothesis:

H5: Customer satisfaction on live streaming in e-commerce is a mediator between social media celebrity and purchase intention.

2.5.6 Informativeness, Customer Satisfaction and Purchase Intention

Information is a key factor in customer satisfaction and willingness to buy. Adequate information about products and companies is a key feature of online shopping. Live streaming provides the way for customers to learn about the services and products of the company they are selling. If the information is thorough and attractive, customer purchase intentions are usually high. However, if the information is insufficient or unattractive, the customer's purchase intention may be low (Chen & Lu 2020). According to Rolland & Freeman (2010) and Cobelli (2019) information is a key factor in customer satisfaction. Informativeness is closely related to satisfaction, and better information will lead to higher satisfaction. (DeLone & McLean 2003)

Therefore, this study proposes the hypothesis:

H6: Customer satisfaction on live streaming in e-commerce is a mediator between informative and purchase intention.

2.5.7 User-Generated-Content, Customer Satisfaction and Purchase Intention

User-generated content allows people to access information more quickly and get quick feedback. It is a source of valuable feedback about a company's products or services. Consumers in online consumer environments often perceive other user-generated content as more credible than content provided by sellers (Jonas, 2010). One of the motivations for users to go online is that they like to compare their reviews with other users and share their buying experience. Information is credible, reliable, unbiased and valuable. If they recognize the authenticity of the information, they are more likely to trust and refer to the content. UGC shapes consumer expectations of a product or service. Customer satisfaction is often influenced by expectations. The desire to buy online is often created as a result of UGC content (Bahtar & Muda, 2016).

Therefore, this study proposes the hypothesis:

H7: Customer satisfaction on live streaming in e-commerce is a mediator between user-generated-content and purchase intention.

2.6 Conclusion

This chapter provides a review of the literature on the proposed framework for the relationship between the factors involved in live streaming. The likelihood of each of the independent variables having an effect on the corresponding variable is examined in depth from an academic perspective and hypotheses are proposed. This chapter provided research from various sources to deepen the understanding of this area of live streaming research. The next chapter discusses the research methodology.

CHAPTER 3 : RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the strategies used to collect and interpret data to achieve the objectives of the study. Further details on the broad structure of the study, the research design, data collection methods, sample design, research instrumentation, construct measurements, data processing, and recommended tools for analyzing the data will be explained.

3.2 Research Design

3.2.1 Quantitative Research

According to Creswell (2017) and Mohajan (2020), quantitative research is an approach by researchers based on testing theories which focuses on analyzing data through digital measurement and statistical techniques. This method involves quantifying and analyzing variables to obtain accurate research results. Quantitative research focuses on objectivity and reproducibility so that researchers can achieve their research goals with relative ease. In terms of data collection, numerical data is usually used and researchers tend to use mathematical models for data analysis. The focus of this approach is on translating the research questions into quantifiable form so that they can be systematically analyzed and conclusions drawn. The quantitative method will be used in this research.

3.2.2 Survey Method

Among the many quantitative research methods, survey research is highly favored, including but not limited to questionnaires. This method collects information from respondents in a systematic way and aims to gain insight into and predict aspects of the behavior of the population of interest (Mohajan, 2020). This approach focuses on people's opinions, attitudes and motivations. The research is done mainly by selecting the desired group of people and based on their responses (Kerlinger, 1966). In this method, the researcher asks the respondents a series of questions and then summarises and analyses their answers through percentages, frequency distributions, and a number of other statistical methods. The process involves key steps such as sample sampling, questionnaire design, questionnaire administration and data analysis to obtain the required results (Mathers & Hunn, 1998). According to this study is used quantitative method, survey method will be also applied to this study.

3.3 Sampling Design

3.3.1 Targeting population

Sampling is the selection of a portion of a large target population to be called the basis and representative of the experiment (Lohr, 2021).According to Onwuegbuzie (2007), sampling also plays a key role in the research process as it helps to assess the quality of the inferences drawn based on the underlying findings. The choosing of sampling is that sampling is the process of selecting parts, pieces or segments that represent the whole (Onwuegbuzie, 2007).

In this study, our target population is those who are the live streaming viewers on social media platform and are the most suitable population to this study.

3.3.2 Sampling Techniques

Sampling is divided into probability and non-probability sampling. Probability sampling is characterized by the process of drawing a sample from a population using random selection, where each population element has a known or knowable non-zero inclusion probability. On the other hand non-probability sampling involves some form of arbitrary selection of elements into a sample where the probability of inclusion is unknown. (Wiśniowski and Sakshaug, 2020).

Non-probability sampling is a method of selecting sample units from a population in a subjective rather than random manner. This sampling method is regarded as a quick, easy and economical way of collecting data because it does not require a complete survey frame. In order to be able to draw conclusions about the population from a sample, an assumption needs to be established in non-probability sampling that the sample is a valid representation of the population (Vehovar and Toepoel, 2016).

In non-probability sampling, these include the most commonly used convenience sampling, quota sampling, and snowball sampling. In this study, convenience sampling method will be used. The sample is selected based on the convenience of the researcher, usually because respondents are present at the appropriate time and place. Advantages of this method include that it is the most commonly used, less costly, and eliminates the need to list all demographic elements (Achary and Prakash, 2013).

3.3.3 Sampling Frame

Non-probability sampling is a method of selecting units from a population, using subjective (i.e., non-random) sampling. Unlike probability sampling, non-probability sampling does not require a complete survey frame (Government of Canada, 2021).Thus, there are no sampling frame for the current study.

3.3.4 Sample Size

Sample size determination is a critical step in research, and determining an appropriate sample size requires consideration of the characteristics of the study population, the complexity of the question, and the cost of the survey. Sample size measures the number of individual samples or of observations in a study (Singh & Masuku, 2014).

According to Hill (1998) and Roscoe (1969) proposed a common sample size guideline that has been widely adopted for decades. He suggested that sample sizes between 30 and 500 are appropriate choices in behavioral research, while sample sizes above 500 may increase the risk of Type II errors. Furthermore, according to the rules of sample to item ratio, it is recommended in the analysis to ensure that the sample to item ratio is not less than 5 to 1. This means that the sample size should be at least five times as large as the number of items in the study to ensure the reliability and validity of the data (Gorsuch, 2014).

Hence, this study included 25 items in questionnaire, so choose a ratio of 12:1 which is 300 responses from respondents and it is also between 30 and 500.

3.4 Data Collection Methods

3.4.1 Primary Data

Primary data are data that are collected using the most appropriate process for the particular research question at hand. Each time raw data are collected, new data are added to the existing store of social knowledge. Applications of raw data range from its use in comparative research, replication of original research, re-analysis and research design. One of the most important advantages of collecting one's own data is that theory building, research design and data collection strategies can be customized to suit the research questions, which ensures that the research is internally consistent and that the information collected actually contributes to the research (Hox & Boeije, 2005). The primary data will be used in this study in order to better fit the research objectives.

3.5 Proposed Data Analysis Tool

3.5.1 Measurement Development

A questionnaire is a specific tool used by scholars to gather information, also known as a scale, which is administered when quantitative scores need to be generated. A questionnaire consists of a series of questions, usually self-administered by the respondent. These questions cover specific concepts or items deemed worthy of investigation, and questionnaires can be disseminated in a variety of ways, including by mail, on the Internet, or even read orally to participants (Slattery and Voelker, 2011).

A complete questionnaire requires that all participants agree to sign an informed consent form stating that they are voluntarily participating in the survey. Typically, a cover letter is included at the beginning of the questionnaire to briefly describe the purpose of the study, provide information needed for further contact, and thank

all respondents for their participation. In addition, we also provided all respondents with confidentiality instructions, assurances and survey purposes in this section.

In order to investigate whether the hypotheses of the model are relevant, a web-based questionnaire was developed to investigate whether the use of live streaming affects customers' willingness to buy. In order to measure each constructed item, the main measurement questions were extracted from existing literature and slightly modified to fit the article topic of live streaming on customer purchase intention. A Likert scale will be the primary measure, and we measure these items on a five-point Likert scale from (1) strongly disagree to (5) strongly agree. This will allow us to measure the extent to which different factors influence customers purchase intention (Likert, 1934).

In this questionnaire, we have divided it into three parts. Respondents were asked to answer questions in Part A (demographic information), Part B (general information), and Part C (item measurement information). In Part A, respondents are asked to provide personal information including age, education, and race. There were a total of six questions. Section B simply asked questions related to the live stream and this article, such as asking if the respondent was in the habit of watching live streams. The total number of questions was 8. In Part C, 25 items were listed to measure and calculate the independent and dependent variables in the text.

3.5.2 Scale of Measurement

Nominal Scale

Nominal scaling is a method of assigning numbers to represent categories or types, where the numbers act only as labels or numbers. This can be categorized into two situations: one where individuals are uniquely identified by numbers, and the other where numbers are used to represent different categories or types. Nominal proportions are a simple and flexible way of presenting data and are often used to work with categorical data, particularly in statistical analyses to describe relationships between categories and frequency statistics (Stevens, 1946). Gender, for example, can be categorized as Nominal scale as we can use M for male and F for female. This scale is used in the questionnaire of this study such as the race, education level and gender.

Ordinal Scale

Ordinal scaling is a data metric in which the main attribute of the data points is their relative rank order, regardless of the spacing or proportionality of the values. Measures in ordinal scales do not have absolute values, so actual differences between neighboring values may not have the same meaning (Stevens, 1946). Age, for example, can be categorized as an ordinal scale because "under 20" and "over 50" in the age range have different meanings. This scale is used in the questionnaire of this study such as the age group, and monthly income.

Interval Scale

The interval scale is a data measure used as a metric for quantitative attributes. On this scale, numerical values represent equally spaced intervals between values, but there are no true zeros. This means that we can compare differences between values and equal interval sizes, but we cannot perform ratio operations. Often, the zero point of an interval scale is chosen arbitrarily and does not indicate a lack of properties. Interval scales are used to represent relative differences and to make equilibrium scale measurements, although they usually do not define a true zero point. Thus, interval scales are very useful data measures in many situations. (Stevens 1946). This scale is used in the questionnaire of this study. The independent and dependent variables were analyzed using the Likert scale rankings of 'strongly agree', 'agree', 'neutral', 'disagree' and 'strongly disagree'. "Strongly disagree" rankings to analyze the independent and dependent variables. ".

3.5.3 Origin of Construct

Table 3.1 Origin of Construct

DV, IV and Mediator	No.	Items	Sources
Social Media Celebrity (SMC)	5	1. My favourite social media celebrity provides a good model for me to follow. 2. My favourite social media celebrity leads by example. 3. My favourite social media celebrity sets a positive example for others to follow. 4. My favourite social media celebrity exhibits the kind of	Wahab andTandon (2022).

			work ethic and behaviour that I try to imitate.	
		5.	My favourite social media celebrity acts as a role model for me.	
Informativeness (I)	5	1.	Information provided by the in-store live streamer is beneficial.	Gu and Cheng (2023).
		2.	I think the in-store live streamer provides timely information about the product or service.	
		3.	The in-store live stream supplies relevant product or service information.	
		4.	I found that watching the in-store live stream is a convenient source of getting the product or service information.	
		5.	The in-store live stream always provides complete product information.	
User-Generated Content (UGC)	6	1.	The posts that appear on the livestreaming describe functions of the products and services	Cheung and Leung (2022).
		2.	The posts that appear on the livestreaming describe values of the products and services	
		3.	The posts that appear on the live streaming describe	

		benefits of product and services.	
		4. The posts that appear on the live streaming create a positive atmosphere about the product and services.	
		5. The posts that appear on the live streaming create positive emotions about the product and service.	
		6. The posts that appear on the live streaming create positive feelings about the product and service.	
Customer Satisfaction (CS)	4	1. I believe I made the right choice in deciding to buy in the live streaming I know.	Xu and Wu (2020)
		2. The purchases I have made in the live streaming I know have been satisfactory.	
		3. I am satisfied with how the live streaming I know deal with the sales they have made with me.	
		4. I am satisfied with the service I receive in the live streaming I know.	
Purchase Intention (PI)	5	1. Whenever I need to purchase, I intend to purchase the product that I saw on Live streaming.	Zhang and Daim (2023)
		2. Whenever I need to purchase, I plan to purchase the product that I saw on Live streaming.	

		3. I predict that I would purchase the product that I saw on Live streaming. 4. It is highly willing that I will purchase the product that I saw on Live streaming. 5. I will strongly recommend others to purchase the product that I saw on Live streaming.	

3.5.4 Pilot Test

The main purpose of a pilot study is to ensure that the suitability of the research methodology can be fully understood before a large-scale study is formally conducted. Test potential problems in advance, including respondents' questions and concerns about the questionnaire. In order to prevent serious problems from arising. It also to improve the accuracy and validity of the survey. Essentially, the pilot study is designed to avoid the wastage time and energy and avoid study developing major flaws at a later stage (Lowe, 2019). Generally, pilot tests are 10 per cent of the target number of tests, which provides an effective understanding (WINGATE, 1998).To ensure the feasibility of the study and that there will not be huge problems in the later stages of the study. Thirty questionnaires will be sent to the target respondents.

3.6 Data Analysis

3.6.1 SPSS Software

SPSS software is a powerful statistical software with an intuitive user interface that makes preparing and analyzing data easy. It can perform a wide range of statistical tasks such as descriptive statistics and regression analyses, allowing for better understanding and interpretation of data (Verma, 2012). Therefore, this study will use SPSS software to analyze relevant data.

3.6.2 Descriptive Analysis

Descriptive statistics is a method of data analysis that describes, presents and summarizes data in a simple and meaningful way. It is the basis for understanding our data and presenting raw data through numerical calculations, charts or tables allows us to visualize the data in an effective way. These statistics can be used to accurately summaries and present data through charts, tables, etc. Descriptive statistics allow us to present data in a more meaningful way, making it easier to interpret (Statistics, 2013).

3.6.3 Inferential Analysis

Inferential statistics is a method of data analysis that uses data from a sample to draw conclusions or inferences about a larger aggregate. Its main goal is to generalize from the sample data to the aggregate and use probability theory to determine the probability of the sample characteristics. Common methods used in inferential statistics include hypothesis testing and analysis of variance (Statistics, 2013).

3.6.4 Multiple Linear Regression

Regression analysis is a statistical technique used to study and estimate the relationship between different variables. Multiple linear regression is a form of regression analysis that involves modelling the relationship between a dependent variable and multiple independent variables. Multiple linear regression is used to best fit the relationship between the independent and dependent variables (Uyanık & Güler, 2013). Multivariate regression analysis model is formulated as in the following:

$$y = \beta_0 + \beta_1 x_1 + \ldots + \beta_n x_n + \varepsilon$$

y = dependent variable

x_i = independent variable

β_i = parameter

ε = error

3.6.5 Reliability Test

Cronbach's Alpha reliability (Cronbach's Alpha) is one of the most widely used reliability measures in social and organizational sciences. It is used to assess, for example, the degree of internal consistency of a questionnaire, i.e. the correlation between the items in a measurement instrument. Higher alpha values usually indicate that the measurement instrument has a higher level of reliability because there is more consistency between the items. This helps to ensure that the measurement instrument produces consistent results across contexts and enhances the reliability of the study (Bonett & Wright, 2015).

Table 3.2 Rules of Thumb for Reliability Test

Alpha Coefficient Range	Strength of Association
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Source: Hair & Brunsveld (2019). *Essentials of business research methods*. Routledge.

3.7 Mediation Analysis

Mediation takes the simple form X → M → Y, where X leads to the mediator M and M leads to Y. Mediation may be present in analyses between X and Y, provided that a third variable, Z, is considered. Z may be a confounding variable, affecting both X and Y, and ignoring it may lead to erroneous inferences about the relationship between X and Y. In other cases, Z may be associated with X and/or Y, but not substantially alter the relationship between X and Y. This is an example of a covariate. Alternatively, Z may be correlated with X and/or Y, improving the prediction of X against Y without substantially altering the relationship between X and Y. This is an example of a covariate.Z may also modify the relationship between X and Y such that the relationship between X and Y varies at different values of Z. This is an example of a moderator or interaction effect. Mediating variables are part of the causal sequence, whereas moderating variables are not. (MacKinnon, et, al 2007)

3.8 Pilot Test

3.8.1 Data Coding

Quantitative coding is a process of categorizing non-numeric information and assigning numeric codes to these categories. This method of numerical coding is not only common to a wide range of statistical software, but also facilitates data conversion and measurement comparisons. . (CESSDA, 2023). SPSS is one of the most widely used computer software for coding. In this process, the variables of interest are grouped together and each group has its own code and number. For Section C, "Strongly Disagree" is coded as "1", "Disagree" is coded as "2", "Neutral" is coded as "3", "Agree" is coded as "4" and "Strongly Agree is coded as "5".

Table 3.3 The result of pilot test

NO.	Construct	Cronbach's Alpha	Number of items
1	Social Medial Celebrity	0.876	5
2	Informativeness	0.912	5
3	User-Generated Content	0.936	6
4	Customer Satisfaction	0.838	4
5	Purchase Intention	0.840	5

For the sake of clarity of presentation, the table below shows the coding of Section A and Section B of the questionnaire.

Table 3.5 Screening Question Coding

Screening Question	
Do you watch live streaming?	• Yes is code as 1 • No is code as 2

Table 3.6 Demographic Questions Coding

Demographic	
Gender	• Male is code as 1 • Female is code as 2
Age	• Below 20 is code as 1 • 20-29 is code as 2 • 30-39 is code as 3 • 40-49 is code as 4 • 50-59 is code as 5 • 60 and above is code as 6
Highest Education	• SPM/O-level is code as 1 • STPM/A-Level/UEC is code as 2 • Diploma is code as 3 • Bachelor Degree is code as 4 • Master Degree is code as5 • PhD is code as 6 • Others is code as 7
Marital status	• Single is code as 1 • Married is code as 2 • Other is code as 3
Monthly Income	• Below RM2500 is code as 1 • RM2,501-RM7,500 is code as 2 • RM7,501-RM10,000 is code as 3

	• RM10,001-RM15,000 is code as 4
	• More than RM15, 000 is code as 5
Race	• Chinese is code as 1
	• Indian is code as 2
	• Malay is code as 3
	• Other is code as 3

Table 3.7 General Questions Coding

General Question	
How often do you buy things on live streaming?	• Never is code as 1
	• Rarely is code as 2
	• Sometimes is code as 3
	• Always is code as 4
	• Often is code as 5
Do you have any favourite social media celebrity?	• Yes is code as 1
	• No is code as 2
Do you search for the review or recommendation before buy a product or service?	• Yes is code as 1
	• No is code as 2
Are you willing to buy any products as long as it is endorsed by your favourite celebrity?	• Yes is code as 1
	• No is code as 2
	• Not relevant is code as 3
Are you satisfied with the product/service purchased as long as it is endorsed by your favourite celebrity?	• Yes is code as 1
	• No is code as 2
	• Not relevant is code as 3
Did you buy anything when you were watching live streaming?	• Yes is code as 1
	• No is code as 2
Did you buy anything based on other people online' recommendation?	• Yes is code as 1
	• No is code as 2

3.9 Conclusion

This chapter covers a range of research methods in specific research areas that require certain procedures to be followed. We have explored the operations of research design, sampling design, and data processing to obtain and confirm new and reliable knowledge

CHAPTER 4 : DATA ANALYSIS

4.1 Introduction

This chapter will look at the analysis and interpretation of the questionnaire data from the 317 respondents. SPSS software will be used to derive the expected findings of the study and these will be presented more clearly through charts and tables. In addition, this chapter will include descriptive analyses of sections A, B and C of the questionnaire, demonstration of Cronbach alpha to assess the consistency and reliability of the questions in the questionnaire, and finally, mediation analysis. There are10 respondents were not counted in the all section because they never watch live streams.

4.2 Descriptive Analysis

The questionnaire of 317 respondents was descriptively analyzed, with a particular focus on the results of demographics (Section A) and general experience of live streaming (Section B). In terms of demographics, researcher examined the basic characteristics of the respondents, including but not limited to age, gender, and education level. In Section B, researcher examined the general attitude of the respondents.

4.2.1 Do you watch live streaming?

The total number of respondents was 317 as shown in Table 4.1 and Figure 4.1. All 317 of them, or 96.8 % of the total, said they watch live streaming. And the remaining 10 do not watch live streaming. The question excluded 10 respondents from the final results due to they never do not watch

Table 4.1 Do you watch live streaming

Do you watch live streaming?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	307	96.8	96.8	96.8
	No	10	3.2	3.2	100.0
	Total	317	100.0	100.0	

Source: Developed from questionnaire distributed by researcher.

Figure 4.1 Do you watch live streaming
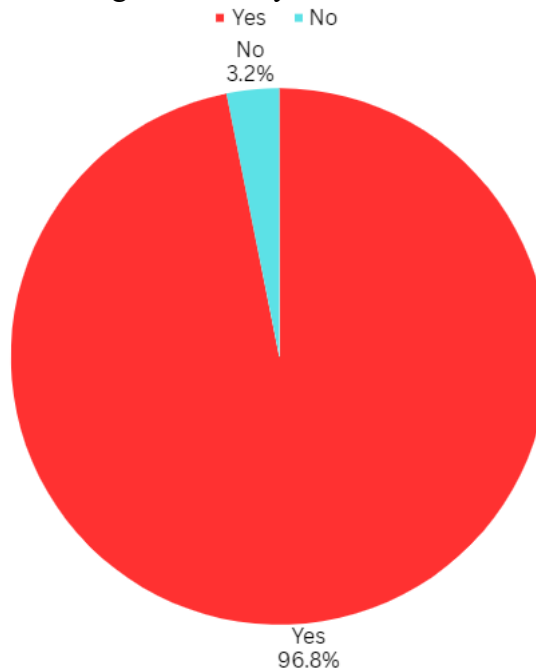
Source: Developed from questionnaire distributed by researcher.

4.2.2 Gender

The total number of respondents was 307 as shown in Table 4.2 and Figure 4.2. Which 180 were females and 127 were males. In terms of gender ratio, 58.6 % of the respondents were female and 41.4 % were male. This shows that more women than men participated in the questionnaire.

Table 4.2 Gender

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	127	41.4	41.4	41.4
	Female	180	58.6	58.6	100.0
	Total	307	100.0	100.0	

Source: Developed from questionnaire distributed by researcher.

Figure 4.2 Gender

Source: Developed from questionnaire distributed by researcher.

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4.2.3 Age

The total number of respondents was 307 as shown in Table 4.3 and Figure 4.3. From the data, the main questionnaire respondents were in the age group of 20-29 years old, accounting for 62.5%, or 192 of the total number of respondents. There were 48 respondents under the age of 20, representing 15.6% of the total. This shows that young people are the dominant group of respondents. However, 52 and 12 respondents, or 16.9 % and 3.9 % of the total, were aged 30-39 and 40-49 respectively. After that, there are only 3 respondents, or 1 % of the total, were aged 60 or over.

Table 4.3 Age

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 20	48	15.6	15.6	15.6
	20-29	192	62.5	62.5	78.2
	30-39	52	16.9	16.9	95.1
	40-49	12	3.9	3.9	99.0
	50-59	3	1.0	1.0	100.0
	Total	307	100.0	100.0	

Source: Developed from questionnaire distributed by researcher.

Figure 4.3 Age

Source: Developed from questionnaire distributed by researcher.

4.2.4 Highest Education

The total number of respondents was 307 as shown in Table 4.4 and Figure 4.4. As can be seen from the table, there is a majority of those whose highest qualification is above the Bachelor's Degree (127 or 41.4 %), Master's Degree (25 or 8.1 %) and Doctoral Degree (6 or 2 %). The number of respondents with lower secondary education (SPM/O-LEVEL) was 16 or 5.2 % of the total. The number of respondents with high school education (STPM/A-LEVEL/UEC) was 63 or 20.5% of the total. Diploma degrees accounted for 22.1 % of the respondents, numbering 68.

Table 4.4 Highest Education

Highest Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SPM/O-LEVEL	16	5.2	5.2	5.2
	STPM/A-LEVEL/UEC	63	20.5	20.5	25.7
	Diploma	68	22.1	22.1	47.9
	Bachelor Degree	127	41.4	41.4	89.3
	Master	25	8.1	8.1	97.4
	PhD	6	2.0	2.0	99.3
	Others	2	.7	.7	100.0
	Total	307	100.0	100.0	

Source: Developed from questionnaire distributed by researcher.

Figure 4.4 Highest Education

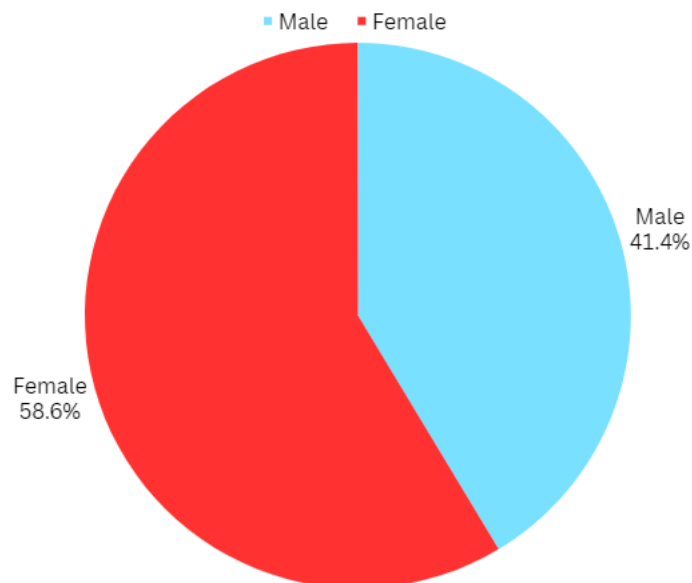Source: Developed from questionnaire distributed by researcher.

4.2.5 Marital Status

The total number of respondents was 307 as shown in Table 4.5 and Figure 4.5. Significantly more respondents were single than married. 60.9% of the respondents were single, totaling 187. The number of married persons was 120, or 39.1 % points of the total.

Table 4.5 Marital Status
Marital Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	187	60.9	60.9	60.9
	Married	120	39.1	39.1	100.0
	Total	307	100.0	100.0	

Source: Developed from questionnaire distributed by researcher.

Figure 4.5 Marital Status

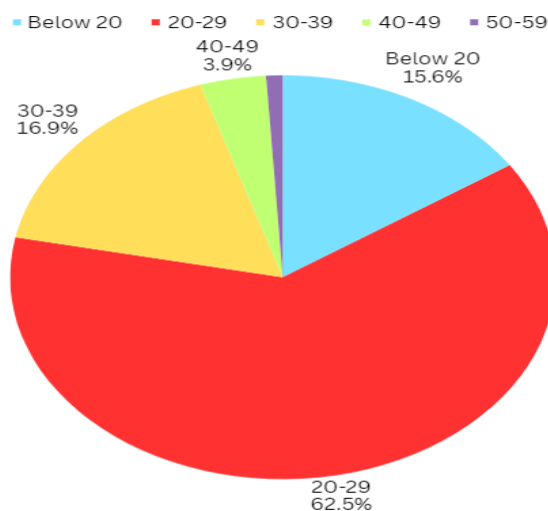Source: Developed from questionnaire distributed by researcher.

4.2.6 Monthly Income

The total number of respondents was 307 as shown in Table 4.6 and Figure 4.6. However, 95 or 30.9 % of the total number of respondents earned less than RM2, 500. 157 or 51.1 % of the total number of respondents earned between RM2, 500 and RM7, 500, while this income bracket was the main group of respondents. In addition, 35 respondents or 11.4 % of the total had a monthly income of RM7500-RM10000. There are only 20 people who earn more than RM10,000 per month, of which 17 are less than RM15,000 and 3 are more than RM15,000, accounting for 5.5 % and 1 % of the total respectively.

Table 4.6 Monthly Income

Monthly Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below RM2,500	95	30.9	30.9	30.9
	RM2,501-RM7,500	157	51.1	51.1	82.1
	RM7,501-RM10,000	35	11.4	11.4	93.5
	RM10,001-RM15,000	17	5.5	5.5	99.0
	More than RM15,000	3	1.0	1.0	100.0
	Total	307	100.0	100.0	

Source: Developed from questionnaire distributed by researcher.

Figure 4.6 Monthly Income
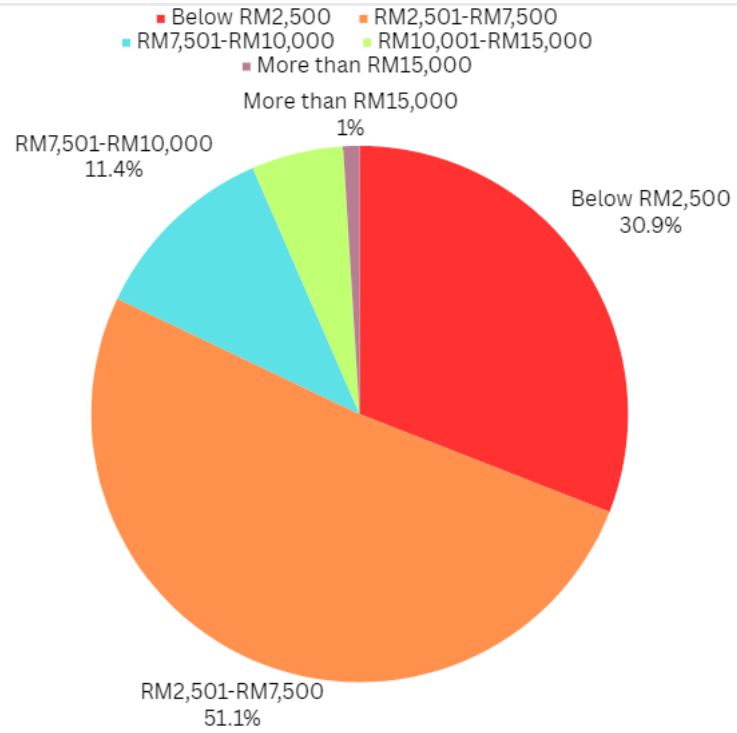
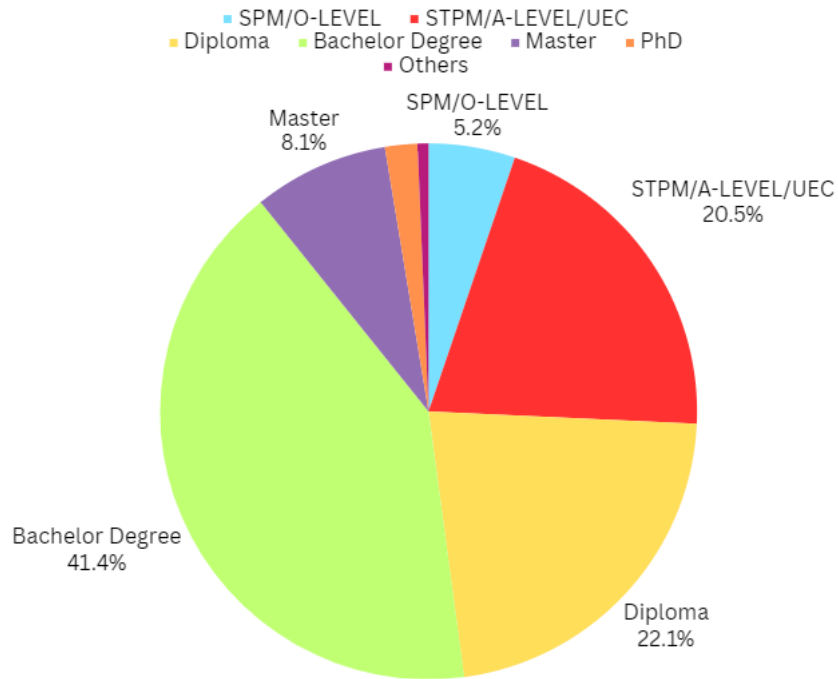Source: Developed from questionnaire distributed by researcher.

4.2.7 Race

The total number of respondents was 307 as shown in Table 4.7 and Figure 4.7. Well, 88 were Malays, 139 were Chinese and 79 were Indians. In percentage terms, 28.7 % were Malays, 45.3 % were Chinese, leaving 28.7 % of Indians and 0.3% (1 person) come from the other races to participate in the survey

Table 4.7 Race

Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chinese	139	45.3	45.3	45.3
	Indian	79	25.7	25.7	71.0
	Malay	88	28.7	28.7	99.7
	Other	1	.3	.3	100.0
	Total	307	100.0	100.0	

Source: Developed from questionnaire distributed by researcher.

Figure 4.7 Race

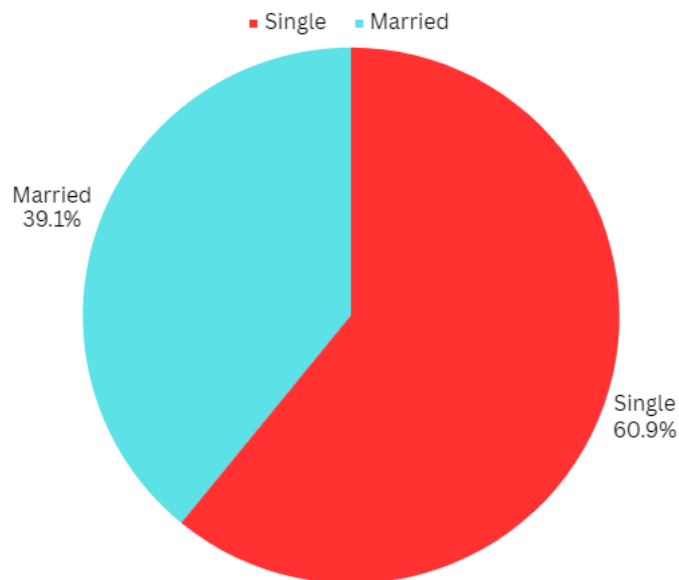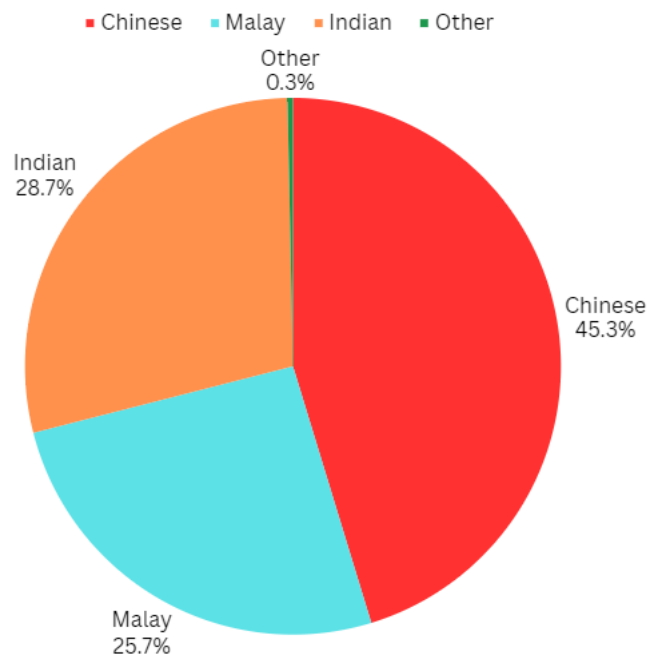Source: Developed from questionnaire distributed by researcher.

4.2.8 Do you follow any live streaming celebrity?

The total number of respondents was 307 as shown in Table 4.8 and Figure 4.8. In it we can see that there is not much difference between the number of people who follow social media celebrities and the number of people who don't follow social media. 150 people (48.9%) said that they follow while the remaining 157 people (51.1%) answered that they don't follow social media celebrities.

Table 4.8 Do you follow any live streaming celebrity?

Do you follow any live streaming celebrity?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	150	48.9	48.9	48.9
	No	157	51.1	51.1	100.0
	Total	307	100.0	100.0	

Source: Developed from questionnaire distributed by researcher.

Figure 4.8 Do you follow any live streaming celebrity?
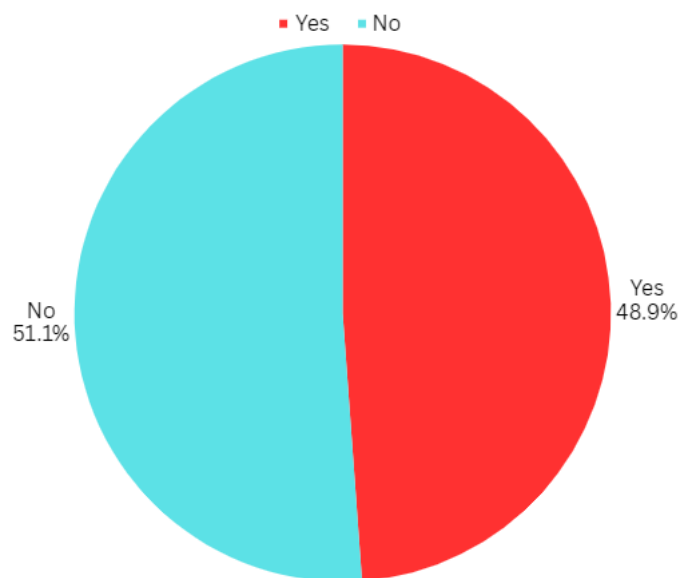
Source: Developed from questionnaire distributed by researcher.

4.2.9 Are you willing to buy any products as long as it is endorsed by your favourite social media celebrity?

The total number of respondents was 307 as shown in Table 4.9 and Figure 4.9. In it we can see that only 95 respondents said they would be willing to buy any product as long as it was endorsed by their favorite social media celebrity, which is 30.9% of the total. However, 125 respondents said they would not, which is 40.7 % of the total. The remaining 87 respondents, or 28.3% of the total, said that their purchase of a product had nothing to do with whether it was endorsed by their favorite social media celebrity.

Table 4.2.9 Are you willing to buy any products as long as it is endorsed by your favorite social media celebrity?

Are you willing to buy any products as long as it is endorsed by your favorite social media celebrity?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	95	30.9	30.9	30.9
	No	125	40.7	40.7	71.7
	Not relevant	87	28.3	28.3	100.0
	Total	307	100.0	100.0	

Source: Developed from questionnaire distributed by researcher.

Figure 4.9 Are you willing to buy any products as long as it is endorsed by your favorite social media celebrity?
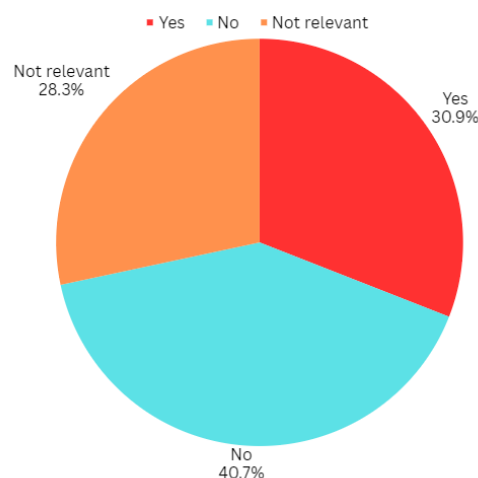
Source: Developed from questionnaire distributed by researcher.

4.2.10 Are you satisfied with the product/service purchased as long as it is endorsed by your favourite celebrity?

The total number of respondents was 307 as shown in Table 4.10 and Figure 4.10. In it we can see that only 90 respondents said they would be happy with any purchase as long as it was endorsed by their favorite social media celebrity, which is 29.3% of the total. However, 96 respondents said they would not be satisfied with a product or service just because it was endorsed by their favorite social media celebrity, which is 31.3% of the total. The remaining 121 respondents, or 39.4 % of the total, said that their satisfaction with a product had nothing to do with whether it was endorsed by their favorite social media celebrity.

Table 4.10 Are you satisfied with the product/service purchased as long as it is endorsed by your favorite celebrity?

Are you satisfied with the product/service purchased as long as it is endorsed by your favorite celebrity?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	90	29.3	29.3	29.3
	No	96	31.3	31.3	60.6
	Not relevant	121	39.4	39.4	100.0
	Total	307	100.0	100.0	

Source: Developed from questionnaire distributed by researcher.

Figure 4.10 Are you satisfied with the product/service purchased as long as it is endorsed by your favorite celebrity?
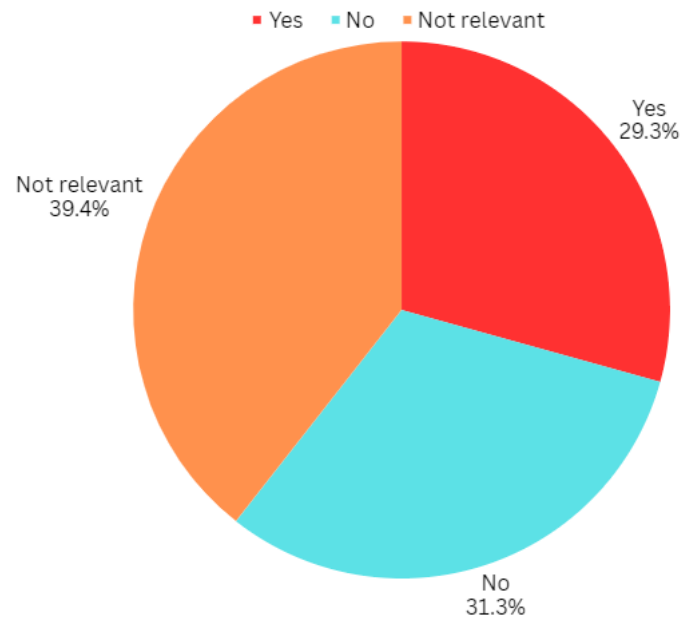
Source: Developed from questionnaire distributed by researcher.

4.2.11 How often do you buy things on live streaming?

The total number of respondents was 307 as shown in Table 4.11 and Figure 4.11. Of this total, only one respondent, or 0.3 % of the total, said that they never bought anything on live streaming. The majority of respondents, said that they sometimes buy products or services on live streaming, which accounted for 198, or 64.5 %, of the total. The number of respondents who regularly buy products or services on live streaming was 19.5 % of the total, or 60 people. Occasionally, 35 respondents, or 11.4 % of the total, purchase products or services on live streaming. Only 13 people, or 4.2 % of the total, said they always bought products or services on live streaming.

Table 4.11 How often do you buy things online?
How often do you buy things online?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	.3	.3	.3
	Rarely	35	11.4	11.4	11.7
	Sometimes	198	64.5	64.5	76.2
	Often	60	19.5	19.5	95.8
	Always	13	4.2	4.2	100.0
	Total	307	100.0	100.0	

Source: Developed from questionnaire distributed by researcher.

Figure 4.11 How often do you buy things online?
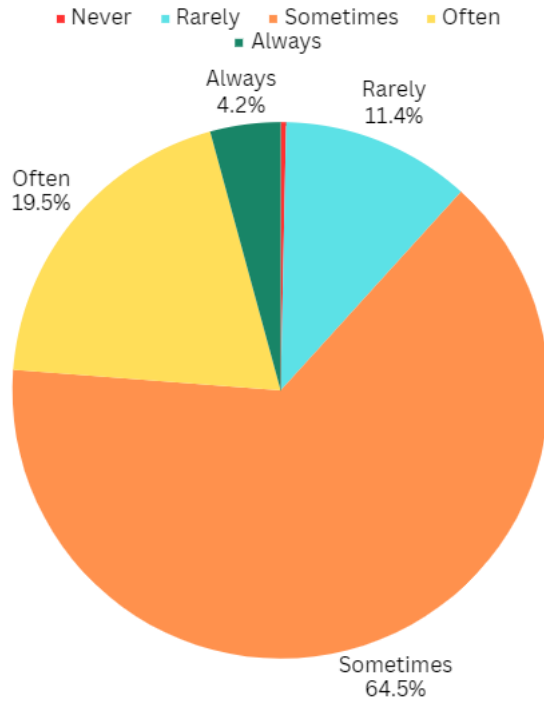
Source: Developed from questionnaire distributed by researcher.

4.2.12 Do you search for the review or recommendation before buy a product or service?

The total number of respondents was 307 as shown in Table 4.12 and Figure 4.12. As can be seen from the responses of the respondents, the vast majority of them would search for advice or reviews related to a product or service before purchasing it, with 259 indicating that they would do so, which represents 84.4 % of the total. Only 48 people, or 15.6 % of the total, said they would not do so.

Table 4.12 Do you search for the review or recommendation before buy a product or service?

Do you search for the review or recommendation before buy a product or service?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	259	84.4	84.4	84.4
	No	48	15.6	15.6	100.0
	Total	307	100.0	100.0	

Source: Developed from questionnaire distributed by researcher.

Figure 4.12 Do you search for the review or recommendation before buy a product or service?

Source: Developed from questionnaire distributed by researcher.

58
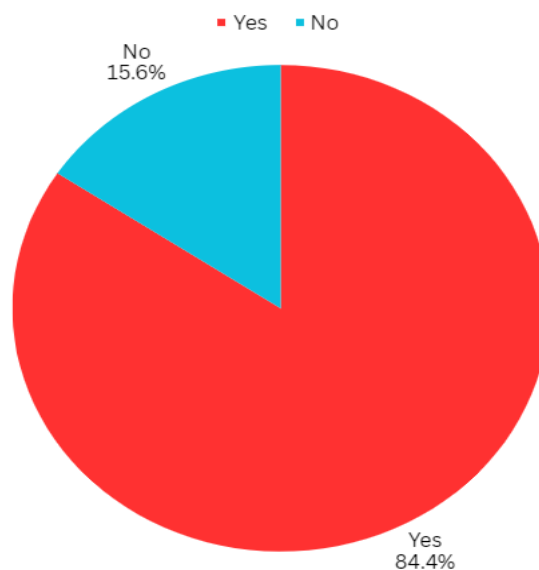
4.3 Reliability Test

According to Shi & Mo (2012) and Hulin & Netemeyer (2001), variables are considered acceptable if the Cronbach's Alpha of the tested variable is greater than 0.6. After testing, all the variables were greater than 0.5, which indicates that all the variables can be accepted. Firstly, social media celebrity has a value of 0.678, informativeness has a value of 0.669 while customer satisfaction has a value of 0.685. These are in the questionable range of reliability. Whereas the values for user generated content and purchase intention are 0.711 and 0.743 which are in the acceptable range of reliability.

Table 4.13 Reliability Test

NO.	Construct	Cronbach's Alpha	Number of items
1	Social Medial Celebrity	0.678	5
2	Informativeness	0.669	5
3	User-Generated Content	0.711	6
4	Customer Satisfaction	0.685	4
5	Purchase Intention	0.743	5

4.4 Multiple Linear Regression

4.4.1 SMC, IS and UGC towards CS

According to Table 4.14, it can be seen that the R-value is 0.670 and the adjusted R Square is 0.449. Based on the results of the R Square, it can be concluded that 44.4% of the dependent variable (Consumer Satisfaction) is affected by the independent variables such as Social Media Celebrities, Informativeness, and User Generated Content. However, the variation in consumer satisfaction can also be explained by these independent variables.

Table 4.14 Multiple Linear Regression (Model Summary: SMC, IS and UGC to CS)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.670[a]	.449	.444	.48373

a. Predictors: (Constant), UGC, SMC, IS

Source: Developed from questionnaire distributed by researcher.

Furthermore, Table 4.15 shows an F value of 82.441 with a significance level of 0.001, which indicates a significant association between IV and DV. It also proves that the overall regression model in this study provides a good match with the data. According to the results, customer satisfaction (DV) can be described by the following dependent variables (IV) which are social media celebrity, informativeness and user generated content.

Table 4.15 Multiple Linear Regression (ANOVA: SMC, IS and UGC to CS)

ANOVAᵃ

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.871	3	19.290	82.441	<.001ᵇ
	Residual	70.899	303	.234		
	Total	128.770	306			

a. Dependent Variable: CS

b. Predictors: (Constant), UGC, SMC, IS

Source: Developed from questionnaire distributed by researcher.

Table 4.16 resolves that the p-value for both informational and user-generated content is less than 0.05, both being 0.01. Thus these two IVs are found to have a statistically significant impact on consumer satisfaction with purchasing a product or service on air. On the other hand, the p-value of 0.075 for social media celebrities is more than 0.05 and is therefore not considered to have a practically significant relationship with customer satisfaction.

Also, this table shows the coefficient values for this study. In mathematics solutions, the B-value highlights the positive effect of each unit increase in the independent variable on the dependent variable, with all other factors remaining unchanged. UGC has the highest unstandardized B value of 0.441. There cannot be compared in social psychology due to there are not a precise value for comparison.

For standardized coefficients, the higher the value of Beta, the greater the effect of the independent variable on the dependent variable. On the other hand, UGC has the highest standardized coefficient beta at 0.395

Thus, H1 will be rejected due to p-value is more than 0.05. H2 and H3 will be accepted due to p-value is less than 0.05

Table 4.16 Multiple Linear Regression (Coefficients: SMC, IS and UGC to CS)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.714	.173		4.135	<.001
	SMC	.109	.061	.110	1.787	.075
	IS	.250	.066	.246	3.793	<.001
	UGC	.441	.067	.395	6.591	<.001

a. Dependent Variable: CS

Source: Developed from questionnaire distributed by researcher.

4.4.2 CS towards PI

According to Table 4.17, it can be seen that the R-value is 0.728 and the adjusted R Square is 0.528. Based on the results of the R Square, it can be concluded that 52.8 per cent of the dependent variable purchase intention is influenced by the independent variable customer satisfaction. However, changes in willingness to buy can also be explained by customer satisfaction.

Table 4.17 Multiple Linear Regression (Model Summary: CS to PI)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.728[a]	.530	.528	.43619

a. Predictors: (Constant), CS

Source: Developed from questionnaire distributed by researcher.

Furthermore, Table 4.18 shows that the F-value is 343.906 with a significance level of 0.001, which indicates that there is a significant correlation between IV and DV. This also proves that the overall regression model of this study has a good fit with the data. According to the results, willingness to buy (DV) can be described by the following dependent variable customer satisfaction (IV).

Table 4.18 Multiple Linear Regression (ANOVA: CS to PI)
ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	65.433	1	65.433	343.906	<.001[b]
	Residual	58.030	305	.190		
	Total	123.463	306			

a. Dependent Variable: PI

b. Predictors: (Constant), CS

Source: Developed from questionnaire distributed by researcher.

Table 4.19 shows that the p-value for customer satisfaction is less than 0.05 and is 0.01. Therefore, this IV has a statistically significant effect on consumers' purchase intention to buy broadcasting products or services. In addition, the coefficient value indicates that customer satisfaction has the highest unstandardized beta value of 0.713. On the other hand, CS has the standardized coefficient beta value of 0.728. The standardized coefficient beta value will affect the effect of the independent variable on the dependent variable.

Thus, H4 will be accepted due to p-value is less than 0.05

Table 4.19 Multiple Linear Regression (Coefficients: CS to PI)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.034	.132		7.805	<.001
	CS	.713	.038	.728	18.545	<.001

a. Dependent Variable: PI

Source: Developed from questionnaire distributed by researcher.

4.5 Mediation Analysis

In this article, Bootstrap analysis will be used to verify the presence of mediating effects. According to Zhang & Wang 2008, Bootstrap analysis is one of the most widely used methods for verifying mediation effects. In this study, Model 4 (Model 4 is a simpler mediation model) from the PEOCESS macro in SPSS was used and 5000 self-samples were taken to test for mediation effects.

This study uses Baron and Kenny's suggestion of X, M and Y to denote X as the independent variable, M as the mediator and Y as the dependent variable respectively. A four-step model will be used to validate the relationship between them, and 1. The variables X and Y must be related. 2. The variables X and M must be related. 3. The variables M and Y must be related if the effect of X is controlled. 4. The relationship between X and Y must be significantly reduced when the effect of M is controlled (Pardo & Román 2013).

4.5.1 SMC to CS to PI

According to the four-step analysis:

Condition 1: social media celebrity has a significant effect on purchase intention; Condition 2: social media celebrity has a significant effect on customer satisfaction; Condition 3: customer satisfaction has a significant effect on purchase intention; Condition 4: when social media celebrity and customer satisfaction predict purchase intention at the same time, there is a significant decrease in the predictive effect on purchase intention.

According to the four-step analysis: Condition 1: social media celebrity has a significant effect on purchase intention; Condition 2: social media celebrity has a significant effect on customer satisfaction; Condition 3: customer satisfaction has a

significant effect on purchase intention; Condition 4: when social media celebrity and customer satisfaction predict purchase intention at the same time, there is a significant decrease in the predictive effect on purchase intention. Based on Table 4.20, (1) From model 1, social media celebrity significantly influences purchase intention (B=0.454, p<0.01), satisfying condition 1 of the mediation test;(2) In model 2, social media celebrities significantly influence customer satisfaction (B=0.522, p<0.01), satisfying condition 2 of the mediation test. (3)In model 3, the mediator variable customer satisfaction is added on the basis of model 1, the regression coefficient of customer satisfaction (B=0.653, p<0.01), and the regression coefficient of social media celebrities decreases from the original 0.454 to 0.114, and p-value is 0.011, the coefficients are both significant, so the conditions of mediation test 3 and 4 are fulfilled. From this, it can be judged that customer satisfaction plays a significant role in the relationship between social media celebrity and purchase intention. Media celebrities and purchase intention partially mediate the relationship.

Table 4.20 Mediation Test (Model: SMC to CS to PI)

Variable	Model 1			Model 2			Model 3			
	B	t	p	B	t	p	B	t	p	
SMC	0.454	9.190	0.000	0.522	115.219	0.000	0.114	2.548	0.011	
CS							0.653	14.606	0.000	
R-sq	0.217			0.2742			0.5398			
F	84.449			115.219			178.296			

Source: Developed from questionnaire distributed by researcher.

In addition, this paper uses Bootstrap method to further verify the mediation effect. The 95% confidence interval is [0.239, 0.443], which does not include 0, thus further verifying the existence of the mediation effect.

Thus, H5 will be accepted due to all p-value is less than 0.05 and the bootstrap's lower boundary and upper boundary does not touch 0.

Table 4.21 Mediation Test (Effect: SMC to CS to PI)

| | Effective | se | Bootstrap 95% | | Ratio of total effect |
			Lower boundary	upper boundary	
Total Effect	0.454	0.049	0.357	0.552	
Direct Effect	0.114	0.045	0.026	0.201	
Indirect Effect	0.341	0.052	0.239	0.443	0.751

Source: Developed from questionnaire distributed by researcher.

4.5.2 IS to CS to PI

According to the four-step analysis:

Condition 1: informativeness has a significant effect on purchase intention; Condition 2: informativeness has a significant effect on customer satisfaction; Condition 3: customer satisfaction has a significant effect on purchase intention; Condition 4: when informativeness and customer satisfaction predict purchase intention at the same time, there is a significant decrease in the predictive effect on purchase intention.

According to the four-step analysis: Condition 1: informativeness has a significant effect on purchase intention; Condition 2: informativeness has a significant effect on customer satisfaction; Condition 3: customer satisfaction has a significant effect on purchase intention; Condition 4: when informativeness and customer satisfaction predict purchase intention at the same time, there is a significant decrease in the predictive effect on purchase intention. Based on Table 4.20, (1) From model 1, informativeness significantly influences purchase intention (B=0.533, p<0.01), satisfying condition 1 of the mediation test ;(2) In model 2, informativeness significantly influence customer satisfaction (B=0.595, p<0.01), satisfying

condition 2 of the mediation test. (3)In model 3, the mediator variable customer satisfaction is added on the basis of model 1, the regression coefficient of customer satisfaction (B=0.620, p<0.01), and the regression coefficient of social media celebrities decreases from the original 0.533 to 0.161, and p-value is still less than 0.01, the coefficients are both significant, so the conditions of mediation test 3 and 4 are fulfilled. From this, it can be judged that customer satisfaction plays a significant role in the relationship between informativeness and purchase intention. Informativeness and purchase intention partially mediate the relationship.

Table 4.22 Mediation Test (Model: IS to CS to PI)

Variable	Model 1			Model 2			Model 3		
	B	t	p	B	t	p	B	t	p
SMC	0.533	11.000	0.000	0.595	12.616	0.000	0.161	3.410	0.000
CS							0.620	13.296	0.001
R-sq	0.284			0.343			0.547		
F	121.001			159.163			183.755		

Source: Developed from questionnaire distributed by researcher.

In addition, this paper uses Bootstrap method to further verify the mediation effect. The 95% confidence interval is [0.260, 0.474], which does not include 0, thus further verifying the existence of the mediation effect.

Thus, H6 will be accepted due to all p-value is less than 0.05 and the bootstrap's lower boundary and upper boundary does not touch 0.

Table 4.23 Mediation Test (Effect: IS to CS to PI)

	Effective	Se	Bootstrap 95%		Ratio of total effect
			Lower boundary	upper boundary	
Total Effect	0.530	0.482	0.000	0.4352	
Direct Effect	0.161	0.0473	0.0007	0.683	
Indirect Effect	0.369	0.055	0.260	0.474	0.696

Source: Developed from questionnaire distributed by researcher.

4.5.3 UGC to CS to PI

According to the four-step analysis:

Condition 1: UGC has a significant effect on purchase intention; Condition 2: UGC has a significant effect on customer satisfaction; Condition 3: customer satisfaction has a significant effect on purchase intention; Condition 4: when UGC and customer satisfaction predict purchase intention at the same time, there is a significant decrease in the predictive effect on purchase intention.

According to the four-step analysis: Condition 1: UGC has a significant effect on purchase intention; Condition 2: UGC has a significant effect on customer satisfaction; Condition 3: customer satisfaction has a significant effect on purchase intention; Condition 4: when UGC and customer satisfaction predict purchase intention at the same time, there is a significant decrease in the predictive effect on purchase intention. Based on Table 4.20, (1) From model 1, UGC significantly influences purchase intention (B=0.656, p<0.01), satisfying condition 1 of the mediation test; (2) In model 2, UGC significantly influence customer satisfaction (B=0.701, p<0.01), satisfying condition 2 of the mediation test. (3)In model 3, the mediator variable customer satisfaction is added on the basis of model 1, the regression coefficient of customer satisfaction (B=0.568, p<0.01), and the

regression coefficient of social media celebrities decreases from the original 0.656 to 0.258, and p-value is still less than 0.01, the coefficients are both significant, so the conditions of mediation test 3 and 4 are fulfilled. From this, it can be judged that customer satisfaction plays a significant role in the relationship between UGC and purchase intention. UGC and purchase intention partially mediate the relationship.

Table 4.24 Mediation Test (Model: UGC to CS to PI)

Variable	Model 1			Model 2			Model 3		
	B	t	p	B	t	p	B	t	p
SMC	0.656	13.092	0.000	0.701	5.929	0.000	0.258	4.855	0.000
CS							0.568	11.923	0.000
R-sq	0.360			0.393			0.564		
F	171.424			197.826			196.459		

Source: Developed from questionnaire distributed by researcher.

In addition, this paper uses Bootstrap method to further verify the mediation effect. The 95% confidence interval is [0.265, 0.525], which does not include 0, thus further verifying the existence of the mediation effect.

Thus, H7 will be accepted due to all p-value is less than 0.05 and the bootstrap's lower boundary and upper boundary does not touch 0.

Table 4.25 Mediation Test (Effect: UGC to CS to PI)

	Effective	Se	Bootstrap 95%		Ratio of total effect
			Lower boundary	upper boundary	
Total Effect	0.656	0.050	0.000	0.558	
Direct Effect	0.258	0.053	0.000	0.154	
Indirect Effect	0.398	0.066	0.265	0.525	0.607

Source: Developed from questionnaire distributed by researcher.

4.7 Conclusion

In conclusion, in this chapter, the reliability test was carried out by comprehensively analyzing the questionnaire data using various methods such as descriptive analysis, Cronbach's alpha and multiple regression analysis and mediation analysis were carried out to test the relationship between the different variables and to draw conclusions.

CHAPTER 5 : DISCUSSION, CONCLUSION AND IMPLICATION

5.0 Introduction

This chapter will summarize the results from the research and how the results from the research will affect the business. Also, the limitations of the study and the recommendations to address the limitations will be detailed in this chapter.

5.1 Summary

The survey included 307 respondents and covered a wide range of data. The gender ratio showed that 58.6 per cent of the respondents were female, slightly more than the 41.4 per cent who were male. In terms of age, 62.5 per cent of respondents were between 20 and 29 years old, with 15.6 per cent under the age of 20, indicating that young people were the main target. In terms of educational attainment, the largest number of respondents had a bachelor's degree or higher (41.4%), followed by a high school education (20.5%), and then a diploma education (22.1%). Single respondents accounted for 60.9 per cent while married respondents accounted for 39.1 per cent. In terms of income, half of the respondents, 51.1%, earned between RM2, 500 and RM7, 500, while a lower proportion earned less than RM2, 500 and more than RM10, 000. In terms of ethnicity, Chinese accounted for 45.3 per cent, Malays 28.7 per cent, Indians 28.7 per cent and other races only 0.3 per cent. These data reveal the characteristics of the participating population in terms of gender, age, education level, marital status, income level and race, highlighting the main characteristics and tendencies of the respondents.

Based on the data provided, the results of the survey of 307 respondents revealed the status of following social media celebrities, attitudes towards their purchase intention of endorsed products, and perceptions of purchase satisfaction. Nearly half of the respondents (48.9%) said they follow social media celebrities, but in terms of purchase intention, only 30.9% said they would be willing to purchase products based on endorsement by their favorite celebrities. In addition, 31.3% of respondents said that even if a product is endorsed by their favorite social media celebrity, they would not be satisfied with it. In terms of shopping methods, the majority would purchase products via live streaming (64.5%), while 84.4% would seek relevant advice or reviews before making a purchase. These figures reflect the diversity of respondents' buying behaviors and attitudes.

Furthermore, Cronbach's Alpha was used to measure the internal consistency of the variables, and all the variables exceeded 0.6 and were therefore considered acceptable. The relationship between the independent and dependent variables was subsequently tested through regression analysis. From this the results H1 (p-value>0.05) was not supported, H2, H3 and H4 were supported (p-value<0.05). The mediated effects analysis method yielded that H5, H6 and H7 all met the conditions of the four-step analysis of mediated effects and were therefore also supported.

5.2 Discussions of Major Findings

5.2.1 Results of Hypothesis

Table 5.1 Summary of Hypothesis Finding

Hypothesis	Results	Finding
H1: Social Media Celebrity on live streaming is positively related with consumer satisfaction.	Sig. = 0.075 P>0.05	Not Supported
H2: Informativeness on live streaming is positively related with consumer satisfaction.	Sig. = 0.001 P<0.05	Supported
H3: User-Generated Content on live streaming is positively related with consumer satisfaction.	Sig. = 0.001 P<0.05	Supported
H4: Customer satisfaction on live streaming in e-commerce is positively related with purchase intention.	Sig. = 0.001 P<0.05	Supported
H5: Customer satisfaction on live streaming in e-commerce is a mediator between social media celebrity and purchase intention.	LLCI = 0.239 UCLI =0.443 Indirect effect = 0.751	Supported
H6: Customer satisfaction on live streaming in e-commerce is a mediator between informative and purchase intention.	LLCI = 0.260 UCLI = 0.474 Indirect effect = 0.696	Supported
H7: Customer satisfaction on live streaming in e-commerce is a mediator between user-generated-content and purchase intention.	LLCI = 0.265 UCLI = 0.525 Indirect effect = 0.607	Supported

5.2.2 Social Media Celebrity

Social media celebrities presented in this study did not have a significant effect on customer satisfaction (p-value > 0.05). According to Hussain et. al (2020), celebrity trustworthiness is based on cognitive dimensions only and therefore may have different effects on other constructs. Moreover, consumers who have a high level of knowledge about products and services, so they do have own view of the product and services and do not affect their satisfaction. Therefore, consumers do not blindly experience high satisfaction with a product or service because they like a celebrity.

5.2.3 Infomativeness

Infomativeness presented a significant effect on customer satisfaction in this study (p-value<0.05). Lin (2007) also proved that being up-to-date, accurate, useful, and providing complete information can have a role in influencing customer satisfaction with online shopping. Also this supports the findings of this article. Therefore, informativeness is crucial for live e-commerce. Informativeness largely determines consumer satisfaction, e.g. consumer satisfaction is higher if the product or service is accurate in live streaming with the description. If the deviation is large, the consumer satisfaction is low.

5.2.4 User-Generate Content

User-Generate Content presented a significant effect on customer satisfaction in this study (p-value<0.05). The impact of UGC on customer satisfaction is confirmed in this study and it has a higher impact on customer satisfaction as compared to other factors. Thus this study found that the impact of UGC on satisfaction in live streaming cannot be ignored. According to Colicev & O'Connor (2020), UGC is

also believed to influence customer satisfaction. Good UGC can lead to increase in customer satisfaction after consumption.

5.2.5 Customer Satisfaction and purchase intention

Customer Satisfaction presented a significant effect on purchase intention in this study (p-value<0.05). Chen (2019) also proves that customer satisfaction has a significant effect on customer purchase intention in live streaming. Therefore, if companies want to improve customer purchase intention in live broadcasting, customer satisfaction can play a good role in it.

5.2.6 Customer Satisfaction as mediator between Social Media Celebrity and Purchase intention

Customer presented a significant mediator effect between social media satisfaction and purchase intention in this study (value between lower boundary and upper boundary is not touched 0). Domfeh, Kusi et. al. (2018) similarly demonstrated the mediating effect of customer satisfaction between social media celebrities and purchase intention. Therefore, this study found a mediating effect of customer satisfaction. Moreover, if companies want to increase purchase intention through social media celebrities in live streaming, they also need to pay attention to customer satisfaction.

5.2.7 Customer Satisfaction as mediator between Infomativeness and Purchase intention

Customer presented a significant mediator effect between infomativeness and purchase intention in this study (p-value<0.05). (value between lower boundary and upper boundary is not touched 0). Chen (2013) similarly demonstrated the mediating effect of customer satisfaction between informativeness and purchase intention. Therefore, this study found a mediating effect of customer satisfaction. Furthermore, information that is true and valuable can lead to increased customer satisfaction in live streaming and thus influence their willingness to buy.

5.2.8 Customer Satisfaction as mediator between User-Generate Content and Purchase intention

Customer presented a significant mediator effect between user-generate content and purchase intention in this study (p-value<0.05). (Value between lower boundary and upper boundary is not touched 0). Kim, (2019) similarly demonstrated the mediating effect of customer satisfaction between UGC and purchase intention. Therefore, customer satisfaction plays an effect between UGC and purchase intention. In live streaming if companies want to better motivate customers' purchase intention, they can use UGC to drive customer satisfaction and thus achieve it.

5.2 Implication of the Study

The amount of information in live streaming was found to be positively correlated with consumer satisfaction. The fact that adequate and accurate information is crucial for enhancing consumer satisfaction was emphasised. Brands or merchants should pay special attention to the quality and diversity of live information content

to ensure that it adequately caters to the diverse needs of consumers, thereby enhancing their satisfaction and trust. This focus on information content can help to create a richer, more valuable consumer experience in a live environment, leading to higher levels of customer satisfaction.

In addition, the study found a positive correlation between user-generated content and consumer satisfaction, further highlighting the high value consumers place on the opinions and feedback of other users. This finding emphasizes the importance of interactions between users, suggesting that consumers are more inclined to trust and draw on the experiences and views of other users. Therefore, companies can actively advocate and promote user-generated content, encourage consumers to participate, and provide them with a platform for sharing and interaction in order to enhance communication and interaction among consumers, increase consumer engagement and trust, and thus effectively improve the overall level of consumer satisfaction.

In addition, the study found that live e-commerce customer satisfaction is positively correlated with purchase intention, further validating the key role of customer satisfaction in shaping purchase intention. This means that consumers' overall satisfaction with a product or service influences their purchase intention, and customer satisfaction, as an important factor in the decision-making process, influences their willingness to purchase and continue to choose a brand or product. Therefore, companies should focus on improving customer satisfaction in their operations and take steps to ensure that consumers have a quality experience during the purchase and use process. This includes providing superior product quality and information, excellent customer service, and timely response to consumer needs.

Finally, customer satisfaction was found to mediate between social media celebrity and purchase intention, amount of information and purchase intention, and user-generated content and purchase intention. This demonstrates the important role of customer satisfaction in influencing consumer purchase decisions. Companies

should focus on improving customer satisfaction when developing marketing strategies to indirectly promote purchase intention. Firstly, cooperating with influential celebrities on social media can increase brand exposure and build trust and credibility, thus increasing customer satisfaction. Second, providing detailed product descriptions, usage tutorials, user reviews and other rich information satisfies consumers' need to obtain the information they need to make decisions, which in turn influences their purchase intention. In addition, it encourages and promotes users to share their usage experience, evaluation and sharing, enhances the sense of community and interactivity through user-generated content, improves consumer engagement and loyalty, and at the same time provides more authentic and persuasive information to other potential customers, indirectly influencing their purchase intention.

5.3 Limitations of the Study

5.3.1 Language Limitation

The limitation of this study is the monolingual nature of the questionnaire, as not everyone is familiar with English, and Malaysia has three major ethnic groups that speak different languages (English, Malay, and Chinese). Therefore, a monolingual questionnaire limits the comprehensiveness and accuracy of the information. It may lead to ambiguity in the respondents' understanding of the questions, leading to possible problems in selection. It also tends to ignore the voices and experiences of groups that are not proficient in English, as well as limiting the ability of some respondents to express themselves.

5.3.2 Lack of Independent Variable

Secondly, the inadequacy of the independent variables is also a limitation. This is evident in the inability to take into account all the factors that may affect customer satisfaction and the mediating role of customer satisfaction in influencing purchase intentions. There is a diversity of factors involved in the business environment and the failure to cover them comprehensively may lead to one-sided and incomplete analyses. It may also fail to fully explore specific factors and the role from which they play.

5.4 Recommendations for Future Research

5.4.1 Language

The recommendation for overcoming the limitation of linguistic homogeneity in questionnaires can be achieved through a variety of measures. The diversified questionnaire design is key, using plain language, taking into account different cultural and linguistic backgrounds, and providing multiple language versions of the questionnaire. Furthermore, the needs of specific groups need to be taken into account by understanding and incorporating the dialects, jargon or terminology that they may use in order to avoid neglecting their views and experiences. In addition to the online questionnaire combined with other data collection methods, such as oral interviews, to make up for the limitations of the questionnaire's linguistic form, allowing respondents to express their thoughts and experiences more freely and comprehensively These measures collectively help to improve the universality and validity of the questionnaire survey, and to ensure a more comprehensive and accurate collection of data.

5.4.1 Lack of Independent Variable

The recommendation for independent variable inadequacy requires a multifaceted strategy. Firstly, a wide range of other factors influencing customer satisfaction and the mediating role of customer satisfaction in influencing purchase intentions, such as promotional factors, price factors and personal preferences, need to be considered in order to obtain more comprehensive information. Secondly, integrating different data sources and adopting flexible analytical methods can help to understand the market and customer behavior more accurately. By delving deeper into the mediating role of satisfaction in purchase intentions, the pathways of influence can be better understood. These methods, in collaboration with each other, can effectively overcome the limitations of insufficient independent variables in business research and support more comprehensive findings.

5.5 Conclusion

This chapter summarize the findings made through the previous chapters and how they can be applied to the future of the live industry and business. It also points out the limitations of this article and makes recommendations based on the limitations.

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APPENDIX

Appendix A : Questionnaire

UNIVERSITI TUNKU ABDUL RAHMAN

Faculty of ACCOUNTANCY AND MANAGEMENT

BACHELOR OF INTERNATIONAL BUSINESS
FINAL YEAR PROJECT

TITLE OF TOPIC: THE USAGE OF LIVE STREAMING IN AFFECTING CUSTOMER PURCHASE INTENTION

Survey Questionnaire

I am year 2 sem3 undergraduate students pursuing Bachelor of International Business (Hons) from University Tunku Abdul Rahman (UTAR).

The purpose of the study is to analyze the determinant of live streaming in affecting customer satisfaction. Your participation will greatly contribute to the success of the survey. I will deeply appreciate your help in participating in this survey, and your responses will remain private and will be used strictly for **academic purpose only**.

You are invited to participate in a research project being conducted by Chen Bo Nian, a year 2 sem 3 undergraduate student in the Faculty of Accountancy and Management at UNIVERSITI TUNKU ABDUL RAHMAN. If you decide to participate, you will be asked to

complete an anonymous web-based survey. The survey should take almost 10 minutes with 39 questions and I hope that to recruit 300 participants.

The survey will not collect any identifiable information and nobody will be able to connect your responses to you. Your anonymity is further protected by not asking you to sign and return a consent form. Your completion of the survey will serve as your consent.

Thank you.

Demographic	
Gender	Male
	Female
Age	Below 20
	20-29
	30-39
	40-49
	50-59
	60 and above
Highest Education	SPM/O-level
	STPM/A-Level/UEC
	Diploma
	Bachelor Degree
	Master Degree
	PhD
	Others:
Marital status	Single
	Married
	Other
Monthly Income	Below RM2500
	RM2,501-RM7,500
	RM7,501-RM10,000
	RM10,001-RM15,000
	More than RM15, 000
Race	Chinese
	Indian
	Malay
	Other

How often do you watch live streaming?	Never
	Rarely

	Sometimes Always Often
How often do you buy things on live streaming?	Never Rarely Sometimes Always Often
Do you have any favorite social media celebrity?	Yes/No
Do you search for the review or recommendation before buy a product or service?	Yes/No
Are you willing to buy any products as long as it is endorsed by your favorite celebrity?	Yes/No/Not relevant
Are you satisfied with the product/service purchased as long as it is endorsed by your favourite celebrity?	Yes/No/Not relevant
Did you buy anything when you were watching live streaming?	Yes/No
Did you buy anything based on other people online' recommendation?	Yes/No

Social Media Celebrity						
NO.	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
1	My favourite social media celebrity provides a good model for me to follow.					
	My favourite social media celebrity leads by example.					
	My favourite social media celebrity sets a positive example for others to follow.					
	My favourite social media celebrity					

		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
	exhibits the kind of work ethic and behaviour that I try to imitate.					
	My favourite social media celebrity acts as a role model for me.					
Informativeness						
NO.	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
2	Information provided by the in-store live streamer is beneficial.					
	I think the in-store live streamer provides timely information about the product or service.					
	The in-store live stream supplies relevant product or service information.					
	I found that watching the in-store live stream is a convenient source of getting the product or service information.					
	The in-store live stream always provides complete product information.					
User-Generated-Content						
NO.	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
3	The posts that appear on the livestreaming describe functions of					

		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
	the products and services					
	The posts that appear on the livestreaming describe values of the products and services					
	The posts that appear on the live streaming describe benefits of product and services.					
	The posts that appear on the live streaming create a positive atmosphere about the product and services.					
	The posts that appear on the live streaming create positive emotions about the product and service.					
	The posts that appear on the live streaming create positive feelings about the product and service.					
Customer Satisfaction					
NO.	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
4	I believe I made the right choice in deciding to buy in the live streaming I know.					
	The purchases I have made in the live streaming I know					

		Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
	have been satisfactory.					
	I am satisfied with how the live streaming I know deal with the sales they have made with me.					
	I am satisfied with the service I receive in the live streaming I know.					
Purchase Intention						

NO.	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
5	Whenever I need to purchase, I intend to purchase the product that I saw on Live streaming.					
	Whenever I need to purchase, I plan to purchase the product that I saw on Live streaming.					
	I predict that I would purchase the product that I saw on Live streaming.					
	It is highly willing that I will purchase the product that I saw on Live streaming.					
	I will strongly recommend others to purchase the product that I saw on Live streaming.					

Appendix B: SPSS Output

Descriptive Analysis

Do you watch live streaming?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	307	96.8	96.8	96.8
	No	10	3.2	3.2	100.0
	Total	317	100.0	100.0	

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	127	41.4	41.4	41.4
	Female	180	58.6	58.6	100.0
	Total	307	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 20	48	15.6	15.6	15.6
	20-29	192	62.5	62.5	78.2
	30-39	52	16.9	16.9	95.1
	40-49	12	3.9	3.9	99.0
	50-59	3	1.0	1.0	100.0
	Total	307	100.0	100.0	

Highest Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SPM/O-LEVEL	16	5.2	5.2	5.2
	STPM/A-LEVEL/UEC	63	20.5	20.5	25.7
	Diploma	68	22.1	22.1	47.9
	Bachelor Degree	127	41.4	41.4	89.3
	Master	25	8.1	8.1	97.4
	PhD	6	2.0	2.0	99.3
	Others	2	.7	.7	100.0
	Total	307	100.0	100.0	

Marital Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	187	60.9	60.9	60.9
	Married	120	39.1	39.1	100.0
	Total	307	100.0	100.0	

Monthly Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below RM2,500	95	30.9	30.9	30.9
	RM2,501-RM7,500	157	51.1	51.1	82.1
	RM7,501-RM10,000	35	11.4	11.4	93.5
	RM10,001-RM15,000	17	5.5	5.5	99.0
	More than RM15,000	3	1.0	1.0	100.0
	Total	307	100.0	100.0	

Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chinese	139	45.3	45.3	45.3
	Indian	79	25.7	25.7	71.0
	Malay	88	28.7	28.7	99.7
	Other	1	.3	.3	100.0
	Total	307	100.0	100.0	

Do you follow any live streaming celebrity?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	150	48.9	48.9	48.9
	No	157	51.1	51.1	100.0
	Total	307	100.0	100.0	

Are you willing to buy any products as long as it is endorsed by your favorite social media celebrity?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	95	30.9	30.9	30.9
	No	125	40.7	40.7	71.7
	Not relevant	87	28.3	28.3	100.0
	Total	307	100.0	100.0	

Are you satisfied with the product/service purchased as long as it is endorsed by your favorite celebrity?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	90	29.3	29.3	29.3
	No	96	31.3	31.3	60.6
	Not relevant	121	39.4	39.4	100.0
	Total	307	100.0	100.0	

How often do you buy things online?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	1	.3	.3	.3
	Rarely	35	11.4	11.4	11.7
	Sometimes	198	64.5	64.5	76.2
	Often	60	19.5	19.5	95.8
	Always	13	4.2	4.2	100.0
	Total	307	100.0	100.0	

Do you search for the review or recommendation before buy a product or service?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	259	84.4	84.4	84.4
	No	48	15.6	15.6	100.0
	Total	307	100.0	100.0	

Reliability Test

NO.	Construct	Cronbach's Alpha	Number of items
1	Social Medial Celebrity	0.678	5
2	Informativeness	0.669	5
3	User-Generated Content	0.711	6
4	Customer Satisfaction	0.685	4
5	Purchase Intention	0.743	5

Multiple Regression Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.670[a]	.449	.444	.48373

a. Predictors: (Constant), UGC, SMC, IS

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.871	3	19.290	82.441	<.001[b]
	Residual	70.899	303	.234		
	Total	128.770	306			

a. Dependent Variable: CS

b. Predictors: (Constant), UGC, SMC, IS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.714	.173		4.135	<.001
	SMC	.109	.061	.110	1.787	.075
	IS	.250	.066	.246	3.793	<.001
	UGC	.441	.067	.395	6.591	<.001

a. Dependent Variable: CS

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.728[a]	.530	.528	.43619

a. Predictors: (Constant), CS

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	65.433	1	65.433	343.906	<.001[b]
	Residual	58.030	305	.190		
	Total	123.463	306			

a. Dependent Variable: PI

b. Predictors: (Constant), CS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.034	.132		7.805	<.001
	CS	.713	.038	.728	18.545	<.001

a. Dependent

Variable: PI

Mediation Analysis

SMC to CS to PI

Variable	Model 1			Model 2			Model 3		
	B	t	p	B	t	p	B	t	p
SMC	0.454	9.190	0.000	0.522	115.219	0.000	0.114	2.548	0.011
CS							0.653	14.606	0.000
R-sq	0.217			0.2742			0.5398		
F	84.449			115.219			178.296		

	Effective	se	Bootstrap 95%		Ratio of total effect
			Lower boundary	upper boundary	
Total Effect	0.454	0.049	0.357	0.552	
Direct Effect	0.114	0.045	0.026	0.201	
Indirect Effect	0.341	0.052	0.239	0.443	0.751

```
***************************************************************************
OUTCOME VARIABLE:
 CS

Model Summary
     R       R-sq     MSE       F        df1      df2         p
   .5236     .2742    .3064   115.2191  1.0000  305.0000    .0000

Model
              coeff     se       t        p       LLCI     ULCI
constant    1.7000    .1601   10.6201   .0000    1.3850   2.0149
SMC          .5216    .0486   10.7340   .0000     .4260    .6172

Standardized coefficients
         coeff
SMC      .5236

***************************************************************************
OUTCOME VARIABLE:
 PI

Model Summary
     R       R-sq     MSE       F        df1      df2         p
   .7347     .5398    .1869   178.2960  2.0000  304.0000    .0000

Model
              coeff     se       t        p       LLCI     ULCI
constant     .8691    .1463    5.9405   .0000     .5812   1.1571
SMC          .1135    .0445    2.5481   .0113     .0258    .2012
CS           .6532    .0447   14.6064   .0000     .5652    .7412

Standardized coefficients
         coeff
SMC      .1164
CS       .6671


*************************** TOTAL EFFECT MODEL ***************************
OUTCOME VARIABLE:
 PI

Model Summary
     R       R-sq     MSE       F        df1      df2         p
   .4657     .2168    .3170    84.4487  1.0000  305.0000    .0000

Model
              coeff     se       t        p       LLCI     ULCI
constant    1.9795    .1628   12.1583   .0000    1.6591   2.2999
SMC          .4542    .0494    9.1896   .0000     .3569    .5515

Standardized coefficients
         coeff
SMC      .4657


************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
   Effect    se        t        p       LLCI     ULCI     c_cs
    .4542    .0494    9.1896    .0000    .3569    .5515    .4657

Direct effect of X on Y
   Effect    se        t        p       LLCI     ULCI     c'_cs
    .1135    .0445    2.5481    .0113    .0258    .2012    .1164

Indirect effect(s) of X on Y:
      Effect   BootSE   BootLLCI   BootULCI
CS     .3407    .0516     .2385      .4431

Completely standardized indirect effect(s) of X on Y:
      Effect   BootSE   BootLLCI   BootULCI
CS     .3493    .0505     .2469      .4467
```

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IS to CS to PI

Variable	Model 1			Model 2			Model 3		
	B	t	p	B	t	p	B	t	p
SMC	0.533	11.000	0.000	0.595	12.616	0.000	0.161	3.410	0.000
CS							0.620	13.296	0.001
R-sq	0.284			0.343			0.547		
F	121.001			159.163			183.755		

	Effective	Se	Bootstrap 95%		Ratio of total effect
			Lower boundary	upper boundary	
Total Effect	0.530	0.482	0.000	0.4352	
Direct Effect	0.161	0.0473	0.0007	0.683	
Indirect Effect	0.369	0.055	0.260	0.474	0.696

************************* TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 PI

Model Summary
      R   R-sq   MSE   F   df1   df2   p
   .5330   .2840   .2898 121.0010 1.0000 305.0000 .0000

Model
          coeff   se   t   p   LLCI   ULCI
constant 1.6980 .1619 10.4899 .0000 1.3795 2.0165
IS   .5300 .0482 11.0000 .0000   .4352   .6248

Standardized coefficients
     coeff
IS   .5330

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
   Effect   se   t   p   LLCI   ULCI   c_cs
   .5300   .0482 11.0000 .0000 .4352   .6248   .5330

Direct effect of X on Y
   Effect   se   t   p   LLCI   ULCI   c'_cs
   .1614   .0473 3.4095   .0007 .0683   .2546   .1623

Indirect effect(s) of X on Y:
     Effect   BootSE BootLLCI BootULCI
CS   .3686   .0550   .2603   .4740

Completely standardized indirect effect(s) of X on Y:
     Effect   BootSE BootLLCI BootULCI
CS   .3706   .0532   .2656   .4729

****
OUTCOME VARIABLE:
 CS

Model Summary
      R   R-sq   MSE   F   df1   df2   p
   .5856   .3429   .2774 159.1626 1.0000 305.0000   .0000

Model
          coeff   se   t   p   LLCI   ULCI
constant 1.4227   .1584 8.9829   .0000 1.1110   1.7343
IS   .5948   .0471 12.6160 .0000   .5020   .6875

Standardized coefficients
     coeff
IS   .5856

****
OUTCOME VARIABLE:
 PI

Model Summary
      R   R-sq   MSE   F   df1   df2   p
   .7398   .5473   .1839 183.7552 2.0000 304.0000   .0000

Model
          coeff   se   t   p   LLCI   ULCI
constant   .8163   .1450 5.6302   .0000   .5310   1.1016
IS   .1614   .0473 3.4095   .0007   .0683   .2546
CS   .6198   .0466 13.2957 .0000   .5280   .7115

Standardized coefficients
     coeff
IS   .1623
CS   .6329

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UGC to CS to PI

Variable	Model 1			Model 2			Model 3		
	B	t	p	B	t	p	B	t	p
SMC	0.656	13.092	0.000	0.701	5.929	0.000	0.258	4.855	0.000
CS							0.568	11.923	0.000
R-sq	0.360			0.393			0.564		
F	171.424			197.826			196.459		

	Effective	Se	Bootstrap 95%		Ratio of total effect
			Lower boundary	upper boundary	
Total Effect	0.656	0.050	0.000	0.558	
Direct Effect	0.258	0.053	0.000	0.154	
Indirect Effect	0.398	0.066	0.265	0.525	0.607

```
***************************************************************************
OUTCOME VARIABLE:
 CS

Model Summary
     R     R-sq    MSE      F       df1      df2      p
   .6272   .3934   .2561  197.8256  1.0000  305.0000   .0000

Model
        coeff    se      t      p     LLCI    ULCI
constant  1.0139  .1710  5.9293  .0000   .6774  1.3504
UGC        .7008  .0498  14.0651  .0000   .6027   .7988

Standardized coefficients
      coeff
UGC    .6272

***************************************************************************
OUTCOME VARIABLE:
 PI

Model Summary
     R     R-sq    MSE      F       df1      df2      p
   .7509   .5638   .1772  196.4586  2.0000  304.0000   .0000

Model
        coeff    se      t      p     LLCI    ULCI
constant   .6508  .1502  4.3331  .0000   .3552   .9463
UGC        .2583  .0532  4.8545  .0000   .1536   .3630
CS         .5678  .0476  11.9229  .0000   .4741   .6615

Standardized coefficients
      coeff
UGC    .2361
CS     .5799

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 PI

Model Summary
     R     R-sq    MSE      F       df1      df2      p
   .5998   .3598   .2591  171.4239  1.0000  305.0000   .0000

Model
        coeff    se      t      p     LLCI    ULCI
constant  1.2265  .1720  7.1304  .0000   .8880  1.5650
UGC        .6562  .0501  13.0929  .0000   .5576   .7548

Standardized coefficients
      coeff
UGC    .5998


************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
   Effect    se      t      p     LLCI    ULCI    c_cs
   .6562   .0501  13.0929  .0000   .5576   .7548   .5998

Direct effect of X on Y
   Effect    se      t      p     LLCI    ULCI    c'_cs
   .2583   .0532  4.8545  .0000   .1536   .3630   .2361

Indirect effect(s) of X on Y:
     Effect   BootSE  BootLLCI  BootULCI
CS   .3979   .0662    .2649     .5248

Completely standardized indirect effect(s) of X on Y:
     Effect   BootSE  BootLLCI  BootULCI
CS   .3637   .0599    .2441     .4761
```

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