

**Live Streamer Commerce: Exploring how the interconnections
among brand, streamer, and follower translate into
behavioural outcomes**

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Abstract

This study investigates the psychological and behavioural mechanisms that drive consumer engagement and impulse buying in live streaming commerce. As an emerging form of digital marketing, live streaming integrates real-time interaction, sense of presence, and brand messaging to create immersive consumer experiences. Drawing upon a multi-theoretical framework—comprising Source Credibility Theory, Congruity Theory, Flow Theory, and Consumer Engagement Theory—this research explores how streamer attributes (attractiveness, expertise, trustworthiness), brand–streamer–follower congruence, and the sense of presence contribute to dynamic brand experiences, which in turn influence follower engagement and impulse buying behaviour.

To address these aims, a quantitative research design was employed using structured online questionnaires conducted in both China and the UK, enabling cross-cultural analysis of follower behaviours. Data collected from 600 participants (300 per country) were analysed using Structural Equation Modelling (SEM) using SmartPLS to test direct, mediating, and moderating relationships among the constructs.

The findings confirm that streamer attributes positively influence dynamic brand experience, with sense of presence and congruence acting as critical psychological mechanisms. Sense of presence showed a positive mediating effect among Chinese followers but not a very positive effect in the UK sample, highlighting important cross-cultural differences. The congruence emerged as a

consistently strong predictor of dynamic brand experience across both markets. Dynamic brand experience, in turn, strongly drives follower engagement and impulse buying, with gender and product type not moderating the strength of these effects in engagement and impulse buying. The study contributes to theoretical advancement by extending the application of existing models to real-time, interactive commerce environments and offers actionable insights for marketers, streamers, and brands seeking to enhance the effectiveness of live-streaming strategies.

Keywords: Live Streaming Commerce, Digital Marketing, Consumer Behaviour, Branding, Sense of Presence

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Chapter 1: Introduction

This chapter serves as the introduction to the live streaming commerce research study, providing an overview of the key elements that frame the investigation of live streaming commerce research. This chapter begins by establishing the research background and rationale, and the research problem is clearly explained. The research objectives and questions are then presented to guide the study.

This chapter also discusses the chosen research methods, including the adoption of a quantitative methods approach to gather comprehensive insights. Furthermore, the potential contributions of the study are outlined, encompassing theoretical, managerial, methodological, and contextual dimensions. The chapter acknowledges the limitations and delimitations of the research, ensuring a transparent understanding of its scope and potential constraints. Finally, the structure of the thesis is outlined, providing readers with a roadmap for the subsequent chapters.

Overall, Chapter 1 sets the stage for the live streaming research, contextualising the topic and outlining the significance and objectives of the investigation.

1.1 What is Live Streaming Commerce

Live streaming commerce is a form of digital retail where products are promoted and sold in real time through interactive livestreams hosted by streamers, influencers, or brands. Unlike traditional e-commerce, where consumers passively browse static listings, live streaming commerce integrates real-time video, interactivity, and sales promotion into a single platform. Streamers showcase products, answer questions, and respond instantly to audience comments, creating a sense of presence, authenticity, and urgency that can drive immediately following and purchase decisions (Zhang et al., 2022; Luo et al., 2023).

For example, Figure 1 shows below, in the UK, The Body Shop uses TikTok Shop livestreams to promote skincare and beauty products, offering exclusive discounts and flash sales during the broadcast. Similarly, in China, L'Oréal Paris regularly hosts livestreams on Taobao Live, where professional hosts demonstrate product benefits, interact with viewers, and provide limited-time coupons and gifts to encourage impulse purchases.

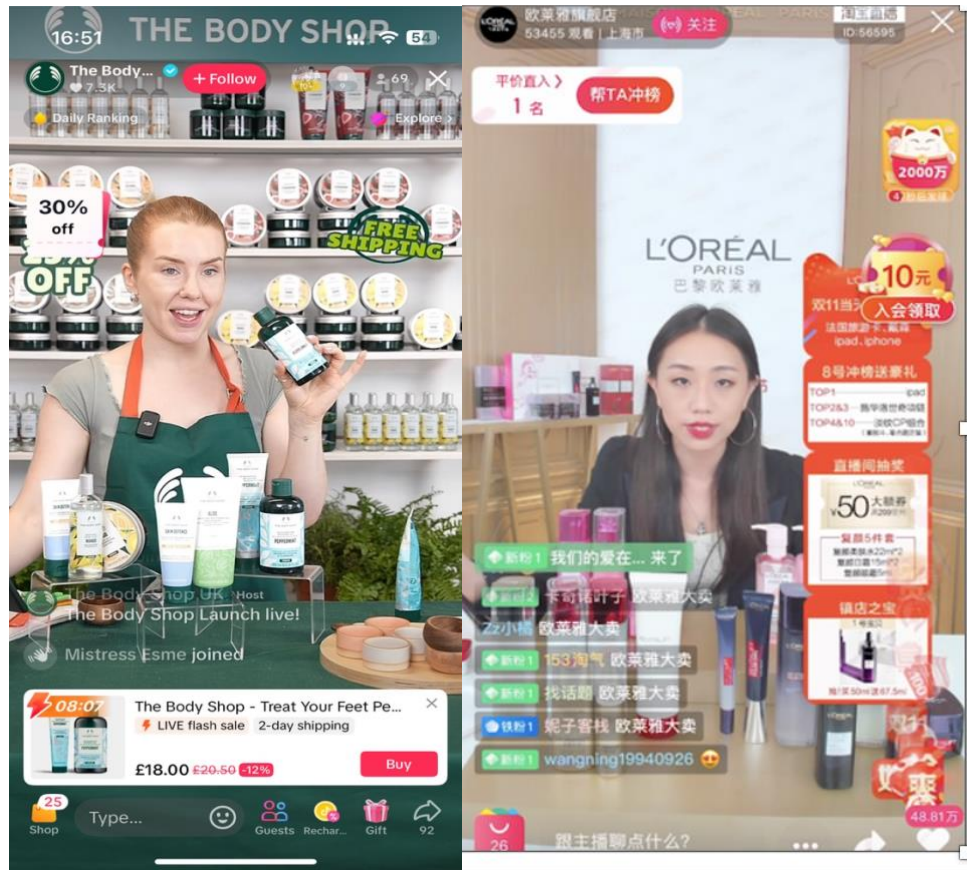


Figure 1: Live Streaming Commerce

These examples illustrate how live streaming commerce operates at the intersection of entertainment, interactivity, and retail. Streamers act not only as presenters but also as sales agents and relationship builders, using personal credibility and audience engagement to influence consumer decision-making. The popularity of this practice has led to its rapid expansion in both Western markets, where it is emerging, and Asian markets, such as China, where it is already highly developed.

1.2 Research Background

Live streaming commerce (LSC) has its roots in the home shopping television programmes that emerged in the 1990s (McDonald, 1995). Similar to channels such as QVC (Quality, Value, Convenience television shopping channel) and HSN (Home

Shopping Network television channel), these programmes featured live product demonstrations, persuasive sales dialogues, and opportunities for viewers to make purchases while watching TV (Park et al., 2011; Yen, 2018). However, unlike traditional TV shopping, which relied on one-way communication via television networks, LSC leverages social media and digital platforms to enable real-time, two-way interaction between streamers and viewers, as well as engagement among viewers themselves. This interactive capacity, supported by integrated e-commerce functions, represents a fundamental shift from the more passive, broadcast-based TV shopping format to a socially driven, participatory shopping experience.

Given the global expansion of live streaming commerce, this study focuses on China and the UK as two important yet contrasting markets. China represents the world's most mature live streaming commerce ecosystem, while the UK is one of the fastest-growing Western markets. Comparing these two countries provides valuable insights into how cultural and market differences may influence consumer responses to live streaming commerce. In another aspect, with the rapid advancement of digital technologies and the widespread adoption of the internet, social media platforms have proliferated, giving rise to new forms of online interaction and commerce. Among these, platforms that integrate live streaming and e-commerce functionalities have gained significant popularity, enabling users to engage with their favourite streamers in real time. Through various platforms such as Douyin, TikTok, RedNote, and Instagram Live, viewers could join sessions based on interest or product category, interact with streamers, and experience a sense of social presence and immersion during the process (Wongkitrungrueng & Assarut, 2020; Ma, 2021).

Since 2020, the growth of live streaming platforms has accelerated in both China and the UK (Mintel, 2021; Statista, 2021). According to Apple Store rankings, TikTok was the most downloaded app globally in 2024 (Statista, 2025), indicating its dominant position in the digital landscape. In China, platforms such as Douyin and Red Notes, both of which support live streaming functions, also achieved top download positions, reflecting strong consumer interest and acceptance of this interactive format. Furthermore, data from Statista, (2025) shows a consistent upward trend in the number of live streaming viewers in both China (Appendix 5) and the UK Live Streaming Market growth rate is expected to be around 25.65% (Marketresearch, 2025), underscoring live-streaming's rising influence on follower engagement and impulse buying behaviour.

Also, live streaming has emerged as a compelling tool for marketers due to its ability to deliver real-time interaction, product demonstrations, and personal engagement, which can influence impulse buying and foster brand loyalty (Sun et al., 2019,Hugh et al., 2022). Viewers can ask questions, receive instant feedback, and observe streamers dynamically adapt content based on context. These features create a rich media environment that surpasses traditional marketing formats, enhancing emotional connection and authenticity (Yu & Zheng, 2021). Additionally, elements such as lighting, music, visuals, and streamer charisma can evoke a strong sense of presence, making followers feel "present" in the virtual shopping space (Ming et al., 2021; Zheng; Li, Dou & Yu, 2023).

However, despite these advantages, live streaming is not without its challenges and risks. The live and unscripted nature of the format can lead to unpredictable

outcomes—including technical failures, misinformation, or controversial content—that can damage a brand’s reputation (Li & Lee, 2024; Ding et al., 2025; Khan et al., 2025). Streamers may also face pressure to maintain constant enthusiasm or high sales performance, leading to burnout or ethical compromises. From the consumer side, over-commercialised or insincere content may reduce trust and trigger scepticism, particularly if the authenticity of the streamer is questioned (Kanaveedu & Kalapurackal, 2022; Bu et al., 2022). Additionally, not all campaigns achieve their intended ROI, and some live streaming efforts fall short in generating meaningful engagement or conversions (Manning & Muzellec, 2021).

Given this context, a key challenge and opportunity for marketers is understanding how to attract and engage followers through live streaming and how this real-time interaction could drive unconscious or impulse purchasing behaviours. As live streaming continues to evolve into a powerful and immersive marketing tool, it presents a valuable and timely area for academic investigation, particularly in exploring the psychological, relational, and experiential mechanisms that shape follower engagement in this dynamic environment. In the age of digital influence and real-time engagement, live streaming commerce has taken advantage of the power of live streaming as a potent marketing tool, providing a unique platform to immediately and interactively connect with their followers. As defined by Wongkitrungrueng, Dehouche & Assarut (2020) Live streaming commerce is a form of digital retail where products are promoted and sold in real-time through interactive video streamer, combining entertainment, follower engagement, and instant purchasing capabilities. As this dynamic landscape continues to evolve, delving into the interaction of digital marketing through streamers and its impact on follower engagement and impulse

buying emerges as a compelling area of research (Luo et al., 2023; Aggarwal & Shah, 2024; Cheah, Koay & Lim, 2024).

By contrast, live streaming commerce has many advantages over traditional marketing. Firstly, during live streaming, the streamer could show products in real-time through live streaming platforms. Also, the streamer could answer the followers' questions in the chat box or have a voice chat with followers through the live streaming platform (Wang & Wu, 2019). Secondly, streamers' live streaming content is dynamic, not limited by region or presentation format; it could be text, voice, or any display that could, according to different situations, also could make timely adjustments which providing richer information than static text or images (Wongkitrungrueng & Assarut, 2020; Ma, 2021). Thirdly, the live streaming background music, lights and pictures of streamers could be adjusted according to different scenes and products (Yu & Zheng, 2021). Fourthly, streamers could bring a sense of presence to their followers (Sun et al., 2019). The sense of presence in live streaming commerce refers to the degree to which streamers immerse themselves in and interact with the digital environment, creating a feeling of "being there" for the audience and fostering deeper connections and engagement (Ming et al., 2021; Zheng, Wu & Liao, 2023; Li, Dou & Yu, 2023). This means that the followers' interaction with streamers through the live streaming platform could reduce their perception of uncertainty and increase followers' perception of authenticity (Sun et al., 2019).

1.2.1 *Theoretical Perspective*

Theoretically, this research is grounded in Source Credibility Theory, Congruity Theory, and Flow Theory, which offer insights into how consumers perceive streamers in terms

of credibility, expertise, authenticity, and congruence. While these models are well-established, their combined application in real-time live streaming environments remains underdeveloped. Combining these theories allows a more holistic understanding of live streaming commerce. Source Credibility Theory explains streamer characteristics, Congruity Theory explains perceived alignment, Flow Theory captures immersive experiences, and Customer Engagement Theory explains behavioural outcomes. Together, they provide a comprehensive framework for examining follower engagement and impulse buying. For example, while physical attractiveness is commonly cited as a signal of credibility, recent findings suggest that its influence on engagement and impulse buying may be context-dependent or weaker than expected (Li, Feng & Zhao, 2023; Li et al., 2025), indicating that the relationship remains theoretically and empirically contested. Similarly, congruence—the alignment between streamer, brand, and audience values—has emerged as a powerful predictor of consumer trust, credibility, and purchase intentions. Prior studies (Liu, Zhang & Zhang, 2020) highlight its importance in shaping consumer attitudes, yet its role within real-time, interactive live streaming commerce remains insufficiently understood. In particular, little is known about how congruence operates dynamically during live interactions to influence follower engagement and impulse buying.

1.2.2 *Practitioner's Perspective*

From the practitioner's perspective, many different types of businesses have started to consider live streaming as an important part of their digital marketing strategy (Zhang et al., 2022; Luo et al., 2023), for example, fashion businesses, food businesses, some technology product companies, etc. For instance, fashion brands like Louis Vuitton and Shein have hosted live runway shows and product launches

(Global Cosmetics Media, 2026); food companies such as Haidilao in China have used live streaming for kitchen tours and promotions; and tech brands like Xiaomi and Samsung have employed live product announcements and interactive Q&A sessions to engage audiences (South China Morning Post, 2020).

Businesses with streamers could create authentic and relevant content through live streaming platforms that resonate with the target audience. By leveraging the trust and connection that streamers build with their followers, products could effectively reach and engage with the customer base they want (Wei & Xi, 2023; Chen, Pham & Tran, 2024). For example, in China, Li Jiaqi (known as the “Lipstick King”) has successfully promoted cosmetic brands like L’Oréal and Perfect Diary through his trusted influencer persona. Similarly, in the UK, influencers on TikTok Shop such as Abby Roberts have collaborated with beauty and fashion brands to drive sales through authentic, real-time interactions. Yet, strategic alignment alone is not enough; a deeper understanding of the mechanisms behind consumer engagement is essential to harness the full potential of live streaming commerce.

Strategic alignment alone is not enough; a deeper understanding of the mechanisms behind consumer engagement is essential to harness the full potential of live streaming commerce. This is because engagement in live streaming environments is shaped by dynamic and psychologically rich interactions that go beyond brand-fit or product relevance. Factors such as the perceived authenticity of the streamer, the sense of real-time presence, emotional resonance, and the interactive flow of communication all contribute to follower attention, trust, and eventual purchase behaviour (Brodie et al., 2011; Lim et al., 2022). Without unpacking how these

experiential elements function in tandem, businesses may struggle to convert viewers into active consumers, even with strategically aligned streamers or content.

1.2.3 *Industry Perspective*

From the live streaming industry perspective, with market forecasts suggesting the live streaming commerce sector's potential to double annually, this medium presents vast growth opportunities for digital marketing practitioners. (Statista, 2022). In the landscape of live streaming, the consistent yearly rise in live streaming users by tens of millions is a testament to its growing influence (Appendix 5) (Statista, 2024). Live streaming commerce, in particular, has rapidly emerged as a central strategy, creating a unique and captivating platform for streamers to engage with their followers. These real-time interactions, characterised by their immediacy and authenticity, enhance audience participation and establish a deeper sense of connection (Hugh et al., 2022).

1.2.4 *Streamers' Perspective*

From the streamers' perspective, live streaming's advantage is the unrestricted environment it creates, enabling streamers to directly converse, engage, and resonate with their followers (Wies, Bleier & Edeling, 2022). Platforms like Instagram Live, Facebook Live, and TikTok Live have become popular for these real-time discussions, Q&A sessions, and interactions, providing deeper connections between streamers and their audiences (Sun et al., 2019). Besides substantiating the efficacy of this approach, live streaming campaigns have consistently demonstrated their influence in enhancing product awareness, brand image and consumers' purchase intentions (Abell & Biswas, 2023). Recognising these benefits, brands are strategically aligning with streamers whose audience mirrors their desired target market (Wies, Bleier &

Edeling, 2022). Such collaborations are important, especially when research highlights consumers' proclivity to perceive streamers as reliable sources and endorsements (Barta et al., 2023). So, streamers play an important role in follower engagement.

In the realm of live streaming commerce, the interplay among dynamic brand experiences, sense of presence, and brand–streamer–follower congruence—particularly in their effects on engagement and impulse buying—remains largely unexplored. For instance, Sun et al., (2019); caution that “few studies have investigated how live-streaming enhances customer engagement,” underscoring the need for deeper inquiry. Similarly, Addo, Fang, and Asare (2021) observe that while customer engagement significantly predicts purchase intentions in live-streaming platforms, there is still a lack of comprehensive models outlining how these processes unfold. Although impulse buying is recognised as a common outcome of live commerce, empirical studies like Huang and Suo (2021) largely focus on promotional or visual triggers—such as price promotions and visual appeal—rather than examining the mediating psychological mechanisms behind consumer reactions

Together, these sources reveal a striking limitation: most existing studies concentrate on isolated stimuli or outcomes, leaving the underlying cognitive and affective mechanisms—such as immersion, authenticity, and congruence—that drive engagement and impulsive behaviour insufficiently theorised. This avenue of interaction holds the potential to reshape the understanding of the streamer brand and followers (Manning & Muzellec, 2021). Also, as viewers observe streamers actively engaging with comments, answering queries, and participating in authentic

conversations during live streams, the perception of their credibility and expertise could be influenced (Hugh et al., 2022). Therefore, this study focuses on exploring how streamer attributes, sense of presence, and brand–streamer–follower congruence influence dynamic brand experiences, follower engagement, and impulse buying. By acknowledging both the potential of live streaming commerce, the research aims to provide a more balanced, theoretically grounded, and practically relevant understanding of this fast-evolving digital phenomenon.

1.3 Research Gaps

Live streaming commerce is undergoing a transformation with the advent of live streaming platforms. These live streaming platforms have special characteristics like real-time interaction, streamers could influence followers' behaviour online (Wang & Wu, 2019; Wongkitrungrueng, Dehouche & Assarut, 2020). While these live streaming commerce are beginning to be explored for their potential impact on consumer behaviour, comprehensive academic investigations into these areas remain limited (Leung, Gu & Palmatier, 2022; Bu, Parkinson & Thaichon, 2022; Hugh et al., 2022). For instance, Leung, Gu, and Palmatier (2022) note that “research on live streaming commerce is still in its infancy, with many unanswered questions about consumer–seller interactions and engagement outcomes.” Similarly, Bu, Parkinson, and Thaichon (2022) argue that although live streaming commerce has emerged as a disruptive force, “systematic academic inquiry into its drivers and consequences remains limited compared to its rapid commercial adoption.” Hugh et al. (2022) also emphasise that “the theoretical understanding of consumer behaviour in live streaming contexts is fragmented, calling for integrative models that capture the interplay of trust, presence, and persuasion.” By analysis and review of existing academic literature

indicate that the current field of live streaming commerce is divided into 5 main directions:

(1) Followers' buying behaviour via streamers' physical attraction (Sun et al., 2019; Clement Addo et al., 2021; Zhu et al., 2022; Pink, Wilkie & Graves, 2023); This stream of research primarily examines how physical attractiveness and perceived appeal of streamers act as persuasive cues that drive viewers' purchase intentions and impulse buying.

(2) Follower engagement on live streaming platforms (Jin, Muqaddam & Ryu, 2019; Belanche et al., 2021; Barta et al., 2023); This category focuses on how interactivity, parasocial relationships, and real-time communication foster sustained audience involvement, loyalty, and active participation during live streams.

(3) Brand experience impacts streamer and their followers (Lou & Yuan, 2019; Wongkitrungrueng & Assarut, 2020; Kim & Kim, 2021; Crnjak-Karanović, Kursan Milaković & Elez, 2023). This research area explores how multi-sensory, immersive, and interactive experiences created in live streaming environments shape both brand perceptions and consumer behavioural outcomes, such as trust, engagement, and purchase behaviour.

(4) Contextual moderators and boundary conditions in live streaming commerce (e.g., gender, product type (Abosag et al., 2020; Rollin, 2022; Arora et al., 2023): this stream examines how individual differences and situational/contextual factors shape the

strength and direction of effects from streamer cues and live streaming experiences to consumer behaviours such as engagement and impulse buying.

(5) Cross-cultural perspectives in live streaming commerce: research comparing how cultural contexts (e.g., China vs. the UK) shape the effects of streamer attributes, presence, and brand experiences is still limited, despite evidence that cultural values influence consumer engagement and consumer behaviour (Jeong & Lee, 2019; Wang et al., 2021).

Although those 5 areas above are growing in significance in both academia and live streaming commerce practice, the literature remains fragmented, and there are some potential problems worth exploring. For example, Prior studies have tended to focus separately on streamers' appeal (Sun et al., 2019; Clement Addo et al., 2021), follower engagement (Jin, Muqaddam & Ryu, 2019; Barta et al., 2023), or dynamic brand experiences (Lou & Yuan, 2019; Wongkitrungrueng & Assarut, 2020; Kim & Kim, 2021) without integrating these strands into a unified framework that reflects the complexity of live streaming environments. So, this study fills these gaps.

First: Although existing studies have examined individual streamer attributes such as expertise, trustworthiness, and attractiveness, few have explored how these attributes influence the sense of presence and Congruence then bring an immersive experience (Lou & Yuan 2019, Li & Xie 2020). Additionally, the interplay between streamers' attributes, sense of presence and congruence in real-time live streaming settings remains underexplored. So this study addresses this gap by investigating how

streamers' attributes impact the sense of presence and congruence in a live streaming commerce context.

Second: while prior research has explored sense of presence in digital environments, there is limited understanding of how presence, particularly social presence and telepresence, interacts with dynamic brand experience to influence follower engagement and impulse buying in live streaming contexts (Ye, Zheng & Li, 2022; Sang et al., 2023). Existing studies rarely examine the sense of presence as a mediating psychological mechanism within a real-time, interactive commerce setting. So, this study addresses this gap by investigating how the sense of presence impacts dynamic brand experiences and indirectly impacts engagement and impulse buying.

Third: Although prior studies have acknowledged the importance of congruence between brands, streamers, and followers in shaping consumer behaviour, most research has focused on static or one-dimensional relationships, particularly within traditional influencer marketing contexts (Deng, Chen & Wu, 2024; Opić & Pandža Bajš, 2024; Roth-Cohen, Segev & Liu, 2024). Existing literature has yet to fully explore how streamer–follower congruence operates dynamically in real-time live streaming environments, where immediacy, interactivity, and authenticity continuously shape perceptions of alignment. Moreover, little is known about how streamer–follower congruence functions as a mediating mechanism linking streamer attributes (e.g., credibility, expertise) to dynamic brand experiences and engagement and impulse buying. Addressing this gap, the current study investigates congruence as an evolving, interactive construct that plays an important role in enhancing brand experiences and influencing follower behaviours within live streaming commerce.

Fourth: While existing studies have examined the influence of streamer attributes on consumer perceptions and behaviours (Hugh et al. 2022), limited research has explored the role of dynamic brand experiences within this relationship, especially in live streaming commerce contexts. Prior literature often treats brand experience as a direct outcome, but rarely as a psychological mechanism that connects credible streamer characteristics with follower engagement and impulse buying (Ye, Zheng & Li, 2022; Sang et al., 2023). This gap is particularly obvious in real-time, interactive environments where consumers' immersive experiences shape follower engagement and impulse buying (Liao et al., 2022; Li, Feng & Zhao, 2023; Khoi & Le, 2025). Addressing this gap, this study investigates how dynamic brand experiences act as a mediator between streamer attributes and follower engagement and impulse buying, contributing new insights to both theory and practice.

Fifth: Although previous studies have examined individual elements such as streamer credibility, authenticity, or attractiveness, and their influence on engagement or impulse buying, they have typically done so in isolation rather than through an integrated theoretical lens. Existing research has primarily focused on surface-level engagement metrics or single-factor analyses, overlooking the complex interplay between streamer attributes, brand dynamics, and follower responses (Wongkitrungrueng, Dehouche & Assarut, 2020; Wymer et al., 2021; Meisner & Ledbetter, 2022; Zheng, Li & Na, 2022). Therefore, a comprehensive model that unites the S-O-R framework, Source Credibility Theory, and Congruence Theory is needed to capture how these interconnected factors collectively influence dynamic brand experience, follower engagement, and impulse buying, while considering moderating effects such as gender and product type within live streaming commerce.

All in all, the study aims to extend and integrate multiple established frameworks—Source Credibility Theory, Congruity Theory, Flow Theory, and Consumer Engagement Theory—within the emerging and under-theorised domain of live streaming commerce. Although these theories have been individually applied to various areas of digital marketing, their combined application in a real-time, interactive commerce environment remains limited (Wongkitrungrueng & Assarut, 2020a; Ming et al., 2021; Ma, 2021b; Barta, Gurrea & Flavián, 2023). By investigating how streamer attributes, sense of presence, and brand–streamer–follower congruence influences dynamic brand experiences, and indirectly influence follower engagement and impulse buying. The study introduces a more comprehensive and psychologically grounded framework for understanding follower engagement and impulse buying behaviour in live streaming environments.

1.4 Research Scope and Delimitations

This study is positioned within the discipline between marketing and psychology, specifically consumer psychology, with strong overlaps in social and cognitive psychology. The research focuses on the psychological mechanisms that explain how consumers perceive, process, and respond to live streaming commerce environments. In particular, the study emphasises cognitive and affective processes—such as credibility judgements, presence, congruence, and experiential immersion—and their engagement and impulse buying behaviour. By positioning the research in this way, the aim is to develop a theoretically grounded model that advances understanding of live streaming commerce from a psychological rather than a sociological or cultural lens.

While sociocultural and contextual dimensions are recognised as important influences, an in-depth exploration of these factors is beyond the scope of this study. For example, cultural norms, platform-specific affordances, or economic structures may shape how live streaming commerce develops, but these are not the central focus here. Instead, cultural context is addressed through cross-country sampling (China and the UK) to test the robustness of the psychological model across two distinct markets, rather than to conduct a sociocultural comparison. This delimitation ensures that the study remains conceptually coherent and focused on psychological processes, rather than extending into broader cultural, sociological, or economic inquiries.

The scope is also delimited to live streaming commerce, where products are promoted in real time by streamers through interactive sessions. Other forms of digital marketing, such as static posts, stories, or pre-recorded videos, are excluded from this study. Similarly, platform-specific technical features (e.g., TikTok algorithms, Taobao's payment integration) are not explored in depth, as the focus is on psychological and experiential mechanisms that can be generalised across platforms.

Finally, the study is delimited to a quantitative approach using online questionnaire. Qualitative methods such as interviews or ethnography are not included, as the primary objective is to statistically test the proposed model and its relationships. The temporal scope is also limited, acknowledging that live streaming commerce evolves rapidly; thus, findings represent a snapshot rather than a longitudinal account of this phenomenon.

By establishing these boundaries, the research maintains a clear psychological orientation, offering a focused and rigorous investigation of follower engagement and

impulse buying behaviour in live streaming commerce while recognising, but not directly addressing, broader cultural and contextual dimensions.

1.5 Research Objectives

In response to the growing relevance of live streaming commerce and digital marketing and its ability to influence follower engagement and impulse buying behaviour in real time, this study aims to explore the psychological and experiential mechanisms that drive follower engagement and impulse buying. Specifically, the research focuses on how various elements—such as streamer attributes, sense of presence, brand-streamer-follower congruence, and dynamic brand experiences—interact to shape consumer responses within live streaming environments. The study also considers individual differences and contextual factors, such as gender and product type, which may moderate these effects. The research is guided by the following objectives:

Objective 1: To explore how streamers' attributes, brand–streamer–follower congruence, and the immersive nature of live-streaming environments collectively shape dynamic brand experiences and influence follower engagement and impulse buying behaviour.

This objective seeks to understand how multiple antecedents—such as a streamer's expertise, trustworthiness, and attractiveness, combined with congruence and immersive interactivity—jointly influence brand experiences. By examining these factors together, the research aims to contribute to a comprehensive understanding of how live streaming creates emotional, cognitive, and behavioural responses. This is

important because prior literature has often studied these elements in isolation (Chen & Yang 2023; Zheng et al.2023), leaving gaps in how they operate in combination within a real-time interactive environment.

Objective 2: To examine the sense of presence and brand–streamer–follower congruence impact the relationship between streamers’ attributes and dynamic brand experiences, and how these experiences drive follower engagement and impulse buying behaviour outcomes.

Although the sense of presence and congruence are acknowledged as important in digital and social commerce, their specific mediating roles in live streaming remain underexplored (He, Li & Xue, 2022; Li & Xie, 2020). This objective aims to clarify the psychological processes through which credibility-based streamer attributes translate into consumer engagement and impulse buying. Addressing this provides theoretical value by advancing the understanding of how and why streamers influence consumer decisions beyond surface-level cues.

Objective 3: To investigate the effects of gender and product type on the relationship between dynamic brand experiences and follower engagement and impulse buying behaviour.

While dynamic brand experiences have been shown to affect consumer behaviour, these effects are unlikely to be uniform across all consumers or contexts. For example, low versus high product prices, fashion versus technology products, or gender-based preferences may alter how strongly brand experiences translate into engagement and

purchases (Khoi, Le & Nguyen Dong, 2023; Wei & Xi, 2023; Li, Xuan & Chen, 2024). This objective addresses the need for more precise insights into heterogeneity in follower engagement and impulse buying behaviour responses, helping to explain the boundary conditions of live streaming commerce effectiveness.

Objective 4: To provide practical insights for brands, streamers, and marketers on how to design more effective live-streaming strategies by leveraging psychological mechanisms that enhance consumer engagement and purchase intent.

Beyond theoretical contributions, this study has strong applied relevance. By identifying which streamer attributes and psychological mechanisms are most effective, and under what conditions, the findings will guide practitioners in optimising streamer selection, campaign design, and platform strategy. This objective ensures that the research outcomes extend beyond academic knowledge to provide tangible value for industry stakeholders seeking to maximise the return on investment in live streaming commerce.

1.6 Research Question

Building upon the objectives outlined in the previous section, this study is guided by a series of research questions designed to explore the mechanisms through which live streaming commerce influences follower engagement and impulse buying. The questions aim to uncover the direct and indirect effects of key variables such as streamer attributes, sense of presence, congruence, and dynamic brand experience, as well as to identify moderating influences like gender and product type. These

questions are central to addressing the research problem and provide the foundation for the study's theoretical model and empirical analysis.

The research questions are as follows:

Research Question 1: How do streamers' attributes and the immersive nature of the live-streaming environment influence dynamic brand experiences and follower engagement and impulse buying behaviour outcomes?

This question responds directly to calls in the literature for a more integrated understanding of streamer attributes and their effects. While prior research has examined credibility factors (e.g., trustworthiness, attractiveness, expertise) or congruence in isolation, little is known about how these elements operate together within immersive, real-time commerce environments (Abell & Biswas, 2023; Chen, Yan & Smith, 2023). Addressing this question allows the study to explain how multiple antecedents combine to shape dynamic brand experiences and subsequent follower engagement and impulse buying behaviour, thereby advancing theoretical clarity.

Research Question 2: How do sense of presence and brand–streamer–follower congruence impact the relationship between streamers' attributes and dynamic brand experiences in live-streaming commerce?

The mediating role of psychological mechanisms such as sense of presence and congruence remains underexplored. While presence has been studied in virtual environments and congruence in traditional marketing (Zhang, Wang & Zhang, 2021; Liu et al., 2024) its specific function as mediator in live-streaming contexts is not well

established. By asking this question, the study seeks to uncover the processes through which attractiveness-based streamer cues translate into engagement and impulse buying behaviour, addressing a critical gap in the consumer psychology of live streaming.

Research Question 3: To what extent do gender and product type impact the relationship between dynamic brand experiences and follower engagement and impulse buying behaviour outcomes?

This question acknowledges that follower engagement and impulse buying behaviour responses to live streaming commerce are not uniform. Prior studies suggest that demographic characteristics (e.g., gender) and product-related factors (e.g., type of product promoted) may shape the extent to which brand experiences translate into engagement and purchases (Liu & Yu, 2022; Li, Tang & Feng, 2023). However, little is known about how such differences play out in the fast-paced, interactive setting of live streaming. By examining these moderating influences, this research provides a deeper understanding of follower engagement and impulse buying behaviour, helping to explain why some live-streaming strategies succeed with certain groups or product types while others do not.

Research Question 4: What practical strategies can streamers and brands adopt to enhance credibility, presence, and congruence, thereby optimising follower engagement and stimulating impulse purchases during live-streaming sessions?

The final question explicitly addresses the applied side of the research. By linking theoretical insights to actionable strategies, this study provides value not only to

academia but also to practitioners seeking to maximise ROI. This includes exploring how brands and streamers can design campaigns that leverage credibility cues, foster immersive presence, and align values with followers to build trust and drive impulse buying.

1.7 Research Methods

To investigate the psychological and experiential mechanisms that drive follower engagement and impulse buying behaviour in live streaming commerce, this study adopts a quantitative research approach. There are 3 reasons.

First, this approach is well-suited to studies aiming to measure relationships among multiple variables, test hypotheses, and generalise findings across a broader population (Saunders, Lewis & Thornhill, 2019; Creswell, 2014; Bryman, 2016). Live streaming commerce involves complex and interrelated elements such as streamer attributes, sense of presence, brand–streamer–follower congruence, and dynamic brand experiences. Given the multifactorial nature of these constructs and their potential effects on follower engagement and impulse buying behaviour, the quantitative research enables the researcher to statistically test these relationships using structured data collection and analysis techniques (Saunders, Lewis & Thornhill, 2019; Schindler, 2022; D O’Gorman & MacIntosh, 2015). The quantitative research method is particularly appropriate for capturing a wide range of perceptions and behaviours from a large sample, which strengthens the external validity and generalizability of the results. (Saunders, Lewis & Thornhill, 2019; Schindler, 2022).

Secondly, this study uses the online questionnaire to collect primary data from social media users in China and the UK, using a 7-point Likert scale to measure the variables.

The data is analysed using SPSS and SmartPLS to examine both direct and indirect relationships between constructs (Bryman, 2016; Schindler, 2022). The questionnaire is aligned with the study's objective of developing an empirically grounded framework that could inform both academic understanding and practical strategies for live streaming commerce. In addition, this methodological approach aligns closely with the research objectives and questions by enabling a structured and measurable assessment of live streaming commerce as a digital marketing strategy. The use of the questionnaire allows for systematic data collection and provides the foundation for empirical testing of the proposed relationships between key constructs.

Thirdly, this study targets social media users from both China and the United Kingdom, two markets that offer distinct yet complementary perspectives on live streaming commerce. China represents one of the most mature and commercially driven live streaming markets globally (Shi, Wang & Zhang, 2023), while the UK reflects an emerging market where streamer-driven live streaming commerce is gaining momentum (Merritt & Zhao, 2022; WW, 2025). Including these two contexts enhances the study's cross-cultural relevance and allows for greater generalisability of the findings. Moreover, examining these different markets facilitates an understanding of how cultural and market dynamics may influence follower engagement and impulse buying behaviour. This adds an important comparative dimension to the research, contributing to the broader literature on digital marketing across cultures. (Saunders, Lewis & Thornhill, 2019; D O'Gorman & MacIntosh, 2015).

Therefore, the questionnaire-based approach not only ensures methodological rigour but also allows for a more comprehensive and culturally exploratory of the research questions.

1.8 Contributions

This research offers several important contributions to both academic theory and marketing practice in the context of live streaming commerce and streamer marketing.

1.8.1 Theoretical Contributions

This research makes several key theoretical contributions to the study of live streaming commerce and follower engagement and impulse buying behaviour.

First, it advances knowledge by developing an integrated multi-theoretical framework that combines Source Credibility Theory, Congruity Theory, Flow Theory, and Consumer Engagement Theory. While these theories have individually been applied to digital and influencer marketing, their combined application in the highly interactive, real-time context of live streaming commerce has not previously been examined. By synthesising these perspectives, the study explains how streamers' attributes, congruence, and brand experiences collectively drive follower engagement and impulse buying, thereby moving the literature beyond fragmented single-theory explanations (Henseler et al., 2016, Hair et al., 2019).

Second, the study makes a contribution by extending Source Credibility Theory and Congruity Theory into live streaming commerce contexts. Prior applications of these frameworks primarily emphasised static marketing formats, such as celebrity

endorsements or pre-recorded influencer content. By contrast, this study positions credibility and congruence within live, unscripted interactions between streamers and audiences, highlighting their dynamic and relational nature. In particular, the findings shed light on how congruence among streamers, brands, and followers acts not only as a static predictor of trust but also as a dynamic mechanism shaping real-time emotional and cognitive responses (Henseler et al., 2016, Liang et al., 2025).

Third, the research contributes to Flow Theory and Presence literature by demonstrating how immersive experiences (social presence and telepresence) mediate the relationship between streamer attributes and consumer outcomes. While flow and presence have been widely studied in gaming and virtual environments, their application in live streaming commerce remains limited (Hsu & Lin, 2021; Li & Peng, 2021). This study shows that the sense of presence does not simply enhance enjoyment but serves as a psychological mechanism that amplifies dynamic brand experiences and facilitates downstream behaviours such as impulse buying. This extends Flow Theory into the consumer psychology of interactive commerce.

Fourth, the study enhances Consumer Engagement Theory by contextualising engagement as a multidimensional construct (cognitive, emotional, and behavioural) within real-time, co-created brand experiences. Unlike static digital environments, live streaming allows followers to actively participate in shaping the consumption experience (Le et al., 2022; Zhang et al., 2025). This research highlights the reciprocal and co-creative nature of engagement in live streaming commerce and positions dynamic brand experiences as a central driver of these processes, thereby extending engagement theory into more interactive, psychologically rich environments.

Fifth, the research makes a methodological and contextual contribution by empirically testing mediating mechanisms (sense of presence, brand–streamer–follower congruence, dynamic brand experiences) and moderating variables (gender, product type). These dimensions have been largely overlooked in previous research. By incorporating them into a unified model, the study responds to calls for more contextualised and multidimensional frameworks in digital marketing and consumer psychology (Hair et al., 2019; Henseler et al., 2016).

Finally, the development and empirical validation of the conceptual model across two culturally distinct contexts (UK and China) contribute to the growing literature on cross-cultural digital marketing. The findings show not only the universality of certain mechanisms but also how contextual differences may shape consumer responses. This positions the study as a significant step in broadening the external validity and cultural relevance of psychological theories applied to live streaming commerce.

In sum, this research advances theory by developing a comprehensive and multidimensional model of follower engagement and impulse buying behaviour in live streaming commerce, extending established theories into new contexts, identifying novel mediating and moderating mechanisms, and demonstrating the cross-cultural robustness of the proposed framework.

1.8.2 *Practical Contributions*

This study also offers several important practical contributions for streamers, brands, and marketers seeking to optimise live streaming as a digital marketing and sales channel.

First, by identifying how specific streamer attributes (expertise, trustworthiness, attractiveness) influence followers' perceptions and behaviours, the study provides clear guidance for streamer selection and training. Brands and marketing agencies can use these findings to prioritise credibility and authenticity over superficial popularity when choosing collaborators, ensuring that streamers can effectively build trust and drive conversion. This also highlights the importance of ongoing training for streamers to enhance expertise and authenticity in product presentation.

Second, the study highlights the role of dynamic brand experiences and immersive presence (social presence and telepresence) as psychological mechanisms driving engagement and impulse buying. For practitioners, this implies that successful live streaming campaigns should go beyond product demonstrations and instead focus on designing interactive, immersive, and emotionally engaging content. This may include features such as real-time Q&A, personalised responses, and creating a sense of experience that makes followers feel part of the event.

Third, although gender and product type were examined as potential moderators, the results show they did not significantly influence the key relationships in this study. This suggests that such effects may be more strongly shaped by platform or app algorithms rather than factors that streamers or brands can directly control. For practitioners, this finding highlights the importance of focusing on controllable elements—such as enhancing streamer credibility, fostering congruence, and designing immersive content—rather than overemphasising demographic segmentation or product category differences, which may be less relevant in algorithm-driven live streaming environments.

Fourth, the study provides actionable guidance on optimising brand–streamer–follower congruence. The findings suggest that alignment between the streamer’s persona, the brand’s identity, and the audience’s values strengthens engagement and reduces scepticism. Practically, this encourages marketers to focus on strategic brand–streamer matching and ensure consistent messaging across campaigns, thereby fostering long-term brand loyalty rather than short-term sales boosts.

Fifth, the cross-cultural design of the study (UK vs. China) provides practitioners with insights into international marketing strategies for live streaming commerce. While certain mechanisms (e.g., presence, dynamic brand experience) appear robust across cultures, subtle variations highlight the need for context-sensitive adaptations in campaign design. This supports global brands in localising their live streaming commerce strategies to account for cultural differences in consumer expectations, trust-building, and engagement patterns.

Collectively, these contributions provide businesses with a more evidence-based, psychologically grounded roadmap for leveraging live streaming commerce. By focusing on credible streamer attributes, immersive experiences, audience congruence, and tailored segmentation strategies, firms can enhance follower engagement, stimulate impulse buying, and maximise returns on their live streaming investments.

1.9 Thesis Structure

This paper is divided into 6 Chapters. Chapter 1 Introduction: This serves as an introduction, providing an overview of live streaming commerce study and setting the stage for the subsequent chapters, providing the outline of the focus of the dissertation.

Also, the research problem, potential contributions, limitations, and delimitations and is identified, focusing on the need to understand the mechanisms that influence consumer engagement and impulse buying through streamers' attributes, dynamic brand experiences, sense of presence and brand follower streamer congruence and its impact on theories. Also, the specific research questions are proposed, addressing the gaps in the existing literature and the objectives of the study. The rationale for adopting a quantitative methods approach is explained, emphasising its suitability for capturing insights and providing a comprehensive analysis. The chapter concludes by outlining the structure of the thesis, detailing the subsequent chapters that delve into the methodology, data analysis, findings, potential contributions, limitations, and conclusions. By establishing a strong introduction, this chapter sets the foundation for the research, contextualises the importance of the live streaming commerce topic, and creates a framework for the subsequent chapters to explore and analyse the research in depth.

Chapter 2 literature review: This is dedicated to the comprehensive literature review, which critically examines the existing knowledge related to digital marketing and live streaming commerce. This chapter begins by providing an overview of the key concepts and theories relevant to live streaming commerce, streamers' attributes, dynamic brand experiences, sense of presence and brand-streamer and follower congruence. It explores the relevant literature, delving into its emergence, evolution, and impact within the context of live streaming commerce and digital marketing. The literature review also highlights their significance in understanding the different aspects that drive followers' engagement and impulse buying with streamers' attributes and dynamic brand experiences. The chapter critically analyses relevant

studies, identifying gaps, inconsistencies, and debates in the literature, and identifies the theoretical frameworks that guide the research.

Chapter 3: Hypotheses Development This chapter presents the development of the study's hypotheses, building directly on the theoretical foundations and research gaps identified in Chapter 2. This chapter focuses on articulating the theoretical relationships between key variables in the conceptual framework, including streamers' attributes, sense of presence, congruence, dynamic brand experience, follower engagement, and impulse buying. The hypotheses are organised according to the Stimulus–Organism–Response (SOR) structure, outlining how streamers' attributes operate as stimuli, how psychological mechanisms such as sense of presence and congruence function as organismic responses, and how dynamic brand experiences lead to engagement and impulse buying. Additionally, this chapter introduces the moderating roles of gender and product type, explaining their potential influence on the dynamic brand experience–behaviour relationship. Collectively, the hypotheses presented in this chapter establish the analytical foundation for the empirical testing in the subsequent methodology and findings chapters.

Chapter 4 methodology: This focuses on the research methodology. This chapter is based on the Research Onion and outlines the research design, data collection procedures, and data analysis techniques utilised in the study. The chapter discusses the quantitative research methods approach adopted, emphasising how it enables the integration of quantitative data to provide a comprehensive understanding of the research topic. The specific data collection methods, such as online questionnaires, are described, along with the rationale for selecting these methods and the target

population in the UK and China. The chapter concludes by outlining the structure of the thesis, detailing the subsequent chapters that delve into the methodology, data analysis, findings, potential contributions, limitations, delimitations, and conclusions. By establishing a strong introduction, this chapter sets the foundation for the research, contextualises the importance of the topic, and creates a framework for the subsequent chapters to explore and analyse the live streaming commerce research in-depth.

Chapter 5 data analysis: this focuses on the data analysis the steps taken to transcribe and organise quantitative data, the chapter explains the statistical analyses conducted, such as descriptive statistics, regression analysis, or correlation analysis, to examine the relationships between streamers' attributes, dynamic brand experiences, sense of presence, streamer follower brand experience, follower engagement and impulse buying and trends within the data. Then, all hypotheses were tested to see if they were supported, in order to achieve a comprehensive analysis and deep understanding of this study.

Chapter 6 Findings and discussion: This focuses on the live streaming commerce research findings and discussion, providing an in-depth discussion based on the research. The chapter discusses the main findings, provides a comprehensive overview of the results obtained from the quantitative data, and the findings addresses each research question and objective. After presenting the findings, the chapter dives into a detailed discussion and interpretation of the results. The discussion section explores the implications of live streaming commerce and follower engagement and impulse buying behaviour of the findings, connects them to existing literature and

theoretical frameworks, and provides insights into the live streaming commerce research. In addition, this chapter answers the research objectives and key findings. Then discusses the theoretical and practical contributions of the study, emphasising how it fills gaps in the existing live streaming commerce literature and extends our understanding of the research topic. Furthermore, this chapter acknowledges the limitations of the study as well as points to future research directions and opportunities in the live streaming commerce area.

1.10 Summary

Chapter 1 has established the importance of investigating live streaming commerce as an emerging digital marketing phenomenon that uniquely combines real-time interaction, product promotion, and consumer engagement. The chapter highlighted the research problem, namely the limited understanding of the psychological and behavioural mechanisms through which streamer attributes, sense of presence, and brand–streamer–follower congruence influence dynamic brand experiences, follower engagement, and impulse buying.

It also positioned the study within consumer psychology, emphasising the need to move beyond descriptive accounts of live streaming commerce toward a theoretically grounded model that integrates different theories. In doing so, the chapter identified clear research objectives and questions that focus on unpacking both the direct and indirect pathways shaping consumer responses in live commerce environments.

Furthermore, the potential contributions were outlined, showing how this research extends theoretical debates on credibility, congruence, and experiential marketing

while also offering practical insights for brands, marketers, and streamers seeking to design more effective live commerce strategies. Finally, the scope and delimitations clarified the study's boundaries, particularly its psychological focus and cross-cultural perspective, ensuring a coherent and rigorous approach to examining this rapidly evolving marketing practice.

The next chapter will build on this foundation by presenting a literature review to critically analyse existing research and position the study within the broader academic context.

Chapter 2: Literature Review

The purpose of this literature review is to critically examine existing research on digital marketing and live streaming commerce, focusing on how streamers' attributes influence follower engagement and impulse buying through key psychological and experiential mechanisms. This review aims to establish a strong theoretical and conceptual foundation for the study by identifying core constructs, highlighting research gaps, and demonstrating how the current research contributes to advancing knowledge in this emerging field.

To ensure a rigorous and comprehensive review, key academic databases such as Scopus and Google Scholar were used to source peer-reviewed journal articles, with emphasis on recent studies in live streaming commerce, digital marketing, and engagement and impulse buying behaviour. The inclusion criteria focused on research related to streamer credibility, sense of presence, congruence, and dynamic brand experiences, supported by relevant theoretical frameworks including Source Credibility Theory, Congruity Theory, and Flow Theory.

The review argues that live streaming commerce represents a transformative evolution in digital marketing, where real-time interaction, streamer credibility, and psychological engagement converge to shape consumer decision-making and behaviour. It explores how streamers' attributes—such as attractiveness, trustworthiness, and expertise—alongside mediating factors like social and telepresence, as well as brand–streamer–follower congruence, influence consumer trust, engagement, and impulse purchases.

By drawing on this research from marketing, psychology, and consumer behaviour studies, this review integrates multiple theoretical perspectives to offer a comprehensive framework for understanding the interactive and immersive nature of live streaming commerce. Synthesising these insights allows the study to identify critical gaps in existing literature, such as the underexplored mediating roles of presence and congruence, thereby laying the groundwork for the conceptual model and hypotheses presented in the following sections.

2.1 Context Background: Live Streaming Commerce

2.1.1 Definition of Live Streaming Commerce

Live streaming commerce is a digital marketing strategy that integrates real-time video broadcasting with interactive, transactional and immersive consumer experiences (Ma, Zou & Lv, 2022; Gu, Cheng & Shen, 2023; Li & Lee, 2024; Chung et al., 2025). It enables brands and streamers to promote and demonstrate products live while engaging directly with audiences through two-way communication tools (Liu & Yu, 2022; Deng, Chen & Wu, 2024; Deng & and Wu, 2024; Li & Lee, 2024). This format has evolved from traditional static e-commerce by embedding entertainment, immediacy, and social interaction into the shopping journey, creating a more immersive and persuasive environment for consumers (Li et al., 2023; Picot-Coupey et al., 2023; Xin, Liu & Jian, 2024).

2.1.2 Growth and Relevance of Live Streaming Commerce.

The growth of live streaming commerce has been driven by advancements in mobile technology, social media platforms, and user-generated content (Hajarian et al., 2021; Chen, Pham & Tran, 2024). Recent systematic reviews in live streaming commerce

has rapidly emerged as a powerful digital marketing channel that merges real-time video broadcasting with interactive viewing and shopping experiences (Luo et al., 2023; Fauzi et al., 2026). First popularised in China through platforms like Taobao Live and later adopted globally by platforms such as TikTok, Instagram, and YouTube, live streaming commerce allows streamers and brands to showcase products, interact with viewers, and drive purchasing decisions in real time (Yan et al., 2022; Deng, Chen & Wu, 2024; Lee & Lee, 2025). Unlike traditional e-commerce, live streaming commerce is distinguished by its immediacy, interactivity, and entertainment value, which together foster deeper consumer involvement and increase the likelihood of engagement and impulse buying (Yu, Cheah & Liu, 2022; Hua et al., 2023; Huang, Kim & Ko, 2024).

Also, some scholars have identified live streaming commerce as online entertainment, social interaction, and commercial transactions (Xi et al., 2023). Streamers often play a dual role as both content creators and persuasive sellers, using their charisma, expertise, and real-time responsiveness to influence follower attitudes and behaviours (Luo et al., 2023; Lu, Wu & Zhao, 2022; Xue & Liu, 2022). The interactivity inherent in live streaming—enabled through features like live chat, instant feedback, and Q&A—encourages social presence, which is believed to strengthen trust and engagement (Khan et al., 2025). Additionally, limited time offers and flash sales often intensify the urgency to purchase, further differentiating live streaming commerce from traditional digital marketing formats (Lai, Aw & Tan, 2024; Lin, Gui & Lu, 2024; Li et al., 2025).

Despite its growing popularity and commercial impact, live streaming commerce remains an evolving research area, especially concerning the psychological

mechanisms that drive follower engagement and purchasing decisions. Overall, live streaming commerce has evolved into a global marketing and retail phenomenon with substantial economic influence. In China, live streaming commerce accounts for a rapidly increasing share of e-commerce sales, driven by the popularity of platforms like Taobao Live and Douyin (Deng, Chen & Wu, 2024). Western markets are also catching up, with TikTok Shop, YouTube Live, and Instagram integrating shopping features that allow consumers to purchase directly during broadcasts (Lee & Lee, 2025). Recent industry estimates suggest that global live streaming commerce revenues could exceed USD 1 trillion by 2026, underscoring its position as one of the fastest-growing sectors in digital marketing. The scale and momentum of this growth demonstrate that live streaming commerce is not a passing trend but a significant, enduring shift in consumer engagement and purchasing behaviour worldwide.

Given the global expansion of live streaming commerce, understanding cross-cultural differences has become increasingly important. According to Hofstede's cultural dimensions (Hofstede, 2001; Hofstede et al., 2010), China and the United Kingdom differ in cultural values such as individualism, collectivism, and long-term orientation, which may influence how followers perceive streamers, engage with live streaming content, and make purchasing decisions. Therefore, comparing these two countries provides a meaningful context for examining whether the proposed relationships are consistent across different cultural settings.

2.1.3 Differences From Traditional Influencer Marketing.

When discussing live streaming commerce, it is easy to get confused with influencer marketing, but there is a difference. While traditional influencer marketing typically

relies on pre-produced content such as sponsored posts, brand endorsements, and curated videos or images (Lou & Yuan, 2019; Kapitan et al., 2022; Leung, Gu & Palmatier, 2022), live streaming commerce introduces a fundamentally different dynamic through its real-time, interactive format. In traditional models, influencer content is often polished, delayed, and limited in interactivity, providing consumers with a passive viewing experience. By contrast, live streaming creates a synchronous communication environment, enabling viewers to engage in real-time conversations, ask questions, and observe unscripted product demonstrations (Kang et al., 2021; He et al., 2023). This immediacy fosters a heightened sense of presence and perceived authenticity, which could enhance consumer trust and influence impulsive buying (Ming et al., 2021; Guo et al., 2021; Shao, 2023).

Additionally, live streaming allows for greater emotional connection and responsiveness, as streamers could adapt their messaging based on live feedback, incorporate viewer comments into their narrative, and create a participatory brand experience (Shao, 2023; Lai, Aw & Tan, 2024; Wang, 2024). This level of interactivity is rarely achievable in static influencer formats, where engagement tends to be limited to delayed likes, comments, or reposts. Moreover, the entertainment value and temporal urgency created through flash sales, limited-time offers, and exclusive live deals are unique to live streaming commerce and often serve as psychological triggers for immediate decision making (Lai, Aw & Tan, 2024; Lin, Gui & Lu, 2024; Li et al., 2025).

Also, from a theoretical standpoint, these differences also suggest that traditional influencer models—grounded primarily in Source Credibility Theory and persuasion

frameworks—may not fully capture the interactive, experiential, and immersive nature of live streaming. This is because Source Credibility Theory primarily focuses on static cues such as trustworthiness, attractiveness, and expertise (Hovland & Weiss, 1951; Ohanian, 1990), which operate in one-way communication environments where consumers passively evaluate influencer content. However, live streaming commerce involves dynamic, two-way communication in which consumers actively co-create the experience through real-time interaction, emotional feedback, and collective participation (Guo et al., 2021; Kang et al., 2021). In this context, consumer perceptions and purchase intentions are shaped not only by the influencer's credibility but also by psychological mechanisms such as sense of presence, flow, and congruence among the streamer, follower, and brand. These interactive and situational dynamics extend beyond the explanatory scope of traditional persuasion models, highlighting the need for an integrated theoretical framework that reflects the immediacy and participatory nature of live streaming commerce.

Therefore, a more integrated approach that combines sense of presence, congruence, and dynamic engagement mechanisms is needed to explain follower behaviour in this evolving space. These theoretical perspectives are particularly applicable because they collectively capture the multi-dimensional nature of live streaming interactions. The sense of presence framework explains how real-time interactivity and immersion heighten consumers' emotional and cognitive involvement (Ming et al., 2021; Shi, Li & Hu, 2023), while congruence theory clarifies how alignment between the streamer's persona, the brand's image, and the follower's identity enhances authenticity and trust (Sirgy, 1982; Aaker, 1999). Meanwhile, dynamic engagement mechanisms, grounded in experiential marketing and SOR theory, account for how stimuli within the live

streaming environment—such as real-time communication, visual cues, and shared experiences—trigger internal psychological responses that lead to engagement and impulse buying (Brodie et al., 2011; Mehrabian & Russell, 1974). Together, these frameworks provide a more comprehensive and contextually relevant explanation of follower engagement and impulse buying behaviour in live streaming commerce, where interaction, alignment, and immersion operate simultaneously to shape decision-making.

So, this study seeks to fill that gap by critically examining live streaming commerce as a distinct phenomenon, rather than a simple extension of traditional influencer practices.

2.1.4 Shaping Live Streaming Commerce: The Roles of Brands, Streamers, and Followers

To illustrate how the key actors in live streaming commerce interact, Figure 2 presents a conceptual interpretation of the relationships among brands, streamers, and followers. While informed by existing literature, the diagram reflects a synthesised understanding of the interconnections among these three parties within the live streaming environment. It highlights the bidirectional interaction between followers and streamers, the streamer's role in shaping and conveying brand meaning, and the ways in which brand cues inform follower perceptions. By mapping these interconnected pathways, the figure clarifies the relational foundations that underpin the development of the subsequent conceptual model and hypotheses.

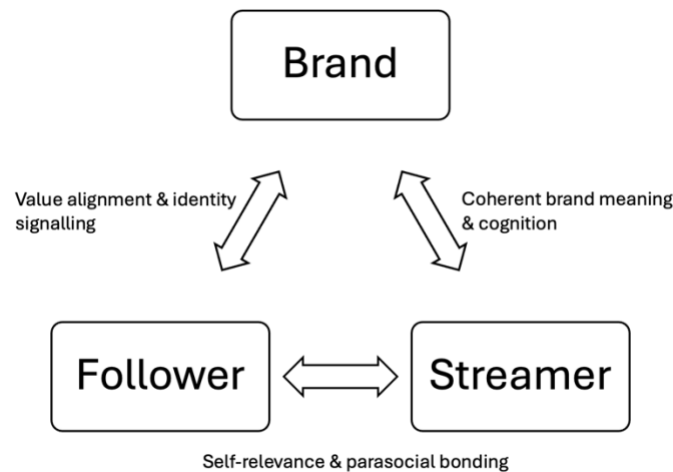


Figure 2: Conceptual representation of the interconnections among brands, streamers, and followers in live streaming commerce

2.1.4.1 The Role of The Brand in Shaping the Interactions Between Streamers and Followers.

In the domain of live streaming commerce, the interplay between brands, streamers, and followers is dynamic and multifaceted. Brands are not mere bystanders in the live streaming marketing arena; rather, they actively shape the interactions between streamers and their followers. For example, beauty brands such as L'Oréal or Perfect Diary often collaborate with professional streamers to design live streaming sessions that highlight specific product narratives, coordinate promotional timing, and even script key talking points to ensure message consistency. Through these strategic interventions, brands influence not only how products are presented but also how engagement unfolds, reinforcing brand identity and shaping consumer perceptions in real time.

On the one hand, the selection of streamers by brands is a strategic process underpinned by a set of criteria that goes beyond mere popularity metrics (Wang et

al., 2021; Leung et al., 2022; Xue & Liu, 2022). Brands look for streamers whose brand image and follower demographics align with their marketing objectives (Chen, 2021; Li, Tang & Feng, 2023). For example, Nike often partners with fitness and lifestyle streamers who embody an active and aspirational image, ensuring that the streamer's persona and audience interests resonate with the brand's core message of performance and motivation.

This alignment is important to ensuring that the brand essence is congruent with the streamer's content, thereby avoiding dissonance within the target followers (Ki et al., 2020; Chopra, Avhad & Jaju, 2021). In selecting streamers, brands often employ analytics of follower engagement rate and other follower behaviours (Wies, Bleier & Edeling, 2022; Tafesse & Wood, 2021; Delbaere, Michael & Phillips, 2021), but they also consider qualitative factors such as content authenticity and the streamer's reputation (Kapitan et al., 2022; Chen, Yan & Smith, 2023). Once selected, the collaboration between brands and streamers takes various forms, ranging from sponsored content to collaborative product launches (Hughes, Swaminathan & Brooks, 2019; Delbaere, Michael & Phillips, 2021). Brands and streamers co-create content that seamlessly integrates product placements and brand messages into the streamer's narrative, fostering a more organic and engaging user experience (Giertz et al., 2021; Xue & Liu, 2022). The success of these collaborations often hinges on the streamer's creativity, with brands providing guidance while still allowing streamers to maintain their unique style and voice (Hughes, Swaminathan & Brooks, 2019; Borchers & Enke, 2021; Roggeveen et al., 2021; Shao et al., 2026).

On the other hand, engagement with followers is another important aspect of brand strategy in live streaming commerce. Brands are increasingly leveraging interactive tools provided by live streaming platforms to engage directly with the audience. This engagement takes the form of real-time chats, polls, and question and answer sessions, allowing brands to gather immediate feedback and foster a sense of community (Kang et al., 2021; He et al., 2023). Moreover, brands often initiate hashtag challenges, giveaways, and other interactive campaigns to incentivise follower participation and content sharing, thus amplifying their reach and presence in the digital space (Giertz et al., 2021; Jiang, Guangkuo & Xuezheng, 2022; Jones & Lee, 2022; Li, Tang & Feng, 2023). Such strategies not only drive engagement but also create valuable user-generated content that enhances the brand's visibility and appeal (Casidy, Helmi & Bridson, 2019; Hughes, Swaminathan & Brooks, 2019; Moran, Muzellec & Johnson, 2019).

The influence of the brand extends to the relationship between streamers and followers, where the brand acts as a mediator and facilitator of community bonds (Kucharska, 2019; Ki et al., 2020). Brands set the stage for how streamers and followers interact, often defining the context in which these interactions occur. For example, the brand sponsored event provided a platform for streamers to showcase their expertise while simultaneously engaging followers in a collective experience that strengthens their relationship (Hughes, Swaminathan & Brooks, 2019; Chen, Yan & Smith, 2023). The brand's impact is also seen in how it supports streamers in cultivating a loyal following. By providing resources, content, and opportunities for streamers to elevate their presence, brands indirectly enhance the streamer follower connection. This symbiotic relationship is further enriched when followers become

brand advocates, often spurred by the streamer's endorsement and the brand's active community engagement efforts (Jun & Yi, 2020; Ki et al., 2020; Chen, 2021). The brand's role in affecting the streamer-follower relationship is multifaceted, influencing not just the direct interactions but also the underlying sentiment within the online community (Delbaere, Michael & Phillips, 2021; Cheung et al., 2022; Wei et al., 2022). So, the brand's role in affecting the streamer-follower relationship is multifaceted.

2.1.4.2 The Role of the Streamer in Shaping the Interactions Between Brands and Followers

In the interplay of live streaming commerce, streamers command a central role, shaping the interactions between brands and followers with finesse and strategic intent. Their collaboration with brands allows streamers not only to showcase products but also to integrate brand narratives into their personal streaming (Eng & Jarvis, 2020; Chopra, Avhad & Jaju, 2021; Li, Tang & Feng, 2023). This symbiosis allows streamers to maintain authenticity while serving as brand ambassadors (Xue & Liu, 2022; Li, Tang & Feng, 2023). The manner in which streamers collaborate with brands often reflects their personal brand alignment and the needs of their followers, creating a tailored fit that feels genuine to the audience (Leung, Gu & Palmatier, 2022; Wong & Wei, 2023). This authenticity is key, as it fosters trust and credibility, essential components in influencing followers' perceptions and behaviours (He, Li & Xue, 2022; Yan et al., 2022; Li et al., 2023; Zhou & Lou, 2023).

Streamers navigate an important position in live streaming commerce, acting as both content creators and influential personalities. Their collaboration with brands is not a one-way endorsement but a multifaceted partnership (Caruelle, 2023). They bring

brand narratives to life, infusing them with personal anecdotes and genuine recommendations that resonate with their followers (Wong & Wei, 2023; Lee & Wan, 2023). This approach to content creation fosters a sense of trust and relatability, which is crucial for brand messaging to be well-received (Leite & Baptista, 2022; Holiday et al., 2023).

When streamers engage with followers, streamers leverage their approach to create interactive and compelling content (Dou et al., 2023; Gu, Zhang & Kannan, 2023; Li et al., 2023). They often host live question and answer sessions, conduct giveaways, or share personal experiences with branded products, which not only entertain but also educate the audience. Such engagement strategies create a lively forum for followers to interact, ask questions, and provide real-time feedback, deepening the bond between the streamer and their audience (Jones & Lee, 2022). For example, the Chinese streamer Li Jiaqi, known as the “Lipstick King,” frequently engages his followers by testing dozens of beauty products during live streaming, encouraging viewers to comment on colours and textures in real time before making purchase decisions. Similarly, on Western platforms, TikTok Shop creators like Mikayla Nogueira use candid product demonstrations and instant audience responses to foster authenticity and trust. These real-world practices exemplify how interactive communication and personal storytelling can transform passive viewers into actively engaged consumers.

The impact of streamers on brand perception and the follower relationship is profound. Their portrayal of the brand could significantly sway followers’ impressions, with their credibility being a powerful tool in shaping brand image (Ku, Kao & Qin, 2019; Liu,

Zhang & Zhang, 2020; Wang et al., 2022). When followers witness their favourite streamers using or endorsing a product, the streamer's trustworthiness is transferred to the brand, often leading to increased consumer trust and loyalty (Kim & Park, 2023).

Furthermore, the relationship between streamers and followers, nurtured by shared experiences and interactions around branded content, could evolve into a strong community. This community, centred around the streamer's platform, becomes a fertile ground for brand growth. Streamers, by fostering this relationship, create an environment where followers feel a sense of belonging, which could lead to a stronger association with the brand and even brand advocacy (Ooi et al., 2023; Leung, Gu & Palmatier, 2022; Teresa Borges-Tiago, Santiago & Tiago, 2023).

Streamers, therefore, are useful in bridging the gap between brands and followers. Their influence extends beyond mere marketing metrics; they cultivate relationships (Yuan & Lou, 2020; Caruelle, 2023), shape perceptions (Wei et al., 2022; Yan et al., 2022; Zhou & Lou, 2023), and create online communities (Farivar & Wang, 2022; Leung, Gu & Palmatier, 2022; Hsu, 2022) that are necessary to the fabric of live streaming commerce.

2.1.4.3 The Role of the Follower in Shaping the Interactions Between Brand and Streamer

In live streaming, followers play a crucial role in shaping the relationship between the brand and the streamer by influencing how interactions unfold and how marketing messages are received. The brand–streamer relationship is not one-directional; it evolves dynamically based on follower responses and participation during live sessions. Followers act as both the audience and active co-creators of the live

streaming experience, influencing the authenticity and effectiveness of the brand–streamer collaboration. Follower engagement with content is not just a passive reception but a trigger for direct interactions with brands, demonstrated through likes, shares, comments, and more resource-intensive actions like website visits and product purchases (Hughes, Swaminathan & Brooks, 2019; Cabeza-Ramírez et al., 2022; Fan et al., 2023). This engagement, whether spontaneous or prompted by the streamer’s cues, can enhance or diminish the perceived credibility of both the streamer and the brand (Jin & Ryu, 2020; Lou, Tan & Chen, 2019; Dou et al., 2023).

Also follower engagement is especially potent during live stream shopping events, where real-time interactions between followers, streamers, and brands flourish, facilitated by platform features that enable instant purchases (Cabeza-Ramírez et al., 2022; Caruelle, 2023; Ooi et al., 2023). For instance, when followers actively question product quality or share personal experiences in real time, they indirectly validate—or challenge—the brand’s claims, shaping the trust dynamic that underpins the brand–streamer partnership.

The depth of followers' engagement with brand-related content is closely linked to the strength of their parasocial relationship with streamers. Stronger relationships could lead to more engagement, though this effect can diminish if followers perceive content sharing as primarily driven by profit or self-promotion rather than genuine recommendation (Yuan & Lou, 2020; Bu, Parkinson & Thaichon, 2022; Caruelle, 2023). Followers also engage in brand conversations and electronic word-of-mouth by commenting on live streaming content, which could lead to purchasing behaviours (Giertz et al., 2021; Zheng, Li & Na, 2022; Caruelle, 2023; Ko, 2023). Streamers

encourage this by promoting content creation among followers, who often imitate streamers' brand endorsements without compensation, increasing brand visibility (Sánchez-Fernández & Jiménez-Castillo, 2021; Wei et al., 2022; Caruelle, 2023).

Overall, followers are not just passive audiences but active agents who mediate and reinforce the relationship between brands and streamers. Their engagement functions as a critical feedback mechanism that influences how both parties adapt their strategies in real time. For streamers, follower reactions—expressed through comments, likes, and live interactions—serve as indicators of what content resonates, directly shaping their communication style and promotional approach (Jun & Yi, 2020; Caruelle, 2023). For brands, follower engagement provides insight into audience sentiment and brand perception, acting as a barometer of the effectiveness of the partnership. When followers respond positively, they validate the authenticity of both the streamer and the brand, strengthening their mutual credibility (Hughes, Swaminathan & Brooks, 2019; Wies, Bleier & Edeling, 2022; Zheng, Li & Na, 2022). Conversely, disengagement or negative feedback may prompt brands to reassess collaborations or adjust their messaging strategies.

In this way, followers act as co-creators in the digital marketing—amplifying brand messages, influencing streamer content, and shaping how brand–streamer collaborations evolve over time (Delbaere, Michael & Phillips, 2021; Farivar & Wang, 2022; Leung, Gu & Palmatier, 2022; Wies, Bleier & Edeling, 2022). Their active participation thus transforms the brand–streamer relationship from a transactional partnership into a dynamic, audience-driven interaction grounded in responsiveness and shared engagement.

2.2 Theoretical Foundation

To understand the complex psychological and behavioural mechanisms in live streaming commerce, this study adopts a multi-theoretical approach. Given the real-time, interactive nature of live streaming commerce, where streamers, brands, and followers constantly influence one another, a single theory is insufficient to fully explain follower engagement and impulse buying behaviour. Therefore, this research draws on Source Credibility Theory, Congruity Theory, Flow Theory, and Consumer Engagement Theory. These theories complement each other by addressing different aspects of the live streaming experience: how followers perceive streamers (credibility), how value alignment shapes trust (congruence), how immersive experiences affect emotional connection (flow), and how all these elements contribute to engagement (engagement theory) and impulse buying. Together, these foundations support the development of a comprehensive conceptual model and justify the proposed research hypotheses.

2.2.1 S-O-R framework

The Stimulus–Organism–Response (S-O-R) framework, originally proposed by Mehrabian and Russell (1974), explains how external environmental stimuli influence individuals' internal cognitive and emotional states, which subsequently shape behavioural responses. The systematic review shows framework has been widely applied in consumer behaviour, digital marketing, and online shopping research to explain how environmental cues affect consumer attitudes and actions (Zhang et al., 2025). In the context of live streaming commerce, streamer attributes can be viewed as stimuli, sense of presence, congruence, and dynamic brand experience represent organism-related psychological mechanisms, while follower engagement and impulse

buying constitute behavioural responses. Therefore, the S-O-R framework provides the overarching theoretical structure underpinning the conceptual model of this study.

2.2.2 *Source Credibility Theory*

Source Credibility Theory has long been recognised in marketing and communication research as a foundational explanation of persuasive effectiveness. The theory posits that the extent to which a message source is perceived as credible—specifically in terms of expertise, trustworthiness, and attractiveness—directly influences how the audience receives, accepts, and acts on the message (Hovland & Weiss, 1951; Gao et al., 2021) (see Appendix 6). In the context of live streaming, where communication is spontaneous, unfiltered, and interactive, the credibility of the streamer becomes especially important. Unlike traditional media, followers in live streams are constantly evaluating the streamer's appearance, communication style, and authenticity in real time, making these attributes a critical part of the consumer decision-making process (Yang, Feng & Wang, 2019; Wang et al., 2021; Wellman, 2023).

Within this framework, trustworthiness refers to the follower's perception of the streamer as honest and unbiased, while expertise relates to the streamer's perceived knowledge, skills, or competence on the subject or product being promoted. Attractiveness, meanwhile, extends beyond physical appearance to include likability, relatability, and interpersonal appeal, which can foster stronger parasocial relationships between the streamer and the audience (Gao et al., 2021). These three dimensions interact to shape not just message acceptance but also emotional connection and behavioural intentions. Recent studies have also emphasised the importance of authenticity—a sense that the streamer is genuine and consistent—as

a key extension of the traditional source credibility model, especially in digital and streamers marketing contexts (Halder, Pradhan & Roy Chaudhuri, 2021). In live streaming, where viewers expect transparency and spontaneity, authenticity acts as a powerful enhancer of both trust and expertise (Liu & Sun, 2023). In this study, streamers are viewed as interactive communicators, and their credibility is expected to play a significant role in shaping followers' perceptions, attitudes, and behaviours toward both the streamer and the brand. Source Credibility Theory is therefore used to explain how streamer attributes serve as stimuli that initiate the perceptual and emotional processes underpinning engagement and impulse buying in live streaming commerce (Yan et al., 2022).

2.2.3 *Congruity Theory*

Beyond source credibility, the perceived “fit” or alignment between the brand, the streamer, and the follower plays a crucial role in shaping persuasive outcomes. Congruity Theory, originally proposed by Osgood & Tannenbaum (1955), explains how individuals evaluate and adjust their attitudes based on the consistency or inconsistency — between associated elements. In marketing the theory suggests that a high level of congruence between a communicator's image and the message or brand they promote reinforces positive attitudes, whereas incongruence creates cognitive discomfort and may lead to resistance or disengagement (see Appendix 6).

This concept has been widely applied in studies of endorser-brand fit, showing that when an streamer's personality, values, or lifestyle align with the brand's identity, audiences are more likely to trust the endorsement and respond favourably (Liu, Zhang & Zhang, 2020; Chen, Pham & Tran, 2024; Gong, Yang & Wu, 2024; Tian &

Frank, 2024). In the context of live streaming, congruity theory becomes even more relevant. Followers often develop parasocial relationships with streamers and may identify closely with their lifestyle or persona. Therefore, congruence between the streamer's personal brand, the endorsed product, and the follower's self-concept can heighten engagement and brand acceptance (Liu, Zhang & Zhang, 2020; Yang, Yang & Men, 2023; Tian & Frank, 2024; Wang, 2024).

For instance, when a fitness streamer promotes a sports nutrition brand that aligns with their lifestyle, followers experience less cognitive dissonance and are more likely to perceive the endorsement as authentic and persuasive. In contrast, if the same streamer were to promote a luxury watch brand with no clear connection to their persona, the inconsistency might reduce trust and engagement.

Although Congruity Theory has been widely examined in traditional and digital marketing, there is limited research on its application in live streaming commerce, where engagement unfolds in real time and impulse decisions are common (Hossain et al., 2023; Yang, Yang & Men, 2023; Tian & Frank, 2024). In such dynamic environments, brand–streamer–follower congruence may not only shape initial perceptions but also impact real-time behaviour, such as impulse buying or sharing the stream. This study extends the application of Congruity Theory to live streaming contexts by examining how perceived fit influences dynamic brand experiences and, in turn, affects follower engagement and impulse purchasing. By addressing this gap, the research contributes to a deeper understanding of how congruence functions in fast-paced, interactive digital environments.

2.2.4 *Flow Theory*

To further explain how dynamic brand experiences are constructed during live streaming, this study draws on Flow Theory (Csikszentmihalyi, 1995) and the related concept of sense of presence (Perse & Courtright, 1993; Draper et al., 1998), also it is also essential for understanding how dynamic brand experiences are constructed during live interactions. Flow Theory describes a psychological state of deep immersion in which individuals become fully absorbed in an activity, experiencing intense focus, enjoyment, and a loss of awareness of time (see Appendix 6). In digital marketing and media contexts, flow has been widely used to understand how users engage with online content as well as brand, and how this optimal experience enhances emotional involvement, decision-making, and consumer behaviour (Liao et al., 2022; Li et al., 2023; Zheng et al., 2023; Tian & Frank, 2024).

Flow theory further supports the idea that such immersive experiences can lead to deeper cognitive and emotional engagement. Especially in live streaming commerce, presence plays a central role in achieving flow. Presence refers to the psychological state in which individuals feel immersed and connected within a mediated environment (Ma, Zou & Lv, 2022; You, Wang & Shamu, 2023). It has two key dimensions: social presence, the sense of interpersonal closeness and connection with the streamer, and telepresence, the feeling of being “there” in the live streaming space. These types of presence are critical in live streaming commerce, where real-time interactions, emotional cues, and content responsiveness drive stronger parasocial relationships and authenticity perceptions (Ming et al., 2021; Liao et al., 2022; Chung et al., 2025; Wang, Li & Yan, 2025).

Flow theory further supports the idea that such immersive experiences can lead to deeper cognitive and emotional engagement. Previous research suggests that when followers experience high levels of presence during a live streaming session, they are more likely to emotionally engage, trust the streamer and facilitate stronger brand connections, and respond to calls to action, including making unplanned purchases (Liu & Yu, 2022; Hossain et al., 2023; Xin, Liu & Jian, 2024). These immersive experiences lower psychological resistance could setting the stage and creating favourable conditions for engagement and impulse behaviour (Abell & Biswas, 2023; Li & Xie, 2020).

Despite increasing attention to flow in digital marketing, little is known about how presence and flow jointly operate as mediating mechanisms between streamer attributes and dynamic brand experiences. Most existing studies have not examined how immersive engagement, facilitated by presence, contributes to real-time brand connection in live streaming commerce. This research seeks to extend Flow Theory by exploring how presence, particularly social and telepresence, mediates the relationship between streamers and follower behaviours. In doing so, it helps clarify how immersive live streaming experiences enhance enjoyment, foster brand trust, and ultimately drive engagement and impulse buying.

2.2.5 Customer Engagement Theory

In synthesising the core theoretical perspectives—Source Credibility Theory, Congruence Theory, Flow Theory, and Consumer Engagement Theory—this research positions Customer Engagement as the central conceptual anchor for understanding follower behaviour in live streaming commerce. Customer Engagement Theory has

emerged as a prominent perspective for understanding the nature of consumers' cognitive, emotional, and behavioural connections with brands, products, and organisations (Brodie et al., 2011; Hollebeek, 2011). The theory suggests that engagement extends beyond transactional outcomes and reflects a multidimensional psychological state characterised by varying levels of attention, participation, interaction, and emotional involvement. In digital and social media environments, customer engagement has been associated with activities such as commenting, sharing, recommending, co-creating content, and maintaining ongoing relationships with brands (Dessart et al., 2015). Consequently, customer engagement has become an important concept for explaining how consumers actively participate in value creation and develop stronger brand relationships. While traditional marketing approaches often rely on rational information delivery and static advertisements, experiential marketing shifts the focus to creating immersive, emotionally resonant, and memorable brand experiences (Zheng, Li & Na, 2022; Hossain et al., 2023; Li, Feng & Zhao, 2023; Lyu, Liang & Vellore Nagarajan, 2024; Luo, Xu & Zheng, 2024). In live streaming contexts, these experiences are shaped not only by what streamers communicate about a product but also by how the interaction feels — dynamic, spontaneous, and authentic.

All in all, Source Credibility Theory helps explain how trust, expertise, and attractiveness shape the streamer's persuasiveness, while Congruence Theory addresses how alignment between the streamer's image, the brand identity, and the follower's self-concept influences engagement. Meanwhile, Flow Theory and the concept of Presence illuminate how real-time immersion and psychological connection to the streaming environment foster emotional absorption and attention. These

elements work together to co-create dynamic brand experiences, which serve as the experiential core of live streamer commerce.

Building on this, customer engagement theory conceptualises engagement as both a psychological state—cognitive, emotional, and affective involvement (Hsu & Hu, 2023; Li et al., 2023; Wang, 2024), such as engagement, commenting, sharing, or impulsively purchasing during live streaming. Unlike traditional advertising, where engagement may be passive or delayed, live streaming enables active, reciprocal interactions between followers, streamers, and brands (Zheng, Li & Na, 2022; Chen, Pham & Tran, 2024; Liu et al., 2024). Despite this theoretical richness, few studies have integrated these frameworks to explain the full experiential pathway from streamer attributes through dynamic brand experiences to engagement and impulse buying.

By bringing these theories into dialogue, this research not only addresses existing gaps in digital marketing literature but also proposes a comprehensive, empirically testable model of how immersive, interactive experiences in live streaming commerce drive follower engagement and conversion. This multi-theoretical approach strengthens the explanatory power of the study and deepens our understanding of how streamers function as brand co-creators in digitally mediated environments.

In conclusion, these theoretical foundations collectively support the conceptual model of this study by offering a logically integrated explanation of how live streaming commerce operates as an interactive marketing environment. Streamers' credible attributes—such as expertise, trustworthiness, and attractiveness—serve as the initial

stimuli that activate followers' cognitive and emotional evaluations. These evaluations are further shaped by the perceived congruence between the brand, streamer, and follower identities, as well as by immersive presence experiences—including both social presence and telepresence. Together, these psychological mechanisms facilitate the construction of dynamic brand experiences, which are at the heart of experiential marketing. These experiences, in turn, generate higher levels of consumer engagement and impulse buying behaviour, reflecting both psychological involvement and observable follower actions. From a Customer Engagement Theory perspective, engagement represents a multidimensional construct comprising cognitive, emotional, and behavioural dimensions (Brodie et al., 2011; Hollebeek, 2011). In live streaming commerce, engagement is reflected not only in followers' psychological involvement but also in observable behaviours such as commenting, sharing, interacting with streamers, and participating in brand-related activities. As a central theoretical lens, Customer Engagement Theory helps explain how followers transform their perceptions and experiences into active participation and behavioural responses. This theoretical synthesis provides the justification for the hypothesised relationships within the conceptual framework and establishes a robust foundation for the next section, where each construct is critically reviewed, and hypotheses are proposed. To support this theoretical integration, Appendix 6 summarises the key theories underpinning this research and clarifies their specific relevance to the hypothesised relationships.

2.2.6 Research Gap 1: Integrating Different Theories

Despite the previous research into these elements, the literature reveals that a comprehensive model that encapsulates the entire spectrum of the S-O-R framework Source Credibility Theory and Congruence theory —specifically within the context of

live streaming—remains unexplored. Existing studies have concentrated on quantifying engagement metrics (Wongkitrungrueng, Dehouche & Assarut, 2020; Wymer et al., 2021; Meisner & Ledbetter, 2022; Zheng, Li & Na, 2022) and dissecting individual elements of streamer attributes (Guo, Zhang & Wang, 2022; Law et al., 2023; Yun et al., 2023; Zheng et al., 2023) but have yet to fully capture the interplay between these factors. Moreover, external variables such as gender (Liu et al., 2022; Kong, Zhan & Zhu, 2023) and product type (Guo, Zhang & Wang, 2022; Lei, Shi & Liu, 2023; Lu, Li & Ge, 2023) on impulse buying in the live streaming setting are not well understood. These gaps in the literature underscore the research value of this study and highlight the need for a more comprehensive understanding of these phenomena.

By addressing these gaps, the proposed research not only contributes to the academic literature but also offers practical implications for marketers looking to leverage live streaming platforms. The study aims to investigate the impact of streamer attributes on impulse buying and follower engagement behaviours, considering the various elements of the dynamic brand experience and the moderating effects of external variables. This comprehensive approach promises to deepen the theoretical understanding of follower engagement and impulse buying behaviour in live streaming and provide insights that can inform digital marketing strategies and live streaming commerce. With live streaming platforms becoming increasingly popular, this research is timely and holds the potential to shape future digital marketing practices and strategies.

2.3 Key Constructs

2.3.1 *Streamers' Attributes*

The streamers' attributes refer to the personal temperament and characteristics displayed when introducing and recommending products to consumers through live streaming on social platforms. The attributes of streamers play a foundational role in shaping how audiences perceive, engage with, and respond to live streaming content. According to Source Credibility Theory (Hovland & Weiss, 1951), 3 core components determine a communicator's persuasive impact: expertise (Wiedmann & von Mettenheim, 2020), trustworthiness (Crnjak-Karanović, Kursan Milaković & Elez, 2023), and attractiveness (Zheng et al., 2023). In the live streaming context, these attributes influence followers' perceptions of authenticity, the informational value of the stream, their engagement and impulse buying, and each dimension, related theories and research gaps are introduced one by one below.

2.3.1.1 Trustworthiness

Trustworthiness refers to the degree to which a source is perceived as honest, reliable, sincere, and dependable when providing information (Ohanian, 1990; Kim & Kim, 2021). The interactive nature of live streaming means that trustworthiness is not only established through the content but also through the streamer's behaviours (Kim & Kim, 2021). In existing studies, trustworthiness has been further dissected into specific dimensions. For instance, Brinson & Lemon (2023) suggest that Trustworthiness is influenced by perceived credibility and expertise but also includes perceived real-world feel, which is the degree to which the audience feels the content represents an actual person or organisation. In the context of live streaming, trustworthiness could be established through various means. The streamer's

consistent track record of providing accurate information could enhance their trustworthiness (Wellman, 2023; Kim & Kim, 2021). Moreover, the direct and transparent nature of live streaming can contribute to a sense of authenticity, which is closely related to trustworthiness (Zhang et al., 2022). Also, trustworthiness is not static; it is a dynamic attribute that could change over time and is sensitive to the context of the communication and the medium through which it is conveyed (Todd & Melancon, 2017). In the rapidly evolving landscape of digital marketing, where misinformation could be prevalent, the trustworthiness of a live streamer becomes critical for followers seeking reliable information and authentic interaction (Wellman, 2023; Wiedmann & von Mettenheim, 2020). In addition, Studies show that trust in the streamer is positively associated with both purchase intention (Yang, Feng & Wang, 2019) and follower engagement (Wellman, 2023; Wiedmann & von Mettenheim, 2020). As followers seek authenticity in streamer content, streamers who behave consistently and transparently tend to foster stronger emotional bonds and trust.

2.3.1.2 Attractiveness

Attractiveness represents physical appearance in live streaming context, which is an essential dimension that influences an online streamer's perceived credibility. Also, some researchers have argued that attractiveness refers to the extent to which the streamer is seen as likeable, appealing, and relatable by their followers. This dimension goes beyond physical attractiveness and includes personality traits and the overall persona projected by the streamer (Ooi et al., 2023).

Current studies show the streamers' attraction in the live streaming context is paramount (Wiedmann & von Mettenheim, 2020; Kim & Park, 2023); it involves the

streamer's ability to establish a rapport with the audience (Giertz et al., 2021), often through shared interests, interactive dialogue, and a compelling on-screen presence. Physical attractiveness could play a role in live streaming, but it is often superseded by the authenticity and relatability of the streamer (Kim & Kim, 2021). Audiences tend to move towards streamers who exhibit genuine behaviour and a sense of 'being themselves' on camera, which could foster trust and a stronger parasocial relationship—a sense of friendship or emotional connection with a media persona (Kim & Park, 2023; Zheng, Wu & Liao, 2023). On the other hand, the immediacy of live streaming also adds a layer of attraction based on the streamer's responsiveness to their audience (Wiedmann & von Mettenheim, 2020). For example, the ability to interact and engage with viewers in real-time, answering questions and acknowledging comments, could create a more dynamic and personable experience, further enhancing the streamer's attractiveness (Wiedmann & von Mettenheim, 2020; Wang et al., 2021; Liao et al., 2022; Kim & Park, 2023).

2.3.1.3 Expertise

Expertise encapsulates the perceived knowledge (Feng, Chen & Kong, 2021; Liao et al., 2022), skills (Liao et al., 2022; Zheng et al., 2023), and abilities (Li et al., 2023) of a communicator within a specific domain, and it is a critical factor in determining the effectiveness of their influence on an audience's attitudes and behaviours. Expertise is not inherently linked to the actual knowledge the communicator possesses but is rather the audience's perception of the communicator's capability to provide accurate and valuable information (Park & Lin, 2020; Wiedmann & von Mettenheim, 2020; Gao et al., 2021). This perception is often influenced by the communicator's professional experience (Cartwright, Liu & Davies, 2022) and the presentation of information in a

clear and cogent manner, which could either bolster or diminish the communicator's persuasive impact (Borchers & Enke, 2021). Expertise is especially significant in situations where the audience lacks the knowledge to evaluate the content independently and must rely on the communicator's authority on the subject (Church, 2022).

The current studies show, the streamer's perceived expertise and competence could significantly influence viewers' perceptions and lead to higher credibility and influence over the follower (Church, 2022). Expertise not only bolsters their credibility but also adds substantial value to the viewer experience by providing insightful and authoritative content (Chen & Yang, 2023). Together, these attributes are the bedrock upon which a streamer's influence is built, determining their ability to attract, engage, and retain an audience in the dynamic and interactive realm of live streaming. (Syrdal et al., 2023; Wiedmann & von Mettenheim, 2020).

2.3.1.4 Streamers' Attributes and Other Factors

Streamers' attributes have been extensively studied across various domains, including sense of presence, brand follower streamer congruence (Abell & Biswas, 2023; Chen, Yan & Smith, 2023) and dynamic brand experiences (Addo et al., 2021; Bu, Parkinson & Thaichon, 2022; Deng, Lin & Jiang, 2023). These attributes have been scrutinised in the context of live streaming commerce and the burgeoning field of live streaming (Addo et al., 2021; Chen & Yang, 2023; Leong et al., 2023). For example, Li et al. (2022) examined how the attractiveness of a live streamer could influence viewer dynamic brand experiences. This research discovered that viewers tend to engage longer with streamers they find aesthetically appealing. Similarly, the authenticity of

the live streamer has been linked to audience trust and subsequent follower loyalty (Zhang et al., 2022), while credibility has been associated with product persuasiveness and the effectiveness of brand endorsements during live streams (Yang, Feng & Wang, 2019; Kim & Kim, 2021). Expertise, on the other hand, has been shown to enhance the informational value of live streaming content and brand, thereby increasing the educational impact on viewers (Wiedmann & von Mettenheim, 2020). Each of these attributes plays a crucial role in the complex dynamics of viewer interaction and behaviour within the live streaming space.

Together, these attributes form the credibility profile of the streamer and significantly influence how followers interpret live content. In particular credibility, attractive, and expert streamer is more likely to deliver a compelling sense of presence, brand follower streamer congruence —real-time, emotionally resonant, and information-rich moments that shape how consumers engage with the brand (Wiedmann & von Mettenheim, 2020).

2.3.1.5 Research Gap 2: Streamer Attributes Sense of Presence and Congruence

Streamer attributes such as attractiveness, expertise, and credibility have been analysed in the context of live streaming and online interactions. For instance, research by Li & Xie (2020) demonstrates that viewers tend to associate streamer attractiveness with higher-quality content and brand. Similarly, investigations into authenticity, such as those by Kanaveedu & Kalapurackal (2022), show that streamers who exhibit genuine behaviour tend to foster a more dedicated following. Some studies have also delved into the impact of credibility and expertise on viewer behaviour. For example, Lou & Yuan (2019) have shown that streamers who are perceived as

credible or expert during their live streaming not only attract more viewers but also maintain higher engagement rates. In the same area, other research focusing on expertise, like the work by Wiedmann & von Mettenheim, (2020), has found that streamers with specialised knowledge in a subject can command more influence and are more effective in promoting products or brands. In terms of credibility, also work by Chen (2019) has also shown that viewers are more likely to be persuaded by and purchase from streamers they find credible. This is in line with research by Kim et al. (2020), which points out that credibility could be a major driver behind effective product endorsements in live streaming. Expertise plays a crucial role, as indicated by Davis and Park (2020), who find that streamers with specialised knowledge could command greater influence, persuade followers and promote brands more effectively.

Despite these insights, the research linking these streamers' attributes directly to the sense of presence and congruence in live streaming is not as well-established. While attractiveness, authenticity, credibility, and expertise are individually recognised for their impact on viewer engagement, there is a gap in understanding how these attributes collectively contribute to a sense of presence and congruence during live streams. For example, while some studies have explored the role of credibility and expertise (Wang et al., 2022), there is less clarity on how these attributes interact to create the sense of presence. This indicates a research gap in understanding how various streamer attributes collectively influence the sense of presence and congruence in live streaming. Also, in the field of live streaming commerce, there's an ongoing debate regarding the impact of streamer attributes—such as attractiveness, authenticity, credibility, and expertise—on the sense of presence and congruence. Discussions in this area often revolve around whether streamers who showcase more

natural and authentic behaviours (emphasising authenticity and credibility) or those who present a more polished and engaging persona (highlighting attractiveness and expertise) are more effective in influencing the sense of presence and congruence. Also, research so far presents mixed outcomes. Some studies suggest that streamers who are engaging tend to initially draw more viewers (Chen, Yan & Smith, 2023). In contrast, others emphasise the long-term impact of credibility in maintaining viewer interest and fostering a deeper connection with the brand (Wang et al., 2022), bringing more congruence. Taken together, these findings suggest that while single attributes may generate short-term attention, credibility is likely more influential in sustaining followers' trust and cultivating an enduring sense of presence and congruence.

According to those arguments, future research should focus on the comprehensive role these attributes play in shaping viewer perceptions and behaviours in the evolving landscape of live streaming, moving beyond individual traits to explore the synergistic effect they have on creating impactful immersive experiences. In addition, while the attributes of streamers are recognised for their influence on customer behaviour, the overall effect of these combined attributes on shaping the sense of presence and congruence is not fully understood. Therefore, this research seeks to contribute to this discussion by providing empirical evidence on how different combinations of live streamer attributes affect the sense of presence and the congruence is not fully understood.

2.3.2 *Sense of Presence*

The sense of presence refers to the feeling of being immersed and actively involved in a digital environment, giving users the experience of being physically present in a

non-physical world (Chen & Wu, 2023; Onderdijk et al., 2023; Yan, Wu & Meng, 2023). There are some different aspects of presence: social presence and telepresence (Lavoye et al., 2023). Social presence is characterised by Snelson (2019) the degree of salience between two communicators in a communication setting. Over the years, the relationship between different forms of presence and engagement has been thoroughly examined. Each presence is explained in detail below.

2.3.2.1 Social Presence

Social presence is the sense of being with others and the perception of personal, social interaction within a communication environment, even when the participants are not physically co-located (Ma, Zou & Lv, 2022; You, Wang & Shamu, 2023).

In existing research, there's a spirited discourse surrounding the impact of social presence in social media and live streaming on follower engagement. A faction of academia proposes that heightened social presence could elevate follower engagement (Ye, Zheng & Li, 2022) and brand experiences. For example Sang et al. (2023), analysed users who watched live streaming, and it was found that social presence moderated the effect of source credibility on continued viewing intentions, with stronger social presence. The higher user engagement, while a contrasting perspective suggests otherwise, argues that social presence has no significant positive effect on follower engagement and brand experiences. For example, Deng, Lin & Jiang, (2023) analysing the relationship between consumer social presence and followers in e-commerce live streaming through 400 questionnaires concluded that social presence has no discernible impact on brand experiences as well as follower engagement. The dialogue on social presence and its consequent effects on follower

engagement and credibility remains open-ended, as delineated by these varied standpoints, because no same result.

In addition, some research has shown that it has been well documented that immersive live streaming experiences increase interaction trust (Abell & Biswas, 2023; Li & Xie, 2020) and brand experiences. This engagement is attributed to the ease with which users could interact with streamers and content (Wongkitrungrueng & Assarut, 2020). Prior studies have delved into how different social media post designs, such as evaluating content quality (Ki & Kim, 2019), content format (Li & Xie, 2020), and comparing brand sponsored and non- brand sponsored content (Lou, Tan & Chen, 2019), influence user engagement. However, the impact of sense of presence and dynamic brand experiences in the context of live streaming versus the absence of relevant information on follower engagement and impulse buying remains largely unexplored. Given this gap in research and the evolving live streaming strategies employed by brands across platforms, there is an evident demand for a deeper exploration in this domain.

2.3.2.2 Telepresence

Telepresence delves into the subjective experience of being in one place or environment, even when physically situated in another (Tjostheim, Leister & Waterworth 2019). Past research has examined the relationship between telepresence and follower engagement, often identifying an array of mediating variables. Variables such as trust (Wongkitrungrueng & Assarut, 2020) and flow experiences (Ye, Zheng & Li, 2022) have been frequently discussed. It is important to emphasise that there are many factors that cause followers' engagement, aspects like

interactivity, and brand experiences stand out, for example, studies have found that the more frequently the streamer interacts with the follower during a live streaming the higher the level of good brand experiences and consumer engagement, also they have found that hedonic content is effective in increasing consumer engagement (Hughes, Swaminathan & Brooks, 2019). Also, well-researched and factually accurate content can boost perceived expertise. Earlier studies indicate that these factors play a mediating role in the live-streaming domain. However, previous research has not explored how these factors affect dynamic brand experiences as well as mediate the relationship between streamers' attributes and dynamic brand experiences in the context of telepresence. In addition, numerous studies suggest that telepresence could enhance the depth of user immersion in a virtual environment, subsequently impacting brand experience engagement levels (Barta, Gurrea & Flavián, 2023). Exploring this telepresence could uncover unique aspects of live streaming that are not encapsulated by current understandings rooted in the social presence or telepresence research. Therefore, their impact needs to be further explored.

2.3.2.3 Research Gap 3: Sense of Presence and Dynamic Brand Experiences

The sense of presence in the realm of live streaming is defined by the perceptual attributes that allow followers to feel immersed within the virtual environment being streamed (Ye, Zheng & Li, 2022). This can be influenced by factors such as the vividness of the environment being portrayed (Sang et al., 2023), the symmetry and Impressive content (Wies, Bleier & Edeling, 2022), and the diversity of interactive elements (Kang et al., 2021).

In addition, taking into consideration the evolving research landscape in live streaming commerce, it becomes apparent that the integration of social presence, telepresence and dynamic brand experiences in content presentation profoundly impacts follower engagement and impulse buying. Previous studies have elucidated that a compelling presentation is important in fostering follower engagement (Ye, Zheng & Li, 2022; Sang et al., 2023). Moreover, the degree of interactivity embedded within credibility plays a transformative role in sustaining and amplifying follower engagement (Yang, Feng & Wang, 2019). This means that when streamers not only appear credible—through expertise, authenticity, and trustworthiness—but also actively engage with followers in real time, their credibility becomes more persuasive and relational rather than static. Interactive credibility, demonstrated through immediate responses, personalised communication, and transparent demonstrations, reinforces followers' trust and emotional connection, thereby sustaining long-term engagement and encouraging repeated interactions. Those are also characteristics of telepresence.

However, while prior studies have recognised telepresence as a key psychological state that evokes the feeling of “being there” in a mediated environment (Steuer, 1992; He, Li & Xue, 2022; Li & Xie, 2020), its underlying mechanisms and influence within live streaming commerce remain underexplored. Telepresence is shaped by vividness, interactivity, and immersion—factors that together determine how consumers perceive their virtual proximity to the streamer and the product being presented. Existing research primarily examines telepresence as a technological or sensory construct (He, Li & Xue, 2022), yet few studies have unpacked how it interacts with human elements such as streamer credibility, authenticity, and communication

style to create dynamic brand experiences. (Gao, Jiang & Guo, 2023; Khoi, Le & Nguyen Dong, 2023; Lu, He & Ke, 2023; Men, Zheng & Davison, 2023)

In particular, there is limited understanding of how telepresence mediates the relationship between streamer attributes and consumer outcomes—specifically, how immersive experiences amplify emotional involvement, cognitive absorption, and impulsive decision-making. While some studies link telepresence to engagement and purchase intention (Li & Xue, 2022; Li & Xie, 2020; Hugh et al. 2022), they often isolate it from related constructs such as congruence or dynamic brand experience. Therefore, this research addresses a theoretical gap by situating telepresence within an integrative model that connects streamer attributes, sense of presence, and dynamic brand experience to follower engagement and impulse buying. By conceptualising telepresence not merely as a technological by-product but as a psychologically mediated experience, this study extends existing literature and provides a deeper understanding of how immersive interactions shape follower engagement and impulse buying behaviour in live streaming commerce.

2.3.3 *Congruence*

In the evolving landscape of live streaming, the congruence among brands, streamers, and followers stands as a critical factor for marketing success (Ma, 2021; Hudders, De Jans & De Veirman, 2021; Giertz et al., 2021; Bawack et al., 2023; Dua, 2023). Brand, Streamer, and Follower Congruence refer to the harmony and alignment between the values, interests, and expectations of the three entities. This alignment is crucial in ensuring a cohesive and authentic experience that resonates well with the audience, strengthens brand loyalty, and willingness to engage (Ma, 2021; Tian & Li, 2023; Yeh,

2023; Picot-Coupey et al., 2023; Shao, 2023). Each of the different congruences is explained in detail below.

2.3.3.1 Brand-Streamer Congruence

The alignment between the brand's values and the streamer's persona is fundamental (Liu, Zhang & Zhang, 2020; Ko, 2023; Li et al., 2023). Current researches illustrate that when a streamer's style, content, and values mirror that of the brand, the endorsement appears more genuine and credible (Hughes, Swaminathan & Brooks, 2019; Ashraf, Hameed & Saeed, 2023; Liu et al., 2023; Ooi et al., 2023; Dam, Borsai & Burroughs, 2024). Meanwhile, this congruence strengthens the brand's message, as the streamer effectively becomes an extension of the brand, embodying its ethos and appealing to a like-minded audience. Research indicates that such alignment can significantly impact the audience's perception of the brand, leading to higher trust and a stronger brand image and engagement (Park & Lin, 2020; Xue & Liu, 2022; Arora et al., 2023; Li & Nan, 2023; Bawack et al., 2023).

2.3.3.2 Streamer-Follower Congruence

The relationship between streamers and their followers is built on a foundation of shared interests and values (Liu, Zhang & Zhang, 2020; Ma, 2021; Wu et al., 2022; Yang et al., 2023). Current research has found that when followers perceive a streamer as someone with similar tastes, opinions, and a relatable lifestyle, they are more likely to trust and engage with the content and brand. This perceived similarity fosters a strong parasocial relationship, where followers feel a personal connection to the streamer, making the streamer's endorsements more persuasive and impactful

(Hughes, Swaminathan & Brooks, 2019; Ma, 2021; Ozuem & Willis, 2022; Caruelle, 2023).

2.3.3.3 Brand-Follower Congruence

For followers, the alignment of their own values and preferences with the brand's identity is crucial (Sánchez-Fernández & Jiménez-Castillo, 2021; Cabeza-Ramírez et al., 2022; Caruelle, 2023; Shao, 2023). Followers are more receptive to brands that they perceive as reflecting their lifestyle and beliefs. When this congruence is present, followers are more likely to develop a positive attitude towards the brand, exhibit stronger brand loyalty, and engage in word-of-mouth promotion (Wei et al., 2022; Caruelle, 2023). The streamer, in this context, acts as a bridge, reinforcing this congruence through tailored content and personal endorsements (Ma, 2021; Cabeza-Ramírez et al., 2022; Wei et al., 2022).

All in all, Brand, Streamer, and Follower Congruence is a dynamic and influential factor in the realm of live streaming commerce (Shan, Chen & Lin, 2020; Ma, 2021; Pradhan, Kishore & Gokhale, 2023; Wei & Xi, 2023). However, current research focuses on individual relationship between followers and streamers or brands and followers. No research has yet integrated followers, streamers, and brands in live streaming commerce. However, studies have shown that the alignment of values, interests, and expectations among the three entities enhances the authenticity and effectiveness of brand endorsements, fosters deeper relationships, and drives engagement and brand loyalty (Wei et al., 2022; Caruelle, 2023). Understanding and navigating this congruence is essential for brands, streamers, and marketers aiming to create impactful and resonant marketing campaigns in the digital age. (Feng, Chen & Kong,

2021; Leite & Baptista, 2021; Ma, 2021; Cabeza-Ramírez et al., 2022; Alboqami, 2023; Ooi et al., 2023; Nash, 2023).

2.3.3.4 Research Gap 4: Congruence and Dynamic Brand Experience

The congruence between brand, streamer, and follower is increasingly recognised in contemporary marketing literature as an important element shaping consumer experiences and behaviours, particularly within interactive contexts like live streaming. Congruence theory posits that the alignment or fit among the identities, values, and personalities of brands, streamers, and their audience significantly strengthens consumer perceptions and subsequent behaviours (Abosag et al., 2020; Rollin, 2022; Arora et al., 2023). Specifically, brand-streamer congruence involves the compatibility between the brand's image and the streamer's persona, while streamer-follower congruence addresses the similarity or alignment of values, lifestyles, and identities between streamers and their audience (Deng, Chen & Wu, 2024; Opić & Pandža Bajs, 2024; Roth-Cohen, Segev & Liu, 2024).

Recent literature consistently underscores the importance of streamer-follower congruence as a mediator of consumer behaviour (Venciute et al., 2023; Ceylan & Hayran, 2025). When followers perceive high congruence with a streamer, they experience heightened trust, stronger emotional connections, and increased receptivity to brand-related messages, facilitating more meaningful dynamic brand experiences (Venciute et al., 2023; Supriani, Ninglasari & Iswati, 2024). This relational alignment reduces psychological distance, making followers feel more intimately connected and aligned with the streamer's recommendations, thus positively

influencing their engagement levels and enhancing their likelihood of impulsive purchase behaviours (Liang & Yoon, 2022; Zhang & Hu, 2024).

However, while existing studies emphasise the importance of congruence in influencing consumer outcomes, there are theoretical gaps that persist. First, limited research explicitly examines the role of streamer–follower congruence as a mediating mechanism that links streamer attributes, such as expertise and credibility, to brand experiences within live streaming commerce. Although previous studies have examined congruence between brands and endorsers in traditional influencer marketing (e.g., Wang, 2024; Ji, Liu & Chen, 2023), the unique characteristics of live streaming—such as immediacy, spontaneous communication, and real-time interaction—introduce new dynamics to how congruence forms and operates. In live streaming environments, congruence is not static but co-created through continuous interaction between streamers and followers, evolving as followers respond to the streamer’s behaviour, tone, and authenticity in real time. This interactive process may amplify or diminish followers’ sense of identification and thus directly affect engagement and impulse buying behaviour. Despite these distinctive dynamics, current literature has not adequately explored how streamer–follower congruence functions as a mediating mechanism in shaping dynamic brand experiences.

Second, some research has often treated congruence between streamer and follower as a static construct rather than a dynamic and evolving aspect of consumer-brand relationships, failing to account for how congruence perceptions may fluctuate or intensify during interactive live streaming sessions. Given that real-time engagement could amplify perceptions of congruence through immediate feedback and community-

building interactions (Deng, Chen & Wu, 2024; Lyu, Liang & Vellore Nagarajan, 2024; Xin, Liu & Jian, 2024), there is considerable room to investigate how streamer-follower congruence shapes dynamic brand experiences, particularly its indirect effect on follower engagement and impulse buying behaviours during live streaming.

Addressing these gaps, the current research intends to investigate brand streamer-follower congruence as a mediator in the relationship between streamer attributes and the dynamic brand experience. By integrating congruence theory into the broader framework of live streaming commerce, this study aims to provide deeper insights into the congruency between streamer and followers' engagement and impulse buying behaviours, offering valuable theoretical and practical implications for brands and digital marketers seeking more effective strategies within live streaming contexts.

2.3.4 *Dynamic Brand Experiences*

Dynamic brand experience builds upon the broader brand experience literature, which conceptualises consumer experiences through sensory, affective, behavioural, and intellectual dimensions (Brakus et al., 2009). While the concept was not originally developed within live streaming commerce, recent studies have emphasised the increasingly dynamic, interactive, and real-time nature of brand experiences in digital environments (Wiedmann et al., 2018; Kumar & Kaushik, 2020). In the context of live streaming commerce, dynamic brand experience reflects the real-time, interactive, and evolving experiences followers have during live streaming sessions. These elements collectively contribute to a comprehensive and immersive experience that engages followers deeply and dynamically.

Unlike traditional brand experiences, dynamic brand experiences in live streaming are characterised by continuous interaction, real-time feedback, and evolving follower participation. In the context of live streaming, dynamic brand experience is a multifaceted concept involving various elements that collectively contribute to a comprehensive and immersive experience. These elements—*affective, sensory, behavioural, and intellectual*—interact to create an environment that engages followers deeply and dynamically. Each element is explained in detail below.

2.3.4.1 Sensory

The sensory experience in live streaming is vital for attracting and maintaining viewer attention (Xu, Huang & Shang, 2021; Ozuem & Willis, 2022; Wei & Xi, 2023). It involves stimulating the visual and auditory senses of the audience through high-quality visuals, compelling audio, and interactive elements to influence the behaviour of followers.

Also, streamers often use vivid imagery, live demonstrations, and engaging narratives to make the experience more immersive (Park, Hong & Park, 2023). The sensory appeal not only enhances the perception of the brand but also makes the experience more memorable and enjoyable for the followers (Ozuem & Willis, 2022; Park, Hong & Park, 2023). A well-crafted streaming environment that is visually appealing encourages viewers to stay longer and interact more with the stream and influences followers' purchasing decisions (Paraman et al., 2022; Liu et al., 2023).

2.3.4.2 Affective

Affective plays a crucial role in shaping the brand experience. Streamers who can evoke feelings of excitement, joy, trust, or even nostalgia create a stronger emotional

bond with their followers (Khoi, Le & Nguyen Dong, 2023; Li et al., 2023; Luo et al., 2023). When viewers experience positive emotions during a live stream, such as excitement or joy, they are more likely to participate actively, express their opinions, and share content with their networks (Lim et al., 2020; Guo, Zhang & Wang, 2022; Gu, Cheng & Shen, 2023; Shao, 2023). This affective resonance could significantly influence followers' perceptions of the brand and their willingness to engage with it (Zhang, Wang & Zhang, 2021; Dang-Van et al., 2023) even influence their behaviourally responsive. So positive emotions elicited during the streaming sessions could lead to a more favourable brand attitude and higher chances of impulse buying (Khoi, Le & Nguyen Dong, 2023).

2.3.4.3 Behavioural

Behavioural, as a dimension of dynamic brand experiences, is posited to have a positive impact on follower engagement behaviour. The behaviour between streamers and their follower is a fundamental aspect of the live streaming experience (Gu, Cheng & Shen, 2023; Hou & Hou, 2024). When followers feel a personal connection to the streamer, their engagement behaviour is likely to increase, as they perceive the streamer not just as a content provider but as a social entity with whom they can interact and relate (Hou et al., 2019; Liao et al., 2022; Liu & Yu, 2022; Shao, 2023).

Current research illustrates that interaction is one of the key factors affecting consumer decisions and behaviours. The behavioural aspect of the brand experience in live streaming centres around the connections formed between the brand, streamer, and followers. These relationships are cultivated through interactive and personalised engagement behaviour, fostering the sense of community and belonging of followers.

At the same time, it could influence the behaviour of followers (Wang, 2021; Ozuem & Willis, 2022; Kalam, Goi & Tiong, 2023; Li et al., 2023). Also, streamers often act as the medium through which followers form a parasocial relationship with the brand, making the interaction feel more personal and direct (Kalam, Goi & Tiong, 2023; Tanwar, Chaudhry & Srivastava, 2023; Wei & Xi, 2023; Huang & Ma, 2024). This sense of connection is fundamental to a dynamic brand experience, as it encourages continued engagement behaviour and decision-making (Ozuem & Willis, 2022; Liu et al., 2023; Wei & Xi, 2023).

2.3.4.4 Intellectual

Intellectual refers to how followers process information, form perceptions, and make decisions regarding the brand (Wang et al., 2022; Liu et al., 2023). This includes awareness, understanding, and memory of the brand messages conveyed during the live streaming. Streamers who can effectively communicate the brand's values, features, and benefits in an understandable and relatable manner contribute to a more informed and educated audience (Akrouit & Nagy, 2018; Bu, Parkinson & Thaichon, 2022). The current study found that intellectual engagement is essential for followers to make informed decisions, behavioural responsive, and develop a deeper understanding of the brand (Yin et al., 2022; Liu et al., 2023; Sohaib & Han, 2023).

Furthermore, the previous research also found that the intellectual elicited by dynamic brand experiences is hypothesised to positively affect impulse buying. When streamers successfully communicate the value and benefits of a product, they can influence viewers' beliefs and attitudes, making them more inclined to make decisions and behavioural responses (Yin et al., 2022; Wang et al., 2022). So this intellectual

aspect could be particularly persuasive when viewers are presented with compelling reasons or narratives that justify the buying behaviour and then impact followers' decision making.

All in all, Dynamic brand experience refers to the real-time, interactive, and emotionally charged encounters consumers have with brands during live streaming

(Wiedmann et al., 2018; Kumar & Kaushik, 2020; Yu et al., 2021; Zha et al., 2022; Li et al., 2023; Park, Hong & Park, 2023; Wang et al., 2023). Unlike traditional static brand experiences, live streaming allows brands to engage followers through visual, auditory, and conversational cues — creating a more immersive and memorable brand interaction (Iglesias, Markovic & Rialp, 2019; Khan et al., 2020; Kumar & Kaushik, 2020; Tran & Chang, 2022). Prior studies suggest that such experiences not only enhance brand recall and emotional connection but also influence engagement and unplanned buying behaviour (Iglesias, Markovic & Rialp, 2019; Khan et al., 2020; Kumar & Kaushik, 2020; Tran & Chang, 2022). However, most existing research has focused on outcome variables without fully exploring how dynamic brand experience functions as a bridge between streamer attributes and follower engagement and impulse buying behaviour. There remains a gap in understanding its mediating role in shaping follower engagement and impulse buying.

2.3.4.5 Research Gap 5: Dynamic Brand Experiences, Engagement and Impulse Buying

Furthermore, recent systematic review highlights that brand experiences in live streaming significantly influence followers' engagement and buying behaviour, particularly through real-time interactions, sensory stimulation, emotional resonance,

and cognitive engagement (Khoi, Le & Nguyen Dong, 2023; Wei & Xi, 2023; Li, Xuan & Chen, 2024; Sarker & Dwivedi, 2024). Also existing studies emphasise how interactions between streamers and followers—such as live product demonstrations, personalised content, and immediate more audience participant and enhance impulsive purchase decisions (Gu, Cheng & Shen, 2023; Khoi, Le & Nguyen Dong, 2023; Wei & Xi, 2023).

However, although the existing literature acknowledges the importance of these experiential components, a theoretical gap persists regarding the specific mechanisms through which dynamic brand experiences trigger follower engagement and impulse buying during live streams. While previous studies have identified the roles such as emotional, affective and intellectual experiences in shaping consumer attitudes, most have treated these factors as isolated dimensions rather than examining how they interact dynamically in real time to drive engagement and impulse buying (Khoi, Le & Nguyen Dong, 2023; Wei & Xi, 2023; Li, Xuan & Chen, 2024). Consequently, it remains unclear how the affective and intellectual responses cultivated within live streams translate into measurable follower engagement and impulse buying behaviour.

Furthermore, there remains limited exploration of how different elements of dynamic brand experience stimuli affect follower engagement and impulse buying. Also, previous research has suggested that the indirect relationship between streamers' attributes, sense of presence and streamer follower congruence with follower engagement and impulse buying has been ignored (Zheng, Li & Na, 2022; Gu, Cheng & Shen, 2023; Khoi, Le & Nguyen Dong, 2023; Wei & Xi, 2023; Li, Xuan & Chen, 2024). This research gap presents an opportunity for further theoretical advancement,

especially regarding how these dynamic brand experience elements for such as sensory, affective, intellectual, and behaviour, interplay with streamer attributes and brand streamer follower congruence, as well as sense of presence to directly and indirectly influence follower engagement and impulse buying in live streaming contexts.

2.4 Followers Engagement

In the live streaming area, dynamic brand experiences are important in cultivating follower engagement. Existing systematic review shows that the richness of these experiences could boost the level of interaction and involvement of followers during live streams (Yadav et al., 2026). Most of the research is supported by engagement theory, which posits that engaging digital environments encourages active participation (Fredricks, Blumenfeld, & Paris, 2004).

Sense of presence, brand follower streamer congruence and dynamic brand experiences are theorised to positively influence followers' engagement. The multidimensional nature of these experiences, encompassing affective, sensory, behavioural, and Intellectual elements, provides an immersive platform where followers are not just passive viewers but active participants. The stimulus provided by the dynamic brand experience in live streaming is anticipated to enhance the engagement levels of followers, prompting deeper interaction with the content, the streamer, and the brand.

First, the sense of presence could positively influence follower engagement. The more interaction in the live streaming takes place can captivate followers, making the

experience more immersive and engaging (Hou et al., 2019; Gu, Cheng & Shen, 2023; Ma, 2024). A well-crafted social streaming environment that encourages viewers to stay longer and interact more with the stream (Paraman et al., 2022; Liu et al., 2023).

Second, Brand, Streamer and Follower Congruence refer to the harmony and alignment between the values, interests, and expectations of the three entities. This alignment is crucial in ensuring a cohesive and authentic experience that resonates well with the audience, strengthens brand loyalty, and willingness to engage (Ma, 2021; Tian & Li, 2023; Yeh, 2023; Picot-Coupey et al., 2023; Shao, 2023)..

Third, dynamic brand experiences are theorised to positively influence follower engagement. The usability, interactivity, and aesthetic appeal of the streaming platform play a significant role in shaping the user experience (Yu & Zheng, 2021; Xu, Kapitan & Phillips, 2023). A well-designed interface that facilitates easy interaction and provides a pleasant viewing experience can enhance followers' willingness to engage with the stream (Xiao et al., 2022; Lu, Li & Ge, 2023; Huang et al., 2024).

All in all, the live streaming environment works synergistically to elevate the level of follower engagement. This collective impact is crucial for brands, streamers and followers seeking to harness the power of live streaming to build strong relationships. By fostering a digital environment that is relationally rich, immersive, emotionally resonant, and well-designed, streamers and brands could significantly boost engagement levels, turning viewers into active participants and buyers.

2.5 Impulse Buying

Impulse buying, in digital commerce settings as unplanned, spontaneous purchases often driven by emotional arousal and reduced cognitive control (Yan et al., 2022; Miin et al., 2023; Qu et al., 2023; Luo et al., 2024). The literature provides various definitions, generally converging on the concept that impulse buying is characterised by an abrupt, emotion-driven decision to buy, typically occurring with little or no premeditation (Yan et al., 2022; Miin et al., 2023; Qu et al., 2023; Luo et al., 2024). It is an immediate response to a stimulus, often leading to a sense of gratification or fulfilment of an emotional need (Li, Chen & Zhu, 2024).

In live streaming contexts, impulse buying is facilitated by the sense of presence, such as real-time interaction between streamers and followers. The immediate and interactive environment, combined with the persuasive influence of streamers, could create a potent trigger for impulsive purchases (Gao et al., 2021; Yan et al., 2022; Luo et al., 2024). The measurement of impulse buying in this setting may include tracking the number of purchases made during or immediately after a live streaming, as well as analysing chat logs for indications of spontaneous buying language or sentiment (Li et al., 2022; Lyu, Qi & Liu, 2022; Du & Huang, 2023; Li, Dou & Yu, 2023). As the digital landscape evolves, the ways in which impulse buying is both defined and measured continue to be refined, accommodating new forms of consumer behaviour and the various platforms on which they occur.

The brand follower and streamer congruence also positively influences impulse buying. When followers feel a sense of connection with the streamer brand, the trust and rapport built through these relationships can lower the psychological barriers that

typically inhibit impulse buying (Shi, Li & Hu, 2023). This interpersonal connection and congruence serve as a powerful motivator for viewers to make on-the-spot purchases, often driven by the desire to emulate or please the streamer they admire (Wongkitrungrueng & Assarut, 2020; Cheung et al., 2022).

The dynamic brand experience is also hypothesised to positively influence impulse buying. Some empirical evidence shows that highly emotionally charged environments — especially those involving perceived social proof- trigger impulse purchases (Zhang, Cheng & Huang, 2023; Li, Chen & Zhu, 2024). Emotions elicited during a live streaming, such as excitement or trustful, could lower cognitive resistance and encourage viewers to make immediate purchases (Pham et al., 2023; Sun & Bao, 2023; Ye & Ching, 2023). The emotional engagement that streamers foster can thus be a potent driver of impulse buying, as viewers seek to sustain the positive feelings associated with the live streaming experience (Chen et al., 2021; Lee & Chen, 2021).

2.6 Gender

In this study, gender refers to the gender of followers. In previous live streaming studies, there are many factors that could affect the relationship between participants, and gender is one of them. Previous research found that gender could strengthen or weaken the effects of the relationship between dynamic brand experience and follower engagement in different ways. Gender differences in values, interests, and purchasing behaviours could influence how individuals respond to brand experiences. In addition, Gender differences in processing information and engaging with content have been observed in consumer research, suggesting that male and female viewers might respond differently to the same brand stimuli (Li et

al., 2023; Rasool, UI Islam & Shah, 2023; Zhai & Chen, 2023). For instance, the social and relational aspects of live streaming may resonate more with one gender, affecting their level of engagement.

Some research shows that gender might moderate the link between brand experience and impulse buying (Yu et al., 2021; Khoi, Le & Nguyen Dong, 2023; Luo et al., 2023). The brand experience needs to be particularly immersive and engaging to justify the price and encourage impulse purchases (Sang et al., 2023). Gender considerations could also dictate the approach, tone, and content of the brand experience to better connect with the target demographic, thereby influencing the level of Impulse Buying (Liu et al., 2022; Kong, Zhan & Zhu, 2023).

In addition, the literature suggests that impulse buying tendencies could be influenced by gender-based preferences and socialisation, which could mean that dynamic brand experiences might lead to different impulse buying patterns among male and female viewers (Yin et al., 2022; Park, Hong & Park, 2023; Rathore et al., 2024). Understanding these differences could help streamers and brands tailor their content and interaction styles to resonate more deeply with different segments of their followers (Liu et al., 2022; Kong, Zhan & Zhu, 2023).

2.7 Product Type

Prior research also found that the relationship between dynamic brand experiences and followers' engagement in live streaming is moderated by the type of product being featured (Liu & Yu, 2022; Li, Tang & Feng, 2023; Peng, Ren & Guo, 2023). For instance, the type of product being promoted (e.g., utilitarian vs. hedonic) could also

moderate the impact of dynamic brand experiences (Luo et al., 2024). Hedonic products, which are often associated with pleasure and subjective experiences, a strong dynamic brand experience might be more influential in driving engagement and impulse purchases. In contrast, for utilitarian products, practicality and usefulness might be the primary drivers, with the brand experience playing a supporting role. Therefore, this study used product type as a moderator to analyse the moderating effect of dynamic brand experience on follower engagement and impulse buying.

Also, in the relationship between dynamic brand experience and impulse purchase. The impulse to purchase spontaneously in a live streaming context could also be moderated by gender and product type (Kala Kamdjoug, 2023; Khoi, Le & Nguyen Dong, 2023). Some products might require a high level of trust and emotional connection, typically achieved through a compelling brand experience, to prompt an impulse buy (Wang et al., 2022; Khoi, Le & Nguyen Dong, 2023; Park, Hong & Park, 2023; Wang et al., 2022). Meanwhile, for more affordable items, the threshold for engagement and purchase might be lower. Product type further complicates this relationship, as different groups might have varying responses to the same brand experience based on their preferences, needs, and purchasing habits (Khoi, Le & Nguyen Dong, 2023; Wei & Xi, 2023).

All in all, understanding the role of moderators like gender and product type is crucial in live streaming commerce (Todd & Melancon, 2017; Khoi, Le & Nguyen Dong, 2023). These factors help explain the conditions under which dynamic brand experiences are most effective in driving follower engagement and impulse purchases. By tailoring strategies to account for these moderators, marketers could optimise their live

streaming commerce to resonate more deeply with their followers and achieve better outcomes. In addition, a summary of key construct brief definition and key references is provided in Appendix 7, which offers an overview of the empirical foundations supporting all the constructs.

2.8 Conceptual Model

Figure 3 presents a conceptual mapping of the relationships among brands, streamers, and followers in live streaming commerce. It is informed by existing literature yet also reflects the researcher's analytical interpretation of how key psychological mechanisms, including sense of presence, brand–streamer–follower congruence, and dynamic brand experience, interact within this triadic environment. The model integrates insights from prior studies with the researcher's conceptual judgement to illustrate the broader structure of influences that frame the development of the proposed conceptual model.

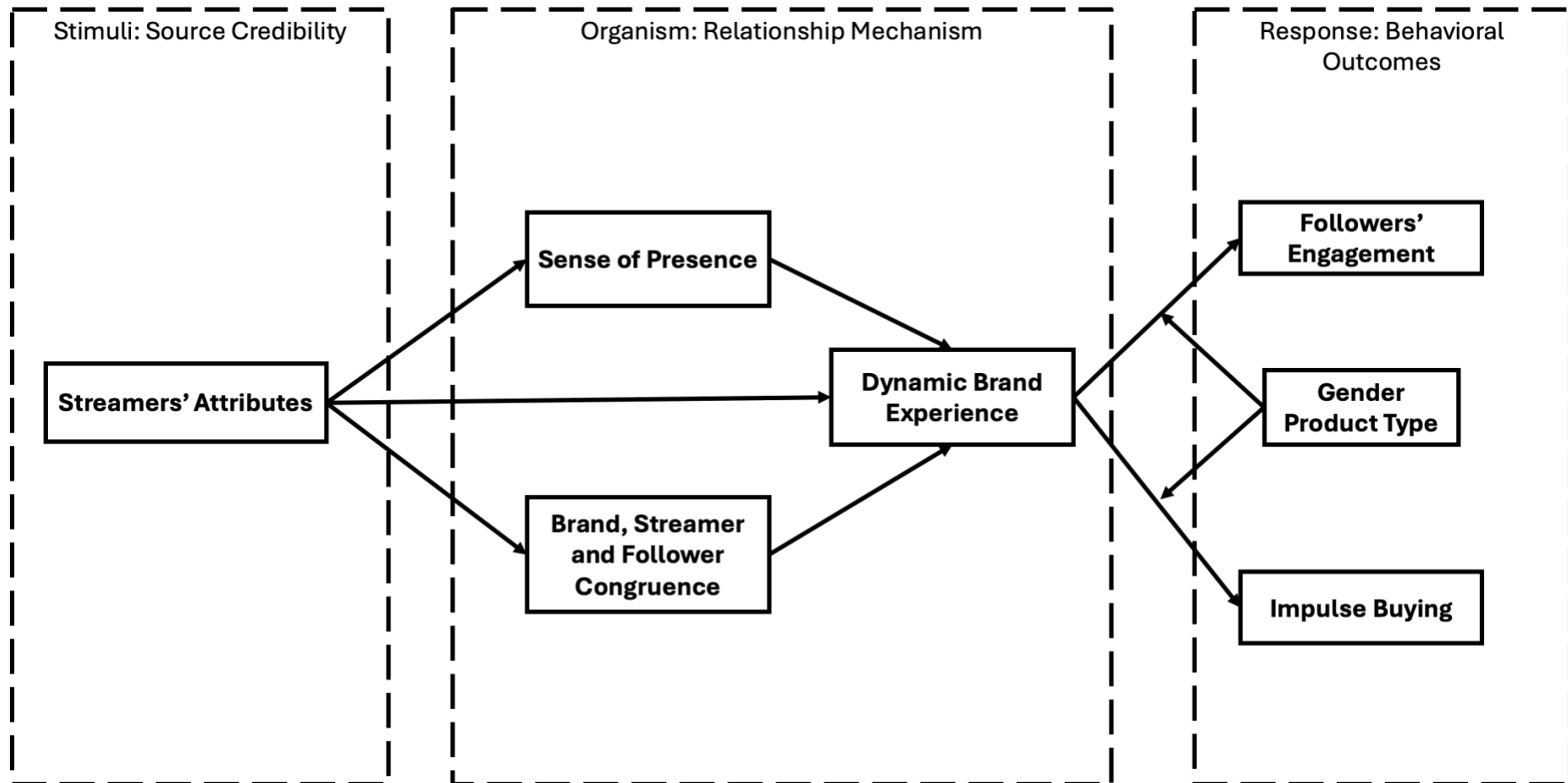


Figure 3: Conceptual Summary of Brand–Streamer–Follower Relationships in Live Streaming Commerce

In the intricate landscape of live streaming commerce, some literature has consistently underscored the important role played by streamers in shaping follower engagement and impulse buying behaviour (Zuo & Xiao, 2021; Fu & Hsu, 2023; Zhang, Cheng & Huang, 2023; Luo et al., 2024). The emergent research draws attention to the multi-layered nature of this influence, dissecting the components that make up the streamers' attributes (Yan et al., 2022; He, Li & Xue, 2022; Shao, 2023; Liu et al., 2023; Zhou & Huang, 2023; Li, Chen & Zhu, 2024) and the ensuing dynamic brand experience (Wang et al., 2022; Khoi, Le & Nguyen Dong, 2023; Sarker & Dwivedi, 2024). Through a synthesis of the literature, it has become evident that attributes such as credibility, authenticity, and relatability are not just peripheral qualities but central pillars in the architecture of consumer engagement within live streaming platforms (Zuo & Xiao, 2021; Fu & Hsu, 2023; Zhang, Cheng & Huang, 2023; Luo et al., 2024).

In addition, the construct of streamers' attributes has been widely examined, with scholars delineating its profound impact on consumer trust and the propensity for impulse buying. For example, trust is engendered through the streamer's perceived expertise and honesty, fostering a secure environment that emboldens consumers to make spontaneous purchases (Yan et al., 2022; Liu et al., 2023; Miin et al., 2023; Sun & Bao, 2023; Luo et al., 2024; Li, Chen & Zhu, 2024). Also, Authenticity, another example of the streamer attribute, has been explored extensively, revealing its unique position in enhancing consumer engagement (Deng, Lin & Jiang, 2023; Fu & Hsu, 2023; Shao, 2023; Zhang, Cheng & Huang, 2023; Li, Chen & Zhu, 2024). Authentic streamers—those who share genuine content, express sincere emotions, and reveal personal experiences—create an environment where followers can form parasocial relationships. These relationships, characterised by a one-sided emotional bond

between the streamer and the follower, have been shown to significantly affect impulse buying decisions (Lo et al., 2022; Li, Dou & Yu, 2023; Liu et al., 2023; Ma, Aw & Filieri, 2023; Sun & Bao, 2023).

In the realm of live streaming, the sense of presence and the feeling of immediacy contribute substantially to the dynamic brand experience (Ming et al., 2021; Chin et al., 2023; Khoi, Le & Nguyen Dong, 2023; Pham et al., 2023). Some literature has identified the importance of visually appealing content, high-quality audio, and narrative engagement in captivating the audience's senses and emotions (Liu, Lei & Law, 2022; Pham et al., 2023).

Dynamic brand experience also plays an important role in the research. For example, the cognitive aspect of the dynamic brand experience has also been scrutinised. Followers engage in a cognitive process where they assimilate and process information presented by streamers (Chen, Chen & Keng, 2020; Wang et al., 2022; Gu, Cheng & Shen, 2023; Li et al., 2023). This process influences their attitudes towards the brand and their understanding of the product, ultimately affecting their impulse buying behaviour (Xu, Huang & Shang, 2021; Dhaigude & Mohan, 2022; Liu et al., 2023; Khoi, Le & Nguyen Dong, 2023; Khoi & Le, 2023). Streamers who could effectively communicate the brand's values and articulate the benefits of a product contribute to an informed follower base that is more likely to engage in impulse buying (Fletcher & Gbadamosi, 2022; Liu et al., 2023; Salem & Alanadoly, 2023; Sarker & Dwivedi, 2024). Overall, this conceptual model integrates streamer attributes, sense of presence, congruence, and dynamic brand experience to explain how these

interconnected factors collectively shape follower engagement and impulse buying behaviour within live streaming commerce.

2.9 Summary

This chapter critically reviewed existing literature on live streaming commerce, focusing on how streamers' attributes—such as credibility, attractiveness, and expertise—influence dynamic brand experience, follower engagement, and impulse buying. It also examined the psychological and contextual mechanisms, including the sense of presence and brand–streamer–follower congruence, that shape consumer responses in live streaming commerce.

The review identified that while existing research recognises the impact of streamer attributes on consumer trust and engagement (Guo, Zhang & Wang, 2022; Law et al., 2023; Yun et al., 2023; Zheng et al., 2023), and streamers who are perceived as genuine and trustworthy can induce stronger impulse buying behaviours (Xu, Huang & Shang, 2021; Dhaigude & Mohan, 2022; Liu et al., 2023; Khoi, Le & Nguyen Dong, 2023; Khoi & Le, 2023). Only a few studies have systematically explored how these effects occur through interactive and experiential mechanisms such as sense of presence and congruence. This gap in understanding led to the development of a conceptual model that integrates Source Credibility Theory, Congruence Theory, Flow Theory, Engagement theory and the Stimulus–Organism–Response (S-O-R) framework to explain engagement and impulse buying behaviour in live streaming contexts.

Specifically, there are our major research gaps were addressed through the hypotheses formulated in this chapter: Gap 1: The insufficient exploration of how different theories integrate in the live streaming commerce environment to understand engagement, impulse buying behaviour, psychological and contextual mechanisms. Gap 2: The limited understanding of how streamer attributes influence the sense of presence and congruence. Gap 3: The lack of research on the sense of presence as a mediator to test how telepresence enhances dynamic brand experience and follower engagement and impulse buying behaviour. Gap 4: The lack of research on congruence to test how alignment between these elements enhances dynamic brand experience and follower engagement and impulse buying behaviour. Gap 5: The insufficient exploration of dynamic brand experience as a psychological mechanism assessing its effects on follower engagement and impulse buying.

By synthesising these findings, this chapter advanced theoretical understanding by positioning live streaming commerce as a dynamic and interactive marketing environment, where streamer credibility, sense of presence, and congruence collectively drive engagement and purchasing behaviours. Overall, the chapter provided a coherent theoretical rationale for the research gaps and model, establishing a solid foundation for the hypotheses development presented in the next chapter.

Chapter 3: Hypotheses Development

Building upon the theoretical foundations and research gaps identified in the previous chapter, this chapter develops the hypotheses that underpin the conceptual framework of the study. While Chapter 2 critically reviewed existing literature to establish the key constructs—streamers' attributes, sense of presence, brand–streamer–follower congruence, dynamic brand experience, follower engagement, and impulse buying—this chapter focuses on articulating the theoretical relationships between these constructs. The objective is to move beyond description and to explain how and why these constructs interact within the context of live streaming commerce.

Drawing on the Stimulus–Organism–Response (SOR) framework, the Source Credibility Theory, and the Congruence Theory, Flow Theory and Customer Engagement theory, this chapter conceptualises streamers' attributes as external stimuli that shape consumers' internal psychological states, represented by sense of presence, congruence, and dynamic brand experiences. These internal states, in turn, influence follower engagement and impulse buying behaviour. The integration of these theories enables a multidimensional understanding of follower engagement and impulse buying behaviour in live streaming environments, where interaction, authenticity, and experiential immersion converge to drive engagement and purchase decisions.

In doing so, this chapter establishes the logical and theoretical foundations for each hypothesised relationship in the model. The following sections systematically present and justify the proposed hypotheses, linking each relationship to relevant theoretical

perspectives and empirical findings to demonstrate how this research advances existing knowledge in digital marketing and live streaming commerce.

2.10 Streamers' Attributes and Dynamic Brand Experience

2.10.1 Streamers' attributes and Dynamic Brand Experiences

In live streaming commerce, streamers' attributes play a central role in shaping followers' perceptions and experiences with brands. Streamers act as human interfaces for brands, and their credibility, authenticity and expertise directly influence how followers interpret and internalise brand-related cues. According to the Source Credibility Model (Hovland et al., 1953; Ohanian, 1990), credible communicators enhance message acceptance by strengthening consumers' cognitive and affective responses. Similarly, authentic and approachable streamers foster emotional closeness and trust, which enhances followers' receptivity to brand information delivered in real time. These mechanisms feed into the broader experience of the brand during live streams.

Within the SOR framework, streamers' attributes function as stimuli that elicit followers' internal processing—shaping sensory, affective, behavioural, and intellectual brand experiences (Mehrabian & Russell, 1974; Wang et al., 2022). When followers perceive a streamer as trustworthy, knowledgeable, and authentic, they process brand information more deeply, experience stronger emotional resonance, and perceive the brand encounter as more engaging and immersive. This alignment between streamer qualities and followers' experiential responses reinforces the dynamic brand experience, which is multimodal and evolves across the live session through visual

demonstrations, narrative storytelling, and interactive exchanges. Given this theoretical foundation, the following hypothesis is proposed.

H1: Streamers' attributes positively influence followers' dynamic brand experience.

2.10.2 Streamers' Attributes and Sense of Presence

In live streaming commerce, streamers' attributes play an important role in shaping followers' psychological experiences, particularly their sense of presence. Sense of presence refers to the extent to which followers feel psychologically immersed and connected to the streamer and the live environment, as if they were physically co-located in the same space (Steuer, 1992; Sun et al., 2019). According to the Stimulus–Organism–Response (SOR) framework, external stimuli such as streamers' appearance, expertise, and credibility act as environmental cues that impact emotional and cognitive responses from consumers, fostering perceptions of immediacy and co-presence (Mehrabian & Russell, 1974; Xue et al., 2020).

Streamers who demonstrate credibility, expertise, and interactive responsiveness enhance followers' sense of being “present” within the live streaming (Liu et al., 2023; Ming et al., 2021). For instance, a streamer who displays expertise through clear product demonstrations or authentic enthusiasm can evoke a stronger emotional connection, leading followers to perceive the interaction as vivid and real. Similarly, streamers' attractiveness and expressiveness enhance visual and emotional engagement, stimulating telepresence—the psychological state of being absorbed in the mediated environment (He, Li & Xue, 2022; Tian & Frank, 2024).

In this context, streamers' attributes function as powerful perceptual stimuli that trigger psychological immersion and co-experiential engagement. Thus, it is hypothesised that:

H2: Streamers' attributes have a positive effect on the sense of presence.

2.10.3 Sense of Presence and Dynamic Brand Experience

Sense of presence serves as a fundamental psychological mechanism that enhances followers' dynamic brand experiences in live streaming commerce. Defined as the subjective feeling of "being there" in a mediated environment, sense of presence consists of social presence—the perception of mutual awareness and real-time interpersonal connection—and telepresence—the immersive sensation of experiencing a mediated environment as real (Ming et al., 2021; Ma, Zou & Lv, 2022; Shi, Li & Hu, 2023; Tian & Frank, 2024). These dimensions collectively enable followers to engage both emotionally and cognitively with the live streaming, transforming an impressive viewing experience into an interactive and experiential encounter.

In the context of live streaming commerce, a heightened sense of presence allows followers to feel psychologically closer to both the streamer and the brand. When streamers actively interact with followers—through personalised responses, eye contact, and emotional expressiveness—the viewers experience stronger feelings of co-presence and immersion. This, in turn, enhances the dynamic brand experience, as followers process the brand through multisensory, affective, and intellectual

engagement rather than purely functional evaluation (Liao et al., 2022; Yu et al., 2021; Wang et al., 2022).

From a theoretical perspective, this relationship aligns with Flow Theory, which proposes that immersion and attentional absorption in engaging environments foster enhanced experiential states (Csikszentmihalyi, 1990; Huo et al., 2023). Within the SOR framework, sense of presence functions as an organism-level psychological state. It represents followers' internal feelings of immersion, co-presence, and perceptual realism during live streams. These internal experiential reactions deepen emotional involvement and cognitive participation, thereby strengthening followers' dynamic brand experience. When followers feel socially connected to the streamer or perceptually immersed in the live environment, they are more likely to interpret brand-related information positively and experience richer sensory, affective, and intellectual brand responses. Accordingly, it is hypothesised that:

H3: Sense of presence positively influences followers' dynamic brand experience.

2.10.4 Mediating Role of Sense of Presence

The relationship between streamers' attributes and followers' dynamic brand experiences operates significantly through the mediating role of sense of presence. Within the Stimulus–Organism–Response (SOR) framework, streamers' attributes function as external stimuli (S) that trigger internal psychological mechanisms (O), such as a heightened sense of presence, which subsequently shape deeper experiential states like dynamic brand experience (Mehrabian & Russell, 1974; Sun et al., 2019).

A strong sense of presence—comprising both social presence (the feeling of mutual awareness and interpersonal interaction) and telepresence (the sensation of immersion in a mediated environment)—enables followers to feel connected, engaged, and emotionally involved during live streaming sessions (Ming et al., 2021; Ma, Zou & Lv, 2022; Tian & Frank, 2024). Streamers who demonstrate credibility, expertise, and interactive communication cultivate an environment where followers perceive the live experience as vivid, personal, and authentic. This immersive connection enhances followers' affective and sensory processing of the brand, reinforcing their overall dynamic brand experience.

From a theoretical standpoint, this mediation aligns with Flow Theory, which posits that immersive and interactive environments foster experiential absorption and emotional resonance (Csikszentmihalyi, 1990; Shi, Li & Hu, 2023). Streamers' attributes therefore act as booster that impacts presence driven immersion an organismic process that strengthens followers' dynamic brand experiences through heightened emotional and sensory engagement. Accordingly, the following hypothesis is proposed:

H4: Sense of presence mediates the relationship between streamers' attributes and followers' dynamic brand experience.

2.11 The Role of Brand–Streamer–Follower Congruence on the relationship between Streamers' Attributes and DBE

2.11.1 *Streamers' Attributes and Congruence*

In live streaming commerce, streamers' attributes play a central role in shaping the perceived alignment among the streamer, the brand, and their followers. In detail, congruence refers to the degree of compatibility or consistency between the personalities, values, and images of these three entities (Osgood & Tannenbaum, 1955; Sirgy, 1982). Drawing on Congruence Theory, individuals are more likely to develop favourable attitudes and behaviours when they perceive harmony between their own identity and the characteristics of the source or brand they engage with (Aaker, 1999; Rollin, 2022).

Streamers' attributes—such as credibility, expertise, and attractiveness—act as critical cues that influence this perception of fit. When streamers embody qualities that resonate with a brand's image and the values of their audience, followers are more likely to perceive congruence in the triadic relationship of brand–streamer–follower (Deng, Chen & Wu, 2024; Zhang & Hu, 2024). For example, an authentic and knowledgeable streamer who promotes eco-friendly beauty products may reinforce the perceived alignment between sustainable brand values and followers who share similar lifestyle preferences. In contrast, a mismatch between streamer persona and brand identity can create dissonance, weakening consumer identification and engagement (Venciute et al., 2023; Opić & Pandža Bajs, 2024).

From the Stimulus–Organism–Response (SOR) perspective, streamers' attributes serve as external stimuli that trigger cognitive and emotional evaluations of consistency, leading to stronger perceptions of identity fit among the brand, streamer, and audience (Liang & Yoon, 2022; Ceylan & Hayran, 2025). This alignment not only

strengthens relational bonds but also enhances the authenticity and persuasiveness of marketing messages in live streaming environments. Accordingly, it is hypothesised that:

H5: Streamers' attributes positively influence brand–streamer–follower congruence.

2.11.2 Congruence and Dynamic Brand Experience

Congruence plays an important role in shaping followers' dynamic brand experiences by fostering psychological alignment among the streamer, the brand, and the followers. Rooted in Congruence Theory (Osgood & Tannenbaum, 1955; Sirgy, 1982), this construct refers to the perceived consistency between the identities, values, and personalities of these three entities. When followers perceive a strong alignment—believing that the streamer authentically embodies the brand's image and that both reflect their own self-concept—they experience emotional harmony and cognitive fluency, which enhance the depth and positivity of their brand experience (Abosag et al., 2020; Venciute et al., 2023; Deng, Chen & Wu, 2024).

In live streaming commerce, congruence operates as a powerful psychological mechanism that reinforces authenticity and coherence in the brand narrative. When the streamer's communication style, tone, and persona align with the brand's positioning and the audience's expectations, followers are more likely to internalise brand values and form stronger emotional bonds. This alignment transforms brand exposure into a dynamic brand experience—one that is affectively engaging,

cognitively stimulating, and experientially immersive (Liang & Yoon, 2022; Ji, Liu & Chen, 2023; Zhang & Hu, 2024).

From a theoretical standpoint, this relationship aligns with the Stimulus–Organism–Response (SOR) model, in which streamer–brand–follower congruence operates as an organism-level mechanism. Congruence reflects followers’ internal cognitive and affective evaluations of “fit” between themselves, the streamer, and the brand. When followers perceive a high degree of alignment, this internal appraisal enhances emotional resonance, reduces psychological distance, and facilitates a more coherent processing of brand meaning. As an organism construct, congruence shapes the way followers interpret and internalise the stimuli presented by the streamer, thereby strengthening their overall dynamic brand experience, which is also an organism-level outcome. Accordingly, it is hypothesised that:

H6: Brand–streamer–follower congruence positively influences followers’ dynamic brand experience.

2.11.3 Mediating Role of Brand–streamer–follower Congruence

In live streaming commerce, congruence operates as a critical psychological mechanism that mediates the relationship between streamers’ attributes and followers’ dynamic brand experiences. Drawing on Congruence Theory (Osgood & Tannenbaum, 1955; Sirgy, 1982), congruence refers to the perceived alignment among the identities, values, and personalities of the streamer, the brand, and the followers. When followers

perceive this alignment, they experience psychological harmony and authenticity, which enhances their emotional attachment and deepens their experiential connection with the brand (Venciute et al., 2023; Deng, Chen & Wu, 2024).

Streamers' attributes—such as expertise, credibility, and attractiveness—serve as a foundation that fosters this congruence. When streamers authentically represent the brand's values and communicate in ways that resonate with followers' self concepts and lifestyles, the perceived fit among these three entities is strengthened. This sense of fit creates a more coherent and meaningful experience, prompting followers to strengthen the brand's identity and form stronger emotional bonds with both the streamer and the brand (Ji, Liu & Chen, 2023; Liang & Yoon, 2022; Zhang & Hu, 2024).

From the Stimulus–Organism–Response (SOR) perspective, streamers' attributes act as external stimuli (S) that evoke cognitive and affective evaluations of fit (O), which in turn enhance followers' dynamic brand experiences. This mediating process explains why congruence facilitates more immersive and emotionally engaging experiences, as followers feel that their values and identities are reflected in both the streamer and the brand. Accordingly, the following hypothesis is proposed:

H7: Brand–streamer–follower congruence mediates the relationship between streamers' attributes and followers' dynamic brand experience.

2.12 Dynamic Brand Experience and Behavioural Outcomes

2.12.1 *Dynamic Brand Experiences and followers' engagement*

Dynamic brand experience represents a multidimensional construct that captures followers' sensory, affective, intellectual, and behavioural engagement with a brand during live streaming. It reflects how consumers internalise brand-related stimuli presented by streamers and translate them into meaningful experiential responses (Brakus, Schmitt & Zarantonello, 2009; Wang et al., 2022; Khoi, Le & Nguyen Dong, 2023). Within the Stimulus–Organism–Response (SOR) framework, dynamic brand experience serves as the organismic state through which external stimuli—such as streamers' attributes are psychologically processed before influencing behavioural responses like engagement and impulse buying.

When followers experience a strong dynamic brand experience, they are more likely to feel emotionally connected to the brand and cognitively invested in the live streaming process. This immersive state encourages followers to interact more actively—by commenting, liking, or sharing and to develop long-term identification with the brand community (Brodie et al., 2011; Yu et al., 2021; Valmohammadi et al., 2024). A compelling brand experience transforms the viewing process from passive observation to active participation, fostering engagement as a reciprocal exchange between the follower, the streamer, and the brand. Accordingly, the following hypothesis is proposed:

H8: Dynamic brand experience positively influences followers' engagement.

2.12.2 *Dynamic Brand Experiences and Impulse Buying*

In live streaming commerce, dynamic brand experience serves as a key psychological driver of impulse buying behaviour, transforming spontaneous emotions and immersive experiences into unplanned purchase actions. When followers perceive a vivid, emotionally engaging, and cognitively stimulating brand experience, they are more likely to experience heightened excitement and reduced cognitive control—conditions that make impulsive purchases more probable (Xu, Huang & Shang, 2021; Dhaigude & Mohan, 2022; Khoi, Le & Nguyen Dong, 2023).

Dynamic brand experience operates across multiple dimensions—behavioural sensory, affective, and intellectual, creating a state of psychological involvement that bridges entertainment and consumption. Sensory stimulation through high-quality visuals and sound, emotional resonance elicited by relatable streamer narratives, and cognitive engagement through real-time product demonstrations together foster a sense of immediacy and enjoyment. This immersive experience diminishes rational evaluation and triggers an effective response that drives immediate buying behaviour (Liu et al., 2023; Sarker & Dwivedi, 2024).

From a Stimulus–Organism–Response (SOR) perspective, streamers' attributes and live interactions act as external stimuli (S) that activate followers' dynamic brand experiences (O), which in turn evoke spontaneous purchase responses (R). This pathway reflects how interactive and immersive digital environments can amplify the emotional and cognitive mechanisms underlying impulsive consumption. Accordingly, the following hypothesis is proposed:

H9: Dynamic brand experience positively influences followers' impulse buying.

2.13 Mediating Roles of Dynamic Brand Experience

2.13.1 DBE as a Mediator between Streamers' Attributes and Follower Engagement

Within the Stimulus–Organism–Response (SOR) framework, dynamic brand experience represents the internal psychological state (organism) through which external stimuli—such as streamers' attributes of credibility, expertise, and attractiveness—are transformed into follower engagement (response). Streamers who effectively communicate trust, expertise, and relatability stimulate emotional and cognitive reactions that enhance followers' perception of the brand's value and interactivity, thereby strengthening their engagement with both the streamer and the brand (Brakus, Schmitt & Zarantonello, 2009; Yu et al., 2021; Wang et al., 2022).

This mediating role suggests that followers are not just responding to the streamer's traits directly, but rather to the experiential meaning that these attributes create. When followers experience vivid, affective, and intellectually engaging brand interactions, they feel more connected, valued, and participatory within the live streaming environment. This heightened brand experience transforms passive viewers into active participants, encouraging continuous engagement through commenting, sharing, and emotional investment (Brodie et al., 2011; Valmohammadi et al., 2024).

From a theoretical perspective, this mediation mechanism demonstrates how streamers' attributes serve as triggers of experiential states that foster interactive engagement. It underscores the importance of understanding engagement as a

response driven by emotional immersion and cognitive involvement rather than just exposure to persuasive cues. Accordingly, the following hypothesis is proposed:

H10: Dynamic brand experience mediates the relationship between streamers' attributes and followers' engagement.

2.13.2 DBE as a Mediator between Streamers' Attributes and Impulse Buying

In the context of live streaming commerce, dynamic brand experience serves as a crucial psychological bridge linking streamers' attributes—such as credibility, expertise and attractiveness to followers' impulse buying behaviour. Within the Stimulus–Organism–Response (SOR) framework, streamer attributes function as external stimuli (S) that evoke internal experiential states (O), represented by dynamic brand experience, which in turn lead to immediate purchase actions (R) (Mehrabian & Russell, 1974; Brakus, Schmitt & Zarantonello, 2009).

Streamers who effectively display credibility, product expertise, and engaging communication styles create immersive and emotional experiences that heighten sensory and affective arousal. This dynamic brand experience reduces cognitive resistance and promotes spontaneous decision-making (Xu, Huang & Shang, 2021; Khoi, Le & Nguyen Dong, 2023). The sensory richness of visuals, the immediacy of feedback, and the emotional appeal of the streamer's interaction combine to create a compelling psychological environment where followers feel both entertained and persuaded to act on impulse (Liu et al., 2023; Sarker & Dwivedi, 2024).

This mediation highlights that followers' impulse purchases are not directly triggered by the streamer's traits alone, but by the experiential and emotional states that those traits evoke. Dynamic brand experience thus acts as the mechanistic link that translates perceived credibility and expertise into purchase behaviour by fostering heightened emotional involvement, sensory stimulation, and cognitive absorption during the live stream. Accordingly, the following hypothesis is proposed:

H11: Dynamic brand experience mediates the relationship between streamers' attributes and followers' impulse buying.

2.14 Serial Mediation Pathways

2.14.1 Streamers' Attributes to Followers' Engagement through Sense Presence, and DBE

Building on the SOR framework, a sequential mediation pathway is proposed in which streamers' attributes (Stimulus, S) shape followers' sense of presence, which then enhances their dynamic brand experience (Organism, O), ultimately influencing engagement behaviour (Response, R). This perspective recognises that engagement in live streaming is rarely triggered by a single psychological process; instead, it emerges through layered experiential mechanisms activated during real-time interaction.

First, streamers' attributes—such as credibility, authenticity, and expertise—are known to heighten viewers' sense of presence, including both social presence (feeling socially connected) and telepresence (feeling immersed in the mediated environment) (Ming et al., 2021; Ma, Zou & Lv, 2022; Tian & Frank, 2024). These presence-driven

psychological states help followers feel in the moment, intensifying their attentional focus and emotional absorption.

Second, a heightened sense of presence creates the conditions for richer dynamic brand experiences by deepening sensory immersion, increasing emotional resonance, and strengthening cognitive engagement with the brand (Khoi, Le & Nguyen Dong, 2023; Sarker & Dwivedi, 2024). When followers feel both socially connected and perceptually immersed in a live stream, they interpret the brand's message more vividly and develop stronger experiential associations.

Finally, richer dynamic brand experiences translate into greater follower engagement, as followers respond with more likes, comments, participation in discussions, and sustained attention during the live streaming (Gu, Cheng & Shen, 2023; Li et al., 2023). This demonstrates that engagement is not just a behavioural reaction to streamer attributes but is shaped by the experiential states that those attributes evoke.

Taken together, this sequential pathway highlights that followers become more engaged when credible and authentic streamers first evoke a strong sense of presence, which then amplifies the quality of the brand experience. Accordingly, the following hypothesis is proposed:

H12: Streamers' attributes indirectly influence followers' engagement through sense of presence and dynamic brand experience.

2.14.2 *Streamers' Attributes to Impulse Buying through Sense Presence, and DBE*

Within the SOR framework, an indirect pathway is proposed in which streamers' attributes (Stimulus, S) first evoke a heightened sense of presence, which subsequently enhances the dynamic brand experience (Organism, O), ultimately leading to impulse buying behaviour (Response, R). This pathway acknowledges that impulsive purchases in live streaming environments are not random but are shaped by layered psychological processes triggered during real-time interactions.

Streamers' attributes—such as credibility, expertise, and attractiveness serve as powerful stimuli that cultivate a strong sense of presence during live streaming sessions. When viewers perceive streamers as credible and professional, the immersive qualities of the stream are amplified. This produces intensified feelings of social presence (the sense of real-time interpersonal connection) and telepresence (the sensation of being immersed within the mediated environment) (Ming et al., 2021; Tian & Frank, 2024). These presence-driven states reduce psychological distance and heighten emotional involvement, making followers more receptive to persuasive cues.

A strong sense of presence then enhances followers' dynamic brand experience, enriching their sensory, affective, and behavioural engagement with the brand (Khoi, Le & Nguyen Dong, 2023; Sarker & Dwivedi, 2024). When followers feel absorbed in the stream, they process information more fluently, experience greater emotional resonance, and perceive the brand message as more vivid and compelling.

These enriched experiences increase the likelihood of impulse buying behaviour, as viewers respond to heightened sensory stimulation, emotional arousal, and moment-

to-moment engagement. Live streaming environments are particularly conducive to impulsive purchases because presence-driven immersion reduces deliberation time, intensifies affective responses, and increases perceptions of product desirability and urgency (Xu, Huang & Shang, 2021; Liu et al., 2023).

Thus, the indirect mediation pathway reflects how streamers' attributes shape viewers' immediate psychological states (sense of presence), which subsequently elevate their experiential evaluations (dynamic brand experience), leading to spontaneous purchasing decisions. Accordingly, the following hypothesis is proposed:

H13: Streamers' attributes indirectly influence followers' impulse buying through sense of presence and dynamic brand experience.

2.14.3 Streamers' Attributes to Followers' Engagement through Congruence and DBE

Within live streaming commerce, the pathway from streamers' attributes to follower engagement often unfolds through a sequence of psychological mechanisms rather than a direct effect. Following Congruence Theory (Osgood & Tannenbaum, 1955; Sirgy, 1982), when followers perceive that the streamer's persona aligns with both the brand identity and their own self-concept, they experience a sense of motivational and value-based harmony. This congruence deepens followers' emotional resonance with the content and increases their receptiveness to the brand narrative presented during the live stream (Venciute et al., 2023; Liang & Yoon, 2022; Zhang & Hu, 2024).

Once this sense of congruence is established, it strengthens the formation of a dynamic brand experience—a multidimensional construct comprising sensory,

affective, intellectual, and behavioural elements. Dynamic brand experience functions as the experiential bridge that converts psychological alignment into meaningful engagement and impulse buying. Followers who perceive a coherent, authentic, and immersive brand-streamer-follower relationship are more likely to interpret the live stream as personally relevant, engaging, and rewarding, which naturally enhances their willingness to interact, participate, and sustain engagement with the stream.

From the perspective of the SOR framework, streamers' attributes serve as the stimulus (S), congruence represents the cognitive-affective organismic response (O1), and dynamic brand experience reflects a deepened experiential state (O2), together driving the final behavioural response of follower engagement (R). This sequential pathway clarifies why individual streamer attributes alone are insufficient for long-term engagement—followers require both psychological alignment and immersive experiential reinforcement. Accordingly, the following hypothesis is proposed:

H14: Streamers' attributes indirectly affect followers' engagement through brand–streamer–follower congruence and dynamic brand experience.

2.14.4 Streamers' Attributes to Impulse Buying through Congruence and DBE

Impulse buying in live streaming commerce is strongly shaped by the psychological coherence followers perceive between the streamer, the brand, and themselves. According to Congruence Theory (Osgood & Tannenbaum, 1955; Sirgy, 1982), when followers observe that a streamer's credibility fits the brand's identity and simultaneously reflects their own values or aspirations, they are more likely to internalise the streamer's recommendations as trustworthy and self-relevant. This

alignment lowers cognitive resistance and increases the emotional receptivity that often precedes spontaneous purchase decisions (Venciute et al., 2023; Zhang & Hu, 2024).

Once congruence is established, it enhances followers' dynamic brand experience by enriching their affective and sensory engagement with the product being presented. Dynamic brand experience—involving heightened emotional arousal, vivid mental imagery, and intensified cognitive involvement—creates the psychological conditions under which impulse purchasing becomes more likely. Followers who feel both aligned with the streamer and immersed in the brand experience are more susceptible to time-limited promotions, persuasive demonstrations, and emotionally charged product presentations typical of live streaming environments.

Within the SOR framework, streamers' attributes act as the initial stimulus (S), while perceived congruence forms the first organismic response (O1), priming followers to process the live stream's content more favourably. Dynamic brand experience then operates as a second organismic layer (O2), amplifying emotional impulses and reducing deliberative control—ultimately leading to spontaneous purchases (R). This sequential mediation explains why impulse buying is unlikely to be triggered by streamer attributes alone; instead, it emerges from the combined influence of psychological alignment and immersive brand experiences. Accordingly, the following hypothesis is proposed:

H15: Streamers' attributes indirectly influence followers' impulse buying through brand–streamer–follower congruence and dynamic brand experience.

2.15 Moderating Effects (Contextual Factors)

2.15.1 Gender

Although dynamic brand experience plays a central role in shaping followers' behavioural responses, its influence may vary across demographic groups, particularly followers' gender. Prior research suggests that males and females often differ in their emotional processing, risk perception, and responsiveness to digital marketing stimuli (Chen et al., 2021; Liu et al., 2022). Female followers, for example, are generally more sensitive to affective cues and interpersonal warmth, whereas men followers may respond more to informational clarity or performance-focused content.

In the context of live streaming commerce, dynamic brand experience encompasses sensory richness, emotional resonance, and interactive engagement, which may be interpreted differently depending on followers' gender-based preferences or motivations. As a result, the degree to which followers translate immersive brand experiences into active engagement (e.g., participating in chat, liking, sharing, or reacting to promotions) could differ across genders.

From an SOR perspective, followers' gender acts as a contextual variable that shapes how organismic states—such as emotional and cognitive responses generated by dynamic brand experience—are transformed into followers' engagement. Thus, based on the existing literature, female followers are expected to respond more strongly to dynamic brand experiences than male followers, resulting in higher levels of engagement. Accordingly, the following hypothesis is proposed.

H16: Gender moderates the relationship between dynamic brand experience and followers' engagement, with the positive relationship expected to be stronger for female followers than for male followers.

Also, Impulse buying in live streaming environments is strongly influenced by emotional arousal, sensory stimulation, and the immediacy created by dynamic brand experiences. However, existing research indicates that men and women often differ in their susceptibility to these psychological triggers. Women tend to rely more heavily on affective cues and experiential enjoyment when making spontaneous decisions, whereas men may be more influenced by informational cues or perceived utility (Chen et al., 2021; Kong, Zhan & Zhu, 2023).

Given these distinctions, the extent to which a vivid and immersive brand experience translates into impulsive purchase behaviour is likely to vary by gender. In the SOR framework, gender shapes how internal emotional states—generated by dynamic brand experience—are converted into impulse buying. Thus, gender may amplify or weaken the link between immersive brand experiences and the tendency to buy impulsively in live streaming contexts. Accordingly, the following hypothesis is proposed.

H17: Gender moderates the relationship between dynamic brand experience and followers' impulse buying.

2.15.2 *Product type*

Different product categories influence different levels of consumer involvement, emotional responses, and information-processing styles. Hedonic products such as electronics, beauty devices, or luxury goods often require more detailed evaluation, leading followers to engage more actively with the streamer and the brand when the dynamic brand experience is strong. In contrast, utilitarian products—such as household supplies or everyday consumables—may evoke more habitual or convenience-driven responses, resulting in weaker engagement even when the experiential quality is high (Guo, Zhang & Wang, 2022; Lei, Shi & Liu, 2023; Lu, Li & Ge, 2023).

From the SOR perspective, product type acts as a contextual factor that influences how followers interpret and respond to experiential stimuli. A rich and immersive brand experience may significantly enhance engagement for visually rewarding or hedonic products, while having a more limited effect for products with primarily functional benefits. This suggests that the strength of the dynamic brand experience to the follower engagement pathway may upon the nature of the product being promoted. Accordingly, the following hypothesis is proposed.

H18: Product type (hedonic vs. utilitarian) moderates the relationship between dynamic brand experience and followers' engagement.

On the other hand, Impulse buying tendencies differ substantially across product categories. Hedonic or visually appealing products—such as cosmetics, fashion items, or lifestyle accessories—often stimulate spontaneous purchasing because they evoke

emotional gratification and sensory pleasure. When paired with a rich dynamic brand experience, these products can trigger stronger impulsive responses, as followers become more immersed, excited, and persuaded in the moment (Guo, Zhang & Wang, 2022; Lin, Gui & Lu, 2024; Li et al., 2025).

Conversely, products with primarily utilitarian benefits—such as home appliances, health-related goods, or functional everyday items—typically require more rational evaluation. Even when the dynamic brand experience is strong, followers may exhibit lower impulse buying tendencies because these products are associated with practicality, long-term use, or higher financial risk.

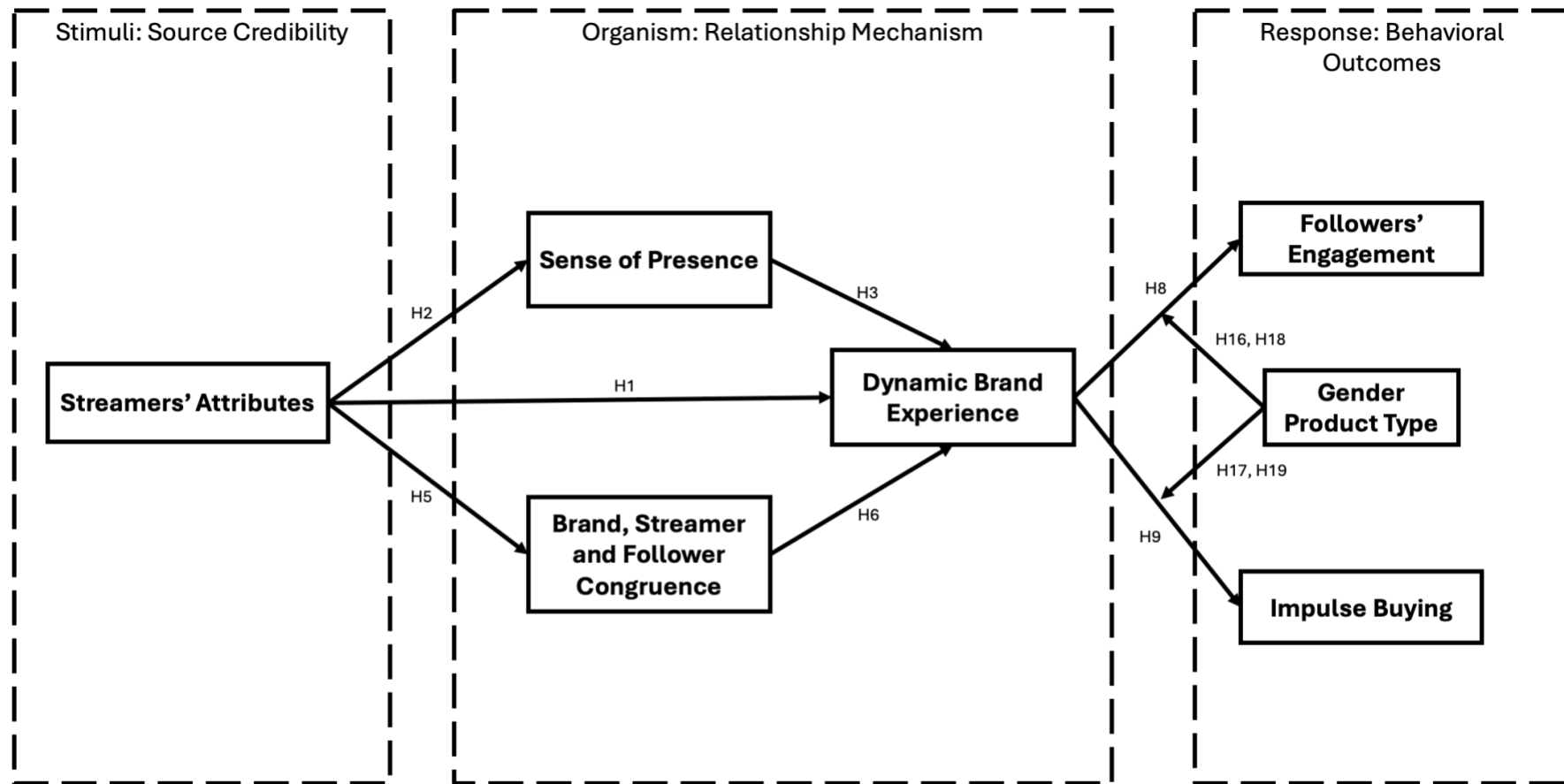
Within the SOR framework, product type operates as a contextual moderator that shapes how experiential stimuli translate into impulsive behavioural responses. Thus, the extent to which dynamic brand experience drives impulse buying depends on whether the product category naturally aligns with hedonic, emotional purchasing versus functional decision-making.

H19: Product type moderates the relationship between dynamic brand experience and followers' impulse buying behaviour.

2.16 Live Streaming Commerce Framework

Figure 4 below summarises the complete set of hypotheses developed in this chapter and visually depicts the underlying logic of the proposed model. It illustrates how streamer attributes function as key stimuli that activate psychological mechanisms in

the follower, namely sense of presence and brand–streamer–follower congruence, which then contribute to the formation of dynamic brand experience. This experience serves as the central pathway through which followers' engagement and impulse buying intentions emerge, while gender and product type moderate selected behavioural relationships. Together, the diagram and accompanying hypotheses capture the structural, mediating, and moderating relationships that define follower behaviour in live streaming commerce. This integrated visual representation provides a clear foundation for the empirical analysis presented in the next chapter.



H4: Streamers' attributes → Sense of presence → DBE
H7: streamers' attributes → BSF Congruence → DBE
H10: Streamers' attributes → DBE → Followers' engagement
H11: Streamers' attributes → DBE → Impulse Buying
H12: Streamers' attributes → Sense of presence → DBE → Followers' engagement
H13: Streamers' attributes → Sense of presence → DBE → Impulse buying
H14: Streamers' attributes → BSF Congruence → DBE → Followers' engagement
H15: Streamers' attributes → BSF Congruence → DBE → Impulse buying
*DBE: Dynamic Brand Experience
**BSF: Brand-Streamer-Follower

Figure 4: Conceptual Model and Summary of Hypothesised Relationships

2.17 Summary

This chapter developed the hypotheses underpinning the conceptual framework of the study by drawing on the Stimulus–Organism–Response (SOR) model and different theories. Building on the literature reviewed in Chapter 2, the chapter clarified how streamers' attributes (stimulus) activate key psychological mechanisms (organism)—sense of presence, congruence, and dynamic brand experience—that shape followers' engagement and impulse buying behaviour (response).

The first set of hypotheses addressed the direct effects of streamers' attributes on sense of presence and congruence, establishing these psychological mechanisms as core pathways through which followers interpret and respond to live-streaming content. Then articulated how sense of presence and congruence independently and significantly influence dynamic brand experience, reinforcing their roles as internal evaluative states consistent with SOR-based organism constructs.

Subsequently, explained how dynamic brand experience functions as a central experiential mechanism linking psychological states to engagement and impulse buying. Hypotheses were developed to capture its direct effects on engagement and impulse buying, as well as its mediating role between streamers' attributes and consumer engagement and Impulse Buying. Additional sequential mediation hypotheses were proposed to examine multi-step pathways involving combinations of presence, congruence, and dynamic brand experience.

Finally, moderating hypotheses were introduced to explore how contextual factors—specifically gender and product type—shape the strength of the relationships between dynamic brand experience and engagement and impulse buying behaviour. These moderators allow the model to account for heterogeneity in audience reactions within live-streaming environments.

Overall, this chapter systematically articulated the theoretical logic that connects all variables in the proposed model. Organising hypotheses into coherent thematic groups aligned with the SOR framework provides a clear foundation for the research and analyses presented in the following chapters.

Chapter 4: Research Methodology

This chapter outlines the research methodology used in this study, providing a detailed explanation and justification of the research design, data collection, and analysis procedures. The objective is to ensure transparency, credibility, and alignment with the research questions and objectives by clearly demonstrating how the chosen methods are appropriate for investigating follower engagement and impulse buying in live streaming commerce. Given the interactive nature of live streaming commerce, this study examines how streamer attributes—such as the sense of presence, brand-streamer-follower congruence, and dynamic brand experiences—impact follower engagement and impulse buying within live streaming commerce.

This chapter outlines the research design, the identification of the target population and sampling strategy, the data collection procedures, and the analytical methods used to interpret the findings. Particular emphasis is placed on ensuring methodological rigour, with a focus on the validity and reliability of the research. Ethical considerations, including participant confidentiality, informed consent, and compliance with regulations, are also addressed to demonstrate adherence to ethical research practices.

Ultimately, this chapter introduces a clear research method that ensures the quantitative approach aligns with the research objectives and enables a structured investigation of the effectiveness of live streaming as a digital marketing strategy. By systematically detailing each aspect of the research methodology process, this chapter provides a solid foundation for the subsequent data analysis and interpretation of findings.

3.1 Overview of Research Methods

The research methodology is anchored by the researcher's epistemological and ontological positions, which inform the researcher's worldview and understanding of reality and knowledge. These foundational philosophical beliefs inevitably shape the overall approach to the research, including the chosen methods and techniques for gathering and interpreting data (Saunders, Lewis & Thornhill, 2019). Also, the theoretical framework of a research methodology refers to the selected paradigms or theories that guide the design and interpretation of the study. The choice of a theoretical framework is strongly influenced by the nature of the research question and the field of research. It acts as a lens through which the researcher views and makes sense of the data collected, offering context and explanation to the phenomena under investigation (Schindler, 2022).

Research methodology is a structured process that demands a rigorous and systematic approach, which is akin to the model of the research onion: Figure 5 below (Saunders, Lewis & Thornhill, 2019). This model visualises the methodology as layers of an onion, each layer representing a distinct stage of the research process. As each layer - or research stage - is peeled away or completed, it reveals the subsequent stage to be addressed, thereby marking the end of the process. Importantly, this model necessitates a procedural approach where researchers must sequentially navigate through each stage without skipping any step to reach the next (Saunders, Lewis & Thornhill, 2019). The key elements of a research onion include philosophical orientation, approaches, strategies, time horizons, and methods for data collection and analysis. A researcher must carefully select suitable components from each of these

key elements to develop an exhaustive research methodology tailored to a specific problem area (Schindler, 2022; Eden, Nielsen & Verbeke, 2020).

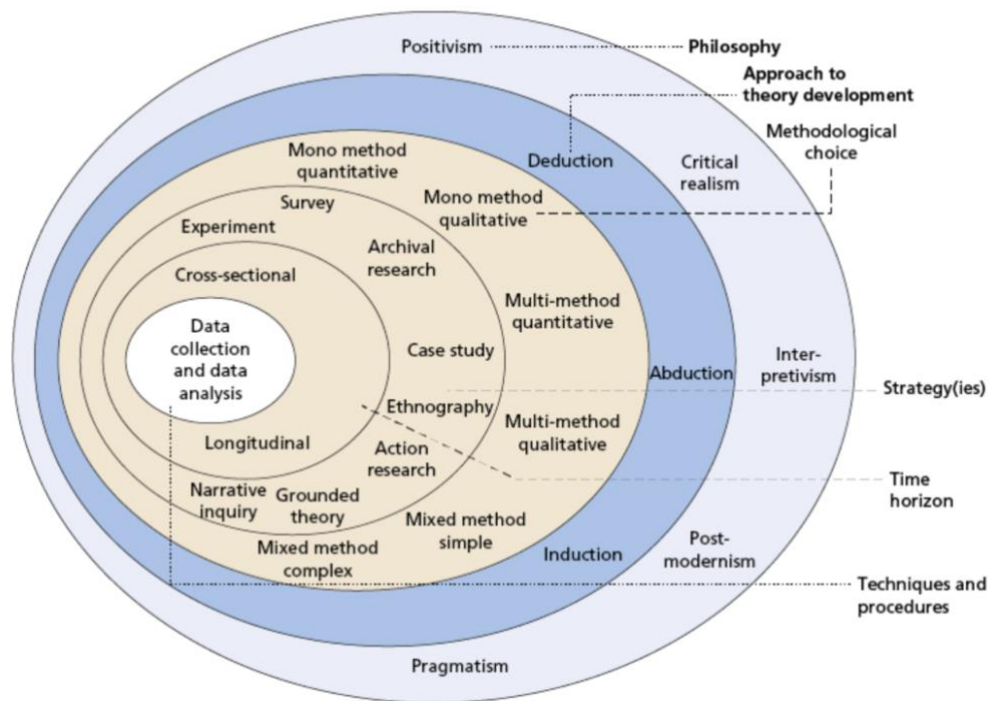


Figure 5: Research Onion

The "Research Onion" is a metaphor used in research methodology to describe the stages through which a researcher must pass when designing and conducting the research. It was introduced by Saunders, Lewis, and Thornhill (2019) and visually represents the research process as the layers of an onion. From the outer layers to the inner core, each layer of the onion signifies a step that needs to be addressed in a sequential manner, akin to peeling an onion.

The outermost layer is the research philosophy, which represents the researcher's beliefs and assumptions about the world. The next layer refers to the research approach, which could be inductive or deductive. The third layer is concerned with the research strategy. The fourth layer denotes the researcher's choice of time horizon.

The innermost layers pertain to data collection and analysis methods. The Research Onion model highlights the importance of considering each element of the research process carefully and sequentially. It offers a systematic approach to designing the research and ensuring it is rigorous, coherent, and valid. It is very effective for management studies (Schindler, 2022; Saunders, Lewis & Thornhill, 2019). The subsequent section provides a detailed account of the research methodology implemented in this live streaming commerce research and offering justifications for each decision made.

In the context of this study on live streaming commerce, the research onion framework is directly applied. The research philosophy adopted is positivism, aligning with the objective, measurable nature of the constructs under investigation. The approach is deductive, as the research tests specific hypotheses derived from established theories, such as Source Credibility Theory, Congruence Theory, and Flow Theory. The strategy involves a quantitative questionnaire design, suitable for analysing relationships between multiple latent variables across two cultural contexts (UK and China). The time horizon is cross-sectional, as data were collected at a single point in time to assess current follower engagement and impulse buying behaviour and perceptions. Finally, the data collection and analysis methods include structured questionnaires and statistical modelling using SPSS and SmartPLS. By mapping each of these decisions onto the layers of the research onion, this study ensures methodological coherence and rigour, while tailoring each step to the specific requirements of the research questions and objectives.

3.2 Research Philosophy

Research philosophy refers to the set of beliefs that guide a business and management researcher's approach to understanding the world, which involves the nature of reality (ontology), how knowledge is created and developed (epistemology), and the values associated with that knowledge (axiology) (Bell, 2019). It provides the philosophical background for the research methodology and influences the researcher's choice of research methods. Research philosophy is fundamental to the research process because it determines how the researcher collects, analyses, and interprets data (Creswell, 2014). It helps the researcher recognise which designs would work and which ones would not (Creswell & Poth, 2018). In short, the research philosophy could have a profound impact on the way we approach our research, how we interpret the findings, and how we perceive the world around us (Saunders, Lewis, & Thornhill, 2012). There are several different types of research philosophies, such as positivism, interpretivism, pragmatism, realism, and others. (Saunders, Lewis & Thornhill, 2019) Each of these is described below.

Positivism, often associated with quantitative research, suggests that the world exists as an objective reality, independent of human perception or interpretation. It emphasises hypothesis testing using structured and statistically analysed data to uncover causal relationships (Bell, 2019). Critical Realism, while acknowledging an objective reality, asserts that our understanding of that reality is always mediated by our perceptions and social conditions. It emphasizes the role of context and looks to uncover mechanisms that may not be immediately observable but still contribute to phenomena (Bhaskar, 2008). Interpretivism argues that reality is not objective but rather socially constructed and subjective, emphasising the subjective experiences,

perceptions, and interpretations of individuals. It is often associated with qualitative research methods, like interviews and observations. (Saunders, Lewis & Thornhill, 2019). Postmodernism, on the other hand, challenges the existence of a single objective or subjective reality. It stresses that realities are multiple and fragmented, often a product of power relations, language, and discourse. It encourages critical interrogation of assumptions and dominant narratives (Schindler, 2022). Pragmatism in research philosophy represents a practical approach that prioritises the research question over strict adherence to any one methodological stance. It is underpinned that the nature of the research question should guide the selection of research methods, theories, and data sources, rather than being constrained by traditional dichotomies such as qualitative vs. quantitative or empirical vs. theoretical. Pragmatists argue that the value of research lies in its ability to address real-world problems and produce meaningful, actionable outcomes. This philosophy encourages researchers to use whatever methods, strategies, or empirical materials are most suitable for answering their specific questions. (Morgan, 2014).

All in all, there are 5 research philosophies in the research onion map. Different research philosophies have different advantages, but Positivism is adopted as the research philosophy for this research because it is guided by several key principles that align with a quantitative research approach through questionnaire. This decision is driven by four main considerations below, reflective of positivism's emphasis on objective analysis and empirical evidence. It also reflects the fitting of the research philosophy to this live streaming commerce research.

Firstly, positivism is grounded in the belief in an objective reality that could be observed and measured independently of the individuals involved. This stance is particularly advantageous in the context of live streaming commerce, where behaviours, preferences, and interactions could be quantified to reveal patterns and relationships (Morgan, 2014; Saunders, Lewis & Thornhill, 2019). For example, follower engagement and impulse buying in this research. By adopting a positivist approach, the research aims to objectively assess the effectiveness of streamer's attributes, sense of presence, brand streamer follower congruence, and dynamic brand experiences. And from a perspective that transcends individual subjective experiences, focusing instead on observable phenomena that can be systematically analysed.

Secondly, positivism advocates for the use of quantitative methods as a means to collect data and test hypotheses. This methodological orientation is well-suited to the aims of this live streaming commerce research, which seeks to quantify the impact of streamers' attributes on followers' engagement and impulse buying. Through structured questionnaire, the study employs statistical analysis to validate theoretical hypotheses and draw findings and conclusions based on empirical data, thus adhering to the positivist emphasis on quantification (Bell, 2019).

Thirdly, the emphasis of positivism on empirical evidence and logical reasoning ensures that research findings are based on verifiable data rather than speculation or subjective interpretation (Saunders, Lewis & Thornhill, 2019). This approach aligns with the objective of understanding live streaming commerce from a standpoint that values reliability and validity. By grounding the research in positivist principles, the

study aims to produce findings that could inform evidence-based strategies for practitioners in the field of digital marketing, offering insights that are directly applicable and grounded in empirical observation.

Fourthly, positivism supports the application of existing theories to frame research questions and guide the analysis of data. Unlike pragmatism, which promotes methodological and theoretical pluralism, positivism encourages a focused examination of phenomena through the lens of specific theoretical frameworks. In this study, theories related to live streaming commerce and follower engagement and impulse buying behaviour form the foundation for developing hypotheses that are tested through quantitative methods (Schindler, 2022). This theoretical rigour ensures that the research not only contributes to the existing body of knowledge but also adheres to the principles of logical positivism, which values coherence, clarity, and predictive power.

So, the choice of positivism as the research philosophy underpinning this study reflects a commitment to objective analysis, empirical evidence, and the testing of hypotheses through quantitative methods. By relying on questionnaire to gather data, the research embraces positivism's foundational belief in the possibility of uncovering universal truths about live streaming commerce and digital marketing, thereby offering valuable, generalizable insights into this dynamic field (Johnson & Onwuegbuzie, 2004).

Furthermore, this study adopts an objectivist ontological stance, assuming that consumer perceptions and behaviours in live streaming commerce exist independently of the researcher and can therefore be objectively measured

(Saunders, Lewis, & Thornhill, 2019; Bell, 2019). Epistemologically, the study follows the positivist view that knowledge is generated through empirical observation, quantitative measurement, and statistical testing (Creswell & Creswell, 2018; Saunders et al., 2019). These philosophical assumptions are consistent with the deductive approach, questionnaire survey, and PLS-SEM analysis adopted in this research.

3.3 Research Approaches

Research approaches are fundamental to any research as they dictate the overall strategy and direction for conducting a study. They refer to the logical reasoning the researcher uses to build a bridge between the theoretical aspects of the research, such as concepts and hypotheses, and the empirical world of observation and data (Norman Blaikie, 2019). There are three research approaches, include deductive, inductive, and abductive reasoning.

Deductive reasoning begins with a theory or a hypothesis, which is then tested through data collection. The goal of deductive reasoning is to test an existing theory, hypothesis, or model within a new context or with a new set of data. It primarily uses quantitative methods, aiming to measure or identify associations between variables and often seeks to generalise findings to a larger population (Bryman, 2015).

Abductive reasoning, on the other hand, involves generating a plausible explanation for an observed phenomenon. It is a back-and-forth process of developing a theory, seeing how it fits with the empirical evidence, and then revising it to better account for the data. It neither starts with a clear theory like deduction, nor purely from data like

induction, but instead continually refines theory in response to empirical insights (Saunders, Lewis & Thornhill, 2019).

Induction is a research approach that typically begins with the collection of empirical data. Rather than starting with a pre-existing theory or hypothesis, as in the case of deductive research, inductive reasoning allows for patterns, themes, and potential theoretical frameworks to emerge from the data itself. Inductive research is often exploratory, seeking to understand the complexities of a phenomenon within a particular context. This approach is typically associated with qualitative research methods such as interviews, observations, and case studies, which provide rich, detailed data from which to draw insights and build theory. Inductive research is particularly useful in areas where little prior theory exists, or where the researcher seeks to develop a more grounded understanding of a particular issue (Saunders, Lewis & Thornhill, 2019; Eden, Nielsen & Verbeke, 2020).

So, the deductive approach is appropriate for this research because this study summarises and proposes hypotheses based on existing literature in the field of live streaming commerce, builds a theoretical model, and then uses data collection and analysis methods to test the relationship between streamers' attributes, sense of presence, brand streamer follower congruence, dynamic brand experiences and follower engagement and impulse buying. Besides, the deductive method, characterised by its focus on testing theory-driven hypotheses through empirical data, aligns with the structured and hypothesis-testing nature of quantitative research (Saunders, Lewis & Thornhill, 2019). So, deductive reasoning is well-suited for this

research as it enables the researcher to measure the relationships and influences among different variables within the live streaming commerce context.

Quantitative research methods, such as questionnaires, are instrumental in gathering numerical data that can be used to test the hypotheses formulated from the theoretical framework. This approach ensures that the findings are based on observable, empirical evidence that can be quantified and analysed statistically (Tharenou, 2007; Krishnaswamy, 2009). In the case of live streaming commerce, the deductive approach allows for a systematic investigation into how different variables impact follower engagement and impulse buying behaviours.

Questionnaires, as a data collection tool, provide a consistent and reliable means of capturing data from a large sample, which is essential for the generalisation of results. The standardised format of questionnaires ensures that data collected across different respondents are comparable, thereby enhancing the validity and reliability of the findings. Additionally, the use of questionnaires facilitates the analysis of complex relationships between multiple variables through various statistical techniques (Bryman, 2015; Schindler, 2022).

Given the rapidly evolving nature of digital marketing and the dynamic environment of live streaming, the deductive approach offers a structured way to test whether the theoretical assumptions hold true in the current context. By using a deductive method, this research aims to contribute to the existing body of knowledge by confirming, challenging, or enhancing the theoretical propositions regarding live streaming commerce.

Adopting this methodological stance also reflects the pragmatic aspects of research design. Questionnaires could be distributed widely and efficiently, making them a practical choice for researchers seeking to collect data from diverse and dispersed populations. This is particularly pertinent for live streaming commerce research, where participants are often geographically scattered, for example, in China and UK and let different participants take part in an online data collection platform.

3.4 Research Method

Research methodology encompasses the systematic, theoretical analysis of the methods and principles associated with a branch of knowledge. It refers to the overall strategy that guides a researcher's choice of research methods and techniques, including whether to use qualitative or quantitative methods or a combination of both, known as mixed methods (Creswell, 2018).

The qualitative research approach is a method used to understand people's views, experiences, attitudes, behaviour, and interactions (Anon, 2023). It generates non-numerical data and focuses on capturing qualitative information in depth rather than quantifying data and generalising the results across a larger population. Qualitative research often involves methods such as interviews, focus groups, and observations, providing rich, contextual explorations of the topic at hand (Anon, 2023). This approach is rooted in interpretive philosophy, which views reality as subjective and stresses the socially constructed nature of reality. It seeks to interpret and make sense of phenomena in terms of the meanings people bring to them. Qualitative research aim to gather an in-depth understanding of consumer behaviour and the reasons that govern such behaviour (Anon, 2023).

Quantitative research is a systematic investigation that utilises quantifiable data to derive results regarding a chosen subject matter. This type of empirical research approach relies heavily on the idea of quantification, which involves the conversion of data into a numerical format (Creswell, 2014; Bryman, 2016). The process essentially includes the measurement, collection, analysis, and interpretation of numerical data to yield empirical evidence capable of demonstrating statistical relationships between observed variables.

The quantitative research is embedded in positivist and post-positivist philosophy. Positivists believe in the existence of a single truth, a stable and predictable reality that can be understood objectively through observable facts and measurable phenomena. Thus, quantitative research tends to have a structured, standardised, and controlled approach to ensure the objectivity and reliability of the collected data (Bryman, 2016). Quantitative research methods, such as questionnaires, experiments, and statistical analysis of numerical data, are designed to gather data that can be coded in a numeric form. These methods enable researchers to test specific hypotheses by examining the relationship among variables. In this context, variables are often manipulated to discern cause-and-effect relationships, which further support the verification or falsification of the proposed hypotheses (Bryman, 2016).

One of the primary advantages of quantitative research lies in its ability to provide precise, quantifiable, and generalizable results. By relying on numerical and statistical data, it allows for a broader study, involving a larger number of subjects, enhancing the generalizability of the results. Also, this methodology is reproducible, meaning that

the same study can be repeated under the same conditions to verify the results (Creswell & Creswell, 2017).

The decision to use a single method, specifically questionnaires, for research on the effectiveness of live streaming commerce is strategic, given the focused objectives of this study. Utilising questionnaires as a quantitative research tool aligns with the need for empirical data to test the formulated hypotheses regarding live streaming commerce (Saunders, Lewis & Thornhill, 2019). While mixed methods research offers the advantage of combining qualitative and quantitative insights, a single quantitative method provides a streamlined, efficient pathway to understanding specific phenomena through statistical analysis. Questionnaires are particularly effective for gathering data on a wide range of variables from a large sample, making it possible to generalise findings across the broader live streaming audience. This approach is advantageous for quantifying the relationships between streamers' attributes, dynamic brand experiences, and follower engagement and impulse buying behaviour. Quantitative methods, such as questionnaires, offer the precision and rigour needed for testing theoretical propositions and deriving measurable insights (Bell, 2019).

Although qualitative methods provide depth and context to consumer behaviours and interactions, the focus of this research on quantifiable aspects of live streaming commerce, such as the degree of follower engagement or impulse buying, necessitates a methodological approach that could produce statistically valid results. For example, the use of questionnaires allows for the collection of data that could be analysed to reveal patterns, trends, and correlations within the live streaming commerce domain. Using questionnaires as the sole method also addresses practical

considerations, such as resource constraints and the feasibility of reaching dispersed digital followers. This approach enables the efficient collection of data from participants across different geographies, for example UK and China, who engage with live streaming platforms, providing a broad basis for analysis.

All in all, while the mixed methods approach has its merits in offering a comprehensive view by marrying qualitative depth with quantitative breadth, the choice of a single quantitative method through questionnaires is purposefully selected for this research. Because it has more generalisability, statistical robustness and objectivity, at the same time, live streaming commerce research needs objective measurement in evaluating efficacy. It serves the aim of systematically examining the efficacy of live streaming commerce within a structured, empirical framework, focusing on measurable outcomes that contribute to the academic understanding of digital marketing strategies in the context of live streaming commerce.

3.5 Research Strategies

The research strategy is an organised plan that guides the researcher in effectively answering the research question or solving the research problem. This plan lays out the overall approach and detailed methods that is used to collect, analyse, and present data. It is guided by the research objectives, the nature of the topic, and the specific constraints of the research context (Saunders, Lewis & Thornhill, 2019). The choice of research strategy determines how the research is conducted, what kind of data is gathered, how that data is analysed, and how the findings is interpreted. Also, strategies could include questionnaires, case studies, experiments, ethnography, grounded theory, and action research. The selection of a particular strategy depends

on several factors, including the research questions, the researcher's philosophical commitments, and practical considerations such as time and resources (Bryman, 2016).

Questionnaires, and in particular questionnaires, are a widely used research strategy that allows for the collection of data from a large sample size. They are an efficient and cost-effective way to gather data on people's beliefs, experiences, and behaviours. Questionnaires can be structured to provide quantitative data that can be statistically analysed to identify trends, correlations, and patterns, thus providing evidence of the effectiveness of live streaming commerce (Creswell, 2018). Furthermore, the standardisation inherent in questionnaire design ensures that all participants are asked the same questions, lending to the reliability and replicability of the research.

So, the questionnaire in this research is an example of the quantitative questionnaire-based approach. This methodological choice takes advantage of the strengths of quantitative (questionnaire) strategies. For the research on the effectiveness of live streaming commerce, this combination offers an effective approach. Questionnaires could provide broad, generalisable data about live streaming commerce effectiveness. The result of the data enhances the validity and richness of findings, making questionnaires an optimal choice for the research (Brannen, 2016).

3.6 Research Design

There are many different approaches to research design, and questionnaire research is one of them. The questionnaire is a quantitative research instrument commonly

used to collect data from a predefined group of respondents to gain information and insights on various topics of interest. It typically involves asking people for information through a structured format of questions that participants respond to. Questionnaires can be conducted in various ways, such as online or over the phone. Also, the 7-point Likert scale has been used during the questionnaire. The Likert scale is a rating scale often used in questionnaires to measure how people feel about an issue. A 7-point Likert scale, for instance, includes options such as "strongly disagree," "somewhat disagree" "disagree," "neither agree nor disagree," "agree," and "somewhat agree" "strongly agree." Respondents indicate their level of agreement with a statement related to the topic being questioned. The use of a 7-point Likert scale allows respondents to express their feelings about live streaming commerce, providing a range of options and opinions that can result in more precise data. This type of scale is commonly used because it's simple for participants to understand, and it's efficient for researchers to analyse (Bryman, 2016).

3.7 Measurement

The questionnaire instrument was developed based on established, validated scales from previous studies. The items measuring key constructs—such as follower engagement, streamers' attributes, and live streaming effectiveness—were adapted from existing literature to ensure content validity for example: Attractiveness (Li & Peng, 2021b; Zheng et al., 2023; Zhou & Huang, 2023), Authenticity (Li & Peng, 2021b; He, Li & Xue, 2022), Credibility (Lin, 2021; Ma, Zou & Lv, 2022), Expertise (Li & Peng, 2021; Zheng et al., 2023; Guo, Zhang & Wang, 2022), Telepresence (Li & Peng, 2021b; Sun et al., 2019b), Social Presence (Lin, 2021; Ma, Zou & Lv, 2022; Zhang, Cheng & Huang, 2023; Sun et al., 2019b), Congruence (Wei et al., 2022),

Dynamic Brand Experience(Yu et al., 2021), Engagement (Wongkitrungrueng & Assarut, 2020a; Yu & Zheng, 2021), and Impulse Buying (Fu & Hsu, 2023; Zhang, Cheng & Huang, 2023). Also, some modifications were made to the wording of these items to better align them with the context of live marketing commerce while maintaining their original meaning. For example, the streamers' attributes are split from the previous questionnaire into three different sub-factors: expertise, credibility, and credibility. Then the streamers' attributes are split from the previous questionnaire into three different sub-factors: expertise, credibility, authenticity, and so on. This allows participants to better understand the questionnaire content.

To ensure the reliability and validity of the instrument, a pilot study was conducted with a small sample before full-scale data collection. The pilot test assessed the clarity of the questions about customers' experiences in live streaming commerce and the effectiveness of the scale, and any potential ambiguities. In detail, there are 100 participants be invited who have watched or participated in live streaming commerce before to fill out a questionnaire to ensure that all of the questionnaire questions were related to the field of live streaming commerce. The participants came from different backgrounds, like people living in China and UK, then ages ranged from 18 to 60. They also had different live streaming engaging or shopping experiences, which were highly relevant to our formal participant profile. Based on the participants' feedback, minor refinements were made to enhance the questionnaire's comprehensibility and applicability to the research context. For example, 1. In the pilot test version, I did not explain the terms in live streaming, which caused some participants to get confused, so I explained each term after receiving feedback. 2. Some participants were not clear

about what the live streaming commerce feature included, so a short introduction video is added at the beginning.

By employing well-established scales with appropriate modifications and validating the instrument through a pilot study, for example, I further subdivided the questions about Attributes into 5 different directions and Congruence into 3 different directions. This research ensures robust data collection, facilitating a comprehensive analysis of follower engagement and impulse buying in live streaming commerce. In the end the measurement scales adopted for each construct are summarised in Appendix 7, while the full questionnaire is presented in Appendix 2.

3.8 Data Collection

The data collection procedure is a key element for this research, ensuring the acquisition of relevant and reliable data to address the research objectives (Krishnaswamy, 2009; Bell, 2019). For this study, an online questionnaire was employed to collect quantitative data from participants in both China and the UK. This dual-country approach allows for cross-cultural comparisons and provides a broader perspective on live streaming commerce. The questionnaire was distributed electronically using secure questionnaire platforms - Qualtrics, ensuring accessibility of participation (Verma, 2020). The population of interest comprised consumers in China and the United Kingdom who had previous experience watching or purchasing through live streaming commerce platforms. A purposive sampling strategy was adopted to recruit participants who were familiar with live streaming commerce and therefore able to provide informed responses relevant to the research objectives.

A total of 750 questionnaires were distributed, resulting in 600 valid responses (300 from China and 300 from the UK). The final sample size was considered adequate for PLS-SEM and cross-cultural comparison, providing sufficient statistical power for the proposed analyses (Yockey, 2016; Stehlik-Barry & Babinec, 2017).

For people recruitment, participants were recruited through two primary channels: Prolific for the United Kingdom sample and Wenjuanxing (WJX) for the Chinese sample. Prolific is a widely used online research platform known for providing high-quality, demographically diverse participants for academic research, while WJX is one of the most reputable and commonly used questionnaire platforms in China. The questionnaire was hosted on Qualtrics, which ensured consistency in presentation and data collection across both samples. All participants were informed of the academic purpose of the study and provided informed consent before proceeding. Participation was voluntary, and modest financial compensation was provided in line with each platform's standard remuneration policies to ensure engagement and data quality.

The 7-point Likert scale allows respondents to express varying levels of agreement to disagreement with the statements, providing more accurate data on follower engagement and impulse buying in live marketing commerce. The sample size of 600 respondents is deemed statistically sufficient to enhance the reliability and generalizability of the findings, ensuring robust statistical power in data analysis (Yockey, 2016; Stehlik-Barry & Babinec, 2017). The inclusion of respondents from both China and the UK enhances the study's validity, allowing for meaningful cross-market insights.

Also, this study utilised the purposive sampling approach to specifically target individuals who actively engage with streamers through live streaming platforms. This method ensures that the collected data is highly relevant to the research objectives (Krishnaswamy, 2009; Schindler, 2022). Additionally, a diverse demographic representation was sought to ensure variability in participant characteristics; for instance, I recruit participants from different ages, genders, and different education levels. Regarding the demographic result, this study achieved balance in responses across different demographic groups to avoid bias and enhance the applicability of the findings to broader followers.

To maintain ethical standards and ensure data protection, participants were informed of their rights and provided with a consent form before completing the questionnaire. Participation was entirely voluntary, and respondents had the right to withdraw at any stage. Data confidentiality was strictly maintained, with all responses anonymised and stored securely to comply with data protection regulations. By employing a rigorous data collection strategy, ensuring representative sampling, and maintaining ethical research practices, this study ensures the validity and reliability of the collected data, contributing to meaningful insights into follower engagement and impulse buying in live streaming commerce.

3.9 Data Analysis

Overall, all quantitative data were processed and analysed according to the following steps. For the quantitative data obtained through the online questionnaires (Qualtrics), SPSS (Statistical Package for the Social Sciences) and Smart PLS were used. PLS-SEM was selected because this study aims to examine a complex conceptual model

involving multiple latent constructs, mediation effects, moderation effects, and cross-cultural comparisons. In addition, PLS-SEM is particularly suitable for prediction-oriented research, theory development, and analysing complex models without requiring strict data normality assumptions (Hair et al., 2022). Therefore, SmartPLS was considered the most appropriate analytical approach for addressing the research objectives. Also, SPSS is a leading software for statistical analysis, well-suited to managing the responses of the questionnaire participants (Field, 2020). After coding and cleaning the data, the data is imported it into Smart PLS. Then, the data is computed using descriptive statistics to provide a snapshot of the overall trends, as well as conducted inferential statistical tests are conducted to uncover any significant relationships or effects within the data. This helped the researcher ascertain broad patterns and understand the general impact of live streaming commerce. Here are the steps for processing quantitative data. First, the different variables are dealt with and given a clear name. Secondly, each variable was worked out with a coding scheme. Thirdly, all data is imported into SPSS and Smart PLS for analysis. Fourthly, the data is double-checked make sure all the data to prevent any data errors. By leveraging the capabilities of SPSS and SMART PLS, the research methods approach provides a comprehensive analysis of live streaming commerce.

3.10 Ethical Issues

Ethical issues are critical considerations in research that involve the responsible and ethical treatment of participants, data, and the overall research process (Saunders, Lewis & Thornhill, 2019). This research abided by principles of research ethics to ensure the privacy of participants, as well as the integrity and validity of the research findings. Ethical issues of this research encompass several key aspects: obtaining

informed consent, maintaining confidentiality, mitigating potential risks, ensuring fairness, and securing institutional ethical approval.

Prior to participation, all respondents were provided with an informed consent form, which clearly outlined the study's purpose, objectives, potential risks, and benefits. Participants were informed that their involvement was entirely voluntary, and they had the right to withdraw at any time without providing a reason. The research also guaranteed that no personal or sensitive information would be collected that could identify participants.

To maintain confidentiality and data security, all questionnaire responses were anonymised, ensuring that individual participants could not be traced back to their responses. Data was securely stored on the OneDrive of the University of Essex, and access was strictly limited. In compliance with data protection regulations. All collected data is retained before eventual deletion in line with institutional and ethical guidelines.

Furthermore, this research received ethical approval from the University of Essex Ethics Committee before data collection commenced (ETH2324-0555). The ethical review process ensured that the study complied with institutional guidelines, safeguarding participant rights and research integrity. By implementing these measures, this study adheres to high ethical standards, ensuring the credibility, fairness, and protection of all individuals involved.

3.11 Summary

This chapter has outlined the research methodology applied to investigate follower engagement and impulse buying in live streaming commerce, detailing the philosophical stance, research design, data collection, and data analysis methods. A pragmatist research philosophy underpins the study, allowing for flexibility in understanding the complex interactions between streamers, follower engagement and impulse buying. The quantitative research approach was adopted, with a questionnaire across China and UK. The questionnaire utilised a 7-point Likert scale to assess key constructs, all of them were drawn from validated scales from prior research.

Besides, data was collected via the online questionnaire platform Qualtrics, using purposive sampling to target social media live streaming users who actively engage with streamers through live streaming. To ensure data protection, ethical approval was obtained from the University of Essex Ethics Committee, with informed consent collected from all participants and data securely stored on the university's OneDrive, compliant with regulations. The data was analysed using SPSS and Smart PLS, employing statistical techniques such as reliability testing, exploratory factor analysis, and structural equation modelling (SEM) to assess relationships between key variables. By integrating these methodological choices, this research provides a structured and robust approach to examining the effectiveness of live streaming commerce, ensuring the validity, reliability, and generalisability of the findings. The next chapter conducted data analysis based on these research methods.

Chapter 5: Data Analysis and Results

This chapter presents the empirical results derived from the analysis of data collected via online questionnaire conducted using Qualtrics. The questionnaire encompassed responses from 600 individuals, evenly divided between 300 Chinese and 300 UK respondents, to uncover the live streaming commerce across different cultural contexts. This data analysis is grounded in a live streaming commerce framework utilising both SPSS and the Smart PLS to explore the different relationships.

The objective of this research is to provide a thorough empirical understanding of how specific attributes of streamers and the dynamic brand experiences influence follower engagement and impulse buying behaviours within the live streaming commerce environment. This chapter not only tests the hypotheses but also uncovers the underlying mechanisms through different cultures.

To achieve this, a series of statistical analyses was performed. Initially, descriptive statistics provided a preliminary overview of the data, offering insights into the basic characteristics and normative trends of our sample. This was crucial for ensuring the data's integrity and suitability for further analysis. Following this, reliability testing, specifically Cronbach's alpha, was used to assess the internal consistency of the questionnaire instruments, ensuring that the scales used to measure various constructs were both reliable and valid for our cross-cultural examination (Brannen, 2016; Bell, 2019; Hair et al., 2019b; Field, 2020).

Further, exploratory factor analysis was conducted to verify the factor structure of the questionnaire questions, aiding in the validation of the constructs and ensuring that

the data collection methods effectively captured the intended variables. This step was critical in refining the theoretical constructs based on empirical evidence, thus enhancing the rigour of the research.

The confirmatory factor analysis (CFA) is used to test whether the data fit a predefined measurement model. Also, CFA was used to confirm the validity and reliability of the measurement model, while patterns or relationships between variables are better assessed through techniques such as SEM. This analysis served as a foundation for the subsequent advanced statistical procedures, guiding the formulation of more specific hypotheses about the relationships between streamer attributes, sense of presence, and viewer responses.

The core of the analytical approach involved Exploratory Factor Analysis and Confirmatory Factor Analysis. Those analyses were crucial for determining the impact of independent variables, such as streamer credibility, attractiveness, and expertise, on dependent outcomes such as follower engagement and impulse buying. These analyses tested the direct and indirect effects posited in the hypotheses, providing a clear picture of how various elements of live streaming influence follower engagement and impulse buying behaviour.

Also in this research, SmartPLS was selected as the analytical tool for several important reasons, particularly its suitability for the context and research design of this investigation. SmartPLS is a variance-based structural equation modelling (SEM) technique that is particularly well-suited for exploratory research, making it ideal for this research, which seeks to investigate relationships between streamers' attributes,

sense of presence, congruence, dynamic brand experience, and follower engagement and impulse buying behaviour in the emerging field of live streaming commerce. Another reason for choosing SmartPLS over covariance-based SEM is its ability to handle small to medium sample sizes without compromising the robustness of the results (Peng & Lai, 2012; Hair et al., 2019). Given the cross-cultural nature of this research, which involves participants from the United Kingdom and China, SmartPLS is particularly advantageous as it allows for the simultaneous analysis of complex models across groups, making it suitable for assessing potential cultural differences and ensuring measurement invariance across contexts. However, while SmartPLS offers flexibility and practical advantages, its robustness can be affected by model complexity and data quality, so results should be interpreted with these limitations in mind.

Based on the results of SMART PLS in presenting these findings, the chapter discusses significant relationships and trends observed in the data, with a particular focus on comparative analysis between Chinese and the United Kingdom samples. This comparative approach is designed to highlight cultural differences in follower engagement and impulse buying behaviour and perceptions related to live streaming, providing a deeper understanding of global digital marketing strategies. The following sections of this chapter present a detailed analysis of the research findings.

4.1 Data Preparation and Coding

Data acquired from the Qualtrics online questionnaire were imported into SPSS for initial evaluation and analysis. During this phase, crucial steps were taken to structure and organise the dataset effectively. This involved assigning descriptive names and

appropriate labels to each variable, which facilitated easier identification and manipulation within the analysis. Additionally, the scale types relevant to each variable were carefully defined in SPSS, ensuring that the data adhered to the correct measurement levels, such as nominal, ordinal, interval, or ratio. This meticulous process of data coding is fundamental to preparing the dataset for the comprehensive statistical analysis that follows.

4.2 Initial Data Review

Before proceeding with the main statistical evaluation, the collected data underwent a thorough initial assessment to ensure its readiness for deeper analysis. This process comprised several fundamental steps: a) an examination of any missing data to understand the extent and pattern of data absence; b) the identification and analysis of outliers to ascertain their impact on the overall dataset; and c) the validation of prerequisites for multivariate analysis, adhering to the methodologies recommended by Hair, Howard & Nitzl (2020). This preparatory review is crucial to establishing a solid foundation for the comprehensive statistical analysis that follows, ensuring that the data is robust and reliable for advanced statistical techniques (Dawson, 2016; Flick, 2018).

4.2.1 *Missing Data*

Missing data represent instances where the values for one or more variables are unavailable, creating potential obstacles for comprehensive data analysis. Such gaps could significantly undermine the validity and generalizability of research findings. It is thus crucial for researchers to promptly identify and address these issues to preserve the reliability of their study outcomes (Hair et al., 2019). In response to this challenge,

Hair et al (2019) have developed a detailed four-step procedure: 1. Ensure your data is coded correctly. 2. Identify missing values within each variable. 3. Look for patterns of missingness. 4. Check for associations between missing and observed data. These four-step procedures were followed in this research, and no missing data points were noted.

First, all data is encoded. Second, the dataset was examined for missing values using descriptive statistics and visual inspections to identify any incomplete responses. Third, the extent and pattern of missing data were analysed to determine whether the data were missing completely at random (MCAR), at random (MAR), or not at random (NMAR), using tests such as Little's MCAR test. Then, appropriate strategies, such as listwise deletion, mean or median imputation, multiple imputation, or maximum likelihood estimation, would have been employed if missing data were detected. Fourth, a data validation step confirmed the completeness and integrity of the dataset, ensuring it was suitable for subsequent analysis.

The result shows no missing data points were identified in this research, eliminating the need for corrective measures and ensuring the robustness of the dataset for statistical analysis using SmartPLS.

4.2.2 Outlier Detection

Outlier detection is an essential step in quantitative data analysis, particularly in behavioural research where individual responses may disproportionately influence regression outcomes. This study employed Cook's Distance, a well-established diagnostic tool in multiple regression analysis, to identify potential multivariate outliers

within the UK dataset. Cook's Distance is especially useful for evaluating whether individual cases have an undue influence on the estimation of regression coefficients, which can compromise the validity of statistical inferences (Nurunnabi & West 2012; Kyriazos & Poga 2023).

Figure 6 below illustrates the distribution of Cook's Distance values for all 300 UK participants across the full range of variables included in this study. These variables represent the theoretical model and include Streamer's Attributes, Sense of Presence, Brand–Streamer–Follower Congruence, Dynamic Brand Experiences, Follower Engagement, and Impulse Buying.

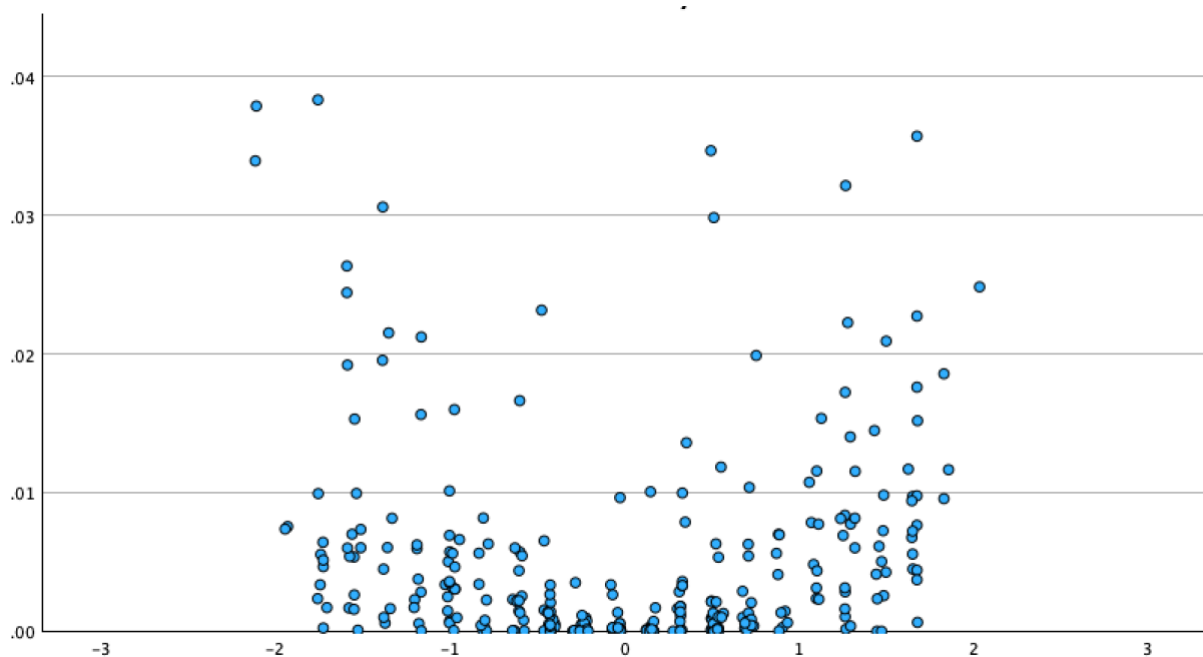


Figure 6: Outlier Detection of UK Participants

Each participant's data was included simultaneously in a comprehensive regression model using SPSS, and Cook's Distance values were computed to measure the influence of each case on the model's predictions. The y-axis of Figure 6 plots Cook's

Distance values, while the x-axis shows recoded Likert-scale responses ranging from -3 (strongly disagree) to +3 (strongly agree), providing a visual spread of participant agreement levels across all items. Each dot represents one observation (participant), allowing a visual inspection of how much any single case could affect the model if removed.

Cook's Distance quantifies the influence of each observation on the regression coefficients. Larger values indicate cases that, if removed, would cause substantial changes in the regression estimates. According to conventional cut-offs, any Cook's Distance value exceeding 1.0 suggests a potentially influential outlier (Cohen et al., 2013).

The vertical axis in Figure 6 shows Cook's Distance values, ranging approximately from 0.00 to 0.04. These values indicate the extent to which individual participants may influence the model's regression estimates. The x axis displays recoded Likert-scale responses ranging.

The majority of data points in the plot cluster tightly at the lower end of the vertical axis, with Cook's Distance values between 0.00 and 0.02, suggesting that most UK participants have minimal influence on the model. A smaller subset of points rises toward 0.03, and a few approach 0.04, indicating a slightly higher, but still modest, level of influence. Importantly, none of the values exceed the conventional threshold of 1.0, which is widely accepted as the cut-off point for identifying potentially problematic observations (Cohen et al., 2013). Therefore, no individual case within the

UK sample can be considered an extreme outlier or a highly influential point in this context.

In addition, the y-axis shows the spread of the data points across the x-axis that appears reasonably balanced and symmetrical, with no apparent clustering at the extremes. This distribution implies a consistent model fit across participants and supports the robustness of the regression estimation. No single participant disproportionately skews the output or drives the findings (Cohen et al., 2013).

Outlier detection is a critical diagnostic step in regression modelling, as it allows researchers to evaluate whether any individual data point exerts a disproportionate influence on the estimated regression coefficients. For the China's sample, Cook's Distance was used as the primary diagnostic measure. This method evaluates both the leverage (the extent to which an observation's values differ from the mean of the predictors) and the residual (the difference between observed and predicted values), making it an effective tool for identifying influential observations in a multivariate context (Nurunnabi & West 2012; Kyriazos & Poga 2023).

Figure 7 below presents the Cook's Distance plot generated from the regression analysis involving all variables from the China dataset. These variables include all key constructs examined in this study: Streamer's Attributes, Sense of Presence, Brand–Streamer–Follower Congruence, Dynamic Brand Experiences, Follower Engagement, Impulse Buying

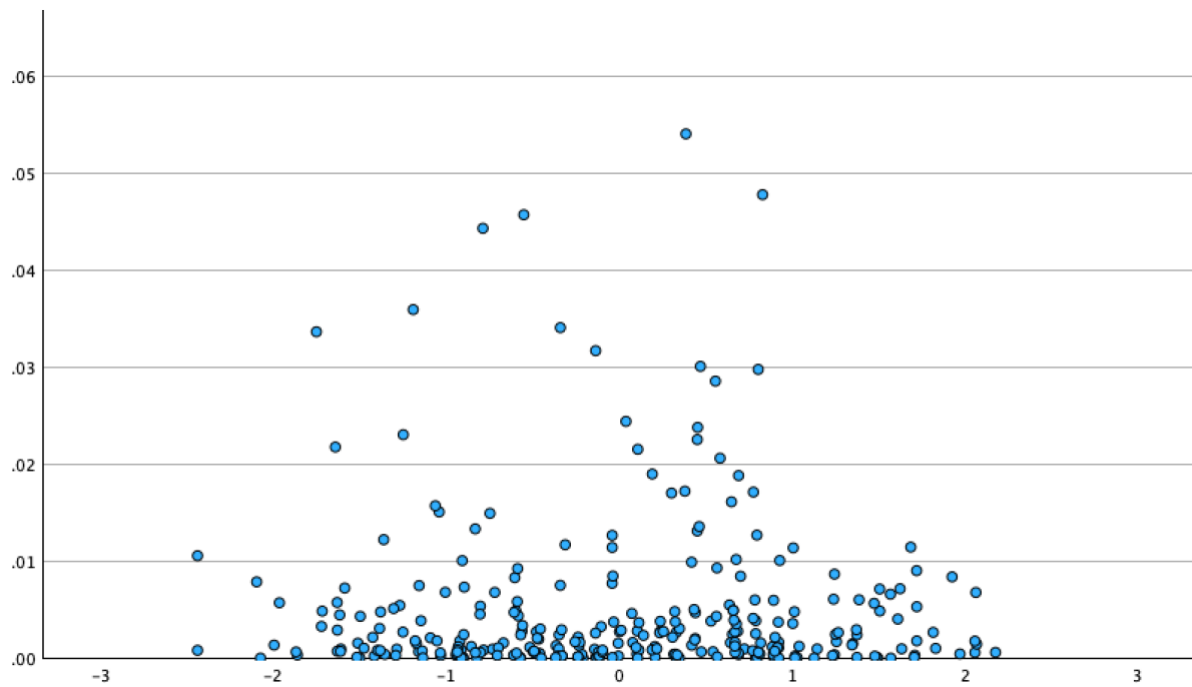


Figure 7: Outlier Detection of Chinese Participants

In Figure 7 above, the y-axis shows Cook's Distance values ranging from approximately 0.00 to 0.06, and the x-axis plots the displays recoded Likert-scale responses ranging. Each dot represents an individual respondent. The vast majority of points fall below 0.03, indicating minimal influence on the model. A few observations approach 0.06, but none exceed the critical threshold of 1.0, confirming that no cases exert an undue influence on the regression results (Cohen et al., 2013).

It is also important to clarify that this scatterplot reflects the influence of all measured constructs collectively—not just individual items or Likert scale categories. The use of Cook's Distance in this context is appropriate for identifying multivariate outliers in complex behavioural models, particularly those examining constructs like impulse buying and engagement in cross-cultural behaviour.

This analysis confirms that the Chinese dataset is free from influential multivariate outliers, and the regression model's estimates can be considered robust and reliable.

Taken together, the outlier analysis for the United Kingdom and China dataset confirms the reliability and integrity of the data used for regression modelling. By incorporating all variables and analysing the full sample simultaneously, this diagnostic procedure reinforces the stability of the model's estimates. As a result, the conclusions derived from the UK and China portion of this study can be regarded as statistically defensible and free from undue influence by individual cases.

4.3 Sample Demographics

Table 1 below shows the demographics of the UK and China, the statistics on the respondents who participated in the live streaming commerce questionnaire. Both male and female respondents in the United Kingdom and China completed the questionnaire. This online questionnaire received a total of 728 responses, but not every response was valid. Some questionnaires were sorted out and deleted that did not provide complete answers, and questionnaires with high duplication of answers. Finally, there are 300 participants from the UK and 300 participants' answers from China are selected.

Category	Subcategory	UK (%)	China (%)
Age	18-25	9%	18%
	26-35	42%	34%
	36-45	35%	31%
	46-55	11%	15%

	56+	3%	2%
Gender	Male	41%	36%
	Female	59%	64%
	Prefer not to say	/	12%
Education	Secondary School	9%	16%
	College	28%	27%
	Undergraduate	50%	37%
	Postgraduate	13%	8%
Monthly Income	≤ £500 ¥ 4,500	14%	9%
	£501-1,000 ¥ 4,509-9,000	34%	41%
	£1001-1,500 ¥ 9,009-13,500	35%	40%
	£1501-2,000 ¥ 13,509-18,000	16%	9%
	> £ 2,000+ > ¥ 18,000+	1%	1%
Product type	Apparel	42%	4%
	Food	45%	55%
	Jewellery	34%	23%
	Beauty Products	39%	47%
	Digital Products	42%	52%
	Bag Accessories	44%	29%
	Home Textile	21%	20%
	Electrical Appliances	23%	31%
	Others	95%	97%

Table 1: Demographic Data

Table 1 above shows that there are 6 demographic categories: age, gender, education, income and product type. The first section is the age of the respondents in the UK and China. Overall, the age range of respondents to the questionnaire invited for this questionnaire age ranges from 18 to 56+. The largest age group of respondents from the UK and China in the questionnaire is aged between 26-35 years old, with 41%(UK) and 34% (China). The second largest age group of respondents is between 36-45 years old in UK and China, with 35% (UK) and 34% (China). The third age group of respondents is between 46-55 years old in the UK, with 42% and 18-25 years old in China, with 18%. The fourth largest age group of respondents in the UK is between 18-25 years old, with 9%, and in China, is age between 46-66, with 15%. Last, the smallest age group of respondents in the UK and China are aged over 56 years old, with 3% in the UK and 2% in China. So, the largest age group of respondents is between 26-36 years old in both countries.

The second section is the gender distribution. There are 300 people in the UK and 300 people in China who completed in this part of the questionnaire. Generally, there are 3 answers to this question: Male, Female, and Prefer not to say. There are 59% of females and 41% of males who participated in this online questionnaire in the UK, and 52% of females, 36% of males, and 12% of people chose to prefer not to say in China.

The third section is the educational level of the participants, where the largest group is the Undergraduate level with 50% in the UK and 37% in China, and the second largest group of educational backgrounds is the college level with 28% in the UK and 27% in China. The third largest group is the participants in the UK with postgraduate level, with 13% and the third largest education level group in China is the education

level is secondary school, with 16% in China. The smallest group is the participants who only received a secondary school background, with 9% in the UK, while in China is postgraduate education level with 8%.

The fourth section is the income of the respondents in the UK and China. In this questionnaire, the income of the respondents is divided into five parts. The first level present people's income $\leq$ £500 pounds | ¥4500, This income level is mostly for students who don't have a stable income and mainly rely on family's support. second level represents income £501-1,000 | ¥4,500-9,000, third level represents people's income between £1,000-1,500 | ¥9,009-13,500 and fourth level represents people's income between £1,501-2,000 | ¥13,509 -18,000. The fifth level represents people's income $\geq$ 2000 | ¥16,000.

In general, the largest income group is participants' income between £1,000-1,500 | ¥9,009-13,500, which occupied 35% of the United Kingdom's, while 41% of Chinese participants' income is between £501-1,000 | ¥4,500-9,000. The second largest income group is participants' income is between £501-1,000 | ¥4,500-9,000 the UK occupied 34%, while the participants' income between £1,000-1,500 | ¥9,009-13,500 occupied the second largest group for China with 40%. The third largest income group in UK is respondents' income between £1,501-2,000 | ¥13,509 -18,000, which occupied 17%, while participants' income between £501-1,000 | ¥4,500-9,000 occupied third largest part for China's Participants with 19%. The fourth part is participants' income between £501-1,000 | ¥4,500-9,000 occupied 14% in the UK, and the fifth income group is people's income with $\geq$ 2000 | ¥16,000, in the United Kingdom and China, both occupied 1%.

The sixth section is product type; it is a multiple-choice question. There are 9 different options provided in the questionnaire. Including apparel, food, Jewellery, Beauty Products, Bag Accessories, Home Textiles, Electrical Appliances and others. The most popular product among UK and China participants is food, which occupied 45% in UK and 55% in China. Then the second largest option in UK is Bag Accessories with 44% while in China it is Digital Products with 52%. The third most popular option in UK is Apparel and Digital Products with 42% while in China, it is Beauty Products with 47%. The fourth most popular option in UK is Beauty Products with 39% while in China it is Electrical Appliances with 31%. The fifth most popular option in the UK is Jewellery with 34% and in China is Bag Accessories with 29%. The sixth most popular option in the UK is Electrical Applications with 23% then the China is Jewellery 23%. The seventh most popular option in the UK and China is Home Textile UK occupied 21% then China occupied 20%. The eighth most popular option in China is Apparel with 4%. Lastly, 95% of UK participants chose other product type and 97% China participants chose other product type.

4.4 Descriptive Statistics

4.4.1 Normality

According to Hair et al (2019) the reliability of multivariate analysis techniques largely depends on successfully meeting foundational assumptions: normality, ensuring data follows a Gaussian distribution. To uphold the validity of the statistical methods employed in this research, comprehensive tests to verify these assumptions were executed for each individual construct involved in the research.

Normality in statistical analysis refers to the extent to which the data distribution of each variable under study conforms to a theoretical normal distribution (Hair et al

2019). The concept of non-normality is evaluated based on two critical factors: the geometric shape of the data distribution and the overall sample size according to Hair et al (2019). Specifically, the shape of a distribution is determined by calculating its kurtosis and skewness metrics. In an ideal scenario for a normal distribution, both the kurtosis and skewness values are expected to be 0, indicating perfect symmetry. Values diverging from 0 signify non-normality, indicating the presence of a skewed or excessively peaked distribution (Hair et al., 2019). Also, small deviations from 0 do not necessarily indicate serious non-normality, especially in larger samples. It may also be helpful to note the thresholds often cited in the literature (e.g. ± 1 or ± 2) for determining acceptable levels of skewness and kurtosis in practice (Hair et al., 2019).

Moreover, to rigorously test for deviations from normality, statistical tests such as the Kolmogorov-Smirnov test (commonly referred to as the KS test) are utilised (Hair et al., 2019). This particular test is designed to evaluate the hypothesis that an observed distribution significantly differs from a normal distribution. Thus, when the results of the KS test are statistically significant, they point to a substantial variation from normality, confirming the data's non-adherence to the normal distribution model (Hair et al., 2019). This thorough approach helps in understanding the extent of non-normality and guides their analytical strategies accordingly.

In this investigation, histograms were constructed for each variable using SPSS, which illustrated deviations from the zero benchmark typically expected for kurtosis and skewness measures. Despite these deviations, the negative impact of non-normality can be substantially minimised in the presence of a large sample size. As noted by Hair et al (2019), for sample sizes exceeding 200, the repercussions of non-normality

are often negligible. With a sample size of 600 consists of two distinct sub-groups UK and China, 300 each in this research, the effects of non-normality are considered to be minimal. The Kolmogorov-Smirnov test produced significant results, prompting the need for additional investigations. Descriptive statistics in both countries indicated both positive and negative values for skewness and kurtosis across different variables, though these values remained below the critical thresholds proposed by Bao (2013) and Hair et al (2019). An exhaustive exploration of the descriptive statistics post-factor analysis is thoroughly documented in section 5.5, descriptive analysis of the research, providing a deep dive into the underlying data characteristics and their implications for the research findings.

4.4.2 Descriptive Data

Table 2 below presents the descriptive statistics for the construct Streamer's Attributes, measured across both the UK and China samples. This construct encompasses three subdimensions: Attractiveness, Trustworthiness, and Expertise, each operationalised using multiple items (e.g., ATTR_1 to EXPE_4). The total number of valid responses is 300 per country, ensuring balanced representation and adequate sample size for statistical reliability and generalisability.

Variable	N	Mean	Std. Deviation	Skewness	Kurtosis
Streamer's Attributes (UK)	300	4.36	0.87	1.510	-.311
ATTR_1	300	4.36	0.87	1.510	-.311

ATTR_2	300	4.20	0.87	1.514	-.267	.141	-.436	.281
ATTR_3	300	4.49	0.91	1.568	-.243	.141	-.646	.281
ATTR_4	300	4.51	0.94	1.629	-.296	.141	-.781	.281
TRUS_1	300	4.51	0.84	1.450	-.295	.141	-.531	.281
TRUS_2	300	4.42	0.88	1.531	-.275	.141	-.585	.281
TRUS_3	300	4.62	0.93	1.616	-.396	.141	-.632	.281
TRUS_4	300	4.65	0.84	1.461	-.334	.141	-.350	.281
TRUS_5	300	4.59	0.81	1.405	-.327	.141	-.370	.281
EXPE_1	300	4.41	0.83	1.438	-.195	.141	-.566	.281
EXPE_2	300	4.31	0.89	1.544	-.211	.141	-.595	.281
EXPE_3	300	4.58	0.91	1.583	-.243	.141	-.738	.281
EXPE_4	300	4.63	0.92	1.599	-.388	.141	-.577	.281

Streamer's

Attributes (China)

ATTR_1	300	4.22	.091	1.573	-.021	.141	-.703	.281
ATTR_2	300	4.25	.093	1.603	.110	.141	-.754	.281
ATTR_3	300	4.37	.094	1.624	-.236	.141	-.578	.281
ATTR_4	300	4.40	.089	1.536	-.157	.141	-.649	.281
TRUS_1	300	4.09	.092	1.594	-.013	.141	-.702	.281
TRUS_2	300	4.17	0.95	1.652	-.008	.141	-.753	.281
TRUS_3	300	3.95	.096	1.654	.152	.141	-.698	.281
TRUS_4	300	4.24	0.89	1.548	-.075	.141	-.707	.281
TRUS_5	300	4.28	.091	1.576	-.094	.141	-.720	.281
EXPE_1	300	4.20	0.87	1.510	.132	.141	-.715	.281

EXPE_2	300	4.22	0.96	1.655	-.002	.141	-.889	.281
EXPE_3	300	4.33	0.95	1.651	-.099	.141	-.710	.281
EXPE_4	300	4.33	.090	1.554	.047	.141	-.738	.281

Table 2: Descriptive Data Streamer's Attributes UK & China

Across both datasets, the mean scores for all measurement items fall within a narrow range, generally above 4 on a 5-point Likert scale. This suggests a consistently favourable perception of streamer attributes among participants. For example, in the UK sample, item means range from 4.20 (ATTR_2) to 4.65 (TRUS_4), while in the Chinese sample, the corresponding range spans from 3.95 (TRUS_3) to 4.40 (ATTR_4). This pattern reflects a broadly positive evaluation of streamers in both markets, albeit with slightly lower means observed in the Chinese context.

Standard deviations are also relatively consistent within and between the two samples. The UK sample shows standard deviations ranging from 1.405 to 1.629, while the China sample ranges from 1.510 to 1.655. These values indicate moderate variability around the mean, implying that while overall perceptions were positive, individual evaluations still exhibited a degree of dispersion—suitable for further multivariate analysis (MacGillivray, 1986; Bao, 2013).

To assess the assumption of univariate normality, skewness and kurtosis values were examined. Skewness evaluates the symmetry of the data distribution. In the UK sample, skewness values range from -0.396 (TRUS_3) to -0.195 (EXPE_1), and in the China sample from -0.236 (ATTR_3) to 0.152 (TRUS_3). All values fall within the accepted threshold of ± 2.7 (MacGillivray, 1986; Bao, 2013), suggesting that the data

distributions are sufficiently symmetric to support parametric statistical techniques (Kozłowski & Gawelczyk, 2002).

Kurtosis, which reflects the 'tailedness' or peakedness of a distribution, was similarly within acceptable limits. UK items ranged from -0.781 to -0.370, while Chinese items ranged from -0.889 to -0.578. These values are well below the recommended threshold of 5.0 for acceptable kurtosis (Negarestani et al., 2019; Chen & Genton, 2023).

Low to moderate kurtosis indicates that the data do not display extreme outliers or flatness that would compromise the validity of statistical inference outliers (Ruppert, 1987; Balanda & Macgillivray, 1990).

It is important to note that while formal normality tests such as the Kolmogorov–Smirnov or Shapiro–Wilk tests were not applied, skewness and kurtosis provide sufficient effect-size-based evidence of normality, especially given the large sample size ($N = 600$ total). In large samples, even minor deviations from normality can lead to statistically significant results in formal normality tests, which is why skewness and kurtosis are preferred for assessing distributional shape in this context (Negarestani et al., 2019; Chen & Genton, 2023).

In conclusion, the descriptive statistics confirm that the dataset is suitable for subsequent analyses such as structural equation modelling. Both central tendency and dispersion measures reflect coherent and valid patterns across samples, while

the skewness and kurtosis statistics support the assumption of univariate normality required for PLS-SEM.

Table 3 below presents the descriptive statistics for the construct Streamer's Attributes, encompassing three core dimensions—Attractiveness, Trustworthiness, and Expertise—measured by 13 items (ATTR_1 to EXPE_4) in both UK and Chinese samples. Each country sample consists of 300 valid cases, enabling cross-cultural comparability.

Variable	N	Mean	Std.	Skewness	Kurtosis
			Deviation		
			on		
Sense of Presence (UK)	Statistic	Statistic	Std. Error	Statistic	Std. Error
ATTR_1	300	4.36	0.87	1.510	-.311
ATTR_2	300	4.20	0.87	1.514	-.267
ATTR_3	300	4.49	0.91	1.568	-.243
ATTR_4	300	4.51	0.94	1.629	-.296
TRUS_1	300	4.51	0.84	1.450	-.295
TRUS_2	300	4.42	0.88	1.531	-.275
TRUS_3	300	4.62	0.93	1.616	-.396
TRUS_4	300	4.65	0.84	1.461	-.334
TRUS_5	300	4.59	0.81	1.405	-.327
EXPE_1	300	4.41	0.83	1.438	-.195

EXPE_2	300	4.31	0.89	1.544	-.211	.141	-.595	.281
EXPE_3	300	4.58	0.91	1.583	-.243	.141	-.738	.281
EXPE_4	300	4.63	0.92	1.599	-.388	.141	-.577	.281
Sense	of							
Presence								
(China)								
ATTR_1	300	4.22	.091	1.573	-.021	.141	-.703	.281
ATTR_2	300	4.25	.093	1.603	.110	.141	-.754	.281
ATTR_3	300	4.37	.094	1.624	-.236	.141	-.578	.281
ATTR_4	300	4.40	.089	1.536	-.157	.141	-.649	.281
TRUS_1	300	4.09	.092	1.594	-.013	.141	-.702	.281
TRUS_2	300	4.17	0.95	1.652	-.008	.141	-.753	.281
TRUS_3	300	3.95	.096	1.654	.152	.141	-.698	.281
TRUS_4	300	4.24	0.89	1.548	-.075	.141	-.707	.281
TRUS_5	300	4.28	.091	1.576	-.094	.141	-.720	.281
EXPE_1	300	4.20	0.87	1.510	.132	.141	-.715	.281
EXPE_2	300	4.22	0.96	1.655	-.002	.141	-.889	.281
EXPE_3	300	4.33	0.95	1.651	-.099	.141	-.710	.281
EXPE_4	300	4.33	.090	1.554	.047	.141	-.738	.281

Table 3: Descriptive Data Sense of Presence UK & China

In the UK dataset, mean values range from 4.20 (ATTR_2) to 4.65 (TRUS_4), indicating generally high evaluations of streamer characteristics. Standard deviations span from 1.405 (TRUS_5) to 1.629 (ATTR_4), suggesting moderate variability in perceptions. In the Chinese sample, item means vary from 3.95 (TRUS_3) to 4.40

(ATTR_4), with standard deviations between 1.510 (EXPE_1) and 1.655 (EXPE_2), reflecting slightly greater dispersion than in the UK sample.

To assess univariate normality, skewness and kurtosis were examined. Skewness values for UK items range between -0.396 (TRUS_3) and -0.195 (EXPE_1), while those for China fall between -0.236 (ATTR_3) and 0.152 (TRUS_3). These figures are within acceptable bounds for approximate normality (i.e., ± 2.7 ; MacGillivray, 1986). Kurtosis values for UK items lie between -0.781 (ATTR_4) and -0.350 (TRUS_4), whereas Chinese values range from -0.889 (EXPE_2) to -0.578 (ATTR_3), all falling below the threshold of 5.0 (Ruppert, 1987; Balanda & MacGillivray, 1990).

These indicators suggest symmetric distributions without excessive peakedness or flatness. The data were thus deemed appropriate for use in subsequent parametric statistical analyses.

Table 4 below presents the descriptive statistics for the construct Congruence, comprising three subdimensions: Follower–Brand Congruence (FBC_1 to FBC_7), Streamer–Brand Congruence (SBC_1 to SBC_4), and Streamer–Follower Congruence (SFC_1 to SFC_8). The dataset includes responses from 300 participants in both the United Kingdom and China, facilitating comparative analysis across national contexts.

Variable	N	Mean	Std. Deviation	Skewness	Kurtosis
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Congruence (UK)	Stati stic	Statistic	Std. Erro r	Statisti c	Statisti c	Std. Erro r	Statis tic	Std. Error
FBC_1	300	4.32	.089	1.545	-.191	.141	-.737	.281
FBC_2	300	4.18	.087	1.512	-.057	.141	-.520	.281
FBC_3	300	4.56	.094	1.621	-.235	.141	-.730	.281
FBC_4	300	4.38	.087	1.506	-.234	.141	-.570	.281
FBC_5	300	4.42	.089	1.540	-.174	.141	-.551	.281
FBC_6	300	4.37	.090	1.554	-.153	.141	-.631	.281
FBC_7	300	4.44	.089	1.545	-.209	.141	-.741	.281
SBC_1	300	4.58	.089	1.536	-.346	.141	-.552	.281
SBC_2	300	4.55	.087	1.506	-.439	.141	-.217	.281
SBC_3	300	4.80	.091	1.577	-.310	.141	-.722	.281
SBC_4	300	4.55	.092	1.599	-.376	.141	-.524	.281
SFC_1	300	4.32	.084	1.448	-.219	.141	-.625	.281
SFC_2	300	4.30	.089	1.533	-.066	.141	-.852	.281
SFC_3	300	4.49	.093	1.612	-.277	.141	-.591	.281
SFC_4	300	4.48	.086	1.498	-.334	.141	-.400	.281
SFC_5	300	4.37	.082	1.424	-.099	.141	-.452	.281
SFC_6	300	4.33	.091	1.582	-.199	.141	-.625	.281
SFC_7	300	4.40	.091	1.579	-.093	.141	-.831	.281
SFC_8	300	4.30	.086	1.496	-.145	.141	-.671	.281
Congruence (China)								
FBC_1	300	4.17	.085	1.479	.104	.141	-.533	.281

FBC_2	300	4.43	.092	1.587	-.208	.141	-.791	.281
FBC_3	300	4.19	.092	1.591	-.075	.141	-.662	.281
FBC_4	300	4.20	.094	1.620	-.133	.141	-.678	.281
FBC_5	300	4.31	.092	1.600	-.017	.141	-.757	.281
FBC_6	300	4.41	.096	1.667	-.079	.141	-.829	.281
FBC_7	300	4.40	.091	1.569	-.139	.141	-.617	.281
SBC_1	300	4.25	.092	1.606	-.150	.141	-.642	.281
SBC_2	300	4.32	.091	1.581	-.061	.141	-.743	.281
SBC_3	300	4.28	.092	1.593	-.136	.141	-.658	.281
SBC_4	300	4.20	.093	1.614	-.214	.141	-.741	.281
SFC_1	300	4.20	.088	1.532	0.20	.141	-.624	.281
SFC_2	300	4.22	.087	1.513	-.051	.141	-.558	.281
SFC_3	300	4.24	.089	1.548	-.036	.141	-.825	.281
SFC_4	300	4.28	.085	1.474	-.133	.141	-.633	.281
SFC_5	300	4.33	.084	1.458	-.145	.141	-.415	.281
SFC_6	300	4.37	.088	1.523	-.110	.141	-.624	.281
SFC_7	300	4.28	.086	1.489	-.079	.141	-.468	.281
SFC_8	300	4.29	.087	1.512	-.110	.141	-.649	.281

Table 4: Descriptive Data Congruence in UK and China

In the UK sample, the item means range from 4.18 (FBC_2) to 4.80 (SBC_3), suggesting generally high levels of perceived congruence. The corresponding standard deviations range from 1.424 (SFC_5) to 1.621 (FBC_3), reflecting moderate dispersion. The standard error of the mean ranges between 0.082 and 0.094, indicating acceptable estimation precision across all items.

Skewness values in the UK data range from -0.439 (SBC_2) to -0.057 (FBC_2), all of which fall within the accepted ± 2.7 threshold (MacGillivray, 1986), indicating symmetrical distributions. Kurtosis values range from -0.852 (SFC_2) to -0.217 (SBC_2), remaining well below the critical value of 5.0, as proposed by Balanda and MacGillivray (1990), thereby confirming the absence of excessive tail weight.

In the China sample, item means range from 4.17 (FBC_1) to 4.44 (FBC_2), slightly lower than those in the UK. Standard deviations fall between 1.458 (SFC_5) and 1.667 (FBC_6), while standard errors range from 0.085 to 0.096, similarly indicating strong sampling precision.

Skewness statistics for the China sample range from -0.214 (SFC_2) to 0.20 (SFC_1), suggesting no substantial asymmetry in the data. The kurtosis statistics range from -0.829 (FBC_6) to -0.415 (SFC_6), confirming appropriate distributional peakedness within the acceptable range.

Collectively, the results confirm that the Congruence items in both countries exhibit acceptable levels of central tendency, dispersion, and normality, thereby validating their inclusion in subsequent structural model testing.

Table 5 below presents the descriptive statistics for the construct Dynamic Brand Experiences, assessed across two national contexts: the United Kingdom and China. The construct encompasses six dimensions—Behavioural (BEHA), Intellectual (INTE), Sensory (SEN), Cognitive (CON), and Relational experiences (RE) — represented by 18 individual items in each dataset.

Variable	N	Mean	Std. Deviation	Skewness	Kurtosis
Dynamic Experiences (UK)	Band	Statistic	Std. Error	Statistic	Std. Error
BEHA_1	300	4.46	.085	1.470	-.282
BEHA_2	300	4.43	.092	1.587	-.158
INTE_1	300	4.49	.082	1.427	-.273
INTE_2	300	4.36	.087	1.511	-.165
INTE_3	300	4.60	.092	1.586	-.183
INTE_4	300	4.47	.091	1.575	-.153
SEN_1	300	4.43	.085	1.478	-.362
SEN_2	300	4.27	.088	1.522	-.058
SEN_3	300	4.49	.089	1.548	-.299
SEN_4	300	4.55	.088	1.526	-.298
SEN_5	300	4.43	.083	1.432	-.216
CON_1	300	4.49	.088	1.531	-.230
CON_2	300	4.37	.095	1.637	-.267
CON_3	300	4.49	.093	1.605	-.231
RE_1	300	4.56	.087	1.510	-.238
RE_2	300	4.48	.089	1.533	-.341
RE_3	300	4.58	.089	1.543	-.342
Dynamic Experiences	Brand				

(China)								
BEHA_1	300	4.35	.094	1.621	.138	.141	-.709	.281
BEHA_2	300	4.53	.092	1.587	-.112	.141	-.797	.281
INTE_1	300	4.21	.088	1.530	0.07	.141	-.651	.281
INTE_2	300	4.32	.091	1.570	-.057	.141	-.829	.281
INTE_3	300	4.24	.094	1.627	-.271	.141	-.694	.281
INTE_4	300	4.45	.090	1.562	-.206	.141	-.805	.281
SEN_1	300	4.42	.088	1.520	-.074	.141	-.623	.281
SEN_2	300	4.44	.090	1.554	-.174	.141	-.729	.281
SEN_3	300	4.50	.090	1.566	-.334	.141	-.682	.281
SEN_4	300	4.45	.093	1.619	-.158	.141	-.751	.281
SEN_5	300	4.48	.088	1.525	-.173	.141	-.729	.281
CON_1	300	4.27	.090	1.561	-.164	.141	-.784	.281
CON_2	300	4.24	.089	1.545	-.075	.141	-.668	.281
CON_3	300	4.34	.095	1.652	-.148	.141	-.735	.281
RE_1	300	4.36	.092	1.602	-.253	.141	-.685	.281
RE_2	300	4.54	.088	1.523	-.328	.141	-.451	.281
RE_3	300	4.41	.092	1.591	-.289	.141	-.619	.281

Table 5: Descriptive Data Dynamic Brand Experiences in UK and China

In the UK sample, the item means range from 4.27 (SEN_2) to 4.60 (INTE_3), indicating generally positive evaluations of dynamic brand experiences among participants. The standard deviations range from 1.427 (INTE_1) to 1.637 (CON_2), suggesting a moderate degree of variability in responses. The standard errors for the

means lie between 0.082 and 0.095, demonstrating high measurement precision across all items.

Skewness values for UK items vary from -0.362 (SEN_1) to -0.058 (SEN_2). All skewness values fall within the conventional threshold of ± 2.7 , indicating that the data distributions do not exhibit problematic asymmetry (MacGillivray, 1986). Kurtosis values in the UK range from -0.787 (INTE_3) to -0.440 (SEN_1), all below the benchmark of 5.0 (Balanda & MacGillivray, 1990), confirming the absence of heavy tails or extreme outliers in the distribution.

In the China sample, item means range from 4.21 (INTE_1) to 4.54 (RE_2), slightly narrower in dispersion compared to the UK. Standard deviations range from 1.520 (SEN_1) to 1.652 (CON_3). The standard error of the mean ranges from 0.088 to 0.095, suggesting reliable parameter estimates for sample means.

Skewness values in the China dataset fall between -0.334 (SEN_3) and +0.138 (BEHA_1), all well within acceptable bounds, indicating approximately symmetrical data. Kurtosis values range from -0.829 (INTE_2) to -0.451 (RE_2), demonstrating acceptable tail thickness and supporting assumptions of univariate normality.

Taken together, the results indicate that the Dynamic Brand Experiences construct exhibits sound psychometric properties in both national contexts. The consistency of mean levels, standard deviations, and normality indicators supports the validity of these items for subsequent PLS-SEM analysis and multi-group comparisons.

Table 6 below presents the descriptive statistics for the Follower Engagement (FE) construct, comprising six observed indicators (FE_1 to FE_6), derived from 300 responses in both the United Kingdom and China samples. The analysis includes metrics such as mean, standard deviation, standard error, skewness, and kurtosis, which collectively assess the central tendency, dispersion, and univariate normality of the data.

Variable	N	Mean	Std.	Skewness	Kurtosis
			Deviation		
Follower	Statistic	Statistic	Std. Error	Statistic	Std. Error
Engagement (UK)					
FE_1	300	4.29	.085	1.479	-.122
FE_2	300	4.32	.086	1.516	-.113
FE_3	300	4.42	.093	1.614	-.165
FE_4	300	4.37	.090	1.563	-.160
FE_5	300	4.34	.088	1.523	-.108
FE_6	300	4.45	.088	1.528	-.176
Follower					
Engagement (China)					
FE_1	300	4.27	.082	1.423	-.156
FE_2	300	4.46	.086	1.493	-.160
FE_3	300	4.37	.088	1.530	-.201

FE_4	300	4.37	.088	1.530	-.122	.141	-.509	.281
FE_5	300	4.36	.094	1.460	-.111	.141	-.478	.281
FE_6	300	4.35	.094	1.621	-.121	.141	-.834	.281

Table 6: Descriptive Data Follower Engagement in UK and China

In the UK dataset, item means range from 4.29 (FE_1) to 4.45 (FE_6), suggesting that UK participants reported relatively high levels of engagement with live streamers. The standard deviations fall within the range of 1.479 (FE_1) to 1.614 (FE_3), while standard errors range narrowly between 0.085 and 0.093, demonstrating robust measurement precision.

The skewness statistics for the UK sample range from -0.122 (FE_1) to -0.176 (FE_6), indicating a slight negative skew, which reflects a modest tendency for respondents to select higher agreement responses. All values fall comfortably within the ± 2.7 threshold (MacGillivray, 1986), suggesting the data is approximately symmetrical. Kurtosis values range from -0.603 (FE_4) to -0.722 (FE_3), again within acceptable limits (< 5.0), indicating no substantial issues related to peakedness or outliers (Balanda & MacGillivray, 1990).

In the China sample, item means range from 4.27 (FE_1) to 4.46 (FE_2), which aligns closely with the UK range and reflects consistent engagement levels. The standard deviations vary from 1.423 (FE_1) to 1.621 (FE_6), while standard errors lie between 0.082 and 0.094, confirming reliability in parameter estimation.

Skewness values for the Chinese sample range from -0.201 (FE_3) to -0.111 (FE_5), all of which suggest slight negative asymmetry but no violations of normality. Kurtosis values span from -0.341 (FE_1) to -0.834 (FE_6), again satisfying the criteria for univariate normality.

In sum, the descriptive data indicate strong internal consistency and no substantial departures from normality in either national context. These results provide a sound foundation for proceeding with latent variable modeling and multi-group analysis in the structural equation modeling phase.

Table 7 below displays the descriptive statistics for the Impulse Buying (IB) construct, which consists of four observed indicators (IB_1 to IB_4), across both the UK and China samples (N = 300 per country). The statistics include mean, standard deviation, standard error, skewness, and kurtosis, offering a comprehensive understanding of the data distribution and aiding in the assessment of univariate normality.

Variable	N	Mean	Std. Deviation	Skewness	Kurtosis
Impulse Buying (UK)					
IB_1	300	4.39	.089	1.544	-.255
IB_2	300	4.26	.094	1.627	-.148
IB_3	300	4.46	.098	1.691	-.095

IB_4	300	4.43	.094	1.623	-.316	.141	-.663	.281
Impulse Buying								
(China)								
IB_1	300	4.20	.082	1.537	.016	.141	-.647	.281
IB_2	300	4.23	.086	1.539	-.114	.141	-.665	.281
IB_3	300	4.28	.088	1.609	-.201	.141	-.777	.281
IB_4	300	4.24	.088	1.504	-.029	.141	-.540	.281

Table 7: Descriptive Data Impulse Buying in UK and China

In the UK sample, the item means range from 4.26 (IB_2) to 4.46 (IB_3), suggesting relatively high self-reported impulse buying tendencies among UK respondents. Standard deviations span from 1.544 to 1.691, while standard errors range between 0.089 and 0.098, indicating a high degree of measurement precision across indicators.

The skewness values for UK items range from -0.316 (IB_4) to -0.095 (IB_3). All skewness values are negative but well within the acceptable ± 2.7 range (MacGillivray, 1986), suggesting slight left-skewed distributions where higher response values are more common. The kurtosis values fall between -0.926 (IB_3) and -0.663 (IB_4), all comfortably below the threshold of 5.0 (Ruppert, 1987; Balanda & MacGillivray, 1990), indicating no issues with tail thickness or outlier presence.

In the China sample, the mean values range from 4.20 (IB_1) to 4.28 (IB_3), with slightly lower averages compared to the UK. Standard deviations lie between 1.504 (IB_4) and 1.609 (IB_3), while standard errors range narrowly from 0.082 to 0.088, reflecting consistent reliability in estimation.

Skewness values in the Chinese dataset range from 0.016 (IB_1) to -0.201 (IB_3), indicating distributions that are nearly symmetric or mildly skewed toward lower values. Similarly, kurtosis values range from -0.777 (IB_3) to -0.540 (IB_4), all well within acceptable parameters.

Overall, all impulse buying indicators for both the UK and China demonstrate acceptable skewness and kurtosis, affirming univariate normality and supporting the suitability of the data for further statistical analysis, including SEM-based modeling.

4.4.3 *Normality*

Assessing the normality of the dataset is a critical step in determining the suitability of subsequent statistical analyses, particularly when deciding between parametric and non-parametric techniques (Hair et al., 2019). Although Partial Least Squares Structural Equation Modelling (PLS-SEM)—the primary analysis technique used in this study—does not assume multivariate normality, a detailed normality test is still warranted to provide a comprehensive understanding of the data's distribution characteristics and to support robustness checks. This study employed the Kolmogorov–Smirnov (K–S) test, a non-parametric method widely used to assess whether a sample deviates from a standard normal distribution (Bao, 2013).

Items (UK)	Sta	df	SIG.	Items (UK)	Sta	df	SIG.	Items (China)	Sta	df	SIG.	Items (China)	sta	df	SIG.
ATTR_1	.170	300	<.001	FBC_2	.150	300	<.001	ATTR_1	.136	300	<.001	FBC_2	.141	300	<.001
ATTR_2	.182	300	<.001	FBC_3	.148	300	<.001	ATTR_2	.133	300	<.001	FBC_3	.135	300	<.001
ATTR_3	.165	300	<.001	FBC_4	.148	300	<.001	ATTR_3	.136	300	<.001	FBC_4	.143	300	<.001
ATTR_4	.150	300	<.001	FBC_5	.154	300	<.001	ATTR_4	.133	300	<.001	FBC_5	.133	300	<.001
TRUS_1	.145	300	<.001	FBC_6	.130	300	<.001	TRUS_1	.128	300	<.001	FBC_6	.127	300	<.001
TRUS_2	.158	300	<.001	FBC_7	.149	300	<.001	TRUS_2	.140	300	<.001	FBC_7	.132	300	<.001
TRUS_3	.174	300	<.001	SEN_1	.161	300	<.001	TRUS_3	.115	300	<.001	SEN_1	.152	300	<.001
TRUS_4	.149	300	<.001	SEN_2	.134	300	<.001	TRUS_4	.135	300	<.001	SEN_2	.129	300	<.001
TRUS_5	.154	300	<.001	SEN_3	.173	300	<.001	TRUS_5	.128	300	<.001	SEN_3	.159	300	<.001
EXPE_1	.144	300	<.001	SEN_4	.142	300	<.001	EXPE_1	.142	300	<.001	SEN_4	.127	300	<.001
EXPE_2	.152	300	<.001	SEN_5	.171	300	<.001	EXPE_2	.122	300	<.001	SEN_5	.133	300	<.001
EXPE_3	.149	300	<.001	INTE_1	.152	300	<.001	EXPE_3	.137	300	<.001	INTE_1	.127	300	<.001
EXPE_4	.135	300	<.001	INTE_2	.178	300	<.001	EXPE_4	.130	300	<.001	INTE_2	.134	300	<.001

TELE_1	.143	300	<.001	INTE_3	.129	300	<.001	TELE_1	.147	300	<.001	INTE_3	.145	300	<.001
TELE_2	.148	300	<.001	INTE_4	.138	300	<.001	TELE_2	.128	300	<.001	INTE_4	.141	300	<.001
TELE_3	.140	300	<.001	BEHA_1	.173	300	<.001	TELE_3	.150	300	<.001	BEHA_1	.129	300	<.001
TELE_4	.129	300	<.001	BEHA_2	.136	300	<.001	TELE_4	.131	300	<.001	BEHA_2	.130	300	<.001
SC_1	.146	300	<.001	RE_1	.135	300	<.001	SC_1	.140	300	<.001	RE_1	.152	300	<.001
SC_2	.138	300	<.001	RE_2	.179	300	<.001	SC_2	.156	300	<.001	RE_2	.146	300	<.001
SC_3	.142	300	<.001	RE_3	.166	300	<.001	SC_3	.142	300	<.001	RE_3	.158	300	<.001
SC_4	.138	300	<.001	CON_1	.145	300	<.001	SC_4	.139	300	<.001	CON_1	.143	300	<.001
SFC_1	.161	300	<.001	CON_2	.174	300	<.001	SFC_1	.151	300	<.001	CON_2	.149	300	<.001
SFC_2	.139	300	<.001	CON_3	.137	300	<.001	SFC_2	.141	300	<.001	CON_3	.132	300	<.001
SFC_3	.142	300	<.001	FE_1	.134	300	<.001	SFC_3	.132	300	<.001	FE_1	.145	300	<.001
SFC_4	.158	300	<.001	FE_2	.131	300	<.001	SFC_4	.146	300	<.001	FE_2	.143	300	<.001
SFC_5	.157	300	<.001	FE_3	.134	300	<.001	SFC_5	.161	300	<.001	FE_3	.146	300	<.001
SFC_6	.150	300	<.001	FE_4	.141	300	<.001	SFC_6	.135	300	<.001	FE_4	.144	300	<.001

SFC_7	.135	300	<.001	FE_5	.133	300	<.001	SFC_7	.155	300	<.001	FE_5	.142	300	<.001
SFC_8	.136	300	<.001	FE_6	.144	300	<.001	SFC_8	.144	300	<.001	FE_6	.125	300	<.001
SBC_1	.152	300	<.001	IB_1	.168	300	<.001	SBC_1	.131	300	<.001	IB_1	.138	300	<.001
SBC_2	.178	300	<.001	IB_2	.139	300	<.001	SBC_2	.129	300	<.001	IB_2	.132	300	<.001
SBC_3	.143	300	<.001	IB_3	.128	300	<.001	SBC_3	.124	300	<.001	IB_3	.149	300	<.001
SBC_4	.139	300	<.001	IB_4	.152	300	<.001	SBC_4	.142	300	<.001	IB_4	.153	300	<.001
FBC_1	.143	300	<.001					FBC_1	.158	300	<.001				

Table 8: Normality

The Normality Results for UK Sample first part of Table 8 above displays the results of the Kolmogorov–Smirnov test for the UK sample ($N = 300$). This includes observed values for the test statistic (Sta) and the significance level (Sig.) for each indicator across all key constructs, such as:

- Streamer's Attributes (ATTR_1–4)
- Trustworthiness (TRUS_1–5)
- Expertise (EXPE_1–4)
- Telepresence (TELE_1–4)
- Congruence dimensions (Self, Brand, Follower)
- Dynamic Brand Experience dimensions (Behaviour, Interaction, Sensory, Cognition, Reflection)
- Follower Engagement (FE_1–6)
- Impulse Buying (IB_1–4)

All K–S test statistics for the UK range between 0.129 and 0.182, with p-values consistently reported as less than 0.001 ($p < 0.001$). This indicates that for each item, the null hypothesis of normality is rejected at a 99.9% confidence level. These outcomes confirm that the data for each construct significantly deviate from a normal distribution (Bao, 2013, Hair et al., 2019).

This pattern of non-normality is consistent with expectations in consumer behaviour research using Likert-scale instruments, which often yield ordinal, skewed data. While traditionally such deviations might warrant transformation or caution in applying parametric methods, the PLS-SEM approach is known for its tolerance of non-normal data, making it well-suited to this study. Furthermore, the use of bootstrapping in PLS-

SEM helps to generate reliable estimates and standard errors despite the non-normal distribution of input variables.

Normality Results for China Sample, the second half of Table 8 above presents the results of the Kolmogorov–Smirnov test for the China sample ($N = 300$), covering the same constructs and measurement items. The observed test statistics for the Chinese dataset fall within a similar range of 0.115 to 0.159, again with all p -values reported as $p < 0.001$. This demonstrates that the data collected from Chinese participants also significantly deviates from the normal distribution, and the null hypothesis of normality is rejected for all items(Bao, 2013, Hair et al., 2019).

This finding is not unusual in cross-cultural questionnaire research, where cultural response patterns, such as central tendency bias or extreme responding, may further influence the normality of distribution. Nonetheless, the robustness of PLS-SEM in handling non-normal data ensures that this characteristic does not adversely affect the quality or interpretability of the structural model results.

The consistent rejection of normality in both the UK and China datasets underscores the importance of selecting an analytical approach that is robust to distributional assumptions. In this study, the decision to adopt PLS-SEM is reinforced by these results, as the method does not rely on multivariate normality and is particularly effective for complex models with multiple latent constructs and relatively small-to-moderate sample sizes.

In conclusion, the Kolmogorov–Smirnov test results presented in Table 8 above confirm that the data do not conform to the assumptions of normality. However, this characteristic does not compromise the study's methodological rigour, given the strengths of the PLS-SEM framework employed. These findings also reflect broader patterns observed in behavioural and marketing research using subjective assessments measured via Likert-type items.

4.5 Confirmatory Factor Analysis

Exploratory Factor Analysis assists researchers in determining the appropriate number of factors needed to represent collected data by analysing factor loadings. In contrast, Confirmatory Factor Analysis differs from Exploratory Factor Analysis because it requires the researcher to specify both the number of factors and the specific items that load onto each factor based on theoretical frameworks (Hair et al., 2019). Confirmatory Factor Analysis enables the validation or rejection of a theory by assessing how well the theoretically defined factors align with the actual data. Therefore, Confirmatory Factor Analysis is grounded in measurement theory, where predefined factors or conceptual constructs are incorporated into the measurement model (Hair et al., 2019). According Hair et al (2019), the process of conducting Exploratory Factor Analysis involves several steps:

- **Measurement Model Development:** Establishing the initial model based on theoretical foundations.
- **Measurement Model Specification and Identification:** Defining the model's structure and ensuring it is statistically identifiable.
- **Model Fit Measurement and Assessment:** Evaluating how well the model fits the collected data using fit indices.

- Model Validity Measurement and Assessment: Testing for reliability and validity to confirm that the model accurately measures the intended constructs.

4.5.1 *Factor Loadings*

The appropriate factor extraction and rotation methods have been applied; the interpretation of the factors relies heavily on distinguishing them based on their factor loadings. These loadings are essentially the correlation coefficients between each item and the identified factor, providing a measure of how strongly each item is associated with a particular factor. Generally, factor loadings that fall within the range of $\pm.30$ to $\pm.40$ are considered adequate for a reliable interpretation of the factor structure. However, loadings that reach or exceed $\pm.50$ are regarded as having practical significance, indicating a strong relationship between the factor and the item (Peterson, 2000; Sass, 2010).

Furthermore, the significance of these factor loadings can also be influenced by the sample size utilised in the study, as noted by Pallant (2020). According to their guidelines, a factor loading of $.30$ is significant when the sample size is at least from 3 to 20 times the number of variables (Mundfrom, Shaw & Ke, 2005). This criterion is relevant to this study, which has a sample size of 600, closely aligning with the threshold suggested by Pallant (2020). Despite this guideline, the current study opts for a higher threshold, considering factor loadings of $.40$ as the benchmark for significance in the context of exploratory factor analysis. This decision is based on the specific analytical goals and the nature of the data under examination, emphasising a more stringent criterion for defining significant relationships within the factor analysis framework Pallant (2020).

The factor loadings are shown below (Table 9), to summarise, in terms of outcomes, 6 factors were extracted, guided by eigenvalues greater than 1.0 and visual inspection of the scree plot. These factors collectively explained 70.6% in China and 75.75% in the UK of the total variance, indicating a satisfactory level of explanatory power. In addition, all items reached the minimum level of factor loading value of 0.4, so no items were removed.

The final factor solution displayed clean and interpretable loading structures, with each retained item strongly loading onto its intended construct. For example, items ATTR_1 to ATTR_5 loaded onto the Streamer's Attributes factor with loadings ranging from .671 to .974 in the UK and .664 to .751 in China. While items TELE_1 to TELE_4 and SC_1 to SC_4 were loaded onto the Sense of Presence factor. These results confirm that the constructs are reliably measured and that the instrument captures the intended theoretical dimensions with acceptable psychometric properties. This rigorous refinement process through factor analysis thus laid a solid foundation for the subsequent stages of the analysis, ensuring the robustness and validity of the constructs used in the structural model.

	UK	China
ATTR_1	.794	.751
ATTR_2	.671	.710
ATTR_3	.703	.681
ATTR_4	.769	.664
TRUS_1	.751	.749
TRUS_2	.694	.702
TRUS_3	.725	.691
TRUS_4	.709	.698
TRUS_5	.729	.707
EXPE_1	.787	.745
EXPE_2	.711	.701
EXPE_3	.731	.705
TELE_1	.828	.705
TELE_2	.683	.707
TELE_3	.740	.626
TELE_4	.776	.691
SC_1	.788	.712
SC_2	.745	.618
SC_3	.726	.688
SC_4	.774	.727

	UK	China
SFC_1	.707	.520
SFC_2	.683	.593
SFC_3	.662	.557
SFC_4	.649	.602
SFC_5	.650	.507
SFC_6	.691	.529
SFC_7	.678	.530
SFC_8	.707	.596
SBC_1	.775	.738
SBC_2	.665	.650
SBC_3	.728	.625
SBC_4	.779	.664
FBC_1	.735	.621
FBC_2	.678	.606
FBC_3	.674	.659
FBC_4	.726	.627
FBC_5	.684	.630
FBC_6	.672	.575
FBC_7	.699	.606

	UK	China
SEN_1	.743	.678
SEN_2	.719	.574
SEN_3	.662	.673
SEN_4	.762	.611
SEN_5	.689	.674
INTE_1	.766	.682
INTE_2	.701	.637
INTE_3	.748	.686
INTE_4	.750	.671
BEHA_1	.816	.813
BEHA_2	.845	.749
RELA_1	.789	.743
RELA_2	.756	.667
RELA_3	.736	.667
CONS_1	.801	.698
CONS_2	.777	.678
CONS_3	.761	.719

	UK	China
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	UK	China
IM_1	.879	.790
IM_2	.859	.790
IM_3	.846	.807
IM_4	.878	.790

FE_1	.746	.639
FE_2	.684	.580
FE_3	.711	.602
FE_4	.677	.553
FE_5	.677	.602
FE_6	.685	.588

Table 9: Factor Loadings (China and UK)

4.5.2 *Cronbach's Alpha Reliability Analysis*

Reliability analysis is an essential component of research that assesses the consistency of a measurement instrument. Reliability analysis is a crucial statistical process used to measure the consistency and stability of a measurement instrument over time. One of the most common methods for evaluating reliability is the calculation of Cronbach's alpha (George & Mallery, 2019). Cronbach's alpha is a statistic commonly used to measure the internal consistency, or reliability, of a set of scale or test items. Introduced by Cronbach, (1951), this coefficient is a measure of the extent to which all parts or items of a test contribute positively and consistently to the overall test score. Specifically, it assesses how closely related a set of items are as a group (Cronbach, 1951). According to Sijtsma & Pfadt, (2021), if measurements or variables are "parallel," they exhibit equal covariances and variances. In cases where measurements are "essentially tau-equivalent," they do not share equal variances, but their covariances remain consistent (Graham, 2006). Consequently, Sijtsma & Pfadt, (2021) notes that Cronbach's alpha effectively gauges the reliability of either the sum or average of measurements that meet these parallel or less restrictive essentially tau-equivalent conditions. On the other hand, if the measurements are "congeneric" as described, they can be modelled using a single factor with uncorrelated measurement errors. The congeneric assumption is considered more realistic than tau-equivalence because it does not require equal variances or covariances among the measurements (Cho, 2021). The internal consistency of a measurement tool is gauged through the correlations among various items that comprise the same test. Such correlations signify that if multiple items are designed to assess the same underlying construct, they ought to generate comparable scores. To measure this consistency, Cronbach's alpha is utilised, which involves calculating the correlation across all possible pairs of

items within the test. The resulting measure of internal consistency can vary widely, ranging from zero to one, with instances where negative values are observed as well.

This metric is crucial for validating the reliability and coherence of the measurement instruments used in psychological and educational assessments. Psychometric testing, it is generally recognised that the value of Cronbach's alpha serves as a benchmark for assessing the reliability of an instrument. Specifically, a Cronbach's alpha ranging from 0.6 to 0.7 is regarded as indicating an acceptable level of reliability for the tool being evaluated. Values that reach 0.8 or higher are typically viewed as indicative of an excellent reliability standard. Conversely, a Cronbach's alpha exceeding 0.95, although seemingly high, is not always desirable as it may suggest that there is redundancy among the items, which could mean some items are superfluous. This potential issue of redundancy highlights the complexity of designing effective measurement tools (Ursachi, Horodnic & Zait, 2015).

While it would be ideal for all items within a test to uniformly measure the same underlying latent variable, there are numerous instances where Cronbach's alpha might yield higher values, even when the items are actually assessing disparate constructs. This phenomenon highlights some limitations of relying solely on Cronbach's alpha as an indicator of internal consistency (Raykov, 2004; Hayes & Coutts, 2020). In a comprehensive evaluation involving the analysis of hundreds of research articles and several thousand coefficients extracted from them, Peterson, (1994) found that the average value of Cronbach's alpha across various studies is approximately 0.77. This statistic underscores the typical reliability level encountered

in empirical research, reflecting the commonality of the measure but also hinting at the diversity of contexts in which it is applied.

Ursachi, Horodnic & Zait, (2015) offer a widely accepted set of benchmarks. Therefore, targeting a Cronbach's alpha score of approximately 0.8 is often seen as a practical and reasonable objective. Additionally, while a higher Cronbach's alpha indicates a strong internal consistency among the items of the scale, it does not guarantee the scale's one-dimensionality.

Table 10 below shows the results of the reliability test. The reliability test using Cronbach's alpha is used. In this research, there are 6 main variables with a total of 67 items measured, including Streamer's Attributes 13 items, Sense of Presence 8 items, Streamer, Brand, Follower Congruence 19 items, Dynamic Experiences 17 items, Follower Engagement 6 items, and Impulse Buying 4 items and all the variables were tested in 2 countries UK and China.

Research Variables	Number of items	Cronbach's Alpha	
		UK	China
Streamer's Attributes	13	.860	.889
Sense of Presence	8	.838	.826
Streamer, Brand, Follower Congruence	19	.903	.897
Dynamic Experiences	17	.865	.859
Follower Engagement	6	.912	.862

Impulse Buying	4	.888	.805
All Variables	67	.878	.856

Table 10: Cronbach's Alpha Test Results

Regarding the reliability results of Cronbach's alpha, the reliability result for the first variable Streamers' Attributes is .860 in the UK and .889 in China, which is greater than the generally accepted value of 0.7 (Ursachi, Horodnic & Zait, 2015). The Cronbach alpha result of the second variable, Sense of Presence is .838 in the UK and .826 in China; both countries' data are greater than the generally accepted value of 0.7 (Ursachi, Horodnic & Zait, 2015). The Cronbach alpha result of the third variable, Streamer, Brand, Follower Congruence, is .903 in the UK and .897 in China; both countries' data are greater than the generally accepted value of 0.7 (Ursachi, Horodnic & Zait, 2015). The Cronbach alpha result of the fourth variable, Dynamic Experiences, is .865 in the UK and .859 in China, which is greater than the generally accepted value of 0.7 (Ursachi, Horodnic & Zait, 2015). The Cronbach alpha result of the fifth variable, Follower Engagement, is .912 in the UK and .862 in China; both countries' data are greater than the generally accepted value of 0.7 (Ursachi, Horodnic & Zait, 2015). The Cronbach alpha result of the sixth variable, Impulse Buying is .888 in the UK and .805 in China; both countries' data are greater than the generally accepted value of 0.7 (Ursachi, Horodnic & Zait, 2015). Finally, the Cronbach alpha result of all total variables was .878 in the UK and .856 in China, both countries' data greater than the generally accepted value of 0.7 (Ursachi, Horodnic & Zait, 2015)

4.5.3 *Measurement Model Specification*

To develop a measurement model for Confirmatory Factor Analysis, it is essential to ensure unidimensionality, especially when dealing with multiple constructs. This concept means that a set of measured items should align with only one construct (Hair et al., 2019). Additionally, the constructs need to be categorised as either reflective or formative. Reflective measurement models assume that latent constructs influence the observed variables, while formative models suggest that the constructs are defined by their indicators rather than being latent. Errors in a formative measurement model arise from the inability of measured items to fully define the construct (Hair et al., 2019). In this study, the constructs used for CFA are reflective and latent, leading to a design where arrows point from the latent construct to the measured items.

4.5.4 *Assessment of Measurement Model Validity*

Construct validity ensures that the items used in a measurement accurately reflect the intended latent constructs. It is typically evaluated using two main criteria: convergent validity and discriminant validity. Convergent validity assesses how well items correlate with the construct they are meant to represent and is determined by examining factor loadings, average variance extracted, and construct reliability (Hair et al., 2019).

High factor loadings indicate strong convergent validity, signifying that the items are well-aligned with the underlying construct they are meant to measure. As a general guideline, factor loadings above 0.50 are acceptable, though values of 0.70 or higher are preferred. In structural equation modeling software like Stata, these loadings are represented by standardized regression coefficients (Hair et al., 2019).

The average variance extracted is another key metric for assessing convergent validity, representing the mean variance captured by the items relative to the construct. A value greater than 0.50 indicates satisfactory convergence (Hair et al., 2019).

To further confirm convergent validity, construct reliability is used, with values over 0.70 generally signaling strong reliability. However, construct reliability values between 0.60 and 0.70 may still be acceptable if other indicators of convergent validity are strong (Hair et al., 2019).

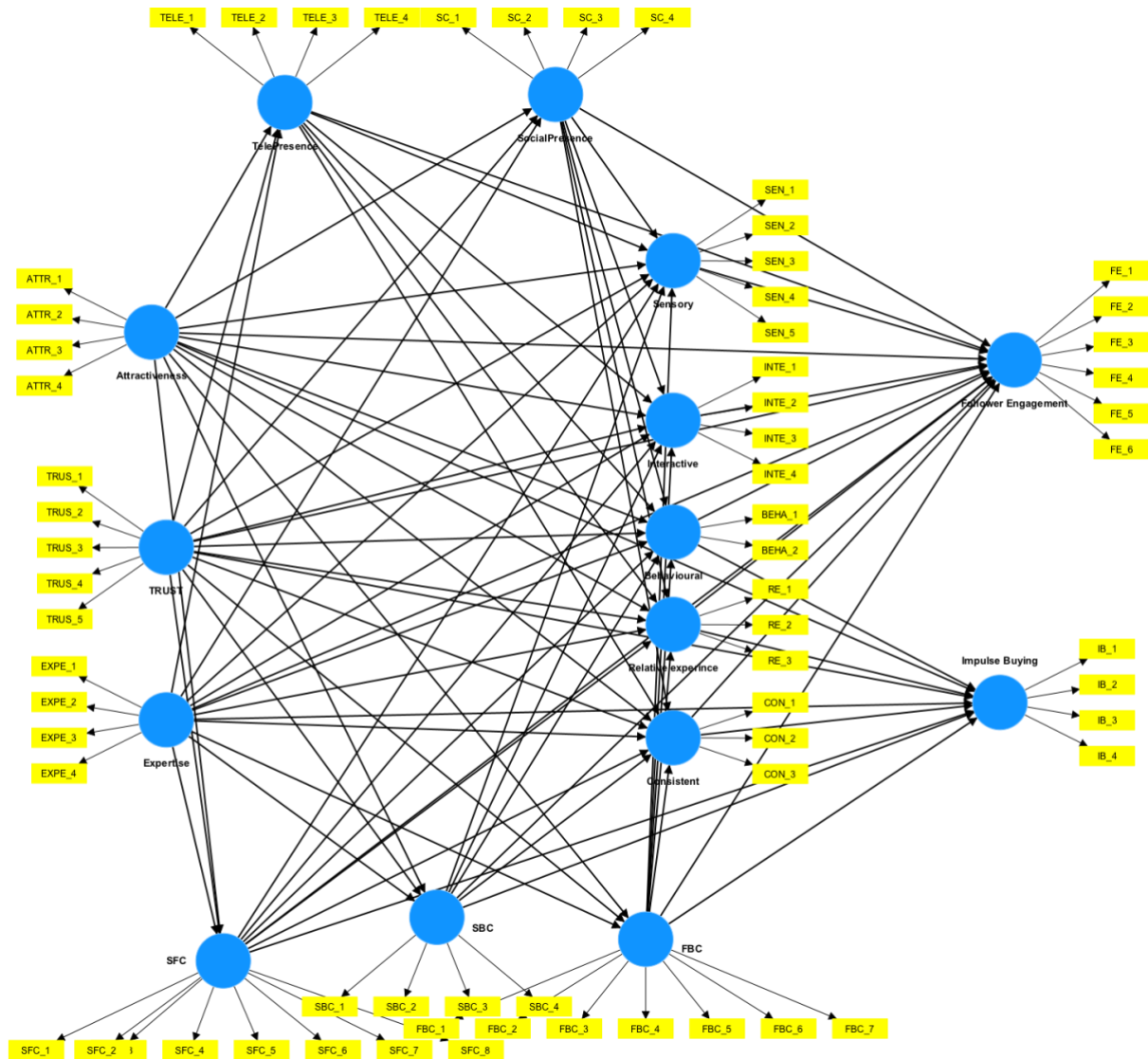
Discriminant validity, the second aspect of construct validity, confirms that each construct is distinct from others, ensuring that items measure only one construct. This is evaluated by ensuring that the AVE of a construct exceeds the squared correlations with other constructs (Hair et al., 2019).

4.5.5 *Confirmatory Factor Model Assessment*

Figure 8 below shows measurement model of this study consisted of a total of 15 constructs respectively: Attractiveness (was measured using 3 items), Trustworthy (was measured using 3 items), Expertise (was measured using 4 items), Telepresence (was measured using 4 items), Social Presence (was measured using 4 items), Streamer Follower Congruence (was measured using 8 items), Streamer Brand Congruence (was measured using 3 items), Follower Brand Congruence (was measured using 7 items), Sensory (was measured using 5 items), Interactive (was measured using 4 items), Behavioral (was measured using 2 items), Relative Experiences (was measured using 3 items), Consistent (was measured using 3 items),

Follower Engagement (was measured using 6 items), Impulse Buying (was measured using 4 items).

Figure 8: Measurement Model



4.5.6 Composite Reliability and Average Variance Extracted

The Confirmatory Factor Analysis was performed on 14 latent constructs comprising 63 measured items. The initial assessment focused on evaluating model fit and construct validity. Based on the outcomes of the Exploratory Factor Analysis,

preliminary model fit, and initial validity indicators, problematic items were subsequently removed to enhance both model fit and construct validity. The initial model fit was evaluated using absolute fit indices and incremental fit indices. Table 11 presents the fit statistics from the first Confirmatory Factor analysis, indicating that there is room for improvement in the model's fit indices.

Table 11 below presents the results of Composite Reliability (CR) and Average Variance Extracted (AVE) for the key constructs measured in both the United Kingdom and China samples. These indices are used to assess the internal consistency and convergent validity of the measurement model. According to the guidelines suggested by Hair et al. (2019), a CR value greater than 0.70 indicates satisfactory internal consistency reliability, while an AVE value above 0.50 reflects acceptable convergent validity.

	Composite Reliability		Average Variance Extracted	
	UK	CHINA	UK	CHINA
Attractiveness	0.917	0.903	0.735	0.699
Trustworthy	0.926	0.923	0.715	0.704
Expertise	0.941	0.909	0.746	0.715
Telepresence	0.925	0.895	0.755	0.682
Social Presence	0.926	0.897	0.758	0.686
Streamer Follower Congruence	0.945	0.907	0.682	0.550
Streamer Brand Congruence	0.917	0.889	0.734	0.668
Follower Brand Congruence	0.932	0.918	0.694	0.616

Sensory	0.923	0.896	0.707	0.633
Affective	0.916	0.889	0.733	0.666
Behavioral	0.908	0.875	0.831	0.778
Intellectual	0.901	0.863	0.752	0.668
Follower Engagement	0.932	0.898	0.696	0.594
Impulse Buying	0.923	0.872	0.749	0.630

CR>0.70 AVE>0.50

Table 11: Composite Reliability and Average Variance Extracted

In the UK sample, all 14 constructs demonstrated strong reliability, with CR values ranging from 0.901 to 0.945. The constructs with the highest CR included Streamer–Follower Congruence (0.945) and Expertise (0.941), while Relative Experiences (0.901) recorded the lowest, but still well above the acceptable threshold. This indicates that each construct's items were consistently measuring the intended underlying factor. Similarly, in the Chinese sample, CR values ranged from 0.863 to 0.923. The highest reliability was observed in the Trustworthiness construct (0.923), while the lowest was found in Intellectual (0.863). These results confirm that, across both cultural contexts, the items used to measure each latent construct performed consistently and reliably.

Regarding AVE, which reflects the proportion of variance captured by a construct relative to the variance due to measurement error, all constructs across both samples exceeded the recommended minimum threshold of 0.50. In the UK dataset, AVE values ranged from 0.682 (Streamer–Follower Congruence) to 0.831 (Behavioural Experience), indicating satisfactory convergent validity across the board. In the

Chinese dataset, AVE values ranged from 0.550 (Streamer–Follower Congruence) to 0.778 (Behavioural Experience). Although the AVE values for some constructs in China were comparatively lower than those in the UK, they remained above the acceptable level, confirming adequate convergence.

4.5.7 *Discriminant Validity Assessment*

Discriminant validity refers to the extent to which constructs that are expected to be distinct are indeed empirically separate from one another (Hair et al., 2019). In this study, discriminant validity was assessed using the Heterotrait-Monotrait ratio of correlations (HTMT), which is considered one of the most reliable and conservative methods for evaluating construct distinctiveness in PLS-SEM (Henseler, Ringle & Sarstedt, 2015).

For both the UK and China datasets, HTMT values were compared against the widely accepted thresholds of 0.85 (Kline, 2011) and 0.90 (Gold, Malhotra & Segars, 2001). Results for the China sample showed that all HTMT values ranged between 0.19 and 0.49, comfortably below the recommended cut-off. Similarly, results for the UK sample demonstrated that all HTMT ratios also fell well below 0.85, with values between 0.20 and 0.49.

These findings provide robust evidence of discriminant validity across both cultural contexts, confirming that each construct—such as streamer attributes, sense of presence, dynamic brand experiences, follower engagement, and impulse buying—measures a unique dimension of live streaming commerce.

Taken together, the HTMT assessment confirms that the measurement model meets the criteria for discriminant validity, thereby supporting the adequacy of the construct operationalisation for subsequent structural model testing.

Overall, the confirmatory Factor Analysis assessments indicate that the measurement model performs well in both the UK and Chinese samples. The constructs demonstrate consistent and valid measurement across different cultural settings, lending credibility to the subsequent structural model analysis. These results also support the cross-cultural robustness of the instrument, which is particularly important given the comparative nature of this study.

4.6 Common Method Bias

In this section, the way to reduce common bias is discussed to minimise common method bias. This research implemented both procedural measures during the research design phase and statistical tests during data analysis. Procedural steps were carefully planned based on suggestions of Kock, (2017) to reduce the likelihood of respondents introducing bias into their responses.

First, respondent anonymity was ensured by guaranteeing that all questionnaire responses would remain confidential and anonymous, which likely reduced social desirability bias and encouraged honest answers. Second, established scales with demonstrated validity and reliability were used to measure each construct, ensuring that items were well-defined and clearly worded to avoid ambiguity. Third, scale clarity was enhanced by pre-testing the questionnaire instrument with a small group of participants to refine item wording and structure. Fourth, counterbalancing the order

of items in the questionnaire helped to reduce order effects, preventing systematic bias due to the sequential positioning of questions. Additionally, psychological separation of constructs was achieved by using distinct question blocks and varying item phrasing to create conceptual distance between the independent and dependent variables (MacKenzie & Podsakoff, 2012).

In addition to these procedural measures, statistical tests were employed to assess the presence of common method bias in the dataset. Specifically, Harman's single-factor test was conducted (Aguirre-Urreta & Hu, 2019), and the results confirmed that no single factor explained the majority of the variance. Furthermore, the marker variable technique was applied to control for potential bias statistically (Simmering et al., 2015). Together, these procedural and statistical steps provide robust evidence that common method bias was effectively minimised, ensuring the validity of the findings in this study. More detailed analysis process is shown below.

There are several approaches to addressing Common Method Bias, but the most recognised are the Harman one-factor test and the marker variable method (Lindell & Whitney, 2001). Both of these methods also be used for testing in this research. Based on the Harman one-factor test. If a single factor explains most of the variance (more than 50%), then common method bias may be present (Fuller et al., 2016; Howard, 2023). For this research, the total variance explained by all retained factors in this research is 25.04% in the UK and 23.23% in China, so data from both countries are less than 50%, which indicates that this shows that common method bias is not a major problem in this study.

In the application of the marker variable method, a variable unrelated to the main variables of interest—Weather—was utilised. This particular variable was measured through four specific items on a 7-point Likert scale, with response options ranging from Strongly disagree to Strongly agree. Initially, the calculated the average correlation between the constructs without incorporating the marker variable is calculated, resulting in a mean correlation of 0.48 in the UK and 0.43 in China. Subsequently, the marker variable was integrated into the measurement models, and inter-construct correlations were recalculated. After this integration, the mean correlation observed remained at 0.48 in the UK and 0.42 in China. The analysis revealed that the average difference between the adjusted correlation matrices (which included the marker variable) and the unadjusted correlation matrices (which did not include the marker variable) was 0.00 in UK and 0.01 in China. This minimal difference indicates that the inclusion of the marker variable did not cause any significant deviation in the correlation matrices. Consequently, these findings suggest that common method bias is not a significant concern in this study, as the introduction of the marker variable did not materially alter the relationships among the constructs being examined (Lindell & Whitney, 2001). The consistency between the adjusted and unadjusted correlation matrices reinforces the conclusion that the marker variable's influence is negligible, thereby affirming the robustness of the observed correlations among the primary constructs under investigation.

4.7 Measurement Invariance

Testing for measurement invariance is a critical step when conducting cross-cultural research, especially when data is collected from different countries, such as the UK and China. Measurement invariance ensures that the constructs being measured are

interpreted, understood, and function similarly across diverse groups (Jeong & Lee, 2019; Lacko et al., 2022). This process confirms that observed differences between groups reflect genuine variations in the constructs, also in how the measurement scales operate across cultures.

To provide further clarity, it is important to distinguish between the two complementary, but distinct procedures used in this study: the Measurement Invariance of Composite Models (MICOM) procedure and Multi-Group Analysis (MGA). The MICOM procedure, as outlined by Henseler, Ringle, and Sinkovics (2009), is designed specifically to assess measurement invariance in PLS-SEM. It involves a three-step process—configural invariance, compositional invariance, and equality of composite means and variances—to determine whether constructs are measured equivalently across groups. This step is essential to ensure that the constructs and their associated items operate similarly between UK and Chinese respondents. Only after establishing sufficient measurement invariance through MICOM, it is methodologically appropriate to proceed with MGA. The Multi-Group Analysis then compares the strength and significance of structural relationships between the two national groups, enabling to explore whether cultural context moderates the relationships within the model. By following both MICOM and MGA sequentially, this study adheres to best practices in cross-cultural SEM and supports valid cross-national comparisons.

In the context of this research, which examines constructs such as streamers' attributes, sense of presence, congruence, and dynamic brand experience, impulse buying and follower engagement ensuring measurement invariance is essential. Cultural differences between the United Kingdom and China may lead to variations in

how respondents perceive and respond to questionnaire items, influenced by differences in language, cultural norms, and social behaviours. Without establishing measurement invariance, any observed differences in follower engagement or impulse buying behaviour might stem from inconsistencies in the measurement instrument rather than true differences in the constructs themselves. This would compromise the validity of cross-group comparisons and the robustness of the study's conclusions.

By testing for measurement invariance, this research verifies that the constructs and their associated measurement items function equivalently across the UK and Chinese samples. This process enables meaningful and valid comparisons between the two cultural contexts, providing confidence that the observed effects reflect actual variations in behaviours or attitudes rather than measurement biases. Ensuring measurement invariance enhances the reliability and credibility of cross-cultural findings, making them more robust for academic and practical applications (Henseler, Ringle & Sinkovics, 2009).

Based on the suggestion of Henseler, Ringle & Sinkovics,(2009), this research utilises multi-group analysis with structural equation modelling (SEM) in Smart PLS to explore the differences in structural relationship strengths between participants from the United Kingdom and China. This approach evaluates whether national groups influence the primary effects or paths within the structural model. The analysis focuses on the impact of these different national groups on the structural model and three key variables: sense of presence, brand follower and streamer congruence, and dynamic brand experiences. The participants from different national groups were categorised in the dataset using nominal variables, as depicted in Table 12 below

Pathway	Path Coefficients		Original Difference	Permutation P Value
	UK	CHINA		
Streamer's Attributes -> Sense of Presence	0.491	0.491	0.001	0.992
Streamer's Attributes -> Congruence	0.630	0.496	0.134	0.024
Streamer's Attributes -> Dynamic Brand Experience	0.245	0.268	-0.023	0.771
Sense of Presence -> Dynamic Brand Experience	0.095	0.182	-0.087	0.326
Congruence -> Dynamic Brand Experience	0.448	0.380	0.068	0.378
Dynamic Brand Experience -> Follower Engagement	0.506	0.398	0.108	0.139
Dynamic Brand Experience -> Impulse Buying	0.322	0.421	-0.099	0.183

P Value < 0.05: Sig

P-Value > 0.05 No significant difference. (Invariance is supported — not “significant.”)

Table 12: Multiple Group Analysis Data

Table 12 above shows the results of Measurement Invariance testing (MICOM 2), showing the comparison between different groups, often across various constructs. In this output, the Measurement Invariance results data from MICOM. In general, there are 12 variables to be tested: Streamer's Attributes, Sense of Presence, Streamer, Brand, Follower, Congruence, Dynamic Brand Experiences, Follower Engagement, Impulse Buying, Age, Education, Frequency, Gender, Income, and Previous Experiences. Three indicators were included in the invariant measurement invariance assessment: Original Correlation and Correlation Permutation mean, and P-Value. Based on the suggestion that Henseler, Ringle & Sarstedt, (2016) if the P-value < 0.05 indicates measurement invariance, meaning that the groups are comparable with respect to the construct. In addition, in comparing the values of the Original Correlation and the Correlation Permutation Mean in measurement invariance testing, the differences between these two values should be minimal for the assumption of invariance to hold. The general expectation is that these correlations should be close to each other, as a significant discrepancy might indicate a lack of invariance (Henseler, Ringle & Sarstedt, 2016; Jr et al., 2017).

The results of the multiple analyses are shown in Table 12 above, where there are 5 cells with the pathway on the left, the path coefficients for the UK and China in the second and third column, the path coefficients difference between the UK and China in the fourth column, and in the fifth column is the Permutation p value. Overall, the path coefficients for the UK and China are not very large, ranging from -0.099 to 0.134. For the P value, it is greater than 0.005 for all pathways, which means that all constructs achieved invariance, allowing valid cross-country comparisons.

4.8 Path Analysis

While various methods are available for path analysis, this study employs Partial Least Squares Structural Equation Modelling (PLS-SEM) due to its suitability for predictive research, its robustness with small to medium sample sizes, and its ability to handle non-normal data distributions (Shmueli et al., 2019; Anon, 2023). The approach is particularly well-aligned with the exploratory nature of this study, which begins by clearly identifying and defining individual constructs — a critical foundation for developing and evaluating the model's structural relationships. (Shmueli et al., 2019, Anon, 2023).

Following the identification phase, a measurement model is constructed. This model serves as a scaffold, linking theoretical constructs with their practical, observable representations. The strength and validity of the indicator–construct relationships are then systematically evaluated using established criteria such as factor loadings, composite reliability, and average variance extracted (AVE), ensuring that the measurement model accurately captures the intended constructs (Hair Jr et al., 2014; Henseler, Ringle & Sarstedt, 2016).

The validation of the measurement model's accuracy and reliability is an essential precursor next, the focus shifts to specifying the structural model. This phase involves the application of the PLS-SEM algorithm via the SmartPLS, which efficiently handles the model's complexity and helps delineate the causal relationships between constructs. The final step involves a thorough assessment of the structural model's validity to ensure that it accurately reflects the theoretical assumptions and can reliably

predict outcomes based on the hypothesised relationships (F. Hair Jr et al., 2014; Henseler, Ringle & Sarstedt, 2016).

Through these rigorous analytical procedures—such as assessing indicator reliability, construct validity, and structural relationships—PLS-SEM via SmartPLS enables the uncovering of complex data patterns while advancing theoretical insights in their field.

4.8.1 *Structural Model - Specification*

In specifying the structural model, two types of latent constructs: exogenous constructs, which function as predictors (similar to independent variables), and endogenous constructs, which are the predicted outcomes (analogous to dependent variables) is distinguished. These constructs are typically measured using multiple items and are visually represented in a path diagram, where directional relationships are illustrated with single-headed arrows pointing from exogenous to endogenous constructs. This structure captures the hypothesised causal pathways that form the foundation of the model (F. Hair Jr et al., 2014).

In this research, a structural model was designed based on theoretical principles including Source Credibility Theory (Hovland & Weiss, 1951), Flow Theory (Steuer, 1992) and Congruence Theory (Sirgy, 1985; Aaker, 1999). The model includes exogenous constructs such as Streamer's Attributes, sense of presence, and streamer brand follower congruence. These exogenous constructs influence other latent constructs like Sense of Presence, Brand Streamer and Follower Congruence and dynamic brand experience, Follower Engagement and Impulse Buying. These constructs are subsequently connected to the endogenous constructs, including

Follower Engagement and Impulse Buying, through single-headed arrows indicating the direction of influence.

Additionally, constructs such as Product Type and Gender are included as moderating variables in the model. Product Type is comprised of several binary variables representing different categories, such as Apparel, Food, Jewellery, Beauty Products, Digital Products, Bag and Accessories, Home Textile, Electrical Appliances, and Others. Gender is also considered a moderating variable to examine if significant differences exist in the relationships between constructs across different genders.

Since the endogenous constructs are not entirely explained by the exogenous constructs alone, error terms are associated with them to account for the unexplained variance (F. Hair Jr et al., 2014). This ensures that the model captures the complexity, and potential external influences not directly measured by the included constructs.

Figure 9 below illustrates the structural models developed without, while Figure 10 below shows the structural model with control variables. The control variables included in the model are Age, Income, Education, the platform used (such as Instagram, Little Red Book, Other, Taobao, and TikTok), and Previous Experiences.

It is important to clarify that Figure 10 represents the structural model used for the final analysis, which was tested using raw item-level scores. This approach was chosen over aggregated construct scores (as shown in Figure 9) because it allows for a more granular and accurate estimation of measurement and structural relationships. Using raw item scores aligns with the strengths of the PLS-SEM method, which prioritises

maximising explained variance at the indicator level and is especially suitable for complex models involving multiple reflective constructs (Hair et al., 2019).

Figure 9: Structural model without control variable

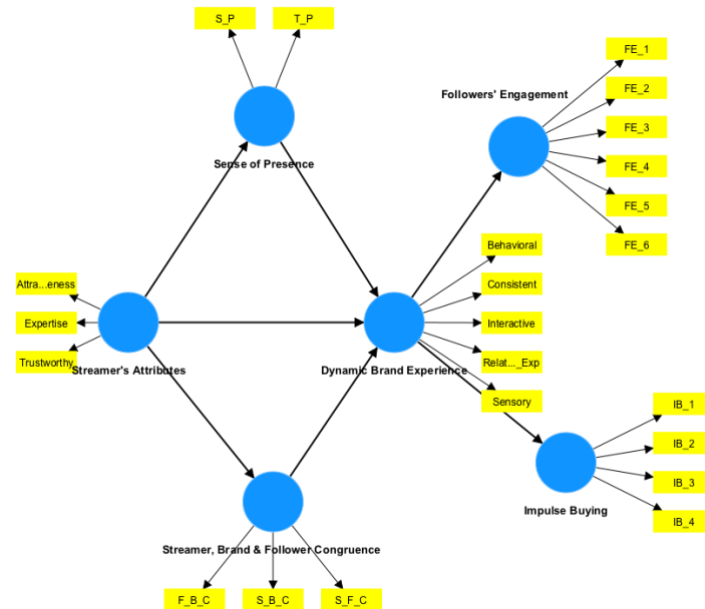
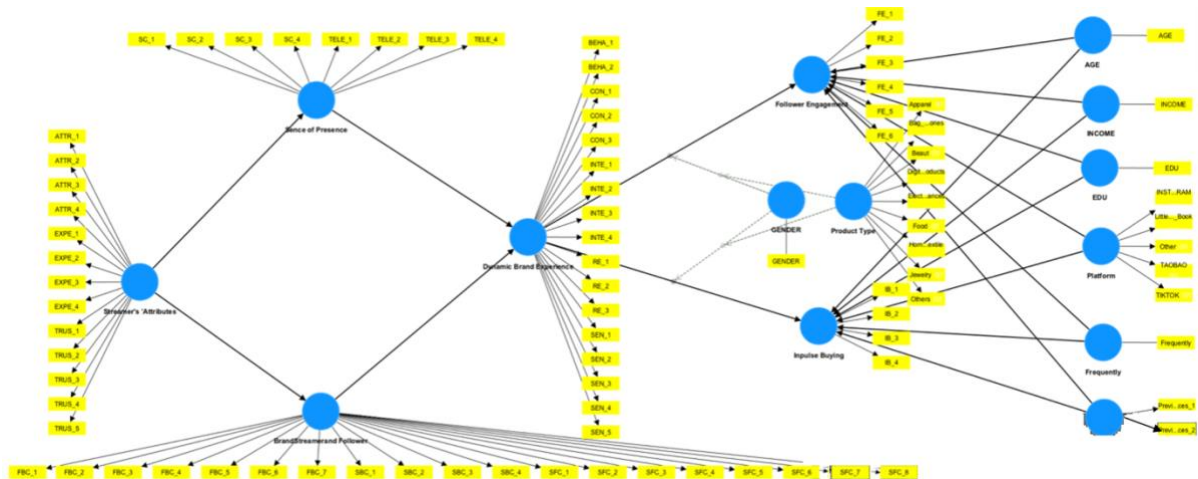


Figure 10: Structural model with control variable



By incorporating these detailed elements and explaining the structure and relationships within the research model, Gaining better understanding of how various factors, such as Streamer's Attributes and dynamic brand experiences, impact key

outcomes like follower engagement and Impulse buying. This comprehensive model facilitates a deeper analysis of the interactions and potential moderating effects, offering valuable insights for researchers and practitioners in the field.

4.9 Hypothesis Testing

The main hypotheses of this research examine the relationships among 6 core variables: streamers' attributes, sense of presence, brand–streamer–follower congruence, dynamic brand experience, follower engagement, and impulse buying. Specifically, it is hypothesised that streamers' attributes positively influence dynamic brand experience, which in turn affects follower engagement and impulse buying. Sense of presence and brand–streamer–follower congruence is proposed as mediators in the relationship between streamer attributes and dynamic brand experience. Additionally, moderation effects (e.g. gender and product type) and moderated mediation effects are also tested using PLS-SEM.

Furthermore, this section presents the results for all the proposed hypotheses, encompassing direct effects, mediating effects, moderating effects, and moderated mediation effects. The analyses were conducted using the PLS Algorithm, bootstrapping and permutation multigroup analysis. The results are interpreted based on the statistical outputs provided by these techniques. This approach ensures that the conclusions drawn are robust and reliable, enhancing the empirical findings (Hair, Howard & Nitzl, 2020). The findings presented here are crucial for understanding the complex interactions and conditional relationships between the studied variables, and they substantiate the theoretical framework proposed in this research. This thorough

examination of each hypothesis underscores the strength and validity of the results obtained.

4.9.1 *Direct Effects*

Table 13 below presents the results of all the hypotheses. In general, most hypothesised relationships were supported and found to be positive. Except, the relationship involving sense of presence in the UK was not statistically significant, and thus Hypotheses 3 and 7 were not supported in that context.

Path		STDEV		P-Value		T Values		Bata Values	
		UK	China	UK	China	UK	China	UK	China
1	Streamer's 'Attributes -> Sense of Presence	0.049	0.042	0.000	0.000	10.153	11.919	0.244	0.238
2	Streamer's 'Attributes -> Brand Streamer and Follower	0.036	0.043	0.000	0.000	18.089	2.797	0.424	0.264
3	Sense of Presence -> Dynamic Brand Experience	0.067	0.046	0.043	0.005	3.447	2.797	0.487	0.485
4	Brand Streamer and Follower ->Dynamic Brand Experience	0.063	0.415	0.000	0.000	7.167	5.460	0.487	0.485
5	Dynamic Brand Experience -> Follower Engagement	0.074	0.065	0.000	0.000	11.020	7.723	0.251	0.170
6	Dynamic Brand Experience -> Impulse Buying	0.090	0.060	0.001	0.000	5.817	8.656	0.112	0.172
7	GENDER-> Follower Engagement	0.105	0.068	0.435	0.266	0.165	0.642		
8	GENDER -> Impulse Buying	0.109	0.067	0.155	0.323	1.014	0.460		
9	Product Type-> Follower Engagement	0.223	0.280	0.156	0.246	1.011	0.687		
10	Product Type-> Impulse Buying	0.187	0.179	0.023	0.406	1.994	0.239		
Controls									
9	AGE -> Follower Engagement	0.057	0.058	0.348	0.009	0.390	2.350		

10	AGE -> Impulse Buying	0.057	0.060	0.497	0.168	0.009	0.963
11	EDU -> Follower Engagement	0.059	0.065	0.024	0.416	1.970	0.213
12	EDU -> Impulse Buying	0.068	0.067	0.095	0.103	1.308	1.226
13	Frequently -> Follower Engagement	0.054	0.053	0.015	0.174	2.165	0.939
14	Frequently -> Impulse Buying	0.055	0.059	0.180	0.212	0.914	0.962
15	INCOME -> Follower Engagement	0.066	0.068	0.041	0.481	1.736	0.207
16	INCOME -> Impulse Buying	0.069	0.068	0.224	0.291	0.758	0.522
17	Previous Experience -> Follower Engagement	0.052	0.235	0.448	0.422	0.131	0.197
18	Previous Experience -> Impulse Buying	0.055	0.275	0.194	0.228	0.864	0.747

$p < 0.05$: Indicates strong statistical significance and high confidence in the stability of the estimate.

$0.05 \leq p < 0.10$: Suggests marginal significance, reflecting moderate stability of the estimate.

$0.10 \leq p < 0.20$: Indicates some variability and reduced confidence in the reliability of the estimate.

$p \geq 0.20$: Suggests considerable variability and potential issues with the reliability or robustness of the estimate.

(Hair et al., 2019; Cohen, 1988)

Table 13: Results of Direct Effects

Table 13 above presents the results of the structural model assessment using bootstrapping with 5,000 subsamples. Each path is evaluated based on its Beta coefficient (β), T-value, and P-value. A path is considered statistically significant if $p < 0.05$, with stronger support indicated by $p < 0.01$ or $p < 0.001$. The STDEV column represents the standard error of the bootstrapped estimates, where lower values indicate greater stability. Among the six hypothesised direct paths:

1. Streamer's Attributes $\rightarrow$ Sense of Presence was significant in both countries ($\beta = 0.244$, $t = 11.919$, $p < 0.001$) and China ($\beta = 0.238$, $t = 10.153$, $p < 0.001$).
2. Streamer's Attributes $\rightarrow$ Brand Streamer and Follower Congruence showed a strong positive effect in both countries ($\beta = 0.424$, $t = 18.089$, $p < 0.001$) and China ($\beta = 0.264$, $t = 2.797$, $p < 0.01$).
3. Sense of Presence $\rightarrow$ Dynamic Brand Experience was supported in China but not in UK (UK: $\beta = 0.487$, $t = 3.447$, $p > 0.20$; China: $\beta = 0.485$, $t = 2.797$, $p < 0.01$).
4. Brand Streamer and Follower Congruence $\rightarrow$ Dynamic Brand Experience was significant in both countries (UK: $\beta = 0.487$, $t = 7.16$, $p < 0.001$; China $\beta = 0.485$, $t = 5.460$, $p < 0.001$).
5. Dynamic Brand Experience $\rightarrow$ Follower Engagement was supported in both countries (UK: $\beta = 0.251$, $t = 7.723$, $p < 0.001$; China: $\beta = 0.170$, $t = 7.723$, $p < 0.001$).

6. Dynamic Brand Experience $\rightarrow$ Impulse Buying was also significant in both countries (UK: $\beta = 0.112$, $t = 5.817$, $p < 0.001$; China: $\beta = 0.172$, $t = 8.656$, $p < 0.001$).

All hypothesised paths were statistically significant, except Sense of Presence $\rightarrow$ Dynamic Brand Experience in the UK, and in the expected positive direction across both samples, suggesting strong support for the conceptual model. Although most results were consistent, minor variations were observed in the magnitude of effects. For instance, Streamer's Attributes had a notably stronger effect on Brand-Streamer-Follower Congruence in the UK, whereas Dynamic Brand Experience more strongly influenced Impulse Buying in China.

These findings confirm that the proposed relationships are robust and applicable across both cultural contexts, offering insight into the influence mechanisms of streamer characteristics and brand experience on consumer engagement and behaviour.

4.9.2 *Mediation Analysis*

The mediator is a variable that explains the mechanism or process through which an independent variable influences a dependent variable. In other words, it acts as an intermediary that helps to clarify the relationship between the two primary variables by showing how or why such an effect occurs. The mediator carries the influence of the independent variable to the dependent variable, suggesting that the independent variable indirectly affects the dependent variable through the mediator. This concept

is crucial for understanding the underlying processes that drive observed relationships in research (MacKinnon, 2008)

Based on Based on the recommendations of Hayes (2018) and Wang et al. (2022), this study examined sense of presence, brand–streamer–follower congruence, and dynamic brand experience as mediators in the relationship between streamers' attributes and the outcomes of follower engagement and impulse buying.

Based on the recommendations of Hayes, (2018) and Wang et al. (2022), this study examined sense of presence, brand–streamer–follower congruence, and dynamic brand experience as mediators in the relationship between streamers' attributes and the outcomes of follower engagement and impulse buying.

This mediation approach was adopted because there have been a number of previous studies in the live streaming domain that have applied this approach and provided little evidence, e.g. (Ming et al., 2021; Ma, Zou & Lv, 2022; Deng, Chen & Wu, 2024; Maghraoui & Khrouf, 2024). Specifically, within live streaming platforms, the factors that streamers' attributes had a significant direct impact on the relationship of dynamic brand experiences were included in the mediation analysis. See the analysis below for more details. So, this research is based on previous evidence to strengthen the research evidence on sense of presence and brand follower streamer congruence as mediating variables.

In detail, the structural model assessed all direct and indirect effects of follower engagement and impulse buying, and the analysis showed that the model fit to the

data was adequate for estimating the significance of the indirect effects and the present study used the non-parametric bootstrap method proposed by (Streukens & Leroi-Werelds, 2016) with 95% confidence intervals for the 5000 sampling. Table 13 below shows the mediation analysis result.

4.9.3 *Indirect (Mediating) Effects*

Table 14 below presents the results of the hypothesised indirect (mediating) effects for both the UK and China samples, based on the PLS-SEM bootstrapping procedure with 5,000 resamples. The analysis evaluates 6 hypothesised sequential mediation pathways, each comprising a combination of mediators between the independent and dependent constructs.

In accordance with established significance thresholds in PLS-SEM (Henseler, Ringle & Sarstedt, 2016; Jr et al., 2017), indirect effects were considered statistically significant when: The p-value is less than 0.05 ($p < 0.05$), significant

And the T-value exceeds ± 1.96 , indicating the estimate lies outside the 95% confidence interval. Furthermore, the sign and magnitude of the indirect effect quantify the strength and direction of the mediating relationship. A positive indirect effect indicates that the mediating construct transmits a positive influence from the predictor to the outcome variable. Conversely, a negative indirect effect would reflect an inverse mediated relationship. Interpretation should be grounded in both statistical outcomes and theoretical justification (Verma & Verma, 2024).

	Indirect Pathway	P-Value		Indirect Effects		T-Values	
		UK	China	UK	China	UK	China
	Streamer's 'Attributes -> Sense of Presence -> Dynamic Brand						
1	Experience -> Follower Engagement	0.075	0.031	0.147	0.033	1.785	2.377
	Streamer's 'Attributes -> Sense of Presence -> Dynamic Brand						
2	Experience -> Impulse Buying	0.139	0.021	0.019	0.033	1.628	2.471
	Streamer's 'Attributes -> Brand Streamer and Follower -> Dynamic						
3	Brand Experience -> Follower Engagement	0.000	0.000	0.029	0.088	1.881	4.601
	Streamer's 'Attributes -> Brand Streamer and Follower -> Dynamic						
4	Brand Experience -> Impulse Buying	0.003	0.000	0.019	0.088	1.720	4.960
	Streamer's 'Attributes -> Sense of Presence -> Dynamic Brand						
5	Experience	0.053	0.007	0.057	0.080	1.864	2.693
	Streamer's 'Attributes -> Brand Streamer and Follower -> Dynamic						
6	Brand Experience	0.000	0.000	0.294	0.213	6.686	6.392

Table 14: Indirect Effects: P-value < 0.05 indicates statistical significance. T-Value > ± 1.96 confirms that the indirect effect is significant at the 5% level.

Pathway 1: Streamer's Attributes → Sense of Presence → Dynamic Brand Experience → Follower Engagement

This sequential mediation was statistically significant in China ($p = 0.031$, $T = 2.377$) but not significant in the UK ($p = 0.075$, $T = 1.785$), falling slightly short of the 5% threshold. The positive indirect effects (UK = 0.147; China = 0.033) suggest that in both contexts, streamers' presence contributes to heightened brand experiences, which in turn positively impact follower engagement—though this chain is statistically supported only in the Chinese context.

Pathway 2: Streamer's Attributes → Sense of Presence → Dynamic Brand Experience → Impulse Buying

Similarly, this pathway was significant only in China ($p = 0.021$, $T = 2.471$), while the UK findings were non-significant ($p = 0.139$, $T = 1.628$). The positive coefficients (UK = 0.019; China = 0.033) suggest that the sense of presence increases impulse buying via enhanced dynamic brand experiences, but this effect is only statistically confirmed for Chinese consumers.

Pathway 3: Streamer's Attributes → Brand–Streamer–Follower Congruence → Dynamic Brand Experience → Follower Engagement

This indirect effect is statistically significant in both the UK and China, though stronger in the Chinese sample (UK: $p = 0.000$, $T = 1.881$; China: $p = 0.000$, $T = 4.601$). The indirect effects are positive (UK = 0.029; China = 0.088), indicating that when the

streamer, follower, and brand are perceived as aligned, this fosters a more immersive brand experience, which then enhances follower engagement. The greater effect in China could reflect stronger identification with streamers in local platforms such as Douyin.

Pathway 4: Streamer's Attributes → Brand–Streamer–Follower Congruence → Dynamic Brand Experience → Impulse Buying

This pathway follows the same mediators as above but leads to impulse buying rather than engagement. Again, it was significant in China ($p = 0.000$, $T = 4.960$), but only marginally significant in the UK ($p = 0.003$, $T = 1.720$). While both effect directions are positive (UK = 0.019; China = 0.088), only the Chinese pathway satisfies both statistical thresholds. This reinforces the notion that perceived congruence enhances spontaneous purchase behaviour more strongly in the Chinese live streaming commerce context.

Pathway 5: Streamer's Attributes → Sense of Presence → Dynamic Brand Experience

This single-step mediation was significant in both countries, though again more robust in China (UK: $p = 0.053$, $T = 1.864$; China: $p = 0.007$, $T = 2.693$). The positive indirect effects (UK = 0.057; China = 0.080) suggest that streamer presence significantly enhances the perceived quality and immersion of the brand experience, particularly in contexts where presence cues are more integrated (e.g., livestream tools in China with dual-camera, chat overlay, etc.).

Pathway 6: Streamer's Attributes → Brand–Streamer–Follower Congruence → Dynamic Brand Experience

This final indirect path was highly significant in both the UK and China ($p = 0.000$ for both; UK $T = 6.686$; China $T = 6.392$), representing the strongest mediating effect in the model. The large positive coefficients (UK = 0.294; China = 0.213) demonstrate that the alignment among streamer, follower, and brand powerfully predicts the depth and richness of brand experience. This finding affirms the central role of congruence in shaping consumer perceptions and validates its inclusion as a core mediator.

4.10 Summary

To summarise, SPSS and SmartPLS software were used to organise and analyse data collected from 600 valid questionnaires, comprising 300 participants from the UK and 300 from China. All data were analysed using quantitative methods. Initially, the dataset was screened to ensure the absence of missing or invalid responses. Following this, descriptive statistics and exploratory factor analysis were conducted to examine the underlying structure of the constructs.

Subsequently, all hypothesised relationships proposed in Chapter 3 were tested. The model included 13 latent constructs: Streamer's Attributes, Sense of Presence, Streamer–Brand–Follower Congruence, Dynamic Brand Experience, Follower Engagement, Impulse Buying, Age, Education, Frequency of Watching, Gender, Income, and Previous Experience, comprising a total of 67 measurement items. A total of 18 hypotheses were evaluated, and the results are summarised in Table 15.

The following chapter provide an in-depth discussion of these findings, highlighting the theoretical and practical implications derived from the statistical analysis.

		Result	
Direct Effect		UK	China
	Streamers' attributes have a positive effect on the sense of presence.		
	Streamers' attributes have a positive effect on streamer, brand, and followers' congruence.	YES	YES
	Sense of presence has a positive effect on dynamic brand experience.	YES	YES
	Streamer, brand, and followers' congruence have a significant positive effect on dynamic brand experience.	YES	YES
	Dynamic brand experience has a positive effect on followers' engagement.	YES	YES
	Dynamic brand experience has a positive effect on impulse buying behaviour.	YES	YES
Mediating Effects	The sense of presence mediates the relationship between streamers' attributes and dynamic brand experience.	YES	YES
	Streamer, brand, and followers' congruence mediate the relationship between streamers' attributes and dynamic brand experience.	YES	YES
	Dynamic brand experience mediates the relationship between streamers' attributes and followers' engagement.	YES	YES
	Dynamic brand experience mediates the relationship between streamers' attributes and followers' impulse buying behaviour.	YES	YES

Streamers' attributes indirectly affect followers' engagement through sense of presence and dynamic brand experience.

Streamers' attributes indirectly affect followers' impulse buying behaviour through sense of presence and dynamic brand experience. YES YES

Streamers' attributes indirectly affect followers' engagement through streamer, brand, and followers' congruence and dynamic brand experience. YES YES

Streamers' attributes indirectly affect followers' impulse buying behaviour through streamer, brand, and followers' congruence and dynamic brand experience. YES YES

Moderating Effects	The relationship between dynamic brand experience and followers' engagement is moderated by gender.	NO	NO
	The relationship between dynamic brand experience and followers' impulse buying behaviour is moderated by gender.	NO	NO
	The relationship between dynamic brand experience and followers' engagement is moderated by product type.	NO	NO
	The relationship between dynamic brand experience and followers' impulse buying behaviour is moderated by product type.	YES	NO

Table 15: All Hypotheses

Chapter 6: Discussion and Conclusion

Live streaming commerce has become one of the most disruptive developments in digital marketing, merging real-time interaction, entertainment, and commerce into a single consumer experience. Unlike traditional online retail or pre-recorded influencer promotions, live streaming is characterised by immediacy, interactivity, and social immersion, creating unique psychological and behavioural dynamics for consumers. While its commercial success is evident in both China and, increasingly, Western markets, academic understanding of the mechanisms underpinning consumer responses in these environments is still developing. Therefore, this study provides timely and novel insights into how streamers' attributes, congruence, and immersive experiences influence consumer engagement and impulse buying within live streaming commerce.

The purpose of this chapter is to move beyond statistical reporting to critically interpret the results presented in the data analysis. By situating the results within the wider scope of literature on digital marketing and consumer psychology, the chapter highlights how the research contributes to theoretical advancement and practical application. Specifically, the findings demonstrate that dynamic brand experiences play an important role in shaping follower engagement and impulse buying behaviour outcomes, and that presence and congruence act as crucial mediators. These contributions are important because they extend well-established frameworks—such as Source Credibility Theory, Congruity Theory, and Flow Theory—into a new, real-time and cross-cultural context that has so far received limited scholarly attention.

A key novelty of this study lies in its multi-theoretical approach. Previous studies have tended to focus narrowly on individual variables (such as trustworthiness or presence) or on single-market contexts. In contrast, this research develops and empirically validates an integrated model that integrates multiple theoretical perspectives to explain consumer engagement and impulse buying in live streaming commerce, while also comparing patterns between the UK and China. This cross-cultural dimension not only enhances the generalisability of findings but also illustrates how cultural contexts may amplify or weaken the impact of psychological mechanisms, an area of enquiry that has been underexplored in prior research. By foregrounding these contributions, this chapter underscores how the study moves the literature forward rather than simply replicating earlier work.

The discussion proceeds in three parts. First, the results are synthesised with existing theory to highlight how this study supports, contradicts, or extends prior research in live streaming marketing and consumer behaviour. Second, the chapter draws out the theoretical and practical implications, emphasising how the results can inform both academic debates and managerial practice in live streaming commerce. Finally, the study's limitations are acknowledged and future research directions proposed, offering a pathway for subsequent studies to build on these insights. In doing so, this chapter not only consolidates the contributions of the present research but also points toward new opportunities for advancing knowledge in this rapidly evolving domain.

5.1 Discussion on Results

This section provides a detailed discussion of the study's findings, interpreting the results in light of the conceptual model and prior research. Attention is given to how

the empirical evidence supports, refines, or challenges existing theoretical perspectives on live streaming commerce.

5.1.1 *Streamer and Dynamic Brand Experience*

Finding 1: Streamers' attributes positively impact dynamic brand experiences in both the United Kingdom and China, with the effect being more pronounced among Chinese followers. Also, this finding answered Objective 1.

This finding highlights the central role of Source Credibility Theory in live streaming commerce, confirming that followers' perceptions of a streamer's credibility shape their experiential engagement with brands. Importantly, the result is consistent with prior work (Masuda, Han & Lee, 2022; Lyu, Liang & Vellore Nagarajan, 2024; Xue et al., 2024), which identified credibility as a reliable predictor of consumer attention and positive evaluations. However, the present study extends these insights by demonstrating that attractiveness does not simply function as a superficial trait; rather, it enhances the immersive quality of the brand experience by reinforcing a sense of relational closeness between followers and streamers. This suggests that attractiveness in live streaming contexts is not just about visual appeal but about creating affective resonance that strengthens consumer–brand bonds.

Trustworthiness also emerges as a critical dimension, echoing earlier findings (Zhang et al. 2024; Lyu, Liang & Vellore Nagarajan, 2024) but adding differences by showing how trust is socially reinforced in live streaming environments. The results suggest that followers often look to the broader community within a live stream for

cues of shared belief in the streamer's honesty and reliability. This phenomenon underscores the collective nature of live streaming commerce: when credibility is perceived as a shared group consensus, it amplifies the dynamic brand experience beyond individual evaluation. Such insights align with Congruity Theory, which suggests that alignment between the follower's expectations and the streamer's perceived values enhances positive responses.

Expertise, the third dimension, provides further evidence of the Stimulus-Organism-Response (SOR) framework in action (Yu et al., 2021; Wang et al., 2022; Wei & Xi, 2023). Expertise functions as a cognitive stimulus that reassures followers of product quality and reduces purchase uncertainty, which in turn enriches the brand experience. This supports findings by Xue et al., (2024) and Zhang et al., (2024) but advances them by situating expertise within the real-time, high-pressure dynamics of live streaming. In such contexts, followers are not merely evaluating knowledge; they are interpreting expertise as an assurance mechanism in the absence of physical product interaction.

Cross-cultural comparison adds an important layer to these findings. The stronger effect observed in China compared to the UK suggests that collectivist cultural orientations may heighten the credibility cues. In markets like China, where consumers are highly accustomed to live streaming commerce, attributes such as trustworthiness and expertise may carry more weight in shaping immersive experiences. By contrast, UK participants, representing a relatively newer live commerce market, may be less influenced by streamer attributes and more reliant on other mechanisms such as platform credibility or brand reputation. This comparison illustrates how cultural

contexts moderate the weight assigned to streamer attributes, advancing our understanding of live streaming as a global yet culturally embedded phenomenon.

Taken together, these findings extend existing literature by demonstrating that streamer attributes function not only as surface-level signals but as psychological mechanisms that actively shape experiential engagement. They provide theoretical support for Source Credibility Theory and SOR within live streaming commerce while also offering practical implications for marketers: selecting streamers with high credibility attributes can substantially enrich brand experiences, but cultural context must be considered when designing campaigns for international markets.

5.1.2 *Streamer's Attributes Engagement and Impulse buying Behaviour*

Finding 2: Streamers' attributes positively impact follower engagement and impulse buying in both the United Kingdom and China, although the strength and mechanisms of influence differ across contexts. Also, this finding answered Objective 1.

This finding confirms the central role of Source Credibility Theory, which posits that credibility, expertise, and trustworthiness drive follower engagement and impulse buying behaviour (Hovland & Weiss, 1951). In live streaming commerce, followers who perceive streamers as credible experts are more likely to engage with the content and act on product recommendations. This aligns with earlier work (Wei & Xi, 2023; Dokumaci, 2024), but extends it by showing how these effects real-time, interactive environments where credibility functions not only as a rational evaluation but also as an emotional driver of impulse buying.

The results also extend Source Credibility Theory by showing that trustworthiness, expertise, and attractiveness do not operate in isolation but interact to shape follower engagement and impulse buying behaviour in real time. Trustworthiness provides reassurance, expertise reduces perceived uncertainty, and attractiveness enhances the emotional appeal of the message. Together, these attributes create what Congruity Theory describes as an alignment between the streamer, the brand, and the follower, which strengthens message acceptance and brand attachment (Shen et al., 2022; Jing & Loang, 2024). In fast-paced live streaming, where consumers make purchase decisions under time pressure, such attributes function as cognitive and emotional shortcuts, enabling followers to engage quickly and act impulsively without prolonged deliberation.

Cultural differences deepen this interpretation. In China, followers' higher trust in streamers reflects the collectivist cultural norm of relying on authority and social proof (Luo et al., 2021; Chen, Zhao & Wang, 2022; Chu, 2024). Here, streamers are not just entertainers but also perceived as authoritative figures, which amplifies impulse buying. Conversely, in the UK, where individualism and independent evaluation are stronger (Yang, 2022; Zhao & Chiu, 2023), followers are more likely to seek additional verification before purchasing. In this context, streamers' attractiveness appears to play a relatively stronger role in capturing attention and driving engagement (Zhao & Chiu, 2023; Wang & Wang, 2024), while credibility cues are integrated with other information sources.

This comparative perspective highlights both universal and context-specific mechanisms. Universally, credibility and expertise matter across cultures;

contextually, the reliance on authority (China) versus personal judgment (UK) shifts the relative influence of different attributes. This not only enriches the application of Source Credibility Theory in live streaming commerce but also integrates it with cross-cultural psychology, showing how cultural orientations moderate the pathways from credibility to behaviour.

From a practical perspective, the findings suggest that brands should carefully tailor their streamer partnerships. In China, credibility and authority should be emphasised, as followers are more likely to respond to streamers perceived as trusted advisors. In the UK, a combination of attractiveness, authenticity, and transparent information may be more effective, given consumers' preference for independent evaluation.

5.1.3 *Sense of Presence Enhancing the Dynamic Brand Experience*

Finding 3: Sense of presence significantly mediates the relationship between streamers' attributes and dynamic brand experience among Chinese participants but is negligible in the UK. This highlights cross-cultural differences in how immersion and interaction shape consumer responses in live streaming environments and directly addresses Research Objective 2.

The findings reveal that sense of presence—comprising both social presence and telepresence—mediates the relationship between streamers' attributes and dynamic brand experience significantly in China but not in the UK. This cultural difference highlights the varying importance of immersive feeling mechanisms across consumer groups.

In China, social presence—the perception of personal connection with the streamer and other viewers (Ming et al., 2021; Zahid et al., 2024) —is a key driver of brand experience. This aligns with prior research suggesting that collectivist cultural orientations place greater value on interpersonal bonds and community within digital settings (Li et al., 2022; Xu, Kapitan & Phillips, 2023; Li et al., 2024). When followers perceive strong social interaction, they become more engaged with the brand narrative, reinforcing the impact of streamer credibility. By contrast, UK participants, shaped by more individualistic orientations, appear less influenced by the “social warmth” of the live streaming session, suggesting that engagement in these markets may rely more on informational content or streamer expertise than on relational cues.

Similarly, telepresence—the sense of being virtually immersed in the streaming environment—exerts a stronger influence in China, where audiences are accustomed to highly interactive and gamified platform features (Barta, Gurrea & Flavián, 2023; Zahid et al., 2024). This finding underscores the importance of technological affordances: Chinese platforms like Taobao and Douyin provide more immersive design elements than Western counterparts, which may explain why telepresence did not significantly enhance brand experiences among UK participants.

Theoretically, these findings contribute by demonstrating that sense of presence operates as a culture-contingent psychological mechanism in live streaming commerce. This extends Flow Theory by showing that immersion (telepresence) and relational warmth (social presence) are not universally influential but are instead conditioned by cultural and platform factors. Practically, the results imply that marketers must adapt presence-based strategies to cultural contexts: in China,

enhancing interaction features and immersive design may be critical, while in the UK, strategies may need to focus on credibility signals and informative content rather than attempting to replicate the same sense of presence.

5.1.4 *Sense of Presence Enhancing Engagement and Impulse Buying Behaviour*

Finding 4: The sense of presence served as a mediating variable in the research, indirectly and positively affecting followers' engagement and impulse buying through dynamic brand experience from China and indirectly but not affecting the United Kingdom users, this is due to the differences between the live streaming platforms in China and the UK, which lead to different functions. UK live streaming platforms do not have more interactive functions, which leads to indirect and negative impacts on follower engagement and impulse buying. Also, this finding answered the research Objective 2.

This finding reveals the differences between countries in how the sense of presence functions as a mediating variable between streamers' attributes and dynamic brand experience, ultimately influencing follower engagement and impulse buying in the UK and China. While the sense of presence positively mediates this relationship among Chinese participants, it shows that it cannot have a positive mediating effect among UK participants. This suggests that the ability of live streaming to create a strong sense of immersion and engagement differs significantly between the two markets, likely due to variations in platform design, user expectations, and interactive functionalities.

For UK participants, this research found that the sense of presence cannot impact the dynamic brand experience, meaning that a weaker or less engaging presence experience indirectly led to lower follower engagement and impulse buying. A possible explanation for this is the difference in live streaming platform capabilities between the UK and China. Even within TikTok, which operates globally, the Chinese version (Douyin) is more advanced in terms of interactive features, such as real-time engagement tools, gamification elements, and highly immersive live streaming functionalities. By contrast, the international version of TikTok and other Western live-streaming platforms offer fewer real-time interactive elements, which may result in a diminished sense of presence for UK consumers (Yang, 2022; He et al., 2023; koshi, 2023; Wang et al., 2024; Xin, Liu & Jian, 2024). As a result, UK followers may perceive the live streaming experience as less immersive, leading to a weaker dynamic brand experience and reduced engagement.

Conversely, in China, the study found that the sense of presence positively mediates the relationship between streamers' attributes and dynamic brand experience, thereby increasing follower engagement and impulse buying. This is consistent with previous research results (Wang et al., 2022; Gu, Cheng & Shen, 2023; Wei & Xi, 2023). This indicates that Chinese consumers are more likely to feel a stronger sense of presence during live streaming sessions, which enhances their overall brand experience. One potential explanation for this finding is that Chinese live streaming platforms, such as Douyin, Taobao Live, and Kuaishou, have significantly more integrated engagement mechanisms, including real-time interaction, pop-up comments, virtual gifting, live polling, and seamless e-commerce integration (Guo et al., 2021; Kang et al., 2021; Chen & Yang, 2023). These interactive elements likely contribute to heightened

immersion, making consumers feel more connected to the streamer and increasing their trust in product recommendations (Li, Feng & Zhao, 2023; Ji, Chen & Wei, 2025). Consequently, this enhanced presence experience fosters greater engagement and increases the likelihood of impulse purchases.

All in all, these insights underscore the critical role of platform interactivity and technological capabilities in shaping consumer experiences in live streaming commerce. The contrasting findings between the UK and China emphasise the need for culturally adaptive live streaming strategies, with a stronger focus on enhancing social presence and telepresence in Western markets to replicate the success seen in China's highly immersive live streaming commerce ecosystem.

5.1.5 *Brand, Streamer and Follower Congruence*

Key Finding 5: Brand, streamer, and follower congruence positively mediate the relationship between streamers' attributes and dynamic brand experience, demonstrating that alignment between brand identity, streamer persona, and follower preferences enhances engagement and positively influences follower engagement and impulse buying behaviour across both the United Kingdom and China. Also, this finding answered Research Objective 2

Key Finding 6: Streamer, brand, and followers' congruence positively and indirectly affect followers' engagement and impulse buying through dynamic brand experience in the UK and China. That demonstrates that congruence between brand identity, streamer persona, and follower preferences indirectly enhances follower engagement

and impulse buying in the United Kingdom and China. Also, this finding answered research Objective 2.

This study extends prior work (Liu, Zhang & Zhang, 2020; Maghraoui & Khrouf, 2024) by showing that congruence is not a peripheral construct but a central psychological mechanism in live streaming commerce. When followers perceive consistency between the brand, the streamer, and themselves, the brand message appears more authentic, leading to stronger immersion in the brand experience and greater responsiveness to purchasing cues.

Breaking this down further, brand congruence refers to the degree of alignment between the brand's identity and the streamer's persona. For example, a brand that partners with a streamer whose expertise or attractiveness reflects its values strengthens message authenticity and credibility (Wei et al., 2022; Hou & Hou, 2024). Streamer congruence captures the alignment between the streamer and follower expectations—when followers identify with the streamer's lifestyle, values, or demographics, they are more likely to perceive the brand as relevant and to engage actively (Shehzala et al., 2024; Gopakumar & Dananjayan, 2024). Finally, follower congruence describes the extent to which audiences share similar values or interests, fostering a sense of community. This collective identity reinforces the impact of both the streamer and the brand, creating a socially validated and immersive brand experience (Alnoor et al., 2024; Maghraoui & Khrouf, 2024).

Together, these three dimensions of congruence act as mutually reinforcing mechanisms that convert individual perceptions into collective brand experiences. The

consistency of these effects across both cultural contexts suggests that congruence is a universally relevant construct in live streaming commerce, making it highly significant for both theoretical development and managerial practice. For theory, it highlights congruence as a key mediating mechanism connecting credibility-based streamer attributes to follower engagement and impulse buying behaviour. For practice, it underscores the importance of selecting streamers who not only fit the brand but also resonate with the target audience and foster a sense of shared identity among followers.

5.1.6 *Dynamic Brand Experience Engagement and Impulse Buying Behaviour*

Finding 7: Dynamic brand experience positively impacts follower engagement and impulse buying behaviour in live streaming commerce environments, with consistent effects across both the United Kingdom and China. This addresses Research Objective 2.

The results of this study highlight the central role of dynamic brand experience in shaping follower engagement and impulse buying behaviour within live streaming commerce. Rather than simply acting as a background variable, dynamic brand experience emerges as a important mechanism through which streamers' attributes and interactive environments are translated into follower engagement and impulse buying behaviour. This finding contributes to the broader literature by confirming that immersive brand experiences are not only correlated with engagement and purchasing but also provide a direct psychological pathway that connects live interactions to impulsive decisions.

Dynamic brand experience was conceptualised in this study as a multidimensional construct, comprising affective, sensory, behavioural, intellectual, and consistent dimensions (Yang et al., 2017; Legendre, Cartier & Warnick, 2019; Yu et al., 2021; Yin et al., 2022; Henkel & Toporowski, 2023; Park, Hong & Park, 2023; Shahid Satar et al., 2023). The findings show that these elements collectively foster deeper cognitive and emotional engagement, which in turn stimulates spontaneous purchasing behaviours. For example, affective and sensory cues—such as excitement, enjoyment, or product demonstrations—were found to enhance emotional resonance with the brand. This supports prior research (Gu, Cheng & Shen, 2023; Wei & Xi, 2023), which argued that emotional arousal is a key driver of impulsive behaviour, while also extending it by showing that such effects are consistent across both UK and Chinese contexts.

Similarly, behavioural and intellectual dimensions of dynamic brand experience were found to encourage followers to participate actively in live streams, ask questions, and critically evaluate products in real time. This interactive involvement not only builds stronger brand connections but also lowers decision-making barriers, making impulse purchases more likely. These results align with prior studies (Yang et al., 2017; Yin et al., 2022; Bawack et al., 2023) that emphasised the role of active consumer participation in fostering brand loyalty, but extend them by demonstrating that the immediacy of live streaming amplifies the translation of engagement into direct purchase behaviours.

Importantly, this study also reveals that dynamic brand experience functions as a universal mechanism across cultures. Both UK and Chinese followers responded

positively to rich brand experiences, although the underlying triggers may differ: Chinese followers appeared more strongly influenced by collective social presence and trust in streamers, while UK followers were more driven by sensory appeal and consistent product presentation. This highlights the robustness of dynamic brand experience as a cross-cultural driver of follower engagement and impulse buying behaviour, while also suggesting that the weighting of its dimensions may vary depending on cultural norms and platform affordances.

Overall, these findings demonstrate that dynamic brand experience is not merely an outcome of live streaming commerce but an essential bridge between streamer influence and consumer action. By creating immersive, emotionally resonant, and participatory environments, dynamic brand experiences elevate both engagement and impulse buying, underscoring their importance for both theory and practice in digital marketing.

5.1.7 Product Type and Gender

Finding 8: The moderating role of gender and product type does not impact the relationships between dynamic brand experience, followers' engagement, and impulse buying in the UK and China. This finding answers Research Objective 3.

This suggests that regardless of gender or the type of product being promoted, the effect of dynamic brand experience on follower engagement and impulse buying behaviour remains consistent across both cultural contexts. In other words, consumers' engagement with a brand and their likelihood of making impulse

purchases are driven by their perception of the dynamic brand experience itself rather than demographic factors or product categories.

This result is notable because it challenges assumptions from traditional consumer behaviour research, where demographic factors such as gender and product type are often found to influence purchasing patterns and engagement (e.g., Liu & Yu, 2022). In the context of live streaming commerce, however, the findings suggest that dynamic brand experience exerts a universally strong influence that overrides demographic distinctions. Regardless of whether the product is fashion, food, or technology—and irrespective of whether the follower is male or female—the immersive quality of the brand experience itself drives engagement and spontaneous purchasing.

One possible explanation for this finding is that dynamic brand experience is a universally engaging factor that transcends individual differences such as gender or product type. Prior research has shown that immersive and interactive brand experiences enhance consumer engagement by triggering emotional and cognitive responses, making the consumption experience more memorable and stimulating (Brodie et al., 2011; Schmitt, 1999). This effect appears to hold across diverse followers, meaning that consumers, irrespective of their gender identity or the product being promoted, respond similarly when exposed to a strong and compelling brand experience.

Additionally, this finding may reflect the evolution of follower engagement and impulse buying behaviour in live streaming commerce, where traditional segmentation factors such as gender and product type are becoming less influential in shaping consumer

engagement(Liu & Yu, 2022, Anon, 2023). The algorithm of digital platforms allows for personalised content, where content is tailored to the follower's interests and watch history rather than broad demographic categories. This shift suggests that merchants or live streamers cannot pre-screen potential customer groups because live streaming content is algorithmically pushed by the platform based on consumers' browsing history, shopping habits, and viewing history. Therefore, live streamers should focus more on content rather than traditional demographic classifications.

Moreover, the cross-cultural consistency of this result highlights the globalised nature of live streaming commerce, where consumer engagement patterns are increasingly shaped by digital interaction dynamics rather than sociocultural norms. While gender and product type have historically influenced purchasing behaviour in traditional retail and e-commerce settings, live streaming commerce fosters real-time engagement, social interaction, and immersive brand storytelling, which may override these demographic distinctions.

Theoretically, these advances in understanding show that the psychological mechanisms underpinning live streaming commerce may differ from those in offline or static digital contexts. Whereas segmentation by gender and product category has long been a cornerstone of marketing strategy, these results point to the primacy of experiential drivers such as emotional immersion, interactivity, and authenticity (Brodie et al., 2011; Schmitt, 1999). This finding extends the literature by demonstrating that in real-time, interactive environments, consumers converge in their behavioural responses, suggesting a shift toward more universalised patterns of digital engagement.

From a practical perspective, this means that marketers and streamers may not need to design fundamentally different live-streaming strategies for men versus women, or for specific product categories. Instead, investment should be directed toward enhancing the quality of the overall brand experience—through interactive tools, emotional storytelling, and engaging content design—which appears to have a stronger and more consistent effect on follower engagement and impulse buying behaviour than traditional segmentation. In an increasingly globalised and digitalised marketplace, these findings reinforce the idea that experience trumps demographics in shaping engagement and purchase decisions.

5.2 Managerial Implications

The above summarises some of the results from the academic side through data analysis, however, there are also some findings from the practical side to answer Research Objective 4. Based on the findings of this study, several practical recommendations could be made for digital marketers, live streaming platforms, and brands to enhance consumer engagement, impulse purchases, and optimize the effectiveness of live streaming commerce.

First, brands should carefully align streamer attributes with their brand identity and target followers. The findings indicate that streamers' expertise, trustworthiness, and attractiveness strongly influence consumer engagement and impulse buying across both the UK and China. Therefore, brands should select streamers whose style, communication approach, and follower demographics align with their brand image. Instead of randomly choosing streamers based on popularity, brands should conduct

in-depth audience analysis to ensure that the streamer resonates with the intended consumer base, leading to more authentic and effective brand endorsements.

Second, live-streaming platforms and digital marketers should focus on enhancing the sense of presence to increase follower engagement and impulse buying behaviour. The study highlights the significant role of social presence and telepresence, particularly in China, where immersive and interactive live streaming experiences positively influence follower behaviour. However, the UK market still has great potential for development in this area. To replicate this success in UK markets, platform developers should integrate advanced interactive features such as real-time chat, virtual gifting, personalised recommendations, and augmented reality elements to create a more engaging and immersive shopping environment.

Third, streamers should actively engage with their followers to enhance the dynamic brand experience. The study suggests that interactive elements play a crucial role in driving engagement and impulse buying, particularly in China, where platforms are more interactive. Streamers should focus on direct communication with viewers, responding to questions in real-time, initiating discussions, and incorporating gamification techniques such as exclusive deals, countdown sales, and follower-driven content. This strategy not only strengthens the relationship between the streamer and the followers but also enhances consumer trust and purchase intent.

Fourth, marketers should prioritise the quality of the dynamic brand experience over traditional demographic segmentation. The study found that gender and product type do not significantly moderate consumer engagement and impulse buying in live

streaming commerce, indicating that followers are more influenced by their perception of the streamer and brand experience itself rather than their demographic characteristics. Therefore, instead of relying on gender-based marketing strategies, brands should invest in creating highly engaging, sensory-driven, and interactive live streaming experiences that appeal to a broader audience in the UK and China.

Fifth, future digital marketing strategies should incorporate cross-cultural considerations to tailor live streaming experiences for different markets. The findings suggest that Chinese consumers respond more positively to social presence and telepresence, whereas UK consumers may require improvements in interactivity to enhance their engagement levels. Brands and live streaming platforms should consider these cultural differences when developing localised live streaming strategies, ensuring that their approach is adapted to regional consumer behaviours and technological expectations.

By implementing these practical recommendations, brands, streamers, and platform developers could optimise their live-streaming commerce strategies, increase follower engagement, and drive higher impulse purchasing behaviours across diverse markets.

5.3 Contribution

This research makes a number of theoretical and practical contributions to the literature on live streaming commerce and the literature on streamers, dynamic brand experiences and follower engagement and impulse buying behaviour. Overall, this research advances a unified framework that links streamers' attributes, sense of presence, congruence, and dynamic brand experience to explain consumer engagement and impulse buying in live streaming commerce. By integrating these

constructs, the study demonstrates how psychological mechanisms (e.g., emotional involvement through presence and cognitive alignment through congruence) connect streamer characteristics to follower engagement and impulse buying behaviour. This integrative perspective extends existing digital marketing theories by showing that consumer responses in live streaming are not shaped by isolated factors, but by the combined influence of interactivity, alignment, and immersion within dynamic brand experiences. Those are explained in detail in the following paragraphs.

5.3.1 *Theoretical Contribution*

5.3.1.1 Extends Streamers' Attributes Literature

Addressing Research Gap 3, this research extends the literature on streamers' attributes by examining their relationship with sense of presence and congruence in the unique context of live streaming commerce. Prior studies have focused on attributes such as expertise, trustworthiness, and attractiveness in relation to consumer trust (Yan et al., 2022; Zhou & Lou, 2023; Hou & Hou, 2024; Alnoor et al., 2024; Li, Chen & Zhu, 2024) and flow experiences (Zheng et al., 2023). However, the ways in which these attributes interact with the sense of presence and congruence to shape sense of dynamic brand experiences have been largely overlooked. This study addresses this gap by proposing and empirically testing a comprehensive model in which presence (social presence and telepresence) and congruence (brand, streamer, and follower alignment) serve as key mediators linking streamer attributes to dynamic brand experiences.

The findings demonstrate that. Social and telepresence stimulate emotional involvement and cognitive absorption, while congruence reinforces perceived

authenticity and value alignment, together amplifying the overall brand experience. In doing so, this research highlights the distinctiveness of live streaming commerce as a digital environment—marked by interactivity (Ming et al., 2021; Shi, Li & Hu, 2023; Li, Xuan & Chen, 2024) and immersion (Liao et al., 2022; Ma, Zou & Lv, 2022; Shi, Li & Hu, 2023; Li, Xuan & Chen, 2024) —that differentiates it from traditional social media or static e-commerce settings.

In contrast to earlier studies that suggested streamer attributes such as expertise or interactivity may have little direct impact on purchase intentions (Zhao et al., 2024), this research shows that their influence operates indirectly through presence and congruence. By validating this model across both the UK and China, the study also enhances the cross-cultural generalisability of these findings. Thus, it advances theory by clarifying how streamer attributes contribute to consumer experiences—not only by shaping trust or attractiveness directly, but by activating mediating psychological mechanisms that create immersive, credible, and engaging brand encounters.

5.3.1.2 Contribution to SOR Theory

Reply to Research Gap 1, grounded in flow theory and the stimulus-organism-response (SOR) model of sense of presence, which encompasses both social presence and telepresence, recent literature emphasises the influence of these dimensions on follower engagement and impulse buying behaviour (Ming et al., 2021; Ma, Zou & Lv, 2022; Zhang, Cheng & Huang, 2023; Li, Xuan & Chen, 2024). Despite this, limited attention has been given to their role in shaping Dynamic Brand Experience within the context of live streaming commerce. Addressing this research gap, this study elaborates on the mediating role of a sense of presence between

streamers' attributes and dynamic brand experience, thereby contributing substantively to the fields of digital marketing and live streaming commerce.

Also, this research provides robust empirical evidence highlighting the impact of social presence and telepresence as key mechanisms that enhance or modify dynamic brand experiences and follower engagement and impulse buying behaviour during live-streaming interactions. Notably, while prior research has suggested that telepresence may yield negative responses in live-streaming commerce (Barta, Gurrea & Flavián, 2023), this research demonstrates a contrasting outcome, revealing a positive influence of telepresence and social presence among Chinese participants but not significant impact within the United Kingdom context. This difference from earlier findings underscores the importance of cultural context in shaping consumer experiences. Furthermore, by extending SOR model and Flow theory with the integrated dimensions of telepresence and social presence, this study offers a more comprehensive understanding of the relationship between dynamic brand experiences and follower engagement and impulse buying behaviour. This integrative approach enriches existing theoretical frameworks and advances knowledge on how immersive and interactive elements in live streaming could shape consumer-brand interactions (Ming et al., 2021; Huo et al., 2023; Shi, Li & Hu, 2023).

5.3.1.3 Extension of Congruence Theory

Addressing the identified Research Gap 1, this research extends beyond prior investigations that have predominantly explored isolated relationships—such as brand-consumer purchase congruence (Ji, Liu & Chen, 2023; Wang, 2024; Zhang & Zhang, 2024) or live streamer-consumer engagement congruence (Wei et al., 2022)

—by examining the integrated influence of streamer, follower, and brand congruence on dynamic brand experiences. This multidimensional approach empirically validates that congruence among these elements serves as a mediating factor linking streamers' attributes to dynamic brand experiences in both the United Kingdom and China. This finding significantly broadens the theoretical understanding of how the congruence across these dimensions mediates the streamers' attributes and dynamic brand experiences within the live streaming commerce context, thereby creating a new literature that contributes to the fields of live streaming commerce and digital marketing.

Besides, unlike previous research, which has often been restricted to specific industries, platforms, or regions (Wei et al., 2022; Ji, Liu & Chen, 2023; Wu et al., 2023; Wang, 2024), this research adopts a broader scope by including a diverse range of streamers from various platforms and geographical locations. This inclusive approach increases the reliability, generalisability, and applicability of the findings across different countries. The research underscores how congruence at multiple levels—streamer-brand alignment, streamer-follower engagement, and follower-brand perception—cohesively mediates the relationship between the streamer's attributes and dynamic brand experiences, offering a comprehensive view that had been missing in previous literature.

Moreover, building on and extending existing theoretical frameworks, such as research on Wang,(2024) this study, fills a critical gap by incorporating congruence theory to better explain brand-live streamer-follower interactions. The findings thus offer a more comprehensive perspective on how congruence drives meaningful

consumer interactions, enhancing both theoretical models in live streaming commerce.

5.3.1.4 Advance Dynamic Brand Experience Literature

Addressing research gap 2 and 5, this research extends the existing literature on dynamic brand experience by empirically demonstrating its mediating role in the relationship between sense of presence, congruence, and follower engagement and impulse buying behaviour within live streaming commerce. While previous studies have explored the concept of dynamic brand experience, they have primarily focused on single social media platforms such as Weibo, Instagram, and Twitter, often limiting their scope to static brand consumer interactions (Yin et al., 2022; Park, Hong & Park, 2023). This study bridges this gap by situating dynamic brand experiences within the live streaming commerce context, a highly interactive and rapidly evolving digital marketing environment.

Moreover, while earlier research has frequently examined the relationship between brand experiences and brand loyalty or customer retention (Kumar & Kaushik, 2020; Yin et al., 2022; Park, Hong & Park, 2023; Valmohammadi et al., 2024; Wang, 2024), few have integrated dynamic brand experiences into impulse buying and follower engagement. Importantly, this research is among the first to investigate how dynamic brand experience mediates the effects of sense of presence (social and telepresence) and brand, streamer, and follower congruence on follower engagement and impulse buying in a live streaming scenario. This represents a critical advancement in understanding how dynamic brand experiences function as a mechanism that

enhances follower engagement and impulse buying behaviour in digital marketing and live streaming environments.

The findings reveal that dynamic brand experience positively influences both follower engagement and impulse buying behaviours across the United Kingdom and China, reinforcing its universal importance in live streaming commerce. By empirically validating the mediating role of dynamic brand experience, this research provides a comprehensive understanding of how interactive and immersive elements within live streaming amplify consumer responses, offering theoretical insights into live streaming commerce.

In addition to expanding the theoretical understanding of dynamic brand experience, this research underscores its central role in driving positive consumer outcomes, challenging the traditional focus on static brand-consumer relationships. By integrating dynamic brand experience into the framework of live streaming commerce, this research provides substantial evidence for its relevance in enhancing follower engagement and purchase behaviours, offering valuable implications for future studies and practical strategies in the field of digital marketing and live streaming commerce.

5.3.2 *Practical Contribution*

The contributions of this study provide valuable practical insights for the digital marketing industry, particularly within the emerging field of live streaming commerce. A central challenge for practitioners is how to effectively attract viewers, foster meaningful interaction, and build trust in order to convert engagement into actual

purchases. The findings of this research address these concerns by linking them to the underlying theoretical framework of the study.

Grounded in the Stimulus–Organism–Response (SOR) framework, the results show that when streamers' attributes (stimulus) trigger psychological mechanisms such as a sense of presence and brand–streamer–follower congruence (organism), the consumer's dynamic brand experience (response) is significantly enhanced. This stronger brand experience, in turn, drives higher levels of follower engagement and impulse buying. From a practical perspective, this means that companies should not view live streaming merely as a sales channel, but as an experiential environment in which psychological immersion and authenticity are key levers for influencing follower engagement and impulse buying behaviour.

The findings also extend signalling theory, suggesting that congruence between brand identity, streamer persona, and follower values functions as a credibility signal. For practitioners, this highlights the importance of carefully selecting streamers whose expertise, style, and values authentically represent the brand. Random or mismatched partnerships risk decreasing trust, whereas congruent partnerships amplify credibility, deepen engagement, and increase the likelihood of spontaneous purchases.

Moreover, this study reinforces insights from flow theory by showing that interactive and immersive live streaming environments foster emotional involvement and cognitive absorption. For practitioners, this underlines the need to design live sessions that go beyond one-way product promotion. Instead, streamers should encourage two-

way interaction (e.g., real-time Q&A, virtual gifting, polls, or gamified features) to heighten immersion and trigger impulse buying.

The UK–China comparison further highlights the importance of cultural sensitivity in managerial strategy. In China, where collectivist values and high digital familiarity prevail, consumers place greater trust in streamers' expertise and respond strongly to interactive features. Platforms such as Douyin or Taobao Live are designed to maximise presence and interactivity, which explains why Chinese followers report higher levels of engagement and impulse buying. In contrast, in the UK, with its more individualistic culture, followers are comparatively less influenced by social presence and tend to place greater emphasis on independent evaluation and source credibility. This suggests that Western marketers should focus on transparency, clear product information, and authenticity to build trust, while simultaneously investing in platform features that enhance immersion to narrow the experiential gap with Chinese platforms. More details are discussed below

5.3.2.1 Impacts Related to Social Presence

The findings of this research highlight the critical role of social presence—the feeling of being personally connected and socially engaged during live streaming interactions—in shaping follower engagement and impulse buying behaviour within live streaming commerce. While social presence was found to positively influence consumer engagement and impulse buying in both the UK and China, its effect was stronger among Chinese participants. This reflects cultural differences: in collectivist contexts such as China, social connectedness and community-oriented experiences

are more highly valued, whereas UK participants, situated in a more individualistic context, respond positively but with less intensity.

From a practical perspective, these results suggest that live streamers and digital marketing companies should prioritise strategies that foster a heightened sense of social presence during live sessions, thereby reinforcing engagement and trust. Grounded in the SOR framework, social presence functions as a psychological “organism” that transforms the streamer’s attributes (stimuli) into a richer consumer response by encouraging emotional involvement and interpersonal closeness.

Practical strategies for enhancing social presence include:

- **Interactive communication:** Streamers should go beyond product descriptions by actively responding to follower questions, initiating conversational prompts, and recognising individual audience members during the session. These micro-interactions make followers feel noticed and valued, thereby deepening social bonds.
- **Personalised acknowledgement:** Addressing viewers by name, responding to comments in real time, and using inclusive language fosters a participatory environment that enhances the consumer’s perception of being part of a community.
- **Balancing product focus with engagement:** Rather than focusing exclusively on sales, streamers should balance informative content with interactive dialogue, which builds trust and strengthens brand associations.

The results further indicate that fostering social presence not only enhances the dynamic brand experience but also improves followers' perceptions of product authenticity and brand credibility, ultimately increasing engagement and impulse purchase behaviour. This effect was particularly visible among Chinese participants, where interactive features such as live chat, gifting, and real-time reactions are integrated deeply into platform design. By contrast, UK platforms provide fewer interactive functions, suggesting that Western marketers may need to innovate around interactivity (e.g., polls, Q&A features, or gamified engagement) to replicate the higher levels of presence achieved in China.

So, building a strong social presence is essential for driving follower engagement and impulse buying behaviour in live streaming commerce. By embedding interactivity, personalised communication, and community-building strategies into live streaming sessions, streamers and marketers can create memorable experiences that enhance engagement and stimulate impulse buying across diverse cultural contexts. Furthermore, these contributions, grounded in the SOR framework, extend the scope of social presence research by showing how it not only enhances engagement in general digital environments but also specifically drives impulse buying in the unique context of live streaming commerce (Ming et al., 2021; Zahid et al., 2024).

5.3.2.2 Impacts Related to Telepresence

The findings of this research reveal that telepresence—the psychological state of feeling virtually present in a mediated environment—plays an important role in shaping followers' perceptions of dynamic brand experiences. A heightened sense of telepresence was shown to increase both engagement and impulse buying behaviour,

underscoring its strategic importance for live streamers and digital marketing companies. Grounded in Flow Theory and the SOR framework, telepresence enhances immersion (the “organism”), which transforms external stimuli (streamer communication, platform design) into deeper consumer responses (active engagement and spontaneous purchasing).

- From a practical perspective, live streamers and digital marketers should focus on strategies that maximise immersion during broadcasts, enabling followers to feel as though they are “inside” the streaming environment. Effective techniques include:
- Vivid verbal communication: Streamers can use descriptive language, metaphors, and storytelling to stimulate the imagination, helping followers visualise products and experiences in a lifelike manner.
- Dynamic non-verbal cues: Gestures, facial expressions, and vocal modulation enhance realism and help simulate a sense of co-presence with the streamer.
- Multi-sensory framing: Describing how a product feels, looks, or sounds creates a layered sensory experience that strengthens the illusion of “being there.”

The results also highlight a cultural difference. Chinese participants reported a stronger telepresence effect, reflecting both the advanced immersive features of Chinese live streaming platforms (e.g., real-time gifting, interactive overlays, gamification) and cultural preferences for highly interactive, community-oriented online environments. By contrast, UK participants reported weaker effects, likely due to fewer platform-based immersive functions and more cautious consumer engagement styles. For Western marketers, this suggests a need to experiment with creative design

solutions—such as live polls, interactive product trials, or augmented reality integrations—to replicate the intensity of telepresence observed in China.

Overall, this study extends Flow Theory by demonstrating that telepresence in live streaming is not only about immersion but also functions as a mechanism linking cognitive absorption with consumer action (Ki et al., 2024).” Also, this study demonstrates that telepresence is not just a technical artefact but a psychological mechanism that drives follower engagement and impulse buying behaviour in live streaming commerce. By deliberately cultivating immersive experiences through language, performance, and platform design, marketers and streamers can enrich the dynamic brand experience, foster stronger emotional and cognitive bonds with the brand, and ultimately stimulate higher levels of engagement and impulse purchasing.

5.3.2.3 Impacts Related to Congruence

By applying Congruence Theory to the live streaming context, this study extends its applicability beyond traditional brand–consumer alignment to a triadic model involving streamer, brand, and followers. The findings of this research demonstrate that congruence—the alignment between the streamer’s persona, the brand’s identity, and the followers’ values—plays a critical role in enhancing dynamic brand experiences across both China and the United Kingdom. This alignment significantly strengthens follower engagement and impulse buying, underlining the importance of selecting streamers and brands whose identities naturally resonate with the target audience. Grounded in Congruence Theory and the SOR framework, congruence functions as a psychological mechanism: it reduces cognitive dissonance, fosters perceptions of

authenticity, and enhances emotional connection, thereby making the overall brand experience more compelling.

From a practical perspective, this means that matching matters. Streamers and digital marketing companies should carefully analyse the streamer's persona and style (e.g., luxury-oriented, lifestyle-focused, technology-driven) alongside the demographics and psychographics of their followers to ensure the chosen brand or product aligns seamlessly with both. For example, a mismatch—such as a luxury fashion streamer promoting low-cost budget travel—can reduce authenticity and weaken engagement. By contrast, alignment between a tech streamer and a consumer electronics brand, or a lifestyle influencer and wellness products, creates a sense of relevance that amplifies trust and stimulates consumer action.

The findings also highlight subtle cultural differences. In China's collectivist digital environment, congruence tends to be reinforced by community dynamics: when followers perceive alignment between streamer, brand, and group values, the effect on engagement and impulse buying is amplified. In the UK, however, with its more individualistic consumer culture, congruence is often judged at the personal level—followers are more sensitive to authenticity and may disengage quickly if they perceive a promotional partnership as forced or commercially motivated. These distinctions suggest that while congruence is universally important, its strength may vary by cultural context and consumer expectations.

Therefore, to optimise live streaming campaigns, brands and streamers should curate partnerships that feel natural, authentic, and relevant to both the audience and the

product category. By prioritising brand–streamer–follower alignment, digital marketers can foster cohesive, immersive brand experiences that enhance trust, deepen engagement, and drive impulse buying purchases, regardless of cultural context.

5.4 Limitations and Future Research

This research explores the impact of different dimensions of sense of presence and congruence, as well as their relationship with streamers' attributes and dynamic brand experience in live streaming commerce. Additionally, it examines how dynamic brand experience influences followers' engagement and impulse buying behaviour. While this research offers valuable insights into the interplay between streamers, consumers, and brands in the context of online live streaming commerce, it is not without limitations.

As with any research, certain constraints must be acknowledged, which also provide opportunities for further exploration. These limitations do not undermine the significance of the findings but rather highlight areas where future research could build on this research to deepen understanding in the growing field of live streaming commerce. The following section outlines these limitations and suggests avenues for future inquiry to address them.

5.4.1 *Cultural Variability*

5.4.1.1 Limitation

This research examines the impact of the sense of presence, incorporating dimensions such as social presence and telepresence, as outlined in the models developed by Sun et al.(2019) and further extended by Shi, Li & Hu, (2023) and Tian

& Frank, (2024). Prior research has established that the sense of presence is a critical factor influencing consumer behaviour in live streaming commerce. Some studies demonstrate that a heightened sense of presence enhances user trust (Ma, Zou & Lv, 2022), satisfaction and stickiness Barta, Gurrea & Flavián, 2023), and consumer engagement (Xue et al., 2020). For example, Ma, Zou & Lv (2022) and Zhang et al. (2022) highlighting that social presence, which fosters a sense of connection with the streamer, plays a important role in building trust. When consumers feel actively engaged with the streamer, such as through personalised interactions and responsive communication, they perceive the streamer as trustworthy, leading to a positive brand experience and higher levels of engagement.

However, this research does not explicitly examine some of the finer aspects identified in recent studies. For example, variables such as colour schemes, visual impact, and the streamer's interactive style have been shown to significantly contribute to enhancing social presence and telepresence. These sensory and stylistic cues could create a more immersive environment for viewers, strengthening their connection to the brand and their overall engagement, but they were not included in this study's measurement.

Additionally, while this research controlled for demographic variables such as age, gender, level of education, and employment status, it did not account for how visual aesthetics, streamer presentation styles, and cultural preferences might mediate or enhance the sense of presence. Importantly, the research's scope does not address the potential cultural difference between the UK and Chinese participants, particularly in their preferences for visual elements, communication styles, and interaction

patterns. Cultural differences in colour symbolism, engagement strategies, and follower expectations could significantly influence how followers perceive social presence and telepresence during live streaming sessions.

From a theoretical standpoint, this omission limits the ability to fully extend the construct of social presence beyond its current cognitive-interactive definitions. Specifically, it constrains understanding of how cultural psychology and sensory design elements shape presence and, in turn, dynamic brand experiences.

5.4.1.2 Future Research

To address the limitations identified above, Future research will need to refine the conceptual boundaries of presence by integrating aesthetic, cultural, and behavioural dimensions into its theorisation.

For instance, investigating the effects of colour palettes, streamer presentation styles, and interactive tools (e.g., live polls, personalised shoutouts, or audience-driven content) could provide valuable insights into how to optimise social presence and telepresence. Studying these factors would not only generate practical recommendations but also extend existing presence theory by incorporating aesthetic and design-related mechanisms into its conceptualisation.

In addition, given the significant cultural differences between countries, future research should explore how cultural preferences in visual aesthetics and communication styles influence followers' perceptions of brand experiences. For example, Western consumers may value a more casual and personable approach to live streaming, while

Asian audiences, particularly in China, may prefer a highly polished and professional style. Investigating these cultural differences would refine the cross-cultural boundaries of presence theory, showing whether its effects are universal or moderated by cultural psychology factors such as individualism–collectivism and communication norms.

Finally, future studies could employ experimental or longitudinal designs to test how varying combinations of visual stimuli, interactive elements, and streamer engagement tactics shape the sense of presence over time. Such approaches would advance theory by clarifying the temporal and causal mechanisms through which presence influences brand experience and follower engagement and impulse buying behaviour. By controlling for both demographic and cultural variables, researchers could develop more comprehensive models of presence that capture its cognitive, emotional, and cultural dimensions, thereby strengthening both theoretical and practical knowledge in the field of live streaming.

5.4.2 *Construct Dimensionality*

5.4.2.1 Limitation

This research develops a model to investigate the relationship between congruence and dynamic brand experience, ultimately assessing their influence on follower engagement and impulse purchasing behaviour. By highlighting the mediating role of congruence between streamer and follower and dynamic brand experience, this study advances the understanding of how congruence contributes to follower engagement and impulse buying behaviour in live streaming commerce. While the findings are

significant, several limitations should be acknowledged to clarify the boundaries of the construct and open avenues for future theoretical development.

Although this research focuses on brand, streamer, and follower congruence, existing literature suggests that congruence encompasses additional dimensions, such as cultural congruence and product congruence, which were not addressed here. These omitted dimensions may hold distinct and impactful roles in shaping dynamic brand experiences. For example, cultural congruence refers to the alignment of cultural values and norms between a brand's messaging, the streamer's persona, and followers' expectations. Cultural alignment may strengthen perceived authenticity and evoke deeper connections, while cultural mismatches could trigger disinterest or even negative brand evaluations. Likewise, the phenomenon of cultural collisions, where diverse cultural elements interact, may create unique dynamics that heighten engagement or stimulate curiosity (Ma, 2021; Lee, Yuan & Bi, 2023; Li, Xuan & Chen, 2024). Whether such collisions between Western brand identities and Chinese consumer expectations amplify or diminish brand experiences remains unexplored, leaving a gap in understanding how congruence operates across cultural boundaries.

Similarly, product congruence—defined as the alignment between different product lines or series within the same brand—may also shape consumer perceptions and engagement (Chen, Shen & Wei, 2023; Yu et al., 2024; Wang, 2024). For instance, a streamer promoting high-end luxury items under a brand may reinforce perceptions of exclusivity and quality, whereas promoting entry-level items under the same brand could dilute that perception. This research does not examine how such internal brand

consistency (or inconsistency) interacts with follower expectations, limiting insights into how product-level congruence contributes to dynamic brand experiences.

Finally, although the study controlled for key demographic variables such as age, gender, education, and employment status, it did not account for external contextual factors, including platform affordances, streamer–follower communication styles, or market-specific trends. These contextual factors may interact with congruence in ways that reshape its meaning or influence, suggesting that the current conceptualisation may be under-specified.

5.4.2.2 Future Research

Future research should empirically investigate the additional dimensions of cultural congruence and product congruence to refine the theoretical boundaries of the congruence construct. For instance, examining how cultural alignment or misalignment affects followers' perceptions across different regions—particularly contrasting Western and Asian markets, where cultural values and communication styles diverge—would extend the construct by demonstrating its cultural contingency (Ma, 2021; Lee, Yuan & Bi, 2023; Li, Xuan & Chen, 2024). Integrating cultural congruence into future models would not only enrich the understanding of consumer–brand–streamer alignment but also clarify how cultural norms moderate or amplify the role of congruence in shaping dynamic brand experiences. In this way, research could contribute to cross-cultural consumer psychology and refine congruence theory by embedding it in intercultural marketing contexts.

Similarly, future studies should examine the difference of product congruence, determining whether consistent branding across product lines strengthens dynamic brand experiences or whether variations across categories create differentiated effects on engagement and impulse purchasing (Chen, Shen & Wei, 2023; Yu et al., 2024; Wang, 2024). This would extend the construct by unpacking its internal structure—showing whether congruence functions at a single global level or as multiple nested dimensions (e.g., cultural, product, and interpersonal congruence). Experimental designs could test whether certain product types or brand tiers evoke stronger or weaker responses, thereby refining the scope and applicability of congruence theory in live streaming commerce.

Moreover, incorporating market-specific trends and platform affordances into future research could reveal how contextual factors interact with congruence to shape consumer perceptions. For example, followers on platforms with richer interactive features (e.g., Douyin, Taobao Live) may perceive congruence differently than those on less interactive platforms (e.g., TikTok UK). This would extend congruence theory by situating it more firmly within platform-based and market-based contexts, offering a more contextualised and flexible conceptualisation of the construct.

Collectively, these future directions highlight that congruence is not a static or one-dimensional construct but rather a multifaceted theoretical concept shaped by cultural, product, and contextual conditions. By exploring these dimensions, future research can extend congruence theory, refine its conceptual boundaries, and strengthen its explanatory power in predicting consumer engagement and impulse buying in live streaming commerce.

5.4.3 *Methodological Constraints*

5.4.3.1 Limitation

This research employs a quantitative research approach to examine the mediating effects of the sense of presence and congruence on the relationship between streamers' attributes and dynamic brand experiences, alongside their influence on follower engagement and impulse buying behaviour. While the findings significantly contribute to the understanding of live streaming commerce, several limitations in the research design and methodology warrant attention, providing opportunities for further exploration.

First, a major limitation is the geographical focus of the research, which includes participants from the UK and China only. This focus limits the generalisability of the findings to other regions, particularly those with established live streaming markets and unique cultural dynamics. For instance, countries like the United States, Brazil, and Indonesia are known for their substantial online live streaming audiences (Statista, 2024), but consumer behaviour in these contexts remains unexplored in this research. Such as cultural factors, which significantly influence consumer-brand interactions, may yield different results in these regions (Li et al., 2024; Peng, Zhang & Huang, 2024; Wang et al., 2024). For example, cultural preferences regarding communication styles, interaction levels, and digital consumption behaviours might impact the mediating effects of the sense of presence and congruence differently, offering opportunities for more globally inclusive research. Without testing the model in these diverse contexts, the theoretical claims regarding cross-cultural robustness remain partial.

Second, the reliance on a questionnaire-based methodology introduces additional limitations. While questionnaires effectively capture self-reported behaviours and perceptions, they are prone to biases such as social desirability bias and recall bias, which may compromise the accuracy of the data (Bryman, 2016). These limitations may restrict the explanatory depth of theories applied in this study, particularly when exploring different psychological constructs like social presence, congruence, and impulse buying. Without triangulation from behavioural data (e.g., actual purchase logs, platform analytics) or qualitative insights (e.g., interviews, digital ethnography), theoretical interpretations may remain somewhat abstract and disconnected from lived consumer experiences.

Third, the cross-sectional design of this study limits its ability to capture how the relationships among streamers' attributes, presence, congruence, and dynamic brand experiences evolve over time. Live streaming commerce is inherently dynamic, with consumers' responses influenced by repeated exposure, novelty effects, or even fatigue. The absence of longitudinal data means the study cannot theorise how the constructs studied—particularly presence and congruence—may fluctuate across time or different stages of consumer-brand relationships. This weakens the potential to contribute to temporal theories of follower engagement and impulse buying behaviour in digital environments.

5.4.3.2 Future Research

Future studies should consider incorporating qualitative methods, such as in-depth interviews to complement quantitative approaches. While this study provides statistical validation of the conceptual model, qualitative methods could uncover the

psychological mechanisms (e.g., emotional immersion, cognitive absorption) through which presence and congruence shape consumer responses. Such mixed-method approaches would not only enrich practical insights but also extend theoretical frameworks like the SOR model by capturing different, experiential data that quantitative surveys may miss.

Longitudinal research designs would also address the limitations of cross-sectional studies by examining how follower engagement and impulse buying behaviour and perceptions change over time (Bell, 2019). For instance, longitudinal studies could test whether the effects of presence and congruence intensify with repeated exposure or diminish due to novelty loss and fatigue. This would allow researchers to theorise presence and congruence as temporally dynamic constructs, refining existing digital marketing theories that currently treat them as static effects.

Expanding the geographical scope in future research to include a more diverse range of countries would enhance the generalisability of the findings and provide richer insights into cross-cultural differences. Examining regions such as Southeast Asia, North America, and South America (Statista, 2024) could reveal how cultural orientations—such as collectivism versus individualism, or high versus low power distance—moderate the effects of presence and congruence. Such cross-cultural comparisons would advance cultural psychology and international marketing theories by clarifying the boundary conditions under which the proposed framework operates.

Industry-specific research could also prove valuable. For instance, testing this model within sectors like tourism (Zhang, Wang & Zhang, 2021; Liu et al., 2024), education

(Hou et al., 2023), and food (Guo, Zhang & Wang, 2022; Liu et al., 2024; Nguyen & Veer, 2024) could refine the scope of congruence theory by exploring whether different product categories amplify or dampen the role of presence. This would extend theory by demonstrating how industry context functions as a boundary condition for consumer engagement in live streaming commerce.

Finally, future research could explore additional mediators and moderators, such as platform-specific features (Li, Xuan & Chen, 2024; Long, Zaidin & Mai, 2024; Zhang et al., 2024). For example, features like real-time gifting systems on Douyin or live polls on TikTok may amplify social presence. Also streamer interaction styles (Cong & Li, 2024), or consumer personality traits (Lin et al., 2021; Zheng et al., 2023). Such variables would enrich theoretical models by explaining why presence and congruence vary in their effectiveness across different technological environments and consumer segments. In doing so, future work could extend existing models of follower engagement and impulse buying behaviour by incorporating technology affordances and individual difference variables into frameworks of live streaming commerce.

In summary, by addressing these methodological limitations, future studies could refine theoretical boundaries (e.g., presence as dynamic, congruence as multidimensional, cultural values as moderators) while also building a more robust and globally applicable framework. This dual contribution would not only expand academic knowledge but also provide actionable insights for marketers and streamers in the increasingly competitive field of digital marketing.

5.4.4 *Conclusion*

This dissertation set out to quantitatively investigate how streamers' attributes, sense of presence, and brand–streamer–follower congruence shape dynamic brand experiences and, in turn, influence follower engagement and impulse buying in live streaming commerce. By integrating these constructs within a unified framework and testing the model across two culturally distinct contexts—the United Kingdom and China—the study provides new insights into the mechanisms driving follower engagement and impulse buying behaviour in this rapidly expanding digital environment.

The findings confirm that streamers' attributes exert a significant influence on follower engagement and impulse buying behaviour, but primarily through the mediating effects of presence and congruence. Dynamic brand experience emerged as a central pathway, linking these mediators to follower engagement and impulse buying. Notably, the results reveal important cultural distinctions: while presence strongly enhanced brand experience in China, its role was less pronounced in the UK, suggesting that platform design, digital familiarity, and cultural expectations shape how immersive cues are perceived.

The research makes several theoretical contributions. It extends congruence theory and source credibility theory by demonstrating their relevance in live streaming commerce and by integrating sense of presence as a key psychological mechanism. It also advances the literature on dynamic brand experience by situating it within a live, interactive environment rather than static social media contexts. Together, these contributions provide a richer conceptual understanding of how digital interactivity,

alignment, and immersion jointly drive consumer engagement and purchase behaviour.

In practical terms, the study offers clear guidance for digital marketers and live streamers. Success in live streaming commerce requires more than product promotion: it depends on fostering immersive and interactive environments, ensuring congruence between streamers, brands, and followers, and tailoring strategies to cultural contexts. These insights provide actionable strategies for enhancing engagement, trust, and impulse buying across diverse markets.

Although the study provides empirical evidence, it is not without limitations. Its geographical scope was restricted to the UK and China, and its reliance on cross-sectional survey data precludes longitudinal insights. Future research should expand to other regions, adopt mixed and longitudinal methods, and examine additional moderators such as platform features, industry dynamics, and consumer traits.

In conclusion, this dissertation contributes to advancing theoretical and managerial understanding of live streaming commerce by offering a comprehensive framework that explains how presence, congruence, and dynamic brand experience mediate the relationship between streamer attributes and follower engagement and impulse buying behaviour. It demonstrates the universal power of immersive and congruent brand experiences while highlighting important cultural differences. Ultimately, the research deepens scholarly knowledge of digital marketing while providing practical strategies for brands and streamers operating in one of the most dynamic frontiers of consumer engagement.

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Appendix 1: Ethical Approval



University of Essex

01/02/2024

Mr Mengqi Wu

Essex Business School, Essex Business School

University of Essex

Dear Mengqi,

Ethics Committee Decision

Application: ETH2324-0555

I am pleased to inform you that the research proposal entitled "Impact of Streamer Attributes and Dynamic Brand Experiences on Follower Engagement and Impulse Buying in Live Streaming Environments" has been reviewed on behalf of the Ethics Sub Committee 2, and, based on the information provided, it has been awarded a favourable opinion.

The application was awarded a favourable opinion subject to the following **conditions**:

Extensions and Amendments:

If you propose to introduce an amendment to the research after approval or extend the duration of the study, an amendment should be submitted in ERAMS for further approval in advance of the expiry date listed in the ethics application form. Please note that it is not possible to make any amendments, including extending the duration of the study, once the expiry date has passed.

Covid-19:

Please note that the current Government guidelines in relation to Covid-19 must be adhered to and are subject to change and it is your responsibility to keep yourself informed and bear in mind the possibility of change when planning your research. You will be kept informed if there are any changes in the University guidelines.

Yours sincerely,

Muhammad Junaid Ashraf



Appendix 2: Questionnaire

1.Streamers' Attributes

1.1 Attractiveness

I feel that the live streamer is:

- Classy
- Beautiful
- Elegant
- Sexy

1.2 Trustworthiness

I think the streamer is.

- Dependable
- Honest
- Sincere
- Trustworthy

1.3 Expertise

I feel that the live streamer is:

- An expert
- Knowledgeable
- Qualified
- Experienced

2 Sense of Presence

2.1 Telepresence

When I watch live streaming, I feel:

- My body was in the room, but I felt my mind was inside the world created by these streamers.
- I was immersed in the world these streamers had created.
- This live streaming generated world seemed to me to be “somewhere I visited” rather than “something I see.”
- After watching the live stream, I feel like I come back to the “real world” after a journey.

2.2 Social Presence

There is a sense of

- Human contact in live streaming.
- Personalness in live streaming.
- Human sensitivity in live streaming shopping.
- Human warmth in live streaming shopping.

3. Congruence

3.1 Streamer-Follower Congruence

- Concerning our characters, this streamer and I are very similar.
- I resemble the typical follower of this streamer’s channel very much.
- I can easily identify with this streamer.
- I resemble the typical follower of this channel very much.
- My ideals are very similar to the characteristics of this streamer.

- By participating in this live streaming, I want to show the best of me.
- My actual self-image is consistent with the overall image of this online celebrity.
- This streamer reflects my ideal self.

3.2 Streamer- Brand Congruence

I think :

- There's a good fit between my favourite streamer and the brand he or she endorses.
- My favourite streamer is compatible with the brand he or she endorses.
- My favourite streamer is congruent to the brand he or she endorses.
- It makes sense that my favourite streamer endorses the brand.

3.3 Follower – Brand Congruence

- The brands advertised through social media live streams are consistent with how I see myself.
- The brands advertised through social media live streams reflect who I am.
- The brands advertised through social media live streams cater to people like me.
- The typical customers of brands advertised through social media live streams are like me.
- I think the consistency between me and the brand.
- I could use this brand to communicate who I am to other people.
- I think this brand could help me become the type of person I want to be.

4. Dynamic Brand Experience

4.1 Sensory:

- This brand makes a strong impression on my visual sense or other senses.
- The brand always appeals to me sensually.
- I find this brand interesting in a sensory way.
- I will be interested when I see, hear or come into contact with the brand on the live streaming platform.

4.2 Affective:

This brand

- Induces feelings and sentiments.
- Is an emotional brand.

4.3 Intellectual:

- Engagement with this platform sparked my intellectual thinking.
- The brand makes me think.
- This brand stimulates my curiosity.

4.3 Behavioural:

- I engage in interactions with the brand.
- I find the brands encourage interactions on the brand.

5.Follower Engagement

In the live streaming, I would like to.

- Spend more time participating in the live streaming.
- Consider a streamer that uses live streaming platforms as my first choice when I want to buy something.
- I recommend live streaming streamer to my friends.
- Become a fan and follow this streamer.

- Try and keep track of the activities of a streamer's live streaming channel.
- Revisit the streamer's page to watch their new live stream in the near future.

6.Impulse Buying

- While watching live streaming, I often buy things spontaneously.
- As I watch live streaming, I often buy things online without thinking.
- Watching live streaming, sometimes I am a bit reckless about what I buy.
- While watching the live streaming, I feel like buying more things than I need.

Appendix 3: Summary of Key Studies List

Authors (Year)	Title	Journal Name	Ranking	Cited
(Gu, Zhang & Kannan, 2023)	Influencer Mix Strategies in Livestream Commerce: Impact on Product Sales	Journal of Marketing	ABS 4*	67
(Hugh et al., 2022b)	Influencer Marketing Effectiveness	Journal of Marketing	ABS 4*	455
(Wies, Bleier & Edeling, 2022)	Finding Goldilocks Influencers: How Follower Count Drives Social Media Engagement	Journal of Marketing	ABS 4*	237
(Hugh et al., 2022b)	Influencer marketing effectiveness: the mechanisms that matter	European Journal of Marketing	ABS 3	105
(Lou, 2022)	Social Media Influencers and Followers: Theorization of a Trans-Parasocial Relation and Explication of Its Implications for Influencer Advertising	Journal of Advertising	ABS 3	467
(Lee & Wan, 2023)	The Impact of Mukbang Live Streaming Commerce on Consumers' Overconsumption Behaviours	Journal of Interactive Marketing	ABS 3	64

(Miranda et al., 2024)	To buy or not to buy? The impulse buying dilemma in livestream shopping	Psychology and Marketing	ABS 3	18
(Bargoni et al., 2024)	Is this really me? Investigating brand personality self-congruity on consumer behavior in video-based social media	Psychology and Marketing	ABS 3	11
(Ooi et al., 2023a)	Social media influencers: An effective marketing approach?	Journal of Business Research	ABS 3	167
(Wongkitrungrueng & Assarut, 2020)	The role of live streaming in building consumer trust and engagement with social commerce sellers	Journal of Business Research	ABS 3	1524
(Ming et al., 2021)	How social presence influences impulse buying behavior in live streaming commerce? The role of S-O-R theory	International Journal of Web Information Systems		487
(Lo et al., 2022)	Why do consumers buy impulsively during live streaming? A deep learning-based dual-stage SEM-ANN analysis	Journal of Business Research		322
(Zheng et al., 2023)	What motivates users' viewing and purchasing behavior motivations in live streaming: A stream-streamer-viewer perspective	Journal of Retailing and Consumer Services		162

(Zhang, Cheng & Huang, 2023)	Oh, My God, Buy It!" Investigating Impulse Buying Behavior in Live Streaming Commerce	International Journal of Human–Computer Interaction		133
(Ma, Zou & Lv, 2022)	Why do consumers hesitate to purchase in live streaming? A perspective of interaction between participants	Electronic Commerce Research and Applications		132
(Wang et al., 2022)	Big arena, small potatoes: A mixed-methods investigation of atmospheric cues in live-streaming e-commerce	Decision Support Systems		107
(Hou et al., 2019)	Factors influencing people's continuous watching intention and consumption intention in live streaming: Evidence from China	Internet Research		437
(Geng et al., 2020)	Content marketing in e-commerce platforms in the internet celebrity economy	Industrial Management & Data Systems		265
(Zheng, Li & Na, 2022)	How customer engagement in the live-streaming affects purchase intention and customer acquisition, E-tailer's perspective	Journal of Retailing and Consumer Services		245

(Yin et al., 2022)	How to retain customers in omnichannel retailing: Considering the roles of brand experience and purchase behavior	International Journal of Hospitality Management		119
(Lin et al., 2022)	Exploring factors influencing impulse buying in live streaming shopping: a stimulus-organism-response (SOR) perspective	Asia Pacific Journal of Marketing and Logistics		201
(Wang et al., 2022)	How live streaming changes shopping decisions in E-commerce: A study of live streaming commerce	Computer Supported Cooperative Work		188
(Ma, Zou & Lv, 2022)	Why do consumers hesitate to purchase in live streaming? A perspective of interaction between participants	Electronic Commerce Research and Applications		132
(Wang & Wu, 2019)	Understanding user engagement mechanisms on a live streaming platform	Information Systems and Analytics		103

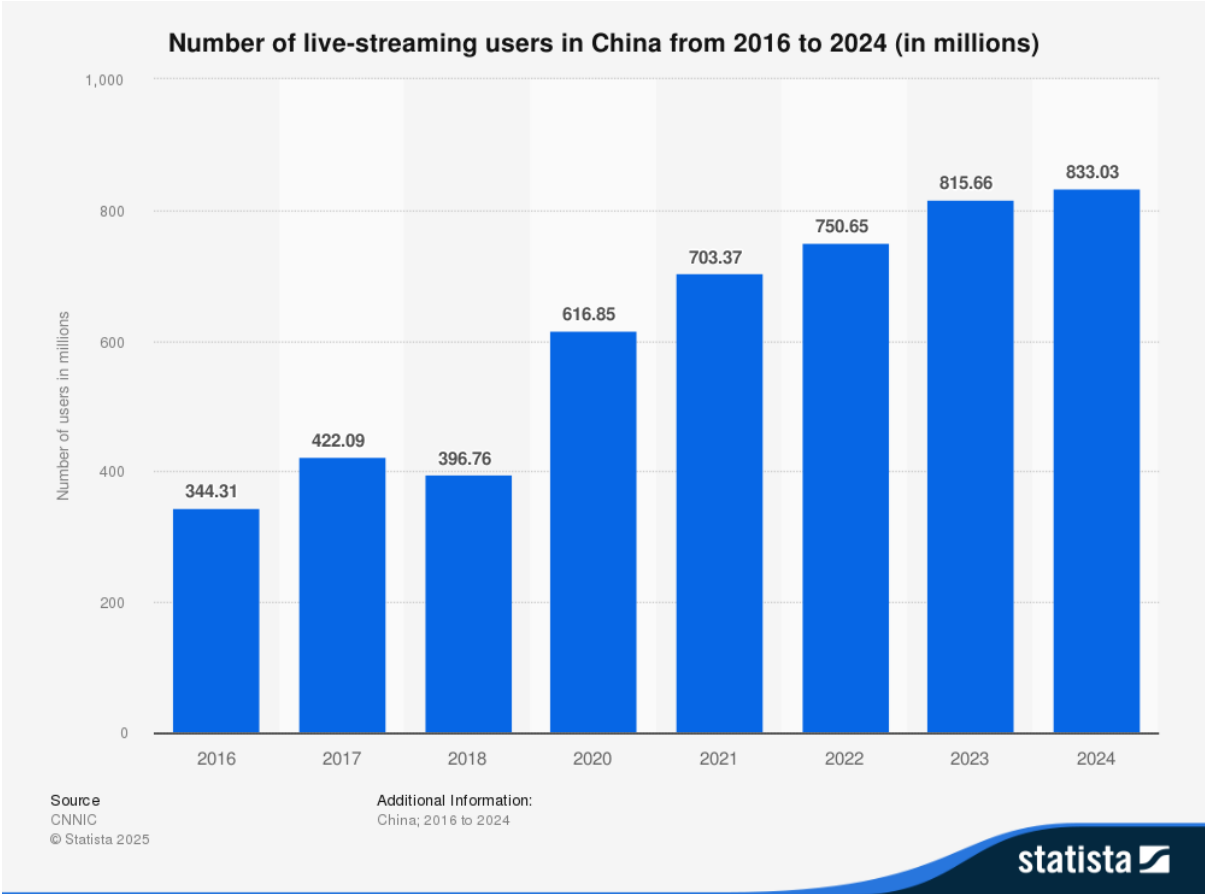
(Kang et al., 2021)	The dynamic effect of interactivity on customer engagement behavior through tie strength: Evidence from live streaming commerce platforms	International Journal of Information Management		682
(Wongkitrungrueng, Dehouche & Assarut, 2020b)	Live streaming commerce from the sellers' perspective: implications for online relationship marketing	Journal of Marketing Management		517
(Guo et al., 2021)	Effects of customer trust on engagement in live streaming commerce: mediating role of swift guanxi	Internet Research		290
(Chen, Dou & Xiao, 2023)	Understanding the role of live streamers in live-streaming e-commerce	Electronic Commerce Research and Applications		122
(Joo & Yang, 2023)	How perceived interactivity affects consumers' shopping intentions in live stream commerce: roles of immersion, user gratification and product involvement	Journal of Research in Interactive Marketing		102
(Liu, Zhang & Zhang, 2020)	The impact of self-congruity and virtual interactivity on online celebrity brand equity and fans' purchase intention	Journal of Product & Brand Management		252

(Li & Peng, 2021a)	Influencer marketing: purchase intention and its antecedents	Marketing Intelligence & Planning		209
(Hudders, De Jans & De Veirman, 2021)	The commercialization of social media stars: a literature review and conceptual framework on the strategic use of social media influencers	Social Media Influencers in Strategic Communication		943
(Wu et al., 2022)	Consumer resource integration and service innovation in social commerce: the role of social media influencers	Journal of the Academy of Marketing Science		128
(Lou & Yuan, 2019)	Influencer Marketing: How Message Value and Credibility Affect Consumer Trust of Branded Content on social media	Journal of Interactive Advertising		3719
(De Veirman, Cauberghe & Hudders, 2017)	Marketing through Instagram influencers: the impact of number of followers and product divergence on brand attitude	International Journal of Advertising		4417
(Chen, Zhao & Wang, 2022)	How livestreaming increases product sales: role of trust transfer and elaboration likelihood model	Behaviour & Information Technology		213

Appendix 4: Live Streaming

<https://vm.tiktok.com/ZNdV3qHWy/>

Appendix 5: Number of Live-Streaming Users In China from 2016 to 2024



Appendix 6: Summary of Main Theories

Theory	Key Authors	Core Concepts	Contribution
Source Credibility Theory	Hovland et al. (1953); Ohanian (1990); Gao et al., 2021	Communicator effectiveness depends on expertise, trustworthiness, and attractiveness.	Explains why streamer attributes matter as persuasive signals. Unlike SOR, which explains psychological processing, SCT explains the quality of the stimulus itself. Provides justification for why credibility-based streamer traits lead to stronger presence/congruence and richer brand experiences.
Congruence Theory	Osgood & Tannenbaum (1955); Sirgy (1982); (Liu, Zhang & Zhang, 2020; Chen,	Behaviour and attitudes depend on perceived alignment between self-image and external objects (brand/ streamer).	Explains why fit between streamer–brand–follower identities strengthen dynamic brand experiences. Adds the relational and identity-based mechanism missing in SOR and SCT. Highlights psychological alignment rather than persuasion or environmental stimuli.

	Pham & Tran, 2024		
Flow Theory	Csikszentmihalyi (1990); Liao et al., 2022; Li et al., 2023;	Immersive, focused attention states enhance engagement and experiential processing.	Provides a mechanism for how sense of presence enhances dynamic brand experience by creating cognitive absorption. Unlike SCT or congruence theory, Flow Theory focuses on immersive experiential states, bridging presence with emotional/cognitive brand engagement.
Customer Engagement Theory	Hollebeek et al., Citation 2019; Rasool et al., Citation 2020	Customer engagement is a psychological state resulting from interactive, co-creative customer experiences with a brand, characterised by cognitive, emotional, and behavioural dimensions. Engagement emerges through ongoing interactions rather than passive consumption.	Supports the conceptualisation of follower engagement as an outcome shaped by dynamic, interactive live-stream environments. Explains how streamer attributes and dynamic brand experience stimulate followers' cognitive attention, emotional involvement, and participation behaviours, ultimately driving engagement and impulse buying.

Appendix 7: Summary of Constructs and Definition

Construct	Definition	Key References
Streamers' Attributes	The perceived qualities of the streamer—such as, expertise, attractiveness, and trustworthiness—that influence followers' evaluation of the brand and the content.	Ohanian,1990; Li & Peng, 2021; Zheng et al., 2023; Zhou & Huang, 2023
Sense of Presence	The psychological perception of “being there” during the live streaming, comprising social presence (feeling socially connected) and telepresence (feeling immersed in the mediated environment)	(Lin, 2021; Ma, Zou & Lv, 2022; Zhang, Cheng & Huang, 2023; Sun et al., 2019b)
Congruence (Streamer–Brand–Follower Congruence)	The perceived fit or alignment among the streamer's persona, the brand identity, and the follower's self-concept, which shapes trust, emotional resonance, and brand evaluations.	(Wei et al., 2022)

Dynamic Brand Experience	The real-time, sensory, affective, behavioural, and intellectual, responses followers have toward a brand during live streaming, influenced by interactivity and presentation.	Yu et al., 2021
Follower Engagement	Followers' behavioural and emotional involvement during live streaming, including attention, interaction, participation, and intention to continue engaging.	Wongkitrungrueng & Assarut, 2020; Yu & Zheng, 2021
Impulse Buying	A spontaneous, unplanned purchase decision triggered by emotional, experiential, or contextual cues during live streaming interactions.	Fu & Hsu, 2023; Zhang, Cheng & Huang, 2023
Gender	A demographic characteristic used to test whether males and females differ in how dynamic brand experience translates into engagement or impulse buying.	Chen, H. et al. (2021), He, Y., Li, W. and Xue, J. (2022)
Product Type	The category or nature of the product (e.g., hedonic vs. utilitarian), used to examine whether product characteristics influence the strength of relationships.	Luo et al., 2024

