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Flow Theory Approach to Impulsive Purchase of Millennials in Social Commerce in China

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Abstract

Millennials' motives to achieve flow and impulsive buying vary greatly in social commerce. This study provides a comprehensive framework better to understand millennial consumers' spontaneous social commerce purchases. This framework aims to explain the flow experience and its complex relationship with Impulsive buying. The research used the partial least sHMOres structural model to analyse empirical data from 566 consumers who had previous experience purchasing on social media networks. This research revealed that the leach antecedent element significantly affects flow experience. The research also showed that flow experience strongly influences Impulsive buying. This study's findings significantly impact social media companies trying to win millennials' business. The key conclusion is that millennials' flow experience may increase impulsive buying. Merchants may encourage more passionate and unconstrained shopping in this group by personalising techniques to boost flow experience characteristics. Moreover, a well-designed theoretical framework illuminates millennials' social commerce engagement, flow experience, and Impulsive buying behaviour. The empirical validation of this framework illuminates the critical antecedents of the flow experience and its crucial role in Impulsive buying. These findings provide retailers with a path to improve millennial consumers' flow experience and impulsive buying habits in social commerce.

Keywords: *Millennials, Social commerce, Flow experience, Impulsive buying.*

Introduction

As defined by Zihao et al. (2022), Impulsive buying entails making spontaneous purchases without prior deliberation. Within the realm of marketing research, significant efforts have been invested in discerning the pivotal determinants of successful sales, as highlighted by Tinne (2010). The advent of the Internet and the concurrent surge of electronic commerce have propelled online retail into unprecedented popularity. A substantial proportion of online transactions fall under impulsive purchases, as established by Liu et al. (2013).

The landscape of internet shopping, characterised by its unfettered accessibility, has engendered a notable upswing in impulsive buying in contrast to the more traditional brick-and-mortar retail model. This shift is attributed to the inherent freedom it offers, emancipating consumers from the confines of routine work and domestic schedules that typically govern in-store purchases. The convenience and ubiquity of online platforms have ushered in an era where spur-of-the-moment buying behaviours find a conducive environment, reshaping the dynamics of consumerism.

Commonly characterised as "digitally aware," Millennials' constitutes the inaugural cohort to have matured entirely within a digital milieu (Nguyen et al., 2019; Pambreni et al., 2019; Reinikainen et al., 2020). This emergent generation, encompassing those born from the mid-1990s to the early 2010s and comprising approximately 32% of the global populace (Priporas et al., 2020), is poised to exert substantial sway over

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the global sales landscape. Millennials' individuals are more likely to engage with online and social media advertisements (Viţelar, 2019). These demographic displays pronounced materialistic tendencies and elevated expectations for expeditious service delivery while valuing businesses' adeptness in leveraging social media interactions. Particularly noteworthy is their inclination to endorse endorsements from notable personalities, deeming them more credible (Udriyah et al., 2019; Wolf, 2020).

Considering these dynamics, delving into the proclivity of millennials' predecessor generation for impulsive buying yields the promise of furnishing profound theoretical insights and tangible, practical applications.

Coined by psychologist Csikszentmihalyi in 1990, the concept of "flow" encapsulates the sensation of complete absorption in an ongoing activity. As postulated, individuals engrossed in demanding tasks often lose track of time and identity (Khoa & Huynh, 2022; Mahnke et al., 2015; Dewi et al., 2019; Do et al., 2019). The crux of the "flow" phenomenon asserts that individuals find optimal satisfaction and productivity when fully deploying their competencies while encountering challenges that stimulate growth. This harmonious convergence can trigger a heightened mental state called "flow," characterised by profound engagement and a simultaneous enhancement of cognitive faculties and emotional well-being.

In scenarios where the complexity of a task aligns with the individual's expertise, a sense of self-assuredness permeates the endeavour, fostering an enjoyable experience. The essence of flow theory is deeply entwined with the concept of positive feedback loops within the domain of psychology, offering insights into the enigmatic propensity of specific individuals to engage persistently in seemingly trivial activities.

By cognitive-emotional theory, this study constructed a model to unveil the cognitive and emotional underpinnings governing online purchasing behaviour. It delved into the beliefs associated with functional convenience and pleasure engendered by online transactions. The findings of this investigation unveiled substantial impacts on the allure of online stores, the gratification derived from products, and the tenor of communication, all of which stem from consumers' emotional states.

Mustafi and Hosain (2020) emphasised the significant impact of independent factors, specifically informativeness, arousal, entertainment, incentive, and credibility, in shaping the intention to engage in online purchases through intermediaries, particularly within a flow state. Their study revealed that these factors exert not only direct positive influences but also indirect ones, leading to a greater propensity for online shopping. Crucially, the research underscored the pivotal role of advertising value and the flow experience as mediating factors in this relationship, mediating the link between the identified independent factors and the intention to partake in online shopping. By elucidating these intricate dynamics, Mustafi and Hosain's findings provide valuable insights into the multifaceted nature of consumer behaviour within online shopping, shedding light on the various elements that drive individuals to make purchasing decisions while in a state of flow.

While extensive research has scrutinised Impulsive buying in both traditional and online environments, an avenue deserving further refinement lies in examining the Impulsive buying behaviour within the online social commerce landscape, particularly among the imminent majority market segment, Millennials. This cohort's pivotal role in shaping the market remains paramount. By leveraging the lens of flow theory, such research stands as a promising area for further exploration in China and the broader global context. As a result, this study endeavours to discern and idenntify the factors influencing the flow experience and its consequent impact on the impulsive buying behaviour of Millennials in social commerce.

Review of Literature

An instance where a customer spontaneously makes a purchase immediately upon encountering it is

categorised as an Impulsive buying event. This behaviour is typified by emotional arousal, a momentary lapse in self-control, and impulsive actions triggered by the allure of a desired product or service. The proliferation of online retail has accentuated the prominence of the Impulsive buying phenomenon. Due to low entry barriers, streamlined procedures, and diminished social influence, the digital shopping environment encourages hasty and impulsive decision-making (Ek Styvén et al., 2017).

Online stores are strategically poised to employ rational product promotion tactics, exerting influence over their customer base. This expansion into more deliberate approaches to encourage purchasing implies that internet-based shopping has considerably widened the realm in which Impulsive buying can transpire (Wu et al., 2020).

Hypotheses Development

The human experience of a harmonious state referred to as "flow", occurs when individuals respond to external stimuli with complete engagement and focus on the task (Csikszentmihalyi, 1997). In this state of mental contentment, individuals become so engrossed in pursuing their preferred objectives that they remain oblivious to environmental changes (Csikszentmihalyi & LeFevre, 1979). The concept of flow has garnered significant attention in recent times, particularly in enhancing the online shopping experience. Notably, a customer's perception of the traffic on a specific shopping website can substantially influence their purchasing behaviour during the exploration phase (Wu et al., 2020).

During exploratory searches, consumers are particularly susceptible to external cues, potentially prompting impulsive purchases (Zhang et al., 2017). This constellation of research findings collectively suggests a plausible connection between the state of flow and impulsive online purchases. The notion of the flow state has indeed been implicated in the emotional perspective of a shopper when contemplating a spontaneous online transaction (Wu et al., 2020). As such, this study posits hypothesis

H1: *Flow experience will positively influence impulsive buying behaviour.*

Hung and Khoa (2022) emphasised the intricate interplay between consumer satisfaction, purchasing inclination, and perceptions of a website's relevance and the experience of flow it delivers. Service HMOlity emerged as a dominant factor, exerting a more profound influence on consumers' overall contentment and predisposition to make purchases compared to information and system HMOlity. Additionally, Gao and Bai (2014) illustrated the crucial role of informativeness, efficiency, and entertainment in shaping customers' flow experience while navigating online travel agency websites in the Chinese context. This insight resonates with the findings of other research studies, further underscoring the significance of informality as a pivotal factor impacting the flow experience (Wibowo et al., 2020). The collective evidence from these studies underscores the intricate web of influences that contribute to consumers' satisfaction, flow experience, and purchasing behaviour in the dynamic landscape of online commerce.

The importance of individuals maintaining focused attention on their immediate environment has emerged as a well-established factor contributing to the flow experience (Patanasiri & Krairit, 2017). The perception of risk during the process of exploring websites has been identified as a pivotal determinant in achieving a state of flow and completing online purchases, as confirmed by the findings of Morales-Solana et al. (2019). Notably, Martins et al. (2019) introduced a fresh dimension to understanding the flow experience by introducing the concept of online advertising value. This concept pertains to a consumer's subjective assessment of the worth or utility of advertising, shedding light on the multifaceted influences that contribute to the immersive and engaging nature of the flow experience. The collective insights from these studies further enrich our understanding of the intricate factors that shape individuals' engagement, decision-making, and overall experience when navigating the digital realm of online commerce.

The formulation of the purchasing experience for Millennial customers on social networking sites is influenced by a constellation of pivotal factors, encompassing Customer Empowerment, Hedonic Motivation, perceived risk, informativeness, enjoyment, and online advertising value. As postulated by Hsu et al. (2012), concentrating on the platform is crucial in effectively capturing users' attention during their online shopping journey, directing their focus towards specific purchase scenarios. Moreover, the research by Morales-Solana et al. (2019) substantiates that Customer Empowerment, coupled with personalisation, serves as a direct precursor to inducing the flow state during online activities. This backdrop lays the foundation for the following hypothesis:

H2: *Customer Empowerment has a positive effect on the flow experience.*

The impact of hedonic motivation on consumer satisfaction and purchase intent has been demonstrated by prior studies (Ajitha et al., 2022; Hsu et al., 2012). The central aim of this research was to construct a comprehensive model elucidating the intricate dynamics among hedonic motivation, perceived playfulness, perceived flow, and user experience. Furthermore, the study delved into the mediating functions of perceived playfulness and perceived flow in bridging the effects of hedonic motivation onto the user experience. This investigation was conducted within an online travel agency's specific context, as Fan et al. (2013) outlined.

The findings of this study unveiled a distinct linkage between hedonic motivation and user satisfaction, with perceived flow and playfulness acting as crucial intermediaries. The perceived sense of flow experienced by users and the inherent element of playfulness associated with a website were both identified as potent contributors to the overall satisfaction levels of visitors. This realisation prompted the researchers to posit the following conjecture:

H3: *Hedonic motivation positively affects the flow experience.*

Chen and Yao (2017) have identified four key determinants contributing to perceived risk in online shopping: Supplier, consumer, technology, and product. These factors collectively can evoke feelings of vulnerability or uncertainty in buyers, impeding the seamless flow experience and impulsive purchase intentions. Correspondingly, the research by Morales-Solana et al. (2019) underscores that a reduced sense of perceived risk correlates with an elevated flow experience. In simpler terms, a heightened perceived risk negatively impacts the flow experience, deterring its manifestation. So, the hypothesis put forward is:

H4: *Perceived risk has a negative effect on the flow experience.*

In their study, Mustafi and Hosain (2020) examined customers' intentions in Bangladesh when purchasing smartphones online. They identified five independent variables: informativeness, stimulation, entertainment, incentive, and reliability. These factors collectively influence customers' intentions to make a purchase. Significantly, these effects are mediated by two intermediary variables: the flow experience and advertising value. Therefore, hypothesis H5 posits that:

H5: *Informativeness has a positive effect on the flow of experience.*

Individuals engage with the online realm for multifarious purposes, encompassing knowledge acquisition, task completion, and indulgence in leisure and amusement (Guo & Poole, 2009). This immersive digital landscape often leads users to become entirely absorbed in their pursuits due to the presence of positive influences and engaging surroundings. Consequently, the sensation of flow aligns harmoniously with enjoying online shopping.

Additionally, a plethora of research within the domain of customer behaviour in e-commerce has

demonstrated a positive correlation between the occurrence of flow and the presence of a substantial perceived hedonic value – an alignment consistent with flow theory. With this understanding, the study posits an expectation that shopping preferences will serve as catalysts for the emergence of a flow experience among consumers. Thus, hypothesis H6 is formulated as follows:

H6: *Enjoyment has a positive effect on the flow of experience.*

Customers who direct their undivided attention towards the signals they receive, devoid of distractions, are inclined to experience a heightened sense of flow (Hoffman & Novak, 1996). Additionally, messages tend to receive a positive appraisal from individuals if they are relevant to their needs or offer valuable shopping guidance (Martins et al., 2019). Thus, the study proposes hypothesis H7:

H7: *Online advertising value has a positive effect on the flow experience.*

The study proposes a model, as shown in Figure 1.

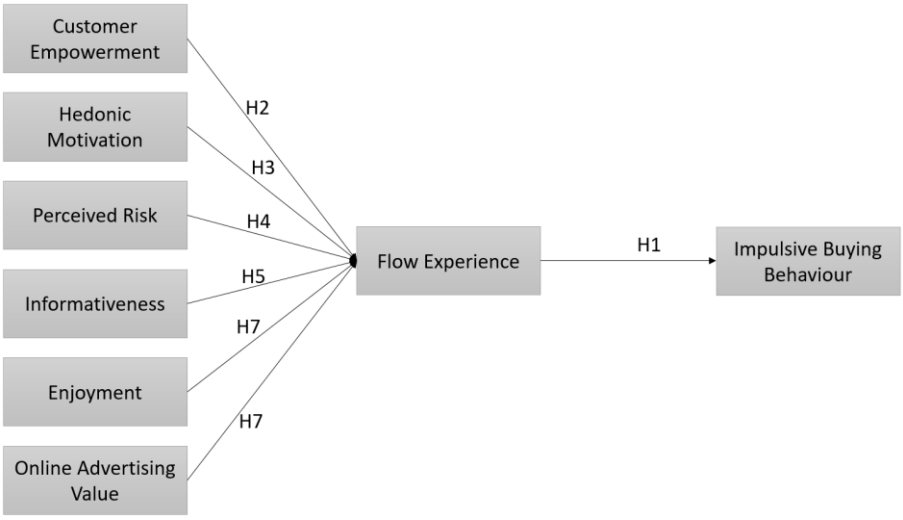

Figure 1: Research model

Research Methodology

This study employed a mixed-method approach, encompassing Qualitative research and interviews with five experts in the fields of marketing and e-commerce, hailing from universities and online shopping platforms (Azam et al., 2021). These in-depth interviews were conducted to delve into the theoretical framework of Impulsive Buying Behaviour. The researcher meticulously crafted the discussion board and distributed it to participants before the interviews, facilitating structured exploration. The interviews focused on gaining insights into consumers' perceptions and experiences during purchases made on social networking platforms.

The Qualitative phase informed the refinement of the research scale and the subsequent construction of a Quantitative research questionnaire (Azam et al., 2023). The sample for the Qualitative portion was purposefully selected using a non-probability technique. For the Quantitative phase, data collection involved a prepared questionnaire administered to a total of 566 customers who are frequent shoppers on social networking platforms, including WeChat, Douyin, and Youku. Pertinent details regarding the research sample are presented in Table 1.

Table 1: Demographic Information

	Frequency	Percent (%)
Gender		
Male	272	49.7
Female	274	50.2
Job		
School Students	117	20.7
College Student	176	31.1
College Student	130	23
Non-students	142	25.1
Social commerce channels often buy		
Youku	170	30
Douyin	216	37.2
WeChat	170	31.7

The gathered data will undergo processing using statistical software such as SPSS 20 and SmartPLS. The scale's reliability will be evaluated through measures including Cronbach's Alpha coefficient, convergence value, and discriminant validity. The theoretical model's validity will be examined using linear regression analysis to ascertain the magnitude of its impact.

For the Quantitative research phase, sample selection will adhere to the non-probability approach, employing a combination of purposeful and quota sampling. The scales employed in this study are derived from existing research but have been refined based on insights garnered from the Qualitative phase. A comprehensive overview of the scale information can be found in Table 2.

Table 2: Scale in the Study

Scale Items	Source
Customer Empowerment (CEM)	Barta et al. (2021)
Hedonic Motivation (HMO)	Ha and Im (2012)
Perceived Risk (PR)	Chen et al. (2017)
Informativeness (INF)	Mustafi and Hosain (2020)
Enjoyment (ENJ)	Barta et al. (2021)
Online Advertising Value (ADV)	Martins et al. (2019)
Flow Experience (FLO)	Chen et al. (2017)
Impulsive Shopping (IMP)	Leong et al. (2017)

Findings and Results

By Henseler et al. (2014), it is imperative to establish the relevance of assessments before delving into the analysis of measurement models. The saturation model's Standardised Root Mean Residual (SRMR) at 0.077 falls below the accepted threshold of 0.07, signifying a satisfactory model fit. Three critical metrics, namely outer loading (OL), Cronbach's alpha (CA), and composite reliability (CR), were utilised to gauge the model's reliability. Firstly, the loading coefficients for all external factors demonstrated a significance level surpassing 0.7007.

Additionally, as depicted in Table 3, both CA and CR values exceeded the established threshold of 0.7, affirming the construct's internal consistency. Lastly, the Average Variance Extracted (AVE) served as a yardstick for testing convergence validity, with AVE values surpassing the threshold of 0.5, as suggested by the authors. Thus, the findings corroborate the reliability and convergent validity of the constructs under investigation.

Table 3: Reliability and convergence value measurement results

Scale	CA	CR	AVE	OL
ADV	0.797	0.742	0.703	[0.832-0.923]
CEM	0.772	0.745	0.752	[0.878-0.967]
ENJ	0.765	0.878	0.777	[0.897-0.924]
FLO	0.791	0.756	0.777	[0.913-0.935]
IMP	0.832	0.772	0.722	[0.924-0.943]
INF	0.756	0.772	0.779	[0.952-0.953]
PR	0.714	0.746	0.753	[0.911-0.922]
HMO	0.797	0.727	0.765	[0.912-0.979]

In this study, the discriminatory power of constructs was evaluated using the heterotrait-monotrait ratio (HTMT). As indicated in Table 4, a discriminant value between research constructs is established when the HTMT value between any two reflective structures is at least 0.7. Before assessing the structural model, an examination of the structure's variance inflation factor (VIF) values was conducted to gauge the presence of multicollinearity. Notably, all VIF values were below the recommended threshold of 5. This indicates the absence of multicollinearity within the research model.

Table 4: Discriminant value measurement results

	ADV	CEM	ENJ	FLO	IMP	INF	PR	HMO
ADV	0.477							
CEM	0.527	0.455						
ENJ	0.547	0.674	0.552					
FLO	0.421	0.537	0.432	0.645				
IMP	0.352	0.475	0.257	0.574	0.671			
INF	0.353	0.441	0.36	0.579	0.679	0.547		
PR	0.391	0.472	0.474	0.542	0.453	0.342	0.432	
HMO	0.527	0.474	0.479	0.614	0.510	0.417	0.454	0.765

Furthermore, the examination of each dependent variable's R2 is presented in Table 5. Notably, all the values surpass the minimum threshold of 0.2, as Hair Jr et al. (2016) recommended. The assessment of effect size was executed through the utilisation of the f2 statistic, as described by Henseler et al. (2009) and depicted in Table 5. The findings reveal that the impact of FLO on IMP is notably substantial ($f2 > 0.35$), while the remaining associations within the model are relatively modest (with f2 values ranging between 0.02 and 0.15).

The model's predictive prowess is subsequently evaluated using the Q2 value test. When Q2 surpasses 0, it signifies the model's competence in accurately predicting the dependent variables. As demonstrated in the outcomes displayed in Table 5, all coefficients, encompassing VIF, R2, f2, and Q2, demonstrate their validity and appropriateness.

Table 5: Measurement results VIF, R2, f2 , Q2

	VIF	R2	f2	Q2
ADV	1.501		0.029	
CEM	1.597		0.119	
ENJ	1.525		0.046	
FLO	1	0.595	0.594	0.509
IMP		0.373		0.335
INF	1.519	0.066		
PR	1.532	0.053		
HMO	1.439	0.025		

To assess hypotheses H1 through H7, the significance of the beta coefficients for each regression and their corresponding p-values was examined. The outcomes of the research, presented in Table 6, demonstrate that all calculated p-values are below the threshold of 0.05. Consequently, hypotheses H1, H2, H3, H4, H5, H6, and H7 are all substantiated and accepted.

Table 6: Hypothesis test results

	Beta	p-value	Hypothesis
FLO -> IMP	0.61	0	H1
CEM -> FLO	0.277	0	H2
HMO -> FLO	0.121	0.013	H3
PR -> FLO	-0.171	0	H4
INF -> FLO	0.202	0.001	H5
ENJ -> FLO	0.169	0.005	H6
ADV -> FLO	0.132	0.006	H7

Discussion

The Quantitative research conducted in this study sheds light on the affirmative relationship between the flow experience and impulsive purchasing Behaviour (Beta = 0.61; p-value = 0.000). Thus, hypothesis H1 gains support with a high confidence level of 99%. These findings are consistent with previous research by Lee and Kim (2012), who identified flow, positive and negative emotions, the attractiveness of social commerce platforms, and discounted prices as pivotal factors influencing impulsive shopping Behaviour. A similar sentiment echoes in the work of Huang (2016) and Y.-Wu and Ye (2013), where online and mobile commerce investigation unveiled a correlation between Impulsive buying Behaviour and flow experience.

Furthermore, the impact of Customer Empowerment on the flow experience for millennials engaging in social commerce emerges positively (Beta = 0.277; p-value = 0.000). Consequently, hypothesis H2 finds substantial backing with a 99% confidence level. This alignment with the findings of Morales-Solana et al. (2019) substantiates Customer Empowerment's role as a direct precursor to entering a flow state. As highlighted in prior research, the attainment of Customer Empowerment serves as a fundamental prerequisite for users of online supermarkets to experience flow.

In parallel, the study establishes that Hedonic Motivation (Beta = 0.121; p-value = 0.013), informativeness (Beta = 0.202; p-value = 0.001), enjoyment (Beta = 0.169; p-value = 0.005), and online advertising value (Beta = 0.132; p-value = 0.000) all exert a positive influence on Millennials' flow experience in social commerce. Consequently, hypotheses H3, H5, H6, and H7 garner substantial support with a confidence level of 95%. Fan et al. (2013) and Hsu et al. (2012) have previously demonstrated that hedonic motivation significantly shapes the flow experience in online shopping contexts. Moreover, social networking websites' rich informational context, encompassing input from sellers and fellow customers, contributes to an enhanced flow experience (Mustafi & Hosain, 2020; Wibowo et al., 2020). Reinforcing this, Barta et al. (2021) posit that enjoyment during the shopping process heightens the flow experience, be it on handheld devices or computers. The effectiveness of social media advertising in captivating customers and fostering joy during the buying journey is also attested, further solidifying the foundation for a heightened flow experience (Khoa & Huynh, 2023).

Finally, perceived risk is discerned to negatively impact Millennials' flow experience when shopping on social platforms (Beta = -0.171; p-value = 0.000). This substantiates hypothesis H4 with a robust 99% confidence level. In line with the observations of Morales-Solana et al. (2019), a perception of high risk diminishes the flow experience during online sales transactions. Chen et al. (2017) also align with this notion, asserting that perceived risk plays a substantial role in shaping customers' perception of flow during social commerce purchases.

In summation, the study's Quantitative exploration showcases that flow experience holds significant

sway over impulsive purchasing Behaviour among Millennials in the realm of social commerce. Customer Empowerment, hedonic motivation, informativeness, enjoyment, and online advertising value contribute positively to the flow experience. Conversely, perceived risk acts as a detractor. These findings align with prior research and provide deeper insights into the intricate dynamics of millennials buying behaviours in the context of social commerce.

Conclusion

The primary objective of this research is to discern the factors that influence the flow experience and subsequent Impulse buying behaviour among millennial consumers in the realm of social commerce. By synthesising theoretical insights and findings from related studies, the study identifies six key factors that impact the flow experience: Customer Empowerment, perceived risk, Hedonic Motivation, informativeness, enjoyment, and online advertising value. Notably, the research highlights the positive correlation between the flow experience and impulsive buying Behaviour. Within antecedent factors shaping the flow experience, while perceived risk exhibits a negative effect, the remaining five factors positively influence millennials' flow experience in social commerce.

To optimise their performance on social networking platforms, online sellers are advised to provide customers with valuable and pertinent information. Strategic alignment of online advertisements to promotional efforts and product utility is emphasised as one of the influential factors directly impacting the flow experience. Additionally, creating visually appealing websites/apps embellished with compelling product imagery and precise descriptions is encouraged. Crafting a coherent and well-structured product portfolio further enhances the flow experience. Concomitantly, regulations concerning return policies, warranties, and maintenance serve as pivotal tools in mitigating perceived risk, thereby bolstering customer confidence in purchasing on social commerce platforms. These policies should be meticulously communicated and updated on the platforms for customers' convenience and comprehension.

However, the study acknowledges its limitations and suggests potential avenues for future research. The scope of antecedents in the flow experience is limited to six factors, and there is room for expanding this spectrum to include elements such as entertainment, corporate credibility, and personalisation. Additionally, future research could explore cross-generational comparisons to understand how the influence of flow experience varies among different generations when making purchases on social networking sites. In sum, while the study offers valuable insights, it also underscores the need for ongoing exploration and refinement in comprehending the intricate dynamics of consumer Behaviour in the ever-evolving landscape of social commerce.

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