

# THE IMPACT OF AI-DRIVEN PERSONALIZATION AND SOCIAL INFLUENCE ON CUSTOMER ENGAGEMENT: THE MEDIATING ROLE OF FOMO IN DIGITAL CAMPAIGNS

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## Abstract

This study aims to examine the impact of AI-driven personalization and social influence on customer engagement, with fear of missing out (FOMO) as a mediating factor in digital marketing campaigns. The research is motivated by the growing importance of personalized technologies and social dynamics in shaping user engagement within digital platforms. A quantitative approach was employed using survey data collected from 220 active Spotify users in Indonesia who are familiar with the Spotify Wrapped campaign. The data were analysed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that AI-driven personalization and social influence have a positive and significant effect on customer engagement. Social influence also significantly increases FOMO, while AI-driven personalization shows a negative relationship with FOMO. However, FOMO does not significantly influence customer engagement and fails to mediate the relationship between the independent variables and customer engagement. These results suggest that customer engagement is primarily driven by personalized experiences and social interactions rather than psychological pressure such as FOMO. This study contributes to the digital marketing literature by challenging the commonly assumed mediating role of FOMO and highlighting the dominant role of AI personalization and social influence in enhancing customer engagement.

**Keywords:** AI personalization, Social influence, Customer engagement, FOMO, Digital marketing.

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## 1. INTRODUCTION

Customer engagement is increasingly recognized as a crucial aspect of digital marketing and a central focus of modern marketing strategies, as it contributes to marketing outcomes (Blut et al., 2023; Rasool et al., 2020). According to research conducted by Busalim et al. (2021), customer engagement is influenced by technological factors, social interactions, and motivational factors.

The use of artificial intelligence (AI) to provide personalized user experiences is one of the most significant developments in technology. AI-driven personalization enables companies to tailor content based on user preferences and behavioural data, thereby enhancing its relevance and fostering stronger emotional connections. This approach has been widely adopted across digital platforms, including music streaming services such as Spotify, which leverages AI to curate personalized content in its annual digital campaign, Spotify Wrapped. This campaign has evolved into a global digital phenomenon, driving massive user participation and social sharing behaviour. From a digital marketing perspective, such participatory patterns suggest the emergence of affective engagement and heightened social discourse, which collectively shape user experience and contribute to elevated levels of customer engagement (Lee & Breckon, 2025; Salah & Mburugu, 2025).

Several studies have demonstrated that AI-driven personalization positively influences customer engagement by enabling the delivery of content tailored to users' preferences and behavioural histories (Ahmed et al., 2025; Alghaswyneh, 2025; Sayuti et al., 2025; Tjioe et al., 2025). However, this relationship is not consistently direct or statistically significant across all contexts (Teepapal, 2025). Beyond technological factors, social influence has also been identified as a significant determinant of customer engagement in digital environments (Ao et al., 2023; Ting et al., 2020). Users are frequently motivated to engage with content upon observing the participatory behaviours of others, resulting in increased interaction and collective behavioural patterns. Nevertheless, Yang et al. (2017) found that perceived social influence does not significantly affect engagement intentions. In addition, psychological constructs such as the fear of missing out (FOMO) have been recognized as potential drivers of user engagement, as individuals strive to remain socially relevant and avoid exclusion from trending digital experiences (Dinh et al., 2023; Habib & Almamy, 2025; Poleac & Gherguţ-Babii, 2024). Based on findings from various previous studies, the present study aims to examine the interrelationships among AI-driven personalization, social influence, and FOMO in relation to customer engagement, with particular reference to Spotify Wrapped.

To explain the mechanisms underlying customer engagement in digital environments, this study adopts the Stimulus-Organism-Response (S-O-R) framework as its primary theoretical foundation (Mehrabian & Russell, 1974). The S-O-R model posits that environmental stimuli influence individuals' internal cognitive and affective states, which in turn drive behavioural responses. Within this framework, AI-driven

personalization and social influence are conceptualized as external stimuli, FOMO is defined as an internal psychological state, and customer engagement represents the resulting behavioural response. This framework offers a structured explanation of how technological and social factors interact through psychological processes to shape engagement outcomes.

Previous studies have primarily examined variables related to AI-driven personalization, social influence, and FOMO as discrete constructs. However, studies integrating these three variables within a unified conceptual framework to explain customer engagement remain limited. Moreover, empirical investigations into the effect of AI-driven personalization on customer engagement have largely been conducted in the e-commerce sector, as evidenced by Hassan et al. (2025), Mandagie & Kristaung (2025), and Ratnawati & Saragih (2025). Accordingly, the present study addresses this gap by examining the combined effects of AI-driven personalization and social influence on customer engagement, with FOMO as a mediating variable. By focusing the analysis on the context of Spotify Wrapped, this study offers a contemporary and contextually relevant case for exploring the interaction between technological and psychosocial factors in digital marketing.

On the other hand, although AI-driven personalization and social influence are recognized as important factors affecting consumer engagement, there is a relative scarcity of empirical studies that have thoroughly examined mediating variables such as FOMO. Prior research has more commonly investigated the direct effect of each variable individually, without situating them within an integrated mediation model capturing their interrelationships. Consequently, a research model that combines AI-driven personalization and social influence with FOMO as a mediating variable in influencing customer engagement represents an innovative approach that has yet to be widely explored in the Indonesian academic context.

This study makes several contributions to the management literature. First, it extends the strategic management and information systems literature by conceptualizing AI-driven personalization and social influence as critical digital capabilities central to firms' ability to create value and sustain customer engagement in competitive and uncertain environments, highlighting the strategic importance of data-driven technologies in enabling competitive advantage through enhanced customer experience. Second, it contributes to the behavioural strategy literature by re-examining the assumption that FOMO is a primary driver of user engagement, positioning FOMO as a context-dependent construct whose relevance varies under conditions of high personalization and increased user autonomy. Finally, by integrating technological, social, and psychological dimensions within a unified framework, this study offers a comprehensive perspective on how engagement is formed within complex and dynamically evolving digital ecosystems.

## 2. LITERATURE REVIEW

### 2.1 Stimulus-organism-response (S-O-R)

This study is grounded in the Stimulus-Organism-Response (S-O-R) framework, originally developed by Mehrabian and Russell (1974) to explain how environmental stimuli influence an individual's internal states and further shape behavioural responses. Although initially proposed within the field of environmental psychology, the S-O-R model has since been widely adopted in digital marketing and consumer behaviour research to explain how technological and social factors drive customer engagement.

Within this framework, stimuli represent external environmental triggers that act upon the individual. In the present study, AI-driven personalization and social influence are conceptualized as such stimuli. The organism component captures the internal cognitive and affective states that mediate this process, represented in this study by the FOMO. The response, in turn, refers to the resulting behavioural outcomes, operationalized here as customer engagement. By applying the S-O-R framework, this study offers a theoretically grounded explanation of how technological and social stimuli interact with psychological states to ultimately drive engagement behaviour in the context of digital campaigns.

### 2.2 Customer engagement

Hollebeek (2011) and Brodie et al. (2013) define customer engagement as a marketing activity centred on customers' behavioural and psychological states. Both perspectives emphasize that customer engagement is closely linked to motivation, brand, and context, as reflected in specific levels of cognitive, emotional, and behavioural awareness that emerge when individuals interact with a brand. In modern marketing, customer engagement has become a primary focus and is increasingly regarded as a critical dimension of digital marketing practice. It is frequently used to evaluate the success of digital campaigns, as it captures customers' interactive responses to a brand and contributes to broader marketing outcomes (Blut et al., 2023; Rasool et al., 2020). From a digital marketing perspective, the Spotify Wrapped campaign has been shown to generate significant emotional engagement and social conversation, thereby shaping user experience and enhancing customer engagement (Lee & Breckon, 2025; Salah & Mburugu, 2025). Within the S-O-R framework, customer engagement represents a behavioural response that arises from the interaction between external stimuli and internal psychological states.

### 2.3 AI-driven personalization on customer engagement

Sayuti et al. (2025) found that AI-driven personalization is among the factors that significantly and positively influence customer engagement. In the context of the Spotify Wrapped campaign, AI personalization is implemented through the collection and processing of users' listening history data to

generate content that is relevant, accurate, and individually tailored. Such personalization enables platforms to deliver experiences that make users feel understood, thereby strengthening their engagement with the brand (Mandagie & Kristaung, 2025). Accordingly, AI-driven personalization serves not only to identify opportunities and anticipate user preferences, but also to foster more meaningful emotional connections between users and the platform (Polignano et al., 2021).

Apostol et al. (2024) further emphasize that AI-personalized content tends to generate deeper levels of engagement compared to non-personalized content. From a theoretical standpoint, AI-driven personalization functions as the primary external stimulus within the S-O-R framework. By delivering highly relevant and tailored content, AI systems influence users' cognitive evaluations and affective responses. AI personalization outcomes that reflect users' preferences and identities further strengthen emotional engagement and position such personalized content as both a representation of identity and a form of participation in social trends (Rahmah & Sartika, 2025). Collectively, these dynamics underscore the substantial influence of AI-driven personalization in shaping consumer behaviour in digital environments.

#### **2.4 Social influence on customer engagement**

Customer engagement in digital environments is substantially shaped by social influence, as individuals who observe others actively sharing content or commenting on a brand are frequently prompted to engage with that brand themselves (Hartanto, 2021). Within the S-O-R framework, social influence operates as an external social stimulus that triggers cognitive and affective responses. Exposure to others' participation in digital campaigns can establish perceived social norms, which in turn encourage individuals to adopt similar behavioural patterns.

Hartanto (2021) found that social influence significantly contributes to increased customer engagement, a finding supported by Ting et al. (2020), who demonstrated that social interaction has a significant and positive effect on customer engagement behaviour. Social influence may manifest through various forms of social interaction that shape social norms, peer behaviour, and group pressure dynamics across both physical and digital contexts (Sopian et al., 2024). When individuals observe peers with similar interests engaging in a particular activity, they are often motivated to adopt similar behaviours, ultimately resulting in active participation (Ao et al., 2023). This relationship is further supported by Zahran & Aljuhmani (2025), who found that social influence significantly and positively fosters customer engagement, particularly within social media contexts.

## 2.5 Fear of missing out as mediating

FOMO can be triggered by AI-personalized algorithms that surface relevant content, highlight trending topics, and present exclusive offerings to users (Poleac & Gherguț-Babii, 2024). Such algorithmic mechanisms have been shown to intensify users' fear of missing out, thereby fostering a drive to remain connected and engaged. Ali et al. (2025) further suggest that tailored algorithms encourage users to stay current with evolving social media trends as a means of avoiding FOMO. In the context of Spotify Wrapped, FOMO is particularly salient given that the campaign is widely perceived as a reflection of users' musical identity, both exclusive and culturally current (Rahmah & Sartika, 2025).

FOMO is also strongly associated with the desire for social connectedness, time pressure, and anxiety (Jabeen et al., 2023; Roberts & David, 2020). High levels of user participation reinforce the perception that Spotify Wrapped constitutes a socially significant and engaging event, particularly when shared by peers or influential figures. Conformity to these emergent social norms amplifies FOMO as individuals seek to avoid being excluded from current trends (Humaira, 2025; Karimkhan & Chapa, 2021). The time-limited nature of the Wrapped feature further contributes to this effect by creating a sense of scarcity and urgency that renders user interactions inherently fleeting. Collectively, these conditions of exclusivity and temporal constraint encourage users to engage promptly to remain relevant within the broader flow of digital trends (Nesbit & Lole, 2025; Putri et al., 2025; Ya You, 2025).

Within the S-O-R framework, FOMO represents the organism component, reflecting the internal affective and psychological responses to external stimuli. AI-driven personalization and social influence function as stimuli that activate FOMO by drawing attention to content that is relevant, socially visible, and time-sensitive. The perceived exclusivity and social prominence of digital campaigns can further amplify these psychological responses. Accordingly, FOMO serves as a psychological mechanism through which AI-driven personalization and social influence converge to shape user behaviour, functioning as a key driver of engagement by motivating users to avoid missing out on valued social experiences (Bright & Logan, 2018; Dinh et al., 2023; Habib & Almamy, 2025; Poleac & Gherguț-Babii, 2024).

Nevertheless, empirical findings on the relationship between FOMO and customer engagement remain inconsistent. Although Bright & Logan (2018) and Mavilinda et al. (2024) indicate that FOMO positively influences engagement by motivating participation, other studies suggest that FOMO does not consistently produce positive behavioural outcomes and may, in some cases, diminish engagement due to psychological pressure and emotional exhaustion (Hollebeek et al., 2023; Linny et al., 2025; Lv et al., 2025). This inconsistency underscores the need for further empirical examination of FOMO as a mediating mechanism. Grounded in the S-O-R framework, the present study expects that AI-driven personalization and social influence, as external stimuli, will influence FOMO as an internal psychological state, which in

turn shapes customer engagement as the behavioural response. Direct effects of both stimuli on customer engagement are also anticipated.

H1: AI-driven personalization positively affects customer engagement

H2: AI-driven personalization positively affects FOMO

H3: Social influence positively affects customer engagement

H4: Social influence positively affects FOMO

H5: FOMO positively affects customer engagement

H6: FOMO mediates the relationship between AI-driven personalization and customer engagement

H7: FOMO mediates the relationship between social influence and customer engagement

### 3. RESEARCH METHODS

This study employs a quantitative approach with a conclusive research design aimed at testing the relationships among the study variables. Descriptive analysis is used to characterize respondent profiles and the phenomena under study, which then serve to explain the causal relationships between variables. The variables include AI-driven personalization and social influence as independent variables, FOMO as a mediating variable, and customer engagement as the dependent variable, all within the context of the Spotify Wrapped campaign. Variable measurement was adapted from established instruments in prior research: AI-driven personalization from Abinesh & Dulloo (2024), social influence from Liang et al. (2024) and Venkatesh et al. (2012), customer engagement from So et al. (2014) and S. U. Yang & Kang (2009), and FOMO from Przybylski et al. (2013).

Data were collected through an online questionnaire distributed to respondents across various regions in Indonesia from December 2025 to February 2026. The three-month period provides a suitable context for observing user behaviour during a time of relatively high digital engagement, when online consumption patterns had largely stabilized. This period also coincides with year-end digital campaigns such as Spotify Wrapped, which typically generate increased user engagement. The study population consists of active Spotify users who are familiar with the Spotify Wrapped campaign. A total of 220 respondents were selected using a non-probability purposive sampling technique. The minimum sample size was determined based on the ten-times rule relative to the number of indicators (Hair et al., 2019), as this study employs 17 indicators. Sampling criteria included: aged 18-34 years, active Spotify users over the preceding year who have a listening frequency of more than ten times per month, and are familiar with the Spotify Wrapped campaign. A screening mechanism was implemented at the beginning of the questionnaire to ensure that only respondents who met all the predefined criteria were allowed to proceed. This step was intended to enhance the relevance and validity of the data collected by restricting participation to eligible respondents.

Responses were measured using a five-point Likert scale with the following response categories: Strongly Agree (5), Agree (4), Neutral (3), Disagree (2), and Strongly Disagree (1). Before full distribution, a pilot test was conducted using SPSS to assess the reliability and validity of the instrument.

#### 4. RESULTS

The initial stage of this study involved testing the validity and reliability of the research instrument using Corrected Item-Total Correlation and Cronbach's Alpha with the assistance of SPSS software. Based on the results, all indicators recorded Corrected Item-Total Correlation values greater than 0.30, exceeding the minimum threshold recommended by Hair et al. (2021), and were therefore considered to have adequate validity. In addition, all Cronbach's Alpha values for each variable exceeded the 0.70 threshold as suggested by Hair et al. (2021), indicating that all constructs demonstrated good reliability and were suitable for further analysis using a PLS-based SEM approach.

This study collected data on respondents' demographic characteristics, including age, gender, education, and occupation. The majority of respondents fell within the 18-21 age group (46.36%), followed by the 22-25 age group (40.45%), indicating that the sample was predominantly young and productive in age. In terms of gender, female respondents constituted the larger proportion at 75.00%, compared to 25.00% male respondents. Regarding educational background, the majority were college undergraduates at 69.55%, reflecting a relatively high level of educational attainment among the sample. In terms of occupation, students comprised the largest group at 66.82%, followed by private-sector employees at 15.91%, with other categories represented in smaller proportions. This demographic composition suggests that the respondents were young, educated individuals who are reasonably familiar with digital technology, which supports the quality of the data collected, as respondents are considered capable of understanding and evaluating digital experiences, particularly in the context of the Spotify Wrapped campaign. The distribution of respondents' demographic characteristics is presented in Table 1.

TABLE 1. DEMOGRAPHIC CHARACTERISTICS

	Category	n	% of total
Age	18-21 years	102	46.36%
	22-25 years	89	40.45%
	26-30 years	25	11.36%
	31-34 years	4	1.82%
Total		220	100%
Gender	Female	165	75.00%
	Male	55	25.00%
Total		220	100%
Education	College Undergraduate	153	69.55%
	Senior High School	55	25.00%
	Diploma	9	4.09%

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	Magister	3	1.36%
Total		220	100%
Job	Student	147	66.82%
	Private Sector Employee	35	15.91%
	Other	14	6.36%
	Entrepreneur	11	5.00%
	Unemployed	7	3.18%
	Public Sector Employee	6	2.73%
Total		220	100%
Income	< Rp1.000.000	92	41.82%
	Rp1-2,5 million	55	25.00%
	Rp2,5-5 million	48	21.82%
	> Rp5 million	25	11.36%
Total		220	100%

Source: Primer data, 2026

The Cronbach's alpha values for all variables are above 0.80, namely AI-driven personalization (0.833), social influence (0.802), FOMO (0.935), and customer engagement (0.935). These values exceed the recommended threshold of 0.70 (Hair et al., 2021), indicating that all constructs are reliable. To avoid issues related to common method bias, this study employed the variance inflation factor (VIF) approach. The results showed that all VIF values were below the maximum threshold of 5, with values distributed around the 2.2 range, in accordance with Kock (2015). This indicates that there are no issues of multicollinearity or common method bias in the data. According to Hair et al. (2021), a value below 0.5 indicates that the model estimates are considered stable and reliable.

TABLE 2. MEASUREMENT MODEL RESULTS

Constructs	1*	2*	3*	4*
1. AIDP	<b>0.775</b>			
2. SI	0.479	<b>0.747</b>		
3. FOMO	0.186	0.600	<b>0.871</b>	
4. CE	0.748	0.604	0.253	<b>0.751</b>
Mean	4.325	3.710	2.909	4.448
SD	0.733	1.118	1.343	0.846
FL	0.748 - 0.810	0.712 - 0.768	0.749 - 0.915	0.718 - 0.820
CR	0.882	0.863	0.949	0.944
AVE	0.600	0.558	0.758	0.563
VIF	1.581 - 1.942	1.449 - 1.700	1.861 - 4.690	1.975 - 2.915

Note: AIDP = AI-driven personalization, SI = social influence, FOMO = fear of missing out, CE = customer engagement, FLC = Fornell-Larcker criterion, 1\* = FLC-AIDP, 2\* = FLC-SI, 3\* = FLC-FOMO, 4\* = FLC-CE, SD = standard deviation, FL = factor loading, CR = composite reliability, AVE = average variance extracted, VIF = variance inflation factor, SRMR = standardized root means square residual

Source: Researchers' PLSM compilations, 2026

In Table 2, factor loadings and composite reliability values were used to assess the reliability of the measurement model. The factor loadings for all indicators were above the minimum threshold of 0.707, indicating that each indicator has good reliability in representing the construct being measured. Additionally, the composite reliability values for all variables are above 0.70, indicating that the latent constructs possess adequate internal consistency. This is consistent with Hair et al. (2021), who state that

composite reliability values above 0.70 indicate good reliability. Furthermore, the validity of the measurement model was evaluated through convergent validity and discriminant validity. Convergent validity was measured using the average variance extracted (AVE) value. According to Hair et al. (2021), a good AVE value is above 0.50. The results show that all constructs have AVE values above this threshold, meaning the constructs explain more than 50% of the variance in their indicators and are therefore considered to have good convergent validity. Meanwhile, discriminant validity was evaluated using the Fornell-Larcker criterion and the Heterotrait-Monotrait Ratio (HTMT). As shown in Table 2, the Fornell-Larcker results indicate that the square root of the AVE for each construct is higher than its correlations with other constructs, indicating that discriminant validity is achieved. Hair et al. (2021) state that HTMT values below 0.85 indicate satisfactory discriminant validity. The HTMT values for each pair of constructs are as follows: AIDP → SI (0.584), AIDP → CE (0.836), AIDP → FOMO (0.209), SI → CE (0.695), SI → FOMO (0.688), and CE → FOMO (0.279). All HTMT values fall below the recommended threshold, indicating that discriminant validity is further supported and that there is no evidence of excessive correlation among the constructs. It can therefore be concluded that the measurement model in this study has met the criteria for both reliability and validity, making it suitable for use in structural equation modeling.

TABLE 3. STRUCTURAL MODEL RESULTS

Paths	β (p-value)	Remark
AIDP → CE	0.585 (0.000)	Supported
AIDP → FOMO	-0.132 (0.034)	Supported
SI → CE	0.371 (0.000)	Supported
SI → FOMO	0.663 (0.000)	Supported
FOMO → CE	-0.078 (0.076)	Unsupported
AIDP → FOMO → CE	0.010 (0.191)	Unsupported
SI → FOMO → CE	-0.052 (0.086)	Unsupported
SRMR	0.080	Good fit
R <sup>2</sup> (CE)	0.641	Moderate-Strong
R <sup>2</sup> (FOMO)	0.373	Moderate

Note: AIDP = AI-driven personalization, SI = social influence, FOMO = fear of missing out, CE = customer engagement  
 Source: Researchers' PLSM compilations, 2026

An inner model analysis was conducted to test the relationships among latent variables. The structural model was evaluated by examining the R-squared (R<sup>2</sup>) value as a measure of the model's predictive ability in explaining the variance of the endogenous variables. The higher the R<sup>2</sup> value, the better the model's ability to explain the relationships among variables. In addition, the strength of the relationships among variables was assessed using effect size (f<sup>2</sup>), which measures the magnitude of one variable's influence on another within the model, with criteria of 0.02 (small), 0.15 (moderate), and 0.35 (large). Model fit was also examined using the Standardized Root Mean Square Residual (SRMR). According to Hair et al. (2017), an SRMR value below 0.08 indicates a good level of model fit.

## 5. DISCUSSIONS

This study aims to examine the influence of AI-driven personalization and social influence on customer engagement through the mediating role of FOMO in the context of the Spotify Wrapped campaign. First, the results confirm that AI-driven personalization has a positive and significant effect on customer engagement ( $\beta = 0.585$ ). This finding reinforces the role of AI personalization as a key technological driver in digital environments, where tailored content enhances perceived relevance and deepens user engagement. It aligns with the growing reliance of firms on data-driven technologies to improve customer experience as a source of competitive advantage. Prior studies similarly demonstrate that AI-based personalization enhances user interaction and engagement by increasing content relevance and user satisfaction (Ahmed et al., 2025; Alghaswyneh, 2025; Sayuti et al., 2025).

From the S-O-R perspective, AI-driven personalization functions as a strong stimulus that directly triggers behavioural responses without relying on intermediate psychological mechanisms, suggesting that the personalized experience itself is sufficient to generate engagement. Within the broader domains of digital marketing and strategic management, the significant role of AI-driven personalization underscores the importance of digital capabilities as strategic resources. In line with the resource-based view, such technology-based capabilities represent a critical source of sustained competitive advantage when effectively deployed. In this context, personalization evolves beyond a marketing instrument to function as a core organizational capability that drives value creation.

Second, social influence also has a positive and significant effect on customer engagement ( $\beta = 0.371$ ). This finding is consistent with social influence theory, which emphasizes the role of social norms, peer behaviour, and collective participation in shaping individual actions (Ting et al., 2020). In digital campaigns, visible participation by others creates a bandwagon effect that encourages users to engage through imitation and social validation (Ao et al., 2023; Zahran & Aljuhmani, 2025). Within the S-O-R framework, social influence operates as a strong external stimulus that reinforces engagement through social mechanisms. Moreover, its significant role supports perspectives in information systems and network theory, which emphasize digitally mediated social interactions in shaping user behaviour and enhancing engagement outcomes.

Third, social influence was found to significantly increase FOMO ( $\beta = 0.663$ ), indicating that exposure to others' participation intensifies users' psychological responses. These findings are consistent with prior studies identifying social comparison, social environmental pressure, and the need to stay connected as key drivers of FOMO, particularly in digital environments (Dinh & Lee, 2021; Gupta & Sharma, 2021; Nesbit & Lole, 2025). In contrast, AI-driven personalization has a significant negative effect on FOMO ( $\beta = -0.132$ ), suggesting that highly personalized content may reduce users' need to monitor broader social

trends (Lv et al., 2025). When users perceive content as tailored to their preferences, they are less likely to engage in social comparison.

Regarding the role of FOMO, the findings indicate that FOMO does not have a significant effect on customer engagement ( $\beta = -0.078$ ) and exhibits a negative relationship. This suggests that FOMO does not consistently function as a driver of engagement; under certain conditions, it may operate as a psychological barrier when emotional pressure becomes overwhelming, leading users to reduce engagement in order to avoid stressful experiences (Hollebeek et al., 2023; Linny et al., 2025). Most importantly, this finding challenges dominant assumptions in the behavioural strategy and online decision-making literature, where FOMO is often treated as a universal driver of individual action. The results indicate that in highly personalized digital environments, users are more likely to rely on perceived relevance and intrinsic value rather than emotional pressure or social anxiety. This points to a shift from emotion-driven engagement toward value-driven engagement, particularly in digital markets.

Furthermore, while social influence significantly enhances customer engagement, FOMO does not exert a comparable effect, indicating that the two constructs operate through fundamentally different mechanisms. Social influence drives engagement through normative and informational processes, such as social proof and collective participation, whereas FOMO reflects an anxiety-based psychological state that does not necessarily lead to constructive behavioural outcomes. Additionally, AI-driven personalization may reduce social comparison tendencies, thereby weakening the emergence of FOMO. Overall, these findings reflect a broader shift in contemporary management practice, where organizations increasingly rely on data-driven personalization and socially embedded digital strategies, rather than traditional psychological triggers, to sustain engagement. Accordingly, firms are required to strategically manage both technological and social aspects within digital ecosystems.

From a theoretical standpoint, these findings suggest that not all organism-level responses within the S-O-R framework lead to positive behavioural outcomes. Unlike prior studies that positioned FOMO as a facilitating mechanism, this study indicates that its role is context-dependent and may not be effective in experience-based digital campaigns such as Spotify Wrapped. Engagement in such contexts appears to be driven more by intrinsic enjoyment and personal relevance than by extrinsic psychological pressure. Moreover, the non-significant mediating role of FOMO suggests that the pathway from stimulus to response does not always require emotional mediation. AI-driven personalization and social influence appear capable of directly influencing engagement without relying on psychological intermediaries, thereby expanding the S-O-R framework by pointing to the existence of a direct stimulus-response pathway in digital marketing contexts.

From a managerial perspective, these findings suggest that marketers should exercise caution in over-relying on FOMO-based engagement strategies. While cultivating a sense of urgency and social pressure may succeed in generating short-term user attention, such approaches do not necessarily translate into sustained or meaningful engagement. Instead, marketing practitioners are encouraged to prioritize strategies that enhance personalization and foster authentic social interaction, as these factors have demonstrated a direct and significant capacity to drive engagement. This study accordingly contributes to the existing literature by demonstrating that not all psychological constructs function as effective mediating mechanisms, and by highlighting the importance of contextual factors in shaping the mechanisms underlying customer engagement. Future research should explore alternative psychological mechanisms beyond FOMO, such as enjoyment, perceived value, or emotional attachment, to provide a more nuanced and comprehensive understanding of customer engagement dynamics in digital environments.

## 6. CONCLUSIONS

This study examined the effects of AI-driven personalization and social influence on customer engagement through the mediating role of FOMO in the context of the Spotify Wrapped campaign. The main findings indicate that both AI-driven personalization and social influence exert positive and significant effects on customer engagement, while social influence also positively affects FOMO. In contrast, AI-driven personalization has a significant negative effect on FOMO, and FOMO itself does not significantly influence customer engagement. Overall, these results suggest that user engagement is driven more by personally relevant experiences and social interactions than by psychological pressure mechanisms such as FOMO. Notably, the findings further reveal that FOMO neither significantly influences customer engagement nor mediates the relationship between the independent variables and engagement, thereby challenging the prevailing assumption in the literature that FOMO consistently functions as a psychological driver of user behaviour. Instead, the findings suggest that FOMO operates as a context-dependent mechanism that does not always translate into observable behavioural outcomes, particularly in experience-centred digital campaigns. These findings reflect a significant shift in management practices under increasingly challenging conditions, where firms rely more on technology-based capabilities and value-driven engagement mechanisms rather than traditional strategies rooted in psychological triggers.

This study contributes to the existing literature from two perspectives. Theoretically, it extends the Stimulus-Organism-Response (S-O-R) framework by demonstrating that behavioural responses such as customer engagement can be directly shaped by external stimuli without necessarily requiring emotional mediation. AI-driven personalization was shown to strengthen engagement by delivering meaningful and individually relevant experiences, while social influence drives engagement through collective norms and

social interaction dynamics. These findings highlight the relative dominance of technological and social factors over psychological pressure in shaping engagement within digital environments, while also challenging the assumption that FOMO serves as a primary driver of digital behaviour. From a managerial perspective, the findings suggest that marketers should prioritize investment in AI-driven personalization and the cultivation of authentic social interactions, rather than placing excessive reliance on FOMO-based strategies. While FOMO-driven approaches may generate short-term attention, they do not reliably produce meaningful or sustainable engagement.

This study is subject to several limitations. First, the focus on a specific digital campaign context may limit the generalizability of the findings. Second, the sample distribution may not fully represent all user segments within the broader population. Future research is encouraged to explore alternative psychological mechanisms, such as perceived enjoyment, emotional attachment, or perceived value, and to examine a wider range of digital platforms to enhance the generalizability of findings in this area.

#### DECLARATION OF COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

#### DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

During the preparation of this work the authors used Consensus in order to assist in identifying relevant academic literature. After using this tool, the authors reviewed and refined the content as needed and take full responsibility for the content of the published article.

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