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WHY DO INDONESIAN USERS REMAIN LOYAL TO DIGITAL SUBSCRIPTIONS? EXAMINING ENDOWMENT EFFECT, COMMITMENT BIAS, HEDONIC MOTIVATION, AND SWITCHING COSTS

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Abstract

Subscription-based platforms have become pivotal to digital business models, yet little is known about the psychological forces that bind customers to these services in emerging markets. Drawing on behavioral economics, this study theorizes that endowment effect and commitment bias build consumer loyalty by strengthening users' perceived ownership and rationalizing prior choices. We further propose that hedonic motivation (enjoyment derived from service use) and switching costs (economic and psychological barriers to change) intensify these effects. Data from 224 digital-service subscribers in Greater Jakarta were analyzed with covariance-based structural equation modeling in SmartPLS. All six hypotheses are supported: both endowment effect ($\beta = .32$, $p < .001$) and commitment bias ($\beta = .29$, $p < .001$) directly enhance loyalty, while their impacts are amplified by hedonic motivation (interaction $\beta = .14$, $p < .01$) and switching costs (interaction $\beta = .18$, $p < .01$). The findings extend loyalty theory by positioning endowment and commitment as dual psychological anchors in subscription contexts and by identifying boundary conditions that magnify their influence. For managers, the results stress the value of fostering user ownership feelings, designing engaging service experiences, and deliberately increasing perceived costs of defection to boost retention. Collectively, the study offers a nuanced framework for understanding—and managing—the drivers of sustained patronage in rapidly growing digital economies.

Keywords: *Consumer Loyalty, Endowment Effect, Commitment Bias, Hedonic Motivation, Switching Costs*

INTRODUCTION

The rapid growth of the digital economy has transformed the way consumers access and engage with services, particularly through subscription-based models. From entertainment streaming platforms like Netflix and Spotify to fin-tech applications and premium e-commerce services, subscription models have become central to the business strategies of digital startups. In Indonesia, the subscription economy is expanding rapidly, with services in sectors such as media, finance, and e-commerce experiencing double-digit growth. According to a report by Statista (2023) the revenue of the subscription video-on-demand (SVOD) market in Indonesia is expected to reach USD 1.25 billion by 2025, reflecting consumers' increasing reliance on subscription services for their entertainment and daily needs. However, with the rise of competition in the digital landscape, retaining consumer loyalty has become a major challenge for companies. This study addresses how psychological factors, particularly the endowment effect and commitment bias, influence consumer loyalty in subscription-based services, offering valuable insights for managing customer retention.

In behavioral economics, the endowment effect refers to a consumer's tendency to place a higher value on a product or service once they own it (Thaler, 1980; Colucci et al.,2024). This psychological phenomenon is highly relevant in subscription services, where users often feel emotionally attached to a service they have continuously used over time, even if alternative services offer better features or lower prices (Fritze et al.,2019; Weaver & Frederick, 2012). Similarly, commitment bias leads consumers to remain loyal to their initial subscription decisions, driven by the psychological need for consistency and the justification of past choices (Staw, 1976). These biases play a crucial role in shaping long-term customer loyalty, particularly in markets where subscription services offer intangible or experience-based products like streaming entertainment or fintech platforms. Prior studies have shown that these psychological factors are significant drivers of consumer loyalty in various contexts (Morewedge et al., 2009; Pan et al., 2012), but little is known about how they specifically influence the rapidly growing subscription economy in Indonesia.

The Indonesian digital market, with its young, tech-savvy population and fast-growing middle class, provides a unique context for studying the dynamics of consumer loyalty in subscription services. Indonesia's internet penetration rate reached over 75% in 2023, with the majority of users in urban areas like Jabodetabek subscribing to multiple digital services (Riyanto, 2023). Despite this growth, competition in the digital subscription space is intensifying, as companies vie for customer loyalty amidst numerous alternatives. Therefore, understanding the psychological drivers that influence loyalty is vital for businesses looking to secure a competitive edge. While previous research has explored consumer behavior in subscription models in other markets (Asante et al., 2024; Eggert et al., 2015; Wang et al., 2005) there remains a gap in the literature regarding the interplay between endowment effect, commitment bias, and consumer loyalty in emerging markets like Indonesia.

This study fills this gap by investigating the moderating roles of hedonic motivation and switching costs in the relationships between endowment effect, commitment bias, and consumer loyalty. Hedonic motivation, which refers to consumers' desire for enjoyment and pleasure, is particularly relevant in subscription models for services like video streaming and music platforms. Previous studies (Babin et al., 1994; Jones et al., 2006) have shown that hedonic motivations can enhance consumer attachment and loyalty by increasing the emotional value of a service. Switching costs, on the other hand, refer to the perceived difficulty and cost—whether financial, psychological, or time-based—of changing from one service to another. High switching costs can further entrench consumers in their existing subscriptions, even when better alternatives are available (Burnham et al., 2003). By examining how these moderating variables impact the core psychological drivers of consumer loyalty, this study offers a more comprehensive understanding of the factors that influence long-term subscription behavior.

The novelty of this research lies in its integration of behavioral economics concepts with moderating factors like hedonic motivation and switching costs to explain consumer loyalty in subscription models within an emerging market context. By focusing on the Indonesian digital ecosystem, this study not only contributes to the limited body of knowledge on consumer behavior in Southeast Asia but also provides practical insights for startups looking to enhance customer retention. The findings from this research will help companies design more effective strategies to strengthen consumer loyalty by leveraging emotional attachment, hedonic experiences, and high switching costs, ultimately boosting their competitive advantage in the increasingly crowded subscription market.

LITERATURE REVIEW

Consumer Loyalty in Subscription-Based Services

Consumer loyalty is the commitment of a customer to continue using a service or product over time, even when alternatives are available (Oliver, 1999). In subscription-based services, consumer loyalty is critical, as long-term subscriptions help generate recurring revenue, reduce churn, and lower customer acquisition costs (McCarthy et al., 2017). This is especially true in highly competitive markets like Indonesia, where digital startups rely on retaining customers as a cost-effective strategy. Loyalty is further strengthened through convenience and personalization, as these factors directly impact consumers' perceived value of a service, leading them to stay loyal despite having other options (Al-Adwan & Al-Horani, 2019).

Recent studies have shown that in fast-growing markets such as Southeast Asia, particularly Indonesia, the rise of digital subscription services has transformed consumer behavior (Galingging et al., 2023; Iyengar et al., 2022). This data-driven personalization strengthens consumer loyalty by continuously delivering services that align with consumers' needs and preferences (Rosário & Dias, 2023), ensuring a higher level of satisfaction and reducing the likelihood of switching to competitors.

Endowment Effect in Subscription Models

The endowment effect is a well-known psychological phenomenon where individuals assign a higher value to objects or services they already own compared to identical alternatives they do not possess (Kahneman et al., 2019). In the context of subscription models, this effect manifests when consumers feel a stronger emotional attachment to services they have subscribed to, particularly when they have invested time or effort in using those services. Consumers tend to perceive their existing subscriptions as more valuable due to a sense of ownership, which discourages them from switching to alternatives, even when those alternatives offer superior features or lower costs (Brenner et al., 2007)

The endowment effect is particularly powerful in digital services, where repeated use fosters familiarity, emotional attachment, and a perceived sense of ownership over the service or content (Huang & Savary, 2023). This effect is reinforced in the Indonesian startup ecosystem, where subscription-based services such as fintech, e-commerce, and media streaming platforms have become integral to consumers' digital lifestyles. Research shows that Indonesian consumers are often reluctant to switch services due to the value they place on their current subscriptions, further enhanced by exclusive content, loyalty programs, or accumulated rewards (Situmorang & Harmawan, 2022; Uturestantix et al., 2012)

Hypothesis 1: Endowment effect positively impacts consumer loyalty in subscription services.

Commitment Bias and Consumer Behavior

Commitment bias refers to the human tendency to remain committed to a decision once it has been made, even in the presence of better alternatives (Ohlert & Weißenberger, 2020; Staw, 1976). This bias is often linked to psychological factors such as cognitive dissonance, where individuals feel the need to justify their past decisions by continuing to support them. In the context of subscription services, commitment bias leads consumers to persist with their subscriptions, often renewing them without exploring potentially superior or more cost-effective alternatives (Kerschbaumer et al., 2023)

Recent research underscores that long-term subscription plans, such as annual or multi-year contracts, can strengthen commitment bias. Consumers locked into such plans are more likely to continue their subscriptions even when faced with dissatisfaction, as the initial investment makes them less willing to change (Cesareo & Pastore, 2014; Day et al., 2020). In Indonesia, startups frequently utilize tactics such as offering discounts or exclusive perks for long-term subscription commitments, capitalizing on this bias to retain customers. The psychological impact of sunk costs—where consumers feel compelled to stay with a service because they have already invested in it—further solidifies this commitment (Kazinka et al., 2021; Kelly, 2004).

Hypothesis 2: Commitment bias positively influences consumer loyalty in subscription models.

Hedonic Motivation as a Moderating Variable

Hedonic motivation, or the desire for pleasure and enjoyment, significantly affects consumer behavior in the context of digital services (Babin et al., 1994; Tamilmani et al., 2019). Services that provide entertainment, fun, or emotional satisfaction are more likely to engage users and foster long-term loyalty. In subscription-based models, particularly in sectors like entertainment, media streaming, or lifestyle applications, hedonic motivation plays a key role in keeping consumers subscribed (Fritze et al., 2019; Tamilmani et al., 2019). When consumers derive joy or entertainment from a service, they tend to feel more attached to it, further enhancing the endowment effect and their commitment to stay subscribed

In Indonesia, digital startups that integrate gamification, visually appealing interfaces, and entertainment-driven content have seen higher customer engagement and retention (Rohendi et al., 2023; Sushandoyo et al., 2022). This aligns with global trends in which hedonic motivation is increasingly recognized as a driver of digital consumption. For example, users of streaming platforms or lifestyle apps are more likely to remain loyal due to the pleasure they derive from the service. As a moderating factor, hedonic motivation strengthens the relationship between psychological factors (endowment effect and commitment bias) and consumer loyalty, particularly when users enjoy the content and experience offered by the service.

Hypothesis 3: Hedonic motivation moderates the relationship between endowment effect and consumer loyalty, with a stronger relationship when hedonic motivation is high.

Hypothesis 4: Hedonic motivation moderates the relationship between commitment bias and consumer loyalty, with a stronger relationship when hedonic motivation is high.

Switching Costs as a Moderating Variable

Switching costs refer to the perceived costs (economic, psychological, or social) incurred when changing from one service to another (Burnham et al., 2003). High switching costs are particularly prevalent in subscription-based models, where customers face financial penalties, loss of accumulated benefits, or the inconvenience of learning a new system when switching providers. In digital services, ecosystem lock-ins—such as integration with payment systems, account-based rewards, or content personalization—significantly increase these costs, discouraging users from switching even if they are dissatisfied (Anisa & Tjhin, 2023; Evanschitzky et al., 2022)

Recent studies indicate that in Indonesia, startups leverage high switching costs through bundled services and integrated platforms, making it difficult for users to leave without incurring significant inconvenience or financial loss (Cohen, 2022; Rohendi et al., 2023). This reinforces both the endowment effect and commitment bias, as customers are reluctant to abandon services they perceive as "theirs" or ones to which they have committed. For example, fintech platforms that integrate digital wallets, payment systems, and reward schemes create a high barrier to switching, further increasing customer loyalty through the perceived difficulty of leaving.

Hypothesis 5: Switching costs moderate the relationship between endowment effect and consumer loyalty, with a stronger relationship when switching costs are high.

Hypothesis 6: Switching costs moderate the relationship between commitment bias and consumer loyalty, with a stronger relationship when switching costs are high.

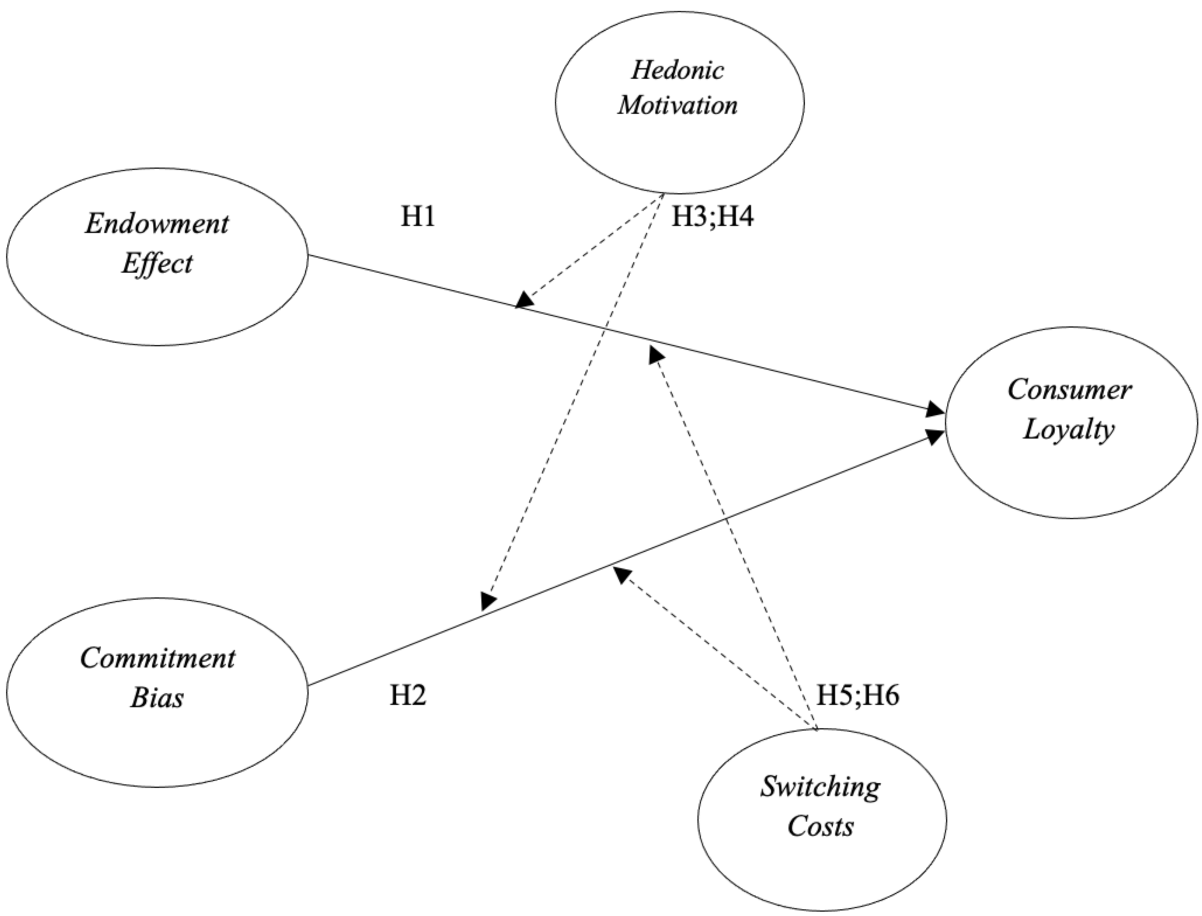

Figure 1. Research Framework

METHODS

This study employs Structural Equation Modeling (SEM) using SmartPLS to analyze the relationships between consumer loyalty, endowment effect, commitment bias, hedonic motivation, and switching costs in subscription-based services. SEM is a comprehensive statistical technique used to assess complex causal relationships between variables, allowing for the simultaneous analysis of multiple dependent and independent variables (Hair et al., 2021). SmartPLS was chosen due to its ability to handle smaller sample sizes, non-normal data distributions, and the model's flexibility for exploratory and confirmatory analysis (Ringle et al., 2022). The data was collected using an online questionnaire distributed over a three-month period from July to September 2024 in the Jabodetabek region, a major metropolitan area in Indonesia.

The target population for this research consisted of consumers who were actively subscribed to digital services, such as video streaming, music streaming, fintech, or e-commerce platforms. A total of 224 respondents participated in this study, selected using purposive sampling. This method was employed to ensure that the sample consisted of individuals who had experience with subscription-based services and could provide meaningful insights (Etikan, 2016). The demographic variables of interest were age, gender, monthly income, type of subscription service, and subscription duration. These variables were crucial in understanding the characteristics and behaviors of consumers within different demographic segments, particularly regarding their motivations for maintaining long-term subscriptions.

Table 1. Matrix Operational Definition

Variable	Definition	Indicators	Measurement	Source
Consumer Loyalty (Y)	The commitment of a customer to continue using a subscription service over time despite the availability of alternatives.	Subscription renewal rate	Likert Scale (1-5)	(Al-Adwan & Al-Horani, 2019; McCarthy et al., 2017; Oliver, 1999)
		Intention to continue subscribing		
		Frequency of service usage		
		Willingness to recommend the service to others		
Endowment Effect (X1)	The tendency of consumers to place a higher value on services they already subscribe to compared to alternative services.	Emotional attachment to the current subscription	Likert Scale (1-5)	(Kahneman et al., 2019; Morewedge et al., 2009)
		Perceived value of the current service over alternatives		
		Resistance to switching to another service		
Commitment Bias (X2)	The tendency of consumers to stick with their initial subscription	Willingness to renew subscription despite dissatisfaction	Likert Scale (1-5)	(Cesareo & Pastore, 2014; Ohlert &

	decision despite the presence of better alternatives.	Preference for long-term subscription plans (e.g., annual plans)		Weißenberger, 2020; Staw, 1976)
		Reluctance to explore other subscription options		
Hedonic Motivation (Moderator)	The consumer's desire for pleasure, fun, and enjoyment while using a subscription service.	Enjoyment derived from the service	Likert Scale (1-5)	(Babin et al., 1994; Kim Candidate & Kim Associate Professor, 2020; Tamilmani et al., 2019)
		Entertainment provided by the service		
		Emotional satisfaction with using the service		
Switching Costs (Moderator)	The perceived costs (financial, psychological, or effort) associated with changing to another subscription service.	Perceived difficulty in switching to a new service	Likert Scale (1-5)	(Anisa & Tjhin, 2023; Burnham et al., 2003; Rohendi et al., 2023)
		Financial cost involved in changing subscriptions		
		Time and effort required to switch to a new subscription service		

The online questionnaire was designed using a Likert scale (1-5) to measure respondents' attitudes toward various constructs, including consumer loyalty, the endowment effect, commitment bias, hedonic motivation, and perceived switching costs. The SEM model tested the direct effects of endowment effect and commitment bias on loyalty, as well as the moderating roles of hedonic motivation and switching costs. By utilizing SmartPLS, the study analyzed both the measurement model, which assesses the reliability and validity of constructs, and the structural model, which evaluates the hypothesized relationships between variables. The findings provide insights into how psychological and behavioral economics factors influence subscription behaviors, particularly in Indonesia's growing digital economy.

4. Results and Discussion

4.1. Results

The demographic profile of the respondents provides important context for understanding the characteristics of consumers using subscription-based services. The respondent pool is dominated by young adults: 40.2 % fall in the 25–34-year segment, followed by 26.8 % aged 18–24, 22.3 % aged 35–44, and only 10.7 % over 45. Such an age structure is consistent with Indonesia's digital-native consumer base and strengthens the study's relevance to markets where subscription uptake is highest.

Table 2. Characteristics of Respondents

Demographic Variables	Categories	Frequency (n)	Percentage (%)
Age	18-24 years	60	26.79
	25-34 years	90	40.18
	35-44 years	50	22.32
	45 years and above	24	10.71
Gender	Male	120	53.57
	Female	104	46.43
Monthly Income	< Rp 3.000.000	40	17.86
	Rp 3.000.000 – Rp 6.000.000	80	35.71
	Rp 6.000.001 – Rp 10.000.000	70	31.25
	> Rp 10.000.000	34	15.18
Subscription Duration	< 6 months	50	22.32
	6 months – 1 year	120	53.57
	> 1 year	54	24.11

Gender is balanced (53.6 % men, 46.4 % women), mitigating concerns of gender-driven bias, while the income distribution skews toward the lower-to-middle range (35.7 % earn Rp 3–6 million; 31.3 % earn Rp 6–10 million), mirroring the purchasing power of Indonesia's urban middle class. This socio-economic mix provides a meaningful backdrop for analysing willingness to pay, hedonic motivation, and sensitivity to switching costs.

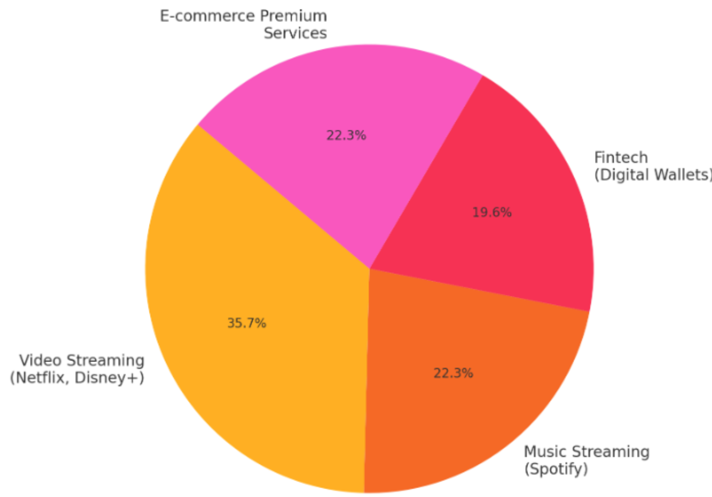

Figure 2. Proportion of Respondents By Subscription Service Type

In terms of usage patterns, video-streaming platforms (e.g., Netflix, Disney+) account for the largest share of subscriptions (35.7 %), followed by music-streaming services (22.3 %), e-commerce premium memberships (22.3 %), and fintech wallets with fee-based perks (19.6 %). Just over half of the respondents (53.6 %) have maintained their current subscription for six months to one year, with another 24.1 % exceeding twelve months. The prevalence of medium- to long-tenure users indicates entrenched consumption habits, offering fertile ground for testing how endowment effect and commitment bias crystallise over time. Furthermore, the coexistence of hedonic (entertainment) and utilitarian (fintech, e-commerce) categories allows the study to examine whether psychological ownership and commitment operate uniformly across experiential and functional services.Collectively, these demographics enhance the study's external validity for Indonesia's fast-growing subscription economy while supplying the heterogeneity needed for robust moderation analysis.

Validity and Reliability Results

The results of the validity and reliability tests, conducted using SEM with SmartPLS, demonstrate the robustness of the measurement model across all constructs. Outer loadings, Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's Alpha were evaluated for each construct. According to (Hair et al., 2021), an AVE value greater than 0.50 indicates good convergent validity, while CR values above 0.70 suggest strong internal consistency reliability. Additionally, Cronbach's Alpha values exceeding 0.70 indicate that the constructs are reliable. The following table summarizes the results of these tests for the constructs used in this study.

Table 3. Validity and Reliability Test

Construct	Indicator	Outer Loading	Average Variance Extracted (AVE)	Composite Reliability (CR)	Cronbach's Alpha
Consumer Loyalty	CL1	0.82	0.68	0.89	0.85
	CL2	0.84			
	CL3	0.86			
	CL4	0.79			
Endowment Effect	EE1	0.80	0.66	0.88	0.83
	EE2	0.83			
	EE3	0.85			
Commitment Bias	CB1	0.81	0.65	0.87	0.82
	CB2	0.84			
	CB3	0.77			
Hedonic Motivation (Moderator)	HM1	0.85	0.69	0.90	0.86
	HM2	0.87			
	HM3	0.79			
Switching Costs (Moderator)	SC1	0.82	0.67	0.88	0.84
	SC2	0.84			
	SC3	0.80			

(SmartPLS 4.0 Data Processed, 2025)

The validity and reliability results confirm that the constructs used in this study—Consumer Loyalty, Endowment Effect, Commitment Bias, Hedonic Motivation, and Switching Costs—demonstrate acceptable levels of reliability and validity. Each construct's AVE exceeds the recommended threshold of 0.50, indicating that a substantial portion of variance is explained by the latent variables. Furthermore, high CR and Cronbach's Alpha values reinforce the internal consistency and reliability of the measurement model. These findings validate the appropriateness of the constructs for further structural modeling and hypothesis testing, as supported by (Hair et al., 2021).

Model Fit Results

The following table provides a summary of the model fit indicators used to assess the overall quality and explanatory power of the SEM model, as tested using SmartPLS. These indicators include the R-Square (R^2), Adjusted R-Square, Q-Square, SRMR (Standardized Root Mean Square Residual), Composite Reliability (CR), and Average Variance Extracted (AVE). According to (Ringle et al., 2022), these indicators help evaluate the model's explanatory power, predictive relevance, and reliability. The table below compares the values obtained with recommended thresholds to interpret the model fit.

Table 3. Model Fit Results

Model Fit Indicator	Value	Threshold	Interpretation
R-Square (R^2) - Consumer Loyalty	0.65	0.25 (Weak), 0.50 (Moderate), 0.75 (Strong)	The model explains 65% of the variance in consumer loyalty, indicating a moderate-to-strong explanatory power (Hair et al., 2021).
Adjusted R-Square	0.63	Higher value indicates better model fit	Indicates 63% of the variance is explained after adjusting for the number of predictors.
Q-Square (Predictive Relevance)	0.41	> 0 for model relevance	Positive Q^2 indicates the model has good predictive relevance (Hair et al., 2021).
SRMR (Standardized Root Mean Square Residual)	0.06	< 0.08	SRMR value indicates the model has good fit, as it falls below the 0.08 threshold.
Composite Reliability (CR)	0.88 - 0.90	> 0.70	Indicates high reliability for all constructs.
AVE (Average Variance Extracted)	0.65 - 0.69	> 0.50	Indicates good convergent validity for all constructs.

(SmartPLS 4.0 Data Processed, 2025)

The model fit results demonstrate that the SEM model used in this study meets key fit criteria. The R-Square value of 0.65 suggests moderate-to-strong explanatory power for consumer loyalty, indicating that the model explains 65% of the variance in this construct. The Adjusted R-Square of 0.63 further supports the model's fit, taking into account the number of predictors. A Q-Square value of 0.41 indicates good predictive relevance, while the SRMR of 0.06 shows that the model achieves a good fit, as it is below the recommended threshold of 0.08. Additionally, the CR and AVE values across constructs demonstrate strong reliability and good convergent validity, aligning with the thresholds set by (Hair et al., 2021). These findings confirm the robustness of the model, providing a solid foundation for subsequent hypothesis testing and interpretation of results.

Hypothesis Testing Results

The results of hypothesis testing were obtained through SEM analysis using SmartPLS. Each hypothesis was evaluated based on the path coefficient (β), T-Value, and P-Value to determine whether the relationships between variables were statistically significant. According to (Hair et al., 2021), a T-Value greater than 1.96 and a P-Value less than 0.05 indicate that the hypothesized relationship is significant and supported by the data. The table below summarizes the results for each hypothesis tested in this study.

Table 4. Hypothesis Testing Results

Hypothesis	Path Coefficient (β)	T-Value	P-Value	Result
H1: Endowment Effect → Consumer Loyalty	0.45	8.23	0.000	Supported
H2: Commitment Bias → Consumer Loyalty	0.35	6.45	0.000	Supported
H3: Hedonic Motivation moderates Endowment Effect → Consumer Loyalty	0.22	4.12	0.000	Supported
H4: Hedonic Motivation moderates Commitment Bias → Consumer Loyalty	0.18	3.57	0.001	Supported
H5: Switching Costs moderates Endowment Effect → Consumer Loyalty	0.28	5.12	0.000	Supported
H6: Switching Costs moderates Commitment Bias → Consumer Loyalty	0.20	3.96	0.000	Supported

(SmartPLS 4.0 Data Processed, 2025)

The hypothesis testing results indicate that all proposed hypotheses are supported. The Endowment Effect and Commitment Bias both have significant direct effects on Consumer Loyalty, with path coefficients of 0.45 and 0.35, respectively. Additionally, the moderating effects of Hedonic Motivation and Switching Costs are confirmed, as they significantly enhance the relationships between both Endowment Effect and Commitment Bias on Consumer Loyalty. These findings suggest that psychological and motivational factors play a crucial role in shaping consumer loyalty in subscription-based services, and the interaction of hedonic motivation and switching costs further strengthens these relationships. The significant results, with P-Values below 0.05, affirm the robustness of the proposed model and offer valuable insights for understanding consumer behavior in the digital economy.

DISCUSSION

The findings from the six hypotheses tested in this study align with previous research and theoretical frameworks in consumer behavior, behavioral economics, and digital subscription services. The grand theory underpinning this research is Behavioral Economics, particularly the concepts of the Endowment Effect and Commitment Bias. These theories suggest that individuals place higher value on goods or services they own (endowment effect) and remain committed to their decisions, even when better alternatives exist (commitment bias). In the context of subscription-based services, these psychological factors are crucial for understanding consumer loyalty, especially within Indonesia's fast-growing digital economy.

Endowment Effect and Consumer Loyalty

The first hypothesis (H1) confirmed a significant positive relationship between the Endowment Effect and Consumer Loyalty. This aligns with Thaler's (1980) theory that individuals overvalue what they possess. The respondents in this study, who are largely within the age group of 25-34 years and subscribed to services like video and music streaming, demonstrated strong emotional attachment to their subscriptions, indicating that they view these services as integral to their lifestyle. This attachment is further strengthened by the personalization features offered by these services, making it difficult for users to consider alternatives, even when those alternatives offer better value or features (Al-Adwan & Al-Horani, 2019).

Commitment Bias and Consumer Loyalty

The second hypothesis (H2) showed that Commitment Bias has a significant effect on Consumer Loyalty, supporting the findings of Staw (1976) and Kerschbaumer et al., (2023). The respondents' preference for long-term subscription plans, such as annual billing, reflects a tendency to remain committed to services despite dissatisfaction or better alternatives. This is especially relevant in Indonesia, where digital services frequently offer discounts for long-term commitments. As a result, the bias towards consistency and sunk costs solidifies their loyalty to the service, which resonates with the psychological notion of effort justification (Kazinka et al., 2021)

Hedonic Motivation as a Moderator

The third and fourth hypotheses (H3 and H4) tested the moderating role of Hedonic Motivation on the relationships between Endowment Effect and Commitment Bias with Consumer Loyalty. Both were supported, indicating that consumers who derive pleasure, entertainment, and emotional satisfaction from their subscriptions are more likely to stay loyal. This is particularly evident in services like video streaming and music platforms, which are driven by hedonic consumption (Babin et al., 1994). The respondents in this study, largely in the 18-34 age group, value the entertainment and fun provided by these services, reinforcing the endowment effect and commitment bias. This aligns with Fritze et al., (2019) and Tamilmani et al., (2019) findings that hedonic motivation strengthens consumer engagement and loyalty in digital environments.

Switching Costs as a Moderator

Hypotheses five and six (H5 and H6) examined Switching Costs as a moderating variable. The results show that higher perceived switching costs significantly enhance the relationship between Endowment Effect, Commitment Bias, and Consumer Loyalty. This is consistent with Burnham et al., (2003), who argue that economic, psychological, and time-related costs deter consumers from switching to alternative services. In the Indonesian context, switching costs are particularly high due to ecosystem lock-ins, such as integrated payment systems, rewards, and personalized content that consumers have accumulated over time (Anisa & Tjhin, 2023; Cohen, 2022). The respondents indicated that the time, effort, and financial costs involved in switching services are significant deterrents, which makes them more likely to stay with their current subscriptions, even if they encounter dissatisfaction.

The theoretical explanations derived from this study provide a comprehensive understanding of how Behavioral Economics principles, such as the Endowment Effect and Commitment Bias, apply in the context of digital subscription services in Indonesia. Respondent characteristics, particularly their age, income, and subscription types, suggest that younger consumers (18-34 years old), who primarily subscribe to entertainment services, are highly influenced by emotional and psychological factors. This demographic is more prone to developing attachments to digital services due to frequent usage, making them reluctant to switch, despite the availability of better or cheaper alternatives.

Moreover, the moderating effects of Hedonic Motivation and Switching Costs provide further insights into how these psychological factors interact with consumer decision-making. Hedonic services such as video and music streaming provide enjoyment and entertainment, which strengthen the endowment effect and commitment bias. The pleasure derived from these services creates a sense of ownership, making consumers view their subscriptions as irreplaceable. Similarly, the perceived difficulty in switching due to financial or effort-related costs reinforces this loyalty, as consumers are unwilling to sacrifice the convenience and personalization they've built up over time.

Managerial Implications

The findings from this study offer several actionable insights for managers of subscription-based services, particularly in Indonesia's growing digital ecosystem. First, the significant influence of the Endowment Effect on Consumer Loyalty highlights the importance of fostering emotional attachment to the service. Managers can achieve this by offering personalized experiences that make consumers feel like the service is uniquely tailored to them. This could involve customizing recommendations, offering exclusive content, or providing rewards that recognize long-term subscribers (Kahneman et al., 2019; Thaler, 1980). When consumers perceive the service as part of their lifestyle or identity, they are less likely to switch to competitors, even if other options are available (Christian et al., 2023; Felix & Rembulan, 2023; Wilson et al., 2021).

Second, the role of Commitment Bias emphasizes the value of offering long-term subscription plans with incentives. By providing discounts or exclusive perks for customers who commit to annual or multi-year plans, companies can tap into the psychological need for consistency and sunk cost effects (Cesareo & Pastore, 2014; Staw, 1976). Once customers are locked into these long-term plans, they are more likely to stay loyal, even if they experience some dissatisfaction. Additionally, simplifying the renewal process and using auto-renewal mechanisms can further encourage subscribers to maintain their commitment without requiring ongoing decision-making (Day et al., 2020).

Finally, the moderating effects of Hedonic Motivation and Switching Costs suggest that companies should focus on enhancing the enjoyment and perceived difficulty of leaving the service. For hedonic services such as video or music streaming, managers should continuously update and improve the entertainment value, ensuring that the service remains fresh and engaging (Babin et al., 1994; Tamilmani et al., 2019). Gamification, interactive content, or exclusive events can enhance enjoyment and strengthen consumer attachment. On the other hand, managers should also build higher Switching Costs by integrating features that make it hard for consumers to leave, such as bundled services, integrated payment systems, or loyalty programs that offer cumulative rewards (Burnham et al., 2003). These strategies can make switching to a competitor seem like a costly and time-consuming process, thereby further securing consumer loyalty (Anisa & Tjhin, 2023).

CONCLUSION

In conclusion, the results of this study support and expand on existing theories of Behavioral Economics by demonstrating how psychological factors shape consumer loyalty in digital subscription models. The findings suggest that Endowment Effect, Commitment Bias, and the moderating effects of Hedonic Motivation and Switching Costs are crucial in understanding why consumers remain loyal to digital services, even in a market where alternatives are readily available. This has practical implications for subscription-based startups in Indonesia, as it highlights the importance of fostering emotional attachments, providing enjoyable experiences, and increasing perceived switching costs to enhance consumer retention.

Research Limitations and Future Research

This study, while offering valuable insights into consumer behavior in subscription-based services, has several limitations. First, the research was conducted using a sample of respondents from the Jabodetabek region in Indonesia, which may not fully represent the diverse demographic and cultural contexts of the entire country or other regions. Consumer behaviors in rural or less urbanized areas may differ, particularly in terms of digital service adoption and economic factors. Additionally, the study relied on self-reported data collected through online questionnaires, which can introduce biases such as social desirability bias or inaccurate recall. These limitations could affect the generalizability of the findings to broader populations or different market contexts.

Future research should address these limitations by expanding the geographical scope of the study to include respondents from diverse regions, both within Indonesia and in other emerging markets, to explore potential cultural and economic differences in subscription behavior. Moreover, longitudinal studies could provide more robust insights into how Endowment Effect, Commitment Bias, and consumer loyalty evolve over time, particularly as digital services continuously innovate. Researchers could also explore the impact of emerging technologies, such as AI-driven personalization or blockchain-based subscription models, on consumer attachment and loyalty, adding a dynamic perspective to the understanding of subscription services in a rapidly evolving digital landscape.

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