The Influence of FOMO (Fear of Missing Out), Instant Gratification, and Financial Literacy on Buy Now Pay Later (BNPL) Usage among Generation Z University Students in Indonesia

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Abstract

This study examines the psychological and capability-based factors that influence the adoption of Buy Now, Pay Later (BNPL) among Generation Z university students in Indonesia. Drawing on the Stimulus–Organism–Response perspective, present-bias, and a light extension of the Theory of Planned Behaviour, we investigate how Fear of Missing Out (FOMO), instant gratification, and financial literacy shape actual BNPL behaviour. A cross-sectional survey of 230 students was analysed using partial least squares structural equation modelling with bootstrapping (5,000 subsamples) and two-stage interactions. The measurement model met conventional reliability and convergent validity thresholds. Structurally, FOMO strongly increased instant gratification (β=0.757), while BNPL usage was positively predicted by financial literacy (β=0.400) and instant gratification (β=0.338); the direct path from FOMO to BNPL was also significant (β=0.395). Mediation testing confirmed a significant indirect effect of FOMO on BNPL through instant gratification (O = 0.256; p = 0.047). Moderation by financial literacy was limited: the FOMO × financial literacy term was marginal, and the instant gratification × financial literacy term was not significant. The model demonstrated substantial explanatory and predictive power (R^2_BNPL = 0.700; Q^2_BNPL = 0.418). These results suggest that present-oriented motives, amplified by social and promotional cues, are central to BNPL engagement. At the same time, financial literacy functions more as an enabling capability than a strict deterrent. The study offers actionable guidance for ethical interface design and targeted literacy interventions in higher education settings.

Keyword: Buy Now, Pay Later; Fear of Missing Out; Instant Gratification; Financial Literacy; Generation Z; PLS-SEM

1. Introduction

Buy Now Pay Later (BNPL) has expanded rapidly across Indonesia's digital commerce, with the sharpest uptake among Generation Z university students, who are situated at the intersection of e-commerce, live-commerce, and social-commerce ecosystems. In these arenas, interface cues—countdown timers, flash sales, limited-stock banners, and real-time social proof—operate as potent external stimuli that heighten Fear of Missing Out (FOMO) and catalyse instant-gratification seeking (Al-Ichwani & Rahayu, 2025; Q. Hu et al., 2022; Mayori & Hidayat, 2025; Sekarlaras et al., 2025). As students toggle between study, social life, and online marketplaces, purchasing choices are frequently shaped by present-biased preferences and uneven financial literacy, conditions that increase the appeal of deferring payment while

obscuring longer-term costs (Jasen & Kim, 2023; Jin et al., 2024; Malini, 2025). The Stimulus–Organism–Response (S–O–R) model offers a coherent lens: platform-level stimuli (S) trigger cognitive–affective states such as FOMO and desire for immediate rewards (O), which then produce behavioural responses (R), including BNPL adoption (Song et al., 2021). Incorporating hyperbolic discounting clarifies why immediate benefits dominate intertemporal trade-offs, while a light extension of the Theory of Planned Behaviour (TPB) helps account for perceived behavioural control and social norms around consumption in peer networks (Jasen & Kim, 2023; Martin et al., 2023; Rahayu et al., 2022). Understanding these dynamics among students is not merely of theoretical interest: it has practical implications for universities, fintech providers, and regulators tasked with promoting responsible finance and consumer protection in fast-moving digital markets (Dietrich et al., 2021).

Despite growing scholarly and practitioner attention, prior BNPL research rarely integrates FOMO, Instant Gratification (IG), and Financial Literacy (FL) within a single explanatory framework that predicts actual usage rather than intentions (Chan et al., 2022; Goraya et al., 2022). The literature remains fragmented—often examining isolated predictors or single platforms—leaving limited insight into how FOMO and IG operate jointly in live- and social-commerce contexts typical of Indonesian campuses (Jasen & Kim, 2023; Luo et al., 2021; Mayori & Hidayat, 2025). Methodologically, BNPL is frequently treated as a reflective attitudinal construct; however, in practice, it is better modeled as a formative/composite behavior comprising frequency, value, payment tenor, late-payment experience, and purchase categories. This calls for a design that accommodates both mediation (e.g., FOMO → IG) and moderation (the buffering or amplifying role of FL) using appropriate PLS-SEM procedures (Q. Hu et al., 2022; Malini, 2025; Sekarlaras et al., 2025). Addressing these omissions is particularly salient for emerging-market Gen Z cohorts, whose financial capabilities and digital exposure evolve simultaneously (Al-Ichwani & Rahayu, 2025).

Accordingly, the study examines how FOMO and IG influence BNPL usage among Generation Z university students and whether FL mitigates or exacerbates these effects. It further investigates the pathway by which FOMO influences IG, which, in turn, affects BNPL behavior, thereby clarifying the interplay between salient psychological drivers and financial capability in real purchase settings (Jasen & Kim, 2023; Mayori & Hidayat, 2025). In concrete terms, the analysis asks whether FOMO and IG have positive effects on BNPL behaviour, whether FL exerts an adverse effect on such behaviour, whether FOMO increases IG, whether IG mediates the effect of FOMO on BNPL, and whether FL moderates the FOMO→BNPL and IG→BNPL relationships (Al-Ichwani & Rahayu, 2025; Jasen & Kim, 2023).

The objectives mirror these questions: to test the direct effects of FOMO and IG on BNPL behaviour; to assess the direct effect of FL and its moderating role on the FOMO→BNPL and IG→BNPL links; to evaluate the mediating role of IG in the FOMO→BNPL relationship; and to translate the findings into actionable recommendations for university-based financial-literacy initiatives aligned with students' digital consumption realities (Al-Ichwani & Rahayu, 2025; Jasen & Kim, 2023).

The study's significance is threefold. Theoretically, it advances an integrative account that links S–O–R with present bias and a TPB-light perspective to explain BNPL behavior among Gen-Z students (Cruz-Cárdenas et al., 2021; Jasen & Kim, 2023). Methodologically, it models BNPL as a higher-order composite and applies joint mediation–moderation testing in PLS-

SEM via a two-stage approach to yield robust, behaviour-level evidence (Al-Ichwani & Rahayu, 2025; Jin et al., 2024; Mayori & Hidayat, 2025). Practically, the results can inform ethical UI/UX design in fintech, refine consumer protection strategies, and guide targeted literacy programs that curb impulsive credit use while preserving access to flexible payments (Dietrich et al., 2021; Rahayu et al., 2022; Sekalaras et al., 2025).

2. Literature Review

2.1 Theoretical Foundations

The Stimulus–Organism–Response (S–O–R) framework offers a cohesive perspective for understanding the adoption of Buy Now Pay Later (BNPL) among Generation Z undergraduates. Within digital marketplaces, salient platform cues—such as scarcity signals, social proof generated by peers or influencers, and flash-sale prompts—trigger internal states marked by the Fear of Missing Out (FOMO) and instant gratification (IG) (Tandon et al., 2021). These organismic states translate into behavioural responses, notably an elevated inclination to employ BNPL to satisfy immediate wants. Present bias, often formalized as hyperbolic discounting, is central here: IG operationalizes this bias by prioritizing the short-term pleasure of a purchase over distant financial outcomes. At the same time, FOMO heightens the perceived urgency to act before an opportunity disappears.

An extension of the Theory of Planned Behaviour (TPB) further enriches this account. FOMO maps onto subjective norms, capturing the peer-driven pressures that shape consumption choices in student networks (Wu et al., 2020). IG, in turn, strengthens hedonic attitudes and fosters impulsive buying that resonates with group values (Taghikhah et al., 2021). By contrast, financial literacy (FL) aligns with perceived behavioural control: students possessing stronger FL are better equipped to evaluate costs, manage credit, and resist high-risk BNPL practices (Singh et al., 2021). Taken together, this layered perspective integrates S–O–R with present bias and TPB to illuminate how psychological drivers and social context jointly condition BNPL usage among Generation Z, yielding insights directly relevant to educators and policymakers concerned with responsible finance.

2.2 FOMO and Instant Gratification Increasing BNPL Usage among Generation Z Students

Fear of Missing Out (FOMO) denotes an anxiety-laden state arising from the prospect of being excluded from rewarding experiences or opportunities enjoyed by others. This condition frequently precipitates impulsive action to relieve this tension (Djafarova & Bowes, 2021). Complementing this, Instant Gratification (IG) refers to the preference for immediate satisfaction from purchases, with limited regard for future financial consequences, thereby heightening the propensity to use Buy Now, Pay Later (BNPL) services (Daassi & Debbabi, 2021). Framed by the Stimulus–Organism–Response (S–O–R) perspective, contextual cues such as perceived scarcity, social proof, and flash-sale prompts function as stimuli that elicit organismic responses—namely FOMO and IG—which in turn culminate in behavioural outcomes, including the uptake of BNPL platforms (Laato et al., 2020). Empirical work indicates that intensified scarcity perceptions and visible social endorsement substantially amplify impulse buying and credit utilisation among Gen Z consumers, particularly within live-commerce settings (Djafarova & Bowes, 2021). This cohort, strongly influenced by social

media trends and the immediacy of online shopping, is therefore prone to BNPL-enabled purchasing under conditions of promotional intensity (Daassi & Debbabi, 2021). Moreover, boundary conditions—such as whether the product is hedonic rather than utilitarian, the strength of promotional tactics, and the frequency of shopping episodes—can moderate the influence of FOMO and IG on BNPL behaviour (Shao & Chen, 2020). Accordingly, the following hypotheses are advanced:

H1: FOMO positively influences BNPL usage among Generation Z university students.

H2: Instant Gratification positively influences BNPL usage among Generation Z university students.

2.3 Higher Financial Literacy Reducing BNPL Usage among Generation Z Students

Financial Literacy (FL) refers to the mastery of core financial concepts—such as compound interest, inflation, risk–return relationships, and diversification—that enable individuals to make informed choices. For Generation Z university students, FL is especially salient, as it enhances their ability to assess the full cost and risk profile of products, such as Buy Now Pay Later (BNPL). Empirical work shows that higher FL suppresses high-cost and impulsive credit behaviour; students with solid financial knowledge are less inclined to adopt risky borrowing practices that jeopardise their financial well-being (Mutamimah et al., 2021). At the same time, studies document substantial heterogeneity in FL within this group, indicating that variations in financial acumen shape consumption patterns, particularly the propensity for impulsive purchases facilitated by BNPL ("Financial Literacy Level on College Students: A Comparative Descriptive Analysis between Mexico and Colombia", 2020). Accordingly, the following hypothesis is proposed:

H3: Financial Literacy negatively influences BNPL usage among Generation Z university students.

2.4 FOMO Elevating Instant Gratification, and Instant Gratification Bridging the Effect of FOMO on BNPL Usage

Fear of Missing Out (FOMO) heightens time pressure by combining peer-driven social influence with perceived scarcity, thereby intensifying the desire for Instant Gratification (IG) among Generation Z consumers. When countdowns, limited-time offers, and trending endorsements converge, FOMO catalyzes swift, present-oriented choices that prioritize immediate utility over deliberation, a pattern consistently associated with impulsive purchasing (Tandon et al., 2021). Within this dynamic, IG serves as the psychological conduit linking FOMO to the adoption of Buy Now, Pay Later (BNPL) services. Heightened FOMO intensifies the desire for instant gratification, which, in turn, translates into BNPL usage as a convenient mechanism for satisfying wants without deferring consumption. Evidence also suggests a direct pathway from FOMO to BNPL, while the IG route represents a theoretically and empirically compelling mechanism that warrants formal mediation testing (Dibb et al., 2021). Accordingly, the study advances the following hypotheses:

H4: FOMO has a positive influence on instant gratification among Generation Z university students.

H5: Instant Gratification mediates the relationship between FOMO and BNPL usage among Generation Z university students.

2.5 Financial Literacy Weakening the Effects of FOMO and Instant Gratification on BNPL Usage

Financial Literacy (FL) serves as a cognitive safeguard, tempering impulsive tendencies and mitigating peer-driven pressure among Generation Z undergraduates, thereby discouraging the use of Buy Now, Pay Later (BNPL) arrangements. Individuals with stronger FL are better positioned to appraise total borrowing costs and risk exposures, and thus to make more deliberate choices when confronted with credit products (Du et al., 2020). Empirical evidence further indicates that FL interacts meaningfully with impulsive consumption: students who grasp foundational financial principles are more resistant to the immediate lure of promotional cues—those bound up with Fear of Missing Out (FOMO) and Instant Gratification (IG)—that marketing campaigns and social dynamics often amplify (Akdemir & Lawless, 2020). To capture this moderating role rigorously, interaction terms (FOMO×FL; IG×FL) should be specified within a PLS Two-Stage analysis, enabling a fine-grained assessment of how FL attenuates the influence of FOMO and IG on BNPL behaviour; simple-slope plots can then aid interpretation by revealing how effects vary across levels of FL and underscore the heterogeneity characteristic of this cohort (Currie et al., 2022). In line with this reasoning, the study advances the following hypotheses:

H6: Financial Literacy weakens the effect of FOMO on BNPL usage among Generation Z university students.

H7: Financial Literacy weakens the effect of Instant Gratification on BNPL usage among Generation Z university students.

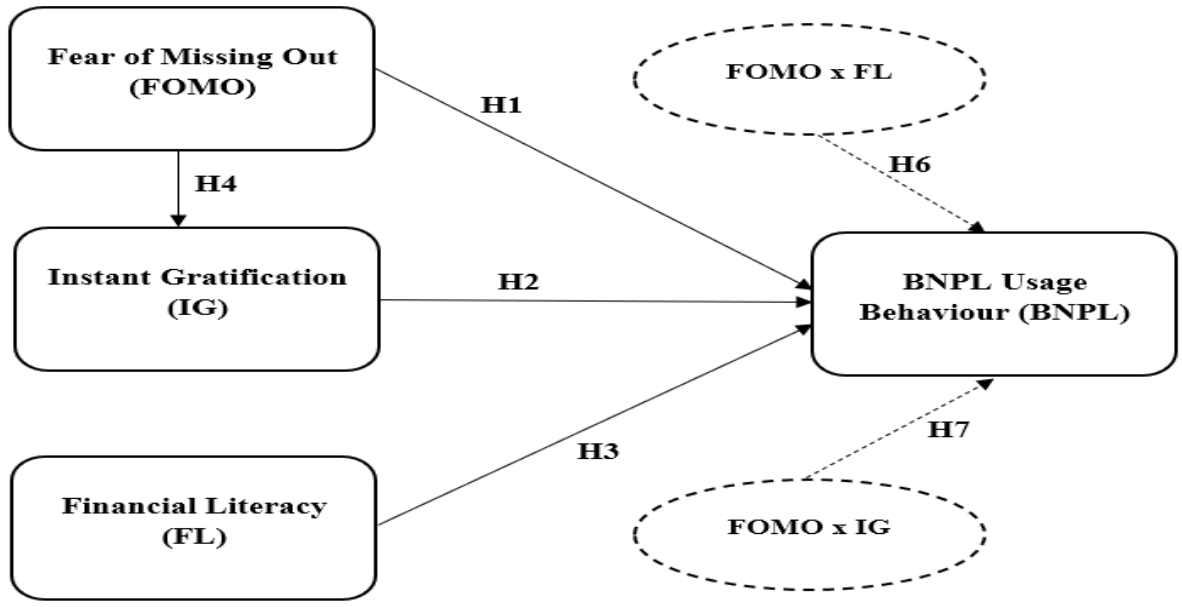

Figure 1. Conceptual Framework

3. Materials and Methods

3.1. Research Design and Context

This study employs a cross-sectional quantitative survey of Generation Z university students in Indonesia's e-commerce, live-commerce, and social-commerce settings. Guided by the Stimulus–Organism–Response lens, present-bias, and a light TPB extension, the model

examines how Fear of Missing Out (FOMO) and Instant Gratification (IG) shape BNPL Usage Behaviour, with Financial Literacy (FL) acting both directly and as a moderator. All focal constructs were measured reflectively (see Section 3.3). Partial Least Squares Structural Equation Modeling (PLS-SEM) was selected due to its theory development aim, non-normal indicators, mediation, and two interaction terms (FOMO × FL and IG × FL). The design targets behaviour (not mere intention) in real purchase contexts typical of digitally active students.

3.2. Population, Sample, and Sampling Technique

The population consisted of undergraduates (approximately 18–25 years old) enrolled at public and private universities. Inclusion criteria required familiarity with online shopping and, for the BNPL module, prior BNPL experience within the last six months. Non-probability purposive sampling, complemented by snowball diffusion through student organisations and class groups, yielded N = 230 valid responses after screening (removal of duplicates, failed attention checks, and implausibly short completion times). Data were collected through an online questionnaire platform, with informed consent and anonymity ensured. The wording of the item was adapted to campus commerce contexts and pretested for clarity. Descriptive profiles of the sample are reported in Table 1, showing broad coverage across gender, year of study, fields, and allowance bands.

3.3. Measurement and Instrument Development

All measures were drawn from your uploaded instrument and refined against established sources, then administered on a five-point Likert scale (1 = strongly disagree; 5 = strongly agree). Fear of Missing Out (FOMO) was adapted to the BNPL context from canonical FOMO work that links social comparison and scarcity cues to compulsive checking and purchase urgency (Djafarova & Bowes, 2021; Tandon et al., 2021) and was measured with six items (FOMO1–FOMO6). Instant Gratification (IG) captures present-biased, immediacy-seeking tendencies that underpin impulse purchasing in digital commerce (Daassi & Debbabi, 2021; Tandon et al., 2021), comprising six items (IG1–IG6). Financial Literacy (FL) was assessed using objective knowledge indicators covering interest compounding, inflation, risk–return trade-offs, and diversification, consistent with widely used financial capability batteries (X. Hu et al., 2021), operationalized via four items (FL1–FL4). BNPL Usage Behaviour reflected self-reported intensity and patterns of BNPL activity (e.g., frequency/recency of use and repayment experience) based on prior credit-use and BNPL research in youth markets (Chan et al., 2022; Goraya et al., 2022), measured with seven items (BNPL1–BNPL7). Items were expert-reviewed and piloted to ensure content validity and age-appropriate wording for Generation-Z students.

3.4. Data Collection Procedure and Ethics

Analyses were conducted using SmartPLS, a PLS algorithm with bootstrapping (5,000 subsamples). Measurement evaluation followed standard criteria: outer loadings ≥ 0.70 (items ≥ 0.60 retained on content grounds), Cronbach's alpha/CR ≥ 0.70, AVE ≥ 0.50, and Fornell–Larcker and HTMT < 0.85 for discriminant validity. Collinearity was assessed via VIF <3.3. Structural paths were estimated with confidence intervals from bootstrapping; effect sizes (f^2), R^2, and predictive relevance (Q^2) were reported (BNPL: R^2=0.700, Q^2=0.418; IG: R^2=0.572,

Q^2=0.377). Mediation (FOMO → IG → BNPL) was tested using the indirect effect; moderation employed a two-stage approach with product indicators (FOMO × FL; IG × FL), mean-centered at stage one (Hair et al., 2024).

3.5. Data Analysis Plan (PLS-SEM)

Procedural remedies minimized common method bias, including the use of anonymity, neutral wording, mixed item order, and the separation of predictor/criterion blocks. Statistically, full collinearity VIF <3.3 suggested CMB was unlikely; results were consistent with a Harman single-factor check (<50% variance). Robustness was examined through: (i) sensitivity to trimming the lowest-loading indicator(s), (ii) alternative indicator centring for interactions, and (iii) PLSpredict confirming positive Q^2 for endogenous constructs. Substantive inferences (sign and significance of focal paths) remained stable (Hult et al., 2021). Ethical clearance was obtained from the faculty-level research ethics committee. Respondents provided informed consent and voluntary participation, and no personally identifiable information was retained. Data were stored securely in accordance with institutional policy.

4. Result

4.1 Descriptive Statistics and Respondent Profile

Table 1 summarizes the responses from 230 Gen-Z university respondents. Gender is balanced (53.0% female, 46.1% male). Most are aged 19–22 (85.2%) and are at mid-programme (Years 2–3: 60.0%). Fields are varied—Business/Economics accounts for 31.3%, Engineering/IT for 27.8%, and Social Sciences for 21.7%—with public institutions slightly dominant (53.9%). Monthly allowances cluster at IDR 1.5–3.5 million (65.3%); 20.0% receive <1.5 million and 14.7% >3.5 million. BNPL experience is widespread (81.7%), providing a substantive behavioural base. FOMO levels are predominantly medium to high (70.4%), as are Instant Gratification levels (73.0%), indicating substantial exposure to social and promotional cues. Financial literacy is moderate, mainly (51.3%), with 23.5% low; awareness of BNPL fees/charges is only marginally higher than not aware (53.9% vs 46.1%). The sample mirrors a typical campus population yet retains sufficient heterogeneity for hypothesis testing. At the same time, the combination of high BNPL penetration, elevated FOMO/IG, and uneven literacy underlines the salience of investigating psychological and capability determinants of BNPL usage.

Table 1. Attributes of Review Respondents

Respondent Attributes	Categories	Frequency (N)	Percentage (%)
Gender	Male	106	46.1
	Female	122	53.0
	Prefer not to say	2	0.9
Age Group	17–18 years	12	5.2
	19–20 years	104	45.2
	21–22 years	92	40.0
	≥23 years	22	9.6
Year of Study	Year 1	54	23.5
	Year 2	68	29.6

	Year 3	70	30.4
	Year 4+	38	16.5
Field of Study	Business/Economics	72	31.3
	Engineering/IT	64	27.8
	Social Sciences	50	21.7
	Arts/Humanities	24	10.5
	Other	20	8.7
University Type	Public	124	53.9
	Private	106	46.1
Monthly Allowance (IDR)	< 1.5 million	46	20.0
	1.5–2.5 million	88	38.3
	2.5–3.5 million	62	27.0
	> 3.5 million	34	14.7
BNPL Usage Experience	Yes	188	81.7
	No	42	18.3
FOMO Level	Low	68	29.6
	Medium	88	38.3
	High	74	32.1
Instant Gratification Level	Low	62	27.0
	Medium	92	40.0
	High	76	33.0
Financial Literacy Level	Low	54	23.5
	Moderate	118	51.3
	High	58	25.2
BNPL Risk Awareness (fees/charges)	Aware	124	53.9
	Not aware	106	46.1

4.2 Measurement Model Evaluation (Outer Model)

Table 2 evaluates the external (measurement) model for the study constructs. Reliability is satisfactory across all reflective latent variables: BNPL Usage Behaviour (α=0,905; CR=0.907; AVE=0.584), Fear of Missing Out (α=0,960; CR=0.968; AVE=0.835), Financial Literacy (α=0,956; CR=0.957; AVE=0.846), and Instant Gratification (α=0,911; CR=0.932; AVE=0.698). Convergent validity is supported because AVE values exceed the 0.50 benchmark, and most outer loadings are greater than or equal to 0.70. FOMO and FL exhibit uniformly high loadings (0,871–0,937 and 0,855–0,951, respectively), indicating strong item coherence. IG indicators are acceptable (0,711–0,900), while BNPL loadings range from 0,661 to 0,925; the marginal BNPL5 (0,661) remains within tolerable limits for exploratory PLS-SEM. The interaction constructs, FOMO×FL and IG×FL, are specified as single product indicators following a two-stage approach; their loadings (1,029 and 0,873) and fixed reliability/AVE values (1,000) confirm stable measurement of the moderation terms. The results demonstrate a robust measurement model, justifying progression to structural hypothesis testing.

Table 2. Analyses of the External Model

Construct / Item	Loadings	Alpha	CR	AVE

BNPL Usage Behaviour		0,905	0,907	0,584
BNPL1	0,925			
BNPL2	0,802			
BNPL3	0,728			
BNPL4	0,752			
BNPL5	0,661			
BNPL6	0,727			
BNPL7	0,729			
Fear of Missing Out		0,96	0,968	0,835
FOMO1	0,934			
FOMO2	0,919			
FOMO3	0,871			
FOMO4	0,908			
FOMO5	0,912			
FOMO6	0,937			
Financial Literacy		0,956	0,957	0,846
FL1	0,925			
FL2	0,855			
FL3	0,946			
FL4	0,951			
Instant Gratification		0,911	0,932	0,698
IG1	0,711			
IG2	0,899			
IG3	0,869			
IG4	0,869			
IG5	0,9			
IG6	0,743			
FOMO×FL		1,000	1,000	1,000
Financial Literacy * Fear of Missing Out	1,029			
IG×FL		1,000	1,000	1,000
Financial Literacy * Instant Gratification	0,873			

Table 3 presents the Fornell–Larcker matrix for assessing discriminant validity. The diagonal entries reflect the square roots of AVE: Fear of Missing Out (0.914) and Instant Gratification (0.835), both of which exceed their correlations with other constructs, indicating adequate separability. The interaction terms (FOMO×FL; IG×FL) appear with unit diagonals because they are single-indicator products; as expected, their correlations with the primary constructs are modest to moderate (e.g., IG×FL with FOMO×FL = 0.557).

By contrast, the behavioural construct is strongly related to the psychological and capability variables. BNPL Usage Behaviour correlates highly with Instant Gratification (0.775) and Financial Literacy (0.764). Given BNPL's AVE (0.584), its implied diagonal is $\sqrt{AVE} \approx 0.764$—very close to, and in one case slightly lower than, the inter-construct correlations. This edge condition suggests that discriminant validity is broadly acceptable but borderline for the BNPL–IG and BNPL–FL pairs. In such cases, complementary evidence from cross-loadings and the HTMT ratio (preferably <0.85) should be consulted to confirm construct distinctiveness.

Table 3. Result of Discriminant Validity

Variable	1	2	3	4	5	6
1. BNPL Usage Behaviour						
2. FOMO×FL	0,329	1,000				
3. Fear of Missing Out	0,598	0,144	0,914			
4. Financial Literacy	0,764	0,244	0,440			
5. IG×FL	0,174	0,557	0,146	0,067	1,000	
6. Instant Gratification	0,775	0,124	0,757	0,783	0,012	0,835

Table 4 summarises effect sizes (f^2), explained variance (R^2), and predictive relevance (Q^2) for the endogenous constructs. For the BNPL Usage Behaviour equation, R^2=0,700 denotes substantial explanatory power, while Q^2=0,418 indicates strong out-of-sample predictive relevance. Regarding contributors, Financial Literacy shows the most significant effect on BNPL (f^2 = 0.167; medium, per Cohen), followed by Instant Gratification (f^2 = 0.064; small–medium). The moderation terms are comparatively modest: FOMO×FL (f^2=0,047) is small, the main effect of FOMO is small (f^2=0,022), and IG×FL is negligible (f^2=0,004).

Turning to the Instant Gratification model, fit is also satisfactory (R^2=0,572; Q^2=0,377), with Fear of Missing Out exerting a considerable influence (f^2=1,344), thereby substantiating the theorised pathway FOMO → IG → BNPL. These results suggest that capability (FL) and present-oriented motives (IG) primarily account for BNPL usage among Generation Z, whereas interaction effects add only incremental explanatory value. The combination of sizeable R^2 and positive Q^2 metrics supports the predictive adequacy of the structural model.

Table 4. Coefficient of Effect Size (f^2), Determination (R^2) and Predictive Relevance (Q^2)

Variable	f^2					R^2	Q^2
	2	3	4	5	6		
1. BNPL Usage Behaviour	0,047	0,022	**0,167**	**0,004**	0,064	0,700	0,418
2. FOMO×FL							
3. Fear of Missing Out							
4. Financial Literacy							
5. IG×FL							
6. Instant Gratification		**1,344**				0,572	0,377

4.3 Structural Model Evaluation (Inner Model)

Figure 2 depicts the PLS-SEM with standardised path estimates and variance explained. The model accounts for 57.3% of the variance in Instant Gratification (IG) and 70.6% of the variance in BNPL Usage Behaviour, indicating substantial explanatory power. Consistent with the S–O–R mechanism, Fear of Missing Out (FOMO) strongly elevates IG (β=0.757). Turning to BNPL, usage is shaped by three main antecedents: Financial Literacy (FL) (β = 0.400), Instant Gratification (β = 0.338), and a moderate direct effect of FOMO (β = 0.395). Bootstrapping confirms the statistical significance of these links ($p \leq 0.047$; see Table 5). By contrast, the moderation terms add limited incremental value: FOMO × FL is marginal (β = 0.142, p = 0.059), and IG × FL is non-significant (β = 0.048, p = 0.510). Overall, the figure

supports a pathway in which promotional and social cues intensify present-biased motives that, alongside financial capability, translate into higher BNPL usage among Generation Z students.

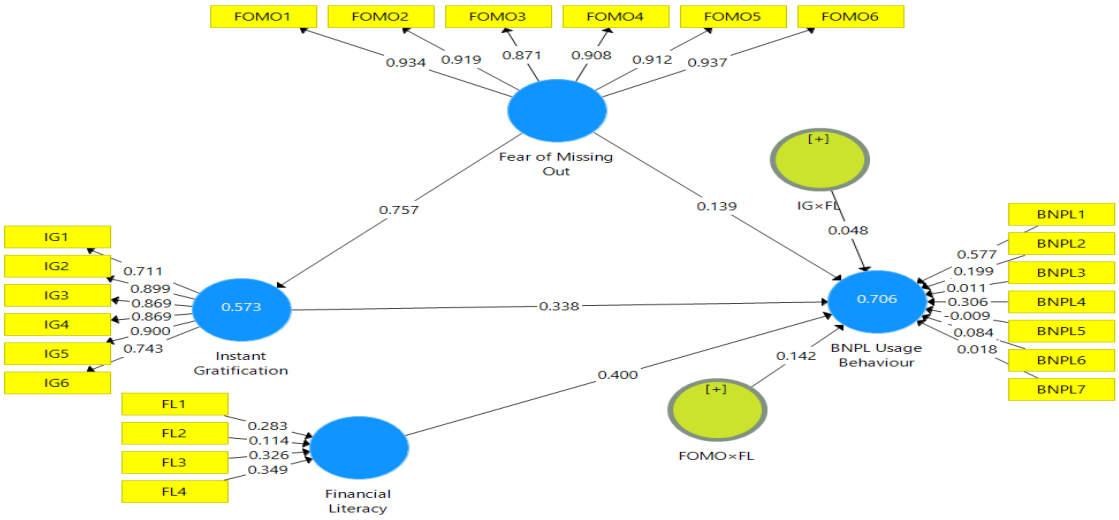

Figure 2. Construct Testing Model

4.4 Hypotheses Testing Results

Figure 3 displays the bootstrapped t-statistics for the measurement and structural relations. Reflective indicators for Fear of Missing Out (FOMO) and Instant Gratification (IG) are highly robust (FOMO t = 18.165–31.325; IG t = 12.042–26.308), confirming convergent validity. By contrast, the BNPL Usage Behaviour composite exhibits heterogeneous weights: BNPL1 is clearly salient (t = 3.221) and BNPL4 is borderline (t = 1.984), whereas the remaining weights are weak, consistent with a formative specification. Regarding structural paths, FOMO → IG is powerful (t=16.084), while IG → BNPL attains conventional significance (t=1.990). Financial Literacy (FL) → BNPL is likewise significant (t=2.233), yet the direct FOMO → BNPL path is not (t=1.154). Moderation effects are limited: FOMO×FL → BNPL is marginal (t=1.893), and IG×FL → BNPL is clearly non-significant (t=0.660). The bootstrapping results substantiate a mediated pathway from FOMO to IG, with IG influencing BNPL, and FL exerting a protective direct effect.

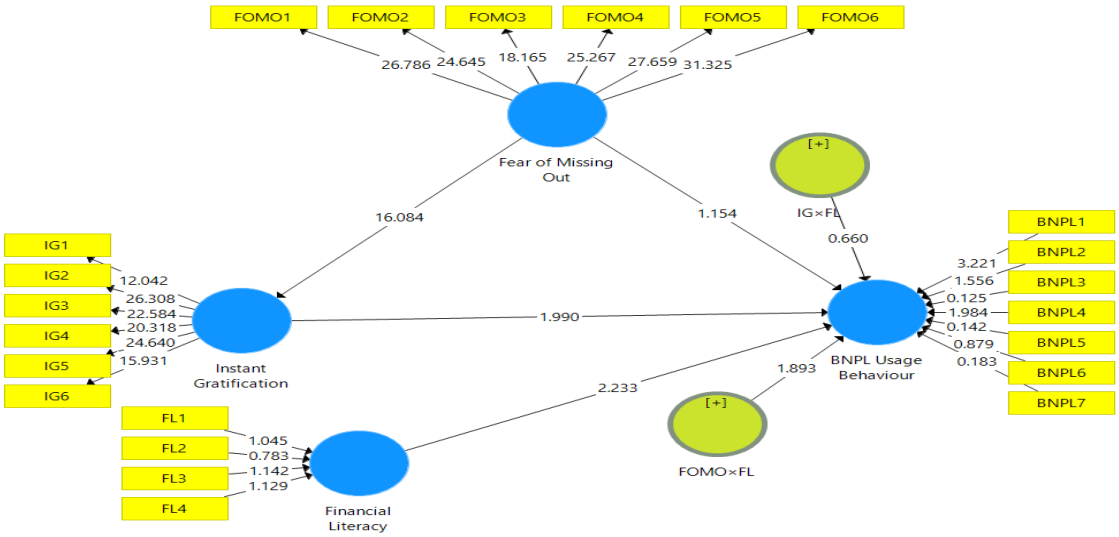

Figure 3. Bootstrapping Results

Table 5 presents the direct effects from the PLS-SEM. First, Fear of Missing Out (FOMO) is a significant antecedent of Instant Gratification (IG) ($\beta = 0.757$, $t = 16.084$, $p < 0.001$), reinforcing the S–O–R pathway. Turning to BNPL Usage Behaviour, three main effects reach conventional significance: FOMO → BNPL ($\beta=0.395$, $t=2.776$, $p=0.006$), Financial Literacy (FL) → BNPL ($\beta=0.400$, $t=2.233$, $p=0.026$), and IG → BNPL ($\beta=0.338$, $t=1.990$, $p=0.047$). FL and FOMO exert comparable positive influences in magnitude, with IG adding a more minor yet meaningful contribution. The bootstrapped sample means (M) are close to the original estimates, indicating stable coefficients despite moderate standard errors.

By contrast, neither of the two interaction terms achieves a 5% significance level. FOMO×FL → BNPL is borderline ($\beta=0.142$, $t=1.893$, $p=0.059$), suggesting only weak moderation, while IG×FL → BNPL is clearly null ($\beta=0.048$, $t=0.660$, $p=0.510$). Overall, BNPL behaviour among Generation Z appears to be driven primarily by FOMO and financial capability, with present-oriented motives reinforcing usage and literacy-based moderation playing a limited role.

Table 5. Summary of Direct Effects Testing Results

Construct	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
FOMO×FL -> BNPL Usage Behaviour	0,142	0,122	0,075	1,893	0,059
Fear of Missing Out -> BNPL Usage Behaviour	0,395	0,358	0,142	2,776	0,006
Fear of Missing Out -> Instant Gratification	0,757	0,759	0,047	16,084	0,000
Financial Literacy -> BNPL Usage Behaviour	0,400	0,461	0,179	2,233	0,026
IG×FL -> BNPL Usage Behaviour	0,048	0,064	0,072	0,660	0,510
Instant Gratification -> BNPL Usage Behaviour	0,338	0,280	0,170	1,990	0,047

Table 6 reports the bootstrapped mediation from Fear of Missing Out (FOMO) to BNPL Usage Behaviour via Instant Gratification (IG). The indirect coefficient is positive and statistically significant ($O = 0.256$; $STDEV = 0.129$; $t = 1.987$; $p = 0.047$), indicating that IG transmits a meaningful share of FOMO's influence on BNPL. In conjunction with the significant direct path from FOMO to BNPL (Table 5), this pattern is consistent with complementary partial mediation: FOMO heightens present-oriented motives, which, in turn, elevate BNPL usage, while a direct route remains. A rough decomposition suggests that the indirect component accounts for roughly two-fifths of FOMO's total effect (0.256 of ≈0.651), underscoring the behavioural importance of immediate-reward seeking. Although the t-value lies close to the conventional threshold, the result supports the theorised S–O–R mechanism linking social urgency to deferred-payment behaviour among Generation Z students.

Table 6. Summary of Indirect Effects Testing Results

Construct	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Fear of Missing Out -> Instant Gratification -> BNPL Usage Behaviour	0,256	0,129	1,987	0,047

5. Discussion

The results support the proposed S–O–R mechanism, which links promotional and social cues to BNPL behavior among Generation Z students. Most notably, FOMO strongly elevates IG (β = 0.757), aligning with evidence that scarcity prompts and peer cues trigger anxiety-driven urgency and present-oriented choice (Djafarova & Bowes, 2021; Tandon et al., 2021). In turn, IG positively predicts BNPL usage (β=0.338), and the indirect effect FOMO → IG → BNPL is significant (O=0.256; p=0.047), indicating that immediate-reward motives are a core channel through which social pressure translates into deferred-payment behaviour (Dibb et al., 2021). The direct FOMO → BNPL path (β = 0.395) further suggests a dual route—both emotional urgency and present bias jointly stimulate usage.

Contrary to the conventional expectation that financial capability restrains risky credit, FL has a positive correlation with BNPL (β = 0.400). Rather than signalling imprudence, this may reflect capability-enabled, fee-minimising use: financially literate students can exploit short tenors, avoid charges, and smooth cash flow while preserving optionality (X. Hu et al., 2021). This interpretation is consistent with youth-market BNPL evidence, which emphasizes convenience, budgeting, and promotional optimization, even among informed users (Chan et al., 2022; Goraya et al., 2022). By contrast, moderation is weak: FOMO×FL is marginal (p=0.059) and IG×FL is non-significant, plausibly because promotional salience dominates any buffering role of FL and/or because literacy dispersion is limited in a relatively homogeneous campus cohort.

Measurement diagnostics are strong (high loadings; α/CR above thresholds; AVE > 0.50), and discriminant validity is acceptable, mainly, though BNPL–IG/FL correlations approach √AVE—warranting HTMT confirmation. Substantively, the findings foreground present-bias (IG) as the proximal driver while FOMO injects social urgency; FL functions less as a brake than as a resource that enables disciplined BNPL use. Practically, fintechs and universities should combine ethics-by-design interfaces—clear cost disclosures and soft defaults toward shorter tenors—with targeted literacy modules that emphasize the total cost of credit and repayment planning (Daassi & Debbabi, 2021; Tandon et al., 2021). Limitations include cross-sectional self-reports and non-probability sampling; future work could employ panel or experimental designs and segment hedonic versus utilitarian purchases to test boundary conditions (Taghikhah et al., 2021; Wu et al., 2020).

6. Conclusion, Implication, and Recommendation

6.1. Conclusion

The findings confirm the S–O–R pathway: The phenomenon of Fear of Missing Out (FOMO) has been demonstrated to have a significant impact on the propensity for instant gratification (IG). It has been observed that IG, in conjunction with financial literacy (FL),

plays a crucial role in influencing the utilisation of Buy Now, Pay Later (BNPL) services. The indirect effect of FOMO through IG is significant, complementing the direct effect of FOMO on BNPL. The moderating effect of FL is found to be weak; the interaction between FOMO and FL is only marginal, while the interaction between IG and FL is insignificant. The model exhibits a considerable degree of explanatory power regarding IG and BNPL.

6.2. Implication

Theoretically, these results integrate S–O–R with present-oriented preferences and a slight extension of TPB to explain actual BNPL behaviour among Gen Z students. In practice, fintech providers should implement ethics-by-design principles, which entail clear disclosure of total costs, automated payment reminders, and shorter default tenors, with a view to curbing impulsive urges. Within the university environment, literacy programmes must emphasize payment planning, tenor management, and cost awareness, thereby enabling students to utilise the BNPL methodically.

6.3. Recommendation

It is recommended that future research employ longitudinal or experimental designs in order to assess causality. Furthermore, the combination of objective transaction data with surveys should be implemented, and boundary conditions (for example, hedonic versus utilitarian product categories and live versus social commerce contexts) should be tested. The implementation of a multifaceted evaluation approach, encompassing variables such as literacy levels, financial assistance received, and the academic year, is anticipated to enhance our comprehension of the segments under scrutiny. To enhance the external validity of the research, it is necessary to implement cross-campus and cross-platform replication. Furthermore, to refine the measurement specifications of BNPL, it is essential to ensure that they are consistent with the nature of the construct being studied.

7. References

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