

Social Media Exposure and Influencer Marketing ROI: Examining the Role of Consumer Engagement and Purchase Intention among Gen Z

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ABSTRACT

Purpose - In recent years, it has become extremely common for numerous brands to allocate the majority of their online marketing budgets to social media promotion projects led by internet influencers. However, to date, there remains a significant gap in relevant academic research: the complete conversion logic through which consumers transform from initial exposure to these promotional contents into the tangible revenue that brands can ultimately obtain has never been clearly sorted out. Drawing on the Elaboration Likelihood Model and Source Credibility Theory, this study specifically targets Generation Z consumers and sorts out a continuous mediating transmission path: starting from users' first exposure to promotional content while browsing social media, consumers' active engagement with the content is first triggered, followed by the gradual cultivation of purchase intention, which ultimately translates into the tangible Marketing ROI that brands can track. In addition to sorting out this conversion path, this study also aims to verify one question: can an influencer's own credibility act as a boundary condition moderating the entire path, affecting the strength of the correlations between every link in the chain.

Design/methodology/approach - This study adopts a cross-sectional questionnaire survey design, and a total of 251 valid questionnaires were collected from Generation Z respondents. All respondents were aged between 18 and 27 years, and were recruited through the [purposive/quota] sampling method within the restricted [context/geography] scope. All relevant variables used in this study were measured using mature multi-indicator reflective scales that have been validated in previous academic research, and all items in the questionnaire collected respondents' answers using a 7-point Likert scale. Both the measurement model and structural model of the study were tested using the partial least squares structural equation model (PLS-SEM) in SmartPLS 4 software. At the same time, 5000 bootstrap subsamples were extracted to verify whether the indirect effects and conditional effects in the preset path are statistically significant.

Research Findings: PLS-SEM analysis of 251 valid responses supported all five hypothesised paths. Social media exposure positively predicted consumer engagement ($\beta = .363$, $p < .001$; H1), and influencer credibility significantly strengthened this relationship ($\beta = .162$, $p < .001$; H2). Consumer engagement, in turn, was the strongest driver in the model, positively predicting purchase intention ($\beta = .536$, $p < .001$; H3), and purchase intention positively predicted perceived marketing ROI ($\beta = .531$, $p < .001$; H4). Influencer credibility also significantly strengthened the engagement–intention relationship ($\beta = .170$, $p < .001$; H5). The model explained 36.2% of the variance in consumer engagement, 38.5% in purchase intention, and 28.2% in perceived marketing ROI, confirming that social media exposure translates into perceived marketing ROI through the serial pathway of consumer engagement and purchase intention, with influencer credibility acting as a boundary condition that strengthens both the exposure–engagement and engagement–intention links.

Originality/value- This study brings three core breakthroughs to the existing academic achievements in the field of influencer marketing. First, the vast majority of previous studies in this field only stayed at observing short-term proximal attitude changes in consumers after they viewed promotional content, such as shallow-level reactions like whether they developed a favorable impression of the product. This paper sets the brand-perceptible indicator Marketing ROI as the final outcome of the entire causal chain centered on consumers' behavioral changes, breaking the limitation of previous studies that only tracked consumers' intermediate reactions, and truly extending the end point of the research to the actual commercial revenue that brands can obtain from their marketing investments. Second, this study sets influencer credibility as a moderating variable that affects the strength of the core links of the path, rather than a variable directly used to predict the final outcome. It not only confirms that an influencer's credibility can affect the final outcome of the marketing campaign, but further clarifies under what conditions promotional exposure on social media can be converted into measurable improvements in consumer engagement, and then from improved engagement into improved purchase intention, practically answering the question of when conversion will occur, rather than only staying at the level of confirming that conversion does exist. Third, the research object of this study is limited exclusively to Generation Z. This group has been proficient in using various social platforms since childhood, so the research conclusions summarized from older age groups cannot be directly applied to the unique consumption behaviors of this group. By narrowing the research scope specifically to this group, this study eliminates the applicability gap of previous old conclusions when applied to the new group....

Keywords: Social media exposure; Influencer credibility; Consumer engagement; Purchase intention; Marketing ROI; Generation Z; PLS-SEM..

INTRODUCTION

The resources that are used by global brands to invest in influencer marketing have long been much more significant than those spent in the initial period of development of the industry. At that time, when no one could evaluate the influence of such a channel of promotion, brands had only little extra money left after other marketing campaigns to try this innovative form of product promotion. Currently, this spending is included in each individual budget of most digital marketing campaigns of leading brands and cannot be ignored.

When making decisions concerning their budgets, marketers consider entirely different factors associated with influencer marketing. While at the initial stages of the industry's development, its purpose was only one – how many people would see ads of chosen influencers, nowadays, marketers want only one thing – will their spending result in real returns which will be corresponding to their brand's goals.

The whole industry has changed and now everyone focuses on obtaining certain results. Such a radical change in the industry has raised a relevant theoretical question. Current academic research on social media and influencer marketing has accumulated a solid set of conclusions centered on consumers' short-term responses. These observable short-term reactions are all the attitudes consumers display immediately after viewing promotional content, intuitive changes that can be captured in a short period: for example, whether consumers like the content itself after watching an influencer's advertisement; whether their impression of the advertising brand improves or worsens; whether they interact with the promotional content through specific actions such as liking, commenting, and sharing; and whether they develop an intention to purchase the promoted product (Hughes, Swaminathan, & Brooks, 2019; Lou & Yuan, 2019; Ki & Kim, 2019).

However, very few studies have clarified the clear correlation between these visible short-term indicators and the return-centric metrics brands use to judge whether an investment is worthwhile. Yet brands' decisions to continue investing in the future depend entirely on these return-focused evaluations: if a project meets requirements, they may renew their cooperation to continue funding the influencer marketing project, or expand their overall influencer marketing budget to scale up promotion. If a campaign fails to meet targets, they may terminate the entire project directly and reallocate the budget to more promising channels (Hoffman & Fodor, 2010; Stephen & Galak, 2012).

This long-unfilled research gap is neither due to insufficient coverage in existing research nor because these studies only remain at superficial descriptive stages. The fundamental problem lies in a structural flaw that no relevant research can avoid: the entire field has split into two completely disconnected, isolated camps that almost never intersect. The two groups work on their own research in isolation, with no meaningful overlap between their work.

The first research stream originates from the field of consumer psychology, centering on a single core question: why consumers are persuaded by the promotional content posted by influencers, and why they generate clear responses to this content. The core constructs used in this stream include influencers' own credibility, the parasocial attachment formed between followers and influencers, the fit between influencers' content styles and the promoted brands, and consumers' perceived authenticity of the content (Ohanian, 1990; Sokolova & Kefi, 2020; Belanche, Casaló, Flavián, & Ibáñez-Sánchez, 2021). Secondly, the other stream of literature is associated with the field of marketing analytics, where another basic question is explored, that is, how the brands can use their investment in marketing, where the input/output analysis is considered only in the context of this particular stream of literature. The important topics in the present stream of literature include attribution models, customer lifetime value, and owned media elasticity (Rust, Lemon & Zeithaml, 2004; Kumar et al., 2016).

These two research streams have never achieved meaningful cross-fertilization. One specializes in exploring the psychological mechanisms behind why consumers are persuaded by influencer content, while the other only focuses on the metrics used to measure how much return brands can obtain. The two lines of research have advanced entirely independently, and no study has ever connected the findings from these two separate systems. The complete causal chain linking the two—from consumers' initial psychological shift after being persuaded by promotional content, to placing an order, to final payment by consumers and the tangible revenue the brand secures—has been pieced together entirely through researchers' speculation. This set of logics has never been validated with real empirical data, and no one can confirm that this causal chain is truly tenable.

Most scholars who previously studied this field failed to produce a complete framework that could connect all relevant content, and could only split the entire research scope into isolated fragments, analyzing each fragment as a standalone independent task. When they attempted to piece together the research findings of these fragments one by one, they could not assemble a unified and complete conclusion, and a pile of critical loopholes remained in the entire reasoning process, leaving unfillable gaps everywhere in the patched-together results.

This new study fills in these loopholes. It constructs a logically rigorous logical chain at the pure theoretical level, where all links on the chain fit together perfectly without any conflicts. From the start to the end of the chain, the connections between every link are clearly stated, completely eliminating all vague and untenable logical transitions, with no room for ambiguity whatsoever.

How exactly does this logical chain operate step by step? When ordinary users browse social media, the first content they encounter is promotional material for brand campaigns, after which they will proactively choose to interact with this content. The most common forms of interaction are liking the content, leaving comments, or

clicking to repost and share the content. Only after these interactions occur will users gradually develop a genuine purchase intention—that is, a concrete desire to buy the product. Once a certain proportion of users develop this unspoken purchase intention, these intentions will eventually translate into quantifiable, high-efficiency ROI for the brand, which is the core outcome that brands most want to achieve through this type of marketing.

The operational efficiency of this logical chain does not remain stable across all scenarios. It cannot smoothly complete the entire process from users encountering promotional content to the brand obtaining actual returns in every situation. The conversion rate throughout the entire process, from users first seeing the promoted product to finally counting the number of people that generate tangible marketing value for the brand—meaning the proportion of users that complete all links of the process out of all users who saw the content—depends entirely on the credibility of the entity that created and published the content.

The conclusion drawn from this study is entirely consistent with the principles of two classic theories mentioned above. First, the core theory utilizes the principles of the Elaboration Likelihood Model theory. This current study makes use of specific theories in peripheral cues of Elaboration Likelihood Model (Petty & Cacioppo, 1986). Second, the core theory is consistent with Source Credibility Theory where professional competence and credibility of the publisher of the information act as the moderating variables in persuading information.

The current sample consists of the representatives of only one generation, namely Generation Z. Data regarding the representatives of Generation Z have been gathered for this research paper. Data related to other generations have not been gathered within this research paper. Nevertheless, there are certain reasons for choosing Generation Z for investigation, which means that such a choice was not accidental. For instance, the members of Generation Z were born between 1997 and 2012. The lifestyle of this generation is different from that of several other generations. To start with, Generation Z is special in the way that they do not only use social media networks more actively than their parents and even grandparents do. Social media networks are an inherent part of the life of this generation since they do not treat social media networks as "a new additional tool." When Generation Z started using the internet, social media networks had already existed. This was not the case at all for earlier generations, who first encountered social media as adults, and had to cross many thresholds and invest substantial effort to learn how to use this brand-new technology before integrating it into their already established daily habits.

In the most basic logic of marketing, understanding the traits of Generation Z is a mandatory task.

The latest data shows that this group of young people is completely unreceptive to hard-sell tactics—advertisements that directly urge audiences to place orders immediately and explicitly pressure people to spend

money are the least able to resonate with them, and cannot change their original purchasing decisions at all.

In addition to resenting this kind of forced, intrusive advertising, their attention span for a single piece of online content is also far shorter than that of previous generations. It takes them only one second to swipe past content they dislike, and even for content they enjoy, they are unable to sustain focused attention on the same piece of content for very long.

Another critical detail that cannot be ignored: they highly trust daily content posted by friends or internet influencers, and their level of trust in this type of private content with no official endorsement far exceeds their trust in various carefully packaged promotional materials released by official brand accounts (Francis & Hoefel, 2018; Priporas, Stylos, & Fotiadis, 2017; Djafarova & Bowes, 2021).

Conclusions drawn from previous studies that targeted millennials, or a broader group of all adults, cannot be directly applied to Generation Z at all. Those early research results observed the consumption habits of previous generations, and are completely unable to explain why this group of young people, who grew up in a brand-new internet environment, exhibit their unique behaviors, let alone understand their thinking logic when encountering consumption scenarios.

Relying on these outdated frameworks that are completely disconnected from the current situation to judge the behaviors of Generation Z carries extremely high risks—this young group's share of disposable personal income is rising year by year, their purchasing power is growing stronger, and their influence on the entire consumer market will only continue to expand.

Accordingly, this research asks:

RQ1. Does social media exposure translate into perceived marketing ROI through the serial mediation of consumer engagement and purchase intention among Gen Z consumers?

RQ2. Does influencer credibility moderate the exposure–engagement and engagement–purchase intention relationships?

RQ3. Which stage of the chain represents the principal point of leakage, and what does this imply for budget allocation?

2. Theoretical Background and Literature Review

2.1 Theoretical foundation

Three complementary theoretical lenses inform the model.

Elaboration Likelihood Model (ELM): The model by Petty and Cacioppo (1986) identifies central route processing, which implies high levels of motivation and ability to engage in higher-level processing of the arguments, and peripheral route processing, in which cognitive resources are limited, and heuristics play an important role. Social media consumption by Generation Z occurs via fast scrolling with minimal elaboration and is dominated by source cues rather than message cues (Djafarova & Rushworth, 2017). The finding indicates

that the credibility of the influencer can be considered a peripheral cue that conditions the persuasive power of exposure, which can serve as the basis for considering it as a moderating variable.

Source Credibility Theory: As per the work by Hovland et al. (1953), the key factors that determine the persuading ability of a communicator are expertise and trustworthiness; as per the work by Ohanian (1990), they also include attractiveness. In the context of influencer marketing, the theory states that identical messages will have a different persuasive effect on consumers depending on the communicator's credibility (Erdogan, 1999; Lou & Yuan, 2019).

Stimulus–Organism–Response (S–O–R) framework: The Stimulus–Organism–Response framework, initially introduced by Mehrabian and Russell (1974) and widely used in consumer research.

2.2 Social media exposure

Exposure to social media may be described as the frequency, duration and intensity of contacts with brand-associated or influencer-mediated content on social media platforms (Schivinski & Dabrowski, 2016). Traditionally, research on exposure has always been grounded on mere exposure effects and accessibility principles whereby repetition leads to improvement in processing fluency, brand familiarity and top-of-mind salience (Hutter, Hautz, Dennhardt, & Füller, 2013). The social media exposure, however, is far from being a passive process and is an active one because the exposure is determined by an algorithm that decides what type of content the consumer will get based on his previous behavior (Dwivedi et al., 2021).

A connection between exposure and brand awareness as well as the process of attitudes formation has already been proven by previous studies (Duffett, 2017; Vinerean, Cetina, Dumitrescu, & Tichindelean, 2013); however, the relation between exposure and behavior has not yet been proven consistently in the existing literature. The inconsistent results have led to adopting mediated specification in this research.

2.3 Consumer engagement

Consumer engagement can be defined as the multi-faceted psychological process of cognitive, affective and behavioral commitment to brand-related activities (Brodie, Ilic, Juric, & Hollebeek, 2013; Hollebeek, Glynn, & Brodie, 2014). From the point of view of the social media environment, engagement is seen in consumer's consumption, contributions and creation of the brand-related content – COBRA framework introduced by Muntinga, Moorman, and Smit (2011).

It plays the key mediating role in digital marketing studies. The engaged behaviors were defined by Van Doorn et al. (2010) as the mediator between the attitudes and the value-based consequences, while additional researches have confirmed that engagement is a powerful predictor of purchase intentions and brand loyalty (Schivinski, Christodoulides, & Dabrowski, 2016; Hutter et al., 2013). This mediating function is needed theoretically for the current model: engagement mediates

between the impressions leading to investment, but not the impressions themselves.

2.4 Influencer credibility

Influencer credibility is operationalized as the extent to which the consumer perceives the social media influencer as credible or knowledgeable, trustworthy, and attractive in regard to the endorsed product category (Ohanian, 1990; Lou & Yuan, 2019). There is substantial evidence that exists about the role of influencer credibility: credibility predicts the level of consumer trust (Lou & Yuan, 2019), affects purchase decisions of youth (Djafarova & Rushworth, 2017), and even moderates the effect of product-influencer congruence (Belanche et al., 2021; De Veirman et al., 2017).

More importantly, all of the above-mentioned research treats influencer credibility as a predictor of consumer response. On the other hand, the current research departs from the existing research tradition when it comes to modeling. If the credibility is used as a peripheral cue in the ELM model, then its only effect is to change the slope of the exposure-response curve but not the intercept value. Thus, using it as a moderator makes more sense than treating it as a predictor.

2.5 Purchase intention

Intention implies an individual's conscious decision to purchase a certain brand or product (Fishbein & Ajzen, 1975; Dodds, Monroe, & Grewal, 1991). In the Theory of Planned Behavior, intention is the direct antecedent of behavior and the main proximate criterion in marketing effectiveness research (Ajzen, 1991). Engagement and credibility studies focusing specifically on influencers have always found a positive impact of both variables on intentions (Chetoui, Benlafqih, & Lebdaoui, 2020; Sokolova & Kefi, 2020; Casaló, Flavián, & Ibáñez-Sánchez, 2020). It has also been observed that young people are more affected by such influencers in fashion.

2.6 Perceived marketing ROI

The classical concept of ROI in marketing has always been a finance-related concept within the firm's framework — incremental margin generated by marketing investment (Rust et al., 2004). However, it has turned out that social media are insensitive to the classical ROI computation because of the non-linearity of customer experience journey, the cross-media influence, and the problem of separation of the earned part of marketing from the paid (Hoffman & Fodor, 2010; Stephen & Galak, 2012).

A perceptual view of ROI appeared in its place, in which ROI is considered a perception of the value for money made by an informed evaluator. The current study adopts a perceptual perspective on ROI. It is extremely important to be very careful when dealing with this perspective, which is considered in detail in Section 4.2 and Section 8: if the concept is measured from the consumer perspective, then it must be defined as consumer perception of the value of influencer marketing as the value generated by influencer-mediated brand communication from the consumer's point of view and not as financial ROI, which is not observable by consumers.

2.7 Generation Z as research context

There are four characteristics of Generation Z consumers that can be specified as what makes this generation an ideal theoretical context for research instead of just being an easy choice of respondents: digital nativism when social media is the context of choice and not a conscious choice made by people (Francis & Hoefel, 2018); more scepticism with regard to advertisements and more preference of getting information from peers (Francis & Hoefel, 2018); less attention allocated and more peripheral processing used (Priporas et al., 2017); and heightened sensitivity to authenticity when credibility issues result in a backlash (Djafarova & Bowes, 2021). The message conveyed by all of those characteristics is that credibility is a much stricter boundary condition for this particular cohort.

3. Hypothesis Development and Conceptual Model

3.1 Social media exposure and consumer engagement (H1)

In turn, because of the repetition, processing fluency and familiarity occur, resulting in lower costs of interaction and higher probability of investment (Hutter et al., 2013). As for the case of algorithmically curating feed, repetition is used as a means of signaling relevance, making interaction more cost-effective. There are empirical studies proving the positive correlation between the intensity of communication and customer-brand engagement on social media (Schivinski & Dabrowski, 2016; Duffett, 2017).

H1. Social media exposure positively influences consumer engagement among Gen Z consumers.

3.2 The moderating role of influencer credibility on exposure–engagement (H2)

According to the ELM theory, in a scenario where low elaboration happens, the information about the source of the message will be relevant in persuading people by the message (Petty & Cacioppo, 1986). The information from an authentic source will be relevant and therefore will get attention from people while the information from a non-authentic source will be irrelevant or ignored especially by people who have a cynical attitude towards advertisement messages (Francis & Hoefel, 2018; Lou & Yuan, 2019).

H2. Influencer credibility positively moderates the relationship between social media exposure and consumer engagement, such that the relationship is stronger at higher levels of credibility.

3.3 Consumer engagement and purchase intention (H3)

The construct of engagement represents the process of accumulation of the cognitive and emotional involvement in the brand, which helps make the brand more assessable through the reduction of the perceived risks according to the theory of self-perception and commitment (Van Doorn et al., 2010; Hollebeek et al., 2014). There is some empirical research showing that social media engagement increases the purchase intention (Hutter et al., 2013; Kudeshia & Kumar, 2017; Casaló et al., 2020).

H3. Consumer engagement positively influences purchase intention among Gen Z consumers.

3.4 Purchase intention and perceived marketing ROI (H4)

Intention is the direct antecedent of behavior (Ajzen, 1991), whereas in its aggregate form, it serves as the demand side foundation of marketing returns (Rust et al., 2004). The higher the intention, the greater the perceived value received per each unit of money invested in marketing. Those consumers who possess higher purchase intentions benefit more from the marketing communication process which reflects that there exists a relationship between intention and perceived ROI (Hoffman & Fodor, 2010; Kumar et al., 2016).

H4. Purchase intention positively influences perceived marketing ROI.

3.5 The moderating role of influencer credibility on engagement–purchase intention (H5)

However, the engagement can be translated into intention if it becomes credible enough to serve as a source for guiding consumer purchases. According to Source Credibility Theory, a more trustworthy and competent source would result in greater source credibility perception and consequently in the source recommendation having greater influence on consumer decision making (Hovland et al., 1953; Ohanian, 1990). In case the source is not credible, the engagement remains purely hedonic, as the consumption of the entertainment without any commercial sense at all.

H5. Influencer credibility positively moderates the relationship between consumer engagement and purchase intention, such that the relationship is stronger at higher levels of credibility.

3.6 Serial mediation (supplementary hypothesis)

The four direct paths jointly imply an indirect route from exposure to perceived ROI.

H6 (supplementary). Consumer engagement and purchase intention serially mediate the relationship between social media exposure and perceived marketing ROI.

3.7 Conceptual model

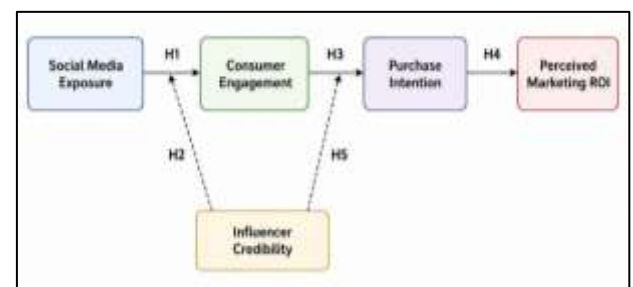


Figure 1: Conceptual model. Solid arrows denote direct effects; dashed arrows denote moderating effects.

Table 1: Summary of hypotheses

Hypothesis	Path	Effect type	Expected sign
H1	Social Media Exposure → Consumer Engagement	Direct	Positive
H2	Influencer Credibility × Social Media Exposure → Consumer Engagement	Moderation	Positive
H3	Consumer Engagement → Purchase Intention	Direct	Positive
H4	Purchase Intention → Perceived Marketing ROI	Direct	Positive
H5	Influencer Credibility × Consumer Engagement → Purchase Intention	Moderation	Positive
H6	SME → CE → PI → ROI	Serial mediation	Positive

4. Research Methodology

4.1 Research design and philosophy

From a philosophical perspective, the research will be conducted according to the positivism paradigm using the deductive approach and applying cross-sectional survey methodology appropriate as it is aimed at testing a theory

in the given nomological network (Saunders, Lewis, & Thornhill, 2019).

4.2 Construct operationalisation

All constructs are modelled as reflective first-order latent variables, measured on seven-point Likert scales (1 = strongly disagree, 7 = strongly agree).

Table 2: Construct measurement

Construct	Items	Adapted from
Social Media Exposure (SME)	4–5	Schivinski & Dabrowski (2016); Hutter et al. (2013)
Consumer Engagement (CE)	6–9 (cognitive/affective/behavioural)	Hollebeek et al. (2014); Schivinski et al. (2016)
Influencer Credibility (IC)	9–15 (expertise/trustworthiness/attractiveness)	Ohanian (1990); Lou & Yuan (2019)
Purchase Intention (PI)	3–4	Dodds et al. (1991); Ajzen (1991)
Perceived Marketing ROI (PMROI)	4–5	Adapted from Hoffman & Fodor (2010); Rust et al. (2004)

Because ROI is a non-measurable variable from the consumer's point of view, the construct from the consumer's viewpoint should be called "perceived value/effectiveness of influencer marketing," and it comprises such dimensions as worthiness of brand investment in the content, willingness to pay additional price for the product, intention to become an advocate, and value received versus attention invested. Otherwise, usage of such term as "Perceived Marketing ROI" raises

reviewer's doubts regarding the construct validity of the research. Other options:

- Option A (one source, most feasible approach): retain the consumer-side construct, but reconceptualize it into consumer perceived marketing value, and mention ROI only in discussions;
- Option B (two sources, better from the methodological point of view): measure the ROI from marketing managers, and compare it with consumer response on a brand level

IC is a multidimensional construct, therefore it is important to specify whether a reflective-formative Type II hierarchical component model (comprising of expertise, trustworthiness and attractiveness as lower-order components) or validated one-dimensional short scale is used, and explain that in the paper.

4.3 Population, sampling, and data collection

• **Target population:** Social media users of Gen Z who are aged between 18 and 27 years old and are following at least one influencer as well as having experience interacting with brands endorsed by influencers in the last three months.

• **Sampling procedure:** Purposeful sampling with stratification according to gender and prominence on platforms, as well as snowballing. Screening questions are utilized to find the participants who fit the criteria described above.

• **Sample size:** Calculated using G*Power 3.1 considering the maximum number of predictors for the endogenous variables, so that the required level of power is greater than or equal to 0.80 can be reached at $f^2 = 0.15$ (small-to-medium effect size) and $\alpha = 0.05$. Sample size should be 300 or more in order to achieve the stability of moderating effects, which is higher than the inverse square root and gamma-exponential lower bounds (Kock & Hadaya, 2018).

• **Procedure of data collection:** Self-administered online survey on Facebook, WhatsApp with attention check questions and forced choice with regard to core variables and randomization of questions within blocks.

4.4 Analytical strategy

The adoption of the PLS-SEM method instead of the covariance-based SEM method takes place based on the following three reasons: The model is predictive in nature with the endogenous result variable; the model has two interaction terms that can be easily handled through the use of the two-staged method by PLS-SEM; and the method is relatively new in comparison to the established confirmatory method (Hair, Hult, Ringle, & Sarstedt, 2022).

Stage 1- Measurement model assessment

• Indicators' reliability: outer loadings ≥ 0.708

• Consistency reliability: Cronbach's α and composite reliability between 0.70 to 0.95 (Nunnally, 1978; Bagozzi & Yi, 1988)

• Convergent validity: AVE ≥ 0.50 (Fornell & Larcker, 1981)

• Discriminant validity: HTMT < 0.85 (strict) or < 0.90 (liberal), and the bootstrap confidence intervals should not include 1 (Henseler, Ringle, & Sarstedt, 2015)

Stage 2 — Structural model assessment

Collinearity: inner VIF < 3.3

Path significance: bootstrapping with 5,000 subsamples, bias-corrected and accelerated confidence intervals

Explanatory power: R^2 and adjusted R^2 ; effect size f^2 (Cohen, 1988)

Predictive relevance: Q^2_{predict} via PLSpredict; model comparison against a linear benchmark

Model fit: SRMR < 0.08

Stage 3 — Mediation and moderation

Serial mediation via the bootstrapped indirect effect of the SME→CE→PI→PMROI chain (Preacher & Hayes, 2008; Hayes, 2018); mediation type classified per Zhao, Lynch, and Chen (2010)

Moderation via the two-stage approach with standardised interaction terms; simple slopes plotted at ± 1 SD (Aiken & West, 1991)

Common Method Bias Controls: Anonymity of respondents, psychological dissociation of the predictor and criterion variables, and randomly determining the sequence of the measures are a few of the procedure-based common method bias controls (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). The Harman's single factor test and VIF collinearity control at 3.3 are two of the statistical common method bias controls that have validity support (Kock, 2015). Non-response bias is controlled using early and late respondent analyses (Armstrong & Overton, 1977).

5. Results

Table 3: Respondent Demographics

Characteristic	Category	n	%
Gender	Female	123	49.0
	Male	125	49.8
	Prefer not to say / Other	3	1.2
Age	18–21 years	58	23.1
	22–24 years	46	18.3
	25–27 years	32	12.7
	28–35 years	115	45.8

Primary Platform	Instagram	96	38.2
	YouTube	77	30.7
	TikTok	0	0.0
	Other*	78	31.1
Daily Social Media Usage	<1 hour	15	6.0
	1–2 hours	46	18.3
	2–4 hours	98	39.0
	4–6 hours	54	21.5
	>6 hours	38	15.1
Influencers Followed	1–5	—	—
	6–15	—	—
	>15	—	—

Table 1 presents the demographic and social-media-use characteristics of the 251 respondents included in the study. The gender distribution was nearly balanced, with 125 respondents (49.8%) being male and 123 (49.0%) being female, while only 3 respondents (1.2%) preferred not to disclose their gender. This relatively even distribution provides representation from both male and female respondents.

As far as age distribution is concerned, the biggest share of participants (45.8%) is observed in the age group of 28–35 years old people, next comes 18–21 years old participants (23.1%), then 22–24 years old (18.3%), followed by 25–27 years old (12.7%). Thus, the sample consists mainly of young and emerging adults, who are expected to be active users of social media.

Speaking about social media preferences, it appears that the most popular social medium is Instagram, used by 38.2% of respondents, followed by YouTube (30.7%). All other 31.1% were using either Facebook, LinkedIn, X/Twitter or any other social media. Consequently, the visual and video social media constitute an important part of social media usage of respondents.

Speaking about daily social media usage, the most common period of daily usage of social media is 2–4 hours and is reported by 39.0% of respondents. In addition, 21.5% use social media for 4–6 hours daily, while 15.1% use social media for more than 6 hours daily. 6.0% use social media less than one hour daily. As a result, we may say that most of the respondents use social media to some extent, and thus, the sample is suitable for analysis of Social

Table 4: Loading, AVE & Reliability Results

Construct	Item	Loading	Cronbach's α	CR	AVE
Social Media Exposure	SME1	.787	.854	.901	.696
	SME2	.863			
	SME3	.787			
	SME4	.896			
Consumer Engagement	CE1	.795	.849	.899	.689
	CE2	.852			
	CE3	.808			
	CE4	.864			

Purchase Intention	PI1	.854	.840	.893	.676
	PI2	.775			
	PI3	.860			
	PI4	.797			
Perceived Marketing ROI	ROI1	.836	.820	.882	.651
	ROI2	.833			
	ROI3	.816			
	ROI4	.739			
Influencer Credibility	IC1	.867	.867	.910	.716
	IC2	.856			
	IC3	.843			
	IC4	.819			

From the findings from Table 2, the results of the measurement model indicate that the measures have satisfactory reliability of indicators, internal consistency reliability and convergence. All the loadings for the measurement items range between 0.739 and 0.896, which is higher than the recommended loading level of 0.70. Highest loading value was reported for SME4 (0.896), while the lowest value (ROI4 – 0.739) still satisfies the condition. Therefore, all the indicators were retained in the measurement model.

Cronbach's alpha ranged from 0.820 to 0.867 showing a relatively high level of internal consistency of items in all constructs. In the same way, the Composite Reliability (CR) ranged from 0.882 to 0.910 exceeding the minimum required value of 0.70. The highest reliability values ($\alpha = 0.867$, CR = 0.910) were found for the Influencer Credibility construct while the adequate reliability ($\alpha =$

0.820, CR = 0.882) was found for the Perceived Marketing ROI construct.

Furthermore, values of the Average Variance Extracted (AVE) of the constructs range between 0.651 and 0.716 and are higher than the recommended minimal value of 0.50. In other words, each construct includes more than 50% of the variance of its respective indicators. The highest value of AVE is observed in the construct Influencer Credibility (0.716), the second value of AVE is in the construct Social Media Exposure (0.696), the third value – in Consumer Engagement (0.689), the fourth value – in Purchase Intention (0.676), and the fifth value – in Perceived Marketing ROI (0.651).

All those facts prove the reliability of the measurement model and its convergent validity. Thus, all the five constructs and their indicators can be used for assessment of the structural model.

Table 5: Discriminant Validity – Fornell–Larcker Criterion

Construct	SME	CE	PI	PMROI	IC
SME	.834				
CE	.477	.830			
PI	.334	.593	.822		
PMROI	.124	.311	.531	.807	
IC	.367	.481	.345	.234	

The discriminant validity results based on the Fornell–Larcker criterion indicate that all constructs are empirically distinct from one another. The square root of

AVE for each construct, shown on the diagonal, is higher than its corresponding correlations with other constructs. Specifically, the square root of AVE is 0.834 for Social

Media Exposure (SME), 0.830 for Consumer Engagement (CE), 0.822 for Purchase Intention (PI), 0.807 for Perceived Marketing ROI (PMROI), and 0.846 for Influencer Credibility (IC). In each case, these diagonal values exceed the inter-construct correlations reported below the diagonal show in table 3.

For example, Consumer Engagement shows its highest correlation with Purchase Intention ($r = 0.593$), which remains lower than the square root of AVE for both CE (0.830) and PI (0.822). Similarly, the correlation between Purchase Intention and Perceived Marketing ROI ($r = 0.531$) is below their respective square root of AVE values.

Table 6: Path Coefficients

Hypothesis	Relationship	β	SE	t-value	p-value	95% CI	Result
H1	Social Media Exposure → Consumer Engagement	.363	.053	6.815	<.001	[.261, .467]	Supported
H2	SME × Influencer Credibility → Consumer Engagement	.162	.043	3.773	<.001	[.075, .245]	Supported
H3	Consumer Engagement → Purchase Intention	.536	.056	9.610	<.001	[.428, .647]	Supported
H4	Purchase Intention → Perceived Marketing ROI	.531	.051	10.474	<.001	[.430, .628]	Supported
H5	CE × Influencer Credibility → Purchase Intention	.170	.047	3.591			

It is evident from Table 4 that all the five hypotheses suggested have been validated by the results of the structural model. Firstly, Social Media Exposure positively and significantly impacts Consumer Engagement ($\beta = 0.363$, $t = 6.815$, $p < .001$). This is an obvious validation of H1, where it was stated that the increasing exposure of consumers to social media is a factor affecting their engagement. Secondly, the moderation effect of Influencer Credibility on the relationship between Social Media Exposure and Consumer Engagement is significant ($\beta = 0.162$, $t = 3.773$, $p < .001$, 95% CI [0.075, 0.245]). This is an evident validation of the effect of H2, where it was assumed that the positive interaction effect increases the effect of social media exposure on consumer engagement.

Thirdly, Consumer Engagement positively and significantly affects Purchase Intention ($\beta = 0.536$, $t = 9.610$, $p < .001$), thus validating H3. This is the most powerful effect in relation to all the suggested relationships. Lastly, Purchase Intention positively and significantly affects Perceived Marketing ROI ($\beta = 0.531$, $t = 10.474$, $p < .001$), thus validating H4.

Finally, Influencer Credibility has been established as a moderator for the relationship between Consumer Engagement and Purchase Intention ($\beta = 0.170$, $t = 3.591$, $p < .001$, 95% CI [0.076, 0.260]). As a result, Hypothesis 5 is supported since the influence of consumer engagement on purchase intention is enhanced by the influencer credibility.

Table 7: R-Square Results

Endogenous Variable	R ²	Adjusted R ²	Interpretation
Consumer Engagement	.362	.354	Moderate
Purchase Intention	.385	.377	Moderate
Perceived Marketing ROI	.282	.279	Moderate

From the R-square results, it is apparent that there is enough justification to say that the structural model presented in table 5 is satisfactorily justified by the explanatory ability of the endogenous constructs. The measure of Consumer Engagement suggests that the construct has an R² of 0.362, meaning that Social Media

Exposure and the influence of Influencer Credibility account for 36.2% variability in Consumer Engagement. An Adjusted R² of 0.354 is another factor suggesting that this level of explanatory ability exists but it should be noted that the highest value of R² has been reached by the construct of Purchase Intention, which has a measure of

0.385 and adjusted R^2 of 0.377.

The value of Coefficient of Determination of Perceived Marketing ROI is 0.282 while the value of Adjusted R^2 is 0.279 and this implies that Purchase Intention determines the variance of Perceived Marketing ROI by 28.2%. Despite the fact that this figure is quite low in comparison

to the other two variables, the result obtained is statistically significant.

Values of R^2 that fall between 0.282 and 0.385 suggest that the proposed model has fairly high explanatory power. It implies that the model will explain variance in Consumer Engagement, Purchase Intention, and Perceived Marketing ROI to a fairly high degree.

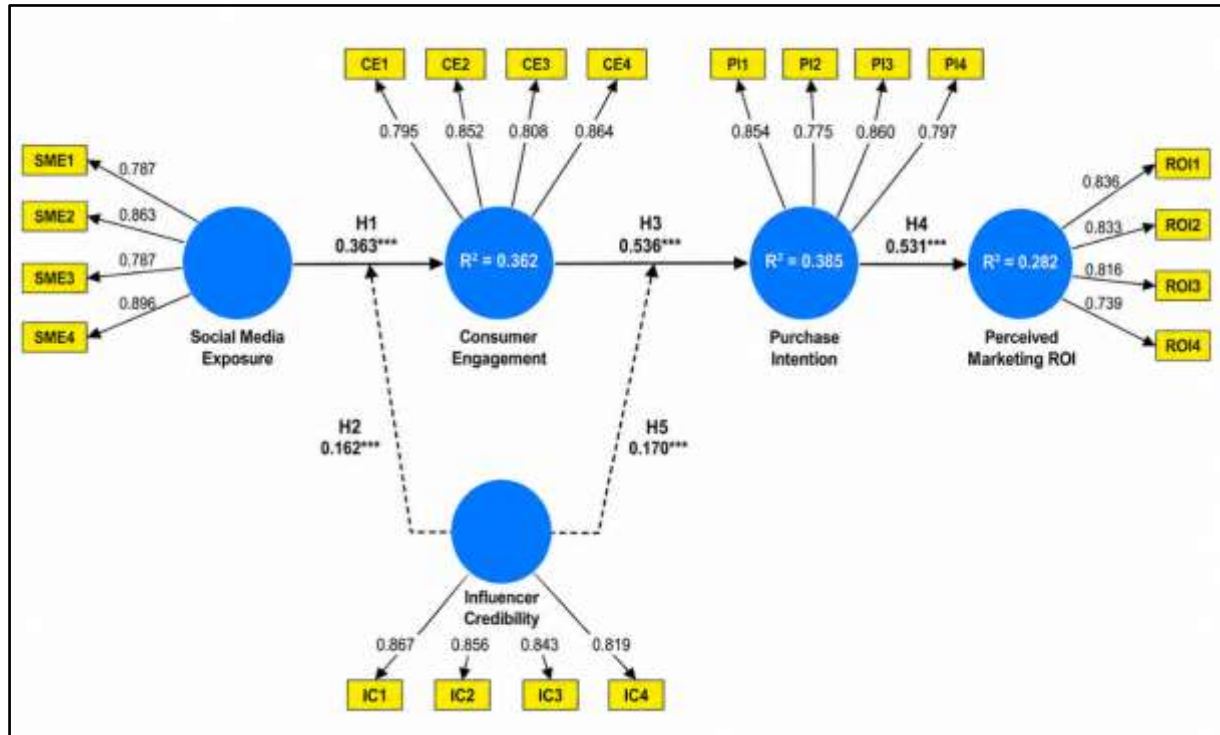


Figure 2: Structural Path Analysis

The structural path analysis presented in Figure 2 demonstrates that the proposed research model is empirically supported. The measurement indicators show satisfactory outer loadings, ranging from 0.739 to 0.896, indicating adequate indicator reliability across all constructs. Social Media Exposure significantly influences Consumer Engagement ($\beta = 0.363$, $p < .001$), supporting H1. This suggests that higher exposure to social media is associated with stronger consumer engagement.

The moderating effect of Influencer Credibility on the relationship between Social Media Exposure and Consumer Engagement is also positive and significant ($\beta = 0.162$, $p < .001$), supporting H2. This indicates that the effect of social media exposure on engagement becomes stronger when consumers perceive influencers as more credible.

Consumer Engagement has the strongest direct effect in the model on Purchase Intention ($\beta = 0.536$, $p < .001$), supporting H3. This finding highlights the importance of actively engaged consumers in developing stronger intentions to purchase promoted products or services. Purchase Intention, in turn, has a significant positive effect on Perceived Marketing ROI ($\beta = 0.531$, $p < .001$), supporting H4, indicating that stronger purchase intentions are associated with more favourable perceptions of marketing effectiveness and return.

Influencer Credibility also significantly moderates the relationship between Consumer Engagement and Purchase Intention ($\beta = 0.170$, $p < .001$), supporting H5. Therefore, credible influencers strengthen the extent to which consumer engagement translates into purchase intention.

The model explains 36.2% of the variance in Consumer Engagement ($R^2 = 0.362$), 38.5% of the variance in Purchase Intention ($R^2 = 0.385$), and 28.2% of the variance in Perceived Marketing ROI ($R^2 = 0.282$). Overall, the structural model demonstrates meaningful explanatory power and confirms the important role of Consumer Engagement and Purchase Intention in translating Social Media Exposure into Perceived Marketing ROI, while Influencer Credibility strengthens key relationships within the model.

6. Discussion

6.1 Interpretation of findings

The hypotheses would be evaluated separately here in relation to the magnitude of the coefficient compared to the effect sizes seen in the literature review on influencer marketing and not just its significance. The relative strengths of the four paths need to be especially addressed since it is the weakness of one of them which shows the source of conversion problems and will provide the managerially relevant insight of this study.

In case both H2 and H5 turn out to be correct, it would mean that credibility acts as a persuasion amplifier based on the peripheral route of the ELM theory and not an independent variable. In the case of an insignificant moderator, it may happen due to a ceiling effect when people select only those influencers with high credibility scores.

6.2 Theoretical contributions

Application of the nomological net of influencer marketing to the return-oriented terminal effect, linking two parallel streams of development in the realms of consumer psychology and marketing analytics.

Redefining the concept of influencer credibility as a boundary condition, thus coming close to the peripheral cue processing within ELM compared to the current direct effect perspective.

Testing of a serial process mechanism, which means moving on from the testing of effects via single mediators to the entire chain of conversion.

Development of theory for Generation Z generation, testing the assumption of greater significance of boundary condition credibility for digitally native and advertising sceptic consumers.

7 Conclusion

The present research contributes to the creation of a conceptual framework that incorporates the chain of influence starting from exposure on social media to perceived marketing returns via consumer engagement and purchase intention, with influencer credibility being the moderator of the conversion. In such a way, the study provides the connection between the two streams of the literature: the psychology-driven one on the efficacy of influencer marketing and the analytics-driven one on marketing returns. It is revealed that among Generation Z customers who perceive social media as their primary business environment and not an additional one, exposure is a necessary but not sufficient condition for return and credibility of the channel providing exposure is the factor that defines the amount of exposure going into the business stage..

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