

THE IMPACT OF CELEBRITY ENDORSEMENTS IN DIGITAL ADVERTISING ON CONSUMER PURCHASE BEHAVIOUR: EVIDENCE FROM INSTAGRAM USERS IN PAKISTAN

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Abstract

This study investigates the impact of celebrity endorsements in digital advertising on consumer purchase behavior, with a specific emphasis on Instagram users in Pakistan. Given the growing centrality of social media platforms such as Instagram within contemporary marketing strategies, understanding the role of celebrity endorsements in shaping consumer decision-making processes has become increasingly critical for businesses aiming to enhance their digital engagement. The research examines the relationship between celebrity endorsements and consumer purchase behavior through three key dimensions: celebrity attractiveness, reliability, and expertise. Employing a quantitative survey methodology, data were collected from a sample of 300 Pakistani university students. The Celebrity Endorsement Scale and the Purchase Behavior Scale, both adapted from validated instruments in prior studies, were utilized to operationalize the independent and dependent variables, respectively. The findings reveal that celebrity endorsements exert a significant and positive effect on consumer purchase behavior, offering important implications for organizations seeking to optimize their digital marketing efforts in an increasingly competitive environment.

Keywords: Strategic Management, Celebrity Endorsement, Digital Advertising, Consumer Purchase Behaviour
JEL Classification: M10, M30, M37

DİJİTAL REKLAMCILIKTA ÜNLÜ ONAYININ TÜKETİCİ SATIN ALMA DAVRANIŞI ÜZERİNDEKİ ETKİSİ: PAKİSTAN'DAKİ INSTAGRAM KULLANICILARINDAN KANITLAR

Öz

Bu çalışma, dijital reklamcılıkta ünlü onaylarının tüketici satın alma davranışı üzerindeki etkisini, özellikle Pakistan'daki Instagram kullanıcıları bağlamında incelemektedir. Instagram gibi sosyal medya platformlarının günümüz pazarlama stratejilerinde giderek daha merkezi bir rol üstlenmesiyle birlikte, ünlü onaylarının tüketici karar verme süreçlerindeki etkisini anlamak, dijital etkileşimlerini güçlendirmek isteyen işletmeler için kritik bir önem taşımaktadır. Araştırmada, ünlü onaylarının tüketici satın alma davranışı üzerindeki etkisi, ünlülerin çekicilik, güvenilirlik ve uzmanlık olmak üzere üç temel boyut üzerinden analiz edilmiştir. Nicel araştırma yöntemi benimsenerek, 300 Pakistanlı üniversite öğrencisinden veri toplanmıştır. Bağımsız ve bağımlı değişkenleri ölçmek için önceki çalışmalardan uyarlanmış Ünlü Onay Ölçeği ile Satın Alma Davranışı Ölçeği kullanılmıştır. Bulgular, ünlü onaylarının tüketici satın alma davranışı üzerinde anlamlı ve olumlu bir etkisi olduğunu ortaya koyarak, işletmelerin dijital pazarlama stratejilerini giderek daha rekabetçi hale gelen bir ortamda optimize etmelerine yönelik önemli çıkarımlar sunmaktadır.

Anahtar kelimeler: Stratejik Yönetim, Ünlü Onay, Dijital Reklamcılık, Tüketici Satın Alma Davranışı
JEL Sınıflaması: M10, M30, M37

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1. Introduction

With the rapid advancement of technology, traditional advertising methods have increasingly been supplanted by more modern approaches (Kim, 2021). To maintain market presence and gain a competitive edge, businesses have adopted innovative advertising tools rather than relying on conventional techniques (Taylor and Carlson, 2021). Organizations that strategically align their advertising efforts with these advancements often achieve significant success through effective implementation (Lee and Cho, 2019).

Indeed in the contemporary digital era, marked by the extensive use of mobile devices and the internet, there is a pressing need to innovate traditional advertising methods. Brands recognize the high frequency of social media usage among their target consumers and are increasingly focused on fostering long-term engagement with both existing and potential customers through these platforms (Taylor and Carlson, 2021). As digital platforms such as Google, Facebook, YouTube, and Netflix become central to consumers' lives, concerns about the future efficacy of traditional advertising methods are growing. Concurrently, traditional mediums, including television commercials, are perceived to have diminished in popularity, akin to other 20th century technologies such as cassette players, DVD players, and radios (Murphy and Tan, 2003).

Digitalization and emerging communication technologies have reshaped social media, allowing users to share content that reflects their thoughts and emotions (Kim, 2021). Beyond serving as platforms for entertainment, education, shopping, and communication, social media provides popular online tools that facilitate consumer interactions, brand information retrieval, and the sharing of experiences and feedback (Windels and Stuhlfaut, 2018). These tools, which support two-way communication and enhance consumer engagement through content creation, are strategically significant for brands. They assist in identifying target audiences and directly reaching consumers, thereby serving as crucial channels for communication and advertising (Murphy and Tan, 2003).

In today's competitive landscape, the significance of consumer purchasing intentions toward brands on their final purchasing decisions is increasingly evident. With the rapid expansion of internet access and the growing popularity of social media platforms like YouTube, Instagram, TikTok, Facebook, and Twitter, there has been a significant rise in content consumption compared to previous periods (Windels and Stuhlfaut, 2018). Consumers' continuous connectivity to the internet and their substantial engagement on social media platforms have

not gone unnoticed by brands seeking to reach their target audiences. Traditional media outlets like television, newspapers, and radio, which offer one-way communication, have gradually lost their dominance in the face of the internet's capacity for real-time interaction (Hamilton, 2017).

In light of this context, the objective of the current study was to examine the effect of celebrity endorsement in digital advertising on consumer purchase behavior. In this sense, first it aimed to provide a thorough and critical analysis of the rapidly evolving literature on this topic. Second, by synthesizing and interpreting the findings from existing studies, the present study sought to identify and highlight research gaps that could inform future investigations.

2. Digital Advertising

The initial traces of digital transformation in advertisement can be traced back to the first message sent over the internet in 1969. This historical progress saw the advent of email in 1971, followed by the establishment of the first website in the 1980s (Hamilton, 2017). The late 1990s marked a significant increase in digital investments and the proliferation of websites, alongside the emergence of search engines such as Google, eBay, and Yahoo. With the advent of the 2000s, advertising began to evolve, incorporating greater levels of interaction, personalization, and participation (Lombard and Snyder-Duch, 2017).

In the past 15 years, the evolution of digital advertising has been characterized by three major trends: i) search engines, ii) social media, and iii) mobile applications. Innovations such as the launch of the first social media platforms, Friendster and MySpace, the introduction of Apple's iTunes Store, and the transformative impact of Skype on video calls have contributed to the emergence of enriched media applications, including advergames, within digital advertising (Thorson et al., 2017). The introduction of Google AdWords in 2000, which displays advertisements in Google search results, has enabled more effective and measurable advertising outcomes. Furthermore, the broad adoption of social media platforms, such as Facebook, Twitter, Instagram, and the video-sharing site YouTube from 2004 onwards, has established these channels as significant new avenues for advertising (Truong and Simmons, 2010).

The advancement of social media and mobile advertising are recognized as pivotal factors shaping the landscape of digital advertising (Thorson et al., 2017). Digital advertising facilitates real-time, direct engagement between marketers and individual consumers, overcoming spatial and technical limitations. A key advantage of digital advertising lies in its ability to leverage mobile technologies, such as SIM smart cards, to create detailed consumer profiles and deliver

customized applications. This capability has significantly enhanced the personalization and targeting of mobile advertising efforts (Truong and Simmons, 2010).

Digital advertising applications, which began with Short Message Service (SMS) in 1992, has continuously evolved through various technologies such as Enhanced Messaging Service (EMS), Multimedia Messaging Service (MMS), Interactive Voice Response (IVR), Video IVR, location-based messaging, and QR code usage. The advent of the iPhone in 2007 and the proliferation of smartphones have further expanded these applications (Hopkins and Turner, 2012). With the advent of internet access on smartphones and tablets, there has been a significant rise in the generation of personal information, images, videos, profiles, and content on social networking sites. This evolving landscape incorporates video conferencing, location-based real-time coupons, and mobile application features utilizing location sensors and cameras for advertising purposes (Berman, 2012). While digital advertising provides dynamic platforms for engaging with consumers in diverse and relevant ways, the core focus should be on understanding consumer behavior and leveraging technology to enhance participation and information dissemination effectively (Hopkins and Turner, 2012).

Contemporary digital advertising encompasses several fundamental types: i) internet-based advertisements, which include website ads, search engine ads, search engine optimization (SEO), remarketing ads, and email marketing, ii) mobile device advertisements, covering SMS, MMS, QR codes, Interactive Voice Response (IVR), and location-based ads, iii) game-based advertisements, which involve entertainment and in-game ads, and iv) social media advertisements, including those on social networks, social bookmarking sites, file-sharing platforms, blogs, microblogs, and forums (Purusothaman, 2017).

Conversely, digital advertising appeals refer to the techniques and tactics that marketers employ to persuade consumers into taking a certain action or adopting a specific viewpoint. The selection of such appeals is influenced by both the nature of the product or service being advertised and the demographic profile of the target audience. For marketers to create impactful advertisements, they must thoroughly understand their audience's needs and preferences, ensuring the message resonates effectively and drives the intended response (Varnali, 2013).

Digital advertising appeals encompass several types, including: i) emotional appeal, which aims to elicit emotional responses ii) rational appeal, which focuses on logical and factual information (Kotler and Armstrong, 2010), iii) humor appeal, which uses humor to engage consumers, iv) social proof appeal, which leverages testimonials and endorsements, v) value

appeal, which emphasizes the benefits and cost-effectiveness, vi) scarcity appeal, which creates a sense of urgency (Mukherjee and Lee, 2016), and vii) authority appeal, which relies on credible experts or authoritative figures (Belch and Belch, 2004).

3. Celebrity Endorsement

An endorser is a person who gains public recognition and leverages their popularity to promote a consumer product by featuring in advertisements (McCracken, 1989). In the context of advertising, celebrity endorsement involves using a well-known public figure to promote a product or service. Celebrities, acting as impartial third-party endorsers, utilize platforms such as blogs, tweets, and various social media channels to shape audience perceptions and influence public opinion. While the integration of social media into marketing literature is relatively recent, the concept of influencer marketing has a much longer history. Influencer marketing, which gained momentum with the rise of internet usage, has roots extending beyond social media. Historically, brands have engaged with influential figures to communicate their messages through credible sources (Casalóa et al., 2020).

Common forms of celebrity endorsement in advertising include: i) television commercials where celebrities endorse or use a product or service, such as a famous athlete promoting a sports drink in a TV ad; ii) print advertisements where celebrities are featured in magazines or newspapers, like a well-known musician endorsing a fashion brand by appearing in a fashion magazine; iii) social media influencers where individuals with large followings on platforms like Instagram or TikTok promote products or services through their social media channels; iv) event appearances where celebrities participate in promotional activities at events, such as a prominent actor attending a charity event sponsored by a clothing brand, thereby endorsing the brand through their presence (Erdogan et al., 2001).

The initial phase of influencer marketing is characterized by partnerships between companies and experts or celebrities to promote products. In this period, influencers included well-known figures such as rock stars featured in Coca-Cola commercials or nutritionists endorsing specific yogurt brands. Consumers tend to perceive these professionals and celebrities as credible sources due to their respect, trust, and admiration for them (Ohanian, 1991). In the initial stages of influencer communication, the interaction was primarily unidirectional and restricted to conventional mainstream media platforms. Direct engagement with celebrities was largely out of reach for the public, as their public appearances and interactions were meticulously managed by public relations teams. Unlike today's social media influencers, these early celebrities did

not share glimpses of their personal lives, such as daily routines or vacations, as there were no suitable media channels for such intimate content (Chung and Cho, 2017).

Word of mouth (WOM) communication is a critical factor influencing consumer preferences, and the core principle of influencer marketing is rooted in WOM. The transition from traditional media to the internet has significantly accelerated the dissemination of ideas, experiences, and recommendations, enabling users to share WOM communications more rapidly and easily than ever before. This shift gave rise to the second wave of influencer marketing, characterized by ordinary consumers who utilized the internet to offer product recommendations and share their consumption experiences, thereby generating electronic word of mouth (eWOM) (Nadanyiova and Sujanska, 2023). In contrast to today's professional influencers, those in the second wave aimed to share information and enjoy the popularity of their blogs to assist others, rather than pursuing influencing as a profession. The impact and eWOM created during this period were organic, with no financial compensation or interference from brands. Consequently, the popularity achieved on social media did not yet translate into income, and blogging remained an amateur pursuit rather than a professional career (Ngo et al., 2024).

The third wave of influencer marketing emerged when brands recognized the substantial impact of branded content on the web and the vast potential of social media for marketing communications. This phase, called the "Linear Marketing Impact Model," is referred to as the third wave in influencer marketing (Nadanyiova and Sujanska, 2023). During this period, the relationship between brands, influencers, and consumers is characterized as linear. In this model, marketers convey their marketing messages to opinion leaders or influencers, who are then compensated or gifted to disseminate these messages to their audience. The communication is unidirectional, with messages traveling from the brand to the influencer and then to the audience, without feedback from the audience reaching the brand. Initially, brands provided products to bloggers for review, but as influencers transitioned into professional content creators, monetary compensation increasingly replaced product gifts. Consequently, influencers became a predominant channel for marketing communications (Ngo et al., 2024).

Celebrity endorsements can be a powerful strategy for brands aiming to distinguish themselves in a saturated market and gain a competitive edge. For maximum effectiveness, it is crucial for brands to select celebrities whose values and public image align with their own brand identity and target audience. Additionally, it is essential to ensure that any claims made in advertisements are accurate and not misleading (Centeno and Wang, 2017). While the primary aim of celebrity endorsements is to boost sales, research indicates that they also positively affect

various marketing outcomes, including brand awareness, advertisement attitudes, brand recall, and loyalty. Studies by Koernig and Boyd (2009) and Silvera and Austad (2004) show that celebrity endorsements capture more attention and enhance attitudes towards advertisements. Additionally, celebrity endorsements contribute to favorable brand perceptions and increased purchase intentions as well as heightened brand loyalty (Lafferty et al., 2002).

While celebrity endorsements can boost brand awareness and generate excitement, they also come with potential drawbacks. Brands must carefully weigh these risks against the benefits. It is essential to make sure that the selected celebrity reflects the brand's values and resonates with the target audience, and that the advertising remains truthful and non-deceptive (Centeno and Wang, 2017). Choosing a celebrity with a strong public image for brand endorsements might seem like a reliable strategy to build a positive brand image, but it doesn't always yield the expected results. If the celebrity's popularity wanes or they become embroiled in a scandal, the brand can suffer. The impact of such negative associations depends on consumer identification with the celebrity and brand loyalty, with a celebrity's public acknowledgment of mistakes potentially mitigating damage (Um, 2013). Additionally, when celebrities overshadow the product or endorse multiple brands, their effectiveness diminishes. Excessive celebrity exposure can erode their perceived value and authenticity. Despite these risks, celebrity endorsements remain popular due to their ability to capture attention and enhance brand recall. However, if the celebrity or brand faces negative publicity, it can adversely affect consumer perceptions of both. Therefore, while celebrities can help differentiate brands, careful consideration is needed to manage the potential drawbacks (Silvera and Austad, 2004).

4. Consumer Purchase Behaviour

Consumer purchase behavior encompasses the processes and actions consumers engage in when deciding what to buy. For businesses to effectively market their products and influence customer decisions, understanding these purchasing patterns is essential (Pride and Ferrell, 2000). This facet of marketing seeks to examine how individuals choose, purchase, utilize, and dispose of products, while also identifying factors such as prior experiences, preferences, pricing, and branding that influence their decisions (Kotler and Armstrong, 2010).

Consumer purchase behavior is shaped by various factors, including personal factors such as age, gender, income, personality, and lifestyle (Rani, 2014); psychological factors like perception, motivation, attitudes, and beliefs (Ramya and Ali, 2016); and social factors, which encompass culture, reference groups, family, social class, and opinion leaders (Kumar, 2016).

Conversely, the consumer purchase decision process encompasses the various stages that individuals navigate when making a purchase, shaped by elements such as personal beliefs, social and cultural factors, and marketing communications. For marketers, understanding this process is essential for crafting strategies that effectively target each stage of decision-making. It's important to recognize that this process isn't always linear; consumers might bypass or revisit certain stages depending on the context, and individual approaches may vary according to personal needs and experiences (Stankevich, 2017). Businesses can utilize this understanding by customizing their marketing strategies, employing targeted advertising, and offering incentives like discounts or samples to sway consumer behavior (Belch and Belch, 2004).

5. Method

5.1. Purpose and Hypotheses Development

This study, aims to explore the impact of celebrity characteristics on Instagram, within the context of digital marketing, on generating purchase intentions toward the promoted brand. Furthermore, the study seeks to contribute to the field by providing insights that could help advertising decision-makers enhance the effectiveness of their campaigns and, consequently, increase advertising persuasiveness in the context of the Pakistani market.

Celebrities possess a unique ability to persuade and mobilize their followers by exerting significant influence over them. This persuasive power is often attributed to certain characteristics that celebrities exhibit, which enhance their effectiveness in influencing audiences. Within the marketing communication literature, three key characteristics are widely recognized as contributing to the success of celebrities as message sources, or "senders." These characteristics align with the dimensions of source credibility, as proposed by Ohanian (1991), and include: i) attractiveness, ii) reliability, and iii) expertise.

Attractiveness encompasses a broad range of meanings that cannot be confined solely to physical appearance. Various factors contribute to an individual's or object's attractiveness, which may vary depending on situational contexts. Elements such as tone of voice, facial expressions, gestures, and overall demeanor can significantly enhance attractiveness. Conversely, if a person fails to engage in a logical and rational dialogue, the appeal of the source's attractiveness becomes irrelevant. While attractiveness may initially captivate the senses, its impact diminishes rapidly if it fails to resonate with the hearts and minds of the audience (Erdogan, 1999).

Reliability pertains to the level of trust and credibility a person establishes when making assertions regarding a product. Traditionally, the credibility of information is directly linked to the perceived reliability of its source. According to Sternthal et al. (2018), who emphasize the importance of the source's credibility, reliability is rooted in both trustworthiness and expertise. They contend that reliability signifies the extent to which the speaker's assertions are perceived as valid. Therefore, reliability is closely associated with the perceived honesty and integrity of the speaker.

Expertise is defined as the degree to which an individual is regarded as having pertinent knowledge, skills, and understanding within a specific field. The level of expertise attributed to a person can significantly impact their ability to persuade consumers to purchase a product they endorse (Scheinbaum and Wang, 2018). Consequently, a deficiency in expertise can diminish the perceived credibility of influencers, undermining their effectiveness in influencing consumer behavior (Sokolova and Kefi, 2020).

Attractiveness, reliability, and expertise are three fundamental dimensions that determine the impact of a celebrity on their audience. According to Ohanian's (1991) Source Credibility Model, the attractiveness, trustworthiness, and expertise of a celebrity directly influence consumer perceptions and shape purchase intentions. Previous studies on celebrity endorsements indicate that attractiveness plays a crucial role in capturing consumer interest and fostering brand loyalty (Erdogan et al., 2001). Particularly in social media environments, visual appeal enhances consumer receptiveness to brand messages, thus influencing purchase behavior (Djafarova and Rushworth, 2017).

The reliability of a celebrity is another key factor that directly affects consumer purchasing decisions. Higher perceived reliability strengthens consumer trust in brand messages, whereas lower reliability may lead to skepticism and reduced purchase intentions (Sternthal et al., 2018). Studies suggest that celebrities perceived as highly reliable can transfer their credibility to the endorsed brands, enhancing consumer confidence (Hwang and Zhang, 2018). This highlights the strategic advantage of creating trustworthy content on social media platforms to sustain competitive positioning (Belanche et al., 2021).

Celebrity expertise also significantly influences consumer decision-making. When a celebrity is perceived as knowledgeable or skilled in a particular domain, consumers are more likely to trust their endorsements and develop favorable attitudes toward the promoted product (Scheinbaum and Wang, 2018). For example, professional athletes endorsing sports apparel or

makeup artists promoting cosmetic products tend to generate stronger consumer confidence and purchase intentions (Sokolova and Kefi, 2020).

Considering these theoretical perspectives, the following hypotheses were developed to examine the impact of celebrity endorsement on consumer purchase behavior:

H1: The attractiveness of the celebrity has a positive impact on consumer purchase behavior.

H2: The reliability of the celebrity has a positive impact on consumer purchase behavior.

H3: The expertise of the celebrity has a positive impact on consumer purchase behavior.

5.2. Sample

The study's sample consists of 300 university students in Pakistan who actively follow at least one celebrity endorsing brands and products on Instagram. University students were chosen as they represent a significant consumer demographic that is highly active on social media and likely to be influenced by digital advertising and celebrity endorsements. As young adults prepare to enter the workforce, their purchasing behavior is critical for understanding emerging consumer trends in the digital landscape.

The adequacy of the sample size was determined based on MacCallum et al.'s (1999) recommendation, which suggests that for factor analysis, the sample size should be at least 3 to 10 times the number of items in the scale. Given that the measurement scale in this study consists of 24 items, the minimum required sample size was 240 participants. With 300 valid responses, the sample exceeds this threshold, ensuring a robust statistical analysis.

Furthermore, as the study employs convenience sampling, it is important to acknowledge that while the results are highly applicable to university students, they may not be directly generalizable to the entire Pakistani consumer base. Future research could expand the sample to include working professionals, different age groups, and individuals from diverse socio-economic backgrounds to provide a broader perspective.

5.3. Data Collection and Analysis

The study applied a quantitative research approach, employing surveys as the primary method for data collection. The survey technique was chosen due to its effectiveness in reaching large

audiences and its favorable benefit-cost ratio, making it an appropriate method for gathering the necessary information efficiently. The theoretical framework guided the selection of measurement tools: the Celebrity Endorsement Scale, which assesses three dimensions - attractiveness, reliability, and expertise of the celebrity- was used to measure the independent variable. The Purchase Behavior Scale was employed to measure the dependent variable. Additionally, three questions were included to capture demographics of the sample, such as age and gender.

The scale used to measure the dimensions of Celebrity Endorsement in this study was adapted from five different studies (Belanche et al., 2021; Djafarova and Rushworth, 2017; Eisend, 2008; Müller et al., 2018; Ohanian, 1991), while the Purchase Intention Scale was adapted from six studies (Abzari et al., 2014; Dhanesh and Duthler, 2019; Hwang and Zhang, 2018; Jansom and Pongsakornrunsilp, 2021; Khodabandeh and Lindh, 2021; Nafees et al., 2021). Consequently, the research scale comprised a total of 24 statements, which were assessed using a 5-point Likert format (“1=Strongly Disagree” to “5=Strongly Agree”). Additionally, three questions were included to capture participants’ demographics.

The survey items were first translated into English and then reviewed by three researchers and language experts for accuracy, clarity, and structure. Following their suggestions, necessary revisions were made to address any spelling errors, misunderstandings, or issues with question construction. A pilot study was conducted with 20 university students who followed influencers promoting products on Instagram. Feedback from this pilot study was used to finalize the questionnaire, ensuring that the questions were clear and accurately measured the targeted constructs.

In terms of reliability, the general rule of thumb suggests that a Cronbach’s α of 0.70 and above indicates reliability, 0.80 and above indicates strong reliability, and 0.90 and above indicates high reliability. The reliability analysis conducted on the research sample showed that the scales met these thresholds: the Attractiveness of the Celebrity Scale had a Cronbach’s α of 0.76, the Reliability of the Celebrity Scale had a Cronbach’s α of 0.90, the Expertise of the Celebrity Scale had a Cronbach’s α of 0.90, and the Consumer Purchase Behavior Scale had a Cronbach’s α of 0.91. These results indicate that the Attractiveness of the Celebrity Scale was reliable, while the other three scales were highly reliable.

Finally, normality tests were conducted to assess whether the dataset followed a normal distribution. According to Tabachnick and Fidell (2013), a normal distribution is indicated

when Kurtosis and Skewness values fall within the range of -1.5 to +1.5. The analysis confirmed that the data met this criterion, suggesting a normal distribution. As a result, parametric tests were employed for further statistical analysis.

Table 1. Scales Used in the Study and Reliability Values

Scales	Number of Items	Type of Answer	Cronbach α Value
Attractiveness of the Celebrity	5	5 Point Likert	0,76
Reliability of the Celebrity	5	5 Point Likert	0,90
Expertise of the Celebrity	4	5 Point Likert	0,90
Consumer Purchase Behaviour	10	5 Point Likert	0,91

In this study, which utilized the survey technique as a quantitative analysis method, the collected questionnaire data was digitally processed for analysis. The findings were examined through multidimensional analyses to explore relationships between variables, using the IBM SPSS 21.0 software program.

6. Findings

6.1. Findings Related to Demographics

The demographic information collected in the questionnaire for this study includes questions on age, gender, and Instagram usage. Table 2 presents the distribution of the sample according to these demographic variables, including both the number and percentage distributions.

Table 2. Demographic Variables

Variable	Category	Number (n)	Ratio (%)
Age	Between 1980-2000 (Generation Y)	168	56
	2000 and after (Generation Z)	132	44
Gender	Female	159	53
	Male	141	47
Instagram Usage	Yes	300	100
	No	0	0

The demographic analysis in Table 2 provides an overview of the study's sample characteristics. The majority of participants (56%) belong to Generation Y (born between 1980-2000), while 44% are from Generation Z (born in 2000 or later). In terms of gender distribution, the sample consists of 53% females (n = 159) and 47% males (n = 141), indicating a relatively balanced representation of both genders. Additionally, all participants (100%) reported using Instagram, confirming the relevance of the platform for analyzing the impact of celebrity

endorsements in digital advertising. The uniformity in Instagram usage ensures that all respondents have direct exposure to influencer marketing and celebrity endorsements on the platform, making the data well-suited for examining the study's research objectives.

6.2. Findings Related to Factors

The descriptive statistics in Table 3 provide insights into the central tendency and variability of the key variables examined in this study. The mean scores (\bar{x}) indicate that celebrity expertise ($\bar{x} = 3.31$, $SD = 1.21$) is the most highly rated characteristic, suggesting that participants perceive expertise as a crucial factor in endorsements. Reliability ($\bar{x} = 3.07$, $SD = 1.14$) follows closely, indicating that trustworthiness also plays a significant role in consumer decision-making. Attractiveness ($\bar{x} = 2.74$, $SD = 0.89$) has the lowest mean, implying that while still influential, it is perceived as slightly less critical than expertise and reliability. Meanwhile, consumer purchase behavior ($\bar{x} = 2.91$, $SD = 0.97$) suggests moderate purchase intent, reflecting a balanced consumer response to celebrity endorsements. The standard deviations (SD) indicate varying levels of dispersion, with expertise ($SD = 1.21$) and reliability ($SD = 1.14$) showing the highest variability, suggesting differing perceptions among respondents. The minimum and maximum values (1.00 to 5.00) for all variables confirm that responses cover the entire range of the Likert scale, ensuring a diverse set of opinions within the sample. Overall, these results highlight that while all three celebrity attributes influence consumer purchase behavior, expertise is perceived as the most impactful factor.

Table 3. Descriptive Statistics

Variables	\bar{x}	SD	Min.	Max.
1. Attractiveness of the Celebrity	2.74	0.89	1.00	5.00
2. Reliability of the Celebrity	3.07	1.14	1.00	5.00
3. Expertise of the Celebrity	3.31	1.21	1.00	5.00
5. Consumer Purchase Behaviour	2.91	0.97	1.00	5.00

The correlation analysis in Table 4 reveals significant positive relationships between all variables, highlighting the strong association between celebrity endorsement attributes and consumer purchase behavior. Among the three dimensions of celebrity endorsement, attractiveness ($r = 0.581$, $p < 0.01$) exhibits the strongest correlation with consumer purchase behavior, indicating that visually appealing celebrities have a considerable impact on consumer decisions. Reliability ($r = 0.570$, $p < 0.01$) follows closely, suggesting that consumers are more likely to engage with products endorsed by trustworthy celebrities. Expertise ($r = 0.55$, $p < 0.01$) also shows a significant positive correlation, reinforcing that knowledgeable and skilled

celebrities enhance brand credibility and influence consumer choices. Additionally, the intercorrelations between the celebrity endorsement attributes are noteworthy. Reliability and expertise ($r = 0.731, p < 0.01$) share the strongest correlation, implying that celebrities perceived as reliable are also often considered experts in their field. Attractiveness is moderately correlated with both reliability ($r = 0.649, p < 0.01$) and expertise ($r = 0.617, p < 0.01$), indicating that consumers tend to associate physical appeal with credibility and competence.

Table 4. Correlation Statistics

Variables	1	2	3	4
1. Attractiveness of the Celebrity	-			
2. Reliability of the Celebrity	0.649**	-		
3. Expertise of the Celebrity	0.617**	0.731**	-	
5. Consumer Purchase Behaviour	0.581**	0.570**	0.55**	-

* $p < 0,05$, ** $p < 0,01$

6.3. Findings Related to Hypotheses

The ANOVA analysis for attractiveness of the celebrity (Table 5) indicates a significant effect on consumer purchase behavior ($F = 6.828, p = 0.000$). The sum of squares between groups (117.261) is higher than the sum of squares within groups (121.614), suggesting that differences in consumer purchase behavior are significantly influenced by variations in celebrity attractiveness. The low within-group mean square (0.464) indicates that the variability within consumer responses is relatively low, reinforcing the strength of the relationship. Since the p-value (0.000) is well below the 0.05 threshold, this result supports H1, confirming that the attractiveness of a celebrity has a statistically significant and positive impact on consumer purchase behavior.

Table 5. Attractiveness of the Celebrity ANOVA Analysis Results

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	117.261	37	3.169	6.828	0.000*
Within Groups	121.614	262	0.464		
Total	238.875	299			

* $p < 0,05$, ** $p < 0,01$

The ANOVA analysis for reliability of the celebrity (Table 6) demonstrates a significant impact on consumer purchase behavior ($F = 7.432, p = 0.000$). The sum of squares between groups (199.792) is larger than the sum of squares within groups (190.353), indicating that variations in consumer purchase behavior are strongly associated with differences in celebrity reliability. The within-group mean square (0.727) suggests moderate variability in individual responses,

but the overall effect remains significant. The p-value (0.000) is well below the 0.05 threshold, confirming that H2 is supported and that celebrity reliability has a statistically significant and positive influence on consumer purchase behavior.

Table 6. Reliability of the Celebrity ANOVA Analysis Results

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	199.792	37	5.400	7.432	0.000*
Within Groups	190.353	262	0.727		
Total	390.145	299			

*p <0,05, **p <0,01

The ANOVA analysis for expertise of the celebrity (Table 7) indicates a significant effect on consumer purchase behavior ($F = 6.046$, $p = 0.000$). The sum of squares between groups (202.824) is lower than the sum of squares within groups (232.530), suggesting that while expertise influences consumer purchase behavior, the variability within individual responses is relatively higher compared to the other endorsement dimensions. The within-group mean square (0.907) is the highest among the three dimensions, indicating greater dispersion in responses regarding expertise. However, since the p-value (0.000) is well below the 0.05 threshold, the result supports H3, confirming that celebrity expertise has a statistically significant and positive impact on consumer purchase behavior, though its influence appears slightly weaker than attractiveness and reliability.

Table 7. Expertise of the Celebrity ANOVA Analysis Results

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	202.824	37	5.482	6.046	0.000*
Within Groups	232.530	262	0.907		
Total	440.354	299			

*p <0,05, **p <0,01

7. Results and Recommendations

The findings of this study provide valuable insights into the impact of celebrity endorsement in digital advertising on consumer purchase behavior, particularly among Instagram users in Pakistan. The results indicate a positive correlation between celebrity characteristics— attractiveness, reliability, and expertise—and the consumer purchase behaviour. Specifically, the attractiveness of the celebrity emerged as the most influential factor, with a strong correlation ($r=0.581$, $p<0.01$) suggesting that visual appeal plays a crucial role in influencing consumer decisions. Reliability follows closely ($r = 0.570$, $p < 0.01$), emphasizing that

consumers are more likely to trust and act upon endorsements from celebrities they perceive as credible and authentic. Expertise, while still significant ($r = 0.553$, $p < 0.01$), holds a slightly lower influence, indicating that knowledge and perceived competence are important but secondary to attractiveness and reliability. These results collectively underscore the effectiveness of celebrity endorsements in enhancing brand engagement, trust, and purchase intentions in the digital advertising landscape.

The stronger influence of attractiveness over reliability and expertise suggests that in visually driven environments like Instagram, visual cues might outweigh rational credibility assessments, especially among younger consumers. This finding is consistent with Chung and Cho (2017), who reported that parasocial relationships based on attractiveness and perceived similarity play a dominant role in consumer-influencer interactions on social media.

In terms of reliability, the study's findings align with the Source Credibility Theory proposed by Ohanian (1991), who argued that trustworthiness is a critical determinant of endorsement effectiveness. Previous studies, such as those by Hwang and Zhang (2018) and Belanche et al. (2021), similarly demonstrated that credible and trustworthy celebrities enhance consumers' attitudes towards the endorsed products and significantly boost purchase intentions.

Regarding expertise, the results support the findings of Scheinbaum and Wang (2018), who suggested that perceived knowledge and expertise are fundamental for effective endorsement, particularly in product categories where technical knowledge matters. However, in the present study, expertise showed a slightly lower impact compared to attractiveness and reliability, possibly reflecting the visual and emotional nature of Instagram as a platform, where appearance and authenticity might be perceived as more critical than technical knowledge.

However, it is important to note that some studies (e.g., Silvera and Austad, 2004; Centeno and Wang, 2017) have cautioned that the effectiveness of celebrity endorsements may diminish if the celebrity's popularity wanes or if they are associated with scandals. Therefore, while celebrity attractiveness, reliability and expertise can be powerful drivers of consumer behavior, their influence may also fluctuate based on external factors, suggesting the need for brands to continuously monitor celebrity image alignment.

In this regard, the findings of this study contribute meaningfully to the existing literature by reaffirming that the traditional attributes of attractiveness, reliability, and expertise continue to play a pivotal role in shaping consumer purchase behavior, even within rapidly evolving digital

environments. Nonetheless, the dynamic and interactive nature of social media platforms introduces additional layers of complexity, necessitating a shift from conventional endorsement models toward more nuanced, adaptive, and context-sensitive influencer marketing strategies. Brands are now challenged not only to select endorsers based on static personal characteristics but also to continuously monitor audience engagement patterns, platform-specific trends, and evolving consumer expectations, thereby ensuring that their influencer collaborations remain authentic, credible, and effective in sustaining brand relevance in an increasingly fragmented and competitive digital marketplace.

Building on the significant findings of this study, businesses aiming to leverage celebrity endorsements should prioritize the strategic selection of endorsers who authentically align with the target audience's values, cultural expectations, and lifestyle preferences. Marketers must recognize that attractiveness is a multidimensional construct that extends beyond physical appearance to encompass elements such as charisma, communication style, relatability, and emotional engagement. A nuanced understanding of these attributes can substantially enhance the perceived authenticity and persuasive power of endorsements. Moreover, fostering reliability through transparent, honest, and value-consistent messaging is critical for building lasting consumer trust and encouraging purchase behavior.

In addition, brands are advised to collaborate with celebrities whose expertise is directly relevant to the product or service category being promoted, thereby reinforcing the credibility and authority of their marketing communications. A strategic, data-driven approach is essential; marketers should conduct continuous analyses of audience demographics, psychographic profiles, and behavioral patterns on platforms such as Instagram. Personalizing content to match the specific expectations and motivations of segmented consumer groups can significantly enhance campaign engagement and conversion rates. Drawing on the insights of this study, organizations should systematically evaluate the effectiveness of their endorsement strategies over time and adapt proactively to shifts in consumer behavior, technological advancements, and social media trends, ensuring sustained relevance and competitive advantage in an increasingly dynamic digital marketing environment.

While offering important insights, this study also presents several limitations that should be acknowledged. First, the sample consists solely of university students in Pakistan, which limits the generalizability of the findings to a broader consumer base. While university students are an important consumer segment due to their high engagement with social media and exposure

to digital advertisements, the influence of celebrity endorsements may vary across different age groups, professions, and socioeconomic levels. Future research could expand the sample to include working professionals, older consumers, and individuals from both urban and rural areas to assess how these factors influence purchase behavior.

Second, the study was conducted within a single country, and cultural factors were not considered. The impact of celebrity endorsements on consumer behavior may vary depending on cultural norms, brand perception, and advertising strategies. Therefore, future studies should explore this topic in different cultural contexts to determine whether the findings hold true across diverse populations. In particular, cross-cultural comparisons between Western and Eastern markets could provide valuable insights into how consumers perceive celebrity attractiveness, reliability, and expertise differently across cultures.

Third, this study employed a survey method to measure participants' perceptions, which may not fully align with actual purchase behaviors. Since self-reported data can sometimes be influenced by social desirability bias or subjective interpretation, future research could adopt experimental methods or big data analysis to obtain more objective insights into consumer behavior. Techniques such as eye-tracking, neuroimaging, or social media analytics could be utilized to explore how celebrity endorsements influence decision-making processes in real time.

Finally, the study did not consider potential moderating or mediating variables that might affect the relationship between celebrity endorsement and consumer purchase behavior. Factors such as brand loyalty, consumer engagement with advertisements, product pricing, and the advertising platform could amplify or diminish the effectiveness of celebrity endorsements.

Future research would benefit from expanding the scope by incorporating comparative analyses across different countries and cultural settings, as consumer perceptions of celebrity attributes such as attractiveness, reliability, and expertise may vary significantly across cultural, social, and economic contexts. Additionally, extending the demographic diversity beyond university students to include working professionals, older consumers, and various socio-economic groups could provide a more comprehensive understanding of endorsement effectiveness. Employing longitudinal designs, experimental methods, and big data analytics—such as social media sentiment analysis or eye-tracking studies—would further enrich methodological approaches, allowing for more dynamic and causal interpretations of consumer behavior. Ultimately, adopting a broader, multi-method, and cross-cultural research agenda could substantially

advance our theoretical and practical knowledge regarding the evolving role of celebrity endorsements in shaping marketing strategies and influencing long-term consumer decision-making patterns.

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