

# Assessing the Effectiveness of social media Advertisements of Selected Apparel Brands: A SEM Approach using AMOS

Effulgence

Vol. 22, No. 2

July - December 2024

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## Abstract

Social Networking Sites (SNSs) have become pivotal global advertising platforms, prompting companies to shift significant advertising budgets towards their expansive reach. This strategic reallocation is driven by the perceived cost-effectiveness and rapid results offered by SNSs, targeting the 'Facebook, WhatsApp, Instagram, YouTube generation. This study delves into the effectiveness of advertisements on platforms like Facebook, WhatsApp, and Instagram, emphasizing selected apparel brands. Examining various advertisement variables, the study employs Confirmatory Factor Analysis (CFA) to ensure data reliability. Utilizing Structural Equation Modeling (SEM) through AMOS, a sophisticated model gauges advertising value for selected apparel brands on SNSs. Anticipated results affirm the influential role of these variables in shaping consumer perceptions. With 520 participants, the findings support null hypotheses, indicating no adverse impact on consumer choices. This research provides valuable insights into advertising dynamics on SNSs, specifically focusing on the efficacy of social media advertisements for selected apparel brands, aiding companies in strategic decision-making within the targeted demographic.

**Keywords:** Social media advertisements, Social Networking sites, Advertising platforms, Apparel Brands, social media.

## INTRODUCTION

Social networking sites have become an indispensable facet of contemporary life since the inception of sixdegrees.com in 1997. Initially crafted for profile creation and fostering connections among friends, subsequent platforms like Facebook,

Instagram, LinkedIn, and Myspace rapidly garnered popularity, seamlessly weaving into the fabric of users' daily lives (Özmen et al., 2022). Facebook, Orkut, YouTube, and Myspace have now become deeply woven into the tapestry of people's existence, making it arduous for regular users to envision a world devoid of their influence (Vrtana &

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Krizanova, 2023a; Abayi & Khoshtinat, 2016; Sharma, n.d.). According to ComScore, Inc., SNSs contribute to over 20% of all online display ads, with Facebook and Myspace reigning supreme in the social networking category.

Social networking sites, operate as potent advertising platforms with a diverse user base conversing in various languages and representing varied demographics(Sundaram et al., 2020; Vrtana & Krizanova, 2023b). Researcher underscore the profound impact of referrals and recommendations on SNSs in acquiring and retaining new customers. Recognizing this, marketers harness the potential of SNSs and other social media for judicious and cost-effective marketing through email campaigns, website advertisements, and viral marketing(Shareef et al., 2017; Sundaram et al., 2020). From a marketing vantage point, these online platforms provide prospective customers with a virtual sojourn through businesses, not only encouraging visits but also fostering the sharing of experiences with friends(Al Idrus et al., 2020; Voorveld et al., 2018).

Businesses employ social media as integral tools for communication and marketing, establishing connections with both potential and current customers. This leads to a faster and more efficient spread of online word-of-mouth, in contrast to traditional offline methods(Frandsen et al., 2014; Srivastava et al., 2017). Moreover, companies integrating social media marketing into their customer service approach stand a greater chance of sustaining a competitive edge(Rai, n.d.). the fundamental principles underlying social media communication, the repercussions of social media communication on brand loyalty, and the outcomes of social marketing on brand loyalty(Choudry et al., 2022; GÖKTAŞ & GÖKERİK, 2024). Social media constitutes a myriad of online platforms and communities designed to facilitate dynamic social interaction, enabling users to freely exchange their viewpoints, experiences, and insights.

This study aims to assess the efficiency of social

media advertising, focusing on platforms like Facebook, WhatsApp, Instagram, and YouTube, for designated apparel brands(Misra et al., 2018; Saxena, n.d.). Employing a Structural Equation Modeling (SEM) methodology through the AMOS software, the research seeks to scrutinize and comprehend the influence of these social media channels on the promotion and perception of the selected apparel brands (Alavi et al., 2019). The objective is to offer meaningful insights into the effectiveness of social media advertising within the fashion industry(Li et al., 2022; Shubhangam1 et al., 2020). The chosen social media platforms for the evaluation of Social Media Marketing Advertisements (SMMAs) in India included Facebook, YouTube, and Twitter (Frick et al., 2021). Ultimately, the research poses the subsequent questions (Boateng & Okoe, 2015).

1. How do social media ads on platforms like Facebook, WhatsApp, Instagram, YouTube, Email affect the visibility of chosen apparel brands?

## LITERATURE REVIEW

Anant Saxena, Uday Khanna (2013) presented an empirical investigation that sought to comprehend the effects of various variables in advertisements on delivering advertising value to respondents. CFA was employed to assess the reliability of the data collection instrument. Furthermore, a model was proposed that used structural equation modeling to measure advertising value. The anticipated outcomes affirmed the significance of distinct variables—specifically information, entertainment, and irritation—in evaluating the value of advertisements presented on social networking sites. Mahsa Abayi, Behnaz Khoshtinat (2015) unveiled a profound influence of emotional and motivational factors on the intricacies of the digital ticket procurement process, with proficient advertising serving as a pivotal modulator of these multifarious influences. the study probed the multifaceted impact of advertising on the proclivity for online airline ticket acquisition, navigating the intricate interplay of motivational and emotional factors across the

societal spectrum. Utilizing applied basic and developmental methodologies within a descriptive survey framework.

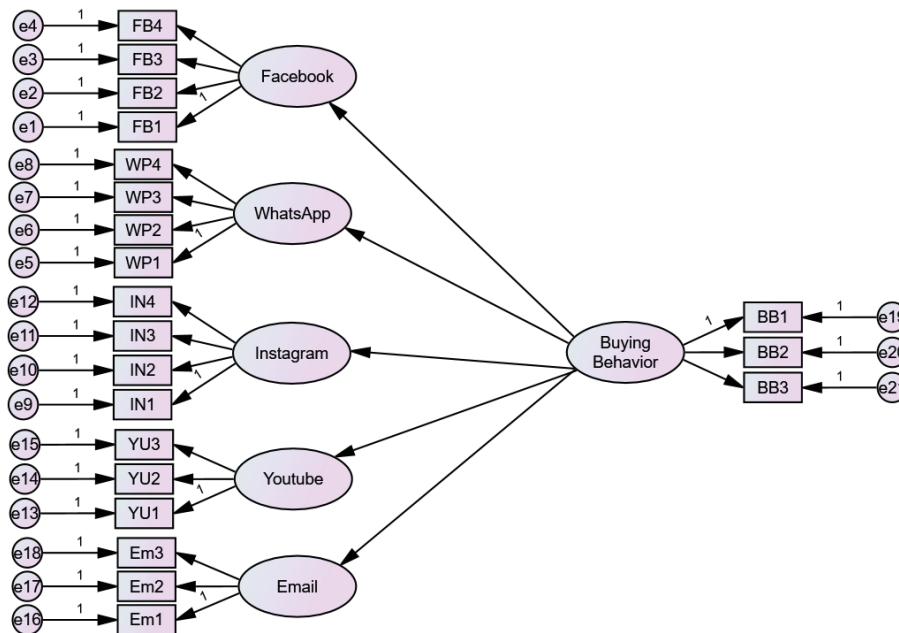
Shahid and Bilal (2016) asserted that emotional advertising served as a catalyst, fostering a profound connection between customers' emotions and products, eliciting a spectrum of emotional responses. Each advertisement strategically triggered affectionate reactions, capitalizing on impulsive emotions in daily life. Zobi Khan, Yongzhong Yang et al (2019) established that SSMMA had a moderating effect on the indirect relationship between FSMMA and customer response through brand equity. Muhammad Tahir Jan, Johan de Jager et al (2020) evaluated how key components in social media marketing—social media activity, interactivity, and content—affected customer satisfaction, particularly in online fashion stores. The analysis involved reliability and validity assessments, exploratory and confirmatory factor analyses, and hypothesis testing using structural

equation modeling. Mohammed Majeed, Martin Owusu-Ansah et al (2021) examined the correlation between social media and the intention to purchase, delving into the mediating role of brand equity within Ghana's fashion sector. Utilizing the Statistical Package for Social Sciences (SPSS) and SEM with AMOS software version 22.0, the hypothesized relationships were evaluated. Esra Ozmen, Ersin Karaman's (2022) revealed distinctive pulse variations and significant EEG fluctuations, emphasizing the intricate dance between design elements and user emotions in the ever-evolving realm of online commerce. Vartana, Krizanova (2023) explored emotional responses in advertising, unveiling that widespread emotional trends have the potential to trigger impulsive purchasing.

**Hypothesis of the study**

H<sub>01</sub>: There is a positive impact of Facebook Ads, WhatsApp Ads, Instagram Ads, YouTube Ads, Email Ads on the buying behavior of consumers.

**Conceptual Framework of the Model**



**Figure 1: Conceptual Framework**

## RESEARCH METHODOLOGY

This study executed a meticulous and comprehensive data collection strategy by utilizing both online and offline platforms to conduct a well-rounded questionnaire survey. In offline settings, questionnaires were distributed across diverse locations, including offices, universities, and malls, ensuring broad participation across various contexts. Simultaneously, an online survey was disseminated

through email and Facebook, broadening its reach for enhanced inclusivity. The primary objective was to amass a robust sample of 520 respondents, aligning seamlessly with the research objectives to ensure a comprehensive dataset. The research methodology adopted a rigorous quantitative approach, employing Structural Equation Modeling (SEM) with AMOS to analyze the nuanced impact of emotional advertising on consumer purchase intention.

## Data Analysis & Discussion

**Table 1 : demographic characteristics of survey participants.**

Components	Classifications	Frequency	Percentage
Gender	Male	253	48.7
	Female	267	51.3
Age	20 or below	75	14.4
	21-30	173	33.3
	31-40	139	26.7
	41-50	105	20.2
	50 or above	28	5.4
Education	Schooling	70	13.5
	Graduate	186	35.8
	Post graduate	212	40.8
	Doctoral	5	1
	Professional degree	47	9
Apparel Brand	Adidas	85	16.3
	Puma	225	43.3
	Nike	162	31.2
	others	48	9.2

Source: Authors' calculations based on primary data

In the context of Table 1, among the group of 520 respondents, a significant 48.7% were identified as male, with the remaining 51.3% constituting the female demographic. The survey unveiled a significant preponderance of participants within the age bracket of 20 years or below, totalling 75 individuals, thereby infusing substantive significance into the resultant study insights.

Regarding the educational background of the respondents, the data disclosed a heterogeneous distribution, with 13.5% holding Intermediate qualifications, 35.8% attaining Graduate status, and 40.8% possessing Master's degrees.

**Table 2 : Reliability Scores N= 520**

Facebook	.854
WhatsApp	.826
Instagram	.798
YouTube	.814
Email	.835
Buying Behavior	.752

The reliability of all variables, encompassing both dependent and independent variables, exceeds the cutoff of 0.70, signifying good reliability (Santos, 1999). The overall Cronbach's Alpha for the questionnaire is 0.737, surpassing the 0.7 cutoff. The reliability of buying behavior is 0.752, falling within the acceptable range of 0.5-0.9.

### Exploratory Factor Analysis

**Table 3 : KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.765
Bartlett's Test of Sphericity	Approx. Chi-Square	4900.242
	df	210
	Sig.	.000

**Table 4 : Rotated Component Matrix**

	Component					
	1	2	3	4	5	6
I appreciate the apparel brands I come across on Instagram pages.			.810			
The selection of Apparel is influenced by Instagram influencers.			.821			
Instagram ads contribute to recalling apparel brands.			.743			
I love buying from brands that showcase their styles on Instagram.			.761			
Advertisements on YouTube impact my apparel purchasing decisions.				.825		

Influencers on YouTube play a role in shaping my purchasing decisions.				.849		
YouTube bloggers help me choose the right apparel.				.804		
WhatsApp channels are a fresh way to stay updated on apparel products.		.711				
WhatsApp updates on Amazon, Flipkart, and Myntra keep me informed.		.854				
I like apparel brands connecting with me through WhatsApp.		.866				
WhatsApp proves to be a formidable social marketing tool for apparel brands.		.735				
Getting emails from diverse apparel brands enhances my product knowledge.					.795	
Emails from different apparel brands offer insight into the latest arrivals in their product line.					.835	
New product launch emails keep me informed and sometimes lead to purchases.					.723	
Facebook ads for apparel strongly influence me.	.704					
Facebook bloggers featuring apparel products impact my choices.	.861					
Apparel-related Facebook pages have an influence on my preferences.	.870					
Facebook significantly shapes apparel customer preferences.	.767					
I applaud Apparel brands that craft socially engaging advertisements.						.736
Apparel ads on social media significantly impact my purchasing choices.						.884

Social media Apparel ads play a pivotal role in shaping my buying decisions.						.825
Extraction Method: Principal Component Analysis.						
Rotation Method: Varimax with Kaiser Normalization. <sup>a</sup>						
a. Rotation converged in 6 iterations.						

Confirmatory Factor Analysis

**Confirmatory Factor Analysis**

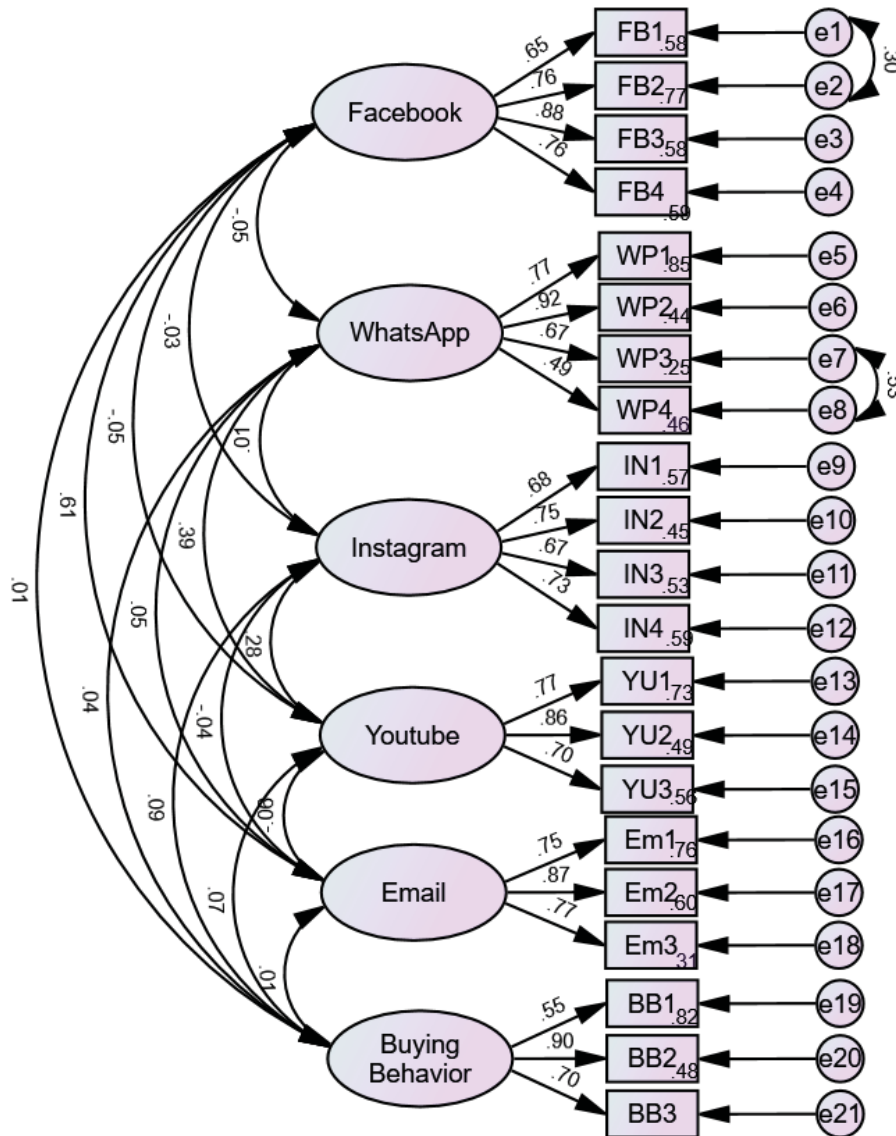


Figure 2 : Confirmatory Factor Analysis

Structural Equation Modeling

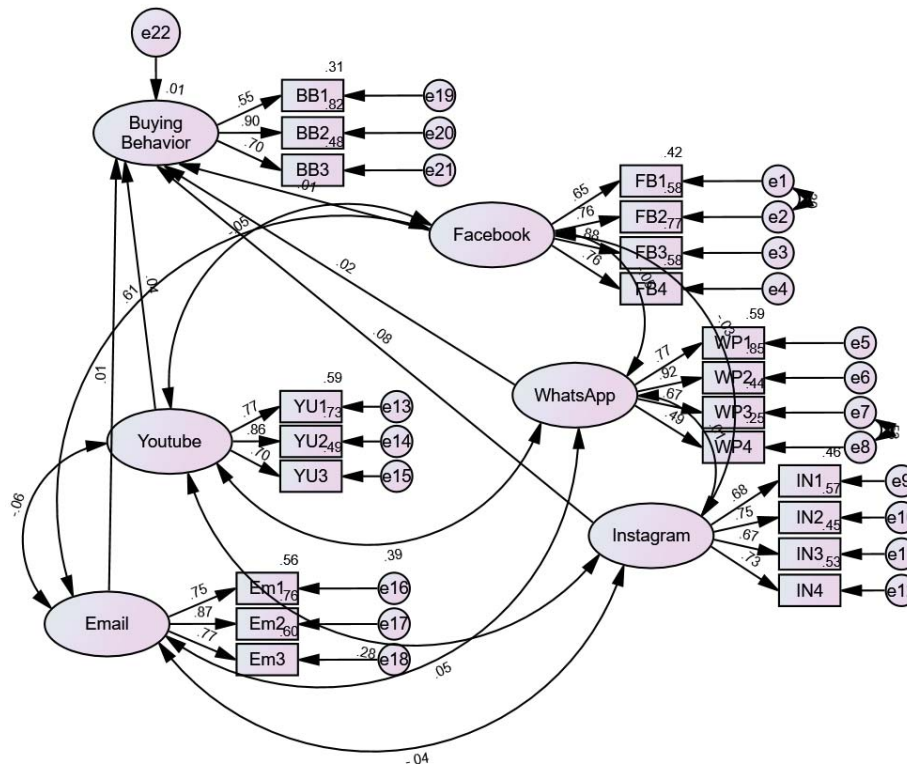


Figure 3 : Structural Equation modeling

Table 4 : Standardized Regression weights

Latent Variable	Item Label	Standardized Factor loading
Facebook Advertisement	FB1	.65
	FB2	.76
	FB3	.88
	FB4	.76
WhatsApp Advertisement	WP1	.77
	WP2	.92
	WP3	.67
	WP4	.49
Instagram Advertisement	IN1	.68
	IN2	.75
	IN3	.67
	IN4	.73
YouTube Advertisement	YU1	.77
	YU2	.86
	YU3	.70
Email Advertisement	EM1	.75
	EM2	.87
	EM3	.77
Buying Behavior	BB1	.55
	BB2	.90
	BB3	.70



Table 4 presents the standardized factor loadings for each item, providing clarity on the correlations between individual items and the core construct.

### Evaluating measurement model Fitness

In the scrutiny of the envisioned model, Amos provides a comprehensive spectrum of indices crucial for assessing its adequacy and validity. Paramount among these indices is the root mean square error of approximation (RMSEA), goodness of fit index (GFI), Chi-Square, CMIN/DF, adjusted goodness of fit index (AGFI), and comparative fit indices.

**Table 5 : Model Fitness Test**

Model Fit	Resultant value	Threshold
CMIN/DF	3.495	< 3 good; < 5 acceptable
CFI	.910	Closer to 1; Good
GFI	.905	>.90
AGFI	.87	>.90
RMR	.036	<.08
RMSEA	.07	<.08
IFI	.911	>.9

The recorded values for CMIN/DF, CFI, PCLOSE, GFI, RMR, and RMSEA align with the predefined criteria, indicating a commendable fit for the model. Nevertheless, there exists a slight deviation in the AGFI values in comparison to the predefined benchmarks. The p-value is utilized to evaluate the statistical significance of the data within a 95% confidence interval. Table 5 corroborates the validation of Null hypotheses H01 thereby offering robust substantiation for the research outcomes.

### DISCUSSION

A thorough evaluation of the adequacy of the model involves a detailed examination of various parameters. In this scrutiny, a meticulous analysis of social media components, including Facebook, WhatsApp, Instagram, YouTube, and Email within advertisements, was carried out using specifically designed items. Additionally, a distinct set of five items was created to gauge the impact of social

media advertising on the complex landscape of customer purchasing behavior. The results obtained from the Structural Equation Modeling (SEM) analysis demonstrated a commendable fit, supported by a range of crucial fit indices. Primarily, the Comparative Fit Index (CFI) displayed a highly fitting value of .910, surpassing the established criterion for model adequacy. The Attuned Goodness of Fit Index (AGFI) reached the commendable threshold of 0.87, indicating a robust alignment between the proposed model and the empirical data. The Root Mean Square Error of Approximation (RMSEA) registered a minimal value of 0.07, suggesting both data coherence and a favorable fit. The computed CMIN/DFI value, standing at 3.495, provides additional evidence supporting the assertion of a well-fitted model. Significantly, the convergence of CFI and RMSEA values collectively affirms that the proposed model not only meets stringent statistical criteria but also effectively captures the intricate patterns and

relationships inherent in the data. This comprehensive assessment of fit indices boosts confidence in the model's strength, reliability, and validity.

### Conclusion, Limitation and scope of the study

This investigation on the Efficacy of Social Media Advertisements for Selected Apparel Brands unveils insightful perspectives into the multifaceted impacts of Social Media Marketing Activities (SMMAs) on business sustainability. The study substantiates null hypotheses, validating the substantial contributions of Facebook, Instagram, WhatsApp, YouTube, and email to the triumph of apparel brands. The findings underscore the strategic imperative of cultivating a robust social media presence for customer attraction and retention, emphasizing the advanced utilization of social media marketing to elevate brand awareness and image. This study aimed to explore the influence of social media advertising on consumer purchasing behavior, specifically focusing on high-involvement product segments within the Indian Apparel market. Due to time constraints in academia, the study utilized a more restricted sample size, potentially introducing nuances to the research outcomes.

### REFERENCES

- Abayi, M., & Khoshtinat, B. (2016). Study of the Impact of Advertising on Online Shopping Tendency for Airline Tickets by Considering Motivational Factors and Emotional Factors. *Procedia Economics and Finance*, 36, 532–539. [https://doi.org/10.1016/s2212-5671\(16\)30065-x](https://doi.org/10.1016/s2212-5671(16)30065-x)
- Al Idrus, S., Abdussakir, & Djakfara, M. (2020). The effect of entrepreneurial orientation and technology orientation on market orientation with education as moderation variable. *Management Science Letters*, 10(10), 2351–2360. <https://doi.org/10.5267/j.msl.2020.2.029>
- Alavi, S. S., Mehdinezhad, I., & Kahshidinia, B. (2019). A trend study on the impact of social media on advertisement. *International Journal of Data and Network Science*, 3(3), 185–200. <https://doi.org/10.5267/j.ijdns.2019.2.005>
- Arora, T., & Agarwal, B. (2019). Empirical Study on Perceived Value and Attitude of Millennials Towards Social Media Advertising: A Structural Equation Modelling Approach. *Vision*, 23(1), 5 – 6 – 6 – 9 . <https://doi.org/10.1177/0972262918821248>
- Boateng, H., & Okoe, A. F. (2015). Determinants of Consumers' Attitude towards Social Media Advertising. *Journal of Creative Communications*, 10(3), 248–258. <https://doi.org/10.1177/0973258615614417>
- Çakiroğlu, A. D. (2019). Social media advertising. In *Digital Marketing Applications* (pp. 105–117). Peter Lang AG. <https://doi.org/10.4324/9781315623252-16>
- Choudry, A., Bakar, A., & Saeed, A. (2022). Social Media Advertisement Impact on Consumer Behavior ARTICLE DETAILS ABSTRACT History: under a Creative Commons Attribution Non-Commercial 4.0. *Journal of Tourism, Hospitality, and Services Industries Research (JTHS)*, 2(2). <https://doi.org/10.52461/jths.v2i02.1692>
- Dwivedi, Y. K., Kapoor, K. K., & Chen, H. (n.d.). *Social Media Marketing and Advertising*.
- Frandsen, M., Walters, J., & Ferguson, S. G. (2014). Exploring the viability of using online social media advertising as a recruitment method for smoking cessation clinical trials. *Nicotine and Tobacco Research*, 16(2), 247–251. <https://doi.org/10.1093/ntr/ntt157>
- Frick, V., Matthies, E., Thøgersen, J., & Santarius, T. (2021). Do online environments promote sufficiency or overconsumption? Online advertisement and social media effects on clothing, digital devices, and air travel consumption. *Journal of Consumer Behaviour*, 20(2), 288–308. <https://doi.org/10.1002/cb.1855>
- Ge, J., Sui, Y., Zhou, X., & Li, G. (2021). Effect of short video ads on sales through social media: the role of advertisement content generators. *International Journal of Advertising*, 40(6), 8 – 7 – 0 – 8 – 9 – 6 .

- <https://doi.org/10.1080/02650487.2020.1848986>  
GÖKTAŞ, F., & GÖKERİK, M. (2024). A Novel Robust Theoretical Approach on Social Media Advertisement Platform Selection. *Uluslararası Muhendislik Araştırma ve Gelistirme Dergisi*.  
<https://doi.org/10.29137/umagd.1398580>
- Hanaysha, J. (2016). The Importance of Social Media Advertisements in Enhancing Brand Equity: A Study on Fast Food Restaurant Industry in Malaysia. *International Journal of Innovation, Management and Technology*, 7(2), 46-51.  
<https://doi.org/10.18178/ijimt.2016.7.2.643>
- Harris, J. M., Ciorciari, J., & Gountas, J. (2019). Consumer neuroscience and digital/social media health/social cause advertisement effectiveness. *Behavioral Sciences*, 9(4).  
<https://doi.org/10.3390/bs9040042>
- Kurenkova, M. (n.d.-a). Big Five Personality Dimensions, Motivation to Use Social Media and Perception of Online Advertisement.
- Kurenkova, M. (n.d.-b). Big Five Personality Dimensions, Motivation to Use Social Media and Perception of Online Advertisement.
- Latif, S., Calicioglu, C., & Cemal Calicioglu, A. (n.d.). Impact of Social Media Advertisement on Consumer Purchase Intention with the Intermediary Effect of Brand Attitude. In *International Journal of Innovation, Creativity and Change*. [www.ijicc.net](http://www.ijicc.net) (Vol. 11).  
[www.ijicc.net](http://www.ijicc.net)
- Li, S. C., Chen, Y. C., Chen, Y. W., & Huang, Y. (2022). Predicting Advertisement Revenue of Social-Media-Driven Content Websites: Toward More Efficient and Sustainable Social Media Posting. *Sustainability (Switzerland)*, 14(7).  
<https://doi.org/10.3390/su14074225>
- Misra, A. K., Rai, R. K., & Takeuchi, Y. (2018). Modeling the control of infectious diseases: Effects of TV and social media advertisements. *Mathematical Biosciences and Engineering*, 15(6), 1315-1343.  
<https://doi.org/10.3934/mbe.2018061>
- Mittal, S. K., & Singh Malik, J. (2017). Effectiveness of Social Media Advertisement in Promoting Business: A Study with Special Reference To NCR. *International Journal of Advanced Scientific Research and Management*, 2(8).  
[www.ijasrm.com](http://www.ijasrm.com)
- Nadarzynski, T., Burton, J., Henderson, K., Zimmerman, D., Hill, O., & Graham, C. (2019). Targeted advertisement of chlamydia screening on social media: A mixed-methods analysis. *Digital Health*, 5.  
<https://doi.org/10.1177/2055207619827193>
- Nwaoboli, E. P. (n.d.). Use of Celebrities in Social Media Advertising and Customer Purchasing Decision: An Analysis of Helen Paul's Hypo Bleach Advertisements *International Journal of Multidisciplinary Approach and Studies Use of Celebrities in Social Media Advertising and Customer Purchasing Decision: An Analysis of Helen Paul's Hypo Bleach Advertisements*.  
<https://www.researchgate.net/publication/366977216>