

## Research Article

### Division V: Business and Public Governance

# Effects of advertising on product satisfaction: Mobile device purchase

Fe B. Tacang<sup>1</sup>, Rosefe E. Tubosa<sup>1</sup>, Nellien L. Sabaduquia<sup>1</sup>, Warren L. Acain<sup>1\*</sup>, Juliet C. Bolocon<sup>1</sup>

<sup>1</sup> St. Peter's College, Philippines

## Abstract

This study investigates how advertising influences product satisfaction among business administration students when purchasing mobile devices. The research examines the relationship between product advertising experience and product satisfaction, considering socio-demographic characteristics such as age, gender, and income. The study employs a descriptive-correlational research design with a quantitative approach, surveying 164 business administration students. Positive advertising interactions are associated with higher product satisfaction levels regarding performance, features, quality, and value. A significant negative correlation ( $r = -0.253$ ,  $p < 0.05$ ) exists between the socio-demographic profile of respondents and product advertising experience. Product advertising experience positively correlates with product satisfaction ( $r = 0.550$ ,  $p = 0.000$ ). Understanding how different advertising approaches resonate with various demographic segments can help businesses enhance their marketing strategies, promoting greater customer satisfaction and loyalty in a competitive market.

**Keywords:** product satisfaction, advertising, mobile device, business students, significant association

Received: 05/19/25 Revision: 08/07/25 Accepted: 08/07/25

Correspondence: Warren L. Acain, St. Peter's College, Philippines; warrenking333@gmail.com

Recommended Citation:

Tacang, F. B., Tubosa, R. E., Sabaduquia, N. L., Acain, W. L., & Bolocon, J. C. (2025). Effects of advertising on product satisfaction: Mobile device purchase. *Sidhaya: The Official Research Journal of Bulacan State University*, 1(1), 16-25.



This is Open Access article distributed under the terms of CC-BY-NC-ND 4.0 International License.  
© Author(s).

## Introduction

The widespread use of mobile devices has made understanding the relationship between advertising and product satisfaction crucial for businesses and marketers. Mobile devices have become an integral part of daily life, serving as tools for productivity, entertainment, and communication, as well as reflecting lifestyle choices. Previous research has shown that demographic variables such as age, gender, and income influence customer attitudes and product satisfaction (Bhat et al., 2020, K V et al., 2021, Mustafa & Al-Abdallah, 2020). Online advertising has been found to be effective in influencing consumer attitudes and purchase decisions, with emotional appeal, creativity, and credibility being key factors (K V et al., 2021). However, traditional advertising approaches also significantly impact purchasing decisions (Mustafa & Al-Abdallah, 2020). Research has identified several key factors that influence product satisfaction in the context of mobile devices. These include: Product performance: responsiveness, speed, and resource management (Halim et al., 2021). Product features: usability, customization, and security (Rahman & Sultana, 2022). Product value: performance-

to-price ratio (Xie et al., 2021). Positive interactions with mobile advertisements: associated with higher product satisfaction (Viorentina & Santoso, 2023). Despite the existing research, there is a need for a more comprehensive understanding of the relationship between advertising and product satisfaction in the context of mobile devices. Therefore, this study aims to fill this gap by examining the impact of advertising on product satisfaction among mobile device users, taking into account demographic variables and key factors influencing product satisfaction. By exploring this relationship, this study seeks to provide insights for businesses and marketers to develop effective advertising strategies that enhance product satisfaction and drive business success.

### **Objectives of the Study**

The purpose of the study is identifying the effect of advertising on product satisfaction on mobile services among business administration students.

### **Statement of the Problem**

The major problem of the study identifies the effect of advertising on product satisfaction on mobile services among business administration students. Specifically, it sought to answer the following:

1. What is the socio-demographic profile of business administration respondents in terms of:
  - 1.1 Age,
  - 1.2 Gender,
  - 1.3 Income?
2. What the factors of the product advertising experience of the business administration respondents in terms of:
  - 2.1 Online Advertising,
  - 2.2 Traditional Advertising?
3. What are the constructs of product satisfaction among business administration respondents in terms of:
  - 3.1 Product Performance,
  - 3.2 Product Features,
  - 3.3 Product Quality,
  - 3.4 Product Value?
4. Is there is significant relationship between the socio-demographic profile of business administration respondents and product satisfaction?
5. Is there is significant relationship between product advertising experience and product satisfaction?

## **Methods**

### **Research Design**

Linear regression correlation method to analyze the data to describe relationships among the variables. The correlation research method is used to study the socio-demographic profile of business administration students and product advertisements. Moreover, to study the relationship between product advertisements and product satisfaction. Survey questionnaires were utilized to gathered data from selected business administration students from St. Peter's College, Iligan City to analyze the data about the effect of advertising on product satisfaction in the context of mobile device purchases.

## Participants

The research design is linear regression. The population of the study is composed of 164 business administration students in the College of Business Administration department in St. Peter's College, Iligan City. Decided to include selected both males and females in all year levels as sample to make result of the study reliable. It was purpose sampling.

**Table 1.** College of Business Administration students

Gender	Population
Male	61
Female	132
<b>Total</b>	<b>164</b>

## Instrument

The research instruments were adapted and composed of six (6) sets of questionnaires. The first part of the questionnaire deals with online advertising by Nizam & Jafar (2018), Interactive online advertising: The effectiveness of marketing strategy towards customers purchase decision. The second questionnaire focuses on traditional advertising by Bezjian-Avery et al. (2019), New media interactive advertising vs. traditional advertising implementing evidence-based. Third questionnaire was relied on product performance by Cohen et al. (2000). Fourth questionnaire stayed on product features by Mahadik et al. (2022), The role of data analysis in enhancing product features. Fifth questionnaire relied on product quality by Naini et al. (2022), The effect of product quality, service quality, customer satisfaction on customer loyalty. The sixth which the last questionnaire focus on product value by Guo et al. (2021), Estimation of product success potential using product value.

## Results and Discussion

Table 2 presents the age distribution of business administration students. The results show that 5% of respondents are aged 31 and older, 10% are between 26 and 30, 64% fall within the 21-25 age range. Notably, the majority of participants belong to the 21-25 age group. According to Munsch (2021), age significantly influences how different generations engage with digital content, with a preference for short-form videos and social media interactions.

**Table 2.** Age of the Business Administration students

Age	Frequency	Percentage
19-20 years old	34	21.0
21-25 years old	105	64.0
26-30 years old	16	10.0
31 years old and above	9	5.0
<b>Total</b>	<b>164</b>	<b>100.00</b>

As shown in Table 3 the business administration students' respondents, 66% indicating a clear majority of female respondents. This gender distribution is significant as it suggests that the perspectives and preferences of women will likely shape the study's findings on advertising and product satisfaction. Understanding this demographic can help marketers tailor their strategies to better connect with the predominantly female audience in mobile device purchases. According to the study by K V et al. (2021), gender significantly influences how consumers respond to advertising, especially regarding mobile device purchases. The research found that advertisements' elements, such as emotional appeal, creativity, and credibility, are crucial in shaping purchase intentions. Notably, there are differences in how male and female consumers react to these advertising strategies, highlighting the importance of tailoring ads to meet the preferences of each gender for better products.

**Table 3.** Gender of the Business Administration students

Gender	Frequency	Percentage
Male	55	34.0
Female	109	66.0
<b>Total</b>	<b>164</b>	<b>100.0</b>

In Table 4, the socio-demographic profile of business administration students regarding their parents' monthly income reveals that 68% between P5000 and 9,999, making this the largest group in the study. Understanding this income profile is essential for marketers to tailor their advertising strategies effectively and meet the needs of consumers when promoting mobile devices. According to Pryshchenko (2021). This generation has been impacted by economic instability. It is more about saving money valued in their purchases and responding better to marketing emphasizing cost-effectiveness and investment value.

**Table 4.** Parents' monthly income

Parents' Monthly Income	Frequency	Percentage
P5,000-9,999	12	68.0
P10,000-14,999	35	21.0
P15,000 and above	17	11.0
<b>Total</b>	<b>164</b>	<b>100.00</b>

Table 5 shows respondents' satisfaction with their mobile device purchase, which aligns with their expectations based on online advertising. Customers appear happy with their choice, as indicated by the mean score of 3.01 for purchase satisfaction. The study by K V et al. (2021) supports this viewpoint and discovers that user-generated reviews, engaging content, and the authority of social influencers strongly influence consumer purchase intentions. Their research supports the current findings by underscoring how social media engagement can boost trust and encourage purchases through interactive and aesthetically appealing advertisements, as stated by K V et al. (2021), giving customers two-way communication reviews and easy access to product information. Technology has changed over time to meet the demands of the industry (Ungureanu et al., 2022). Online advertising is practical and valuable (Bhat et al., 2020). Using online influencer marketing (Leung et al., 2022) also attracts consumers to purchase a mobile device.

**Table 5.** Online advertising

Statement	Mean	Standard Deviation	Description
I was happy with my purchase, and my expectations were met with what I saw in the online advertising.	3.01	0.61	Agree
I was convinced by the reviews I saw on social media.	2.98	0.62	Agree
I was attracted to buy their brand promotion about the mobile device.	2.99	0.59	Agree
I was attracted to buy the mobile device by seeing it in online advertising.	2.92	0.63	Agree
I was convinced by the social influencer's mobile device reviews.	2.93	0.68	Agree
<b>Overall Mean</b>	<b>2.96</b>	<b>0.63</b>	<b>Agree</b>

Interestingly, the product's in-store displays and promotional offers received the highest mean scores (3.08) as can be seen in Table 6, which implies that physical rewards and eye-catching displays work incredibly well at influencing customers to buy. The overall average mean score of 2.92 supports the idea that different promotional tactics influence consumer behavior, and there is broad consensus regarding their efficacy. Mustafa and Al-Abdallah (2020) provide evidence supporting this analysis by pointing out the substantial influence that traditional advertising channels have on consumer purchasing decisions, focusing on strategies like personal selling and promotional offers. Similarly, Mirsa and Dwivedi (2021) discuss how traditional advertising determinants appeal to young consumers, highlighting the significance of direct interaction and alluring promotions in influencing buying decisions. When taken as a whole, these studies confirm that although various advertising techniques can affect consumer decisions, individual engagement and alluring promotional offers stand out as crucial elements in strengthening persuasion and easing purchase decisions.

**Table 6.** Traditional advertising

Statement	Mean	Standard Deviation	Description
The sales promotion convinced me via flyers.	2.65	0.74	Agree
I was convinced by the sales agents to give me exact specifications of the mobile device.	2.90	0.67	Agree
I was convinced by the product's description on the banner.	2.87	0.66	Agree
I was convinced by product's promo deals.	3.08	0.71	Agree
I was convinced by the mobile device that displayed in-store.	3.08	0.68	Agree
<b>Overall Mean</b>	<b>2.92</b>	<b>0.69</b>	<b>Agree</b>

As shown in Table 7, The product features and usability received the highest mean score of 3.29, indicating a "very satisfied." The study by Halim et al. (2021) supports these conclusions by highlighting the importance of assessing performance metrics like responsiveness, speed, and resource management to improve user experience in mobile applications. According to their research, efficient performance testing is essential to guaranteeing that mobile apps satisfy user demands for responsiveness and resource efficiency. The satisfaction levels indicated in this evaluation are consistent with users' expectations that applications should run smoothly and not consume excessive resources or batteries. To sustain high levels of user satisfaction, this evaluation and the accompanying study highlight the importance of ongoing performance monitoring and optimization in mobile app development. They also recommend that developers concentrate on key performance indicators to improve the overall user experience in a cutthroat market.

**Table 7.** Product performance

Statement	Mean	Standard Deviation	Description
I am satisfied with the mobile device's speed when using different applications.	3.03	0.64	Satisfied
I am satisfied with preserving device resources (CPU, RAM) while using mobile applications.	3.15	0.61	Satisfied
I am with satisfied with partitioning mobile applications tasks based on the complexity and resources to optimize performance (Split screen, widget).	3.08	0.63	Satisfied
I am satisfied with the product features and its friendly device.	3.25	0.60	Satisfied
I am satisfied with the storage capacity of the mobile device.	3.29	0.66	Very Satisfied
<b>Overall Mean</b>	<b>3.16</b>	<b>0.63</b>	<b>Agree</b>

Table 8 shows that the highest mean score of 3.20 was notably awarded to privacy and security features, highlighting the growing significance consumers place on security when data breaches are common. These results can be interpreted from the framework developed by Rahman and Sultana (2022); this alignment implies that manufacturers should concentrate on these to improve user satisfaction further. Additionally, knowing local consumer behavior can help businesses effectively customize their products to fit particular needs. Businesses can attract new customers and increase customer loyalty by highlighting efficiency, customization options, ease of use, and strong security measures in their marketing campaigns. These findings indicate that consumers are delighted with mobile devices, offering manufacturers helpful advice on enhancing user experience and successfully meeting customer demands. Also, according to Rai et al. (2022), consumers prioritize mobile phones with advanced features and enhanced usability.

**Table 8.** Product features

Statement	Mean	Standard Deviation	Description
I am impressed by the accessibility and ease of use.	3.19	0.62	Satisfied
I am pleased with how effectively and efficiently the mobile meet my needs.	3.18	0.70	Satisfied
I am satisfied with the level of customization and flexibility the mobile device offers.	3.17	0.63	Satisfied
I am satisfied with the phone's specifications.	3.15	0.64	Satisfied
I am pleased with the mobile device's privacy and security features.	3.20	0.62	Satisfied
<b>Overall Mean</b>	<b>3.18</b>	<b>0.64</b>	<b>Agree</b>

Based on Table 9, the findings suggest that users are generally satisfied with various mobile device features. The overall mean of 3.23, with a 0.69 standard deviation, indicates a consistent level of satisfaction with all indicators. The highest mean score of 3.35 for fast charging and battery life features indicates that consumers strongly value these features and express a strong positive sentiment. According to Vioretnina et al. (2023), which provides a framework for understanding these findings. Product quality has a significant effect on purchase decisions. The focus on product quality is consistent with high camera features and battery life ratings, indicating that these factors significantly impact buying decisions.

**Table 9.** Product quality

Statement	Mean	Standard Deviation	Description
I am satisfied with the performance of the mobile device.	3.13	0.69	Satisfied
I am satisfied with the device's long battery life and fast charging features.	3.35	0.69	Very Satisfied
I am satisfied with the design and appeal of the mobile device.	3.22	0.63	Satisfied
I am satisfied with the speed and connectivity.	3.22	0.66	Satisfied
I am satisfied with the quality of the camera features and the high definition of the photos.	3.22	0.69	Satisfied
<b>Overall Mean</b>	<b>3.23</b>	<b>0.67</b>	<b>Satisfied</b>

Table 10 shows that consumers value a product's functionality and performance more than cost. Interestingly, satisfaction with productivity tools has the highest mean score (3.22). The results suggest that features like calendars, note-taking applications, and document editing software are highly valued by users and probably improve their overall experience. These results are consistent with the study by N'da et al. (2023) that examines how Swedish and Japanese millennials perceive the value of smartphones, indicating that the product appeals to similar demographic groups. Enhancing marketing initiatives centered on these valued features and obtaining more detailed user feedback to pinpoint areas needing development or improvement would be helpful in building on this positive feedback.

**Table 10.** Product value

Statement	Mean	Standard Deviation	Description
I am happy with product's price as it meets my expectations.	3.08	0.70	Satisfied
I am satisfied with the overall performance of the product in terms of price.	3.15	0.58	Satisfied
I am happy to meet my expectations in terms of functionality.	3.21	0.57	Satisfied
I am satisfied with the productivity tools such as calendars, note-taking apps, document editing software, and reminders.	3.22	0.56	Satisfied
I am satisfied with the display resolution on mobile devices.	3.17	0.57	Satisfied
<b>Overall Mean</b>	<b>3.16</b>	<b>0.59</b>	<b>Satisfied</b>

As can be seen in Table 11, The negative correlation coefficient (-0.253) indicates an inverse relationship between income and product advertising experience. This means that as income increases, product advertising experience tends to decrease; conversely, as income decreases, product advertising experience tends to increase. The p-value of 0.002 is less than the conventional significance level (e.g., 0.05 or 0.01). This means that the observed relationship between income and product advertising experience is unlikely to have occurred by random chance. The significant negative correlation between income and product advertising experience suggests that product advertising may be more impactful or more frequently encountered by individuals with lower incomes. In comparison, those with higher incomes may have less overall product advertising experience. This insight is crucial for businesses and advertisers to tailor their marketing strategies effectively based on the target audience's income level.

#### *Practical Implications/Possible Interpretations:*

(1) Less exposure/engagement for higher-income individuals: higher-income individuals might be less exposed to or less influenced by product advertising. This could be for several reasons: different media consumption habits: they might consume less traditional media (tv, radio, print) where advertising is prevalent, opting for subscription-based services or ad-free content. (2) Brand loyalty/established preferences: they might already have established brand loyalties or preferences and thus pay less attention to new advertisements. (3) Access to information: higher-income individuals might rely more on independent reviews, expert opinions, or personal recommendations rather than advertisements for purchasing decisions. (4) Less price sensitive: they might be less influenced by promotional advertising highlighting discounts or deals.

**Table 11.** Significant relationship between socio-demographic profile and product advertising experience

Socio-demographic profile	Correlation coefficient	p-value	Interpretation
Age	0.116	0.162	Not significant
Gender	0.000	0.997	Not significant

Income	-0.253	0.002	Significant
--------	--------	-------	-------------

As can be seen in Table 12, age does is not also significantly related with product satisfaction ( $p = 0.646$ ). The non-significant relationships between age and product advertising experience and product satisfaction suggest that age, in this context, is not a primary predictor or influencing factor for how much product advertising an individual experiences or their level of satisfaction with a product.

### *Implications for product advertising experience*

(1) Universal exposure/engagement: this finding implies that the amount or frequency of exposure to product advertising, or how individuals perceive that experience, does not significantly vary across different age groups within the studied population. Advertisers should not drastically alter the volume or channels of their advertising based solely on the age of their target audience, as all age groups appear to experience advertising similarly in quantity or presence. (2) Focus on other demographics/psychographics: instead of age, other sociodemographic factors (like income, as previously discussed) or psychographic factors (e.g., lifestyle, interests, values, and media consumption habits) might be more relevant in explaining variations in product advertising experience. (3) Content still matters: while advertising experience may not differ by age, the relevance and appeal of advertising content certainly can. This finding does not negate the importance of tailoring ad content to specific age groups' preferences, humor, or stages of life.

### *Implications for product satisfaction*

(1) Satisfaction is Age-Agnostic: This suggests that their age does not significantly influence how satisfied individuals are with products. A 20-year-old is just as likely to be satisfied (or dissatisfied) with a product as a 60-year-old, assuming other factors are equal. (2) Focus on Product Attributes/Service: Product satisfaction is likely driven by universal factors such as product quality, functionality, performance, value for money, customer service, and alignment with consumer needs rather than the consumer's age. (3) Broad Appeal: For product developers and marketers, efforts to enhance product satisfaction should focus on improving the product's core attributes and the overall customer experience, as these efforts are likely to resonate across all age demographics.

**Table 12.** Significant relationship between socio-demographic profile and product satisfaction

Socio-demographic profile	Correlation coefficient	p-value	Interpretation
Age	0.039	0.646	Not significant

A significant positive relationship exists between product advertising experience and product satisfaction (correlation coefficient = 0.550,  $p = 0.000$ ) as can be seen in Table 13. This implies that effective product advertising is associated with higher product satisfaction. Based on the data, the study can propose a simple linear regression equation: Product Satisfaction =  $\beta_0 + \beta_1$  (Product Advertising Experience) +  $\epsilon$ . Where  $\beta_0$  is the intercept or constant term,  $\beta_1$  is the regression coefficient (0.550) and  $\epsilon$  is the error term. This equation suggests that for every unit increase in product advertising experience, product satisfaction increases by 0.550 units, indicating a strong positive relationship between effective advertising and customer satisfaction.

### *Implications for product satisfaction*

(1) Targeted advertising: given the significant relationship between income and product advertising experience/satisfaction, businesses may need to tailor their advertising strategies based on income groups. Higher-income groups require more nuanced or different advertising

approaches. (2) Effective advertising: the significant positive relationship between product advertising experience and product satisfaction highlights the importance of investing in effective advertising strategies to enhance customer satisfaction and potentially increase loyalty and positive word-of-mouth. (3) Demographic-neutral advertising: the lack of significant relationships between age, gender, and product advertising experience/satisfaction suggests that advertising strategies might not need to be heavily tailored based on these demographics, allowing for more universal approaches.

**Table 13.** Relationship between product advertising experience and product satisfaction

	Correlation coefficient	p-value	Interpretation
Product satisfaction	0.550	0.000	Significant

## Conclusion

This study explores the relationship between product advertising experience and product satisfaction among business administration students. It considers the effects of online and traditional advertising on product satisfaction, considering socio-demographic factors like age, gender, and income. Positive advertising interactions are associated with higher product satisfaction, particularly regarding features, performance, quality, and value. Product advertising experience and product satisfaction are significantly related ( $r = 0.550$ ,  $p\text{-value} = 0.000$ ). Income influences the relationship between product advertising experience and product satisfaction. To optimize engagement and satisfaction, marketers should consider the differences in how various demographic groups respond to advertising. Marketers can improve product satisfaction and overall customer experience by tailoring their strategies to specific segments.

## References

- Bezjian-Avery, A., Calder, B., & Iacobucci, D. (1998). New Media Interactive Advertising vs. Traditional Advertising. *Journal of Advertising Research*, 38(4), 23–32. <https://doi.org/10.1080/00218499.1998.12466563>
- Bhat, S. A., Islam, S. B., & Lone, U. M. (2021). Antecedents and consequences of online buying behavior: a mediation study. *South Asian Journal of Business Studies*, 12(1), 54–78. <https://doi.org/10.1108/sajbs-07-2020-0223>
- Cohen, M. A., Eliashberg, J., & Ho, T. H. (2000). An analysis of several new product performance metrics. *Manufacturing & Service Operations Management*, 2(4), 337–349. <https://doi.org/10.1287/msom.2.4.337.12341>
- Guo, J., Peng, Q., Zhang, L., Tan, R., & Zhang, J. (2020). Estimation of product success potential using product value. *International Journal of Production Research*, 59(18), 5609–5625. <https://doi.org/10.1080/00207543.2020.1788733>
- Halim, E., Aprilianto, M. S., Maya Kristin, D., Sukmaningsih, D. W., Chandra, Y., & Hebrard, M. (2024). Examining Customer Behavior for SMEs in Mobile Food Online Delivery (MFOD) Applications. *2024 3rd International Conference on Creative Communication and Innovative Technology (ICCIIT)*, 1–6. <https://doi.org/10.1109/ICCIIT62134.2024.10701085>
- K V, S., Kp, N., & Kamath, G. B. (2021). Social media advertisements and their influence on consumer purchase intention. *Cogent Business & Management*, 8(1), 2000697. <https://doi.org/10.1080/23311975.2021.2000697>
- Leung, F. F., Gu, F. F., & Palmatier, R. W. (2022). Online influencer marketing. *Journal of the Academy of Marketing Science*, 50(2), 226–251. <https://doi.org/10.1007/s11747-021-00829-4>
- Mahadik, S., Khatri, D., Bhimanapati, V., Goel, L., & Jain, A. (2024). The Role of Data Analysis In Enhancing Product Features. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4985275>
- Munsch, A. (2021). Millennial and generation Z digital marketing communication and advertising effectiveness: A qualitative exploration. *Journal of Global Scholars of Marketing Science*, 31(1), 10–29. <https://doi.org/10.1080/21639159.2020.1808812>
- Mustafa, S., & Al-Abdallah, G. (2020). The evaluation of traditional communication channels and its impact on purchase decision. *Management Science Letters*, 1521–1532. <https://doi.org/10.5267/j.msl.2019.12.014>
- Naini, N. F., Santoso, N. S., Andriani, T. S., Claudia, U. G., & Nurfadillah, N. (2022). The effect of product quality, service quality, customer satisfaction on customer loyalty. *Journal of Consumer Sciences*, 7(1), 34–50. <https://doi.org/10.29244/jcs.7.1.34-50>
- Nizam, N., & Jaafar, J. (2018). Interactive Online Advertising: The Effectiveness of Marketing Strategy towards Customers Purchase Decision. *International Journal of Human and Technology Interaction*, 2(2), 9–16. <https://ijhati.utem.edu.my/ijhati/article/view/3693>
- Pryshchenko, S. V. (2021). Cultural heritage of a poster: communicative and creative experience. *Creativity Studies*, 14(1), 18–33. <https://doi.org/10.3846/cs.2021.12605>

- Rai, N., & Srivastava, A. (2024). Drivers of consumer trust in mHealth apps among young consumers: a socio-technical approach. *Young Consumers Insight and Ideas for Responsible Marketers*, 26(1), 36–60. <https://doi.org/10.1108/yc-03-2024-2043>
- Rahman, M. B., & Sultana, S. (2022). Factors Influencing Purchasing Behavior of Mobile Phone Consumers: Evidence from Bangladesh. *Open Journal of Social Sciences*, 10(07), 1–16. <https://doi.org/10.4236/jss.2022.107001>
- Ungureanu, D. M. (2022). *Reviving productivity growth in urban economies*. Questa Soft. <https://www.cceol.com/search/article-detail?id=1034204>
- Viorentina, D., & Santoso, S. (2023). Influence of Brand Image, Product Quality, and Lifestyle on Smartphone Purchase Decision in Indonesia. *Expert Journal of Marketing*, 11(1), 25–33. [https://marketing.expertjournals.com/ark:/16759/EJM\\_1103viorentina25-33.pdf](https://marketing.expertjournals.com/ark:/16759/EJM_1103viorentina25-33.pdf)
- Xie, Y., Xie, L., Lu, M., & Yan, H. (2020). Performance-Price-Ratio Utility: market equilibrium analysis and empirical calibration studies. *Production and Operations Management*, 30(5), 1442–1456. <https://doi.org/10.1111/poms.13331>