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Marketing Deception as a Hidden Factor Influencing Consumer Behavior: An Analytical Study of Consumer Attitudes toward Consumer Products

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Abstract

This study aimed to investigate deceptive marketing as a hidden factor influencing consumer behavior, through an analytical exploration of consumer attitudes toward consumer products. The researcher adopted a descriptive and analytical methodology to highlight and analyze the concepts relevant to the study topic and to extrapolate the findings. A survey was conducted with a sample of 400 consumers who regularly purchase consumer products and have either current or previous exposure to marketing advertisements delivered via traditional or digital channels. To achieve the study's objectives, a questionnaire consisting of 24 items was designed to collect primary data from the sample. Data were then collected and analyzed accordingly.

The study yielded several key findings, most notably: There is a statistically significant effect of deceptive pricing on consumer attitudes toward consumer products.

Promotional exaggeration significantly affects consumer attitudes. The study also found a statistically significant impact of dark patterns, such as forced continuity, hidden costs, and manipulative design, on consumer attitudes. Based on the results, the study presented several recommendations, including: For marketers and companies: adopt transparent and ethical marketing practices, and avoid deceptive pricing or hidden costs. For consumers: increase awareness of deceptive marketing techniques and avoid relying solely on first impressions from advertisements.

Keywords: Marketing Deception, Consumer Behavior, Consumer Products

Introduction

In the current marketing environment, characterized by intense competition and rapid technological advancement, marketing deception has emerged as one of the most prominent challenges facing consumers globally. Marketing deception refers to unethical practices aimed at creating false perceptions or misleading impressions in the minds of consumers regarding the product or one of the elements of the marketing mix (price, promotion, or place). These deceptive tactics often lead consumers to make purchase decisions that may cause them material or psychological harm due to a lack of transparency and credibility in marketing messages (Neama & Al-Sammorraie, 2024) [6].

Recent literature indicates that deceptive marketing practices are no longer limited to exaggeration of features or misleading packaging but have evolved to include the use of dark patterns in websites and e-commerce applications. These are interface design strategies intentionally crafted to manipulate users into making decisions that do not serve their best interests (Mathur *et al.*, 2022) [5]. Such subtle tactics weaken consumer autonomy and directly affect purchasing behavior and trust in brands.

Multiple studies have shown that exposure to misleading marketing content contributes to a decline in purchase intentions, erosion of brand trust, and potentially negative reactions toward the broader market especially in the absence of effective regulation of digital marketing content (Voigt *et al.*, 2021) [9]. Furthermore, the increasing use of artificial intelligence in promotional strategies has intensified this phenomenon. Research has demonstrated that conversational AI tools can influence consumer behavior without their awareness, raising profound ethical and regulatory concerns (Werner *et al.*, 2024) [10].

The growing prevalence of deceptive marketing has prompted academic and regulatory institutions to propose legal and educational recommendations aimed at protecting consumers and promoting market transparency. Accordingly, this study aims to analyze the extent to which marketing deception as a hidden influence impacts consumer behavior and attitudes toward consumer products, with a particular focus on the hidden mechanisms of influence and their implications for purchase intentions, trust, and brand loyalty.

Research Problem Statement

In the era of digital transformation and global commerce, deceptive marketing practices have become increasingly prevalent, including false claims, hidden fees, misleading imagery, and dark pattern user interface designs, all of which influence consumer behavior. These unethical practices distort product information and pricing, reduce transparency, and erode consumer trust. Despite growing evidence of their harmful effects, current research reveals significant theoretical and practical gaps that hinder a comprehensive understanding of marketing deception. Theoretical gaps include a limited integration of deception theory into marketing research, as studies on deceptive designs and dark patterns often remain isolated and lack strong theoretical grounding within consumer behavior literature. Additionally, there is conceptual ambiguity in the field, as terms such as "consumer manipulation," "dark patterns," and "deceptive advertising" are used interchangeably, which undermines comparability across studies and obstructs cumulative theory building. (Neama & Al-Sammarraie, 2024) [6]. Furthermore, little attention has been given to the mediating role of consumer attitudes, perceived fairness, and moral identity in shaping reactions to different deceptive tactics, leaving the mechanisms of trust erosion and behavioral change underexplored. On the practical side, research has largely ignored regional and cross-cultural contexts, particularly in emerging markets such as Jordan, where most studies focus on brand-image deception and purchase intention without examining pricing strategies or digital interface deception. Empirical evidence also tends to be cross-sectional, capturing short-term reactions while neglecting long-term consequences such as the gradual erosion of trust and loyalty. Moreover, the rise of AI-driven marketing tools that enable dynamic pricing, personalized promotions, and urgency messaging introduces new risks of deception, yet their effects on consumer autonomy and attitudes remain under-investigated. Addressing these gaps requires a comprehensive study that develops a clear theoretical framework linking deceptive marketing practices, including dark patterns and AI personalization, to consumer trust, attitudes, and loyalty, establishes a standardized taxonomy of deceptive tactics, conducts empirical research in under-studied digital markets, explores mediating mechanisms such as perceived fairness and moral identity, and considers both short-term and long-term effects. By doing so, the study aims to provide critical insights for academics, policymakers, consumer advocates, and marketers seeking to promote ethical transparency and protect consumers in digital commerce.

Study Objectives

To examine the impact of marketing deception on consumers' attitudes toward consumer products.
 To examine the impact of marketing deception (misleading pricing) on consumers' attitudes toward consumer products.
 To examine the impact of marketing deception (promotional exaggeration) on consumers' attitudes toward consumer products.
 To examine the impact of marketing deception (dark patterns) on consumers' attitudes toward consumer products.
 To provide practical recommendations for marketers and policymakers to minimize the negative impact of deceptive marketing on consumer behavior.

Research Hypotheses

To reach a scientifically sound solution to the research problem, the following main null hypothesis is proposed:

H₀: There is no statistically significant effect of marketing deception (deceptive pricing, promotional exaggeration, and dark patterns) on consumer attitudes toward consumer products.

From this main hypothesis, the following null sub-hypotheses are derived:

H_{0.1}: There is no statistically significant effect of deceptive pricing on consumer attitudes toward consumer products at the 0.05 significance level.

H_{0.2}: There is no statistically significant effect of promotional exaggeration on consumer attitudes toward consumer products at the 0.05 significance level.

H_{0.3}: There is no statistically significant effect of dark patterns on consumer attitudes toward consumer products at the 0.05 significance level.

Theoretical Framework

Neama'a & Al-Sammarraie (2024) [6] Investigating deceptive marketing in Iraq, this study found statistically significant negative relationships between product deception, price deception, and customer loyalty. Voigt *et al.* (2021) [9] Dark Patterns in Online Shopping. Experimental comparison of mock sites with/without dark patterns revealed higher perceived annoyance and significantly lower brand trust among exposure group. Tourism Management (2023) [8] Dark Patterns & Consumer Fairness. Two scenario-based experiments within travel agencies show that moral identity and social proof moderate the impact of dark patterns on perceived fairness and attitudes. sector. Singh *et al.* (2024) Prioritizing Dark Patterns in E-commerce Using AHP, the study ranks dark patterns (e.g., urgency, forced action) in terms of profitability and consumer annoyance. Mathur *et al.* (2019) Dark Patterns at Scale Large-scale web crawl (11K shopping sites) identified 15 dark-pattern types and developed a typology. Berry (2024) Consumer Lying in Online Reviews. Examines misrepresentation by reviewers; shows how deceptive content in reviews undermines trust and decision-making Shabbir & Thwaites (Journal of Advertising) Assessment of 238 national ad campaigns: 73.5% had deceptive elements; humor was frequently used to mask misleading claims. Wired (2020) Mechanics of Dark Pattern Usage by Retailers Examines how fake scarcity, peer pressure, and countdown timers are used to manipulate spending; cites prevalence on >11% of sites. Jack Morton (2024) - Global Brand Trust Study Reports rising consumer skepticism about broken brand promises post-AI era; over 50% say they no longer trust brands that overpromise. 10. Wang *et al.* (2023) AR Environments & Manipulative Design Shows dark patterns are effective even in augmented reality, using attention-capturing haptic and visual techniques. Journal of Business Research (2024) Disinformation in Branding Examines how false claims by socially responsible brands misalign expectations and hurt sales using expectancy-disconfirmation theory. Fairpatterns Newsletter (2024) Arizona v. Amazon Case Discusses regulatory response to Amazon's use of dark patterns to deter subscription cancellation, illustrating legal implications. Media Metrics (2023) Explains how dark patterns hidden fees, misdirection erode consumer trust and prompt legal issues. Reddit Discussion on AI-Dark Patterns

(2025) Community insights implying that dynamic pricing, urgency messages, and auto-selected options are AI-enhanced deception tools. Survey Circle Disclosures and Consumer Behavior (2024) Crowdsourced study invitation indicating public concern about influencer marketing transparency and disclosure effects.

Study Methodology

To achieve the objectives of this study, the researcher employed the descriptive-analytical approach to describe the demographic characteristics of the study sample and to examine their assessments and perceptions regarding the impact of marketing deception on consumer attitudes toward consumer products. Given the nature of the research, the analytical approach was adopted, whereby the researcher designed and utilized a questionnaire as the primary data collection tool. This approach was chosen due to its wide applicability and suitability for studying phenomena as they exist in reality, enabling accurate description and both qualitative and quantitative analysis.

Study Population and Sample

The study population consists of all individuals in the Jordanian market who consume consumer products and have previous or current experience with marketing advertisements delivered through traditional or digital channels. Particular focus is placed on individuals exposed to modern marketing practices such as promotional exaggeration, deceptive pricing, or user interface designs containing *dark patterns*. Given the analytical nature and objectives of the study, the researcher adopted a purposive non-probability sampling method, whereby participants were selected based on specific criteria, including:

- The respondent must have purchased at least one consumer product within the past six months.
- The respondent must have been exposed to either digital or traditional marketing campaigns related to consumer products.
- The respondent must be 18 years of age or older.
- The respondent must be able to read and understand the questionnaire items.

The selected sample consisted of approximately 400 participants, and data were collected through an online questionnaire distributed via social media platforms and email, in addition to select retail outlets in shopping centers. This approach aimed to ensure representation from diverse consumer segments in terms of gender, age, educational level, and income. This sample is considered appropriate for the study, as it reflects direct engagement with marketing campaigns and enables the measurement of consumers' perceptions of marketing deception and its impact on their attitudes and purchasing behavior.

Cronbach's Alpha

Table 1: Presents the internal consistency reliability coefficients (Cronbach's Alpha) for the dimensions of the questionnaire.

S. No	Study Variables	Number of Items	Cronbach's Alpha
1	Deceptive Pricing	4	0.86
2	Promotional Exaggeration	4	0.96
3	Dark Patterns	4	0.85
	Overall Instrument	12	0.88

As shown in **Table 1**, the highest reliability coefficient among the questionnaire dimensions was recorded for **Promotional Exaggeration** at **0.96**, followed by **Deceptive Pricing** at **0.86**. The lowest reliability value was observed for the **Dark Patterns** dimension, at **0.85**.

These results indicate that all dimensions exceed the generally accepted threshold of **0.70**, suggesting a high level of internal consistency. Therefore, the instrument can be considered statistically reliable, and the data collected through its application are likely to yield consistent and dependable results.

Data Analysis and Discussion of Results

This section aims to analyze the data collected through the study instrument. It includes a description of the study sample, an analysis and discussion of the hypotheses, and answers to the research questions.

Table 2: Means and Standard Deviations of Marketing Deception Dimensions

No.	Dimension	Mean	Std. Deviation	Interpretation Based on Mean
1	Deceptive Pricing	4.18	0.90	High
2	Promotional Exaggeration	3.46	0.95	High
3	Dark Patterns	3.58	0.80	High
	Overall Mean	3.62	0.885	—

Commentary on the Results

The findings presented in Table 3 reveal that respondents perceive all dimensions of **marketing deception** as being present at a **high level** in consumer product marketing, based on their average ratings.

- The dimension of **Deceptive Pricing** recorded the **highest mean (4.18)**, indicating a strong perception among consumers that pricing strategies are often misleading—whether through hidden fees, artificial discounts, or manipulative price anchoring. This may suggest that consumers are increasingly aware of deceptive pricing tactics and feel significantly affected by them.
- **Promotional Exaggeration** had a mean score of **3.46**, which also falls within the high category, albeit lower than the other dimensions. This implies that while exaggerated claims and overpromising in advertisements are still prevalent, they may not be as frequently noticed or considered as deceptive as pricing strategies.
- The **Dark Patterns** dimension, which includes manipulative interface designs and behavioral nudges, received a mean score of **3.58**, suggesting a growing concern among consumers regarding subtle interface-level deception in both digital and offline environments.
- The **overall mean score of 3.62** confirms that marketing deception is **perceived to be widespread and impactful**, which aligns with recent literature highlighting the erosion of consumer trust and ethical concerns in marketing communications.

These results underscore the importance of increasing transparency in marketing strategies and suggest that deceptive practices, particularly in pricing, may significantly influence consumer attitudes and behaviors justifying regulatory attention and further academic inquiry.

Hypothesis Testing

H₀: There is no statistically significant effect of marketing deception (deceptive pricing, promotional exaggeration, and dark patterns) on consumer attitudes toward consumer products.

From this main hypothesis, the following null sub-hypotheses are derived:

H_{0.1}: There is no statistically significant effect of **deceptive pricing** on consumer attitudes toward consumer products at the 0.05 significance level.

Table 3: One-Sample T-Test Results for Deceptive Pricing

Item	Mean	Std. Deviation	t (Calculated)	T (Tabulated)	df	Sig. (p-value)	Decision
Sub-Hypothesis H _{0.1}	3.809	0.471	23.808	1.655	380	0.000	Reject H ₀

Interpretation and Analysis

As shown in **Table 3**, the **mean score (3.809)** for deceptive pricing is **significantly higher** than the test value of 3. The **calculated t-value (23.808)** greatly exceeds the **critical t-value (1.655)** at **149 degrees of freedom** and a **significance level of 0.05**.

Moreover, the **p-value (Sig.) is 0.000**, which is well below the threshold of 0.05. This indicates that the result is statistically significant.

Conclusion:

We **reject the null hypothesis (H_{0.1})** and **accept the alternative hypothesis (H_{1.1})**, which states that: **There is a statistically significant effect of deceptive**

pricing on consumer attitudes toward consumer products.

This suggests that deceptive pricing practices such as hidden fees, manipulated discounts, or misleading price comparisons have a **noticeable and measurable influence** on how consumers perceive and evaluate consumer products. These findings reinforce the importance of price transparency and ethical pricing strategies in building consumer trust and maintaining positive brand attitudes.

Sub-Hypothesis H_{0.2}

There is no statistically significant effect of promotional exaggeration on consumer attitudes toward consumer products at the 0.05 significance level.

Table 4: One-Sample T-Test Results for Promotional Exaggeration

Item	Mean	Std. Deviation	t (Calculated)	t (Tabulated)	df	Sig. (p-value)	Decision
Sub-Hypothesis H _{0.2}	3.998	0.578	21.602	1.655	380	0.000	Reject H ₀

Interpretation and Analysis

As illustrated in **Table 4**, the **mean score** for promotional exaggeration is **3.998**, which is notably higher than the test benchmark of 3. This suggests that respondents perceive promotional exaggeration to be significantly present and influential in their consumer experiences.

The **calculated t-value (21.602)** far exceeds the **critical t-value (1.655)** at **149 degrees of freedom**, and the **p-value (0.000)** is well below the commonly accepted significance threshold of 0.05. These indicators confirm that the result is **statistically significant**.

Conclusion:

We **reject the null hypothesis (H_{0.2})** and **accept the alternative hypothesis**, which states:

There is a statistically significant effect of promotional exaggeration on consumer attitudes toward consumer products.

This finding indicates that overstated advertising claims such as exaggerated product benefits, unrealistic promises, or misleading visual content can significantly influence how consumers perceive, evaluate, and form attitudes toward products. It underscores the need for **ethical advertising practices** and **regulatory oversight** to maintain consumer trust and protect buyers from manipulation.

Sub-Hypothesis H_{0.3}

There is no statistically significant effect of dark patterns on consumer attitudes toward consumer products at the 0.05 significance level.

Table 5: One-Sample T-Test Results for Dark Patterns

Item	Mean	Std. Deviation	t (Calculated)	t (Tabulated)	df	Sig. (p-value)	Decision
Sub-Hypothesis H _{0.3}	3.852	0.528	21.638	1.645	380	0.000	Reject H ₀

As presented in **Table 5**, the **mean score (3.852)** for the dark patterns dimension is **well above** the test value of 3, indicating that respondents strongly perceive the presence of dark pattern tactics in marketing—such as forced continuity, hidden costs, or manipulative UI elements.

The **calculated t-value (21.638)** far exceeds the **tabulated t-value (1.645)** at **380 degrees of freedom**, and the **significance level (p-value) is 0.000**, which is significantly less than the conventional alpha level of 0.05. These results indicate that the observed effect is **statistically significant**.

Conclusion

We **reject the null hypothesis (H_{0.3})** and **accept the alternative hypothesis**, which states:

"There is a statistically significant effect of dark patterns on consumer attitudes toward consumer products."

This outcome suggests that deceptive interface designs and hidden behavioral nudges in digital platforms commonly referred to as "dark patterns" have a **clear and meaningful impact** on how consumers feel and behave toward marketed products. These practices not only affect immediate decisions but may also erode long-term trust and perceived fairness.

The findings highlight the urgency of **ethical UX design** and suggest the need for **regulatory frameworks** to limit the misuse of persuasive design elements in consumer interfaces.

Conclusions

Effect of Deceptive Pricing: The findings indicate a statistically significant effect of deceptive pricing on consumer attitudes toward consumer products. The mean score was substantially higher than the test value, and the t-test confirmed the significance. This suggests that consumers are aware of deceptive pricing tactics and that these tactics influence their perceptions and attitudes.

Effect of Promotional Exaggeration: The results reveal that promotional exaggeration significantly affects consumer attitudes. Respondents clearly perceived exaggeration in marketing messages, and this had a noticeable impact on how they view consumer products.

Effect of Dark Patterns: The study also found a statistically significant impact of dark patterns such as forced continuity, hidden costs, and manipulative design on consumer attitudes. This confirms that consumers recognize these unethical practices and are negatively affected by them.

Recommendations

For Marketers and Businesses:

Adopt **transparent and ethical marketing practices**, avoiding deceptive pricing or hidden costs.

Limit **promotional exaggeration**, and focus on delivering accurate, trustworthy messages to build long-term customer trust.

Refrain from using **dark pattern strategies**, as they may harm brand reputation and reduce customer loyalty.

For Consumers:

Increase **awareness of deceptive marketing tactics** and avoid relying solely on first impressions from advertisements.

Always **review product details, terms, and pricing** before making purchase decisions-especially online.

For Regulators and Policy Makers:

Develop and enforce **strict regulations** against misleading marketing practices and the use of dark patterns.

Strengthen **monitoring and oversight mechanisms**, especially in digital marketing, to protect consumers from manipulation.

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