The Impact of E-Marketing on the Preference to Purchase Hybrid Cars by Increasing Awareness: An Empirical Study of Hybrid Car Users in the Northern Border Region, Saudi Arabia

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ABSTRACT

This research examines the impact of e-marketing on consumers' preference to purchase hybrid cars, through the conduction of a field study on the hybrid car users in the Northern Border Region in Saudi Arabia. The research aims to comprehend the relationship between e-marketing campaigns and increasing consumer awareness of the benefits of hybrid cars, and how their decisions are affected by this awareness when purchasing cars. The research aims to shed light on the role of e-marketing in encouraging the use of hybrid cars and identifying the factors influencing consumers' decisions in this context. The research aims to identify factors influencing users' responses to such information, including advertising campaigns, environmental attitudes, future orientations, and governmental incentives. A survey was conducted to a total of 385 hybrid car users and data analysis relied on structural equation modeling deploying the Amos software. The results indicate the existence of a relationship and impact between e-marketing campaigns and user awareness, leading to an increased preference for hybrid cars.

Keywords-e-marketing; consumer awareness; advertising campaigns; environmental attitude; future orientations

I.   INTRODUCTION

Nowadays, the automotive industry is considered one of the most advanced and transformative sectors. With the shift towards sustainability and increasing environmental awareness, hybrid cars have gained growing popularity. One question that is raised regards the origins and motivations of this change. At this point, the research on how the e-marketing affects consumers' inclination to buy hybrid vehicles becomes crucial. Previous studies indicate that e-marketing can be a vital factor in encouraging consumers to choose hybrid cars. E-marketing includes the employment of social media, online advertising

campaigns, email marketing, and specialized websites. However, there is a need for a more detailed study to analyze the impact of these strategies on consumer behavior.

The concept of consumption relying on alternative energy sources [1] has gained significant attention. Green vehicles have emerged intensively in new markets, and business leaders are implementing new strategies to increase the usage and demand for electric and hybrid vehicles [2]. Digital marketing has become a crucial tool for creating and expanding the desired customer base before entering new markets. Consequently, there has been a shift in purchasing behavior among customers [3]. Building different marketing strategies based on key factors that influence purchasing behavior, such as environmental consciousness, technological innovation, and emission production, is essential [4].

Marketers often utilize networks to promote goods and services, alongside online channels, such as websites, social media platforms, smartphones, email, online communities, and more [5]. The leading automotive market has witnessed substantial investments, as users on digital platforms are optimistic about the future of digital marketing in increasing awareness about hybrid and electric vehicles [6].

Social media can play a significant role in influencing customer decisions. Additionally, e-marketing is considered an important communication channel with customers and a means to increase their awareness [7]. It is considered a vital tool for companies to introduce their products and services to customers, enhance customer loyalty, increase returns, and reduce costs. Digital marketing refers to promoting a specific product or service through digital channels to reach customers. Many companies have started shifting from traditional marketing methods to digital marketing to reduce costs and reach a larger customer base [8, 9]. The rapid growth of digital marketing can be attributed to its benefits, as research has demonstrated that online shopping is superior to traditional shopping due to its convenience and ease of use [10]. The study of the impact of e-marketing on consumer preference regarding the purchase of hybrid cars is a contemporary and significant topic in both academic and industrial research.

This research aims to analyze the relationship between e-marketing campaigns and consumer preference for purchasing hybrid cars, by collecting data from hybrid car users in the Northern Border Region, Kingdom of Saudi Arabia. The research will rely on the use of targeted and specific questionnaires to gather data, and the data will be analyzed following advanced statistical techniques such as structural equation modeling. The aim of this research is to provide a meaningful contribution to the understanding of the role of e-marketing in promoting the use of hybrid cars. Additionally, an analytical framework that can be utilized by car manufacturers to enhance their marketing strategies and successfully achieve their objectives in this rapidly evolving field, will be provided.

The results of this research are expected to offer guidance to the car manufacturers and to provide practical insights to the industry as a whole. This research will also have a tangible impact on consumer decisions and choices in the car market, potentially leading to positive changes in the industry's

direction towards developing and marketing more hybrid cars in a better and more effective manner.

The significance of this study is derived from the urgent need for a deep understanding of the impact of e-marketing on consumer preference for purchasing hybrid cars and raising their awareness of their benefits. With the increasing use of social media and the advancement of digital technology, e-marketing has become a crucial factor in the success of marketing strategies and the achievement of sales objectives, through comprehending the effective impact of e-marketing, car manufacturers can direct their strategies more effectively, improve their communication with potential customers, and increase sale opportunities. Additionally, this research can enhance the development of the products and services offered, aligning them with the preferences and needs of consumers in the hybrid car market, Furthermore, this research represents a significant contribution to the promotion of environmental sustainability and the use of hybrid cars as an eco-friendly alternative. With a better understanding of the factors influencing consumer preference of hybrid cars, more people can be encouraged to adopt this technology and contribute to environmental protection and the reduction of harmful emissions.

II. LITERATURE REVIEW

An array of studies has addressed the topic of e-marketing and its relationship with consumer behavior from various perspectives. In [11], the key characteristics of consumer behavior and their interrelationships from the perspective of e-marketing were examined. The study also investigated the acceptance rate of e-marketing among consumers in Jaipur and its impact on their purchase decisions. The findings indicated that people, regardless of age and gender, browse the internet and online shopping is perceived as more convenient and time-saving, with credit cards being the preferred payment method. The paper provides guidance for improving delivery and advertising of web products and services to achieve long-term goals in e-marketing and e-commerce. Authors in [12, 13] explored the impact of e-marketing on online consumer purchasing behavior, utilizing Structural Equation Modeling (SEM) and Analytic Hierarchy Process (AHP). The results revealed a significant association between e-marketing and online consumer purchasing behavior.

Authors in [14] examined consumer preferences and attitudes towards environmentally-friendly products. This paper presented a case study on consumer adoption of hybrid vehicles, an environmentally-friendly innovation that has been present in the market since the late 1990s. The study relied on a questionnaire conducted in 2009 in collaboration with Toyota UK to investigate the dimensions that shape purchase motivations and explore how policy can encourage hybrid car adoption. Similarly, authors in [15] found that Korean consumers perceive hybrid vehicles as fuel-efficient and quiet, although some concerns were raised regarding battery life and safety due to battery performance issues and complaints about battery replacement.

Regarding studies that have addressed awareness of hybrid car usage, authors in [16] aimed to investigate consumer

awareness, familiarity, and experience with electric vehicles by comparing cross-sectional survey responses from two representative samples of new car buyers. Contrary to the expectations, the results indicated that consumer awareness remains low and stagnant, which could hinder market growth and limit the potential of electric vehicles in mitigating climate change impacts, as reported in [17]. Authors in [18] attempted to identify factors that influence or impede consumers from transitioning from carbon-fueled vehicles to electric cars. The primary data were collected through a well-structured questionnaire and were analyzed deploying percentage analysis and chi-square analysis. The study found that awareness level was not a significant factor, despite being considered a major determinant in consumer preferences for purchasing electric vehicles in the previous literature. Statistically significant results indicated that fuel/gasoline/diesel price and environmental awareness, substantially influenced consumer preferences for purchasing electric cars.

The current study aims to understand the relationship and impact of e-marketing factors on consumer preferences by increasing their awareness as an intervening variable. Secondly, while most previous studies considered non-Arab countries, mainly in Asia or Europe, and most of them being producers of this type of vehicle, the current study focuses on the Kingdom of Saudi Arabia.

III. METHODOLOGY

A. Variable Definition

1) Independent Variable (E-Marketing)

E-marketing, also known as internet marketing, involves using e-communication technologies, specifically the internet, for the sale of goods or services. It has several benefits and disadvantages and various methods, namely search engine marketing, e-mail marketing, and viral marketing [19-21].

2) Mediator Variable (Consumers' Awareness of Hybrid Cars)

Consumers' awareness of hybrid cars is generally low, with many individuals lacking basic knowledge and understanding of the technology [22]. This lack of awareness extends to confusion about hybrid and plug-in hybrid technology, as well as a limited understanding of the sources of electricity that Plug-in Electric Vehicles (PEVs) consume [23]. However, once the case technologies are explained, consumers express a range of positive and negative perceptions of hybrid cars, which can be categorized into functional, symbolic, and societal attributes [24]. Factors influencing consumer acceptance of hybrid cars include awareness of the environmental benefits and cost savings, as well as the availability of facilities and subsidies to promote electric vehicles [15].

Consumer awareness refers to the knowledge and understanding that consumers have about their rights, responsibilities, and the potential risks associated with the products or services they purchase [25]. Consumer awareness is important in protecting consumers from exploitation and ensuring their well-being. It can lead to changes in consumer behavior, such as the preference for less harmful alternatives and the demand for safer products. Studies have shown that consumer awareness is influenced by factors, such as personal experience, retail channels, and the attitude of opinion leaders and market share holding organizations [26, 27].

3) Dependent Variable (Consumers' Preference for Purchasing Hybrid Cars)

Consumers' preference for purchasing hybrid cars is influenced by various factors. Price is found to be the most influential attribute, followed by policy, emission level, consumption level, and driving range [2]. Functional values and non-functional values also play an essential role in shaping consumers' attitude towards the intention to adopt hybrid electric vehicles [24]. The Theory of Planned Behavior (TPB) suggests that attitude, subjective norms, and perceived behavioral control impact consumers' green purchase intention for hybrid vehicles [28]. Additionally, a study in Malaysia discloses that consumers' high price sensitivity weakens the positive relationship between perceived behavioral control and purchase intention towards hybrid cars [29]. Furthermore, consumers in Malaysia show a preference for environmental attributes over economic attributes when purchasing hybrid cars, indicating a concern for the environment [30].

Customer preferences refer to the characteristics, needs, desires, attitudes, and behavior of consumers that influence their choices and purchasing decisions [31]. Understanding customer preferences is crucial for developing successful strategies and product designs that align with consumer expectations [32]. Various methods, such as questionnaires, interviews, and market surveys have been used to collect and analyze customer preference data. However, traditional methods may not provide accurate and comprehensive information in a timely manner [33]. The utilization of reviews can offer real-time and comprehensive insights into customer preferences. By analyzing these data sources, product managers and designers can identify the importance of different product attributes, interactions between attributes, and the relationship between attribute subsets and overall ratings. This information can help businesses tailor their marketing strategies, improve product designs, and provide personalized notifications to customers based on their preferences [13].

B. The Relationship between e-Marketing on Consumers' Preference and Increasing Awareness

It has been demonstrated that e-WoM (e-Word-of-Mouth) on social media platforms plays a crucial role in influencing consumers' purchase intentions [34], along with social media marketing and brand awareness [35]. Furthermore, the theory of consumption values suggests that functional, social, emotional, and conditional values positively affect customers' purchase intention of hybrid electric vehicles [11]. Moreover, the awareness of the environmental benefits and cost savings of electric vehicles is a key factor in influencing consumer acceptance and preference for electric vehicles [36]. Therefore, by utilizing e-marketing strategies, such as social media marketing and e-WoM, car manufacturers and marketers can effectively increase consumer awareness and preference for hybrid and electric vehicles.

C. Study Design

The field study approach was engaged to collect data from hybrid car users in the Northern Border Region. A questionnaire was used as the primary tool for data collection, aiming to assess the awareness and knowledge of hybrid cars and consumers' preference for purchasing them. The questionnaire was developed based on previous research and theoretical concepts related to e-marketing and consumer preference for hybrid cars. The questionnaire included personal information of the participants, their level of awareness about hybrid cars, factors influencing their purchase decision, and preferences for online shopping.

D. Study Population and Sample

The study population consists of individuals residing on the area. There were 856 genuine replies available for analysis, the responses indicate the State of the community in thousands and are highly suitable for this study [37]. The required sample size was calculated by [38]:

$$n = \frac{Z^2 * p * (1-p)}{E^2} \qquad (1)$$

where n is the desired sample size, Z is a standard value associated with the specified confidence level. For example, if an individual wants a 95% confidence level, they may use $Z = 1.96$, p is the expected proportion of the characteristic being studied. If they do not have prior expectations, they can use an approximate value such as 0.5, and E is the acceptable margin of error, which is the difference that researchers consider acceptable from the actual results.

E. Study Model

This study is based on a theoretical model linking e marketing to consumers' preference to purchase hybrid cars by the mediating role of awareness, as illustrated in Figure 1.
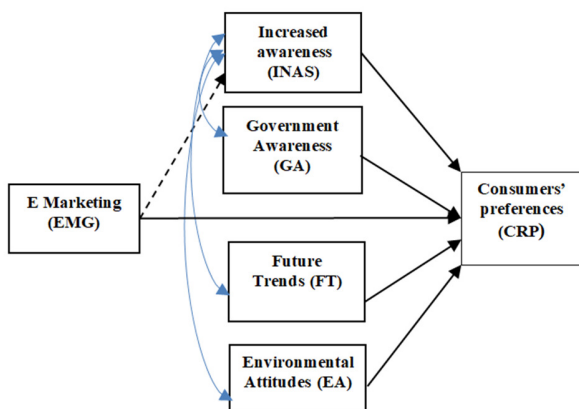

Fig. 1.   Model of the study.

The hypotheses derived from the model are:

The initial primary proposition is that the respondents' responses indicate a positive trend for the studied variables.

H1: E-marketing affects the consumers' preferences regarding electric or hybrid vehicles.

H2: Increasing awareness affects the consumer's' preferences.

H3: There is a mediating effect of increasing awareness between e-marketing and consumers' preferences.

F. Measuring Tool

To test the hypotheses, primary data were collected from a sample consisting of 385 individuals who use hybrid cars in the region. The questionnaire consisted of three Sections, outlined as:

Section 1: Personal details, such as gender, age, educational qualifications, and preferred contact methods.

Section 2: The study variables questions, including the independent, dependent, and mediator variables [4, 39-41]. A pentagram ladder has been employed for the Likert scale ranging from 5 for Strongly Agree to 1 for Strongly Disagree assessed all construction aspects.

Part 1 consists of the independent variable, e-marketing, encompassing 8 items.

Part 2 entails the mediating variable: The text consists of 12 items and focuses on increasing awareness (government awareness; future trends; environmental attitudes).

Part 3 involves the dependent variable: The text consists of 8 items and focuses on consumers' preference to purchase hybrid cars.

For testing the hypotheses of this study, Cronbach's alpha reliability analysis was employed for data analysis. The data collected from the questionnaires were input into Excel sheets and then extracted in SPSS for analysis. Arithmetic means and standard deviation of the study variables were calculated to determine significance, normality test, and correlation coefficients. Regression analysis was carried out to observe the linear relationship of the dependent and independent variables. Path analysis, which is used to identify direct and indirect effects of variables by examining the relationships between them, was also utilized.

Table II presents the questionnaire itself along with a summary of the responses.

G. Validity and Reliability

The results in Table I specify that the persistence factor for each paragraph is 0.80, which exceeds the accepted reliability degree of 0.70 [42]. This factor suggests that the results are acceptable for scientific research.

TABLE I.   QUESTIONNAIRE RELIABILITY TEST

Variable	N	Cronbach's alpha
EMG	8	0.934
INAS	12	0.895
GA	4	0.807
FT	4	0.883
EA	4	0.897
CRP	8	0.883

TABLE II.   RESPONSE SUMMARY

Likert Scale	5	4	3	2	1
Phrase	Strongly agree	Agree	Neutral	Disagree -	Strongly disagree
E-Marketing					
1 I find e-marketing websites to be user-friendly.	158	130	47	38	12
2 Online shopping is an efficient way for me to make purchases.	176	140	49	18	2
3 The product information on e-marketing websites is trustworthy.	143	109	70	50	13
4 I feel secure when making payments through e-commerce platforms.	189	97	69	24	6
5 E-marketing provides a wide variety of product and service choices.	200	104	27	30	24
6 I enjoy the experience of shopping online.	115	123	97	44	6
7 E-marketing websites offer detailed product information.	192	124	36	13	20
8 I have confidence in making purchases through e-commerce websites.	187	160	12	13	13
Government Awareness					
9 I am aware of the government regulations and policies that impact marketing practices.	196	186	1	1	1
10 The government provides clear guidelines for ethical marketing conduct.	200	182	2	1	0
11 I understand the government's role in protecting consumer rights in the marketplace.	254	130	1	0	0
12 I stay informed about the government's initiatives to promote fair and transparent marketing practices.	263	120	1	0	1
Future Trends					
13 I am aware of emerging technology trends that will likely shape the future of marketing.	174	116	22	43	30
14 I closely follow hybrid industry reports and publications to stay up to date on upcoming changes in marketing practices.	164	102	43	40	36
15 I believe that government and industry initiatives are effectively raising awareness about future marketing trends.	183	104	34	32	32
16 I feel confident in my ability to anticipate and adapt to future trends that will impact marketing strategies.	190	107	25	43	20
Environmental Attitude					
17 I consider the environmental impact of cars when making purchasing decisions.	207	128	32	13	5
18 I actively search for information about the sustainability efforts of brands and products.	253	119	7	4	2
19 I am willing to pay for a car that is marketed as green or environmentally responsible.	238	129	15	3	0
20 I believe companies should be transparent about the environmental impacts of their marketing campaigns.	216	151	13	0	5
Consumers' preferences					
21 I would seriously consider buying a hybrid for my next car.	215	130	25	12	3
22 The environmental benefits of hybrid cars are an important factor in my purchasing decision.	211	132	19	2	21
23 I am willing to pay a higher price for a hybrid car than a conventional gasoline car.	134	221	19	7	4
24 The fuel efficiency of hybrid cars is a major consideration for me when evaluating vehicle options.	123	204	29	25	6
25 I trust the reliability and performance of hybrid technology.	228	116	29	6	6
26 The availability of hybrid car models and options on the market will help meet my needs and preferences.	243	114	14	5	9
27 Government incentives and policies promoting hybrid cars influence my purchasing decision.	254	119	7	4	1
28 I actively search for information and stay up to date on the latest developments in hybrid vehicle technology.	156	172	18	23	16

IV.   RESULTS

In this section, the SPSS- AMOS -based statistical findings are provided. The first hypothesis is that the interviewers' trends are positively correlated with the study variables. To verify this idea, the mean values were calculated. The results (Table III) manifested that the arithmetic average of the level of importance of the variables was high, which indicates that the respondents in general were aware of hybrid cars and their benefits. The standard deviation of the importance level of the variables, was generally low, exhibiting that the respondents shared similar views.

TABLE III.   DESCRIPTIVE STATISTICS

Variable	Min	Max	Mean	St. Dev
EMG	2.4	5	4.0667	0.0464
INAS	2.5	5	4.3433	0.0754
GA	2.4	5	4.5833	0.93788
FT	2.3	5	3.9468	0.8435
EA	2.9	5	4.5000	0.94387
CRP	2	5	4,3397	0.76804
N			385	

A. *Hypothesis Testing Results*

1. H1: E-marketing affects the consumers' preferences regarding electric or hybrid vehicles

From the data in Table IV, it is noticed that the Pearson coefficient is equal to 0.677, which is greater than zero, and therefore there is a moderate correlation [43] between e-marketing and the consumer's preference for purchasing hybrid cars.

TABLE IV.   CORRELATIONS BETWEEN VARIABLES

		EMG	CRP
EMG	Pearson correlation	1	0.677
	Sig. (2-tailed)		0.000

TABLE V.   COEFFICIENTS OF DETERMINATION

Correlation coefficient (R)	Coefficient of determination (R^2)	Adjusted coefficient of determination ($\bar{R}^2$)	Standard error
0.677	0.458	0.442	**0.479**

The adjusted coefficient of determination ($\overline{R}^2$) was found to be 0.442, indicating that the independent variable collectively explains 44.2% of the variance in the dependent variable.

TABLE VI.   ANALYSIS OF VARIANCE (ANOVA)

	Sum of Squares (SS)	Mean Square (MS)	F-value	Significance level
Regression	6.422	6.422	27.902	**0.000**
Residual	0.230	7.595		
Total	14.016			

Through ANOVA (Table VI), the estimated value of F was 27.902, and the corresponding calculated level of significance was 0.000. This implies that the value of F is statistically significant, leading to the rejection of the null hypothesis, which assumes the absence of a statistically significant effect of e-marketing on consumers' preference to buy hybrid cars in the study sample. Consequently, the alternative hypothesis (H1), which suggests the presence of a statistically significant effect of e-marketing on consumers' preference to buy hybrid cars in the study sample, is accepted.

2. H2: Increasing awareness affects the consumer's preferences

From the data in Table VII, it is noticed that the Pearson coefficient is equal to 0.778, which is greater than zero, and therefore there is a Strong correlation between increasing awareness and the consumer's preference for purchasing hybrid cars [43] .The adjusted coefficient of determination ($\overline{R}^2$) was found to be 0.756 (Table VIII), indicating that the independent variable collectively explains 75.6% of the variance in the dependent variable. Through Table IX, the estimated value of F was 8.586, and the corresponding calculated level of significance was 0.000. This suggests that the value of F is statistically significant, leading to the rejection of the null hypothesis, which assumes the absence of a statistically significant effect of increasing awareness on consumers' preference to buy hybrid cars in the study sample. Consequently, the alternative hypothesis, which suggests the presence of a statistically significant effect of increasing awareness on consumers' preference to buy hybrid cars in the study sample, is accepted. The T value of GA is 2.074 (Table X) demonstrates statistical significance, with the calculated level of significance (SIG) recorded as 0.000, which is lower than the accepted significance level of 0.05. This indicates a statistically significant effect between GA and CRP.

TABLE VII.   CORRELATIONS BETWEEN VARIABLES

		CRP
INAS	Pearson Correlation	0.778
	Sig. (2-tailed)	0,000
GA	Pearson Correlation	0.746
	Sig. (2-tailed)	0,000
FT	Pearson Correlation	0.823
	Sig. (2-tailed)	0,000
EA	Pearson Correlation	0.687
	Sig. (2-tailed)	0.000

TABLE VIII.   COEFFICIENTS OF DETERMINATION

Correlation coefficient (R)	Coefficient of determination (R²)	Adjusted coefficient of determination ($\overline{R}^2$)	Standard error
0.778	0.758	0.756	0.443

TABLE IX.   ANOVA

	SS	MS	F-value	Significance level
Regression	81.261	81.261	8.586	**0.000**
Residual	25.96	0.195		
Total	107.221			

TABLE X.   TESTING THE SIGNIFICANCE OF REGRESSION COEFFICIENTS ACCORDING TO THE STUDY STATISTICS

	B	Std. err	BETA	T	SIG
C	0.431	0.449	/	1.103	0.000
GA	0.327	0.096	0.891	2.074	0.000
FT	0.822	0.108	0.831	9.214	0.000
EA	0.407	0.108	0.689	5.856	0.000

Similarly, the T value of FT is 9.214 and exhibits statistical significance, with calculated SIG = 0.000, which is lower than the accepted significance level of 0.05. This signifies a statistically significant effect between FT and CRP. Additionally, a statistically significant effect between EA and CRP is observed, as evidenced by T = 5.856, with the calculated SIG again reaching 0.000.

3. H3: There is a mediating effect of increasing awareness between e-marketing and consumers' preferences.

Table XI presents the regression weights for the default model and discloses the following relationships:

INAS ← EMG: The estimate for this relationship is 0.846, indicating a strong positive association between the variables INAS and EMG. The standard error is 0.022, and the critical ratio is 37.960, which is highly significant (***).

GA ← EMG: The estimate for this relationship is 0.673, implying a positive association between GA and EMG. The standard error is 0.035, and the critical ratio is 13.425, which is highly significant (***).

FT ← EMG: The estimate for this relationship is 0.720, displaying a positive association between FT and EMG. The standard error is 0.019, and the critical ratio is 9.032, which is highly significant (***).

EA ← EMG: The estimate for this relationship is 0.479, showcasing a positive association between EA and EMG. The standard error is 0.025, and the critical ratio is 22.681, which is highly significant (***).

CRP ← INAS: The estimate for this relationship is 0.688, exhibiting a positive association between CRP and INAS. The standard error is 0.022, and the critical ratio is 3.970, which is highly significant (***).

CRP ← EMG: The estimate for this relationship is 0.328, showcasing a positive association between CRP and EMG. The standard error is 0.010, and the critical ratio is 22.909, which is highly significant (***).

Therefore, H3 is confirmed.

			Estimate	S.E.	C.R.	P	Label
INAS	←	EMG	0.846	0.022	37.960	***	par_1
GA	←	EMG	0.673	0.035	13.425	***	par_5
FT	←	EMG	0.720	0.019	9.032	***	par_6
EA	←	EMG	0.479	0.025	22.681	***	par_2
CRP	←	INAS	0.688	0.022	3.970	***	par_3
CRP	←	EMG	0.328	0.010	22.909	***	par_4

Table XII illustrates the indirect effects of e-marketing forms on consumers' preference through increasing awareness. It can be seen that both CRP and INAS have a positive association with EMG with p-value=0.

	CRP	INAS	p-value
EMG	0.475	0.353	0

V. DISCUSSION

A. H1

This hypothesis aimed to become aware of the impact and statistical relationship between e-marketing and their preferences towards purchasing hybrid cars. The study concluded that there is a positive and statistically significant relationship, and this is consistent with the finding of other studies [44, 45].

B. H2

The present study's findings, are in accordance with the findings of [24]. Positive WOM information significantly influences consumers' intentions to adopt eco-friendly vehicles. This implies that increasing awareness through e-marketing activities can play a role in shaping consumer preferences for hybrid cars.

C. H3

The hypothesis suggests that raising awareness mediates the relationship between e-marketing and consumers' preference to purchase hybrid cars. The result is consistent with the findings of [14], in which the authors explored the factors influencing consumer adoption intention of hybrid EVs. The findings revealed that environmental concern significantly affected consumers' adoption intention of HEVs. Authors in [34] reported that increasing awareness plays a mediating role between e-marketing and consumers' preference to purchase hybrid cars.

VI. CONCLUSION

The present research investigated the influence of e-marketing on consumers' preference to purchase hybrid cars through increasing awareness. Specifically, the study focused on hybrid car users in the northern border region of Iraq. Through a thorough analysis of the research data and the relevant literature, the following conclusions can be drawn:

- E-marketing activities positively influence consumers' preference to purchase hybrid cars. The findings of this study align with previous research that suggests e-marketing efforts, such as online advertising, social media, and informative websites play a significant role in shaping consumer preferences regarding eco-friendly vehicles.

- Increased awareness acts as a mediator between e-marketing and consumers' preference to purchase hybrid cars. The study revealed that e-marketing activities have a positive impact on increasing awareness among consumers. This awareness, in turn, influences their preference for hybrid cars. These findings support the notion that e-marketing can indirectly affect consumer preferences by enhancing their knowledge and understanding of the benefits and features of hybrid cars [46, 47].

- Overall, this study emphasizes the importance of e-marketing in influencing consumer preferences for hybrid cars and highlights the mediating role of raising awareness. The findings contribute to the growing body of literature on the subject, providing valuable insights into the specific context of the Northern Border Region. Further research could explore additional factors that affect consumer preferences in this region and expand the study to include a larger sample size for more robust conclusions [48].

Recommendations drawn from this study on the impact of e-marketing on consumers' preference to purchase hybrid cars by increasing awareness are:

- Analyze specific e-marketing channels: The impact of the different types of e-marketing activities, for example, examining the effectiveness of online advertisements, targeted email campaigns, or websites could be explored. This would help determine which channels are most effective in influencing consumer preference.

- Evaluate the impact of communication strategies: it would be relevant to examine how the messages and communication strategies used within these activities influence consumer awareness and preferences.

- Compare results among different demographic groups: A comparative analysis of the results among different demographic groups can disclose significant differences in consumer awareness and preferences.

These additional recommendations aim to enrich the current study by delving into specific aspects or exploring other dimensions that can contribute to a better understanding of the relationship between e-marketing, awareness, and consumer preferences for hybrid cars.

The limitations of the current study are:

- The study has been conducted with a limited sample size.

- The study has focused on a specific subset of e-marketing activities.

- The findings of this study provide practical implications for marketers and advertisers in the automotive industry. They can use the insights to develop targeted e-marketing

campaigns aimed at increasing consumer awareness and preference for hybrid cars.

The limitations identified in this study open avenues for future research. Researchers can address these limitations by conducting larger-scale studies, while the exploration of the demographic parameter could open ways for more personalized advertising campaigns.

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