Journal of Business and Economic Policy
UNIZIK Business School, Nnamdi Azikiwe University, Awka

UBSJBEP Volume 3 Issue 2
ISSN (Online) 0795 – 7149
https://journals.unizik.edu.ng/index.php/ubsjbep

THE RELATIONSHIP BETWEEN DATA DRIVEN TARGETED ONLINE ADVERTS AND INCREASE QUALITY LEAD GENERATION FOR MSMES IN ANAMBRA STATE

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CITATION: Udeogu, A.C. & Oparah, P.C. (2025). The relationship between data driven targeted online adverts and increase quality lead generation for MSMES in Anambra State, *UBS Journal of Business and Economic Policy*, 3(2), 23 - 35.
Paper Type**: Original Research Paper;* ***Correspondence: ca.udeogu@unizik.edu.ng

Abstract
The relationship between data driven targeted online adverts and increase quality lead generation for MSMEs in Anambra State was examined in this study. This study made use of a survey research design and the population consisted of 1399 MSMEs from the study area and a sample size of 301 was arrived at using Krejcie and Morgan's formula. The questionnaire used for data collection was validated using face and content validity while the reliability was ascertained using the Cronbach Alpha technique (.873). The data analysis was carried out using both descriptive and inferential statistics and the hypotheses were tested at a 5% level of significance. The findings showed that there is a statistically significant positive relationship existing between data driven targeted online adverts and increase quality lead generation (r = .977; p-value = .000 < .05). Based on the findings, it was recommended that the owners and managers of MSMEs in Anambra state need to take seriously the issue of running online adverts using a targeted strategy so as to reach the desired audience and get quality leads without wasting resources and time in running non-target or open adverts.

Key Words: *Data-Driven Targeted Online Adverts; Quality Lead Generation; Micro, Small and Medium Enterprises.*

Introduction
The digital economy ushered in a whole new platform for conducting business and, subsequently, marketing strategies to meet the needs of a highly connected consumer. This is where targeted online advertising takes the central role in the optimization of modern business operation at its heart with data. It relies on the heavy volume of consumer data to build personalized ad experiences that actually help businesses connect better with prospective customers. With technologies of data analytics getting increasingly sophisticated and consumer insights becoming increasingly available, today marketers can create campaigns that are not only tailored to reach target audiences but engage audiences at a more personal level (Wright et al., 2021). Unlike any other forms of marketing, online advertising has some unique advantages in the realm of reach and targeting capabilities. Rather than traditional media, where one is used to simply broadcasting to a wide, non-discriminating audience, the data-driven advertising could actually allow effective targeting based on demographics, interests, or online behaviors. That would ensure much greater specificity and give businesses more reason to invest in audiences likely to convert to quality leads. For instance, businesses can use Google Ads

or Facebook Ads-type platforms that would allow them, through analytics tools, to carry out effective campaigns by targeting users with data. Studies show that targeted web ads yield higher click-through rates and conversion rates, meaning better marketing outcomes and high return on investment (Interactive Advertising Bureau [IAB], 2023; AdRoll, 2023).

Targeted advertising through data has become an indispensable asset to the Micro, Small, and Medium Enterprises (MSMEs) in Anambra State, Nigeria. MSMEs are the backbone of the economy of Nigeria, accounting for nearly 48% of the national GDP and projected to form about 76% of the total employment in the country as obtained from the National Bureau of Statistics (2023). In contrast, despite such important enterprises, various challenges prevent them from effectively using data-driven strategies for lead generation. MSMEs usually have to operate within strictly limited financial resources. This restricts them from investment in advanced marketing technologies and analytics tools. Furthermore, the majority of MSME owners have neither adequate digital skills nor the knowledge of how to interpret data and undertake effective, targeted advertising campaigns (Adeleke et al., 2022). Furthermore, most MSMEs in Anambra State always encounter unreliable data on the target markets. Lack of market intelligence may cause less effective advertisement, as a firm may not be able to identify and reach an ideal customer. Besides that, the competitive nature in Nigeria often saturates the same products and services, and MSMEs, therefore, find it hard to create some form of distinction in their advertisements. As cited by Eze et al. (2023), these setbacks still prohibit MSMEs from unlocking the potential benefits attendant to targeted data-driven advertising. This has eventually affected leads generation and growth for small businesses.

Targeted advertising in addition to the marketing mix may go a long way in promoting MSMEs. Through the analysis of consumer data, a business will be in a position to generate information on trends and preferences that aid in the formulation of personalized messages to target audiences. This could be realized where a local restaurant in Anambra State targets ads of new menu items to those who have shown interest in dining out or engage online with food-related content. This personalized approach will help in boosting the potential of converting leads into paid customers; it will also breed brand loyalty through attachment between the business and its consumers (Kotler & Keller, 2022). Digital advertising is similarly dynamic, and thus MSMEs can always iterate their strategies with updated information. Such agility is crucial in the fast-moving digital environment, wherein consumer tastes and market conditions change so fast. The analytics tools that come with digital advertising allow MSMEs to track how advertising campaigns perform and hence make informed, data-driven decisions about the improvements needed. The iterative process of testing, learning, and adapting improves the quality of leads generated while further optimizing the effectiveness of marketing budgets (Chaffey, 2022).

Improvement in access to technology and the internet further raises the potential in Anambra State, allowing MSMEs to experience favourable prospects through targeted advertising, driven by data. The population, with increased smartphone devices and

internet connectivity, is increasingly consuming more digital platforms. This has opened the doors to an excellent opportunity for MSMEs in reaching more audience and building their relations with potential customers through targeted online campaigns. It has also been proven through research that businesses embracing digital marketing experience an increase in sales and customer base (PricewaterhouseCoopers [PwC], 2023; Wamatu, 2022).

Therefore, this suggests a synergistic effect, thereby increasing the marketing efficiency and effectiveness between data-driven targeted online advertising and quality lead generation for MSMEs in Anambra State. However, overcoming the challenges that limit these enterprises to exploit this opportunity to its fullest is of much importance; in other words, limiting resources, lack of digital skills, and difficulties in accessing market data are limiting factors to these enterprises. As the digital landscape continues to evolve, MSMEs that possess data-driven strategies are better equipped to face the competitive challenges of the marketplace. Consequently, these businesses will be capable of transforming their marketing efforts using consumer insights in the creation of personalized advertising experiences that drive such businesses into sustainable growth for contribution to the general economic development of the region.

Literature Review

Data Driven Targeted Online Adverts

Online advert is nothing quite like traditional adverts on radio, television or even newspapers or usage of churches, town meetings, mosques and other places. In the world of AI, adverts have now taken a whole new dimension, and the concepts of targeted adverts are increasingly taking centre stage. With data driven targeted online adverts, specific people in specific areas and specific time can be target for adverts. For instance, an MSME that is into selling of laptops and phones can decide to target only people within the age of 20-40, these group are regarded as people who would know how to use these devices and who may have the money to buy. Similarly, if the businessis located in Anambra state, for the sake of location, the advert may target more people within southeast and south-south while excluding those in the North-East or North-West. These are the things that AI can do for you, using Facebook for instance as the means of running the online advert, the algorithm with utilize the data fed by users to look for those whose age fall between the age bracket of those targeted, and those that have selected Southeast and South-South as their location. With this type of data driven targeted adverts, the people that will see the adverts will be people that can potentially afford the products andare within the region or zone of the business. This cannot be achieved with traditional adverts on radio or television because everybody will see or hear about the advert and there may not be any real metrics to measure how many people have seen the adverts and how many people have actually taken action to reach out to the business owners. All these are made possible by AI driven targeted online adverts the likes.

The role of AI in marketing and adverts are humongous, but only those who have foresight can see it. With AI, more people can be reached, with relatively more ease and lesser cost at the long run. AI brings data to bear, and everything can be measured, like how many people have been reached by the advert, how many people have taken action

and even up to the extent of how many people have purchased the product. AI plays an important role in processes related to marketing (Chopra, 2019; Lee, Dabirian, McCarthy & Kietzmann, 2020; Li, Hou, Yu, Lu, & Yang, 2017; Stalidis et al., 2015; Wirth, 2018); customer management (Marinchak, Forrest & Hoanca, 2018); product launches, after-sales services and stock management (Sheta, Ahmed & Faris, 2015; Soltani-Fesaghandis & Pooya, 2018); or in the implementation of industry 4.0 processes (Lee & Park, 2018; Ramakrishna, Ngowi, De Jager & Awuzie, 2020). AI enables machines to analyse enormous volumes of data in order to find patterns, gain insights, and take appropriate action in response to those discoveries (Rai, Constantinides, & Sarker, 2019).

Empirical Review

Elragal and Elgendy (2024) proposed a model to assess Data-Driven Decision-Making (DDDM) readiness in organizations. The study presented the results from investigating the DDDM readiness of a Swedish organization in the food industry. The study designed and developed a questionnaire to collect data about the organization's decision-making and IT systems. The study conducted eleven interviews at the case study organization: ten with various functional decision makers and one with the IT Manager about IT systems. The interview data were then analyzed against known decision theories and state-of-the-art DDDM. Based on the interview outcomes, the study analyzed the data according to the assessment model and recommend changes to the organization's readiness for data-driven decisions. The findings showed that while the organization was assessed as ready in the decision-making process and decision-maker pillars, it was not ready in the data or analytics pillars.

Badghish and Soomro (2024) investigated and presented a theoretical model that identified the most influential factors affecting the adoption of artificial intelligence (AI) by MSMEs to achieve sustainable business performance in Saudi Arabia by integrating the Technology Organization–Environment (TOE) framework. The study utilized a quantitative method, using a survey instrument for this research. Data for this research were collected from managers working in six different sectors. Subsequently, based on company size, firms were divided into two groups, allowing multi-group analysis of small and medium-sized businesses to explore group differences. Hence, firm size played a moderating role in the conceptualized model. Data analysis was performed on SmartPLS 3, and the results suggested that dimensions of the TOE framework, such as relative advantage, compatibility, sustainable human capital, market and customer demand, and government support, play a significant role in the adoption of AI. Moreover, this study found a significant influence of AI on MSMEs' operational and economic performance. The multi-group analysis (MGA) results reveal significant group differences, with a medium-sized firm strengthening the relationship between relative advantage and AI adoption compared to small-size firms.

Echendu and Williams (2023) investigated the relationship between data driven management and organizational innovation in selected manufacturing firms in Port Harcourt, Rivers state of Nigeria. The sample for this study comprised of 106 staff from the selected manufacturing firms. The data for this study was collected using simple sampling random techniques and source of data collection from quantitative and

qualitative research. Spearman's Rank-order correlation coefficient statistical tool with the aid of Statistical Package for Social Science was adopted to test the relationships between the variables under evaluation, upon the influence of data driven management on organizational innovation. Findings from the study revealed that there is a positive and significant relationship between all the dimensions of data driven management tested (i.e robust analytical capabilities, data driven culture and technological capabilities) and organizational innovation as it is link with process, product innovation and competitive advantage thus foster innovation.

Bruce, Shurong, Ying, Yaqi, Amoah and Egala (2023) leveraged the theory of planned behaviour to explore the impact of digital marketing adoption on the sustainable growth of MSMEs in Ghana. Using a structured questionnaire and SmartPLS version 3.3 for the data analysis, 533 owners/managers of MSMEs in Ghana were drawn to administer the questionnaire. The findings suggested that, while attitudes toward digital marketing did not influence the intention to use digital marketing, perceived behaviour control and subjective norms were found to affect individuals' intentions to use digital marketing. Additionally, the results proved a direct positive link between subjective norms and actual behavioural use of digital marketing. Finally, the relationship between the actual use of digital marketing and MSMEs' sustainable growth was also proven positive, affirming that digital marketing significantly improved the sustainable growth of MSMEs in developing countries.

Grandhi et al. (2021) examined the DDM adoption practices and how companies could strive for better creation of shareholder value with the introduction of "customer centricity". In regard to this, a web-based survey conducted in 2016 returned 180 responses from junior, middle, and senior executives. Of these total responses, 26% were from senior management, 39% from middle management, and the remaining 35% from junior management. Other industries that were represented in this survey included retail, BFSI, healthcare and government, automobile, telecommunication, transport and logistics, and IT. Also, aviation, marketing research and consulting, hospitality, advertising and media, and human resource. In basing from the "current level of investments" and "willingness to enhance investments" soon, respondents were divided into four categories: Laggards, Dabblers, Contenders, and Leaders. The results indicated that DDM succeeds or fails depending on how well the practice is embraced by an organization. One immediate and direct indicator of commitment by an organization was the extent of resources invested in DDM.

Yu et al. (2020) built a conceptual model of the cue utilization theory, which places an emphasis on the effects of consumers' perceptions to the personalized online ads on click-through intention. Based on the survey data of 446 WeChat moments users in China, the empirical results show that: 1) the higher the degree of product involvement, brand familiarity, visual appeal, and information quality applied to consumers, the higher the ad click-through intention of a consumer; 2) trust plays a mediating role in the processes of visual attractiveness and information quality affecting click-through intention; 3) the higher the product involvement also stimulated the consumer's privacy concern, which played a negative moderating effect on the positive impact of product involvement, brand

familiarity, and trust on click-through intention. The findings contributed to the precision marketing literature, enriching the understanding of the psychological mechanism that drives underlying consumers' perceptions and cognitive factors toward personalized online ads.

Camilleri (2020) critically discussed recent developments on big data analytics and programmatic advertising. However, the contribution also explains the use of blockchain in view of the fact that this distributed ledger technology provides marketplace stakeholders with secure, confirmed transactions. From these premises, it seems that service providers are increasingly leveraging data-driven technologies such as programmatic advertising tools that target and re-target individuals online or on their mobile. However, people and organizations increasingly become aware of data protection issues, as they often block marketers from tracking them and serving them ads. Finally, the contribution puts forward a theoretical framework that explains how, why, where, and when practitioners capture, analyze, and distribute data. In sum, this means that data-driven technologies facilitate businesses in customer-centric marketing.

Methodology

This study made use of Survey Research Design. This is because of the nature of the study seek to elicit data from sampled respondents about a phenomenon using structured questionnaire. The study area is Anambra State which is one of the five states located in the South-East region of Nigeria. The name of the state came about in 1976, originating from the former East Central State. The state is named after the Omambala River, which traverses its area. Anambra is the Anglicised version of Omambala. The state was officially established in 1991, with its capital located in Awka. It currently comprises 21 Local Government Areas (LGAs). Onitsha, a city with a notable historical legacy as a port during the pre-colonial period, is a vital centre of commercial activity within the state, housing one of the largest markets in West Africa.

The population of the study consist of MSMEs from three areas in the three senatorial zones of the state. These areas and the number of MSMEs are Onitsha (772), Awka (231), and Nnewi (396) making it a total of 1399. This data is gotten from the unions of traders (market traders union) in each of the senatorial zones and Anambra State Ministry of Commerce and Industry in June 2024. The sample size of the study is determined using Krejcie and Morgan's 1970 sample size determination formula. The formula is given below as:

$$s = \frac{x^2 NP(1-P)}{d^2(N-1) + x^2 P(1-P)}$$

Where

s = Sample size

x^2 = Table value of chi-square for 1 degree of freedom at 0.05% confidence level (3.84)

N = population size (1399)

P = population proportion (assumed to be 0.5 since this would provide the maximum sample size)

d = Degree of accuracy expressed as a proportion (0.05)

$$s = \frac{3.84\ (1399)(0.5)(1-0.5)}{(0.05)^2(1399-1)+(3.84)\ (0.5)(1-0.5)}$$

$$s = \frac{1343}{3.5+0.96}$$

$$s = \frac{1343}{4.46}$$

s≅ 301

To determine the appropriate allocation of questionnaire to each of the areas, Bowley's (1926) allocation formula is adopted as shown below:

$nh = \frac{nNh}{N}$

Where n = total sample size.

Nh = No. of items in each stratum in the population.

N = population size.

Application of the Formula

1	Onitsha	301	(772)	/ 1399	= 166
2	Awka	301	(231)	/ 1399	= 50
3	Nnewi	301	(396)	/ 1399	= 85
Total					**301**

The data source for this study is primary sources, though there are two basic sources for data collection, primary and secondary. But the primary source is the most appropriate for this study. The data collection method is through physical/personal distribution. The distribution is done through the use of two research assistants, who are trained on where to go and how to go about it and how to respond to certain questions if they arise. The research assistants went to Onitsha and Nnewi, while the researcher took charge of Awka. This is to ensure that everywhere is covered and that it is done in record time.

The instrument was validated through the supervisor of the work and experts in instrument and measurement in Faculty of Education, Nnamdi Azikiwe University, Awka. The questionnaire was checked for simple English and conciseness. The content of the questionnaire was also evaluated to ensure that it measures what it intends to measure. Hence, what they did was face and content validity. The reliability of the instrument was achieved through the use of Cronbach Alpha, which returned a coefficient of .873 which was higher than the threshold of .7, hence, it was confirmed to be reliable. A total of 30 copies of questionnaire were distributed to MSMEs in Ekwulobia, these copies were collected, coded and fed to Statistical Package for Social Sciences (SPSS) version 20 which returned a coefficient of .873. The analysis for the study is carried out using both descriptive and inferential statistics. Frequencies, mean and rank were used for descriptive while correlation analysis (Pearson Product Moment Correlation Analysis) is carried out to test the hypotheses.

Data Analysis and Results Interpretations

Table 1: Questionnaire Distribution, Collection and Analysis

S/N	Ministries	Distributed	Retrieved	Analysed
1	Onitsha	166	145	140
2	Awka	50	42	40
3	Nnewi	85	78	75
	Total (Percentage)	**301 (100%)**	**265 (88%)**	**255 (85%)**

Source: Field Survey, 2024

Table 1 indicates the schedule for questionnaire distribution, collection and analysis. It is seen in the Table that a total of 301 copies of the questionnaire were distributed in alignment with the sample size of each area, out of which 266 copies representing 88% of the total distributed copies were collected, from where only 255 copies representing 85% of the distributed copies were finally analysed, as 10 copies collected were unusable because some were mutilated while others were not completely filled.

Descriptive Statistics for Research Questions and Test of Hypotheses

What is the type of relationship existing between data driven targeted online adverts and increase quality lead generation for MSMEs in Anambra State?

Table 2: Distribution of responses for data driven targeted online adverts and increase quality lead generation

S/N	Questionnaire Items	SA (5)	A (4)	UD (3)	D (2)	SD (1)	Mean	Decision
	Data Driven Targeted Online Adverts							
1	I do use AI to select those that will see my adverts.	101	104	10	20	20	3.95	Accept
2	Having the opportunity to select the age of those who see my advert will be great for my business.	180	61	5	9	-	4.61	Accept
3	Choosing the location of those that will see my advert will do my business good.	154	91	10	-	-	4.56	Accept
4	Selecting those that see my ads is very crucial to my business.	201	44	5	5	-	4.72	Accept
	Quality Lead Generation							
5	Selecting a particular set of people in an advert will make my business have the right set of customers/clients.	208	47	-	-	-	4.81	Accept
6	The type of potential clients I get will determine my level of sales.	99	120	-	21	15	4.04	Accept
7	I would prefer to get only those that will be interested in what I sell/offer to see my adverts.	154	96	-	5	-	4.55	Accept
8	I will get better clients when I target my audience through ads.	170	80	5	-	-	4.64	Accept

Source: Field Survey, 2024

Table 2 shows the distribution of responses for data driven targeted online adverts and increase quality lead generation. The analysis is done using the mean of the respective questionnaire items, with a benchmark of acceptance of 3 for any questionnaire item with a mean of 3 and above and rejection for any with a mean of below 3. From the questionnaire items used in measuring data driven targeted online adverts, a mean of 3.95 which is greater than the benchmark of 3 shows that the respondents agreed that they would like to use AI to select those that will see their adverts. Similarly, they accepted that having the opportunity to select the age of those that will see their advert will be great for their business as shown by a mean of 4.61. On a similar note, they agreed that choosing the location of those that will see their advert will do their business good as revealed by a mean of 4.56, while also accepting that selecting those that see their ads is very crucial to their business as indicated by a mean of 4.72.

On questions used to measure quality lead generation, a mean of 4.81 indicates that the respondents agreed that selecting a particular set of people in an advert will make their business have the right set of customers/clients. They also agreed that the type of potential clients they get will determine their level of sales as shown with a mean of 4.04. A mean of 4.55 and 4.64 indicate that they concurred that they would prefer to get only those that will be interested in what they sell/offer to see their adverts and that they will get better clients when they target their audience through ads respectively.

Hypothesis Testing

H_{O1}: there is no significant relationship existing between data driven targeted online adverts and increase quality lead generation for MSMEs in Anambra State.

H_{i1}: there is a significant relationship existing between data driven targeted online adverts and increase quality lead generation for MSMEs in Anambra State.

Table 3: Correlation Analysis Result for Hypothesis One

		DDTOA	QLG
DDTOA	Pearson Correlation	1	.977**
	Sig. (2-tailed)		.000
	N	256	256
QLG	Pearson Correlation	.977**	1
	Sig. (2-tailed)	.000	
	N	256	256

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Field Survey, 2024
Where:
DDTOA: Data Driven Targeted Online Adverts
QLG: Quality Lead Generation

Table 3 shows the correlation analysis result for hypothesis one which states that there is a significant relationship existing between data driven targeted online adverts and increase quality lead generation for MSMEs in Anambra State. From the analysis, the correlation coefficient (r) is .977 while the probability value (p-value) is .000. Given that the p-value is less than .05 level of significance, the alternate hypothesis is thereby, accepted and it is stated that there is a statistically significant positive relationship

existing between data driven targeted online adverts and increase quality lead generation for MSMEs in Anambra State.

Discussion of Findings

From the test of the hypothesis, it was revealed that there is a statistically significant positive relationship existing between data driven targeted online adverts and increase quality lead generation for MSMEs in Anambra State. This finding implies that when there is an increase in the usage of data driven targeted online adverts by the MSMEs in Anambra State that the number of quality lead generation by the MSMEs will also increase. That is, if the MSMEs make use of various targeting parameters in their adverts such as age range, gender, location and purchasing behaviour, it will increasingly lead to getting more leads that are tailor-made for such MSMEs, and not people who are unready and unwilling to purchase the goods or services immediately. This finding corroborates that of Badghish and Soomro (2024) who identified the most influential factors affecting the adoption of AI by MSMEs and showed that AI has a significant influence on MSMEs' operational and economic performance, and this AI could be the usage of data driven targeted adverts. The finding also aligns with that of Echendu and Williams (2023) who investigated the relationship between data driven management and organizational innovation and revealed that there is a positive and significant relationship between all the dimensions of data driven management tested and organizational innovation. Similarly, Bruce, Shurong, Ying, Yaqi, Amoah and Egala (2023) who leveraged the theory of planned behaviour to explore the impact of digital marketing adoption on the sustainable growth of MSMEs and revealed that the relationship between the actual use of digital marketing which could be measured using targeted adverts and MSMEs' sustainable growth was proven positive, affirming that digital marketing significantly improved the sustainable growth of MSME, and this sustainable growth could be measured by the number of quality leads these MSMEs are able to generate on a daily, weekly, monthly or yearly basis.

Conclusion and Recommendations

The findings on response analysis to data-driven targeted online adverts on quality lead generation strongly indicate that AI and targeted advertising strategies are well accepted. Whereas the acceptance benchmark for this was placed at a mean score of 3, data actually indicates that the strategies have not only been embraced by the respondents but also seen to have the potential to add value to business outcomes. All the items in the questionnaire related to data-driven targeted online advertisements have means that are significantly higher than the benchmark. The mean of 3.95 shows that the respondents strongly agree to the point that AI-driven audience selection will benefit their adverts. The high mean scores for choosing the age (4.61), location (4.56), and overall audience selection (4.72) further highlight the importance businesses place on precise targeting in their advertising efforts. Therefore, these findings imply that firms believe that targeted advertisements play the most crucial role in reaching the proper audience to enhance the effectiveness of their marketing campaigns.

Similarly, when analyzing the responses related to the issue of quality lead generation, one can see that there is indeed a consensus among the responding subjects regarding how targeted ads are considered important in bringing up valuable customers. The responses strongly agreed that choosing a specific audience would help the business attract the right kind of customers, with a mean of 4.81. Further, they felt that the kind of clients brought in through targeted advertisements will directly influence their sales-as indicated by the mean, which is 4.04. These facts are further enforced by the mean scores of 4.55 and 4.64 for preferring to target only interested customers and achieving better clients through targeted ads, respectively. The study, therefore, concludes that targeted online advertisements using data are highly supported by businesses and are essential for improving the quality of lead generation. In this respect, AI-driven fine-tuning of the audience selection is considered a tool enabling effective reach of the audience and, thus, enhancing business outcomes such as sales and quality of clients. The overwhelmingly positive response suggests that targeted advertisements are indispensable to conducting business in the modern marketplace to greater success.

Sequel to the findings of the study, it is recommended that:

i. Owners and managers of MSMEs in Anambra state need to take seriously the issue of running online adverts using a targeted strategy so as to reach the desired audience and get quality leads without wasting resources and time in running non-target or open adverts.
ii. Businesses should adopt AI-driven advertising platforms that enable precise audience targeting based on demographic factors such as age, location, and interests. This approach will not only enhance the relevance of their ads but also improve the quality of leads generated, leading to better customer acquisition and higher sales conversions.

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