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THE ROLE OF ARTIFICIAL INTELLIGENCE (AI) IN THE FUTURE OF MARKETING RESEARCH

Dr. T. Amose — Assistant Professor, Department Of Economics, The American College, Madurai.

ABSTRACT

Market research typically encompasses both primary and secondary research methodologies. Primary research is conducted by the company itself or by an external firm that the company engages, while secondary research relies on pre-existing external data sources. This study focuses on the significance of market research within the business context, particularly examining the integration of artificial intelligence (AI) and its potential to enhance market research practices. The analysis highlights the critical role of AI in market research, utilizing secondary data to explore various dimensions. AI technologies are capable of executing data analysis more rapidly than human analysts and can leverage machine learning to make swift decisions informed by campaign performance and customer insights. This efficiency allows team members to dedicate more time to strategic initiatives, which can, in turn, inform AI-driven marketing efforts.

INTRODUCTION

Marketing research constitutes a subset of business research. The discipline of marketing research, recognized as a statistical science, was established by Arthur Nielsen with the inception of the ACNielsen Company in 1923. It involves a methodical and objective examination of issues related to the marketing of products and services, applicable across various marketing domains. Research serves as the sole mechanism through which an organization can maintain engagement with its external operational environment. The primary objective of marketing management is to fulfill consumer needs, and marketing research plays a crucial role in this endeavor. It provides a structured and rational approach to evaluating methods for meeting customer demands. (Unit-I, Chapter - I, Marketing Research objective).

Market research typically encompasses both primary and secondary research methodologies. Primary research is conducted by the company itself or by an external firm it engages, while secondary research relies on pre-existing data from external sources. The formal practice of market research originated in Germany in the 1920s. In the United States, it gained significant momentum with the rise of the Golden Age of Radio. Advertisers who produced content for this emerging medium began to analyze the demographics of listeners tuning into various radio shows, music broadcasts, and comedic performances. Previously, their strategy focused on reaching the broadest audience possible through billboards and popular magazines. However, with the advent of radio programming, they were able to specifically target distinct consumer groups, such as rural or urban populations, teenagers, or families, and assess the effectiveness of their campaigns through subsequent sales data.

Usually, the types of market research is, 1. Face-to-Face Interviews: Market research firms have historically conducted street interviews to gather information regarding individuals' regular reading habits related to newspapers and magazines. These firms would inquire about participants' recollections of advertisements or brands featured within these publications. The data obtained from such interviews were subsequently analyzed in conjunction with the circulation figures of the respective publications to assess the efficacy of the advertisements. 2. Focus Groups: A focus group consists of a select group of representative consumers who are invited to evaluate a product or view an advertisement. Following this evaluation, participants provide feedback regarding their impressions of the product, the brand associated with it, or alternative products in the market. The insights gathered from this feedback inform the company's strategic decisions regarding the product or service, which may include launching it, implementing modifications, or discontinuing it entirely. 3. Phone Research: The man-on-the-street interview method was rapidly supplanted by the telephone interview approach. This shift allowed telephone interviewers to gather data in a more efficient and economically viable manner. For an extended period, telephone research was the favored strategy among market researchers. However, in recent years, this method has faced significant challenges due to the decline of landline phone services and the increasing prevalence of mobile phones, which are often less accessible for research purposes. 4. Survey Research: Surveys serve as a viable alternative to focus groups, offering a cost-efficient method for assessing consumer attitudes without the necessity of conducting in-person interviews. Typically, consumers receive surveys via mail, often accompanied by a coupon or voucher to encourage their participation. These surveys are instrumental in gauging consumer perceptions regarding the product, brand, and pricing strategies. 5. Online Market Research: As individuals increasingly allocate their time to online activities, the landscape of market research has transitioned to digital platforms. Data collection continues to employ survey methodologies; however, the approach to participant recruitment has evolved. Rather than companies proactively identifying participants through in-person encounters or unsolicited phone calls, individuals now have the autonomy to register, complete surveys, and provide feedback at their convenience. This evolution in market research practices has its roots in traditional methods but has been refined to create a less intrusive and more leisurely experience, allowing participants to engage at their own pace and discretion (Alexandra Twin, 2024).

1.1. Initiation of AI to Business

Artificial intelligence (AI) in the business sector refers to the application of AI technologies, including machine learning, natural language processing, and computer vision, to enhance operational efficiency, increase employee productivity, and generate business value. Defined as "the science and engineering of creating intelligent machines, particularly intelligent software," AI leverages extensive datasets and human expertise to enable computer systems to perform tasks such as data categorization, predictive analysis, error detection, conversational interaction, and information analysis in a manner akin to human cognition. A primary objective of AI is to develop computer systems capable of emulating human critical thinking abilities. These systems utilize business-related data and incorporate technologies such as natural language processing (NLP), machine learning (ML), and deep learning to streamline business processes. With the emergence of new technologies and the enhancement of existing ones, the potential applications of artificial intelligence within the business sector continue to expand. The advantages of AI are diverse and necessitate the amalgamation of technological

innovations with human labor to enhance operational efficiency and generate business value.

Artificial intelligence in IT operations encompasses the application of AI, machine learning, and natural language processing techniques to enhance the efficiency of IT operations and service management. AIOps enables IT teams to efficiently analyze vast quantities of data, significantly decreasing the time required to identify anomalies, resolve issues, and monitor the performance of IT systems. The integration of artificial intelligence facilitates improved observability for IT teams, offering real-time insights into operational activities. Additionally, customer data plays a crucial role in assisting marketing teams in formulating effective marketing strategies by recognizing trends and spending behaviors. AI tools are instrumental in processing these extensive data sets, allowing for the prediction of future spending patterns and conducting competitive analysis. This analytical capability empowers organizations to attain a more profound understanding of their market position.

AI technologies facilitate marketing segmentation, a method that leverages data to customize marketing initiatives for particular customers according to their preferences. Sales teams can also utilize this data to offer product suggestions informed by customer analytics. The implementation of AI allows companies to deliver round-the-clock customer support and achieve quicker response times, thereby enhancing the overall customer experience. AI-driven chatbots can assist customers in resolving straightforward inquiries without the need for human intervention. This capability enables human customer service representatives to focus on more intricate problems. Generative AI (GenAI) is an emerging domain that aids organizations in streamlining content development. Generative tools like ChatGPT offer content teams robust capabilities for producing original material. These technologies can generate both images and text in response to specific prompts, enabling designers, writers, and content leaders to leverage these AI-generated outputs for brainstorming, outlining, and various project-related activities. According to Gartner's projections, by 2025, generative AI is expected to account for 30% of outbound marketing content, a significant increase from just 2% in 2022. Additionally, artificial intelligence applications can enhance network security, facilitate anomaly and fraud detection, and assist in preventing data breaches. The growing integration of technology within professional environments has led to an increased risk of security vulnerabilities. To mitigate these threats and safeguard both organizational and customer information, it is essential for organizations to adopt a proactive approach in identifying irregularities. For instance, deep learning algorithms can analyze extensive volumes of network traffic data to detect patterns indicative of potential cyberattacks. In the realm of supply chain management, artificial intelligence is utilized through predictive analytics, which aids in anticipating future shipping and material costs. Additionally, predictive analytics enables organizations to optimize inventory levels, thereby minimizing the occurrence of bottlenecks and preventing excessive product stockpiling (Camilo Quiroz-Vázquez and Michael Goodwin, 2024).

2. Methodology
Artificial intelligence has gained considerable importance in the business sector, significantly aiding in development and facilitating growth processes. This study focuses on market research within businesses, exploring the integration of AI and its impact on enhancing market research practices. The work highlights the significance and contributions of AI to market research, utilizing secondary sources to examine various dimensions of this relationship.

3. Role Of Artificial Intelligence (AI)
AI plays a crucial role in keeping users engaged and converting leads in the realm of digital marketing. It helps steer users toward outcomes that match a business's objectives through smart AI chatbots, effective email marketing, engaging web design, and various other digital marketing strategies. The influence of AI on digital marketing is shaped by multiple factors. Machine Learning (ML), a branch of AI, focuses on computer programs that learn from data on their own. With AI, digital marketing creates a more enjoyable experience for customers through advertising on social media and platforms like Facebook and Instagram. These platforms analyze user data thoroughly to present offers that fit their preferences. Additionally, AI aids marketers in spotting and predicting trends. In digital marketing, AI can analyze vast amounts of online data to extract exactly what businesses need to know. Essentially, AI is a technology in computer science that enables machines to understand and mimic human communication and behavior. By processing the data available, AI has developed intelligent systems that think, respond, and perform tasks similarly to humans. It can handle complex and specialized functions like robotics, speech and image recognition, natural language processing, and problem-solving. AI encompasses various technologies that can perform tasks requiring human-like intelligence. When integrated into standard business operations, these technologies can learn, act, and operate with a level of intelligence akin to humans. Companies utilizing AI tools can save time and concentrate on other areas of digital marketing. AI represents a significant and ongoing technological advancement with extensive implications. Therefore, adopting AI in digital marketing is recommended to drive innovation and enhance productivity in the future.

Marketers are leveraging AI to gain a deeper understanding of consumer behavior and effectively guide customers through their journey, ensuring they have the best experience possible. By using computer-based models that incorporate machine learning, marketers can analyze audience data and deliver relevant ads to potential buyers. This approach minimizes human error, optimizes audience data usage, and scales display advertising. People tend to engage more with ads that resonate with their interests or address their needs. By crafting targeted advertising strategies for the right customer segments, marketers can connect with those most likely to respond positively to their messages. AI is being utilized in marketing across various sectors, such as finance, government, healthcare, entertainment, and retail, each yielding different benefits like improved campaign results, better customer experiences, or enhanced operational efficiency. Through programmatic advertising, marketers are tackling various challenges by using AI. These platforms employ machine learning to bid on ad spaces in real-time that are relevant to their target audiences. AI can perform specific tasks more effectively than humans, leading to a higher return on investment by speeding up marketing processes, reducing costs, and boosting efficiency. This technology can analyze data quickly and make rapid decisions based on campaign and customer insights, allowing team members to concentrate on strategic initiatives that can further enhance AI-driven marketing efforts (Abid Haleem, Mohd Javaid, Mohd Asim Qadri, Ravi Pratap Singh, Rajiv Suman, 2022).

Table.1. Applications Of Artificial Intelligence For Marketing

S.No	Applications	Description
1.	Digital marketing	Marketers can leverage AI in their strategies to rapidly analyze vast amounts of data from social media, emails, and the internet. This helps them turn that data into informed decisions, create meaningful connections, and positively impact business results.
2.	Reduction of human	AI is designed to reduce the need for human interaction, which helps to

	mistakes	minimize the chances of making mistakes. Because of ongoing data security problems, a lot of companies worry that their employees might not be able to keep client information and other important business data safe.		control	purchasing, effectively preventing customers from buying excessive amounts and maximizing profits for the company.
3.	Connect business process	AI leverages information systems to link all business processes seamlessly, creating a smooth experience for users. Marketers who tap into AI's capabilities tend to excel in delivering impressive marketing results for their companies.	13.	Customise shopping processes	AI is stepping in to handle the job of spotting marketing trends because it has superior knowledge and data analysis skills. It can sift through data to predict what consumers are likely to buy and how they make decisions. This helps improve user experience by showing people exactly what they want.
4.	Analyse massive amounts of market data	AI has the ability to sift through huge volumes of market data and forecast the next steps a user might take. This technology changes the way we run our business activities. It affects companies so significantly that it can almost triple their efficiency.	14.	Digital advertising	AI is often used in digital marketing to achieve the best results. It's utilized on platforms like Facebook, Google, and Instagram to provide top-notch expertise.
5.	Deliver valuable information	AI is definitely going to help marketers blend advanced technology with human creativity. This will allow them to understand, connect with, and engage modern customers on a personal level by delivering messages that are hyper-personalized, relevant, and timely.	15	Better customer experience	The adoption of intelligent technology solutions by businesses, particularly within their marketing divisions, is on the rise as a means to enhance operational efficiency and elevate consumer experience. These platforms enable marketers to develop a more nuanced and comprehensive understanding of their target audience.
6.	Enable convenient customer support	AI tools in marketing play a crucial role in automating marketing processes. By using machine learning, AI can gather and analyze customer data instantly and apply those insights on a large scale. It simplifies the tasks of organizing, categorizing, and prioritizing this information. With AI-driven marketing automation tools, the approach to marketing automation is being transformed.	16.	Assisting marketers	AI marketing tools use the latest technologies to connect the vast amounts of customer data we have with potential future actions. With the growth of digital media, there's been a huge increase in big data, which helps marketers analyze their campaigns more effectively and create value across different channels.
7.	Better marketing automation tool	AI assists marketers in quickly spotting qualified leads, improving their nurturing strategies, and creating relevant content when it's combined with marketing automation tools. Personalized emails, especially those sent individually, are the most impactful since they utilize contextual information to engage recipients.	17.	Increased customer satisfaction and revenue	In marketing, there are many ways to use AI. Each method comes with its own benefits, like lowering risks, speeding up processes, boosting customer satisfaction, and increasing profits, among others.
8.	Ease workload	AI can help lighten the workload and save time. One way it does this in marketing is through predictive analysis, which can really enhance all of our marketing efforts.	18.	Development of a predictive model	AI allows for the creation of customized emails for each individual customer. Additionally, machine-learning algorithms can help spot groups of customers who are losing interest and might switch to a competitor.
9.	Speeds up data processing	AI enhances data processing much faster than humans can, guarantees precision and safety, and enables the team to concentrate on strategic objectives to develop successful AI-driven campaigns.	19.	Learning about customer preferences	.Marketing teams can utilize AI to gain insights into what customers like and to gather detailed demographic information. This allows marketers to create personalized experiences that cater to the specific preferences of their customers.
10.	Make customer-centred choices	AI provides insights into the market by analyzing vast amounts of online content from social media, blogs, and more. This allows marketers to easily create detailed consumer profiles using billions of data points generated by AI technology.	20.	Make better decisions	AI helps people understand data better by looking at both numbers and details. This leads to smarter decision-making. In Google Ads, AI lets account managers and marketers concentrate on more important tasks, like planning their campaigns.
11.	Examine data about customer	AI has the ability to provide tailored offers and information that are more suited to each type of user by analyzing thousands of data points related to an individual. Predictive models can be applied in many areas, such as marketing, where they can estimate how likely it is for a particular prospect to become a customer.	21.	Target audience	AI marketing helps companies figure out who their ideal customers are, allowing them to create a more tailored experience for everyone. It takes conversion management solutions to a whole new level.
12.	Improve stock	AI can enhance inventory management during periods of high demand and	22.	Deliver the right message in time	AI tools help marketers gain deeper insights into their current and potential customers, enabling them to send the right message to the right person at the right moment. To build a complete profile, it's essential to gather data from every interaction with consumers.
			23.	Assist businesse	AI is really important for helping businesses figure out what their

	s	customers want and creating a personalized experience for them. By gathering information like purchase history and social media activity, companies can connect with their customers in a more effective way.

Source: Abid Haleem, Mohd Javaid, Mohd Asim Qadri, Ravi Pratap Singh, Rajiv Suman, 2022

AI applications in marketing facilitate the personalization of services and content on websites and applications, serving as a foundational element for the development of tailored marketing campaigns and fostering significant consumer engagement. AI-driven chatbots leverage machine learning to enhance their capabilities and intelligence progressively. These systems are extensive, flexible, and sophisticated, providing users with a more realistic interaction experience (Abid Haleem, Mohd Javaid, Mohd Asim Qadri, Ravi Pratap Singh, Rajiv Suman, 2022).

4. CONCLUSION

Artificial intelligence in the business world refers to the application of AI technologies like machine learning, natural language processing, and computer vision to enhance various business operations, increase employee efficiency, and create more value for the company. AI is essentially about developing smart machines, particularly computer programs, that can process vast amounts of data and leverage human expertise. This allows these systems to sort through information, make forecasts, spot mistakes, engage in conversations, and analyze data effectively. According to Gartner, by 2025, generative AI is expected to account for 30% of marketing content creation, a significant rise from just 2% in 2022. AI tools can also enhance network security, detect anomalies, identify fraud, and help prevent data breaches. This technology can analyze data much quicker than humans and utilize machine learning to make rapid decisions based on customer interactions and campaign details. As a result, it allows team members to dedicate more time to strategic initiatives, which can then inform AI-driven marketing efforts.

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