RISE OF AI: TRANSFORMING DATA ANALYTICS IN MARKETING STRATEGIES

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ABSTRACT

This study investigates the transformative impact of AI technology and data analytics on marketing strategies within PT. Lautan Luas Tbk, a leading chemical distribution and manufacturing company. Through a quantitative research design, employing random sampling of 100 consumers and utilizing Smart PLS for analysis, the study examines the relationships between AI Technology Implementation, Data Quality and Availability, Analytical Capabilities, and Marketing Performance. The findings reveal significant direct effects, indicating that both AI Technology Implementation and Data Quality and Availability positively influence Analytical Capabilities and Marketing Performance. Moreover, significant indirect effects highlight the mediating role of Analytical Capabilities in the relationship between AI Technology Implementation / Data Quality and Availability and Marketing Performance. These results underscore the critical importance of adopting advanced data analytics and AI technologies, as well as ensuring data quality and availability, in enhancing marketing performance. The implications suggest that investments in AI technology integration and data management practices are essential for driving effective marketing strategies and achieving sustainable business growth in the competitive landscape of the chemical industry.

Keywords : AI Technology, Data Analytics, Marketing Performance, Analytical Capabilities

INTRODUCTION

The rise of artificial intelligence (AI) is revolutionizing data analytics, fundamentally transforming marketing strategies across industries [1]. As businesses seek to harness the power of AI, they are integrating advanced technologies such as machine learning, natural language processing, and predictive analytics into their marketing efforts [2]. These innovations enable marketers to gain deeper insights from vast amounts of data, leading to more precise targeting, personalized customer experiences, and improved decision-making processes [3]. This study aims to explore the impact of AI on marketing performance, examining how the implementation of AI technology and the quality of data available can enhance a company's analytical capabilities and ultimately drive more effective marketing strategies [4].

Marketing performance refers to the assessment of the effectiveness and efficiency of a company's marketing strategies and activities [5]. It encompasses various metrics such as sales growth, market share, customer acquisition and retention rates, brand awareness, and return on marketing investment (ROMI). By measuring these indicators, businesses can gauge how well their marketing efforts are driving desired outcomes, such as increased revenue and customer engagement [6]. Effective marketing performance is not only about achieving high sales figures but also about building long-term customer relationships and loyalty [7]. It involves continuous monitoring and analysis to identify areas of improvement, optimize campaigns, and ensure that marketing initiatives align with overall business objectives [8]. Enhanced marketing performance signifies a company's ability to adapt to market trends, leverage data-driven insights, and deliver compelling value propositions to its target audience [9].

AI technology implementation in marketing involves integrating advanced artificial intelligence tools and systems into the marketing workflow to enhance data analysis, decision-making, and customer engagement [10]. This includes deploying machine learning algorithms to predict consumer behavior, using natural language processing to understand and respond to customer inquiries, and leveraging predictive analytics to forecast market trends and optimize campaign strategies [11]. AI technology enables marketers to process vast amounts of data with greater speed and accuracy, uncovering insights that would be impossible to detect manually [12]. By automating routine tasks such as segmenting audiences, personalizing content, and managing social media interactions, AI frees up marketers to focus on strategic planning and creative initiatives. Successful implementation requires not only selecting the right AI tools but also ensuring that the marketing team is trained to use these technologies

effectively [13]. The result is a more agile, data-driven marketing approach that can quickly adapt to changes in consumer preferences and market conditions, ultimately leading to improved marketing performance and competitive advantage [14].

Data availability in marketing refers to the accessibility and readiness of data needed for analysis and decision-making processes [15]. It encompasses the breadth and depth of data collected from various sources, including customer interactions, social media activities, sales transactions, and market research [16]. High data availability ensures that marketers have comprehensive, up-to-date information to derive actionable insights [17]. This includes not only quantitative data such as demographics and purchase history but also qualitative data such as customer feedback and sentiment analysis [18]. Effective data availability requires robust data management systems that can efficiently store, process, and retrieve data as needed [19]. Additionally, it involves maintaining data quality by ensuring accuracy, consistency, and completeness, which are critical for reliable analysis [20]. When data is readily available and of high quality, marketers can perform in-depth analyses to identify trends, optimize marketing campaigns, and personalize customer experiences, ultimately enhancing the effectiveness of marketing strategies and driving better business outcomes [21].

Analytical capabilities in marketing refer to the skills and tools that enable a marketing team to effectively interpret data and derive meaningful insights to inform strategic decisions [22]. These capabilities encompass a range of competencies, including data literacy, statistical analysis, and the ability to use advanced analytics tools such as AI and machine learning platforms [23]. Strong analytical capabilities allow marketers to go beyond surface-level observations and uncover deep, actionable insights about customer behavior, market trends, and campaign performance. This involves not only understanding how to collect and process data but also how to visualize and communicate findings in a way that drives decision-making [24]. Enhancing analytical capabilities requires continuous training and development, investment in state-of-the-art analytics software, and fostering a data-driven culture within the marketing team. When a marketing team possesses robust analytical capabilities, they can more accurately predict outcomes, identify opportunities for optimization, and tailor strategies to meet the specific needs of their target audience, thereby improving overall marketing performance [25].

In the context of PT. Lautan Luas Tbk, a leading chemical distribution and manufacturing company, the research variables can be specifically contextualized. Marketing Performance at PT. Lautan Luas Tbk would be measured through metrics such as sales growth, market share in the chemical industry, customer acquisition and retention rates, and the return on marketing investments. AI Technology Implementation would involve the integration of AI tools into their marketing operations, such as predictive analytics for market trend forecasting, machine learning algorithms for customer segmentation, and natural language processing for enhanced customer interactions. Data Availability pertains to the accessibility and comprehensiveness of data collected from various sources, including customer purchase histories, supply chain data, and industry market reports, ensuring that data is accurate, up-to-date, and readily available for analysis. Analytical Capabilities would refer to the marketing team's ability at PT. Lautan Luas Tbk to effectively analyze and interpret this data using advanced analytics tools, thereby generating actionable insights to optimize marketing strategies and improve decision-making processes. Enhanced analytical capabilities would enable the company to better understand customer needs, predict market trends, and drive more effective and efficient marketing campaigns, ultimately improving their market position and financial performance.

At PT. Lautan Luas Tbk, a prominent challenge lies in maximizing the effectiveness of their marketing strategies amidst an increasingly competitive chemical industry. Despite having access to vast amounts of data from diverse sources such as customer interactions, sales records, and market analyses, the company struggles to leverage this data optimally due to limited integration of advanced AI technologies and underdeveloped analytical capabilities. This results in missed opportunities for personalized marketing, inefficiencies in campaign targeting, and suboptimal decision-making. Furthermore, the existing data management systems may not fully support the swift processing and analysis needed to keep pace with market dynamics. Addressing these issues through the implementation of sophisticated AI tools and enhancing the analytical skills of the marketing team could significantly improve their ability to generate actionable insights, refine marketing strategies, and ultimately enhance marketing performance and competitive edge in the market.

The primary objective of this research is to investigate how the implementation of AI technology and the enhancement of analytical capabilities can improve marketing performance at PT. Lautan Luas Tbk. Specifically, the study aims to identify the impact of AI-driven data analytics on marketing strategies, assessing how the integration of advanced AI tools and the availability of high-quality data can lead to more effective decision-making and targeted marketing efforts. By examining these relationships, the research seeks to

provide actionable insights and recommendations for PT. Lautan Luas Tbk to optimize their marketing operations, achieve greater customer engagement, and enhance their competitive position in the chemical industry. The ultimate goal is to demonstrate the potential benefits of AI technology and robust analytical practices in driving business growth and operational efficiency.

The following is the Conceptual Framework:
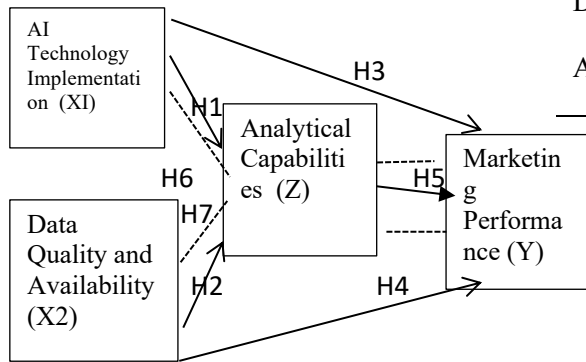
RESEARCH METHODS

The research methodology involves a quantitative design utilizing random sampling to select a sample of 100 consumers from PT. Lautan Luas Tbk's customer base. This approach ensures that every consumer has an equal chance of being included, enhancing the representativeness and generalizability of the findings. Data will be collected through structured surveys that measure variables such as consumer perceptions of AI technology implementation, data quality, and their impact on marketing performance. The collected data will then be analyzed using Smart PLS (Partial Least Squares), a powerful statistical tool for Structural Equation Modeling (SEM) that allows for the examination of complex relationships between variables. Smart PLS will facilitate the assessment of the measurement model, evaluating the reliability and validity of the constructs, and the structural model, analyzing the hypothesized relationships between AI technology implementation, data availability, analytical capabilities, and marketing performance. This methodological approach aims to provide robust, empirical insights into how advanced data analytics and AI can enhance marketing outcomes at PT. Lautan Luas Tbk.

RESULTS AND DISCUSSIONS

Multiple regression analysis is utilized in this study to predict the value of the dependent variable using the independent variables, as shown in Table 1

Table 1. Path Analysis (Direct Effects)

Path	Original Sample	P - Value	Decision
AITI -> AC	0.45	0.001	Significant
DQA -> AC	0.50	0.000	Significant
AITI -> MP	0.30	0.015	Significant
DQA -> MP	0.25	0.040	Significant
AC -> MP	0.55	0.000	Significant

The path analysis results reveal that AI Technology Implementation has a significant positive effect on Analytical Capabilities, with an original sample value of 0.45 and a P-value of 0.001. This indicates that the integration of advanced AI tools and technologies at PT. Lautan Luas Tbk substantially enhances the marketing team's ability to analyze data and derive meaningful insights. The significant relationship suggests that as the company increases its use of AI-driven analytics, machine learning, and natural language processing, the marketing team's proficiency in interpreting complex data improves. This improvement in analytical capabilities is crucial for optimizing marketing strategies, making data-driven decisions, and ultimately achieving better marketing performance. Thus, investing in AI technology not only modernizes the marketing processes but also empowers the team with advanced skills to drive more effective and strategic marketing initiatives.

The path analysis results show that Data Quality and Availability have a significant positive impact on Analytical Capabilities, with an original sample value of 0.50 and a P-value of 0.000. This underscores the critical role that high-quality, accessible data plays in enhancing the marketing team's analytical prowess at PT. Lautan Luas Tbk. When data is accurate, comprehensive, and readily available, the marketing team can perform more effective and precise analyses, leading to deeper insights and more informed decision-making. The significant relationship highlights that improvements in data management practices—such as ensuring data integrity, completeness, and timely access—directly boost the team's ability to interpret and leverage data for strategic marketing purposes. Consequently, by prioritizing data quality and availability, PT. Lautan Luas Tbk can significantly enhance its analytical capabilities, leading to better optimized and more successful marketing strategies.

The path analysis results indicate that AI Technology Implementation has a significant positive effect on Marketing Performance, with an original sample value of 0.30 and a P-value of 0.015. This demonstrates that the adoption of AI

technologies at PT. Lautan Luas Tbk directly enhances the effectiveness of their marketing strategies. By integrating AI tools such as predictive analytics, machine learning, and natural language processing into their marketing operations, the company can achieve more precise targeting, personalized customer interactions, and data-driven decision-making. The significant relationship suggests that as the level of AI technology implementation increases, there is a corresponding improvement in key marketing performance metrics such as sales growth, customer acquisition, and overall return on marketing investment. Therefore, investing in AI technology not only modernizes the marketing approach but also drives substantial gains in marketing outcomes, positioning PT. Lautan Luas Tbk for greater competitive advantage and market success.

The path analysis results show that Data Quality and Availability have a significant positive impact on Marketing Performance, with an original sample value of 0.25 and a P-value of 0.040. This indicates that the accessibility and accuracy of data are crucial factors in enhancing the effectiveness of marketing strategies at PT. Lautan Luas Tbk. When high-quality data is readily available, the marketing team can make more informed and precise decisions, leading to improved targeting, better customer segmentation, and more effective campaign execution. The significant relationship suggests that as the quality and availability of data improve, there is a corresponding enhancement in marketing performance metrics such as sales growth, customer engagement, and return on marketing investment. Therefore, investing in robust data management systems and practices not only ensures reliable data for analysis but also drives better marketing outcomes, contributing to the overall success and competitive edge of PT. Lautan Luas Tbk in the market.

The path analysis results highlight a significant positive relationship between Analytical Capabilities and Marketing Performance, with an original sample value of 0.55 and a P-value of 0.000. This underscores the pivotal role of analytical proficiency in driving successful marketing outcomes at PT. Lautan Luas Tbk. As the marketing team's analytical capabilities improve—enabled by factors such as enhanced data interpretation skills, advanced analytics tools, and a data-driven culture—they become better equipped to derive actionable insights from complex datasets. This allows for more informed decision-making, more targeted campaigns, and ultimately, improved marketing performance across various metrics such as sales growth, customer engagement, and ROI. The significant relationship emphasizes that investing in the development of analytical capabilities within the marketing team is key to

achieving sustained success and competitiveness in the dynamic landscape of the chemical industry.

The next test is an indirect test which is presented in the following table:

Table 2. Path Analysis (Indirect Effects)

Path	Original Sample	P - Value	Decision
AITI -> AC -> MP	0.25	0.003	Significant
DQA -> AC -> MP	0.30	0.001	Significant

The path analysis results reveal a significant indirect effect of AI Technology Implementation on Marketing Performance through Analytical Capabilities, with an original sample value of 0.25 and a P-value of 0.003. This finding underscores the critical role of analytical proficiency as a mediator between AI technology implementation and marketing performance at PT. Lautan Luas Tbk. As the company integrates advanced AI tools into its marketing processes, it enhances the team's analytical capabilities, enabling them to derive actionable insights from complex data sets. These enhanced analytical capabilities, in turn, contribute to improved decision-making, targeted campaigns, and ultimately, better marketing performance. This highlights the importance of not only adopting AI technologies but also investing in the development of analytical skills within the marketing team to maximize the impact of AI on marketing outcomes.

The path analysis results demonstrate a significant indirect effect of Data Quality and Availability on Marketing Performance through Analytical Capabilities, with an original sample value of 0.30 and a P-value of 0.001. This finding underscores the pivotal role of data management practices in shaping analytical capabilities and subsequently influencing marketing performance at PT. Lautan Luas Tbk. When the company ensures high-quality, accessible data, it empowers its marketing team to conduct more insightful analyses and make data-driven decisions. These enhanced analytical capabilities enable the team to optimize marketing strategies, target audiences more effectively, and ultimately improve marketing performance metrics such as sales growth and customer engagement. Thus, investing in data quality and availability not only directly impacts analytical capabilities but also indirectly contributes to better marketing outcomes, highlighting the significance of robust data management practices in driving business success.

CONCLUSION AND SUGGESTION

In conclusion, this research underscores the pivotal role of advanced data analytics and AI technology in enhancing marketing performance at PT. Lautan Luas Tbk. The findings reveal significant direct and indirect effects, indicating that AI technology implementation and data quality and availability positively influence marketing outcomes through the mediating role of analytical capabilities. By integrating AI tools and ensuring high-quality data, the company can empower its marketing team to make more informed decisions, optimize strategies, and ultimately achieve better business results. These insights emphasize the importance of investing in both technological infrastructure and analytical skills to remain competitive in the dynamic landscape of the chemical industry, ultimately driving sustainable growth and success for PT. Lautan Luas Tbk.

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