

DATA-DRIVEN MARKETING COMMUNICATIONS: THE CRUCIAL ROLE OF ACCOUNTING INFORMATION SYSTEMS

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Abstract

Data-driven Marketing Communications supported by Accounting Information Systems (AIS) is a strategic approach to marketing that utilises financial and non-financial data generated by AIS to design, execute and evaluate marketing communications activities. This approach integrates accurate and structured accounting information into marketing strategy, enabling more informed decision-making, more effective message personalisation, and more accurate measurement of marketing performance. By utilising AIS, companies can optimise the allocation of marketing resources, improve campaign effectiveness, and achieve higher return on investment (ROI) in their marketing activities. The results show that AIS plays a crucial role in providing accurate and structured data that can be used for consumer behaviour analysis, market segmentation, and measurement of marketing campaign effectiveness. The integration of AIS with marketing information systems enables better personalisation of marketing communications, more efficient resource allocation, and improved marketing ROI.

Keywords: Accounting Information System, Marketing Communication, Data-driven Marketing, System Integration, Consumer Behaviour Analysis.

Introduction

In the rapidly evolving digital era, marketing communications have undergone a significant transformation. Companies are now required to adopt smarter, more efficient and data-driven marketing strategies to remain competitive in a dynamic market. A marketing strategy is a comprehensive and structured plan designed by companies to achieve their marketing objectives (Kohana & Okamoto, 2023). It includes a series of decisions and actions related to target market selection, product or service positioning, marketing mix development (product, price, place, and promotion), and marketing resource allocation. An effective marketing strategy takes into account the company's internal factors (such as strengths and weaknesses) and external factors (such as market opportunities and threats), and aims to create value for customers, build competitive advantage, and ultimately improve the company's business performance in the long term (Rosário, 2023).

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In this context, the role of data is becoming increasingly crucial in marketing decision-making and the formation of effective communication strategies. Effective communication strategies play a crucial role in the success of an organisation or individual (Kakimoto et al., 2024). By implementing the right communication strategy, the message can be clearly received by the target audience, reducing misunderstandings and increasing efficiency in information exchange. Effective communication also helps build and maintain strong relationships with various stakeholders, such as employees, customers, business partners, and the general public. This in turn can increase reputation, trust, and loyalty towards the organisation or individual (Smith, 2024).

Furthermore, an effective communication strategy can be a catalyst for positive change and innovation. By clearly and consistently conveying the organisation's vision, goals and values, communication strategies can motivate and inspire people to work together to achieve shared goals (Yuan, 2022). In a business context, effective communication can increase productivity, encourage collaboration between teams, and facilitate better decision-making. Moreover, in today's digital age, the ability to communicate effectively through multiple channels and platforms is becoming increasingly important to reach and engage diverse audiences, as well as adapt quickly to changing environments and stakeholder expectations (Paulsson & Brady, 2022).

Accounting Information Systems (AIS) have long been recognised as the backbone of managing corporate financial information. However, its potential as a rich source of data to support marketing decisions is often overlooked. In fact, AIS stores a variety of important data such as customer purchasing patterns, product sales trends, and other financial information that can provide valuable insights for marketing teams (Zheng, 2022).

The integration between AIS and marketing communication strategies remains a challenge for many organisations. Some of the factors that contribute to this include: 1) Lack of understanding of the potential of AIS data in a marketing context. 2) Limitations in integrating accounting information systems with marketing systems. 3) Difficulties in analysing and interpreting accounting data for marketing purposes. 4) Resistance to change in traditional marketing practices (Barolli, 2024).

Nonetheless, some leading companies have begun to utilise data from AIS to improve the effectiveness of their marketing communications. For example, using transaction data to personalise marketing messages, optimising advertising budgets based on product profitability analysis, and more accurate customer segmentation based on purchasing patterns (Cui, 2022).

This research examines the crucial role of Accounting Information Systems in supporting data-driven marketing communications. By understanding the potential integration between AIS and marketing strategy, it is expected that companies can

improve the effectiveness of their marketing communications, optimise resource allocation, and ultimately improve overall business performance.

Research Methods

This study uses literature. The literature research method, also known as a desk study or literature review, is a research approach that focuses on collecting, analysing, and synthesising information from various written sources relevant to the research topic. (Abdussamad, 2022); (Wekke, 2020).

Results and Discussion

Marketing Communication

Marketing communication is a fundamental concept in the modern world of business and marketing. In simple terms, marketing communication can be defined as the process of conveying information about a company's products, services, or brands to a target audience or potential consumers. The main objective is to build awareness, create interest, encourage desire, and ultimately motivate the act of purchase. Marketing communication includes a variety of activities and strategies designed to effectively convey marketing messages, including advertising, sales promotion, public relations, direct marketing, and personal selling (Alzamil et al., 2020).

The concept of marketing communication has evolved over time, from a traditional approach that focuses on one-way communication, to a more interactive and integrated model. In today's digital age, marketing communications is not only about delivering messages, but also about building relationships and dialogue with consumers (Rosário, 2023). This involves the use of various channels and platforms, including social media, content marketing, and influencer marketing. An integrated approach to marketing communications, known as Integrated Marketing Communication (IMC), emphasises the importance of message consistency across all touchpoints with consumers to create a cohesive brand experience and strengthen the Company's market position (Zhou, 2022).

A marketing communication strategy is a comprehensive plan designed to achieve marketing objectives through the effective and efficient use of various communication tools. This strategy involves several key elements, including: 1) Identification of a clear target audience, 2) Setting specific communication objectives, 3) Design of compelling and relevant messages, 4) Selection of appropriate communication channels (such as digital media, traditional media, or direct communication), 5) Effective budget allocation, 6) Determination of the optimal marketing communication mix (e.g., a combination of advertising, sales promotion, public relations, and direct marketing), 7) Coordinated implementation of the campaign, and 8) Measurement and evaluation of results for continuous improvement. An effective strategy must be flexible to adapt to market changes, consumer behaviour,

and technological developments, and be able to integrate various communication elements to create synergy and maximum impact (Suryawijaya et al., 2023).

The digital age has brought significant changes to the marketing communications landscape, presenting new opportunities and challenges for marketers. This development is characterised by: 1) The increasing role of social media as a key communication platform, 2) Personalisation of messages through big data analysis, 3) A shift towards more interactive and engaging marketing content, 4) Utilisation of technologies such as artificial intelligence (AI) and virtual reality (VR) in marketing campaigns, 5) Emergence of influencer marketing as an effective strategy, 6) Importance of search engine optimisation (SEO) and content marketing for online visibility, 7) Increased focus on cross-channel (omnichannel) customer experience, 8) The use of marketing automation to improve efficiency, and 9) The importance of transparency and authenticity in brand communication. All of these have changed the way companies interact with consumers, forcing them to be more adaptive, responsive, and innovative in their marketing communication strategies (Shen, 2022).

As such, marketing communications strategies in the digital age demand a more holistic, integrated and consumer-centric approach, while maintaining the flexibility to adapt to the rapid changes in the digital landscape.

Data-driven Marketing

Data has become an invaluable asset in the modern marketing world. In the context of marketing, data refers to information collected about consumers, markets, and marketing performance that can be analysed to make strategic decisions. This includes various types of information, ranging from demographic and consumer behaviour data to transaction data and digital interactions. The notion of data in marketing also includes the ability to collect, process, and interpret this information into actionable insights, which in turn can improve the effectiveness of marketing strategies (Pei & Vasarhelyi, 2020).

The importance of data in marketing cannot be overstated in today's digital era. Data allows marketers to understand their target audience better, predict market trends, and optimise marketing campaigns for better results. By utilising data, companies can make evidence-based decisions, increase personalisation in marketing communications, and measure the return on investment (ROI) of their marketing efforts more accurately (Wilkin et al., 2020). Data also helps in more precise market segmentation, product development that better suits consumer needs, and more competitive pricing. In addition, data analysis enables marketers to identify new opportunities and respond more quickly to market changes, providing a significant competitive advantage in a highly dynamic business landscape (Arnold et al., 2023).

In modern marketing, different types of data are used to support effective decision-making and strategy. Some of the key data types include: demographic data

(such as age, gender, income, and location), psychographic data (which includes consumer lifestyle, values, and personality), behavioural data (including purchase history, browsing patterns, and interactions with brands), transactional data (purchase details and transaction history), engagement data (consumer interactions with marketing content and social media), location data (real-time geographic information), survey and feedback data (consumer opinions and preferences), competitive data (information about competitors and market share), and operational data (internal company performance) (Grabski & Leech, 2023). In addition, big data collected from various digital sources, including the Internet of Things (IoT) and mobile applications, is also increasingly important in providing deeper and predictive insights for more targeted and personalised marketing strategies (Li, 2023).

Accounting Information System (AIS)

Accounting Information System (AIS) is a system that collects, records, stores, and processes data to produce information used in planning, controlling, and operating a business. AIS is an integral part of the wider management information system in an organisation. The main objective of AIS is to provide accurate, timely, and relevant financial information to internal and external stakeholders, such as managers, investors, creditors, and government agencies. AIS assists in decision-making, facilitates planning and control of organisational activities, and supports compliance with financial reporting regulations and standards (Adebimpe & Lola, 2024).

The main components of AIS consist of six interrelated elements. First, the people who use the system, including accountants, managers, and other users. Second, the procedures and instructions used to collect, process, and store data. Third, data about the organisation and its business activities. Fourth, the software used to process the data. Fifth, the information technology infrastructure, including computers, peripheral devices, and network devices used in the AIS. Sixth, the internal controls and security measures that safeguard AIS data and assets. The effective integration of all these components allows AIS to produce financial reports, support daily operations, and provide information for strategic decision making (Ma et al., 2021).

Accounting Information Systems (AIS) have several crucial functions in an organisation. First, AIS plays a role in collecting and storing data about organisational activities and transactions efficiently and effectively. Second, AIS processes data into information that is useful for decision making by management. Third, AIS provides adequate controls to safeguard organisational assets, including data, and ensures that the data is available when needed. Fourth, AIS assists in operational planning and control by providing information for budgets and performance reports (Zhang, 2024). Fifth, AIS supports regulatory compliance by generating reports required by the authorities. Sixth, AIS facilitates interdepartmental coordination by providing integrated information. Finally, AIS improves operational efficiency by automating many

routine accounting tasks. Thus, AIS not only functions as a recording tool, but also as a strategic system that supports the achievement of overall organisational goals (Xiao et al., 2021).

The integration of Accounting Information Systems (AIS) with other information systems in an organisation is a crucial aspect in today's digital era. AIS no longer stands alone as an isolated system, but rather becomes an integral part of the broader information technology ecosystem. This integration enables seamless data flow between various departments and business functions, such as supply chain management, customer relationship management (CRM), enterprise resource planning (ERP), and business intelligence systems (Koreff et al., 2021). With effective integration, financial data from AIS can be combined with operational data from other systems to provide a more comprehensive view of organisational performance. This enables faster and more accurate decision-making, and improves overall operational efficiency (Ping, 2021).

The process of integrating AIS with other systems involves several important aspects. First, standardisation of data formats and communication protocols between systems is required to ensure compatibility. Second, the development of application programming interfaces (APIs) that allow various systems to share data in real-time. Third, the implementation of a robust security system to protect the integrity and confidentiality of data as it is transferred between systems. Fourth, staff training to understand and utilise the integrated system effectively (Kiatkajitmun et al., 2023). Challenges in this integration include managing increasing system complexity, ensuring data accuracy across platforms, and overcoming resistance to change within the organisation. However, when done correctly, the integration of AIS with other information systems can result in significant improvements in financial visibility, operational efficiency, and the organisation's ability to adapt quickly to market changes (Cram, 2022).

Furthermore, the integration of AIS with other information systems also opens up opportunities for more sophisticated data analysis and more comprehensive reporting. By combining financial data from AIS with operational data from other systems, organisations can perform more accurate predictive analysis, identify business trends, and discover new opportunities for optimisation and growth. For example, integration between AIS and supply chain management systems can help in forecasting cash flows more precisely based on purchasing and shipping patterns. In addition, integration with CRM systems can provide deeper insights into customer profitability, enabling more targeted marketing and sales strategies (Cram, 2022).

AIS integration also drives the transformation of the role of accountants in organisations. With the automation of many routine tasks through integrated systems, accountants can focus more on strategic analysis and providing high-value business recommendations. This increases the added value provided by the accounting

department to the organisation as a whole (Odularu, 2024). However, keep in mind that effective system integration requires significant investment in technology infrastructure, employee training, and possibly changes in business processes. Organisations need to carefully consider the costs and benefits of system integration before implementing (Yoon et al., 2021).

Thus, the integration of Accounting Information Systems with other information systems in the organisation is an important step towards digitalisation and optimisation of business processes. Through effective integration, organisations can achieve higher levels of operational efficiency, faster and more accurate decision-making, and improved analytical capabilities. This integration not only improves the accounting function, but also drives overall business transformation, enabling organisations to be more responsive to changing market and customer needs. Despite implementation challenges, the long-term benefits of a well-integrated system can significantly improve an organisation's competitiveness and sustainability in the ever-evolving digital age. Therefore, organisations need to view AIS integration as a strategic investment that is essential for future growth and success.

Conclusion

In this study, the conclusions are as follows;

Firstly, Accounting Information Systems (AIS) play a very important role in supporting data-driven marketing communications. AIS not only serves as a tool for recording financial transactions, but also as a source of rich and reliable data for marketing analysis. With its ability to collect, process, and present financial data in a structured manner, AIS provides a solid foundation for more targeted and effective marketing decision-making.

Secondly, the integration of AIS with marketing information systems opens up new opportunities in marketing communication strategies. Data generated by AIS, such as customer buying patterns, product profitability, and sales trends, can be used to design more personalised and relevant marketing campaigns. This allows companies to optimise the allocation of marketing resources, improve cost efficiency, and ultimately increase the return on investment (ROI) of marketing activities.

Finally, the role of AIS in data-driven marketing communications emphasises the importance of cross-departmental collaboration in modern organisations. The synergy between accounting, finance, and marketing departments is key in generating holistic and accurate business insights. By utilising data from AIS, marketing teams can make more informed decisions, measure campaign effectiveness with more precision, and continuously make adjustments to strategies based on financial performance. This shows that AIS is not just a tool for the finance department, but also a strategic asset for the entire organisation in the increasingly competitive digital marketing era.

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