

Marketing Automation in Academic Literature: A Systematic Analysis of its Definitions and Categories

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Abstract

Marketing automation has become increasingly critical in contemporary business practices, with the global market reaching \$6.5 billion in 2023 and projected to grow to \$9.5 billion by 2027. However, academic literature currently presents fragmented and diverse definitions of marketing automation, creating both theoretical ambiguity and practical confusion in understanding this construct. This conceptual inconsistency hinders scholarly discourse and impedes practitioners' ability to make informed decisions regarding technology adoption and implementation. The purpose of this study is to determine the definition of marketing automation based on existing literature. A systematic literature review (SLR) was conducted, and 12 articles on marketing automation were obtained. The results indicate four categories of marketing automation discussions based on definitions. From a theoretical perspective, this study contributes to conceptual clarity by synthesizing fragmented definitions into a coherent framework, while from a practical standpoint, it provides business practitioners with a structured understanding to guide investment decisions and implementation strategies in marketing automation technology. This study clarifies the diversity of marketing automation definitions based on academic literature, which can serve as a theoretical basis for further research and as a foundation for practical digital-based decision-making.

Keywords: Definition, marketing automation, SLR

INTRODUCTION

Sustainable and growing businesses are the result of sound business decisions based on thorough market analysis. Business leaders and entrepreneurs need to understand in-depth market analysis, particularly regarding the company's internal capabilities, competitors, consumer behaviour, and the external business environment (Hawkins & Mothersbaugh, 2010). Market analysis capabilities in the era of traditional marketing were very limited. However, with the advancement of technology, business leaders and entrepreneurs now have the opportunity to analyse the market more quickly and accurately with marketing automation.

The existence of marketing automation is now increasingly imperative in line with technological advances, changes in consumer behaviour and the need for corporate efficiency in creating effective value. The global marketing automation market reached \$6.5 billion in 2023 with a CAGR of 12.3%. This growth is projected to reach \$9.5 billion with a CAGR of 9.9% by 2027 (Gupta & Goel, 2024). A study from the University of Hamburg in Germany shows that 52% of all improvements in marketing performance can be achieved through the application of automation (Rosada et al., 2023). Another study shows that marketing automation can increase loyalty by creating a more personalized experience. AI and machine learning also play an important role in refining marketing automation strategies. This is achieved through more effective analysis of customer data to generate personalized marketing communications and offers, leading to higher sales and customer retention (Rolando, 2025). As

many as 80% of companies will hire competent employees to manage their marketing automation (Rosada et al., 2023)

The term 'automation' in the world of marketing first appeared in articles by Gordon W Head in 1960 and Charler R. Goeldner in 1962 as a response to the growth of POS, ATM, vending machines, and other similar technologies. They argued that all these technological advances should make it easier for companies to obtain and analyse the data needed to create the right marketing strategies. Between 1970 and 1979, Little focused on developing a marketing decision support system (MDSS). Rowland T. Moriarty, a Harvard professor, and his colleague George Schwartz, in a Harvard Business Review article, argued that marketing needed to be automated. In 1991, they proposed the Marketing & Sales Productivity (MSD) system, such as direct mail to target markets (Hong & Park, 2020).. Little first introduced the term 'marketing automation' at a symposium in Berkeley in 2001. Little suggested analyzing customer digital footprints using the appropriate model to make better decisions, achieve higher ROI, and create customer satisfaction and loyalty through customize marketing activities (Heimbach et al., 2015).

Marketing automation has continued to evolve and become a topic of discussion in various fields and industries. Since marketing automation became a promising marketing technology, marketing literature has presented various definitions (Corsaro et al., 2021). Li's (2024) study discusses the application of marketing automation technology in personal branding communication. Rolando's (2025) research discusses the application of marketing automation technology in optimizing various consumer journey flows in the context of e-commerce. Discussions on the role of AI in personalized marketing automation and its impact on the experience of customers and SME sellers have also been discussed (Kedi et al., 2024). Among the many discussions on marketing automation, its definition itself has become diverse. Marketing automation is often mistakenly equated with CRM systems, mailing list-based promotions, interactive marketing, direct marketing, and so on (Heimbach et al., 2015).

A clear definition of what marketing automation is becomes necessary. This will impact the understanding of the basic concept that can be accepted across various fields discussing marketing automation. The purpose of this study is to determine the definition of marketing automation based on existing literature. To address this issue, a systematic literature review (SLR) was conducted to obtain a definition of marketing automation through a scientific procedure. Theoretically, this study contributes to knowledge consolidation by developing a typology that categorizes existing definitions, thereby providing a foundation for future construct operationalization and measurement. Practically, the findings offer business leaders a decision-making tool to assess which conceptualization of marketing automation aligns with their organizational needs, facilitating more informed technology adoption strategies and implementation approaches.

RESEARCH METHOD

The study used qualitative inductive approach with a systematic literature review (SLR). Based on the time horizon, this study is classified as a cross-sectional study conducted at a specific point in time (Saunders & Tosey, 2021 SLR is a research methodology for collecting, identifying, and critically analyzing available research studies using systematic procedures.

SLR aims to review the key points of current knowledge on a topic, as well as research questions, to serve as an initial idea for further study (Carrera-Rivera et al., 2022). SLR adopts the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) approach. PRISMA consists of four phases: identification, screening, eligibility, and inclusion (Rehman et al., 2020).

RESULTS AND DISCUSSION

Identification is the first phase of the PRISMA protocol. This phase begins by determining the keywords, which are 'Marketing Automation.' Keyword searches are conducted using the web-based application Watase Uake. The selected articles are those that implicitly use the term 'Marketing Automation' in their titles and were published between 2000 and 2025. Only selected articles with a minimum quartile of Q4 and in English are included. Out of 36 articles, 21 were processed further, as 11 articles did not fall within the Q1-Q4 range, one article was detected without an abstract, and three articles were published before the year 2000.

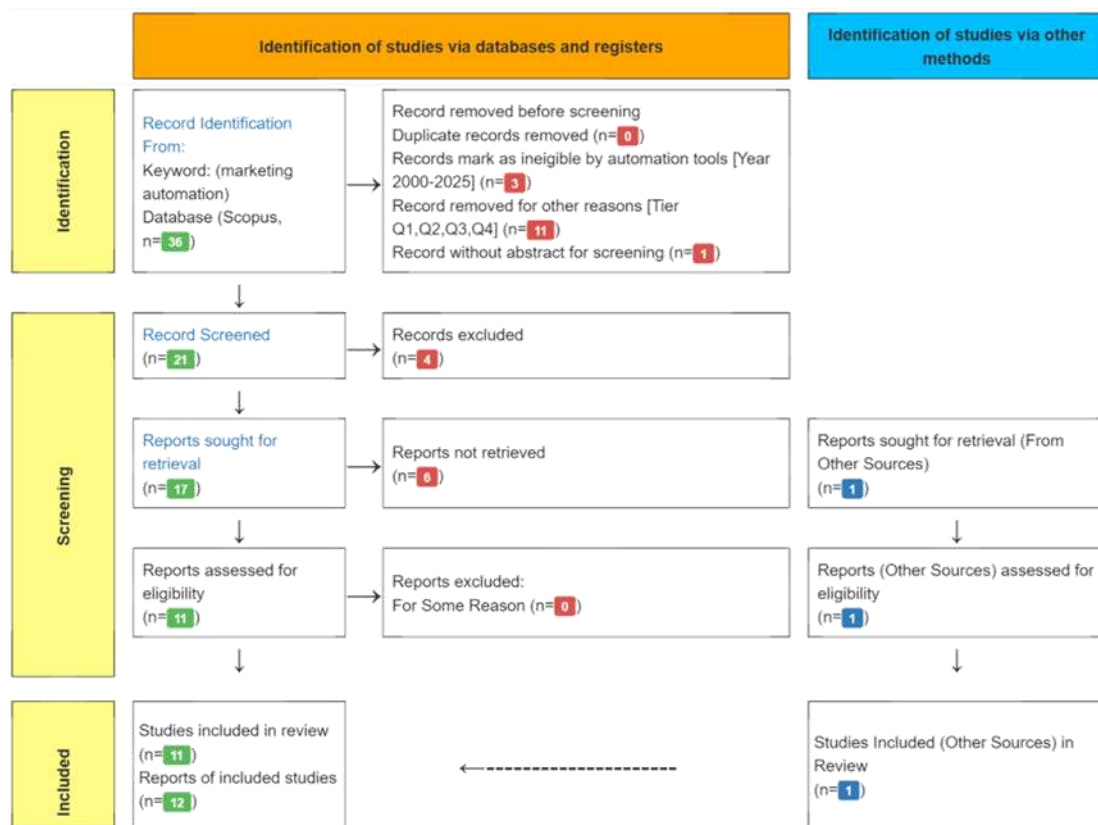


Figure 1 PRISMA Output
Source: (Watase Uake Output)

The screening process began with reading the titles and abstracts. This process revealed that four of the 21 articles were not suitable. A total of 21 articles were then searched for, but only 17 articles could be downloaded because six article DOIs could not be detected. The total number of eligible articles based on this process was 11 articles. One other source from Google Scholar was added, so that in the end there were 12 articles on marketing automation. The selected articles were then uploaded back into the Watase Uake application, and the final results can be seen in the figure above (Figure 1).

The selected articles were then reviewed for their definitions of marketing automation. As shown in the table below (Table 1), there are four major categories of marketing automation definitions based on the 12 articles, namely those related to (1) Smart Tech & Data-Based, (2) Content Personalisation & Sales Integration, (3) Decision Support & Analytics, and (4) Special Applications. These categories are based on the thematic connections and relatively similar definitions.

The first category of marketing automation definitions relates to Smart Tech & Data-Based marketing automation. Lyu et al (2023) explain that marketing automation is defined as cloud-based software used to execute, manage, and automate marketing tasks and processes based on big data. Their definition includes activities such as marketing planning and analysis, inventory and production management, budget forecasting, information management, customer tracking, data-driven marketing activities, and the use of machine learning, particularly back-propagation neural networks, to automatically optimize marketing processes. Guercini (2023) defines marketing automation as a system that uses models and algorithms to automatically analyse big data, respond to customer behaviour, competitors, and influencers to generate personalized marketing decisions in real-time. Islam et al., (2024) do not explicitly define marketing automation, but conceptually, digital marketing automation is defined as a combination of data-based technologies for personalisation, operational efficiency, customer engagement, and data-based decisions.

The second category of marketing automation definitions relates to Content Personalisation & Sales Integration. Järvinen & Taiminen (2016) define marketing automation as a system that enables companies to align their marketing and sales systems. This is primarily in an effort to improve the prospect qualification process through “lead scoring and nurturing” by targeting potential buyers through personalized content. Mero et al. (2020) define marketing automation as technology to enhance the effectiveness and efficiency of marketing operations through automated, persona-based, and analytic-driven activities. Mero et al. (2022) define marketing automation as a software-as-a-service (SaaS) integration solution tailored to organizational needs, enabling rapid decision-making. Silva et al. (2023) explain marketing automation as technology for automating marketing activities, such as email marketing, social media posts, advertising campaigns, CRM, and, in addition to improving personalisation capabilities, also marketing accountability for companies. Marketing accountability, as defined by the American Marketing Association, is a form of responsibility for the systematic management of marketing resources and processes in an effort to achieve measurable improvements in ROMI (Return on Marketing Investment), increase productivity, and enhance company value.

The third category of marketing automation definitions relates to Decision Support & Analytics. Stone (2021) explains that marketing and sales automation (MSA) is automation technology for managing marketing and sales activities, including decision-making analysis, communication campaigns, and activities that interact directly with customers, both digitally and physically, using various types of data, thereby enabling the performance of every aspect of marketing activities to be measured. Murphy (2018) defines marketing automation as the use of software and automation systems to support decision-making and the execution of marketing activities, such as automating repetitive tasks, content delivery, and algorithms and data to improve efficiency, personalisation, and customer engagement. Guercini (2023) argues that the core of marketing automation is automatic customization of marketing decision-making support to increase productivity, high ROMI, and improved customer satisfaction and loyalty.

The last category of marketing automation definitions relates to Special Applications. Savage et al. (2020) explain that marketing automation is a technology that enables the automation of marketing activities aimed at increasing participation (effectiveness) and efficiency in online data collection. Their article provides several examples of its application,

such as email blasts, automatic survey invitation delivery using Salesforce Pardot, CRM systems, and Qualtrics for tracking participant responses and analysing paradata (data during the collection process). Sun et al. (2023) highlight marketing automation as the utilisation of digital advertising technology (mobile-based) with structured ad content design aimed at increasing exposure and conversion. According to them, marketing automation is not limited to the use of SMS for location- and time-based promotions, message personalisation, and content narratives (objective or subjective).

Tabel 1. Definition Based on Articles

No	Articles	Author, Publisher, Year	Definition	Category
1	<i>Impact Of Big Data and Cloud-Driven Learning Technologies in Healthy and Smart Cities on Marketing Automation</i>	Xiaojing, Lyu; Faxian, Jia; Bingqian, Zhao (<i>Soft Computing</i> , Q2, 2023)	Marketing automation is defined in this article as cloud-based software used to execute, manage, and automate marketing tasks and processes based on big data.	Smart Tech & Data-Based
2	<i>Scope Of Heuristics and Digitalization: The Case of Marketing Automation</i>	Simone, Guercini (<i>Mind & Society</i> , Q1, 2022)	Marketing automation is defined as a system that uses models and algorithms to automatically analyse big data, respond to customer, competitor and influencer behaviour, in order to generate personalized marketing decisions in real time.	
3	<i>Artificial Intelligence in Digital Marketing Automation: Enhancing Personalization, Predictive Analytics, and Ethical Integration</i>	Md Ahadul Islam, Shafiqul Islam Fakir, Seaam Bin Masud, Md. Deluar Hossen, Md Tariqul Islam, Md Rafiuddin Siddiky (<i>Edelweiss Applied Science and Technology</i> , Q3, 2024)	This article defines Artificial Intelligence (AI)-based Digital Marketing Automation (DMA) conceptually, including machine learning algorithms, predictive analytics, NLP, and chat-bots, to automate digital marketing processes in order to improve personalisation, operational efficiency, customer engagement, and data-driven decisions.	
4	<i>Harnessing Marketing Automation for B2B Content Marketing</i>	Joel, Järvinen; Heini, Taiminen (<i>Industrial Marketing Management</i> , Q1, 2016)	This article defines marketing automation as software that enables companies to align their marketing and sales systems to improve the prospect qualification process through “lead scoring and nurturing”, by targeting potential buyers with personalized content.	

Marketing Automation in Academic Literature: A Systematic Analysis of its Definitions and Categories

No	Articles	Author, Publisher, Year	Definition	Category
5	<i>Effectual And Causal Reasoning in the Adoption of Marketing Automation</i>	Joel, Mero; Anssi, Tarkiainen; Juliana, Tobon (<i>Industrial Marketing Management</i> , Q1, 2020)	This article defines marketing automation as technology used to improve the effectiveness and efficiency of marketing operations through automated, personalized, and analytic-driven activities.	Content Personalization & Sales Integration
6	<i>Agile Logic for SaaS Implementation: Capitalizing on Marketing Automation Software in a Start-Up</i>	Joel, Mero; Miira, Leinonen; Hannu, Makkonen; Heikki, Karjaluo (<i>Journal Of Business Research</i> , Q1, 2022)	Marketing automation diartikan sebagai bagian solusi <i>Software as a Service</i> (SaaS) yang dibutuhkan organisasi untuk membuat keputusan yang cepat	
7	<i>Marketing Accountability and Marketing Automation: Evidence from Portugal</i>	Susana C., Silva; Leonardo, Corbo; Božidar, Vlačić; Mariana, Fernandes (<i>Euromed Journal Of Business</i> , Q1, 2023)	Marketing automation is defined as part of the <i>Software as a Service</i> (SaaS) solution that organizations need to make quick decisions.	
6	<i>Developments in B to B and B to C Marketing and Sales Automation Systems</i>	Merlin, Stone (<i>Journal Of Business-To-Business Marketing</i> , Q2, 2021)	Marketing & Sales Automation (MSA) is automation technology for managing (planning, delivery, and measurement) marketing and sales processes, decision-making analysis, communication campaigns, and activities that directly engage with customers across all communication and distribution channels used by companies—both digital and physical—by combining various types of data to support decision-making and performance measurement.	Decision Support & Analytics
7	<i>Silver Bullet or Millstone? A Review of Success Factors for Implementation of Marketing Automation</i>	Daniel, Murphy (<i>Cogent Business and Management</i> , Q2, 2018)	Marketing automation refers to the use of software and automated systems to support decision-making and the execution of marketing activities. This includes the automation of repetitive tasks, the delivery of content based on specific rules, and the use of data	

No	Articles	Author, Publisher, Year	Definition	Category
			and algorithms to improve efficiency, personalisation, and customer engagement.	
9	<i>Marketing Automation and the Scope of Marketers' Heuristics</i>	Simone, Guercini (<i>Management Decision</i> , Q1, 2023)	The essence of marketing automation is automated customization of marketing decision support, which promises increased productivity, better decisions, higher marketing return on investment, and increased customer satisfaction and loyalty.	
10	<i>Using Marketing Automation to Modernize Data Collection in the California Teachers Study Cohort</i>	Kristen E., Savage; Jennifer L., Benbow; Christine, Duffy; Emma S., Spielfogel; Nadia T., Chung; Sophia S., Wang; Maria Elena, Martinez; James V., Lacey (<i>Cancer Epidemiology Biomarkers and Prevention</i> , Q1, 2020)	Technology that enables the automation of marketing activities such as sending emails based on predefined rules (e.g. through 'if-then' logic), with the aim of increasing participation and efficiency in data collection through online surveys.	Special Application
11	<i>Marketing Automation: How To Effectively Lead the Advertising Promotion for Social Reconstruction in Hotels</i>	Xue, Sun; Yuhao, Li; Bo, Guo; Li, Gao (<i>Sustainability</i> , Q1, 2023)	Marketing automation is the use of digital advertising technology (especially mobile-based) to promote hotel franchise services with structured ad content design to increase exposure (views) and conversion (clicks/follow-up actions).	

Source: From Various Sources

CONCLUSION

This study achieves its objective of defining marketing automation through a systematic literature review, identifying four key definition groups: Smart Tech & Data-Based, Content Personalisation & Sales Integration, Decision Support & Analytics, and Special Applications. The consolidated definition encompasses activities involving smart technology-based data automation systems that enable personalization, integration, and data-driven decision-making in marketing. While providing valuable conceptual clarity for academics and practical insights for business practitioners, the study is limited by its exclusive focus on English-language, Q1–Q4 journal articles, reliance on purely conceptual SLR without empirical triangulation, and a cross-sectional approach that does not account for future evolution of the term. Future research should explore variable indicators based on the proposed definition, incorporate practitioner

perspectives, and use mixed methods to verify and expand understanding across diverse sources, including industry reports and longitudinal studies.

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