

# An integrated artificial intelligence framework for knowledge production and B2B marketing rational analysis for enhancing business performance

Abhishek Dondapati<sup>a</sup>, Neelam Sheoliha<sup>b</sup>, Jeidy Panduro-Ramirez<sup>c</sup>, Ruhi Bakhare<sup>d,\*</sup>, P.M. Sreejith<sup>e</sup>, V.V. Devi Prasad Kotni<sup>f</sup>

<sup>a</sup> Department of Management Studies, University of Madras, India

<sup>b</sup> Management, IMS Noida, Noida, Peru

<sup>c</sup> Business Department, Universidad Tecnológica del Perú, India

<sup>d</sup> Management, Dr. Ambedkar Institute of Management Studies and Research Deekshbhoomi Nagpur, Maharashtra, India

<sup>e</sup> Cochin University of Science and Technology, Kerala, India

<sup>f</sup> Department Of Marketing, Gitam Institute Of Management, Gitam, Deemed-To-Be University, Visakhapatnam, India

## ARTICLE INFO

### Article history:

Available online xxxx

### Keywords:

Artificial intelligence

B2B marketing

Business performance knowledge production

## ABSTRACT

Artificial intelligence is a software-based program that helps companies to enhance their productivity of the companies. Therefore gaining more marketing knowledge and other organizational knowledge is very important for the development of the performance of business companies. Thus, the usage of artificial intelligence in several sectors of business companies is increasing day by day. Thereafter, the infrastructure of artificial intelligence is expensive but the usage of artificial intelligence can enhance the level of the performance of business organizations. Apart from that, the usage of artificial intelligence helps to enhance the knowledge production of companies. Along with that, the usage of AI helps the companies to gain knowledge about the B2B marketing process which helps the companies to enhance their goods and products. In addition to that, by using the facilities of AI programs the companies can gain knowledge about the demands and needs of the market easily.

Therefore, the companies can improve their products according to the demands of the markets. Thus, improving the services according to the demands and needs of the market helps the companies to enhance the number of the customer. Therefore, enhancing the number of the customer leads to the enhancement of the sales rate of the companies. Furthermore, the purpose of this particular research study is to analyze the artificial intelligence framework and its impact on the business performance of the companies. The usage of AI impacts not only the international companies but also the companies of domestic markets are impacted by the software program. In addition to that, the researcher has used the secondary methods for gathering genuine, objective and accurate data about the research topic. Apart from that, the researcher has used the qualitative methods for analyzing all the collected data in this research study.

Copyright © 2021 Elsevier Ltd. All rights reserved.

Selection and peer-review under responsibility of the scientific committee of the International Conference on Applied Research and Engineering 2021

## 1. Introduction

Inclination of people towards adoption of advanced technology created a path for businesses to utilize technology for improving knowledge sharing supporting overall business growth. In this context, **artificial intelligence (AI)** supported the automation of business processes, especially in the **B2B (business to business)**

context. Circulation of real-time data holding great impact on B2B marketing and operational context can help to collect and utilize data on consumer and vendor profile for improving knowledge production. This is also effective to unify the data for sharing information and communicating with the target audience while communicating and engaging the audience using preferred channels. Besides, being an operational in this competitive business environment demands a focus on making rational decisions for supporting the knowledge management process. Fig. 1. Fig. 2. Fig. 3. Fig. 4. Table 1. Table 2.

\* Corresponding author.

E-mail address: [ruhibakharemt@gmail.com](mailto:ruhibakharemt@gmail.com) (R. Bakhare).

<https://doi.org/10.1016/j.matpr.2021.11.557>

2214-7853/Copyright © 2021 Elsevier Ltd. All rights reserved.

Selection and peer-review under responsibility of the scientific committee of the International Conference on Applied Research and Engineering 2021

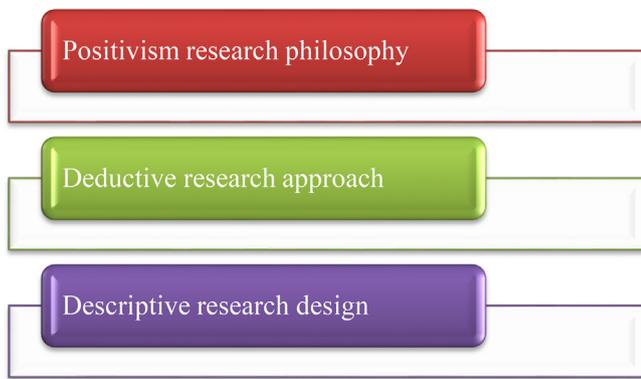


Fig. 1. Research paradigm (Source: Self-made).



Fig. 2. Methods for gathering data (Source: Self-made).

This, as a result, can help to improve the holistic performance of a firm through utilizing AI and automating the knowledge sharing process. Now, regarding this, the current study is destined to examine the importance of integrating AI for supporting knowledge production in a B2B marketing context. It would be beneficial to comment on the efficiency of knowledge creation and rational decision-making process for prompting business capabilities. Furthermore, this study would be helpful to explore the contribution of a technological revolution in meeting business goals and objectives for creating and managing an integrated knowledge management framework using AI technology.

## 2. Usage of artificial intelligence in business organizations

Artificial intelligence is technology based software and the usage of this technology in several factors is increasing day by day. Therefore, the usage of artificial intelligence makes the companies capable of enhancing the economic condition and business growth. Thereafter, the implementation of artificial intelligence software in the companies is very expensive but there are a lot of benefits of using AI in several sectors of a business organization. Thus, AI technology can be used in several sectors such as market-

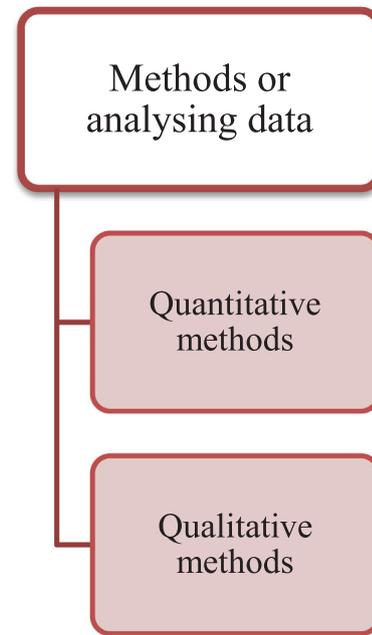


Fig. 3. Methods for analyzing data (Source: self-made).

ing, supply chain management, different operations, customer service, product quality and others [1]. Therefore, the usage of AI helps to enhance the quality of the products by choosing the right raw materials by technology. Apart from that, the usage of AI in business organizations helps for the better supply chain management. Therefore, better supply chain management leads to a better customer experience because of the timely delivery of their products.

Thereafter, good quality products and a better delivery process help to gain customer satisfaction. Thus, the usage of artificial intelligence helps to enhance the customer service level of the company and enhance a better customer experience. Along with that, marketing is a very important part of any business organization and the usage of AI in marketing of the business organization can improve the strategies of marketing of the companies [2]. Apart from that, the business companies have to set some goals to achieve and the companies have to complete some operations to achieve the goals. Therefore, the usage of AI helps for smarter operations and that helps to enhance the productivity and profitability of the companies. Thus, these are the applications and beneficial sites of artificial intelligence in the business organizations.

## 3. B2B marketing and its advantages

B2B marketing means the business-to-business marketing that supports the marketing system of products and services to other organizations and businesses. Therefore, the mentioned marketing system helps to gain knowledge about the market trends easily [3]. Thereafter, there are other several beneficial sites of the B2B marketing system in business organizations. Firstly this system helps to identify sales opportunities and that helps the companies to enhance the rate of the sales of the companies. Apart from that, the B2B marketing system increases the customer value for the companies which helps to get customer satisfaction for the companies. Thereafter, better customer satisfaction helps to get better feedback from the customers and that helps to enhance the number of customers for the companies [4]. In addition to that, enhancing sales rates and customer number helps to enhance profitability of the companies. Apart from that, the market trends that are based

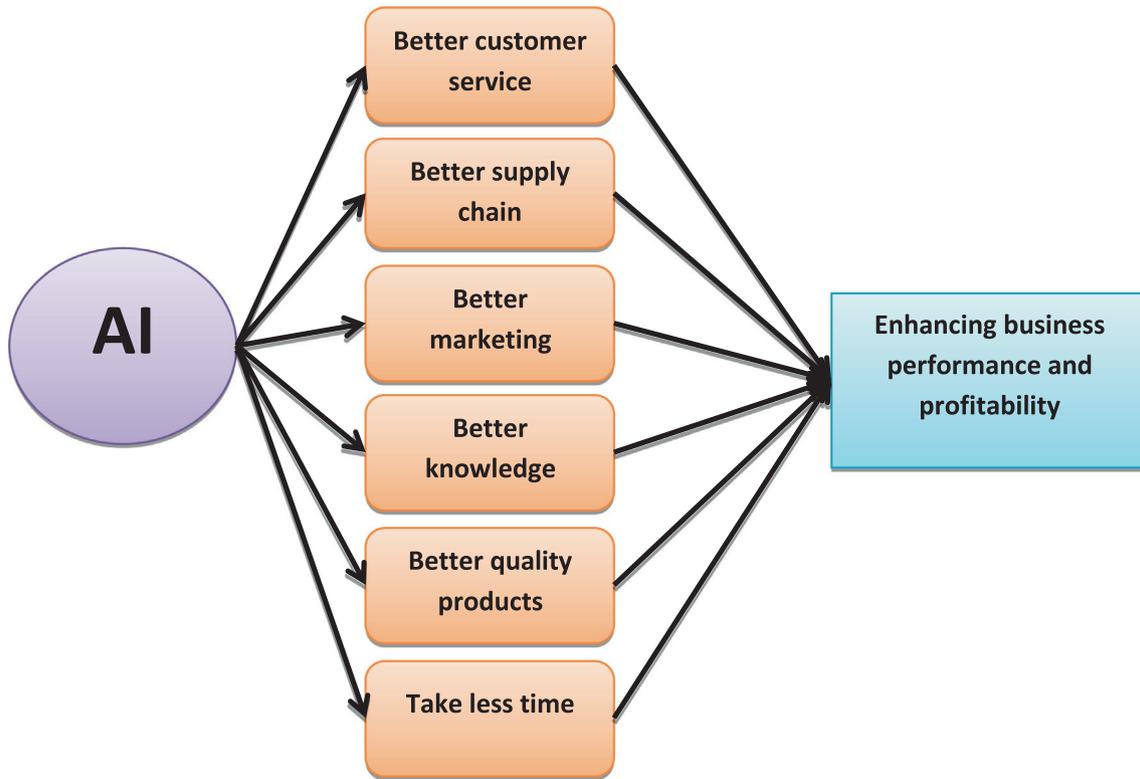


Fig. 4. Artificial intelligence framework (Source: Self-made).

Table 1  
AI applications and their benefits in business.

| AI applications in business | Beneficial sites  |
|-----------------------------|---|
| Customer service            | AI helps the companies to provide better customer services            |
| Marketing                   | The usage of AI for targeted marketing is very helpful                |
| Supply chain management     | The usage of AI in supply chain management makes smarter supply chain |
| Operations                  | AI technology is used for smarter business operation                  |
| Quality of products         | AI helps the companies to enhance the product quality                 |

Table 2  
B2B marketing trends and benefits in business.

| B2B marketing trends      | Benefits   |
|---------------------------|--|
| Account based marketing   | Helps to identify and isolate the most important accounts                                |
| Content marketing         | Helps to create quality contents about the products and connect with the proper audience |
| Customer experience       | Helps to gain knowledge about customer experience  |
| Multiple channel approach | Helps to provide content about the company on social media platforms                     |
| Branding                  | Helps to establish a different and unique identity of the companies                      |

on the B2B marketing system are analyzed in the table and their benefits on business are also analyzed.

#### 4. Methods and techniques

The usage of different types of techniques and methods makes a research study more reliable and readable. Thereafter, there are

several types of methods and techniques that are used in research studies. Therefore, the researcher has used some research methods and all the methods are analyzed in this part of this particular research article. Thus, the researcher has used research philosophy, research design, research approach and other methods for collecting and analyzing data in this particular research study [5]. The usage of these research techniques helps to get more information about the research topic and helps to analyze the data in an objective way. Furthermore, the research has used the **positivism research philosophy** for gaining some genuine, reliable, and objective data for this particular research study. Apart from that, the research has used the **deductive research approach** which helped the researcher to gain more information about the research topic.

On the other hand, the researcher has adopted the **descriptive research design** because it helps to analyze data in a descriptive way. Therefore, the mentioned research design helps to find out the what, where, when and how questions related to the research topic [6]. Thus, these questions are the basic questions of a research topic which helps the researcher to get a basic idea about the concept of the topic. In addition to that, the mentioned research design is unable to answer the why questions of the research topic and because of that, the researcher has used other methods for collecting more data. There are generally two types of methods for collecting data such as primary methods and secondary methods. Therefore, primary methods are based on real-life activities and experiences and the data that are collected by using the primary methods are genuine and original [7]. Thereafter, the secondary is helpful to gain knowledge from the previous literature, articles and journals.

Along with that, there are a lot of sources of the methods of data gathering. Firstly, the sources of primary methods are surveys, interviews and others. Therefore, the sources of secondary methods are books, magazines, government records, newspapers, public

records, journals, articles and other data that are published [8]. Thus, the researcher has used the **secondary methods and techniques** for collecting proper accurate data about the particular research topic. Thereafter, the secondary methods and sources helped the researcher to gain knowledge and information about the impact of artificial intelligence and B2B marketing on the performance of business organizations.

On the other hand, the researcher has adopted proper techniques for analyzing all the collected data in this particular research study. There are mainly two types of techniques for analyzing all the data such as quantitative methods and qualitative methods. Therefore, quantitative methods are used for analyzing the data that are collected by using the primary methods. The qualitative methods are used to analyze the data that are collected by using the secondary methods [9]. Thereafter, as the researcher has adopted the secondary methods for collecting data then the researcher had to adopt the **qualitative methods** for analyzing all the data in this particular research study. In addition to that, the qualitative methods are able to analyze all the data in a systematic way which helps to create the research study more readable.

## 5. Results and discussion

### 5.1. Impact of artificial intelligence and B2B marketing on business performance

Knowledge production and gaining more knowledge about market trends and other sectors is very important for the development of the business companies. Therefore, previously these factors were done by human beings and now the usage of technology has made it easier. Therefore, artificial intelligence is a type of modern technology which helps to develop the productivity and profitability of the business companies [10]. Apart from that, the B2B marketing is an innovative strategy to enhance the sales rate of the business companies. Along with that, the B2B marketing system helps to build up relationships with other business companies that help to gain knowledge about the market trends.

On the other hand, the main purpose of this particular research study is to analyze the impacts of artificial intelligence and the B2B marketing process on business development and business performance. Therefore it is identified that artificial intelligence can be used in several sectors of the companies and the development of the performance of the companies by enhancing the levels of those sectors of the companies [11]. Thus, the sectors in which the AI technology can be used are customer service, supply chain management, marketing, knowledge production, and product quality and delivery process. All the mentioned sectors are very important for any international domestic company and especially a better delivery process is very important for the international companies.

Thereafter, as the usage of AI helps to improve the delivery process and supply chain management and product quality therefore this leads to the development of customer service. Apart from that, better customer service helps to gain good feedback from the customers and that helps to get more loyal customers for the companies [12]. Therefore, enhancing the number of the customers leads to the development of the sales rate of the companies. Along with that, the B2B marketing process helps to gain knowledge about the market trends and the companies can improve their products according to the market trends.

## 6. Conclusion

It is identified that the usage of artificial intelligence is very important and beneficial for the companies. Apart from that, the usage of the B2B marketing system is also very beneficial for the development of the performance of the business companies. Therefore, artificial intelligence helps to promote the products of business companies on social media by using several applications and that helps to get more customers for the companies. In addition to that, the B2B marketing process helps to build up a good relationship with other business organizations. Along with that, artificial intelligence is faster than humans and helps the companies to gain more knowledge about the market trends and other factors. Therefore, it can be said that there is a big impact of artificial intelligence on knowledge production of the companies and on business performance of B2B marketing as well.

### CRediT authorship contribution statement

**Abhishek Dondapati:** Investigation, Writing – original draft. **Neelam Sheoliha:** Conceptualization, Writing – review & editing, Supervision. **Jeidy Panduro-Ramirez:** Formal analysis, Data curation. **Ruhi Bakhare:** Conceptualization. **P.M. Sreejith:** Writing – review & editing. **V.V. Devi Prasad Kotni:** Conceptualization, Writing – review & editing, Supervision.

### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### References

- [1] Vishnoi, S.K., Bagga, T.E.E.N.A., Sharma, A.A.R.U.S.H.I. and Wani, S.N., 2018. Artificial Intelligence enabled marketing solutions: A Review. *Ind. J. Econ. Bus.* pp.167–177.
- [2] A.F.S. Borges, F.J.B. Laurindo, M.M. Spínola, R.F. Gonçalves, C.A. Mattos, The strategic use of artificial intelligence in the digital era: Systematic literature review and future research directions, *Int. J. Inf. Manage.* 57 (2021) 102225, <https://doi.org/10.1016/j.ijinfomgt.2020.102225>.
- [3] A. Carmona-Lavado, S. Gopalakrishnan, H. Zhang, Product radicalness and firm performance in B2B marketing: A moderated mediation model, *Ind. Mark. Manage.* 85 (2020) 58–68.
- [4] D. Tuzunkan, Customer relationship management in business-to-business marketing: example of tourism sector, *GeoJournal Tourism Geosites* 22 (1) (2018) 329.
- [5] M. Siponen, A. Tsohou, Demystifying the influential IS legends of positivism, *J. Assoc. Inf. Syst.* (2018) 600–617.
- [6] L. Doyle, C. McCabe, B. Keogh, A. Brady, M. McCann, An overview of the qualitative descriptive design within nursing research. *J. Res. Nurs.* 25(5) (2020), pp. 443–455.
- [7] V. Heap, J. Waters, Data collection methods. In *Mixed Methods in Criminology* (pp. 141–176). Routledge (2019).
- [8] T. Pliakas, S. Hawkesworth, R.J. Silverwood, K. Nanchahal, C. Grundy, B. Armstrong, J.P. Casas, R.W. Morris, P. Wilkinson, K. Lock, Optimising measurement of health-related characteristics of the built environment: comparing data collected by foot-based street audits, virtual street audits and routine secondary data sources, *Health & place* 43 (2017) 75–84.
- [9] K. Shah, T. Abdeljawad, I. Mahariq, F. Jarad, Qualitative analysis of a mathematical model in the time of COVID-19. *BioMed Research International*, (2020).
- [10] A. Di Vaio, R. Palladino, R. Hassan, O. Escobar, Artificial intelligence and business models in the sustainable development goals perspective: A systematic literature review, *J. Bus. Res.* 121 (2020) 283–314.
- [11] S. Bag, S. Gupta, A. Kumar, U. Sivarajah, An integrated artificial intelligence framework for knowledge creation and B2B marketing rational decision making for improving firm performance, *Ind. Mark. Manage.* 92 (2021) 178–189.
- [12] I.M. Cockburn, R. Henderson, S. Stern, The Impact of Artificial Intelligence on Innovation: An Exploratory Analysis 4 (2019) 115–148.