IOCRF 2025 Conference
The 1st International Online Conference on Risk and Financial Management
17–18 June 2025 | Online
MDPI

The Role of Artificial Intelligence as a driving variable in the modern market: A MICMAC approach

Amit Singh[1], Girish Garg[1], Mohd Shamshad[2], Mosab Tabash[3], Suzan Issa[4]

[1] *University of Delhi, India* , [2] *Galgotias Univesity, India*

[3] *Al Ain University UAE* , [4] *University of Petra,Amman,Jordan*

INTRODUCTION & AIM

- Technological advancements such as the Internet of Things, cloud computing, augmented reality, big data, blockchain, smart space, 5G networks, automotive robotic processes, and artificial intelligence have revolutionized traditional business methods.
- Artificial intelligence (AI) represents a recent instance of an emerging technology with significant potential to impact the marketing field.
- Marketers worldwide are frantically searching for artificial intelligence (AI) solutions that will allow them to carry out their duties effectively.
- Marketers can analyse data more quickly and accurately than ever before with the help of AI technologies, uncovering previously hidden patterns, preferences, and behaviours.
- To find out how Artificial Intelligence can help to adopt the right strategy in cutthroat competition. To find out crucial variables to remain attractive to customers with the help of interpretive structural modelling.

METHOD

- Interpretive structural modelling (ISM) analyses complex systems, identifies their parts, and examines their interactions.
- It aids decision-making and may reveal the hierarchical links between Variables. It incorporates problem identification, system definition, and reachability matrix creation.
- The reachability digraph, a graphical depiction of the system's hierarchy, is derived from the reachability matrix. Identifying the system's drivers and dependents follows the reachability digraph.
- These components strongly impact others and are strongly influenced by others. Recognising system component impact levels complete the structural model.
- The structural model shows the hierarchical links between system components and helps explain system dynamics and interdependencies.
- It helps analyse complex systems, identify drivers and relationships, and inform decision-making. It helps communicate complicated concepts and facilitate collaborative decision-making by visualising system linkages.

RESULTS & DISCUSSION

- Level Partitioning and conical matrix show that the variables Augmented Reality; 5G Network; Automotive; Robotic Process and Cloud Computing placed at the first level, Smart Space variable placed at the second level, variables Internet of Thing; blockchain & Big Data placed at third level and Artificial Intelligence variables placed at top most level
- Artificial intelligence emerges as independent factors with the ability to influence other variables under investigation. India is a developing economy that has seen remarkable advances in technology and automation in recent years. However, the fast growth of technology has had a favourable influence on modern market. The bottom-of-the-model variables Augmented Reality; 5G Network; Automotive; Robotic Process and Cloud Computing are dependent variables and have no driving power.

CONCLUSION

- Artificial intelligence has the potential to serve as a catalyst for achieving the objectives assigned to various components, as outlined in the second objective of this study. Artificial intelligence is identified as the sole factor capable of modifying the other variables under scrutiny in this study.
- India is a developing country with a growing economy. In recent years, the government has made significant strides in technology and automation. The rapid advancement of technology has had a positive impact on the role of businesses in highly competitive environments.

LIMITATIONS

- For this study, just 10 variables were considered, and all of the other variables were disregarded; this is one of the limitations.
- We used interpretive structural modelling, which focused on the relationships between the variables, but other research techniques focused on model building as well as the significance of the models. We used interpretive structural modelling because it focused on the variables' relationships.