Role of Big Data in Better Decision Making in Modern business Environment

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Abstract

Big Data is crucial in enhancing decision-making processes in the contemporary business climate in India. Businesses today have access to a variety of data that can be used to obtain insightful knowledge and make informed decisions. Big Data analytics enables businesses to draw actionable patterns, trends, and correlations from enormous datasets. Business process bottlenecks and inefficiencies can be found and analysed to help businesses manage their inventory, production processes, supply chains, and resource allocation. Cost reductions, increased productivity, and simplified operations are the results of this. This analysis offers insightful information on consumer preferences, market trends, and operational effectiveness. Businesses may use big data to tailor consumer experiences by learning about their requirements, interests, and behaviors. This gives businesses the ability to customize their goods, services, and marketing plans to satisfy unique customer needs, enhancing client happiness and loyalty. Big Data plays a critical part in India's contemporary commercial climate. Organizations are given the tools they need to make data-driven decisions, improve client experiences, increase operational effectiveness, and obtain a market competitive edge.

Keywords: Big Data, Decision-making, Business climate, Data analytics, Consumer preferences, Market trends, Operational effectiveness.

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Introduction

Ahmed et al. (2017) assessed the crucial function of "big data analytics" in the context of the "Internet of Things" (IoT). They emphasised how big data analytics enabled organizations to process and analyse enormous amounts of data produced by IoT devices. Indian businesses were able to learn important things about consumer behaviour, product performance, and market trends. They enabled organizations to modify their strategies and offers to successfully satisfy client expectations in the contemporary business climate by enabling more informed decision-making.

Big Data has been widely acknowledged and validated for its potential to enhance decision-making in India's contemporary economic climate. Provost and Fawcett (2013) assert that "data science" was crucial in the analysis of "big data" and in facilitating data-driven decision-making.

They emphasized the significance of efficient data analysis in gaining insightful information that supported well-informed decision-making. Businesses in India were able to derive useful patterns, trends, and correlations from enormous datasets by utilizing "big data analytics," enabling them to make decisions based on solid data. The enormous amounts of information need to be managed and analysed produced in the business environment, the discipline known as "data science" has arisen. Businesses were able to handle and analyses enormous amounts of structured and unstructured data to gain insightful data using sophisticated analytical tools and algorithms. Big data analytics enabled organizations to spot patterns and trends that would have been challenging to spot otherwise. As a result, they were better able to make decisions and create strategies that reflected the needs of the market and the preferences of their target audience.

In the current Indian business climate, the creation of cyber-physical systems was another area where big data significantly influenced decision-making. Babiceanu and Seker (2016) emphasised how "Big Data" and "virtualization" together changed the manufacturing sector. Businesses were able to gather and analyse huge amounts of real-time data from numerous sensors and devices thanks to big data analytics and virtualization technology. It focused on the efficiency of the supply chain in a contemporary commercial setting and the performance of the equipment.

Literature Review

Hashem et al. (2016) highlighted the importance of "Big Data" in facilitating better decision-making in the context of "smart cities" in India. They emphasized the use of "Big Data analytics" by businesses and government bodies to gather and examine enormous volumes of data from several sources, such as sensors, social media, and public records. Decision-makers got useful insights into numerous "smart city" features, including urban infrastructure, traffic patterns, energy use, and citizen behavior, by using the power of "Big Data." These revelations offered a strong basis for well-informed decision-making, enabling the deployment of successful methods to optimize resource allocation, boost the effectiveness of transport systems, and raise the general standard of living in "smart cities" throughout India.

In the context of the Indian business environment, Bhimani and Willcocks (2014) explored how "Big Data" and digitization had a revolutionary effect on accounting decision-making. They emphasised how businesses in India had begun to see how "Big Data" might completely alter how they conducted business. Businesses were able to process and analyse huge amounts of financial and non-financial data by using "Big Data analytics." With the use of this, they were able to increase financial reporting accuracy, find areas for cost reduction, and spot fraud. Organisations in India are now better equipped to make wise judgements by relying on thorough analysis and insights thanks to the incorporation of "Big Data analytics" into decision-making processes.

In all the service-based and industry sectors in India, Zhong et al. (2016) focused on how "Big Data" might improve supply chain management decision-making. The fact that Indian enterprises understood the enormous potential of "Big Data" in streamlining their supply chain processes was made clear by this. Businesses got insightful information that helped them make better decisions by analysing big datasets pertaining to client demand, inventory management, logistics, and procurement. Decision-makers might find inefficiencies, forecast demand more precisely, and enhance supply chain performance as a whole. Sivarajah et al. (2017) addressed the difficulties and analytical approaches related to "Big Data"; they noted how "Big Data" improved decision-making in the contemporary business climate in India. They emphasized the multiple difficulties that Indian organizations encounter when attempting to manage and make use of "Big Data," including "data quality," "privacy concerns," and a "lack of analytical skills."

According to Tiwari et al. (2018), they highlighted the application of "Big Data" analytics to "supply chain management" in several Indian companies. Particularly, they emphasized the need of "Big Data" analytics in "supply chain decision-making". Utilizing "Big Data," Indian businesses are able to collect and examine enormous amounts of information about "procurement," "logistics," "inventory management," and "customer demand." They emphasized that by utilizing "Big Data" analytics, companies may increase the accuracy of their demand forecasts, discover inefficiencies, and improve supply chain performance in general.

The "COVID-19 pandemic's" effects on information management research and practice were examined by Dwivedi et al. (2020), with an emphasis on how it has changed life in general and education, the workplace, and the workplace environment. The importance of "Big Data" in decision-making increased in the setting of the contemporary business climate in India throughout this historic period. Numerous obstacles and disruptions were brought about by the pandemic for enterprises in numerous industries. However, the use of "Big Data" has become a potent instrument for navigating uncertainties and coming to wise judgements. Businesses in India employed 'Big Data' to acquire understanding of the pandemic's impact on the quickly shifting market dynamics, consumer behavior, and supply chain disruptions. Large data sets might be analyzed to help companies spot new trends, foresee customer wants, and modify their marketing plans as necessary. In India, for instance, retail businesses used "Big Data analytics" to improve inventory control, streamline online activities, and personalize customer experiences in response to altering consumer tastes and the rise of e-commerce.

Rathore et al. (2016) examined the connections between urban planning, "smart towns," the internet of things (IoT), and "massive facts" analytics. The importance of "Big Data" in building "smart cities" and aiding effective city planning was highlighted in the context of India's contemporary, fiercely competitive commercial environment. Indian cities may install IoT devices to gather real-time data and employ "massive data" analytics to learn more about various aspects of city life, such as transportation, electricity use, and citizen behavior. By making informed decisions, effectively allocating resources, and gathering a data, city planners and

legislators can also improve the quality of life for citizens in Indian towns. The focus of Gunasekaran et al. (2017) shifted to the use of “Big Data” and forecasting in “supply chain management and organizational performance”. They emphasized how “big data” could alter the way business operate in India by improving the responsiveness, efficacy, and efficiency of supply chains. They stressed the potential for “big statistics” analytics-enabled and statistics-driven selection-making to considerably increase supply chain effectiveness and, in the end, attain organizational success in the Indian market.

"Raut et al. (2019)" evaluated the "relationship between big data analytics and profitable practices" and "emphasized the importance" of this connection for operating "sustainable businesses.". Big data’s usage in decision-making has grown in importance in the modern Indian business environment. By utilizing the potential of big data analytics, businesses in India may gather and analyze vast volumes of data on operations, supply chains, and environmental impact. Big data analytics can be used by Indian firms to identify patterns, trends, and correlations that reveal useful details about how sustainably they are operating.

Objectives of the study:

To find the role of big data in better decision making in modern business environment

Research Methodology:

This study nature is empirical. 205 respondents were approached to give their view on the role of big data in better decision making in the modern business environment. The data was analyzed through frequency distribution and data was presented with the help of pie charts.

Data Analysis and Interpretation:

Table 1 Helps to draw actionable patterns

Particulars	Agree	Disagree	Can’t Say	Total
Respondents	175	21	9	205
% age	85.0	10.0	5.0	100

Table 1 represents the statement helps to draw actionable patterns, and 85.0% respondents admit with this statement.

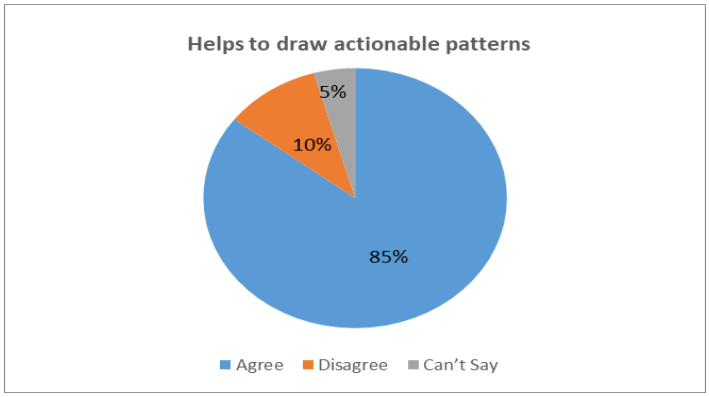

Figure 1 Helps to draw actionable patterns

Table 2 Helps business to manage inventory

Particulars	Agree	Disagree	Can't Say	Total
Respondents	183	16	6	205
% age	89.0	8.0	3.0	100

Table 2 represents the statement helps business to manage inventory and 89.0% respondents admit with this statement.

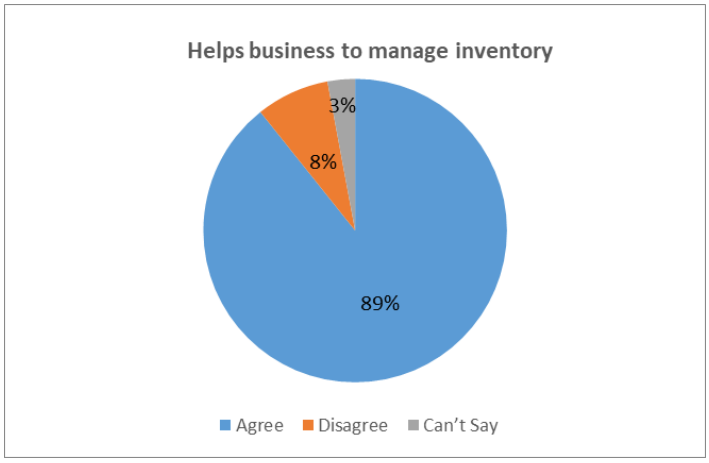

Figure 2 Helps business to manage inventory

Table 3 Helps in increasing productivity and simplifies operations

Particulars	Agree	Disagree	Can't Say	Total
Respondents	189	14	2	205
% age	92.0	7.0	1.0	100

Table 3 represents the statement helps in increasing productivity and simplifies operations, and 92.0% respondents admit with this statement.

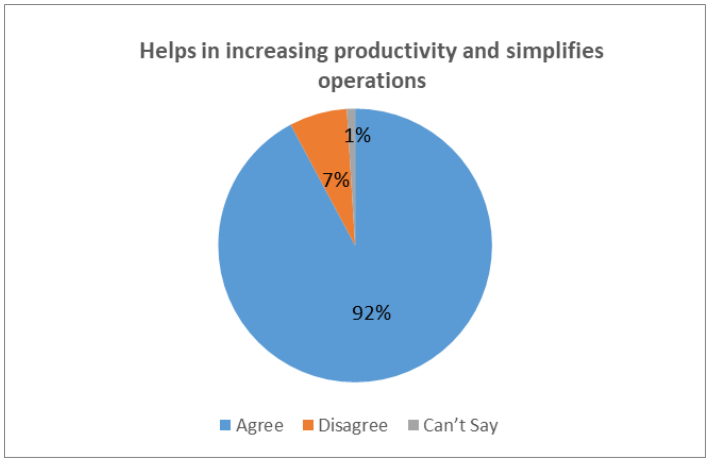

Figure 3 Helps in increasing productivity and simplifies operations

Table 4 Helps in tailoring consumer experiences

Particulars	Agree	Disagree	Can't Say	Total
Respondents	170	22	13	205
% age	83.0	11.0	6.0	100

Table 4 represents the statement helps in tailoring consumer experiences, and 83.0% respondents admit with this statement.

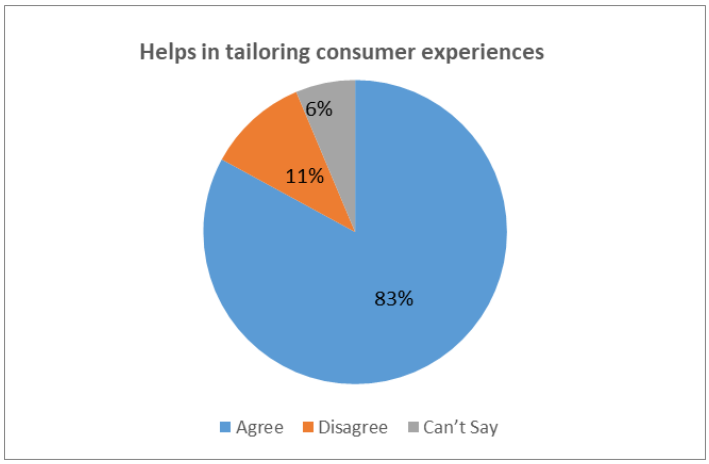

Figure 4 Helps in tailoring consumer experiences

Table 5 Helps in obtaining a market competitive edge

Particulars	Agree	Disagree	Can't Say	Total
Respondents	179	16	10	205
% age	87.0	8.0	5.0	100

Table 5 represents the statement **helps in obtaining a market competitive edge,** and 87.0% respondents admit with this statement. Considering all the responses of the statements, it was found that to a good percentage, the respondents have agreed that big data plays an important role in better decision making in modern business environment.

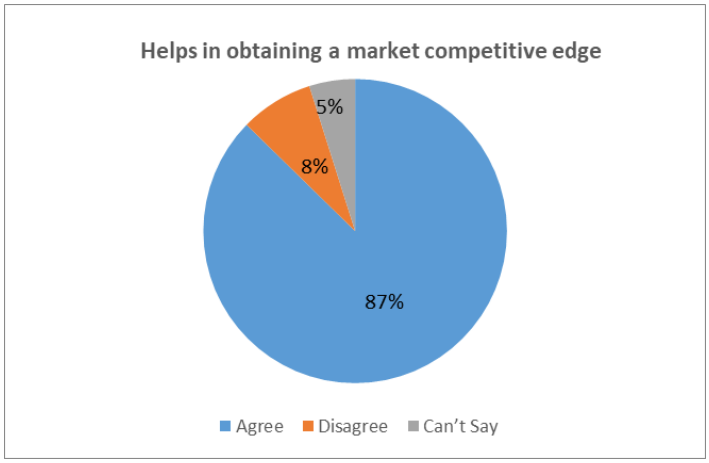

Figure 5 Helps in obtaining a market competitive edge

Conclusion

Better decision-making processes are made possible by big data in the modern Indian business environment. Organizations today need to use and assess this "vast measure of information" in order to remain competitive due to the quick increase of information created from many sources, such as social media, customer transactions, and IoT devices. Utilizing "big data" for decision-making has several "main advantages," one of which is its capacity to give "analytical data about customer behaviours and preferences. Big Data analytics also enables businesses to identify patterns and developments that could not have been visible in the past. The optimization of operations and resource allocation is another benefit of Big Data analytics for enterprises. Organizations can locate inefficiencies, bottlenecks, and opportunities for improvement by analyzing data on production procedures, logistics in the supply chain, and resource usage. Cost savings, higher production, and improved operational efficiency are the results of this optimization conclusion, Big Data is crucial in the contemporary Indian business climate for facilitating better decision-making. It facilitates operation optimization, identifies market trends, and provides organizations with useful insights about client behavior. In today's competitive environment, organizations may achieve sustainable growth and success by utilizing the power of big data analytics to make data-driven decisions, reduce risks, and exploit opportunities.

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