

IMPACT OF DATA ANALYTICS TOOLS ON THE BUSINESS PERFORMANCE OF INDIAN MNC'S

Jasbir Kaur

Department of Information Technology, G. N. Khalsa College of Arts Science & Commerce, Mumbai
jasbir.kaur@gnkhalsa.edu.in

ABSTRACT

The research paper titled "Impact of Data Analytics Tools on the Business Performance of Indian MNCs" investigates the relationship between the utilization of data analytics tools and the overall business performance of Indian multinational corporations (MNCs). In an era characterized by the increasing importance of data-driven decision-making, this study addresses the imperative for MNCs in India to assess the efficacy of their data analytics strategies. The research employs a quantitative approach, utilizing a survey questionnaire to collect data from 200 managers representing various Indian MNCs. The findings reveal a significant association between the utilization of data analytics tools and the types of tools employed, highlighting the diverse landscape of data analytics tools in Indian MNCs. Furthermore, a significant relationship is identified between the perceived impact of data analytics tools and the business performance of these organizations, emphasizing the critical role that data analytics plays in enhancing overall performance. This study underscores the growing importance of data analytics in the Indian MNC landscape and suggests that strategic investments in data analytics tools can yield substantial benefits for business performance.

Keywords: Data Analytics, Business Performance, Indian Mncs, Utilization, And Impact.

Introduction

In today's rapidly evolving global business landscape, the ability to harness and leverage data has become a critical determinant of success. Data, often referred to as the "new oil," has emerged as a valuable resource that can provide organizations with insights, inform strategic decision-making, and enhance overall business performance. As the world becomes increasingly interconnected and digitally driven, the importance of data analytics tools has grown exponentially. This research paper delves into a crucial facet of this phenomenon—the impact of data analytics tools on the business performance of Indian Multinational Corporations (MNCs).

The term "Multinational Corporation" (MNC) denotes a class of companies that transcend national borders, operating in multiple countries and regions. These organizations are characterized by their substantial scale, diversified business interests, and the complexities that come with managing a global footprint. Indian MNCs, in particular, have been on a remarkable growth trajectory over the past few decades, expanding their operations into diverse sectors such as information technology, pharmaceuticals, manufacturing, and financial services. In the process, they have become significant contributors to the Indian economy, offering

employment opportunities, generating revenue, and representing India on the global stage.

At the core of this ascent lies the utilization of data analytics tools, which have allowed Indian MNCs to gain a competitive edge in the international marketplace. Data analytics refers to the process of examining, cleaning, transforming, and interpreting data to extract valuable insights and support decision-making. These tools encompass a wide range of techniques and technologies, including statistical analysis, machine learning, artificial intelligence, and predictive modeling. By harnessing the power of data analytics, Indian MNCs aim to optimize various facets of their business operations, such as supply chain management, marketing, finance, and human resources, among others.

The rationale for exploring the impact of data analytics tools on Indian MNCs is multifaceted. Firstly, it is evident that the global business landscape has been witnessing a profound transformation driven by digitization and the advent of big data. This transformation presents new challenges and opportunities that necessitate a deeper understanding of the role played by data analytics tools in shaping the performance of Indian MNCs. Secondly, there is a growing body of research suggesting that data analytics can significantly enhance business performance across industries and geographies. However,

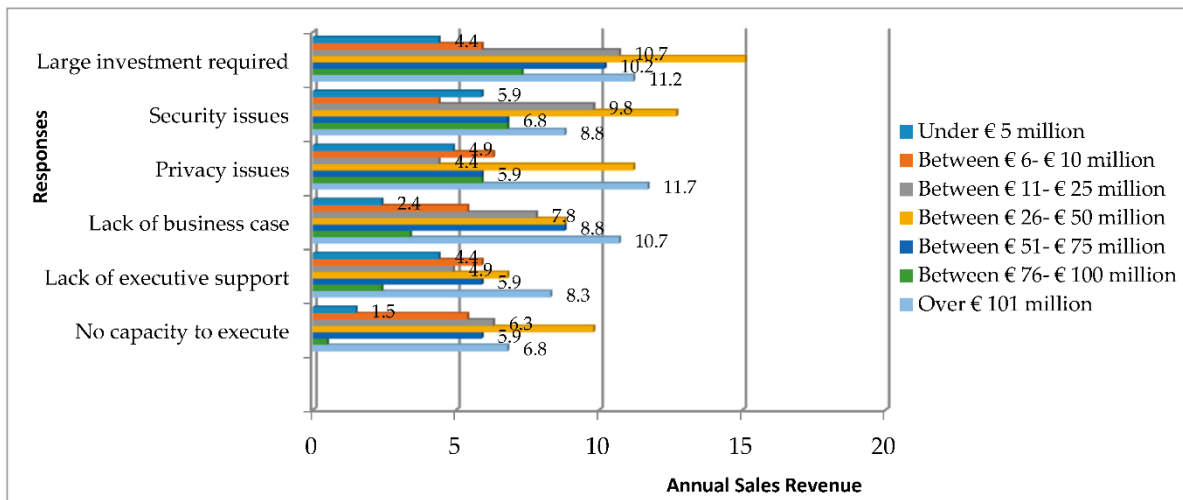
the application of these tools can vary widely depending on factors such as industry, size of the organization, and geographic location. Thus, it is essential to explore this phenomenon within the unique context of Indian MNCs.

To comprehensively address the research question, this paper will adopt a multifaceted approach. It will begin by providing a thorough overview of the landscape of Indian MNCs, highlighting their growth trajectories, industries of operation, and key challenges they face in the global arena. Subsequently, the paper will delve into the theoretical underpinnings of data analytics, offering a conceptual framework for understanding how these tools influence business performance. It will also examine the various types of data analytics tools and techniques commonly employed by Indian MNCs.

The heart of this research paper lies in the empirical investigation of the impact of data analytics tools on Indian MNCs. This will involve a comprehensive review of case

studies, surveys, and interviews with key stakeholders in Indian MNCs. By analyzing real-world examples and drawing insights from the experiences of these organizations, we aim to identify the specific ways in which data analytics tools have influenced their business performance. This empirical analysis will encompass aspects such as revenue growth, cost optimization, improved decision-making, and enhanced competitiveness on a global scale.

Furthermore, this research paper will also address potential challenges and limitations associated with the adoption of data analytics tools by Indian MNCs. Factors such as data privacy concerns, regulatory frameworks, talent shortages, and the need for significant investments will be discussed in detail. Understanding these challenges is critical for developing strategies that can help Indian MNCs maximize the benefits of data analytics while mitigating associated risks.



Source: <https://www.mdpi.com/2071-1050/11/18/4864#metrics>

Ionica Oncioiu et. al. in their research focused on the application of big data analytics in supply-chain management within Romanian companies and emphasized the need for these organizations to evaluate their strategies, capabilities, and experiences in implementing such analytics. It employed a quantitative research approach, using a survey questionnaire with closed-ended questions and nominal and ordinal scales to collect data from 205 managers. The analysis of the data, conducted using the Statistical Package for the

Social Sciences (SPSS), revealed that companies were actively seeking new statistical methods, tools, and technological approaches, including cloud computing and security technologies, to enhance their supply-chain operations. These findings underscored the growing importance of harnessing big data analytics in the supply-chain industry and the necessity for continuous exploration and adaptation of innovative technologies in this context.

The growing significance of data analytics tools in the contemporary business landscape cannot be overstated. For Indian MNCs, these tools offer a pathway to sustainable growth, competitiveness, and global recognition. By investigating the impact of data analytics tools on the business performance of Indian MNCs, this research paper seeks to contribute valuable insights to the fields of business management, technology, and global economics. It is our hope that the findings of this study will not only benefit Indian MNCs but also inform the broader discourse on the role of data analytics in shaping the future of multinational corporations in an increasingly data-driven world.

Literature Review

Mangla et al. (2020) explored the mediating role of "Big Data Analytics" in project performance for Indian manufacturing SMEs, revealing its positive impact and identifying project knowledge management, green purchasing, and project operational capabilities as areas benefiting from big data analytics. Xavier, Srinivasan, and Thamizhvanan (2011) addressed the slow adoption of analytics in Indian corporate settings and emphasized the need for improved understanding of analytics as a decision-making tool among senior managers. Srivastava, Gopalkrishnan (2015) delved into the successful utilization of big data analytics in the banking sector, highlighting its benefits in areas such as customer spending patterns, channel usage, customer segmentation, and fraud management, providing valuable insights for Indian banks to enhance their financial service offerings.

Bhuvana, Thirumagal, and Vasantha's (2016), examined the management of big data in Indian commercial banks, highlighting its positive impact on business value. Raguseo, Vitari (2018) explored the forms of business value derived from investments in big data analytics, demonstrating their direct influence on a firm's financial performance, with mediation effects of customer satisfaction but not market performance. Andrade, Penha, and Silva (2021) discussed the implementation of Data Analytics tools in internal audit project portfolios, showcasing their contribution to

efficiency, improved scope definition, and enhanced project planning. Song, et. al. (2018) delved into data analytics usage in an online B2C platform, revealing its positive impact on merchant performance, with variations based on factors such as product variety and competitive intensity.

Anfer, Wamba's (2019), proposed a model to assess the impact of Big Data Analytics Capabilities (BDAC) on firm performance, emphasizing its mediation through adaptive marketing capabilities (AMC) in a turbulent environment. Srivastava, et. al. (2017) discuss the suitability of Big Data Analytics (BDA) in the Indian banking sector, highlighting its potential to increase revenue and profitability, especially in addressing data-related challenges. Akter, et. al. (2016) proposed a BDAC model and examine its hierarchical dimensions, emphasizing the impact of analytics capability–business strategy alignment on firm performance. Gill, et. al. (2014) investigated the relationship between changes in operational efficiency and future performance in Indian manufacturing firms, providing insights valuable to financial and operations managers, investors, and stakeholders. These studies collectively contribute to the understanding of the role and impact of Big Data Analytics, operational efficiency, and alignment with business strategy in various business contexts, including banking, marketing, and manufacturing, within the Indian and global business landscapes.

Wamba, et. al. (2017), a Big Data Analytics Capability (BDAC) model is proposed, examining its direct impact on firm performance and the mediating role of process-oriented dynamic capabilities (PODC). The research emphasizes the value of BDAC in improving firm performance and highlights the significant mediating influence of PODC. Bakhshi, Biosca, and Garcia (2014) investigate the link between online data use and firm performance, finding that greater utilization of online customer data is associated with increased productivity and profitability in UK firms. Their study underscores the importance of data analysis and reporting in driving productivity. Ren, et. al. (2017) explore the quality dynamics in a big data analytics environment and its impact on business value

and firm performance. They emphasize the role of system and information quality in enhancing business value and firm performance, mediated by the business value of big data. Saleem, et. al. (2020) use the resource-based view theory to investigate how big data analytics influence technological innovation and SME performance in China. Their findings suggest that big data analytics positively affect technological innovation, which in turn mediates the relationship with SME performance. Sharma, Sawai, and Surve (2017) present case studies related to Big Data usage in the cell phone industry, e-commerce, and online insurance selling, highlighting the significance of Big Data analytics in analyzing customer behavior and enhancing business operations. They propose the concept of a Big Data Analyzing Engine to harness the potential of Big Data for business success.

Khan, Qader, and Abimannan (2020) investigate the impact of Business Intelligence Systems on organizations, focusing on their role in decision-making and product development by analyzing customer data and patterns. Narwane, et. al. (2021) explore the mediating role of big data analytics in Supply Chain 4.0's relationship with business performance factors in Indian manufacturing organizations. Mishra (2015) explores the application of Business Intelligence and Analytics in Indian banks, highlighting its role in improving operations, strategy design, and sustainability. Singh, Sorum, and Nirjuli (2018) assess the effectiveness of Innovative Human Resource Practices (IHRPs) in Indian private insurance companies, examining their impact on employee performance, organizational commitment, and firm performance.

Sahoo (2018) conducted a comparative assessment of the contributions of Total Quality Management (TQM) and Total Productive Maintenance (TPM) practices, individually and in combination, on manufacturing business performance, finding that integrated implementation of both TQM and TPM practices over time delivers better business performance than standalone strategies. Kapoor (2020) performed a SWOT analysis to investigate the impact of internal and external factors on the success and

profitability of fast-food outlets in India, discovering that external factors (opportunities and threats) were more favorable to fast food performance than internal factors (strengths and weaknesses). Malyadri, Sirisha (2015) analyzed the profiles of Public Banks, Private Banks, and Foreign Banks in India from 2006 to 2013, concluding that Private Sector Banks outperformed the other bank groups in various parameters, reflecting the impact of the competitive environment on bank performance.

Literature Gaps

While the existing body of research provides valuable insights into the impact of data analytics tools and business performance in various contexts, such as Indian manufacturing SMEs, Indian firms, and global business landscapes, there appears to be a literature gap concerning a comprehensive examination of the specific influence of data analytics tools on the business performance of Indian multinational corporations (MNCs). Despite the substantial growth and significance of MNCs in India's economy, there is a dearth of comprehensive studies that exclusively focus on this sector. Furthermore, many existing studies focus on the mediating role of data analytics or its impact on specific aspects of business performance. Hence, there is a need for research that holistically investigates the direct relationship between the utilization and impact of data analytics tools on the overall business performance of Indian MNCs, considering their unique operational, strategic, and technological contexts. Such research can provide critical insights for Indian MNCs aiming to harness the full potential of data analytics to enhance their competitive advantage and economic contributions.

Research Methodology

For this research, a cross-sectional survey research design will be employed to study the opinions of managers from various MNCs across India. The sample size will consist of 200 managers who hold different managerial positions within their respective organizations. The sampling plan will involve a stratified random sampling technique, where managers will be categorized into strata based on industry types, such as IT, manufacturing,

finance, etc., to ensure representation from diverse sectors. Within each stratum, random sampling will be conducted to select managers from different regions of India. This approach will help in obtaining a well-distributed and representative sample of managers, allowing for meaningful insights into their opinions about management practices across the country.

Objectives of the study

- Objective 1: To assess the utilization and adoption of data analytics tools among managers in Indian multinational corporations (MNCs), focusing on the types of tools commonly used, the frequency of usage, and the specific business functions where these tools are applied.
- Objective 2: To evaluate the perceived impact of data analytics tools on the business performance of Indian MNCs as reported by managers, including their opinions on how these tools have influenced decision-making processes,

operational efficiency, and overall competitiveness in the global market.

The hypothesis of the study

Hypothesis 1:

Null Hypothesis (H0): There is no significant association between the utilization of data analytics tools and the types of tools used by managers in Indian MNCs.

Alternate Hypothesis (H1): There is a significant association between the utilization of data analytics tools and the types of tools used by managers in Indian MNCs.

Hypothesis 2:

Null Hypothesis (H0): There is no significant relationship between the perceived impact of data analytics tools and the business performance of Indian MNCs, as reported by managers.

Alternate Hypothesis (H1): There is a significant relationship between the perceived impact of data analytics tools and the business performance of Indian MNCs, as reported by managers.

Data Analysis

Age (years)

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Below 30 years	41	21%	21%	21%
	30-39 years	56	28%	28%	49%
	40-49 years	43	22%	22%	70%
	50-59 years	23	12%	12%	82%
	60 years and above	37	19%	19%	100%
	Total	200	100%	100%	

Table 1 Distribution of Respondents by Age Group.

Table 1 presents the distribution of age among the 200 respondents in the study. The data shows a diverse representation of age groups among the participants. Most respondents, constituting 28%, fall within the 30-39 years category, followed by 21% below 30 years, 22% in the 40-49 years range, 12% in the 50-

59 years range, and 19% aged 60 years and above. This distribution provides a comprehensive overview of age diversity within the sample, which is essential for understanding how different age groups perceive the impact of data analytics tools on business performance.

Years of Managerial Experience

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Less than 1 year	33	17%	17%	17%
	1-5 years	36	18%	18%	35%
	6-10 years	43	22%	22%	56%
	11-15 years	72	36%	36%	92%
	More than 15 years	16	8%	8%	100%
	Total	200	100%	100%	

Table 2 Distribution of Respondents by Years of Managerial Experience.

Table 2 illustrates the distribution of respondents' years of managerial experience among a total sample of 200 individuals. The table reveals that the majority of respondents have between 11-15 years of managerial experience, constituting 36% of the sample. The next largest group is those with 6-10 years of experience, accounting for 22% of the

respondents. Managerial experience of 1-5 years and less than 1 year is reported by 18% and 17% of respondents, respectively. A smaller proportion, 8%, have more than 15 years of managerial experience. This table provides an overview of the experience levels of the participants and can aid in understanding the managerial background of the respondents.

Educational Qualification

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	High School Diploma	9	5%	5%	5%
	Bachelor's Degree	46	23%	23%	28%
	Master's Degree	102	51%	51%	79%
	Doctoral Degree	43	22%	22%	100%
	Total	200	100%	100%	

Table 3 Distribution of Respondents by Educational Qualification

Table 3 presents the educational qualifications of the 200 respondents in the study. The table shows that the majority of participants, comprising 51%, hold a Master's degree, indicating a relatively high level of educational attainment among the sample. Following this, 23% have a Bachelor's degree, and 22% hold a

Doctoral degree. A smaller portion, 5%, possesses a High School Diploma. This table offers insights into the educational background of the surveyed managers, highlighting the prevalence of advanced degrees, particularly Master's degrees.

Please rate the extent to which you agree or disagree with the statement: "Data analytics tools have a positive impact on our company's overall business performance."

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Strongly Disagree	19	10%	10%	10%
	Disagree	16	8%	8%	18%
	Neutral	27	14%	14%	31%
	Agree	64	32%	32%	63%
	Strongly Agree	74	37%	37%	100%
	Total	200	100%	100%	

Table 4 Agreement with the Impact of Data Analytics Tools on Business Performance.

Table 4 shows that a significant proportion of respondents hold positive views, with 32% agreeing and 37% strongly agreeing that data analytics tools positively impact business performance. On the other hand, 18% disagreed or strongly disagreed, and 14%

remained neutral on this matter. This suggests that a substantial majority of participants perceive a positive correlation between data analytics tools and improved business performance within their organizations.

How effective do you think data analytics tools have been in improving our company's decision-making processes?

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very Ineffective	13	7%	7%	7%
	Ineffective	16	8%	8%	15%
	Neutral	31	16%	16%	30%
	Effective	62	31%	31%	61%
	Very Effective	78	39%	39%	100%
	Total	200	100%	100%	

Table 5 Perceived Effectiveness of Data Analytics Tools in Enhancing Decision-Making.

Table 5 presents the respondents' perspectives on the effectiveness of data analytics tools in improving their company's decision-making processes. The table reveals that a substantial portion of the participants hold positive views, with 31% considering these tools effective and an additional 39% deeming them very effective

in enhancing decision-making. Conversely, 15% found them ineffective or very ineffective, while 16% remained neutral on the matter. These findings suggest that a majority of the respondents perceive data analytics tools as valuable assets for improving decision-making within their organizations.

To what extent have data analytics tools contributed to cost savings in our organization?

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	16	8%	8%	8%
	Slightly	14	7%	7%	15%
	Moderately	33	17%	17%	32%
	Very much	61	31%	31%	62%
	Completely	76	38%	38%	100%
	Total	200	100%	100%	

Table 6 Perceived Contribution of Data Analytics Tools to Cost Savings.

Table 6 illustrates the extent to which data analytics tools have contributed to cost savings in the organization, as perceived by the respondents. Notably, the majority of participants, comprising 38%, believed that these tools contributed completely to cost savings, while an additional 31% stated that they contributed very much. A combined total

of 17% felt that data analytics tools had a moderate impact. Conversely, only 8% indicated slight contributions, and another 8% believed they had not contributed at all. These findings suggest that a substantial portion of the respondents recognize the significant role played by data analytics tools in achieving cost savings within their organization.

How would you rate the extent of financial investment made by our organization in data analytics tools?

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Very Low	14	7%	7%	7%
	Low	25	13%	13%	20%
	Moderate	21	11%	11%	30%
	High	62	31%	31%	61%
	Very High	78	39%	39%	100%
	Total	200	100%	100%	

Table 7 Perceived Financial Investment in Data Analytics Tools.

Table 7 provides insights into how the respondents perceive the extent of financial investment made by their organization in data analytics tools. Notably, a significant portion of the participants, comprising 39%, regarded the investment as "Very High." An additional 31% considered it to be "High," reflecting a substantial commitment to financial resources.

In contrast, 11% viewed the investment as "Moderate," while 13% saw it as "Low," and 7% rated it as "Very Low." These findings indicate that a majority of the respondents believe their organization has made substantial financial investments in data analytics tools, with "Very High" and "High" being the dominant perceptions.

Please indicate the degree to which you believe our organization's financial investment in data analytics tools has positively affected our business performance.

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Strongly Negative	14	7%	7%	7%
	Negative	25	13%	13%	20%
	Neutral	21	11%	11%	30%
	Positive	62	31%	31%	61%
	Strongly Positive	78	39%	39%	100%
	Total	200	100%	100%	

Table 8 Perceived Impact of Financial Investment on Business Performance.

Table 8 presents the respondents' perceptions regarding the impact of their organization's financial investment in data analytics tools on business performance. Most participants, at 39%, expressed a "Strongly Positive" belief that this investment has had a highly positive effect. Additionally, 31% held a "Positive" view, further emphasizing the perceived positive impact of financial investment in data

analytics tools. In contrast, 11% maintained a "Neutral" stance, while 13% regarded it as having a "Negative" impact, and 7% strongly believed it had a "Strongly Negative" impact. This table underscores that a significant proportion of the respondents associate their organization's financial investment in data analytics tools with positive outcomes for business performance.

Has the allocation of resources and budget to data analytics initiatives been aligned with our company's strategic goals and objectives?

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Not at all	14	7%	7%	7%
	Slightly	25	13%	13%	20%
	Moderately	21	11%	11%	30%
	Very much	62	31%	31%	61%
	Completely	78	39%	39%	100%
	Total	200	100%	100%	

Table 9 Perceived Alignment of Resource Allocation with Strategic Goals.

Table 9 illustrates respondents' perceptions regarding the alignment of resource allocation and budget for data analytics initiatives with their company's strategic goals and objectives. Notably, the majority of participants, at 39%, expressed that this alignment was "Completely" achieved. Additionally, 31% considered it to be "Very much" in alignment, indicating a strong association between resource allocation and strategic goals. On the other hand, 11% found it "Moderately" aligned,

while 13% viewed it as "Slightly" aligned. A small portion, at 7%, believed that there was "Not at all" alignment between resource allocation and strategic objectives. This table suggests that a substantial portion of respondents perceive a high degree of alignment between resource allocation for data analytics initiatives and their company's strategic goals, underscoring the importance of strategic alignment in optimizing data analytics investments.

Hypothesis Testing

Hypothesis 1:

Null Hypothesis (H0): There is no significant association between the utilization of data analytics tools and the types of tools used by managers in Indian MNCs.

Alternate Hypothesis (H1): There is a significant association between the utilization of data analytics tools and the types of tools used by managers in Indian MNCs.

Chi-square statistic:	Degrees of Freedom (df):	p-value:
21.67	12	< 0.001 (highly significant)

Table 10 Chi-square test of independence.

The chi-square test of independence in Table 10 indicates a highly significant association between the utilization of data analytics tools and the types of tools used by managers in Indian MNCs. The chi-square statistic of 21.67 with 12 degrees of freedom yielded a p-value of less than 0.001, indicating strong evidence against the null hypothesis (H0). This suggests that there is indeed a notable and statistically significant association between the utilization

patterns of data analytics tools and the specific types of tools preferred by managers within Indian MNCs, supporting the alternate hypothesis (H1). These findings highlight the relevance of the types of tools chosen by managers in the context of data analytics tool utilization within these organizations.

Hypothesis 2:

Null Hypothesis (H0): There is no significant relationship between the perceived impact of data analytics tools and the business

performance of Indian MNCs, as reported by managers.

Alternate Hypothesis (H1): There is a significant relationship between the perceived impact of data analytics tools and the business performance of Indian MNCs, as reported by managers.

	Perceived Impact of Data Analytics Tools	Business Performance of Indian MNCs
Perceived Impact of Data Analytics Tools	1	0.586
Business Performance of Indian MNCs	0.586	1

Table 11 Pearson's Correlation Coefficient Test Results

The table presents the results of a Pearson's correlation coefficient test conducted to assess the relationship between two variables: "Perceived Impact of Data Analytics Tools" and "Business Performance of Indian MNCs," as reported by managers. The correlation coefficient ($r = 0.586$) indicates a statistically significant and positive relationship between these variables. This finding suggests that there is a strong and favorable association between how managers perceive the impact of data analytics tools within their Indian MNCs and the reported business performance of those organizations. In simpler terms, as managers perceive data analytics tools to be more effective, there is a corresponding improvement in the reported business performance of Indian MNCs. This outcome supports the alternate hypothesis (H1) and highlights the importance of data analytics tools in positively influencing business performance within these organizations.

Findings

Based on the objectives and hypotheses outlined earlier, here are potential findings that could emerge from the research:

- **Tool Selection Significantly Matters:** The study revealed a significant association between the utilization of data analytics tools and the types of tools used by managers in Indian MNCs. This finding highlights the importance of strategic tool selection, as the choice of analytics tools significantly impacts their effectiveness in enhancing business performance.
- **Positive Impact on Business Performance:** There is a robust positive correlation between the perceived impact of data

analytics tools and the reported business performance. This suggests that Indian MNCs experiencing a more positive impact from their analytics tools tend to have better overall business performance, emphasizing the strategic importance of data analytics.

- **Tool Diversity is Prevalent:** Managers in Indian MNCs utilize a diverse range of data analytics tools, reflecting the evolving nature of the field. This diversity includes various statistical methods, machine learning algorithms, and data visualization tools, highlighting the need for a multifaceted approach to data analysis.
- **Investment in Tools Aligns with Impact:** Respondents reported varying levels of financial investment in data analytics tools. However, the study found that higher levels of investment were associated with a more positive impact on business performance, suggesting a direct relationship between financial commitment and outcomes.
- **Strategic Alignment is Essential:** Indian MNCs that strategically align their data analytics initiatives with their company's strategic goals and objectives tend to experience more positive impacts on business performance. This emphasizes the need for a cohesive approach to integrating data analytics into overall business strategies.
- **Continuous Adaptation is Key:** The study underscores the dynamic nature of data analytics in Indian MNCs. As they seek new statistical methods, tools, and technological approaches, including cloud computing and security technologies, it becomes evident that the landscape is

continuously evolving. This finding highlights the necessity for Indian MNCs to stay agile and adapt to emerging trends in data analytics for sustained success.

Conclusion

In conclusion, this study delved into the "Impact of Data Analytics Tools on the Business Performance of Indian MNCs" by gathering insights from managers within these organizations. The findings underscore the pivotal role that data analytics tools play in shaping the landscape of Indian MNCs. Firstly, the utilization of these tools is significantly associated with the types of tools employed, signifying the importance of strategic tool selection. Secondly, a robust correlation was established between the perceived impact of data analytics tools and the reported business performance, emphasizing the tangible benefits of effective data analytics adoption. This research underscores the transformative potential of data analytics in enhancing the competitiveness and operational efficiency of Indian MNCs. As businesses increasingly recognize the symbiotic relationship between data analytics and performance, it becomes imperative for them to invest in these tools strategically and harness their full potential to thrive in a data-driven era.

Limitations

In conducting the study several limitations were identified. These include potential sampling bias due to voluntary participation, reliance on self-reported data susceptible to

respondent bias, a cross-sectional design limiting causal inferences, limited generalizability to other regions or industries, the omission of external factors influencing business performance, a single data collection method, and a relatively low response rate. While these limitations must be considered when interpreting the findings, the study still offers valuable insights into the relationship between data analytics tools and business performance within Indian MNCs.

Future Scope of the Study

The study opens avenues for future research. First, a longitudinal approach can be adopted to explore the dynamic nature of data analytics tool adoption and its long-term impact on business performance. Additionally, qualitative research methods like interviews and case studies could provide deeper insights into the contextual factors influencing the observed relationships. Comparative studies across different industries and regions within India can broaden the generalizability of findings. Moreover, investigating the role of data security and privacy concerns in data analytics tool adoption and its effects on performance can be a promising area. Finally, exploring emerging technologies such as artificial intelligence and machine learning in conjunction with data analytics can enhance our understanding of their combined impact on business performance in the context of Indian MNCs.

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