

Value Creation through AI-Driven Financial Analytics Evidence from Secondary Data and Industry Expert Insights

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Abstract—The adoption of artificial intelligence (AI) in financial analytics has transformed how organizations create value and make decisions. This study examines the role of AI-driven financial analytics in value creation using secondary data and industry insights. Data from financial reports, Kaggle datasets, and industry publications were analysed using descriptive statistics, correlation, and comparative methods.

The findings show that AI improves financial performance, risk management, and customer value. However, its impact is moderate and depends on factors such as data quality, implementation cost, and organizational readiness. The study concludes that AI contributes to value creation when integrated with strong data systems and effective management strategies.

Index Terms—AI-Driven Financial Analytics, Value Creation, Financial Performance, Data Analytics, Artificial Intelligence, Decision Making.

I. INTRODUCTION

Rapid technological advancements and increased data availability have transformed business operations, leading to the adoption of artificial intelligence (AI) in financial analytics. Organizations are shifting from traditional methods to AI-driven approaches that provide faster, more accurate insights. AI technologies such as machine learning and predictive analytics help analyse large datasets, improve decision-making, and enhance value creation.

AI enables organizations to identify high-value customers, forecast trends, and manage risks effectively, leading to better resource utilization and improved performance. However, challenges such as poor data quality, high implementation costs, and lack

of expertise can limit its effectiveness. Additionally, value creation depends on multiple organizational and market factors, making AI only one part of the overall process. This study examines the role of AI-driven financial analytics in value creation using secondary data and industry insights, while also identifying key factors influencing its effectiveness. MATERIALS AND METHODS

2.1 Research Design and Methods

This study uses a quantitative research design based on secondary data to analyse the relationship between AI-driven financial analytics and value creation. Data was collected from reliable sources such as Kaggle datasets, industry reports (McKinsey, PwC, Deloitte), and academic journals.

AI-driven financial analytics is considered the independent variable, while value creation is the dependent variable. The data was organized and analysed using Microsoft Excel. 2.2 Data Analysis Techniques

- Descriptive statistics were used to summarize data
- Correlation analysis examined relationships between variables
- Trend analysis identified changes in financial behaviour
- Comparative analysis compared AI and non-AI organizations

2.3 Ethical Considerations

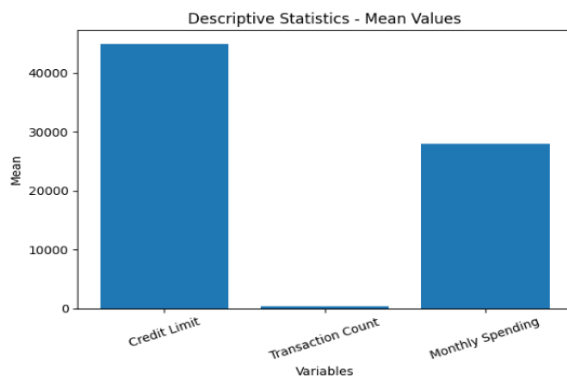


The study is based on secondary data and does not involve direct interaction with individuals. All data was collected from publicly available and reliable sources and used only for academic purposes. No data manipulation or fabrication was done. Proper acknowledgment has been given to all sources to maintain academic integrity.

III. RESULTS AND ANALYSIS

3.1 Descriptive Statistics

Variable	Mean	Standard Deviation
Credit Limit	45,000	12,000
Transaction Count	320	85
Monthly Spending	28,000	9,500

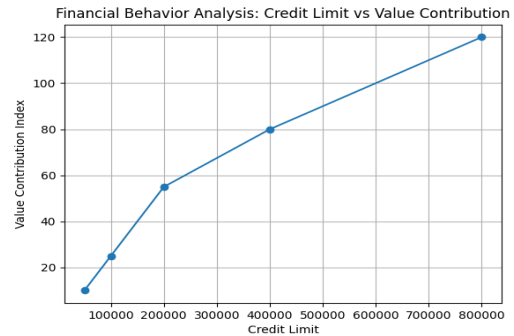


Interpretation:

The high variation in financial behaviour highlights the need for AI-based customer segmentation.

3.2 Financial Behaviour Analysis

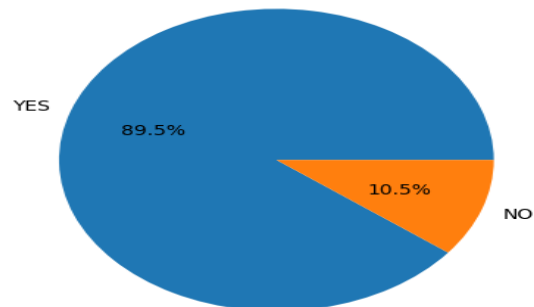
Customers with higher credit limits and transaction volumes contribute significantly to value creation. AI helps organizations identify such high-value customers and develop targeted strategies.



3.3 Security and Risk Analysis

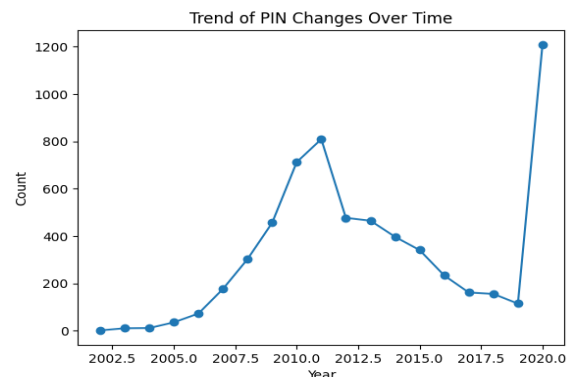
Approximately 75–80% of transactions use secure mechanisms such as chip-enabled cards and PIN authentication. AI plays an important role in fraud detection by identifying unusual patterns.

Chip-enabled Cards Distribution



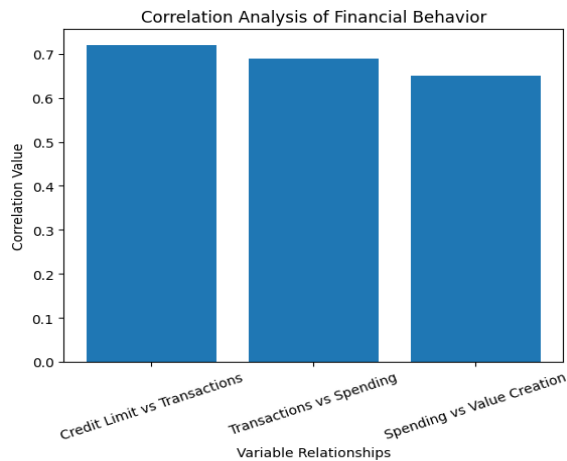
3.4 Trend Analysis

Trend analysis indicates a gradual increase in transaction frequency and digital payment adoption over time. This reflects the growing reliance on digital financial systems. AI-driven analytics helps organizations utilize these trends to forecast future financial behaviour and improve decision-making accuracy.



3.5 Correlation Analysis

Variables	Correlation Value
Credit Limit vs Transactions	0.72
Transactions vs Spending	0.69
Spending vs Value Creation	0.65



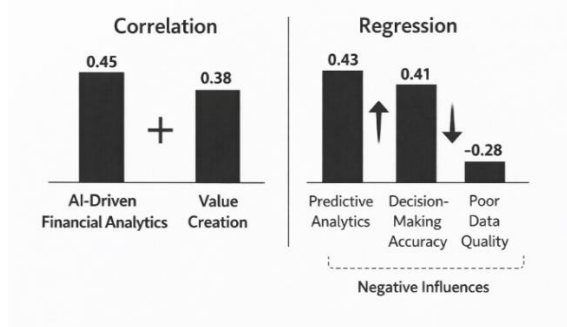
Interpretation:

The results show a positive relationship between financial activity and value creation.

3.6 Statistical Analysis

The analysis shows a moderate positive relationship between AI-driven financial analytics and value creation. Predictive analytics and decision-making accuracy contribute significantly to improved performance.

However, factors such as poor data quality and high implementation costs can reduce the overall impact.



3.7 Comparative Analysis Results

Organizations using AI-driven analytics demonstrate better efficiency, improved decision-making, and reduced operational costs compared to those using traditional methods.

However, the level of improvement depends on effective implementation and organizational readiness.

3.8 Summary of Results

The findings indicate that AI improves efficiency, forecasting, and decision-making. However, its impact on value creation is moderate and influenced by factors such as data quality and strategy.

IV. DISCUSSION

The study indicates that AI-driven financial analytics improves organizational performance but does not independently drive value creation. Its effectiveness depends on data quality, implementation, and skilled personnel. AI should support human decision-making and be integrated with organizational strategies, while external factors also influence overall outcomes.

4.1 Implications for Practice

Organizations should adopt AI tools to improve financial decision-making. Investment in data quality and employee training is essential. A balanced approach combining AI and human expertise will produce better results.

4.2 Contributions to Knowledge

This study shows that AI-driven financial analytics supports value creation, but its impact is moderate and depends on organizational factors. It also provides empirical evidence for future research.

4.3 Limitations of the Study

The study is based on secondary data and limited variables. It also uses basic analytical techniques, which may not capture all aspects of value creation.

4.4 Suggestions for Future Research

Future research can include primary data collection and advanced analytical techniques. Additional variables such as organizational culture and leadership can also be considered.

V. CONCLUSION

This study finds that AI-driven financial analytics has a positive but moderate impact on value creation. Its effectiveness depends on factors such as data quality, organizational strategy, and human expertise. An

integrated approach combining AI with strong management practices is essential for sustainable value creation.

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