

THE IMPACT OF BIG DATA MANAGEMENT ON FINANCING STRATEGIES

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Abstract: Big data refers to large, diverse, and rapidly generated data, playing a crucial role in obtaining valuable information through analysis. This study investigates the impact of big data management on financing strategies, focusing on improving financial performance. Addressing data security, privacy, and challenges, the study emphasizes the significance of big data analytics in financial decision-making processes. By effectively utilizing big data, companies can enhance financial strategies, gain a competitive edge, and ensure long-term sustainability. Conducted through a review method, the study compiles and analyzes data from various academic sources to explore how big data analytics can be integrated into financial strategies for better risk management, customer relations, and operational efficiency. The findings underscore the potential of big data management in achieving growth and sustainability objectives, providing valuable insights for managers and researchers working on financing strategies. It is expected that this study will bring a different perspective to finance managers and academics.

Key words: Big Data, Strategic Management, Financial Management, Financial Strategies, Business Success, Data Sciences

JEL Classification: G17, E22, D24

Introduction

In today's business world, the importance of big data analytics is increasing day by day in order to improve the decision-making processes of companies and to maintain their competitive advantage. Financing strategies are critical for companies to improve their financial performance, reduce risks and be prepared for future uncertainties. Therefore, the use of data analytics in financial management plays an important role for companies to achieve their goals of sustainable growth and success.

In this study, the effect of big data management on financing strategies will be examined. Big data analytics and data science offers financial managers a broader perspective, enabling them to place solid databases at the foundation of their business decisions. The digital transformation of

financial processes offers companies the opportunity to use big data analytics to increase efficiency, reduce costs, and personalize and improve customer experience.

In traditional financial management applications, while decisions are made with limited data sets and experience accumulated over time, companies can make fast and accurate decisions thanks to big data analytics. Big data analytics transforms millions of data points into meaningful information, giving financial managers in-depth insights into market trends, customer behavior, competitive situations, and other key factors. This enables the creation of financing strategies more effectively.

Financing strategies aim to minimize future uncertainties and anticipate potential risks. Big data analytics enables companies to better identify financial risks and better predict future situations. With big data analytics, companies can continuously monitor economic, political and other external factors and update their financing strategies based on this data.

Big data analytics offers the opportunity to better understand and analyze customer behavior. Companies can understand customer preferences, needs and habits by using big data analytics to provide customers with more personalized financial services. While this increases customer satisfaction, it strengthens customer loyalty and competitive advantage of the business.

It will be discussed the effect of big data management on financing strategies in this study. It is clear that big data analytics improves decision-making processes in financial management, strengthens risk management, increases the ability to provide personalized financial services and increases efficiency. By integrating big data analytics into their financing strategies, companies must embrace digital transformation to gain a competitive advantage and achieve sustainable success.

Big data management can have a positive impact on financing strategies. Financial management and analytics, combined with big data analytics and data science, can help companies make more effective decisions and drive better results. Some important points explaining the effect of big data management on financing strategies are as follows:

- **Improvement in Decision-Making Processes:** The size and complexity of data can be difficult to manage with traditional methods when making financial decisions. Big data analytics can help companies make faster and more accurate decisions. Big data analytics enable them to better understand market trends, customer behavior, competitive situations and other important factors.
- **Risk Management and Predictability:** Financing strategies focus on risk management and seek to reduce future uncertainties. Big data analytics can offer better tools for risk management. Big data analytics enable companies to better identify potential risks and better predict their future financial condition. The opportunity to better understand and analyze customer behavior. In this way, companies can provide customers with personalized financial services and increase customer satisfaction.
- **Efficiency and Cost Reduction:** Big data analytics has the potential to automate financial transactions and reporting processes and increase efficiency. More efficient processes can increase the viability of financing strategies by reducing the costs of companies.

- **Fraud and Abuse Detection:** Big data analytics can be an effective tool in detecting financial fraud and abuse. Data analytics can improve companies' financial security by identifying suspicious transactions and behavior.
- **Improving Investment Decisions:** Big data analytics can support companies' investment decisions. Big data analytics can help make better investment decisions by providing an opportunity to better understand market trends, industry performance and potential opportunities. However, it should not be forgotten that the appropriate infrastructure must be established for the effective integration and use of big data analytics in financing strategies, the collection of accurate data and its secure management. It is also important to pay attention to data privacy and security issues. Successful implementation of big data management may require the collaboration of financial experts, data scientists, and technologists.

Big Data and Business

Davenport (2014) explains how businesses can use the concept of big data and the potential of big data to provide competitive advantage. Brynjolfsson & McAfee (2014) examines how big data, artificial intelligence and other technological advances affect business and their potential impact on future business practices. Chen, Chiang & Storey (2012) discusses how big data analytics can create value for businesses and how effective business intelligence and analytics strategies can be created. McAfee & Brynjolfsson (2012) explains that big data management can lead to a management revolution in businesses and emphasizes the impact of big data usage on business success.

Laptev & Zelenkov (2021) discusses how the use of big data and business intelligence can be integrated into enterprise performance management and its potential to achieve effective results. Wang, Kung & Byrd (2018) examines how big data analytics can be used in the healthcare industry and its potential benefits for businesses. Luo, Xu & Liu (2018) explains how big data analytics can be used in the field of operations management and effective data management for businesses. Big data enables businesses to better understand customer behavior, optimize their operations, and develop new products and services. Big data provides many benefits for businesses (McKinsey & Company, 2011):

- **Big data businesses:** It allows them to better understand customer behavior. This enables businesses to develop products and services that better meet customer needs (Gartner, 2012). It allows them to optimize their operations. This allows businesses to reduce their costs and increase their productivity. It enables them to develop new products and services (Harvard Business Review, 2013). This allows businesses to gain a competitive advantage. While big data provides many benefits for businesses, there are also some challenges. For example, it may require specialized tools and expertise to analyze big data (MIT Sloan Management Review, 2014). Also, big data has privacy and security risks.

Big data is an important opportunity for businesses. However, in order to use big data effectively, businesses need to be aware of these challenges and take the necessary precautions (The Economist, 2015).

- **Big Data and Financial Management;** (Cortez & Silva , 2018) explored the usability of big data analytics in predicting financial distress and its impact on the Portuguese banking sector in particular. (Li, Zhang & Fu, 2017) is based on a study of top-ranked companies in China, examining the impact of big data on business performance. (Bollen & Pool, 2013) discusses how big data analytics can be used to detect data manipulation or misreporting in mutual funds. (Amin & Yang, 2017) examines the applications of big data analytics in financial risk management and discusses how it can contribute to more effective management of financial risks. (Pham, Li & Afsharifar, 2017) explore how it can be effective in predicting stock market trends using big data analytics and support vector machines. (Zhou & Luo, 2019) examines how big data analytics can be integrated into audit processes and improve audit quality. (Chen, Chiang & Storey, 2012) discusses the potential of big data to create value for businesses by addressing the integration of big data analytics into business intelligence and analytics.

Financing Strategies in Business

It is vital for businesses to develop effective financing strategies in order to grow and maintain their competitive advantage. Financing strategies are the set of plans and policies used to meet the capital needs of companies, manage risks, invest and increase operational efficiency. In this article, we will examine the processes of developing financing strategies of enterprises, the main types of strategies and the importance of financing strategies in achieving the growth and sustainability goals of enterprises.

i- **The Process of Establishing Financing Strategies of Businesses:** There are several factors that should be taken into account when businesses create their financing strategies. Determination of financing needs, assessment of risk tolerance, analysis of market conditions and consideration of the competitive environment constitute the basic components of the strategy. Companies aim to optimize their capital structure and support long-term growth by using internal and external resources effectively.

ii- **Basic Types of Financing Strategies:**

a) **Debt Financing:** Debt financing means that companies meet their working capital needs by borrowing from external sources. Borrowing is managed according to interest payments and repayment terms, and can increase the financial flexibility of businesses and support their growth (Sourour & Trabelsi, 2017).

b) **Capital increase** is a strategy used by businesses to increase their financial resources. This can be done through methods such as the issuance of stocks or the distribution of dividends. By increasing their capital, businesses can finance new investments, acquisitions, or debt repayment. This can help them grow their business and improve their financial health. (Liu & Long, 2019).

c) **Profitability and Asset Efficiency:** Profitability and asset efficiency strategies aim to increase the financial performance of companies by using their existing assets and operations more

effectively. This enables businesses to optimize their use of capital and manage their investments more efficiently (Bodie et al., 2014).

iii- **The Importance of Financing Strategies in Growth and Sustainability:**

Effective financing strategies play a critical role in helping businesses achieve their growth and sustainability goals. The right financing strategy can help businesses evaluate entry into new markets, product development, acquisitions and other growth opportunities. In addition, financing strategies help businesses achieve financial stability, resilience to crises, and maintain competitive advantage.

Financing strategies play an indispensable role for businesses to achieve their growth and sustainability goals. Establishing their financing strategies correctly, optimizing their capital structure and increasing operational efficiency will help companies achieve long-term success and competitive advantage.

Big Data Management

Big data management is a process used to collect, store, analyze large data masses and obtain valuable information. The following basic steps and principles are important for a successful big data management:

- **Determining a Data Strategy:** The basis of big data management is to determine a data strategy in line with the goals and needs of the business. The data strategy should set the main objectives such as what data will be collected, how it will be stored, analyzed and used.
- **Data Collection and Integration:** For big data management, it is necessary to collect and integrate large data masses from different sources (sensors, social media, websites, customer data, etc.). Data integration enables data to be combined in a meaningful way to obtain more holistic information.
- **Data Storage and Backup:** It is important that the big data collected is stored efficiently. Technologies such as databases, cloud storage and big data storage systems can be used. It is also critical to back up and secure data.
- **Data Security and Privacy:** During big data management, data security and privacy are of great importance. Data security measures include preventing unauthorized access, ensuring data integrity and protecting sensitive information.
- **Data Cleanliness and Quality:** Big data must be carefully scrutinized for quality and accuracy as it comes from a variety of sources. Data cleaning and organization ensures reliable and accurate results of data analysis processes.
- **Data Analytics and Understanding:** Big data management provides valuable information by analyzing data. Data analytics techniques encompass the process of understanding and discovering relationships, trends, and opportunities within large bodies of data.

- **Real-Time and Fast Processing:** Big data management should provide real-time data analytics and fast data processing capability. It is important to process data up-to-date and quickly so that businesses can make instant and quick decisions.
- **Scalability:** Big data management should be scalable in accordance with the increase in data volume and the growth of the business. Infrastructure needs to keep pace with growth and data processing capacity needs to be increased.
- **Data Access and Sharing:** Having data accessible and shareable by relevant people helps businesses improve their data-based decision-making processes and collaborate.
- **Continuous Improvement:** Big data management should be subjected to a continuous improvement process. Data management strategies should be updated according to technological developments and business needs.

These principles outline a successful big data management. Big data management helps businesses to use big data potential effectively and gain competitive advantage.

Big Data Management on Financing Strategies

Big data analytics can increase the effectiveness of financing strategies by building a stronger foundation in financial decision-making processes. Big data analytics enable businesses to better understand market trends, customer behavior and the performance of their competitors, enabling more informed financial decisions (Zikmund -Fisher et al., 2013).

In the risk management dimension of financing strategies, big data analytics can help companies better identify potential risks and anticipate future uncertainties more effectively. Big data analytics support the analysis and forecasting of financial risks, contributing to better design of risk reduction strategies for businesses (Li et al., 2017).

Big data analytics allows businesses to better understand customer behavior and deliver personalized financial services. Big data analytics help better understand customer preferences and habits and enable financial services to better adapt to customers (Ransbotham et al., 2015). Big data management supports automation and analytical processes used to increase financial efficiency and reduce costs. Automating financial transactions and using big data analytics allow businesses to implement more efficient financing processes and manage their resources more efficiently (Davenport & Harris, 2007).

Big data analytics can play an important role in improving investment decisions. Thanks to big data analysis, companies can make more informed investment decisions by better understanding market trends, industry performance and potential investment opportunities (Kiron et al., 2014). Big data management can be an effective tool in detecting financial fraud and abuse. Big data analytics can increase the financial security of companies by identifying suspicious transactions and behaviors and can be used as an effective measure in the fight against fraud (Khan& Irani, 2014).

Conclusion and Evaluation

Big data management can be used in financial decision making processes of businesses. The impact of big data analytics on financing strategies has emerged as an important factor that can contribute to improving financial performance and achieving long-term sustainability goals of businesses.

Big data analytics has great potential in determining and managing financing strategies. Creating a data strategy in line with the objectives and needs of the enterprises at the stage of determining a data strategy is the first step in effectively integrating big data analytics into financing strategies. The data collection and integration process enables large masses of data from various sources to be efficiently combined and prepared for analysis. Data storage and backup measures ensure that the collected data is stored in a safe and accessible manner and protected against possible data loss.

Big data analytics has an important role in determining and implementing financing strategies. With big data analytics, they can better understand key information such as market trends, customer behavior, competitor performance and operational efficiency to help businesses better manage their financing strategies. In addition, big data analytics also makes important contributions in the field of risk management. With big data analytics, companies can better identify potential risks and predict future uncertainties more effectively.

In terms of customer relations, big data analytics makes it possible to obtain more comprehensive and detailed information about customer preferences and habits. This makes it easier for financial services to better adapt to customers and provide personalized service. In terms of operational efficiency, big data analytics enables businesses to manage their resources more efficiently by automating financial transactions and performing data analysis faster and more effectively.

Big data management has a critical importance in determining and managing financing strategies. Understanding the potential of big data analytics and using this technology strategically is important for businesses to achieve their growth and sustainability goals. Developing and managing financing strategies in a data-driven manner will enable businesses to gain competitive advantage, manage risks more effectively and strengthen customer relations. Therefore, focusing businesses on big data management will help them improve their financial performance and ensure their long-term success.

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