ISSN 2661-2666 (Online) International Scientific Journal Monte (ISJM) DOI: 10.33807/monte.20253299
Volume 10, No.1 (2025): April

THE IMPORTANCE OF ANALYZING OUR ENTERPRISE DATA IN CREATING A SUCCESS DRIVEN LEADERSHIP

Ejup Rustemi[1], Mefail Tahiri[2]*
[1]University of Tetova, North Macedonia
[2]University of Tetova, North Macedonia
[*]ejup.rustemi@yahoo.com

ABSTRACT

Our society is governed by data. The digital revolution, characterized by the everyday generation of vast quantities of data, stems from the pursuit of innovative solutions and competitive advantage. The processing and analysis of this extensive data set, collected from many sources and containing inconsistent, erroneous, inadequate, and misleading information, poses considerable hurdles for contemporary enterprises. The diversity of data sources, including text, graphics, audio, and video, along with the rapid generation, collection, and processing of real-time data, contributes to significant complexity within these databases. To evaluate this vast volume of structured and unstructured data, novel data analytics patterns and trends are necessary. Big Data constitutes an extensive aggregation of information-dense data that may be broadly classified into five dimensions: I volume: delineating the data's considerable magnitude; Velocity: the speed at which fresh data is produced and assessed in real time; (ii) Variety: denoting unstructured data from diverse sources, including traditional databases, transactional systems, the Internet, and social media; (iii) Veracity: the authenticity or provenance of the data; and (iv) Value: the worth of the data, contingent upon whether it is historical or contemporary. This paper will underscore the significance and problems of data science within the business environment.

***Keywords**: data, data science, business, strategy, big data.*

INTRODUCTION

The hardware and software prerequisites for managing huge data volumes from several sources constitute a primary challenge faced during the adoption of Big Data in industrial processes and applications. Despite the partial success of advanced technologies such as cloud computing, process and storage virtualization, and new programming and data processing frameworks like MapReduce and Hadoop, complex industrial applications still necessitate more sophisticated technologies to meet real-time requirements.

Dual channel operating in a competitive landscape requires enhancement of service levels and joint efforts between channels, intensifying the competition between manufacturers and retailers while fostering cooperation across the whole supply chain. This paper develops a service differentiation model based on centralized and decentralized decision-making. Through theoretical modeling and numerical computation, it examines the impact of various service levels and network channels on demand within a dual-channel supply chain, emphasizing the cooperative strategy between direct network channels and retail channels to achieve supply chain coordination (Xi Liu, 2017).

Coordination in dual-channel supply chains has been extensively researched for an extended period. To reach an optimal decision, Huang and Swaminathan consider a supply chain comprising

both conventional and online outlets. According to the analysis by Chen Zhang and Sun, the wholesale price contract may effectively coordinate a dual-channel supply chain. David and Adida examine competition and collaboration within a supply chain where a sole supplier operates both a direct channel and distributes its products through diverse specialty retailers. In actuality, most suppliers distribute via various retail channels. Sinha and Santanu optimize the supply chain of a single vendor and several buyers through a discount pricing policy. Mateen and Chatterjee develop analytical models for various techniques to coordinate a single supplier with different shops utilizing vendor-managed inventory.
The swift globalization of the market has led to a notable transition from intergovernmental competition to competition among enterprises, especially brands. The competitiveness of a company's core is dictated by its brand. The United States generally occupies 227 slots in the top 500 global brands, sustaining significant influence, while Chinese enterprises account for approximately 36 slots. Chinese enterprises must enhance their brand competitiveness to distinguish themselves in the global market (Zhi Li, 2018).

THE DIGITAL TRANSFORMATION OF ENTERPRISES

E-commerce has rapidly progressed in recent years, experiencing a tenfold increase in transaction volume over the past decade. Currently, "Internet plus" has become the business's most rapidly expanding area, influencing all aspects of the industry, including the retail network, international e-commerce, online services, and Internet banking. These sectors have emerged as a novel economic strength and catalyst for development. Network retail sales had a notable increase. Application-oriented institutions will certainly face new opportunities for transformation in the e-commerce programs they offer. Historically, all undergraduate institutions offered analogous e-commerce courses, and the content was somewhat obsolete. Simultaneously, instructional technologies and pedagogical methods were both outdated. Furthermore, there was an insufficient quantity of contemporary supporting materials for the instructional resources. In the realm of hiring, numerous e-commerce enterprises often prefer to recruit experienced workers rather than recent graduates. The fundamental operational capacity of e-commerce falls far short of business requirements, which is the underlying cause.
The challenges associated with practical education hinder the rapid and successful development of e-commerce. The idea aims to establish a school inside the e-commerce sector for students to engage in training, practical exercises, and foundational productive training. The reform of electronic commerce education aims to facilitate local economic growth, with a focus on skill development. Integrate the concept that "education benefits the organization." To meet the organization's requirements, the current teaching methodology must be revised, and the instructional materials must be aligned with the practical tasks employed by the enterprise. Establish a training center that fosters an entrepreneurial culture to enhance students' professional success. A fundamental element of advanced vocational education is the amalgamation of production and instruction. Motivate students to develop practical business skills for e-commerce enterprises, encompassing application expertise and the ability to operate an effective business platform (Wang, 2017).

Organizations may employ the American Customer Satisfaction (ACSI) evaluation model to evaluate and improve performance. The aforementioned six structural variables constitute the ACSI structural model. Consumer expectations, customer expectations, and perceived value serve as causal variables, while consumer complaints and customer loyalty function as outcome variables, with customer satisfaction being the ultimate objective variable. Each of the six structural variables consists of one or more observed variables, with data on these observed variables being obtained through empirical study.

The ACSI methodology may assess customer satisfaction across various business types, industries, and departments, yielding comparable results. It facilitates the comparison of customer satisfaction across different industries and among multiple customers using the same product.

The assessment of customer satisfaction can be broadened from engineering and environmental quality to encompass product and service quality (Tong, Jia, 2017).

The stock market relies heavily on a substantial volume of dynamic raw data. Moreover, evaluations of stock investments must include several factors, including the economic conditions at national, regional, and international levels, among others. Future investments will especially benefit from analysis of relevant past data. The stock market system is inherently difficult to predict effectively due to its complex data characteristics. Consequently, predicting stock investment returns is essential in the financial sector.

Data analytics and visualization techniques have been employed in stock market analysis. Predictive analytics depend on data processing due to its pre- and post-processing capabilities, which include transforming raw data. Its features encompass association analysis, data cleansing, and the identification of attribute descriptions, among others. Conversely, data visualization approaches provide intricate data representations, serving as one of the most efficacious methods for aiding investors in comprehending stock market fluctuations (Zreika, Hua, Wang, 2018).

ENTERING THE AGE OF MASS INFORMATION

Because of the growing demand for processing and analysis of large amounts of information, the capabilities of the conventional model of data analysis software have become inadequate. As a consequence of this, the formation of new data models, as well as the execution of data analysis and processing, are becoming increasingly important. This is due to the fact that redundancy will increase in tandem with the expansion of data quantities and the growth of data itself (Wang, Li, 2017). Every single one of the following four types of data-quality issues can be found in data throughout its entire lifecycle, whether it be through human contact, computing processes, or communication techniques. Each of these categories has the potential to introduce errors and produce abnormal data: The first four steps consist of the following process: data input and update, measurement, simplification, and integration.

The relational model of the database is an essential component in the construction of a relational database. Concepts and methods from the field of mathematics are utilized in order to manage the information contained within the database. With the advent of web2.0 in recent years, there has been a significant increase in the amount of data that is stored in the form of photographs, videos, and other sorts of data throughout the years. The data storage methods that are now in use have not been able to meet the standards that have been prescribed for the system. The distributed big data storage technology that NoSQL offers is frequently utilized in cloud computing due to the

fact that it is scalable so well. The use of cloud storage for unstructured data storage technology allows for the resolution of problems with unstructured data storage as well as the improvement of the quality of services related to unstructured data storage. Because of the rise of cloud computing, the relevance and utility of cloud databases are becoming more obvious. Cloud databases are becoming increasingly valuable.

The software, the operating system, and the operational network infrastructure are not accessible to customers who purchase software as a service (SaaS), but they are able to access the program itself. The concept of leasing customer service is the basis of a service concept; rather than offering the idea of purchasing customer service, the software service provider offers the idea of leasing customer service. The option that is more commonly used is to provide a collection of account passwords.

PaaS stands for "platform as a service." There are programs that users execute on the host. Consumers do not have any influence over the operating system, hardware, or operational network infrastructure; however, they do have the ability to modify the environment in which the application is being executed. At its core, a platform is often comprised of an application infrastructure.

Consumers that utilize infrastructure as a service (IaaS) make use of essential computer resources such as the power of their processors, the capacity of their storage devices, the components of their networks, and middleware. Customers are able to manage the operating system, storage capacity, applications that are currently running, and network components (such as load balancers, firewalls, and so on), but they are unable to handle the architecture of the cloud.

In the current era of the data explosion, the future of cloud databases is extremely promising and promises to be very bright. It is anticipated in the research paper that the storage requirements of businesses for structured data would continue to increase in the years to come. The load on the system varies when it comes to small-scale applications because of the redundant resources that the system is required to manage. On the other hand, when it comes to large-scale applications, not only are there significant data storage requirements, but there is also a dynamic demand for resources, which results in an increase or decrease in the number of virtual machines. It has been demonstrated that the standard relational database is incapable of meeting the criteria of NOSQL databases, which include the enormous data store capacity, cost-effectiveness, flexible scalability, and other requirements. Because it is able to more effectively address the problem of data storage in the distributed database of scalability considerations, the cloud database is an alternative that cannot be avoided. Cloud storage has helped to alleviate the pressure that has been produced by the current boom in data growth and has opened our eyes to potential future improvements in data storage (Zhang, Xu, 2017). Despite the fact that cloud storage is not yet capable of fully satisfying our need for storage, its launch has helped to ease the pressure.

CONCLUSION

Business data analytics is comprised of several components, one of which is the understanding of linkages and the application of these linkages to estimate the most likely outcomes of business choices. An example of the former is price elasticity, which can be utilized to either adjust the price of an existing product or to establish the starting price of a new product. In every given situation, the elasticity is calculated by utilizing the price-quantity connection while also taking into consideration other factors such as the degree of income, the season, geographical locations, and so on. With the exception of the fact that, in both economic theory and practice, the relationship

between price and quantity is always negative, the precise nature of this relationship can only be established via the careful examination of data. For the latter application of relationships, predicting, it is generally always the case that you will need to know the outcome of a choice for a key performance measure (KPM), such as revenue, sales, shipments, and so on. This is because predictions are based on the latter application of relationships. Just like the primary measurements, predictions are based on correlations between characteristics or variables in a data collection. Although they are tough to develop and of significant relevance, predictions are still dependent on these correlations.

Hierarchical clustering, as its name suggests, allows for the creation of a hierarchy of different groups of items. A wide range of continuous, ordinal, and nominal qualities are utilized in the measurement of the objects. It is necessary to encode the final two in the correct manner, generally by use dummy encoding. It is possible to make use of character features; nonetheless, it is imperative that they be coded appropriately.

REFERENCES AND BIBLIOGRAPHY

- Brownlees, T., Cipollini, F., & Gallo, M. (2011). Intra-daily volume modelling and prediction for algorithmic trading. Journal of Financial Economics, 9(3), 489–518.
- Han, H., Li, M. (2018). Big Data Analytics for High Frequency Trading Volatility Estimation (349-357). Recent Developments in Data Science and Business Analytics (ICDSB – 2017), Springer.
- Li, Zh., Tao, M. (2018). Research on the Construction of Enterprise Brand Competitiveness Evaluation System Based on the Integration of SWOTand AHP Model (67-74). Recent Developments in Data Science and Business Analytics (ICDSB – 2017), Springer.
- Liu, X., Ji, G. (2017). A study on Cooperation Strategies of Dual Channel Supply Chain Based on Service level (29-43). Recent Developments in Data Science and Business Analytics (ICDSB – 2017), Springer.
- Paczkowski, W. (2021). Business Analytics – Data Science for Business Problems. Springer, Plainsboro.
- Schmidhuber, J. (2015). Deep learning in neural networks: An overview. Neural Networks, 61, 85–117.
- Wang, M., Li, Zh. (2017). Research Status and Prospect of Data Extraction and Cleaning Technology in Large Environment (292-298). Recent Developments in Data Science and Business Analytics (ICDSB – 2017), Springer.
- Wang, Sh. (2017). Reflections on the Training Mode of E-Commerce Professionals with Improved Practical Exercises and Innovative Ability (75-81). Recent Developments in Data Science and Business Analytics (ICDSB – 2017), Springer.
- Zhang, X., Xu, F. (2017). Research on Data Storage Based on Cloud Platform (333-338. Recent Developments in Data Science and Business Analytics (ICDSB – 2017), Springer.
- Zreika, M., Hua, J., Wang, G. (2018). Applying Data Processing Method for Relationship Discovery in the Stock Market (249-255). Recent Developments in Data Science and Business Analytics (ICDSB – 2017), Springer.