A Study on the Impact of Digital Transformation on Organizational Performance of Convenience Stores

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Abstract

As an important part of the retail industry, convenience stores are facing the challenge of fierce market competition and increasingly diversified consumer demand. At the same time, in the development of underlying technologies and applications related to digitalization, many technologies facilitate the creation of digital formats for convenience stores. For example, modern information technologies such as the Internet of Things, big data, cloud computing, mobile payment, and visualization technology are constantly enhancing the level of intelligent management. Therefore, in this context, the impact of digital transformation on the organizational performance of convenience stores is particularly significant and has a profound effect on their overall performance. This study aims to explore the impact of digital transformation on the organizational performance of convenience stores and analyze its key influencing factors. According to the study, digital transformation offers convenience stores real-time data visibility, supply chain optimization, digitalization of human resource management, and data-driven decision-making opportunities. These advancements can enhance operational efficiency, reduce costs, boost competitiveness, and promote the sustainable development of the organization.

Keywords

Digital, Organizational performance, Impact

1. Background and significance of the research

Convenience stores, as one of the modern retail formats, are developing rapidly in terms of both the number of stores and the sales volume of stores in order to meet the convenience and emergency needs of consumers. In today's business environment, with the rapid development of technology and the increasing popularity of digital technologies, organizations have to face the challenges and opportunities of digital transformation in order to remain competitive and achieve sustainable growth. Digital transformation has become a key factor in the continued growth and success of businesses. Digital transformation is more than simply moving traditional businesses onto digital platforms; it is a strategic shift that changes the way organizations operate, their business models, and their culture across the board. In today's digital era, digital transformation has become an important way for enterprises to achieve innovation and improve performance. First, the contribution of digital transformation to business practices is significant. Through digital transformation, enterprises can optimize business processes and improve efficiency. The application of automation systems and digital tools can accelerate business processes, reduce costs, improve production efficiency, and enhance market competitiveness.

Secondly, digital transformation also has an important impact on the innovation capability of enterprises. Digital technology provides enterprises with more possibilities for innovation. Through the application of technologies such
as data analytics, artificial intelligence, and the Internet of Things, enterprises can better understand market needs, develop new products and services, expand new markets, and achieve continuous innovation.

In addition, digital transformation has had a profound impact on the customer experience of enterprises. Through digital channels, enterprises can provide more convenient and personalized services to meet the growing needs of customers (Ye Xia, 2023). Digital transformation enables companies to better understand their customers, provide more precise products and services, enhance customer loyalty, and enhance brand value.

2. Development status of digital enabling for convenience stores

The development of convenience stores reflects the new trend of retail development to a certain extent, and the digital empowerment of China's convenience stores has gone through three stages.

The first is the informatization stage (2010 to 2015). Before 2010, convenience stores began to use POS systems to record sales data and manage inventory, implementing a simple electronic payment system to facilitate the checkout of customers. From 2010 to 2015, convenience stores introduced membership management systems to understand customers' purchasing preferences through data analysis and provide personalized recommendation services. For example, Meiyijia convenience store has digitized the overall structure, especially members, since 2014. During this period, data warehouses and BI systems were established to integrate and analyze sales data and help management make more informed decisions. Taobao member stores and Jingdong unmanned supermarkets are the pioneers of digital operation (Meng Fei, 2018).

The second is the intelligent stage (2015 to 2020): from 2015 to 2020, convenience stores will introduce artificial intelligence technology to provide customers with personalized shopping suggestions through intelligent recommendation systems, optimize inventory management by using big data analysis, reduce excess and shortage phenomena, and improve supply chain efficiency. For example, the "convenience bee" convenience store obtains store data in "seconds" through its own digital store system, relying on IOT, automated capture, and other technologies, and splits product characteristics from various dimensions by labeling and other means through the AI system in the middle station, further adds labels when analyzing the differences in-store sales, and finally draws data association in different labels. To achieve accurate service in different cities and different scenarios (Xu Jiamin, 2021).

The third is the ecological stage (2020 to present). Since 2020, convenience stores have cooperated with third-party delivery platforms to realize online ordering and delivery services for convenience store goods. Establish digital supply chain cooperation with suppliers, realize supply chain information sharing and collaboration, improve inventory turnover, and reduce costs. At present, China's convenience stores show a new competitive situation. On the one hand, funds enter the convenience store industry, create smart retail stores and unmanned convenience stores (such as Bingo Box), and renovate traditional convenience stores (such as Jingdong convenience store); On the one hand, traditional convenience stores attempt to transform, such as Meiyijia and Yiyatong into convenience store service providers, or try to empower convenience stores by convenience store + catering, convenience store + fresh, or cooperate with third-party service providers to introduce takeaway services.

3. Analysis of influencing factors of digital transformation on organizational performance of convenience stores

3.1 Operation efficiency improvement

Efficiency improvement refers to the adoption of various digital technologies and strategies through digital transformation with the goal of improving the operational efficiency and work efficiency of the convenience store organization. This process of increasing efficiency involves several aspects.

Digital transformation is not only the adoption of digital technologies but also a strategic shift. First, digital transformation can improve the efficiency of convenience stores by automating processes. For example, convenience stores can use automated inventory management systems, through sensors and real-time data analysis, to achieve real-time monitoring of inventory levels and automatic replenishment, so as to avoid excess or shortage of inventory, improve inventory turnover, reduce warehousing costs, and ensure the timeliness and accuracy of commodity supply.

Secondly, digital transformation can help convenience stores conduct data analysis. By collecting and analyzing customer purchase data, sales data, inventory data, and other information, convenience stores can deeply understand customer needs and purchasing behaviors, optimize commodity display and pricing strategies, accurately launch
3.2 Customer experience optimization

Customer experience optimization refers to improving customers’ perception and experience during the shopping process, so as to enhance their satisfaction and loyalty to the brand or enterprise. The impact of digital transformation on organizational performance of convenience stores plays an important role in customer experience optimization.

In the early stages of sales, digital transformation enables convenience stores to collect, analyze, and leverage vast amounts of customer data to understand customer preferences, buying habits, and behavior patterns. Provide personalized recommended products and customized promotional activities to meet customers’ personalized needs and improve the shopping experience (Zhang Wenchi & Yin Jie, 2023). Establishing a digital membership system can help convenience stores track members’ consumption behavior, push personalized offers and services, and enhance customer loyalty. Online shopping introduces online ordering and self-service pickup services to provide diversified shopping methods to meet customers’ diversified shopping habits and improve shopping convenience. Through intelligent retail technologies, such as smart shelves, facial recognition payment, and self-checkout systems, the payment process is simplified, waiting time is reduced, and shopping efficiency and convenience are enhanced.

In the later stage of sales, establish a digital customer feedback mechanism, collect customer opinions and suggestions, and timely adjust service and product strategies. Engage with customers through social media platforms and provide online customer support and promotions.

4. Thoughts on the road of digital transformation of convenience stores

4.1 Improve real-time data visibility and optimize store management

The advantage of convenience stores lies in their convenience, flexibility, fast service, and other characteristics to attract consumers, it is precisely because of these characteristics, for the management of the convenience store itself, also brings many challenges, such as multi-format operation, brand aging, and other problems. So how to break the current dilemma through digital means and realize the optimization and upgrading of store management, the key is to grasp the advantages of data.

A convenience store may have many brands and be distributed in different regions. Its business data needs to be effectively integrated in real time. This inevitably touches on the integration of big data. If the data can not be updated, collected, analyzed and processed in a timely manner, it may lead to information islands, low operational efficiency, lagging decision-making, brand image damage and other problems. Therefore, convenience stores should pay attention to the importance of real-time data visibility and save costs by cooperating with service providers, such as Alipay service providers. Using "three sets" analysis, data decision-making. The three units here are the data center, the business center, and the membership center.

The main purpose of the data center is to integrate the scattered data sources into a unified platform, which realizes the centralized management and unified view of data. The business center plays the role of connecting the front desk and the back office system to realize cooperation and information sharing between different business areas. Including sales, purchasing, inventory management, customer service, etc., promote collaboration and information sharing between different departments, break departmental barriers, and achieve fully integrated business management and operation. The member center is used to integrate and manage the enterprise’s member data, member rights and interests, member activities, and other information, integrate member data from different channels and business systems, including personal information, consumption records, behavioral preferences, etc., to achieve unified management of member data. Analyze members’ rights and interests information, including points, coupons, gifts, etc., to realize the issuance, use, and settlement of members’ rights and interests. The above are the three analyses of data centers, business centers, and member centers, which can be achieved with the cooperation of service providers.

Based on the basic analysis of sufficient data, convenience stores can deeply understand key information such as...
sales trends, inventory situations, and customer demand, so as to achieve the goal of optimizing store management, that is, realizing cost control and maximizing sales performance. So as to achieve the store optimization management of convenience stores, including store management, goods management, training management, and customer relationship four levels. Put forward targeted store management optimization strategies and safeguard measures, and keep up with the market to continuously upgrade the store management of convenience stores.

4.2 Optimize the warehousing supply chain and improve store operation

Supply chain optimization refers to the improvement of supply chain management processes and operations to achieve more efficient logistics, inventory management, and partnership, thereby reducing costs, improving service levels, and enhancing market competitiveness. Through digital technology, convenience stores can achieve real-time monitoring and coordination of the supply chain, reduce inventory overstocking and out-of-stock phenomena, improve supply chain efficiency, and reduce costs.

The digital upgrade of supply chain management systems has an important impact on the process from the generation of orders to the flow of products to customers. An automatic ordering system can automatically generate order demand according to sales data and inventory level, reduce human intervention, and improve ordering accuracy and efficiency. Share information and cooperate with suppliers and logistics companies after placing orders. After goods are stored, the use of Internet of Things technology and intelligent warehousing equipment to achieve automated warehouse management, real-time monitoring of inventory levels, sales data, and supplier information, tracking product sources and flows, ensuring product quality and compliance, and achieving data visibility and transparency of all links of the supply chain. In this process, through data analysis and predictive models, convenience stores can accurately predict demand changes in real time, optimize inventory management, reduce inventory overstocking and stock shortages, improve supply chain efficiency, and reduce the risk of supply chain disruptions.

4.3 Digitalization of human resource management, covering the whole process of talent selection, management and use

Human resource management refers to the effective management of human resources within an organization, including recruitment, training, performance management, employee relations, etc., in order to achieve the organization's strategic objectives and improve employee performance.

The digitalization of human resource management is reflected in the following aspects. One is recruitment and talent management. The introduction of an online recruitment platform and talent management system, through the data analysis of talent data, in the recruitment of talent, can be more efficient screening, recruitment, and management of talent, shorten the recruitment cycle, and reduce recruitment costs. In terms of employee management, it can better understand the skills, performance and development needs of employees, develop personalized training and promotion plans, and improve employee satisfaction and loyalty. Second, training and development. The Digital Training platform provides online training and learning resources to help employees train and learn anytime, anywhere, enhancing an organization's talent pool. Through data analysis of employee performance and needs, personalized career development plans are formulated to motivate employees to continue to learn and grow, and improve employee performance and retention (Chen Jia, 2023). The third is to introduce a performance management system to achieve a digital process of performance goal setting, evaluation and feedback, and improve the fairness and transparency of performance management. At the same time, real-time performance feedback and incentive mechanisms are implemented to help employees adjust their work performance in time. Fourth, employee participation and communication. Establish a digital employee participation platform and feedback mechanism to collect employee opinions and suggestions, promote employee communication and participation in decision-making, and enhance employee belonging and team spirit.

4.4 Digital empowerment to build a data decision-making system

Data-driven decision-making refers to the process of making decisions based on data and analysis results when an organization or enterprise makes strategy, business plan, and operation management. This approach to decision-making emphasizes guiding and supporting the decision-making process through in-depth analysis and understanding of data, rather than relying solely on the intuition or experience of supervisors.

Data-driven decision process includes data collection, data analysis, decision system, and continuous optimization.
The first step in data-driven decision-making is to collect relevant data. This data can include internal data (such as convenience store sales data, membership data, inventory data, etc.) and external data (such as retail industry market trends, competitive intelligence, etc.).

Once the data is collected, it needs to be analyzed to find patterns, associations, and trends in the data. For example, sales data analysis, through the analysis of the sales information of various categories of goods, to understand hot and unsalable goods, adjust the mix of goods, and increase sales; Cross-selling analysis, analyzing customer buying behavior, launching matching sales plan, increasing customer unit price and sales; Seasonal sales analysis, analyzing seasonal sales characteristics according to sales information, adjusting seasonal promotion strategies, increasing sales, etc. The analysis of this data can employ various techniques and tools, such as data mining, machine learning, statistical analysis, etc., to extract useful information and make inferences (Fang Cao & Luo Ziming, 2021). On the basis of data analysis, decision-makers can more accurately assess the current situation, predict future trends, and make decisions based on data and analysis results. This kind of decision-making can reduce subjective bias and improve the accuracy and effect of decision-making. Because data-driven decision-making is an ongoing process, organizations need to constantly collect, and analyze data, evaluate the effectiveness of decisions, and adjust and optimize based on feedback to achieve continuous improvement and improve performance.

5. Conclusion

In today's digital era, the convenience store industry is experiencing unprecedented changes. From supply chain optimization to smart inventory management to the digitization of customer service, every link is full of opportunities and challenges. Digital transformation provides convenience stores with real-time data visibility, supply chain optimization, digitalization of human resource management and data decision-making, etc. Only by realizing the digital management of the whole process can they break through their own boundaries, bring more and more good products and services to users, continuously improve operational efficiency, enhance competitiveness, and promote the sustainable development of the organization.

References


