Technology’s Impact on the Retail Industry

Introduction

Technological innovation continues to revolutionize how retail industries conduct business in day to day operations. Instantaneous information contributes to more informed decision making, which assists in overall performance and quality improvements.

- Advancements in technology innovation influence many parts of business strategy in the retail industry. Real time data provides a live outlook for employee needs, inventory management, and forecasting needs such as projected sales.

Evolution of Technology in Retail

Computers and software systems laid the foundation for the evolution of the retail industry that exists today. With the entrance of technology into the retail and service market also came a change in the philosophies of companies. Companies shifted their main focus to customer satisfaction in this time, as the consumers now control markets via their tastes and preferences, which are communicated via technology. This process is also known as the Omni-channel approach.

Smartphones today are becoming an integral part of our everyday lives, and companies are beginning to focus their Omni-channel marketing on mobile platforms that the consumers use to purchase their goods. Customers want a seamless effort when researching and purchasing products, and with a smartphone within reach for the majority of consumers, effort has been focused on smartphones and the mobile platforms that each company uses.

Mobile and customer-operated POS systems are also influencing the retail industry. Today, retailers are designing their stores to be more efficient for customers to come into and leave with what they need in a timely manner.

Positive Impacts of Technology in the Retail Industry

- Better communication between customers and retailers. Interactive technologies have especially liberalized the retail dynamic by transferring more power to customers and allowing smaller firms to overcome traditional economies of scale.
- Improvements in POS systems have coincided with productivity gains and reductions in transactional costs through better inventory management. Perhaps the most significant role technology has influence inventory management is through better methods of demand forecasting. Universal Product Codes, Supply Chain Management Software and Global Positioning Systems have let retailers better understand which products need to be where in real time. The improvement in these systems were instrumental in seeing annual productivity growth in the retail sector grow from an average of 2% during the period of 1987-1995 to an average of 3.8% during the period of 1995-2002 (Doms, 2004).
- Demand forecasting can now be seen as data driven. Advancements in computer and information technology have helped retail firms dissect and process information at ever increasing speeds and accuracy. Demand forecasting has grown from aggregated data to a more granular structure through the use of transaction log data and demand signal repositories. These systems are interacting with “Big Data” to allow inventory to be managed in real time with algorithms helping to optimize inventory and reduce holding costs (Karolesfski, 2016).

Negative Impacts of Technology in the Retail Industry

- Social media, while a powerful platform for businesses to promote themselves and expand their marketing tactics to reach all ranges of demographics, has also led to cases of individual employee workflows to reach a point of stagnation and decline. In addition, while social media was not originally intended for company utilization, according to research by the International Association of Business Communicators, only 16% of companies actually used social media to internally interact with their employees and foster productivity. Part of the issue was that only 25% of employees were even encouraged to participate in social media interaction with their company (Weigel, 2013).
- While self check-out and mobile POS systems are more cost-saving for companies, they eliminate the need for numerous employees, and as such, eliminate jobs. The lack of employees overall hurts the local economies and decreasing opportunities of economic development due to these cuts (Markovic, 2011). Furthermore, smartphones and their corresponding apps allow consumers to pull up any and all product information they need immediately. This eliminates the need for consumers to engage with floor workers, and in turn, eliminates the need for an abundance of floor workers used for engagement purposes with consumers.

Conclusion

Growing technological innovations have positive impacts to our everyday retail businesses such as real time data analysis for POS inventory needs. The positive aspects of technology have resulted in the reduction of transactional costs, improvement of organizational communication, and greater access to analytics in the retail sector. The invention of the computer has built a foundation for future innovation that continuously updates retail consumer purchasing needs. Changing retail consumer behaviors have led to a transition in business strategy from brick and mortar retail structure to a more convenient online user platform. With that, online platforms have literally targeted individual needs based on data collection on past purchasing history, search queries, and related or complementary products associated with a recent purchase. Subsequently, technological innovations have had negative impacts to retail businesses, such as employee reductions due to installation of automated “Self-check-out” stations. However, without innovation in technology, the retail industry could not achieve success in the ever growing consumer needs perspective. Consumer behavior shifts based on many factors, but most importantly communication of information is the primary driver in customer behavior. Understanding how technological innovations impact the retail industry, helps position future strategies in a proactive way ensuring consumer needs are met with efficient and effective results

Sources

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