Explore The Impact Of Emerging Technologies Such As AI, Machine Learning, And Blockchain On Transforming Retail Marketing Strategies

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1.0 Introduction

The retail business has gone through a noteworthy change in many years, principally determined by the coming and everywhere reception of Data and Correspondence Advancements (ICT). This examines the transition from the traditional brick-and-mortar retail model to the contemporary click-and-mortar model, which is a crucial aspect of this evolution. Information Technology plays a vital role in these retail-marketing strategies, reshaping the retail marketing strategies landscape. Throughout the long term, the retail area has seen a seismic change in customer inclinations and ways of behaving. In the retail market, the introduction of the computer has digitally transformed the marketing strategies very well "shorter attention spans with instant gratification, personalized push notification, market trends, strategic analysis, location-based marketing and anticipatory shipping for fulfillment of customers' needs and improves the customers relationships behaviors". Customers are not generally bound to actual stores; they are using digital platforms more and more, making it harder to tell the difference between online and in-store shopping. This progress has established an intricate and dynamic climate for retailers, requiring a thorough comprehension of the exchange among conventional and computerized systems. This paper sets out on a far-reaching examination of how Information Technology has affected largely and keeps on molding the procedures utilized by retailers to draw in with their clients, upgrade functional productivity, and stay cutthroat in a steadily developing commercial center.

1.1 Research Background

By inspecting the complex parts of this change, from the incorporation of internet business stages into physical activities to the use of information investigation for customized promotion, we intend to reveal insight into the complicated connection between innovation and retail. As we dive further into this subject, it becomes obvious that the limits isolating customary and online retail are turning out to be progressively porous (Corrado et al,2022). Retailers are tackling the force of Information Technology has increased in marketing strategies well to make consistent, Omni channel encounters that take care of the assorted necessities and inclinations of current buyers. This

exposition attempts to unwind the procedures, difficulties, and victories related with this change. In addition, the purpose of this study is not only to gain an understanding of the state of click-and-mortar retail now, but also to gain useful insights for upcoming developments in the field. As Information Technology has developed in today's world in every field as it keeps on progressing at a quick speed, the ramifications for retail highlighting procedures will undoubtedly be significant. The purpose of this is to investigate the strategic considerations and potential trajectories of this evolution that will shape the retail industry in the coming years. Overall, the change of retail from blocks and cement to snap and-mortar is a peculiarity that has modified the actual texture of the business (Panibratov and Lathuka, 2022). Retailers, academics, and policymakers alike need to have a solid understanding of ICT's role in this transformation. A comprehensive analysis that sheds light on the past, present and potential of this dynamic industry is the goal of this, which aims to investigate the multifaceted impact of ICT on retail marketing strategies.
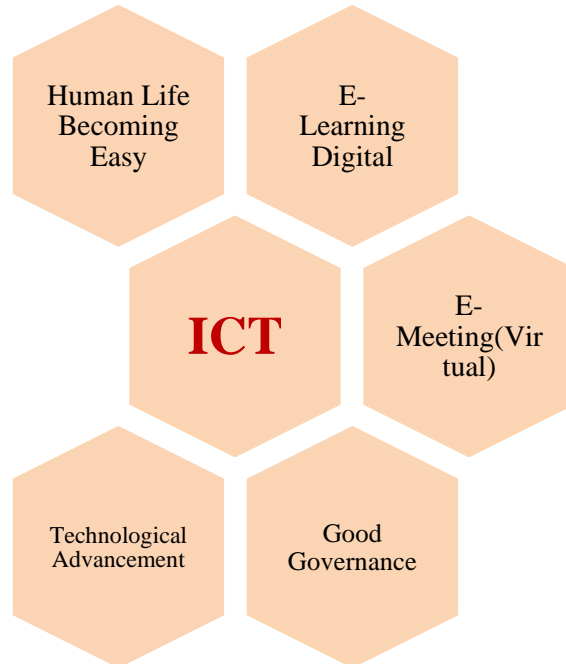

Figure 1: Role of ICT
(Source: Self-created in MS Word)

1.2 Aims and Objectives

Aim - The main aim is to analyze the role of ICT in retail marketing strategies and to understand how technology affects the retailers and promotes the selling of the products.
Objective -
- To examine the ICT tools for the benefit of marketing includes use of social media and e-commerce websites.
- To investigate the multifaceted impact of ICT on retail marketing strategies

- To investigate the strategic considerations and potential trajectories of this evolution that will shape the retail industry in the coming years.
- To play a crucial role in this scenario, reshaping the retail marketing strategies.
- To attempt to unwind the procedures, difficulties, and victories related to this change.
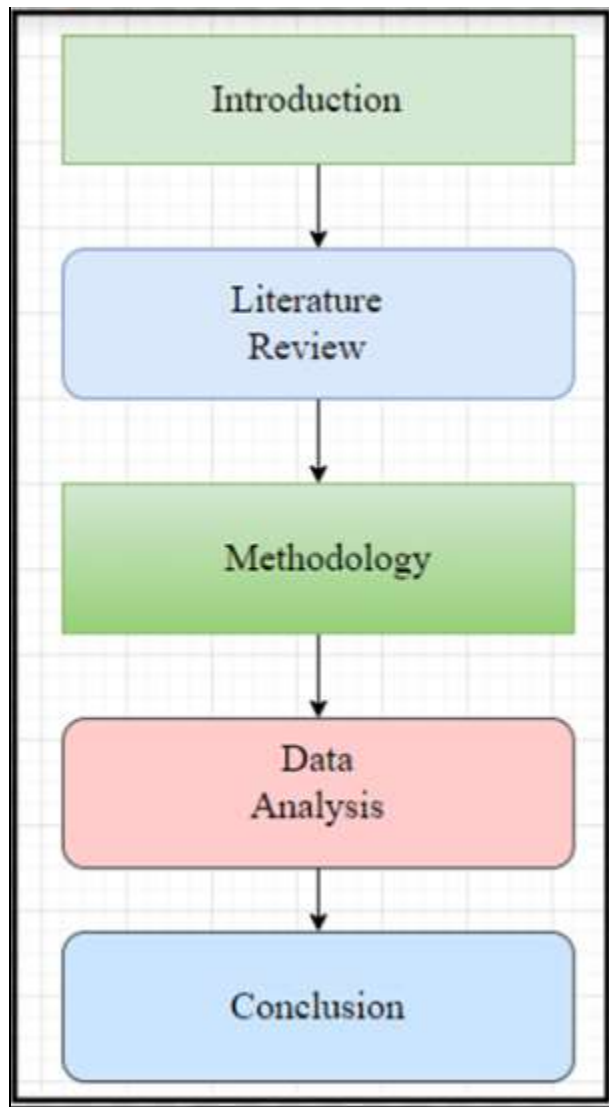
1.3 Research Framework

Figure 2: Research Framework
(Source: Self-created in MS Word)

2.0 Literature Review

According to Chen and Hu, 2020 in this review the focus is on the roles of ICT in transforming retail-marketing strategy. The number of marketing strategies that influenced the marketing are social media, e-commerce websites with the evolution of social media and website awareness of

the market has been improved well, and it influences the contribution to the society, which leads to better environment among the customers and bonds the relationship with us. In the computer field and advancement of information technology, social media has contributed very well in the marketing strategies to increase income and increase productivity (Chen and Hu, 2020). E-commerce websites have also increased the marketing strategies and main things is communication between the people and awareness among the people this also can lead to good marketing strategies. This all can enhance the customer relationship with the client and advertisement of the product on the social media is a big boost in the strategies making of market which contribute very well in the enhancement of the relationship with the customer and provide a valuable solution if there is wrong in a product or we can say that proper technical support should also be provided for enhancing the marketing strategies.

According to Boston, 2019 Customer Engagement ICT plays a crucial role in enhancing customer engagement, which is at the heart of effective retail marketing strategies. With the coming of virtual entertainment stages, retailers can interface with clients on a more private level. Real-time feedback is made possible by this interaction, and it can be used to tailor marketing efforts and enhance customer experiences. In addition, ICT makes it easier to use personalized content and recommendations based on the preferences of individual customers, which results in increased levels of engagement and customer loyalty (Boston, 2019). The coordination of Chabot's and computer-based intelligence driven client care further upgrades the client experience by offering moment help and data. In the present quickly developing business scene, Data and Correspondence Innovation (ICT) has arisen as a basic driver of progress in the retail business. The purpose of this literature review is to examine how ICT influences customer engagement, data analytics, Omni channel retailing, personalized marketing, and other retail marketing strategies. This review will perform a better understanding of the marketing strategies and how to enhance in the global world with lots of competition all over the globe so that is why look at these marketing strategies very well and plan accordingly to expand in a larger way.

According to Dubois, 2020 Information Examination, One of the most groundbreaking parts of ICT in retail promotion is the capacity to gather and examine immense measures of information. Huge information investigation empowers retailers to acquire profound experiences into client conduct, inclinations, and patterns. Targeted marketing campaigns can greatly benefit from this information. AI calculations and prescient examination assist retailers with expecting client needs and upgrade stock administration, prompting diminished costs and further developed productivity (Dubois, 2020). Furthermore, information driven dynamic upgrades the viability of highlighting efforts by guaranteeing that assets are designated to the most encouraging open doors.

According to David et al. 2021 Omni channel retailing the ascent of ICT has worked with the change from multichannel to Omni channel retailing. Through ICT, retailers can flawlessly coordinate different channels, for example, actual stores, web based business sites, portable applications, and online entertainment stages. This joining furnishes clients with a predictable and

helpful shopping experience across all touchpoints (David et al. 2021). Omni channel retailing permits retailers to catch a more extensive crowd and make a brought together brand picture. It additionally empowers creative practices like snap-and-gather, where clients can arrange on the web and get items available, obscuring the lines on the web and disconnected shopping.

According to Ellensburg, 2019 Customized Showcasing ICT engages retailers to convey exceptionally customized showcasing efforts. Through the examination of client information, retailers can tailor item suggestions, advancements, and promotions to individual inclinations and ways of behaving (Ellensburg, 2019). This personalization builds the pertinence of displaying endeavors as well as improves transformation rates and consumer loyalty. Hence, the retailers can send personalized offers to customers who are within close proximity to physical stores by utilizing location-based services and mobile marketing.

According to White, 2019 Data and Correspondence Innovation has significantly changed retail-promoting methodologies. It has reformed client commitment by empowering ongoing associations and personalization. Omni channel retailing has created seamless shopping experiences, and big data analytics has given retailers the ability to make data-driven decisions and optimize operations. ICT-driven personalized marketing boosts sales and customer satisfaction (White, 2019). It is fundamental to note that while ICT offers critical benefits, it additionally presents difficulties connected with information protection and security. Retailers must balance the use of customer data for personalization while adhering to privacy regulations. ICT will continue to play a crucial role in the development of marketing strategies in the retail industry. It is likely that retailers will remain competitive and thrive in this dynamic environment if they successfully harness the power of ICT.
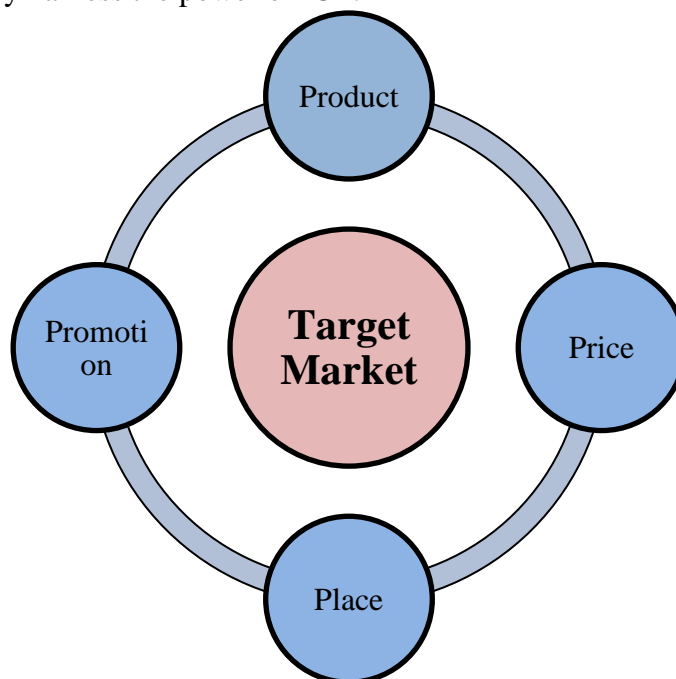
Figure 3: Marketing Strategies
(Source: Self-created in MS Word)

2.1 Literature Gap

The literature gap in the job of ICT in changing retail-showcasing systems is the restricted exploration on how arising advances like expanded reality and computer-generated reality explicitly influence the retail area. While there is existing writing on the general impact of ICT on retail promotion, there is a requirement for more inside and out investigation of the capability of innovations like AR and VR to upset client encounters, upgrade item representation, and drive deals. By filling this hole, specialists can give significant experiences into the viable mix of these advancements into retail displaying methodologies for further developed client commitment and upper hand. This all is the gap in this literature review, which is nowadays increasing, with computer-generated things in the marketing.

3.0 Methodology

3.1 Research Philosophy

The ICT, or Information and Communication Innovation, has reformed retail displaying. It has changed the manner in which organizations collaborate with clients, considering customized encounters and designated publicizing. Research reasoning in this setting alludes to the methodology organizations take to assemble and examine information. With ICT, organizations can gather and investigate huge measures of client information, empowering them to comprehend purchaser conduct and inclinations better. Marketing strategies that work, customer satisfaction, and sales are all aided by this knowledge (Kumar, 2019). In outline, ICT plays had an urgent impact in modernizing retail displaying by empowering information driven research and customized promoting approaches.

3.2 Research Approach

ICT has significantly changed the exploration approach in retail displaying. With ICT, organizations can accumulate and dissect a lot of information, considering more exact and thorough exploration. This innovation empowers organizations to gather data about client inclinations, conduct, and patterns, assisting them with pursuing informed choices. ICT likewise works with continuous information following, permitting organizations to answer rapidly to highlight changes (Jha et al, 2019). Businesses are also able to use cutting-edge analytics tools like machine learning and artificial intelligence to gain valuable insights and enhance marketing strategies thanks to ICT. Overall, ICT has changed the way retail-marketing research is done, allowing businesses to make decisions based on data and making customer experiences better. The adoption of information and communications technology ICT has radically transformed retail marketing research with cloud computing the individuals can now analyze the marketing strategies

and helpful for the customers actionable insights artificial intelligence and machine learning allow for advanced predictive analytics enabling more precise demand forecasting and inventory optimization these technologies provide retailers with real time visibility into customer behavior and preferences overall the use of ICT cloud services AI and big data analytics has enhanced data driven decision making in retail leading to more targeted marketing campaigns personalized customer experiences and smarter supply chain management this data centric approach has become indispensable in today's highly competitive Omni channel retail landscape.

3.3 Data Collection Method

Here the data is collected through the secondary analysis. ICT has fundamentally changed the information assortment strategies in retail advertising. With the assistance of ICT, organizations can now gather information through different computerized channels, for example, online reviews, virtual entertainment checking, and site investigation. This takes into account a more proficient and precise information assortment contrasted with customary techniques. ICT additionally empowers organizations to computerize information assortment processes, saving time and assets. Besides, ICT works with the incorporation of various information sources, empowering organizations to assemble thorough experiences about client conduct and inclinations (Gerow et al, 2022). Overall, ICT has changed how retail marketing data is collected; allowing businesses to make decisions based on data and tailor their strategies to meet customer needs. The adoption of information and communications technology (ICT) has transformed data collection in retail marketing. With cloud computing, businesses can now automatically gather customer data from diverse digital touchpoints like social media, websites, and mobile apps. Artificial intelligence and machine learning allow for advanced analysis of this data to identify patterns and insights. ICT enables real-time data gathering through Internet of Things sensors and analytics, providing instant visibility into customer behavior. Overall, these technologies have enabled more efficient, integrated, and intelligent data collection capabilities for retailers. ICT, cloud services, AI, and IOT have changed how marketing data is captured allowing businesses to understand their customers better and respond faster to trends. This data-driven approach facilitates more targeted, personalized marketing across channels.
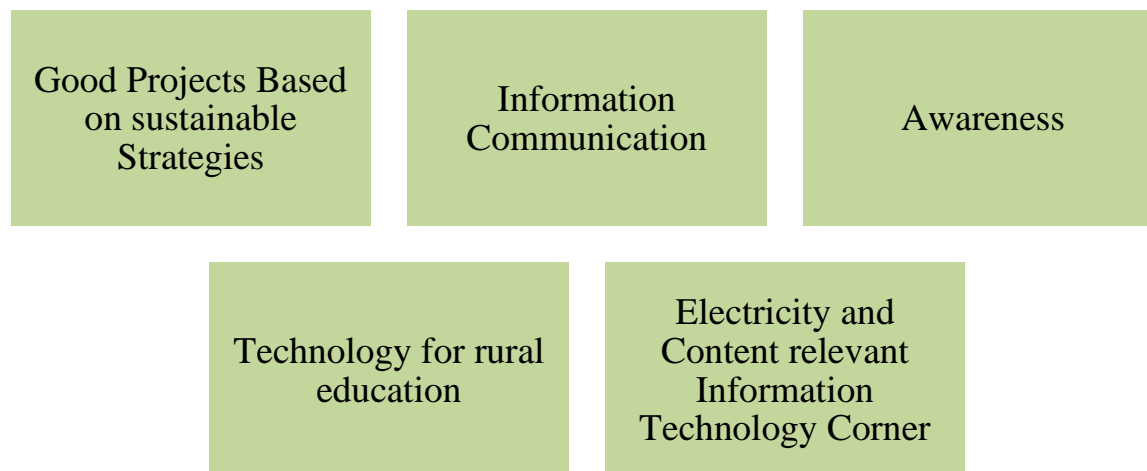
Good Projects Based on sustainable Strategies	Information Communication	Awareness

Technology for rural education	Electricity and Content relevant Information Technology Corner

Figure 4: Success of IT in Rural Areas
(Source: Self-created in MS Word)

3.4 Data Analysis Method

The methods of data analysis utilized in retail marketing have undergone significant transformation thanks to ICT. With the assistance of ICT, organizations can now use progressed examination apparatuses and strategies to investigate enormous volumes of information rapidly and precisely. These devices incorporate AI calculations, information perception programming, and prescient investigation models (Leenas et al, 2021). By utilizing ICT, organizations can acquire important experiences into client conduct, inclinations, and market patterns, empowering them to pursue information driven choices and advance their promoting techniques. ICT has upset information examination in retail promoting, enabling organizations to separate significant experiences from complex informational indexes and remain ahead in a serious market.

4.0 Data Analysis

ICT plays had a critical impact in changing information examination in retail promotion. With the approach of Data and Correspondence Innovation, organizations can now use progressed apparatuses, methods to investigate tremendous measures of information rapidly, and successfully (Yim et al, 2022). This has reformed the manner in which organizations grasp client conduct, inclinations, and market patterns, empowering them to settle on information driven choices and improve their promoting methodologies. In this examination, we will investigate the vital manners by which ICT has changed information examination in retail advertising. First, businesses can now collect and store many data from a variety of sources thanks to ICT. Customarily, information

assortment in retail advertising was restricted to manual techniques, for example, studies, center gatherings, and marketing numbers. Nevertheless, with ICT, organizations can now gather information from numerous computerized channels, including sites, virtual entertainment stages, **versatile applications, and online exchanges. This takes into consideration a more complete and** exact portrayal of client conduct and inclinations. In addition, ICT works with the robotization of information assortment processes, lessening human mistakes and saving time and assets.

Artificial Intelligence enables marketing strategies in many ways like shopping online in e-commerce websites, to promote products based on "customer behavior and purchasing history", and AI helps in making customers very effective. "The virtual trial rooms have allowed the customer to have an immersive experience without stepping out of their homes keeping the customer happy and satisfied" (Burger et al. 2020). "The use of AI has improved retailers providing speedy and personalized attention to their customers which replicates deeper brand engagement, enabling improved customer loyalty". Furthermore, ICT has changed how information is coordinated and put away. Businesses used to store their data in physical ways like filing cabinets and paper documents. However, databases and cloud-based platforms now allow for the electronic storage of data thanks to ICT. This guarantees simple availability as well as empowers organizations to productively store and oversee immense measures of information.

Furthermore, ICT gives progressed information to the executive's frameworks that permit organizations to order, sort, and channel information in light of different boundaries, making it more straightforward to dissect and remove significant bits of knowledge. Thirdly, ICT has presented progressed investigation devices and methods that have changed the information examination process. Predictive analytics models, data mining methods, and machine learning algorithms can now be used by businesses to find patterns, trends, and correlations in their data.

These devices can handle enormous datasets continuously, furnishing organizations with significant bits of knowledge to pursue informed choices. For instance, prescient investigation can assist organizations with gauging client interest, improve valuing methodologies, and customize promoting efforts in view of individual client inclinations. In addition, interactive dashboards and tools for data visualization have made data visualization easier thanks to ICT (Callon and CUSTER, 2021). Businesses now have the ability to create interactive and visually appealing visualizations that make it simpler for them to comprehend intricate data patterns rather than analyzing raw data in reports or spreadsheets (Dubois and Sathre, 2020). These perceptions empower organizations to impart experiences successfully and distinguish key patterns and exceptions initially. By introducing information in an outwardly captivating way, organizations can improve dynamic cycles and drive significant results. The integration of disparate data sources is another significant impact of ICT on retail marketing data analysis.

The adoption of information and communications technology (ICT) has fundamentally transformed data analysis in retail marketing. ICT has enabled more extensive data collection from diverse digital sources like websites, social media, and mobile apps. Cloud computing now allows this data to be stored efficiently in large databases and data lakes, ensuring easy access and management. Artificial intelligence and machine learning algorithms help uncover insights from massive, complex datasets that were previously difficult to analyze. Specifically, ICT has facilitated more advanced predictive analytics and data mining techniques to identify trends and patterns in customer behavior. Machine learning models can now rapidly analyze terabytes of unstructured data from emails, chats, social posts etc. to understand preferences and anticipate needs (Melville et al. 2020). These AI systems can continuously improve their accuracy through automatic learning on new data. ICT has also enabled better visualization and presentation of insights through interactive dashboards. Data storytelling is now enhanced using engaging infographics, charts and graphs.

The data analysis of this marketing strategies is very important for the humans in the field marketing as there is not clear understanding of the market value it is due to non-awareness of the situation which is very much important in our life as it is a serious matter in rural areas as they don't get too much of profit compared to the normal people. People should understand and make a necessary change in the mindset, which is better for the future, and people can also learn from the situation that they are facing and some or the other time it will stick in mind to improve themselves in a better way and it can also be better for the future of marketing strategy.

The analysis reminds me of the situation that in India social media, email marketing and e-commerce websites have developed and increased a lot and it will be helpful in the long run. This can be achieved by regularly active on social media and with the proper advertisement of the product they want to sell with the genuine offer this creates an instinct in a mind to influence other people also to buy a product as it provides a good quality. Social Media has enhanced the marketing size very well and social media handles only provide a better source of income.

On the other hand, Email Marketing has also increased well in the marketing strategies by sending an email on person login from any of the e-commerce website they send the offer details usually on the mails to advertise and hence from there people get influenced and buy a product and increase the market size of the individuals (Esty, 2019). This all can be achieved by the relationship with customers well by providing a good quality product, proper return, fast delivery. This all helps in relationship bonds with the customers and thus helpful in the overall strategy of the market, which is, very much necessary for the growth of India and this affects the Indian economy and GDP.

ICT facilitates the integration of different data sources like CRM systems, inventory databases, website analytics etc. that can provide a 360-degree view of customers. APIs and ETL tools help connect these disparate sources. Big data analytics examines this aggregated data to discover new cross-channel insights. Overall, the scale and sophistication of data analysis has greatly increased with ICT. Retailers can now implement highly personalized and predictive marketing strategies

based on data-driven customer insights. They can also rapidly adapt campaigns based on real-time market changes. The ability to extract value from data has become a major competitive advantage in retail thanks to these technologies. With improvements in AI and cloud computing, data analysis will become even more precise and accessible, providing retailers unmatched customer intelligence.

The Above Analysis on this topic is done on the secondary analysis; data taken is Kathmandu retail marketing strategies and is truly analyzed with a good understanding, and thorough analysis. So the market strategies that are mentioned are very necessary in this era of the world with technology all around the globe and with the competition increasing day by day, that's why the marketing strategies comes in to play and it has to increased well for the good profit and it can be achieved by the social media marketing, email marketing and with e commerce websites etc. and many more. With the help of this type of strategies in the market, it will help in the big boost of the market and expands the market size.

Figure 5: Kathmandu Online Sales in Years

(Source: https://www.sharesinvalue.com)

Here in the above graph, online sales of Kathmandu is displayed it shows the increment in sale of shopping, every year average of 8% is increased and most online sales has been done in 2020 which is due to retail marketing strategies.

Figure 6: Kathmandu Financial Analysis
(Source: https://th.bing.com)

In the above figure, Financial analysis of Kathmandu is discussed which depicts the gross margin percentage where the overall margin of the country is shown to know about the Kathmandu sales and profit in different countries.
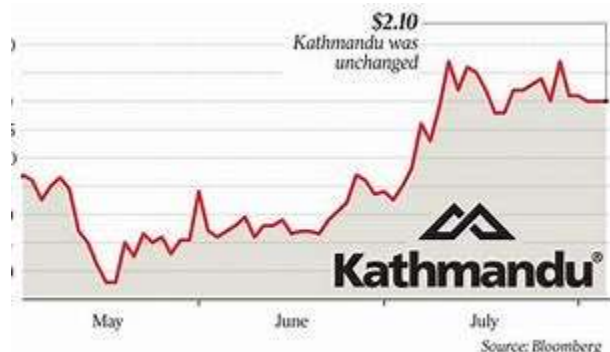

Figure 7: Kathmandu earning and growth outcomes
(Source: https://th.bing.com)
In this above figure, Kathmandu earning and outcomes is shown which helps the individuals to make a note of shopping done in months and total analysis on the amount of product sold and total profit earned.

5.0 Conclusion

ICT has upset information examination in retail promotion. With innovative devices and strategies, organizations can gather, store, and dissect huge volumes of information from different sources. ICT has played a crucial impact in the shift of brick and mortar retail marketing methods to click and mortar. Retailers may now reach a bigger audience, customize marketing campaigns, and improve the overall consumer experience thanks to the development of technology and internet platforms. The result has been an increase in sales and brand loyalty as retailers have been able to adjust to shifting consumer tastes and behaviors. Overall, the use of ICT has transformed how merchants approach marketing, making it more effective, focused, and customer-centered. Overall, ICT has changed how retailers analyze data for retail marketing, allowing them to use the power of data to stay ahead in a competitive market.

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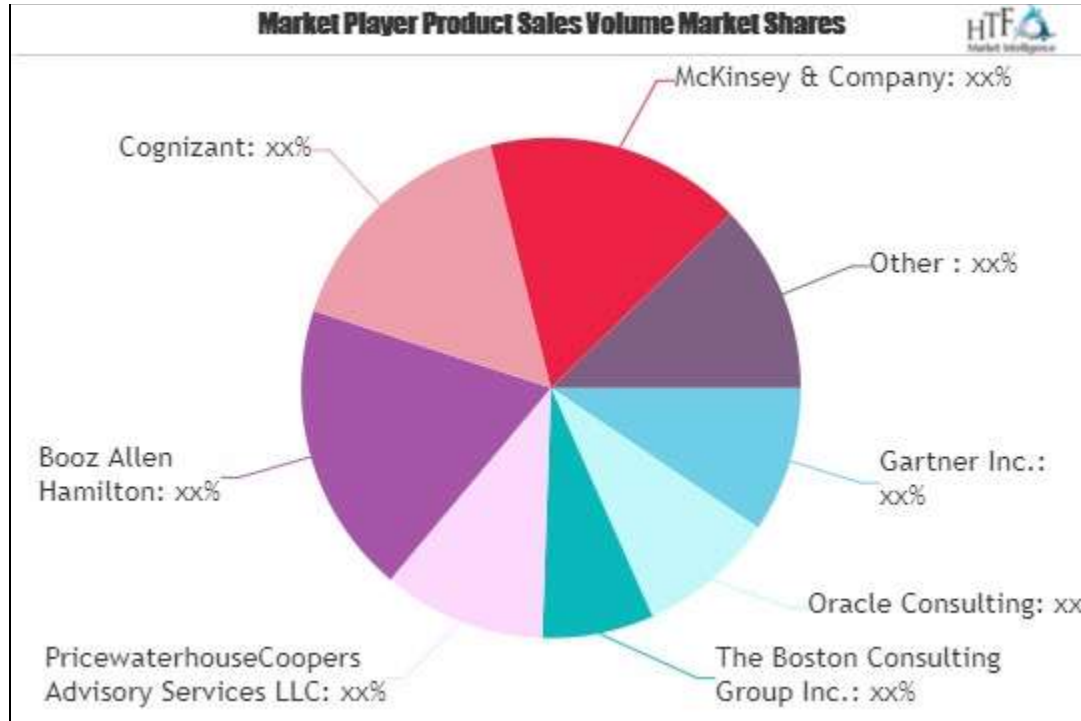
Appendices

Appendix 1: Customer driven technology disrupting the state of retail

(Source: https://th.bing.com)

Appendix 2: ICT Consulting Marketing Analysis and Forecast for 5years

(Source: https://th.bing.com)