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Digital Transformation in Global Retail Industry and Scope for Indian Retailers

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Abstract

The digital revolution has transformed the way companies interact with customers, creating an environment where marketing, information and technology must work together. Retail and consumer goods (R&C) companies are in the midst of a transformation unlike any before in their history. Although there have been times of disruption and competitive fervour in the past, today's R&C environment is marked by huge changes in technology, consumer preferences, sales channels, marketing approaches, barriers to entry, and supply chain and logistics strategies. No company in this sector can afford to ignore these massive shifts.

Indeed, it all fits under the umbrella of Industry 4.0 — and there are several steps that R&C companies must consider when they confront the new landscape. In recent years, retail and consumer goods companies focused primarily on digitizing their customer interface. Now, the digital integration of the end-to-end value chain becomes a strategic priority. This includes digitization of product and service offerings; developing innovative digital business models; digitization and integration of supply chains; and adopting data and analytics as a core capability.

This paper aims to investigate the digital transformations happening in the global retail industry mostly focusing on Industry 4.0 and what are the trends GCC retailers can adopt in their business to improve the productivity.

Keywords: Digital Transformation, Global Retail Industry, Indian Retailers

Introduction

The way we shop and buy has undergone a fundamental revolution, with consumers armed with more knowledge, power and choice than they have ever had. As consumer expectations have changed and demands intensified, the physical retail experience needs to keep up. Consumers are bringing their online expectations – personalized and hassle-free shopping – into the store

The winners of the future will be those that are transforming the customer experience through new technologies, digitizing operations, and putting in place the right people capabilities.

In this report, we provide a framework for retailers to diagnose where they are in terms of becoming a Digital Leader and the strategic priorities for ensuring they do not just match fast-changing consumer

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expectations, but have the agility and vision to stay ahead of what consumers want from the physical store.

Statement of Problem

The retail and marketing ecosystem is being reconfigured and transformed by digital developments. Brands find themselves operating in a quickly evolving environment in which new combinations of technology, experiences, and content are rapidly replacing traditional advertising. These developments are creating a major dilemma for the leading marketers, which control more than US$500 billion in advertising budgets.

Since 2000, 52% of companies in the Fortune 500 have either gone bankrupt, been acquired or ceased to exist. While there are several reasons for companies vanishing from the radar or going bankrupt, technology disruptions are playing a big part in amplifying this development. One critical manifestation of this heightened volatility is the emergence of technology-driven start-ups across multiple sectors.

One of the biggest challenges in responding to disruption is complacency. When disruption strikes, companies find it difficult to keep pace with the fast moving and changing world as they cling on to the old successful business model.

Objective of the Study

The main objective of this study is to ,

- Investigate the digital transformations happening in the global retail industry mostly focusing on Industry 4.0
- Study the trends retailers can adopt in their business to improve the productivity

Research Methodology

Exploratory Research

Since the type and nature of issues is not particularly focused on single retailer it's a generalized report which gives insight for GCC retailers to understand their position in the market. So the study is Exploratory Research. Exploratory research is a research that is carried out when the research problem is not clearly defined. The study determines whether the GCC retailers should adopt Industry 4.0 technologies which is disrupting almost all industry would impact globally. Conclusive study can be made only when the technology is implemented.

Case Study Research

Case studies are one of the important sources of this study. Various case studies related to Digital retail were analysed to infer the conclusion

Case study research, through reports of past studies, allows the exploration and understanding of complex issues. It can be considered a robust research method particularly when a holistic, in-depth investigation is required. Recognized as a tool in many social science studies, the role of case study method in research becomes more prominent when issues with regard to education sociology and community based problems, such as poverty, unemployment, drug addiction, illiteracy, etc. were raised.

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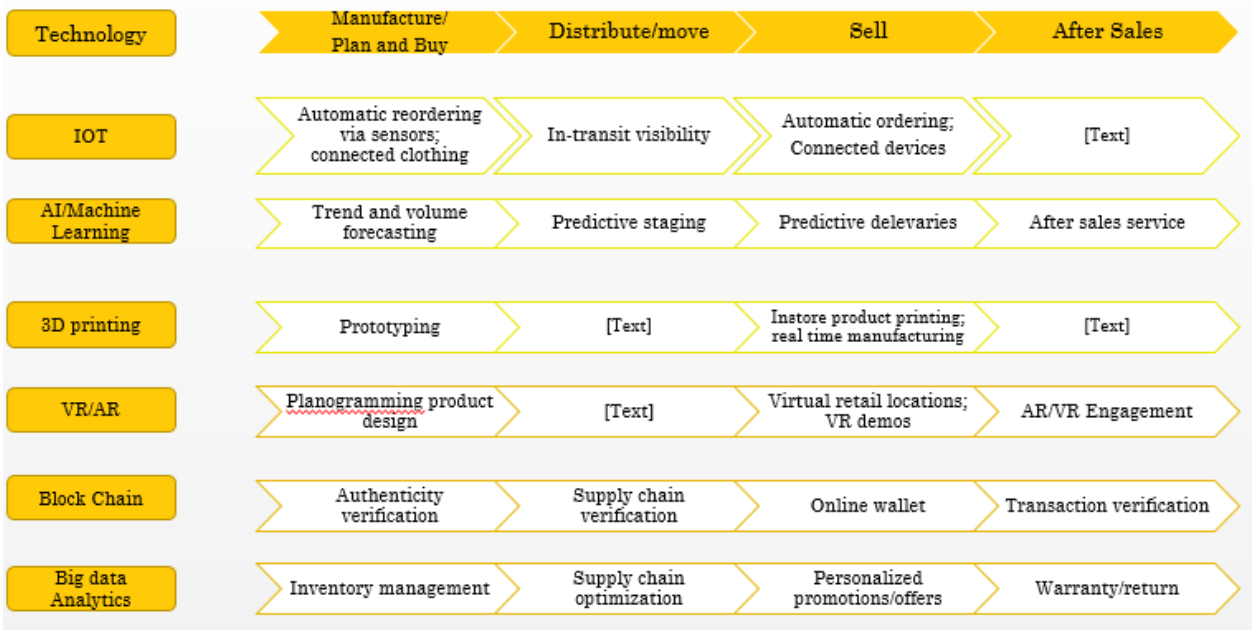
Data collection method

Secondary Data – The data used for the research is secondary and the various sources for the research data was from,

- Research papers published by leading consultancy firms.
- Whitepapers published by leading technology providers and management consultants.
- Interviews conducted by leading magazines and journals with leading supply retail companies and CPR Industry.
- News published by Regional and International players.
- Magazines and Journals.
- Internet, where wide knowledge about different areas is easily available.

Digital Retail Value Chain

- Six new technologies are expected to disrupt the retail and CPG industries, offering unprecedented opportunities. They will be adopted at different rates, but each will fundamentally change some aspect of the end-to-end value chain and redefine the core operations of the retail and CPG industries.
- The six technologies are:
- 1. Internet of Things (IoT)
- 2. Artificial intelligence (AI)/ machine learning
- 3. Robotics
- 4. 3D printing
- 5. Augmented reality (AR)/ virtual reality (VR)
- 6. Block chain



Source: Shaping the Future of Retail for Consumer Industries | Accenture

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Virtual Reality and Augmented reality

Ecommerce is absolutely changing the "face" of retail – and not just because consumers are covering their eyes with VR goggles. The concept of a completely personalized, individually curated consumer experience showcasing products you desire, in an environment you relate to, without leaving your house is enough to whet the shopping appetite of even the most frugal consumer.

And retailers are keen to leverage the benefits of VR, with the virtual reality / augmented reality industry predicted to be worth $150 billion by 2020. Initial applications, such as the "World's First VR Department Store" launched by Australian brand Myer in partnership with eBay have been well-received, with the cardboard "Shoptical" VR viewer providing customers with a personalised experience of relevant products curated through predictive analytics based on personal preferences and purchase history.

The 2015 Reinventing Retail report cited powerful initial interest from consumers in vcommerce, with 35% stating they would shop more online if they could try the product virtually and 63% expecting VR to impact their shopping in the future.

Virtual Reality – A virtual reality is an accurate simulation of a real life situation or world. It enables users to experience a reality that they might not otherwise be able to experience, ºrst hand. For example, very few of us will enjoy the opportunity to visit the International Space Station, but we would be able to virtually visit it and explore it as we wish using Virtual Reality (VR).

Augmented Reality – Augmented Reality (AR) involves the addition of one more layers of artiºcial enhancements on top of an existing reality. The recently released Pokemon Go, for example, allows gamers to catch Pokemon on their mobile screen while ending them in the real environment. It utilises the camera on a mobile phone to display a genuine reality, and then enhances or augments this by layering the Pokemon and Pokeball on top of that reality.

Case Implementation

- Lowe's is beginning to test VR for customers who would like to see what a potential bathroom remodel can look like, all before making a single purchase.
- Ikea launches augmented reality app lets you preview digital furniture in physical house.

Artificial Intelligence

In the near future, artificial intelligence (AI) would be in major demand by the consumers to make interactions as seamless as possible. Many of us as an end user are unaware of the fact that Google uses AI to improve their search. It provides us with the correct results most of the times.

Behind the scenes of any AI-powered systems, there is a long and complex computational process involved with the trained data set for the algorithm to perform so that the user gets an overwhelming experience. This experience is so fast and seamless that the user thinks everything is happening magically.

AI for Retailers

AI arms retailers with sharper forecasting tools to make smarter business decisions. Algorithms increase visibility into ROI implications, translating to results, such as lower costs and higher sales.

Product Inventory

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Controlling adequate product availability is a challenge as it is affected by everything from the economy, weather and future events. Inaccurate management of inventory is a high risk; too much inventory is costly while out-of-stock merchandise leads to lost sales and customer frustration. IBM's Watson Commerce Insights and Order Optimizer apps reduce the uncertainty of maintaining stock levels by monitoring supply chain , market and consumer demand variables.

Customer Service

Facebook saves retailers customer service operating costs by introducing chatbots through its Facebook Messenger platform. AI takes the traditional customer service representative out of the equation to answer questions by responding to text, images and links. Facebook Messenger escalates the chat to a human for more complex issues when necessary. It is important for live customer service to be available at each step of the customer journey, and Facebook Messenger solves that need. According to FurstPerson's research, 79% of people prefer live chat over other customer service channels, and 63% say they are more likely to visit a website again if it has live chat. Companies saving human labor on repetitive tasks is a prime example of how retail will continue to evolve. With the SMARTASSISTANT Digital Advice Platform, you can transform digital advisors into digital advice chatbots to assist mobile shoppers with advice on products to purchase.

Hiring

While there is a near ominous buzz about workforce displacement across many industries, AI helps retailers recruit the right candidates by analyzing historical employee performance and attributes to decrease attrition and hiring costs. Companies can extend their HR department even further: Mya, a virtual assistant that "engages with applicants, poses contextual questions based on job requirements, and provides personalized updates, feedback, and next-step suggestions" using natural language processing technology (Forbes).

Case Implementation

- **Amazon's Alexa** voice assistant-powered Echo speaker had already introduced a similar feature, via which owners can place orders with voice commands.

- One advantage for the Amazon Echo is the vast inventory of products available with Amazon across the globe.

- **Pizza Hut** is the latest high-profile brand to enlist a "chatbot" to launch a social ordering platform that will allow the restaurants customers to place orders for pizza and other products using their Twitter accounts or Facebook Messenger.

3D Printing

- Additive manufacturing, better known in the market as 3D printing (3DP), has been evolving over the past 30 years. There is growing evidence that the advancements in technology and materials have finally brought it beyond the hype stage. Thirty-six percent of companies are already applying or intend to apply 3DP, according to a recent EY global survey of 900 companies.
- The consumer products and retail (CPR) sector is represented by large multinational companies, which own some of the world's best-known brands, operate extensive manufacturing networks and manage complex global supply chains/routes-to-market. The balance of the sector has been disrupted by three fundamental shifts:

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1. Consumers are changing.

The rise of digital has changed the game from B2C to C2B. Demographic changes are shifting the control further toward consumers. In CPR as in health, this trend appears to have reached a tipping point and consumers are demanding LATTE (local, authentic, traceable, transparent and ethical) products.

2. Growth is challenging.

Political, macroeconomic and regulatory volatility in emerging markets coupled with fragile mature markets is increasing complexity and ambiguity. New players are taking share, current product portfolios and supply chains are found wanting, and rules of marketing are being redefined by analytics.

Costs are harder to control.

External cost pressures related to commodities, currency and talent are growing. Internal cost structures are under stress due to an imbalance in mature and emerging market production capacities, the impact of Omni channel on supply chain and the impact of digital on SG&A.

Case Implementation

- **Nike** is pushing 3DP further through a new design and manufacturing center in partnership with DreamWorks Animation. It could be capable of nearly instantaneous digital print applications, photo-real 3D visualizations and ultra-rapid prototyping.
- **Unilever** leverages 3DP injection moulds for its household care and laundry goods divisions, slashing lead time for prototype parts by up to 40%. It 3D prints injection mould tools to create prototype parts in final material, for full functional and consumer testing.

Internet of Things

Internet of things technology is propelling innovation in retail stores that will
revolutionize in-store shopping experiences. Unlike any other sector, retail has direct contact with one of the largest populations of potential consumers that fully embrace
technology and innovation. Retailers need to stay current with the latest technologies to earn the loyalty of the next-generation consumer and capitalize on emerging business opportunities.
Gartner Inc. forecasts that 6.4 billion connected things will be in use in 2016, up 30 percent from 2015, and will reach 20.8 billion by 2020 Gartner estimates that IoT will support total services spending of $69.5 billion in 2015 and $263 billion by 2020.With the number of IoT installed units expected to touch 20.8 billion in 2020, retailers cannot afford to ignore the impact IoT will have on their business The Interaction between Internet of things and retail industry gives huge efficiencies to be gained for both consumer and retailer. When devices can collect, data on present and use real-time information in meaningful, actionable ways. It helps retailers grow more nimble because the information and insights they need are readily available.

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Opportunities offered by IoT in few critical areas retail



Case Implementation

- Walmart was an early adopter of IoT for inventory management to optimize its warehouse and supply chain operations.
- General Electric is the best example of using IoT for predictive maintenance in its jet engines, turbines, and wind farms. To reduce unnecessary periodic trips as part of scheduled maintenance.

Block Chain

Consumer trust is hard earned and easily lost. In an era where more and more transactions are happening in the Internet ether, finding a way to further legitimize that trust is a godsend. Block chain offers promise in this area. A shared ledger where all financial transactions are recorded—eliminating the errors that can occur when each party participating in a transaction maintains its own data set for that transaction—block chain has a growing following even in its nascency.

Transparency

Transparency is of increasing importance to consumers. Provenance is a platform that helps brands provide that transparency by tracing the origins and histories of products. Consumers could trace the seafood they eat from boat to plate. Or, verify that the wool sweater they just bought came from sheep that are humanely treated. Block chain underlies this transparency, allowing all parties—supplier, manufacturer, retailer and end consumer—to trace a product's journey.

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Warranties

A growing number of consumer-focused companies are already using Warranteer, a service that moves product warranties from paper onto the cloud via block chain, keeping them up-to-date and easily transferable. Consumers are able to maintain a virtual warranty wallet, saving retailers and manufacturers administrative work

Reducing counterfeit goods

Counterfeit goods have plagued manufacturers and retailers for years. Block Verify is a block chain-based anti-counterfeiting solution for pharmaceuticals, luxury items, diamonds, and electronics. Goods can be certified with block chain's digital ledger record, which mean that stolen merchandise can also be more easily recorded.

Shipping

Wave, still in testing, has targeted the global supply chain, hoping to modernize import Bills of Lading with blockchain. The company has created a peer-to-peer and completely decentralized network that connects all parties of the international trading supply chain. Using decentralized technologies, all communication between these parties will be direct, eliminating the need for them to pass through a specific central entity. Connecting all members of a supply chain to the decentralized block chain allows for a direct exchange of documents between them, solving one of the shipping industry's largest problems.

Faster transactions

interbank transactions can potentially take days for clearing and final settlement, especially outside of working hours. Block chain transactions can reduce transaction times to minutes and are processed 24/7.

Case Implementation

- "Wal-Mart is using block chain technology co-developed by IBM it opened the Walmart Food Safety Collaboration Center in Beijing"
- Wal-Mart will be able to obtain crucial data from a single receipt, including suppliers, details on how and where food was grown and who inspected it. The database extends information from the pallet to the individual package.

Result of the Analysis

Enhancing instore experience in traditional Brick and Motor Stores

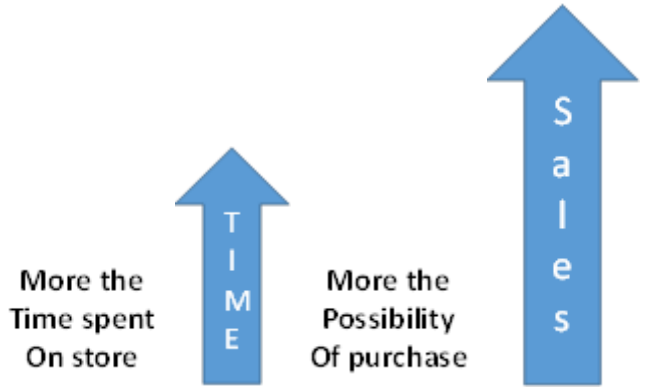
According to Nielsen Global E-commerce and the New Retail Survey on the majority of global respondents (61%) reported that going to the grocery store is an enjoyable and engaging experience. A similar percentage (57%) thinks grocery shopping in a retail store is a fun day out for the family

Beyond focusing on digital to improve customer experience, retailers are determined to improve operational efficiency and optimise costs. In a world of cloud computing and artificial intelligence, an omni-channel strategy not only improves customer service, but also helps retailers realise opportunities, identify new customer segments and support business growth. For retailers seeking to unlock innovation, inspiration can often be found by looking at demographics.

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Retailers should leverage their physical stores for branding efforts

Retailers understand that brick-and-mortar strategies need to evolve to protect and grow the number of customers who come into their stores and to compete with online retailers. As new-age consumers take advantage of digital transformation, retailers are facing increasing disruption.



Sales at supermarkets and hypermarkets in the GCC region are expected to reach US$ 59.3 billion in 2018, exhibiting a CAGR of 9.2% between 2013 and 2018"

Retailers should strategize to maximize the in-store experience by leveraging their physical stores as places of transactions, branding tools and even as fulfilment centers.

Smart devices to enhance instore experience

In today's Omni channel landscape, retailers need to improve the in-store experience for increasingly tech-savvy customers so they will have real, tangible reasons to visit brick-and-mortar stores.

Smart Mirror

Smart mirror enable customers to easily browse and quickly mix and match a wide range of garments—without having to walk the shop floor. A virtual mirror pioneered years ago by IBM, for example, allowed customers to enter a change room and use a touchscreen mirror to view themselves under a superimposed image of the clothing they wanted to try on, rather than having to try on actual pieces of apparel.

"According to a survey by CISCO 65% of GCC consumer shows interest in Purchasing in physical stores and are demanding latest technology in retail stores"

iBeacons

Retailers can use iBeacon technology to guide customers, who opt-in, to the products they are looking for through their smartphones; this can particularly appeal to customers who prefer the self-guided shopping experience or those who are simply browsing and just need that extra nudge to make a purchase .iBeacon can also be used to announce flash sales and discounts, as well as encourage impulse buys.

Bluetooth beacons are a great example. If Bluetooth beacons are unfamiliar, they soon won't be, as this new technology is about to transform the retail experience. BLE beacons ('Bluetooth Low Energy) are small electronic devices that periodically broadcast a radio signal using Bluetooth signals similar to those

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used to pair your phone with a headset. Then, people with smartphones can interact with a beacon if the device is using a store's app or even via the phone's notifications feature.
Beacons enable retailers to leverage contextual and proximity awareness to surprise and delight customers with creative engagement based on their location as they travel throughout the store.

Smart shelf technologies

These technologies give retailers a real-time view into what inventory is actually available in a given store, and they also update prices dynamically via small video displays on the shelf so the customer isn't unpleasantly surprised during checkout. In the near future, this technology may also see shelved products "light up" as a shopper passes by, or direct a shopper via an app to the area where a specific product can be found.

- Intel has unveiled Simbe Robotics Tally — the world's first robotic autonomous shelf auditing and analytics solution for retail.
- Tally works in concert with retail associates by arming them with information to ensure the store's products are always stocked, in the right place and displaying the correct price tag.
- The robot operates safely during normal store hours alongside shoppers and employees and does not require any infrastructure changes to the store.

"According to business insider Business intelligence predictions expect 2.8 million enterprise robots to ship in the next 5 years"

Social Shopping as Marketing Channel

According to Mckinsey "The Middle East and North Africa (MENA) region is ranked second in the world by number of daily YouTube videos views at more than 310 million. And the MENA region is the fastest-growing consumer of videos on Facebook, consumption per Head of Facebook embedded videos is twice the global average.

- Over the last several years, brands have used social media to market their products, talk to customers, and even make merchandising decisions. Social channels would exert significant influence over consumer behavior and preference.
- Facebook's daily video views jumped from 1 billion to 8 billion in this past year, with 500 million people watching videos every day – even as text posts decline
- Nielsen, in a 2015 survey, found that 92% of consumers believe recommendations from family and friends and EWOM.

Findings and Suggestions

The various disruptive trends in retail industry and their impact on the industry were found. The value chain of traditional retail industry was studied and the new value chain of retail industry with Industry 4.0 technologies was drawn and preferred Marketing channels, marketing strategies and business models were suggested.

Limitations

- As it is a futuristic study, no empirical data was available to prove the impact of Industry 4.0 in Retail Industry. Hence analysis was also based on expert views and predictions.
- Since the study is about the impact of disruptive trends on Retail industry as a whole, the paper might not provide a solution for a particular problem in a Retail industry.

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