A Study on Impact of Emerging technologies on E-Commerce and its growth in India

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Abstract

With an online population of 500 million in 2017, India has one of the fastest growing internet populations in the world. A compound annual growth rate (CAGR) of 13 per cent will take the number of online users to 720 million, close to where China is currently. The CAGR of the Indian online user growth is nearly four times that of global rate. The Indian e-commerce has seen a steady growth over the years from 2014 and is currently pegged at $53 billion. With a growth of 25 per cent, the Indian e-commerce industry is expected to cross the $100 billion mark by 2020. E-commerce has become one of the most popular methods of making money online and an attractive opportunity for investors. For those interested in buying an e-commerce business, this article serves to provide an introduction to e-commerce, covering the reasons for its popularity, the main distribution models and a comparison of the major e-commerce platforms available. This paper study is about the technologies booming in E-Commerce and their impact on E-Business.

Keywords: E-Commerce, Retailers, Online shopping, Technologies

Review of Literature

Commerce and Industry Minister, Mrs. Nirmala Sitharaman had said that the new guidelines for E-commerce will be able to provide a level playing field to both online and offline stores by bringing in greater clarity. Subho Roy, The President of Internet & Mobile Association of India (IAMAI) welcomed the DIPP clarification on the marketplace model and said that the industry has been seeking this clarification and allowing 100 % FDI under automatic route in online marketplace.

Introduction

‘E-commerce’ and ‘online shopping’ are often used interchangeably but at its core e-commerce is much broader than this – it embodies a concept for doing business online, incorporating a multitude of different services e.g. making online payments, booking flights etc.
Growth drivers of E-Commerce in India

Growing demand

India is the fastest growing market for the ecommerce sector. Being driven by a young demographic profile, increasing internet penetration and relative better economic performance, India’s E-commerce revenue is expected to jump from US $ 39 billion in 2017 to US $ 120 billion in 2020, growing at an annual rate of 51 percent, the highest in the world.

Attractive opportunities

A lot of India’s blue-chip PE firms had previously avoided investing in E-commerce but are now looking for opportunities in the sector. India’s start-up ecosystem is growing supported by favourable policies. Government Initiatives like Start up India and Digital India, as well as rising internet penetration driven by market players like Reliance Jio.

Increasing Investment

The recent rise in digital literacy has led to an influx of investment in E-Commerce firms, levelling the market for new players to set up their base, while churn out innovative patterns to disrupt old functioning. E-Commerce industry in India witnessed 21 private equity and venture capital deals worth US$ 2.1 billion in 2017 and 40 deals worth US$ 1,129 million in the first half of 2018.

Government initiatives

In India 100 per cent FDI is permitted in B2B E-commerce. As per new guidelines on FDI in E-Commerce, 100 per cent FDI under automatic route is permitted in marketplace model of E-commerce.

<table>
<thead>
<tr>
<th>Year</th>
<th>Internet users(mn)</th>
</tr>
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<tbody>
<tr>
<td>2007</td>
<td>47</td>
</tr>
<tr>
<td>2008</td>
<td>52</td>
</tr>
<tr>
<td>2009</td>
<td>62</td>
</tr>
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<td>2010</td>
<td>92</td>
</tr>
<tr>
<td>2011</td>
<td>126</td>
</tr>
<tr>
<td>2012</td>
<td>159</td>
</tr>
<tr>
<td>2013</td>
<td>193</td>
</tr>
</tbody>
</table>
Internet Penetration in India

<table>
<thead>
<tr>
<th>Year</th>
<th>Market size (billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>$21</td>
</tr>
<tr>
<td>2015</td>
<td>$35</td>
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<tr>
<td>2016</td>
<td>$47</td>
</tr>
<tr>
<td>2017</td>
<td>$53</td>
</tr>
<tr>
<td>2018 *</td>
<td>$87</td>
</tr>
<tr>
<td>2020</td>
<td>$107</td>
</tr>
</tbody>
</table>

F-Forecast

- The Indian e-commerce industry has been on an upward growth trajectory and is expected to surpass the US to become the second largest e-commerce market in the world by 2034. The e-commerce market is expected to reach US$ 64 billion by 2020 and US$ 200 billion by 2026 from US$ 38.5 billion as of 2017. With growing internet penetration, internet users in India are expected to increase from 481 million as of December 2017 to 829 million by 2021.

SECTOR-WISE SPLIT OF THE MARKET

<table>
<thead>
<tr>
<th>Sectors</th>
<th>Market size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronics</td>
<td>48%</td>
</tr>
<tr>
<td>Apparels</td>
<td>29%</td>
</tr>
<tr>
<td>Home and Furnishing</td>
<td>9%</td>
</tr>
<tr>
<td>Baby Beauty Personal care</td>
<td>8%</td>
</tr>
<tr>
<td>Books</td>
<td>3%</td>
</tr>
<tr>
<td>Others</td>
<td>3%</td>
</tr>
</tbody>
</table>

![Graph showing internet penetration in India from 2007 to 2021F.](image)
Reasons for Buying Online

1. **Lower Prices**: Managing an online storefront is far cheaper than an offline, brick and mortar store. Websites, consumers have more transparency with regard to prices and are able to shop around, typically purchasing from online outlets instead.

2. **Accessibility and Convenience**: Unlike many offline stores, consumers can access e-commerce websites 24 hours a day.

3. **Wider Choice**: For the past twenty years, the growth of online shopping has to a large extent been based around increased choice.

Reasons for Selling online

1. **Higher Margins**: Setup costs and ongoing operational costs such as rent, heating, electricity, warehousing (if operating a drop-ship model) and inventory management are often significantly reduced or otherwise eliminated.

2. **Scalability**: With a brick and mortar business, the owner is often limited by the amount of people who can physically be in the store at any one time.

3. **Consumer Insight / Technology**: E-commerce businesses typically collate a tremendous amount of customer data.

Overview of E-Commerce Fulfilment Models

1. **Dropshipping Model**

   In a dropshipping model, the e-commerce business takes no physical possession of the items on sale. The store owner does not keep products in stock and there is no inventory held. Instead, orders are sent directly to the manufacturer, who is responsible for storing the items and shipping them to the customer. Traditional Order Fulfilment Model Buying wholesale is arguably closest to the traditional offline retail model. In effect, the business owner (retailer) acquires stock directly from a wholesaler at a discounted rate, applies a margin onto each product and decides to deliver to consumers directly.

Emerging Technologies in E-commerce

1. **Ubiquitous e-commerce and 24/7 Sales**

   Mobile devices have changed the way we live in radical ways, contributing to every aspect of our daily existence, becoming an integral tool for day-to-day living. According to trade analysts, 90% of all people
keep their mobile phone within reach at all times. And as mobile penetration increases, along with better quality services, this trend is assured to grow.

2. Digital supply chain
Ensuring on-time delivery is a key differentiating factor for companies in the e-commerce space. As a result, the successful management of extreme market and spiked-demand has become the new focus area, optimizing the supply chain management process for these companies, and playing a critical role in ensuring efficient and faster delivery models. Technological innovations are also enabling other critical areas of supply chain, such as:

- Port management (autonomous freight shuttle debuts),
- Inventory management (hack-proof RFID chip),
- Brand protection (invisible digital markers to help fight counterfeit products),
- Warehouse management (robot technology for collaborative automated order picking),
- Infrastructure (deploying drones to inspect bridges), and
- Delivery (using drones to deliver shipments).

3. AI-powered personalization
In today’s hyper-commoditized market, where differentiating a business from the likes of giants like Amazon, Alibaba, and Flipkart, is becoming increasingly difficult; e-commerce vendors are focusing on providing a superior customer experience.

4. Demand-driven forecasting
Anticipatory shipping is the closest e-commerce can come towards clairvoyance. Amazon patented a “method and system for anticipatory shipping” in 2013. This means that, rather than just relying on inviting or reminding customers to repeat their purchases, Amazon is experimenting with a process that can predict a customer’s shopping list and deliver the products to their nearest fulfilment center – even before the order is placed.

5. New payment services
Convenience is an essential value proposition associated with e-commerce. Faster, efficient and secure payment options have played a big role in driving the unprecedented growth of the e-commerce market in recent years.

The top companies in India when it comes to e-commerce.

Marketplaces (Fashion + Grocery + everything)

1. Amazon India (Online Shopping: Shop Online for Mobiles, Books, Watches, Shoes and More)
2. Flipkart (Online shopping Site: Shop online for mobiles, electronics, fashion & more @ Flipkart)
3. Snapdeal (Snapdeal.com)
4. ShopClues (Online Shopping Site India: Buy Mobiles, Electronics, Fashion, Clothing, Shoes, Laptops, Tablets at Best Prices - ShopClues.com)
5. PayTM (Online recharge | mobile recharge for prepaid & pay postpaid bill@Paytm.com)

**Travelling**

1. MakeMyTrip (MakeMyTrip, India's No 1 Travel Site)
2. Yatra (Flight, Cheap Air Tickets, Hotels, Holiday, Trains Package Booking - Yatra.com)
3. GoIbibo (Online flight booking, Hotels, Bus & Holiday Packages at Goibibo)
4. Hotels (http://www.hotels.in)
5. Trivago (http://trivago.com)
6. TripAdvisor "Not Indian but Helpful" (TripAdvisor: Read Reviews, Compare Prices & Book)

**Matrimonial Sites**

1. Shaadi (http://www.shaadi.com)
2. BharatMatrimony (Matrimony, India Matrimonials, Matrimonial Sites, Marriage, Brides)
3. Jeevansaathi (Matrimony, Marriage, Matrimonial Sites, Match Making)

**Classified Sites**

1. OLX 'Mostly Indian' (Free classifieds in India, Classified ads in India, Online Classified Advertising)
2. Quikr (Free Classifieds India, Post & Search Ads Online|Quikr)

![E com Retailers (in million US dollars)](chart.png)
Conclusion

Overall, e-commerce has indeed been growing in popularity – especially under certain demographics such as millennials. For the current generation of young people or “digital natives” as they are called, technology is a normal part of their daily life. Similarly, technology is also paving the way for e-commerce to become a persistent presence in the lives of the user in an unbelievable fashion. This is an inflection point where the millennial generation and its preference for ubiquitous technology is assuredly going to allow e-commerce to reach the masses unlike ever before.

According to recent estimates by e-Marketer, worldwide retail sales are expected to reach $4 trillion by 2020. Without technology, it would be totally naïve to even expect that e-commerce could achieve such an impressive market size. As technology continues to evolve, becoming more sophisticated and advanced, we expect the e-commerce industry to reach unmatched levels of growth by 2020

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