SOUTH ASIA SCAN

E-COMMERCE IN INDIA: OPPORTUNITIES AND CHALLENGES

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South Asia Scan

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Executive Summary

From a negligible base in 1990, e-commerce in India grew to nearly US$40 billion (S$55 billion) in 2017. At the current growth rate, India is poised to become the second largest e-commerce market in the world after China by 2030. Notwithstanding this rapid expansion, the e-commerce sector in India is still small relative to its potential in a country with a population of 1.3 billion, a young demographic profile and rapidly rising incomes.

With appropriate regulation and a policy framework that encourages economic growth, e-commerce stands to deliver benefits for both consumers and producers. Consumers enjoy a wider range of choices, competitive prices and the ease of shopping online. Producers can reach a larger market beyond their traditional catchment. This expanded reach can be a significant advantage for small and medium enterprises which can leverage on economies of scale and digital, marketing and advertising resources offered by e-commerce platforms. Most importantly, e-commerce can potentially create jobs along the entire supply chain.

Such a win-win outcome is, however, not inevitable. The future of e-commerce is fraught with multiple challenges, including poor infrastructure, inadequate skills, low efficiency and doubtful or unethical business practices. Businesses will have to adapt their business models to the economics and business practices of a country that is slowly evolving towards standardisation of quality and services. Governments are expected to design and enforce policies to regulate the growth of e-commerce along healthy and sustainable lines, develop physical and digital infrastructure, and the skills base, and bridge the digital divide.

E-commerce will also generate winners and losers. Governments will have to implement policies to ensure that those whose livelihoods have been compromised by the rise of e-commerce are able to find pathways to meaningful work.

Despite these challenges, e-commerce in India is poised to sustain high rates of growth for the foreseeable future. What accounts for the phenomenal growth of e-commerce in India? What are the challenges and opportunities? How should businesses adapt? And how should governments formulate policy to meet these new challenges? This publication is an attempt to address these questions.

Introduction

Over the past two decades, the channels through which transactions take place among enterprises, and between enterprises and consumers, as well as between governments and business have been undergoing considerable change. Till late into the last millennium, a business would open a storefront, enter into contracts with suppliers along the supply chain following a series of meetings, place advertisements in the print, audio and audio-visual media, while consumers would go to a mall or a store to purchase everything from groceries to appliances. For international contracts, the business would seek out individual suppliers, chalking up high travel and search costs. Today, a steadily growing volume of such transactions are carried out online.

The purchase of a best-seller or the latest accessories from a cosmetics producer; booking a vacation in Goa, Rajasthan or the Caribbean with valet services; a furniture manufacturer in Chennai sourcing upholstery and assembly services from a company in Ahmedabad; a toy retailer in Hyderabad ordering patchwork dolls from Gujarat are examples of the mushrooming e-commerce transactions taking place through online platforms. An online platform is a virtual marketplace that brings together buyers and sellers. Examples include Amazon, Alibaba, Flipkart, Snapdeal, Lazada, Grab, Uber, Ola, Oyo rooms and Airbnb. E-commerce platforms enable small businesses and sole entrepreneurs to sell goods across the country and, increasingly, across national borders.

This publication focusses on the fast-growing e-tail[1] segment of the business-to-consumer (B2C) sector in India. With a 2.9 per cent share of total retail, it is the visible tip of the e-commerce iceberg that has repercussions across several important sectors in the Indian economy, as well as the potential to influence employment and efficiency.

Size of the E-commerce Sector

From a negligible base in 1990, e-commerce today accounts for a growing volume of transactions in the global economy. “E-commerce is the sale or purchase of goods or services conducted over computer networks by methods specifically designed for receiving or placing of orders. Even though goods or services are ordered electronically, the payment and the ultimate delivery of the goods or services do not have to be conducted

1. E-tail is the consumer-facing segment of B2C e-commerce. The words ‘e-tail’ and ‘e-commerce’ are used interchangeably in this paper.

online. An e-commerce transaction can be between enterprises, households, individuals, governments, and other public or private organisations. Included in these electronic transactions are orders made over the web, extranet or electronic data interchange."[2]

Global e-commerce sales in 2015 amounted to US$25.3 trillion (S$34.4 trillion). As much as 90 per cent out of these online sales were in the business-to-business segment, underscoring the importance of the digital economy in global commerce. The remaining 10 per cent were B2C sales. Only 10 per cent of the B2C e-commerce was cross-border, reflecting the increasing international integration of commodity markets through a new channel accessed directly by the final consumer.[3] Table 1 summarises the four main types of transactions that constitute e-commerce.

In India, from a base of US$5.4 billion (S$7.3 billion) in 2011, e-tail sales grew to US$38.5 billion (S$52.4 billion) in 2017.[4] At current growth rates, exceeding 40 per cent per annum, the highest in the world, it is projected to cross US$103 billion (S$140.1 billion) by 2020. If the prevailing growth trajectory is sustained, the e-commerce sector in India may be the second largest e-commerce market in the world by 2034. The growth is led by electronics with 47 per cent of total sales, and apparel accounting for another 31 per cent.[5] While at 2.9 per cent e-tail accounts for a tiny percentage of total retail sales, the potential for growth is vast.

The significance of the e-tail sector extends far beyond overall retail. It has stimulated consumption in smaller cities at rates faster than in the higher income metropolitan areas. A growing number of enterprises from small cities and semi-urban areas are using online portals to sell their merchandise. The parallels with the Chinese experience are notable. In both economies, e-commerce, specifically e-tail, is bringing about a transformation in how people shop, what they shop, where they shop, and how e-commerce can catalyse growth in hitherto neglected geographical areas and marginalised demographic groups. The overall impact of e-commerce is at an incipient stage but the experience thus far

2. World Trade Organisation (WTO), *E-commerce in developing countries: Opportunities and Challenges for Small and Medium Sized Enterprises,* 2013.
3. Ibid. Examples of cross-border B2C are a Singapore resident placing an order on Lazada or Amazon of a good purchased from China or the United States, or any country other than Singapore.
4. Data from United Nations International Development organization *"National Report on E-Commerce Development in India",* Inclusive and Sustainable Industrial Development Working Paper Series WP 15. 2017.
5. India Brand Equity Foundation (IBEF), *"E-commerce",* August 2018.

Table 1: Taxonomy of E-commerce Businesses

	What it is	**Examples**
Business-to-business e-commerce (B2B)	Businesses sell final or intermediate goods or services to other businesses. The transactions are between businesses, for example, a wholesaler and retailer, or a producer and retailer/ wholesaler	Acme, Firerock, Blackbaud, Alibaba, Quill, Amazon Business,
Business-to-consumer e-commerce (B2C)	B2C e-commerce entails businesses selling directly to the public, through online portals using 'shopping cart' software (E-tail)	Amazon, Alibaba, Flipkart, Snapdeal
	B2C e-commerce aggregator: E-commerce firms collects information from competing buyers and seller and matches them through the website	Uber, Didi Chuxing, Grab, Ola, Go-Jek
Business-to-government e-commerce (B2G)	Encompasses use of the internet for public procurement (e-procurement), licensing procedures, and other government related operations with the intent to increase efficiency and transparency.	Local, provincial and national governments, and state agencies floating e-tenders
Consumer-to-consumer e-commerce (C2C)	Online platform based transactions between individuals	eBay, Taobao, OLX

Source: Compiled by the author

and evidence from other countries reveals the transformative potential on some key sectors of the economy.

The growth of e-tail in India raises questions about its role and potential impact on the broader economy. What has driven the expansion of e-commerce? What is the economic raison d'être for e-commerce and what functions does it perform? How will it impact domestic enterprises? Is it likely to complement or replace existing retail? Can policymakers intervene to nudge e-commerce into an instrument of inclusive growth? Is access to e-commerce egalitarian, or conversely, what are the consequences of the digital divide?

Evolution of E-commerce

Retail trade typically evolves from small outlets or 'mom-and-pop stores' to small marts to department stores to large stores and hypermarts culminating in the likes of Walmart, Cosco, Tesco, Metro and Kroger. India's retail sector evolved along a different trajectory. Dominated by millions of small and tiny neighbourhood grocery shops most of which are informal enterprises, these *kirana*[6] stores account for 98 per cent of food sales and 90 per cent of overall retail (Table 2). *Kirana* shops are found in urban as well as rural India, offering convenience, proximity, personalised service, credit, and even home delivery to longstanding customers, and have relatively low infrastructure requirements.

Contrary to expectations, *kirana* stores compete with large supermarkets on prices and service.[7] About 90 per cent of Indian retail is in the informal sector with organised retail, primarily in the form of shopping malls and chain stores, account for the remaining one-tenth of total retail sales. Of course, space and working capital constraints, and the focus on neighbourhood markets and intense local competition from other kirana stores prevent them from increasing inventories or expanding.

In most countries, organised retail expands rapidly with development. Despite a quadrupling of per capita incomes since 1991, organised retail has been slow in gaining a foothold in the Indian market. A protectionist regulatory structure kept out foreign retail. High real estate prices in high-density urban areas, coupled with a fragmented logistics infrastructure and an expensive supply chain, raise the cost of doing business. The challenge is compounded by high interest rates, excessive leverage among existing and potential entrants into organised retail and the difficulties in recruiting trained staff. These factors constrain efficiency and profitability, lowering the attractiveness of large multiproduct stores. However, a few domestic chains have expanded, mainly in India's large cities.

The fragmented retail sector in India offers a fertile ground for the advent of e-commerce. With competitive prices, a business model that entails low

6. *Kirana* stores are small convenience stores found all over India. Estimates suggest there may be 12 million of these in the country. *Kirana* stores stock a wide array of food and food-related merchandise, as well as fast moving consumer goods. They have proven to be remarkably resilient, and today are the only profitable segment of Indian retail.
7. Vivek Kaul, "It is not easy to compete with kirana stores: Rajiv Lal", *DNA India*, 28 July 2010. http://www.dnaindia.com/business/interview-it-is-not-easy-to-compete-with-kirana-stores-rajiv-lal-1416054. Accessed on 21 July 2018; Devina Joshi "Most organised retail cannot handle competition from kiranas: Rajiv Lal", *Business Standard* 30 March 2015. https://www.business-standard.com/article/management/most-organised-retail-cannot-handle-competition-from-kiranas-rajiv-lal-115032900596_1.html.

levels of sunk costs and that can be scaled up rapidly and offering a wide selection of goods that hitherto were not available at a single location or a website, e-commerce immediately broadens the 'shopping experience' in India. It caters to the quest for competitive prices, convenience, choice and the ability to verify product quality via online product reviews.

Although the absolute volume of e-commerce transactions in India is small, the sector has grown rapidly as consumers shift from bricks and mortar retail purchase to shopping online, posing a challenge to traditional retail, not just in India, but also across the world. The trend has been reinforced by the steadily expanding scope of e-commerce, as evident from Amazon broadening its reach into new markets as well as direct retail. The recent purchase of Whole Foods by Amazon or the expansion of other e-tail companies into digital payments and off-line retail, indicates that the contours of e-commerce are fluid and the incumbent's advantages can dissipate rapidly as technology and new alliances across sectors and services constantly shift the boundaries of who sells what, what they sell, to whom and how they sell.

Table 2: Retail Indicators for Selected Countries, 2015

Country	Total Retail Sales per Capita (US$)	Traditional Trade (%)	Modern Trade (%)	Domestic (%)	International (%)
India	273	89	11	98	2
China	2238	78	22	97	3
Brazil	2,388	46	54	87	13
Russia	3,252	52	48	93	7
Germany	7,167	3	97	85	15
Japan	7,398	16	84	96	4
United Kingdom	8,014	3	97	78	22
France	8,056	7	93	86	14
Australia	8,560	8	92	89	11
United States	11,687	6	94	96	4

Source: Knight Frank Global Research

Growth Drivers

Technological Development, Big Data and Developments in Data Analytics

The growth of e-commerce is fuelled by increasing access to the internet, a rapid fall in the cost of data usage and the proliferation of smartphones. In India and China, nearly three-fourths of e-purchases occur over mobile phones. Data analytics or the analysis of 'big data', reflecting a growing volume of data on individual and aggregate consumption decisions tagged with demographic profiles, reveal patterns of behaviour and underlying trends that are increasingly used by business for targeting markets and consumers.

Competitive Prices and Ease of Purchase

Low fixed costs, reversible investment decisions and competitive prices, resulting from multiple producers of similar products listing on the same platform, enable e-tail firms to sell at lower prices than those at traditional brick-and-mortar stores. Economies of scale and scope and bulk purchases of a wide range of goods help to further reduce prices.

The sheer convenience of purchasing groceries through a mobile phone at deep discounts over traditional retail has sustained increasing interest in e-commerce. The deep discounts offered by Amazon, Flipkart and other players in the e-tail sector are part of the strategy to increase the consumer base. The ability to compare prices across producers imparts transparency in transactions; reviews on product quality and vendor's service provide important information on the credibility of sellers. Marketing initiatives, such as the Big Billion day at Flipkart, or Amazon Prime day aim to attract and retain customers. The Singles Day sale (11 November or 11/11) in China has, over a few years, evolved into the biggest shopping day of the year, soon expected to rival Black Friday, the day after Thanksgiving in the United States.

Demographics

India is a young country with a demographic profile that augurs well for the growth of e-tail and e-commerce in general. Rising incomes, coupled with favourable demographics tilted towards the tech-savvy generation, indicates promising prospects for the growth of e-commerce. The millennials are most active amongst online shoppers, though older cohorts wielding higher purchasing power are an increasingly important demographic target. Outside the main metropolitan areas, sales have grown rapidly in Tier II and Tier III cities.[8]

Improvements and Improvisation in Logistics Infrastructure

Efficient logistics, spanning the entire spectrum of services from the initial order to the final delivery of the product, is integral to the viability and commercial success of e-commerce.

In India, poor infrastructure spanning land, air and water transportation, and shortfalls in the warehouse and cold storage facilities – a legacy of a regulatory structure that effectively treated different states as distinct countries by levying taxes on movements of goods across state boundaries, inhibited investments in logistics networks. With the repeal of local taxes and the introduction of the Goods and Services Tax, India is better placed than ever before to create a unified nation-wide market. Logistics costs in India are amongst the highest in the world (Figure 1). While investments in road construction, coupled with ongoing efforts to upgrade ports, expand warehouse facilities and other complementary investments in the logistics infrastructure, is enhancing connectivity across the Indian economy, public infrastructure remains far below internationally competitive standards.

The potential for investments and growth in logistics has drawn start-ups to fill the infrastructure gaps, for example, to deal with endemic traffic jams and haphazard norms for designating addresses, Delhivery,[9] a logistics start-up based in Delhi's suburbs, draws upon machine learning to map and subdivide India's postcodes. To avoid paralysing traffic jams, delivery companies move goods at night to distribution centres in congested urban areas, to be picked up during the day by thousands of delivery employees riding motorcycles. In Mumbai, Flipkart has entered into an agreement with the city's legendary dabbawallas – lunch delivery men – to drop off consignments when collecting their client's dabbas (lunch pails). Amazon has launched a pioneering pilot programme that will enable customers to collect groceries from their local *kirana* shop.

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8. Tier II cities have a population range of 50,000 to 99,999 and Tier III cities, from 20,000 to 49,999.
9. Delhivery a well-established start-up in the logistics space provides the spectrum of logistics services required for e-commerce; for the platforms as well as suppliers. The company aspires to 'build the operating system for digital comer in India'. The company has over 15,000 employees. See https://www.delhivery.com/.

Private Investment in E-commerce

The remarkable growth in e-commerce over the past decade, and its long-term potential has drawn funds from venture capitalists and private equity funds across the world. The e-tail sector has attracted the largest volume of funds among start-ups receiving US$66 million (S$89.8 million) of funding between January and March 2018 (Table 3). In August 2018, Walmart announced the conclusion of a deal to invest US$16 billion (S$21.8 billion) in Flipkart giving it a 77 per cent stake – by far the largest global investment in e-commerce. Towards the end of August 2018, Reliance Industries was reported to be in early talks with Alibaba to establish a joint e-tail venture in a space dominated by Amazon and Walmart-Flipkart. As a local company, Reliance Retail has an advantage as foreign companies are allowed 100 per cent investment (FDI) only into single brand retail, to set up online marketplaces and not hold inventories.

Table 3: Private Investments in E-commerce (Funding Activities as of February 2018)

Company	Sector	Investor	Funding (US$ million)
Flipkart	E-commerce	SoftBank	2,500
BigBasket	Grocery E-commerce	Alibaba Group Holding Ltd, Sands Capital, International Finance Corp, Abraaj Capital	300
Udaan		Lightspeed Venture Partners US and other	50
Capital Float		Ribbit Capital, SAIF Partners, Sequoia India	45
Bank Bazaar		Experian Plc	30
Droom		Asset Management (Asia) Ltd, Digital Garage Inc	20
1 mg		HBM Healthcare Investments, Maverick Capital Ventures, Sequoia India, Omidyar Network and Kae Capital	15
Gozefo		Sequoia Capital India, Helion Venture Partners and Beenext Pte Ltd	9
Jumbotail		Kalaari Capital, Nexus India Capital Advisors	8.5
Blackbuck		InnoVen Capital	7.7
KartRocket.com		Bertelsmann India Investments, Nirvana Digital India Fund	4.1
The Label Life		Kalpavriksh, Centrum group's maiden private equity (PE) fund	3.1

Source: India Brand Equity Foundation. (Table taken from E-commerce sector report, 2018).

Adapting to Indian Conditions

Network Economics

E-commerce generates significant network economies. Network economies arise in two-sided markets with two distinct user groups that create value through trade with each other and, in the process, provide network benefits. Examples include credit card companies (cardholders and merchants), employment platforms or exchanges (job-seekers and recruiters), e-commerce platforms such as Amazon, Alibaba, Flipkart and Lazada (consumers and firms selling on the platform). As the number of participants in the market increases, it generates increasing returns to scale veering towards monopolistic outcomes. This is the reason for firms to persist with deep discounts to gain increasing market share. Consequently, consolidation in the e-commerce sector is almost inevitable and explains why monopolistic and often duopolistic market structures prevail in most economies. This is evident among major B2C platforms in several countries, for example, Flipkart and Amazon in India, JD.Com and Tmall in China, Lazada and 11Street in Thailand, Amazon, C-discount and Fnac in France, and Wal-Mart stores and Amazon in the US.

Consumer loyalty to e-commerce companies is fickle. E-commerce also presents low barriers to entry. Fixed costs are minimal relative to bricks-and-mortar retail and most other costs incurred (primarily personnel and products or intermediate goods created, for example, software development) are of a short-term nature, often reversible and can be partly transferred to other uses or monetised by selling the software. In two-sided markets, it is thus imperative that firms attract and retain customers. In markets selling homogeneous goods or goods that are close substitutes for one another, differences in prices will induce consumers to switch e-tailers. Sales growth of e-tail in India has thus far been driven largely by deep discounts offered to consumers. To retain customers and build loyalty, e-tail companies cross-subsidise products and services or offer bundles of services for subscribers. A subscription to Amazon Prime offers discounts on delivery services as well as a growing and increasingly sophisticated and popular menu of streaming films and serials, often original production. Over a few years, many of these shows have gained immense popularity. Flipkart recently announced its intent to enter the fray through a stake in an established streaming service.

Reduce Transaction Costs, Mitigate Information Asymmetries and Induce Price Transparency

E-commerce enables firms to reduce search costs for buyers and sellers, eliminating middle-men from the transactions. By creating a platform for price discovery, e-tailers reduce information gaps between different players in the online market. With improved logistics and streamlining bulk storage and delivery, the business can reduce transaction costs as well as labour requirements.

Consumer purchase decisions start with a search of prices, services offered by the vendor and the vendor's track record, and product reviews. Access to this information on a single website reduces the information gap between the buyer and the seller. E-commerce helps to narrow this information asymmetry and enhance the efficiency of consumer decisions. This, in turn, promotes competition among e-commerce companies. For small retailers and producers that were hitherto confined to local markets, prices on the platform, especially those of competitors large and small, offer guideposts on cost targets companies need to achieve. This is particularly useful for micro small and medium enterprises (MSMEs) in small towns and semi-urban areas in India.

E-tail can help fill 'missing markets' by creating markets for rural products and for goods that hitherto were in the non-tradable sector, for example, goods produced in the rural areas by artisans, traditional handicrafts, etc. Through the platform, e-tail expands the market size by creating a seamless national and even an international market for a small producer.

To succeed in an economy with a fragmented and overwhelmingly informal retail sector, an over-stretched transport and logistics infrastructure, and distinct consumer preferences, e-commerce companies need to adapt to Indian regulations, economic structures, and infrastructure and consumer preferences. To induce MSMEs to go online, Amazon launched *'Chai Cart'* – mobile tea carts that traversed streets offering complementary tea and lessons on the benefits of e-commerce. Since 2015, *Amazon Tatkal* – a 'studio on wheels' – provides training on registration, cataloguing, marketing and imaging. By signing on to 'Seller Flex', vendors earmark a section of their own warehouses for products sold on Amazon India, with Amazon coordinating the delivery logistics. Aside from prompt delivery, local storage helped ease logistics and overall costs. For the last mile, all e-tail and other e-commerce companies use bicycles and motorcycles for delivery.

Instead of supplanting the local kirana stores, Amazon has co-opted them into the supply chain and logistics networks. Acting as vendors have helped many of the kirana stores boost their own sales. Flipkart deploys Mumbai's *dabbawala's* for pick-up and delivery. All major players in e-commerce, especially e-tail space, have launched similar programmes to attract suppliers as well as customers. By offering physical proximity to the vendor, mobile and even cash payments, and reducing the trust and credibility deficit typical of new customers anywhere, these innovations are attracting customers who otherwise would be reluctant to go online for purchases. This is an illustration of the seamless O2Ooffline to online fusion that characterises the remarkable growth of e-commerce in China. These developments underlie what may seem to be overly optimistic projections of consumer and revenue numbers.

China's e-tail that has given rise to innovative global behemoths like Alibaba, Tencent and JD.Com, and spin-offs such as Alipay and Ant Financial, offers instructive insights into the potential of e-commerce in India. 'New Retail' a term first used by Jack Ma, founder of Alibaba, alludes to the seamless integration between offline and online commerce, and the integration of businesses and regions across the country, including in the rural areas.

Opportunities and Challenges

Consumers

A major attraction of e-commerce is the ease of purchase and deep price discounts it offers customers. The convenience of shopping from anywhere through a mobile, while perusing through products offered by different manufacturers and suppliers; the ability to access information on customer service and being able to track delivery through the phone, offers substantial appeal to price-sensitive, time-constrained customers. Customer satisfaction tends to be higher for e-commerce. The array of payment options and delivery services further add to the choice and appeal for the customer.

Market Development and Efficient Markets

By bringing a large cohort of suppliers together on a common platform, e-commerce results in increased competition and development of markets. E-commerce embodies a two-sided market, connecting the supply side to the demand side without the traditional limitations of physical stores and incurring low transaction costs. A large number of firms listed on the platform engage with multitudes of consumers. The larger the numbers on either side of the market, the more efficient the market is likely to be.

Benefits for Micro, Small and Medium Enterprises

MSMEs play a vital role in all market economies. India has over 51 million MSMEs producing 37.5 per cent of output[10] and employing 117 million workers. MSMEs in India are highly diversified across urban as well as rural areas.[11] An overwhelming part of this cohort is in the informal sector. The growth of e-commerce has created opportunities for MSMEs to register formally as business enterprises and increase direct participation in regional and global trade – key to making growth more inclusive. The United Nations Conference on Trade and Development Information Economy report[12] reveals that the use of digital technologies by MSMEs has not only helped business performance by providing access to international markets, but also improve livelihoods in some of the most marginalised communities.

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10. Ministry of Micro, Small and Medium Enterprises (MSME), Government of India *Annual Report* 2015-16.
11. Data from the United Nations International Development organization "Report on e-commerce, 2017".

Several innovative impact start-ups in India have stepped into this space. MSMEs that use e-commerce platforms are around five times more likely to export than those in the traditional economy[13] The extent of information communication and technology (ICT) used by MSMEs is contingent on the sector and the size of the business. MSMEs engaged in international trade or in tourism have stronger incentives to invest in ICT. MSMEs that actively engage in the digital space, for example, with a website and online transactions, grow 27 per cent faster than those that choose to remain offline.[14] The benefits accrue from savings on marketing, storage and delivery costs and from superior inventory management.

The interests of e-commerce companies and MSMEs trading on the platforms coincide. Amazon, Flipkart and Snapdeal actively help small businesses to enhance their business skills and engage with customers in real time – skills that a MSME would not be able to afford on its own.[15] MSMEs drawing upon ICT experience significantly better prospects of reaching out to new markets, adopting new technologies, engaging with government agencies and generally keeping abreast of cutting-edge knowledge germane to the field of operation. Amazon contends its platform has enabled over 6,000 Indian MSMEs to participate in overseas markets.[16]

Financial Development

Financial development is both a driver and a consequence of e-commerce. Despite a trend of increasing use of digital payments, transactions in India are still overwhelmingly carried out through cash. E-commerce has a tangible impact on financial development by broadening access to financing, expanding and innovating in the payments space and helping bridge information gaps. Access to finance is determined by the availability of information that helps assess the borrower's creditworthiness. The absence of a credit history and the inability to raise collateral makes it difficult for MSMEs everywhere to obtain credit. However, for MSMEs registered on e-commerce platforms, the company owning the platform can generate and collate real-time information about cash inflows and outflows and provide an informed assessment of the company's financial state and creditworthiness – vital inputs for decision-making on loans.

12. UNCTAD (2017), op. cit.
13. United Nations International Development organization "National Report on E-Commerce Development in India", 2017 op. cit.
14. Ibid.
15. Ibid.
16. https://www.amazon.in/b?ie=UTF8&node=8520691031.

With the credit histories, e-commerce firms can link start-ups directly with financial institutions. In January 2016, Snapdeal announced that the State Bank of India (SBI) would approve loans of up to ₹2.5 million (S$50,000) instantly if the data met with SBI's loan approval criteria. The SBI's 'E-smart SME' uses data analytics generated by Snapdeal to assess creditworthiness, a more robust metric instead of relying on financial statements. Other banks and financial institutions have launched similar programmes.

E-commerce has induced many consumers to sign up for digital payments services, increasing the volume of cashless transaction. In areas where credit cards are not widely used and there is hesitancy about paying for goods prior to delivery or paying digitally, e-commerce companies offer cash on delivery (CoD) - a commonly used mode of payment in India and several other developing economies – or deploy the Alibaba-Alipay model where the shopper's payment is held in escrow by Alipay, an entity created by Ant Financial, a subsidiary of Alibaba, for this specific purpose. CoD has enabled a large cohort of individuals to participate in e-tail.

Employment

E-commerce has demonstrated the potential to unleash new investments that create jobs in a range of ancillary activities. Employment in the e-commerce sector generates multiplier effects, with every job created resulting in three to four new jobs in downstream industries, such as information technology (IT) and IT-enabled services, marketing, sales, data analysis, etc, [17] with the possibility of creating as many as five million jobs in India, many of which will be in the smaller cities and the semi-rural areas. The narrower e-tail sector and its ancillary activities are expected to create up to 1.5 million new jobs by 2021, with logistics and warehousing accounting for a million openings. [18] During the recent holiday season in October 2018, Amazon, Snapdeal and Flipkart announced plans to hire over 80,000 workers. [19]

The online seller base is expected to increase to 1.3 million, with 70 per cent of these in smaller cities, 20 per cent women entrepreneurs. [20] The ability to do business from the security of the home or the neighbourhood has made it easier for women to engage in entrepreneurial pursuits. As the seller base expands to the smaller towns and semi-rural areas, connectivity with the outside world creates an awareness of what lies beyond. The empowering effects of these changes can lead to significant socio-economic changes, as hitherto marginalised groups enter the mainstream economy.

Potential for Rural Areas

Nearly 50 per cent of the Indian population lives in rural areas. Although innovations in domestic retail have almost completely bypassed the rural economy, rural incomes have a profound impact on aggregate consumer purchases and thus on aggregate production and incomes. E-tail companies seeking to expand markets into the groceries space need to engage directly with the farmers, offering confirmed prices for the produce – the equivalent of a forward contract. Forward markets help to ensure price stability for produce. Cold storage facilities that allow for storage of perishables are essential for storage and stabilising market prices. By nurturing agribusiness, e-tail can help integrate the rural economy into a nation-wide network. The potential for agribusiness, especially food processing, is vastly under-tapped, primarily due to regulatory impediments, and the lack of investment. The advent of e-commerce into agribusiness can boost rural incomes through higher demand for agricultural produce, and besides offering incentives for rural entrepreneurship and a boost to rural incomes and help integrate agriculture into the formal economy.

Digital Divide

The digital divide is a challenge for e-commerce business and for policymakers. Although India has the world's second largest internet population and smartphone market after China, the digital divide is acute. A small percentage of the 1.3 billion people have access to the internet. Estimates vary from 25 per cent, according to a Pew Centre[21] survey, to 28 per cent (Internet and Mobile Association of India).[22] While internet penetration in urban India is about 64.85 per cent, it is just 20.26 per cent in rural areas. Although access to the internet has been improving, it remains patchy and slow in many parts of the country. Participation in e-tail for the foreseeable future is likely to be confined to the middle class and the rich. A growing volume of purchases in the future will be from the young with rising disposable incomes seeking bargains offered by e-tail.

The more immediate concerns from the digital divide arise for those not able to participate in the gig economy, and for MSMEs excluded from

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17. *"The Impact of E-commerce on Employment in India"*, KPMG-Snapdeal, 2016.
18. *Technopak Report: E-tailing in India, Unlocking the potential, The Need for India to Analyze E-tailing on its own merit* KPMG-Snapdeal, 2013.
19. https://www.livemint.com/Companies/wtoZ3FDyahU1rF6QsxtDZI/Flipkart-Big-Billion-Days-sale-Amazon-sale-jobs-india.html.
20. Ibid.

the mainstream economy. As access to the internet spreads and some of the job creation shifts to the 'gig' economy, there is a risk of the digital divide permanently shutting out a large percentage of the labour force. The impediments in the way of MSMEs participating in global value chains (GVCs) are pervasive. Limited digital capabilities and skill gaps, poor connectivity, resource constraints and the high cost of accessing the digital economy can be powerful inhibitors. The benefits of these investments are not always obvious, reducing incentives to invest in digitisation. There are compelling grounds for the state to intervene to broaden digital access.

Cyber Security

Arguably among the most serious threats confronting any entity with an online presence is cybercrime. This includes outright cyber-theft of private data, corporate strategies or financial data, hacking into private data and denial-of-service attacks, among other cyber-crimes, posing serious risks to the firm. A successful cyber-attack can erode the credibility and value of the firm, and leave it vulnerable to law suits. Firms are investing increasing amounts of money to cope with new risks that regularly arise. In 2016, India was ranked the fifth most vulnerable country for cyber breaches by Symantec's 2017 Internet Cyber Security Threat Report. As cyber-security experts point out, the question is not if a cyber attack will take place; rather, it is a matter of when it will occur. A data breach could seriously undermine confidence in the fledgling industry.

Business Strategy

Aggressive competition in the e-commerce sector compels companies to offer steep discounts and spend heavily on marketing and on commissions to vendors. None of the companies are close to making money yet. How the price-sensitive Indian consumer will react to the phasing out of discounts – inevitable as e-tail firms continue to lose hundreds of millions of dollars each year - remains a moot point. E-commerce companies are of course cognitive of this and have observed the same pattern of behaviour in other countries as well as in other sectors, including ride-hailing apps. The sale of electronics (primarily mobile phones) and apparel accounts for 80 per cent of e-commerce sales. The e-tail market is yet to mature and diversify into other commodity groups to provide resilience

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21. http://www.pewglobal.org/2018/06/19/across-39-countries-three-quarters-say-they-use-the-internet/.
22. https://economictimes.indiatimes.com/tech/internet/internet-users-in-india-expected-to-reach-500-million-by-june-iamai/articleshow/63000198.cms.

to sales. Linguistic diversity renders marketing more complicated in India as cultural nuances are not captured through simple translations. E-commerce companies are actively developing strategies to elicit customer loyalty.

Payments, including Cash on Delivery

India's retail trade is dominated by cash payments. COD makes the delivery process cumbersome as consumers choose to 'try' out the goods before paying. Payment collection becomes a challenge. There is a much higher 'return' of merchandise paid through COD, raising costs for the company. In November 2016, the paucity of cash led to a fall in COD payments to 45 to 55 percent of all payments. However, recent data indicates that COD payments are now up to 60.5 percent of e-commerce payments – the levels that prevailed prior to demonetisation.[23] Along with high rates of product returns, this raises the cost of business for e-commerce.

Logistics

Poor quality infrastructure in the form of slow cargo transfers and long turnaround times at ports, limited cold chain and an inefficient transportation network raise overall costs and constrain profitability. However, there has been progress along the supply chain and in infrastructure, especially roads. Logistics firms are constrained by infrastructure that is well below international standards. High warehouse rentals, and an expensive supply chain network – all raise logistics costs, eroding competitiveness (Figure 1).

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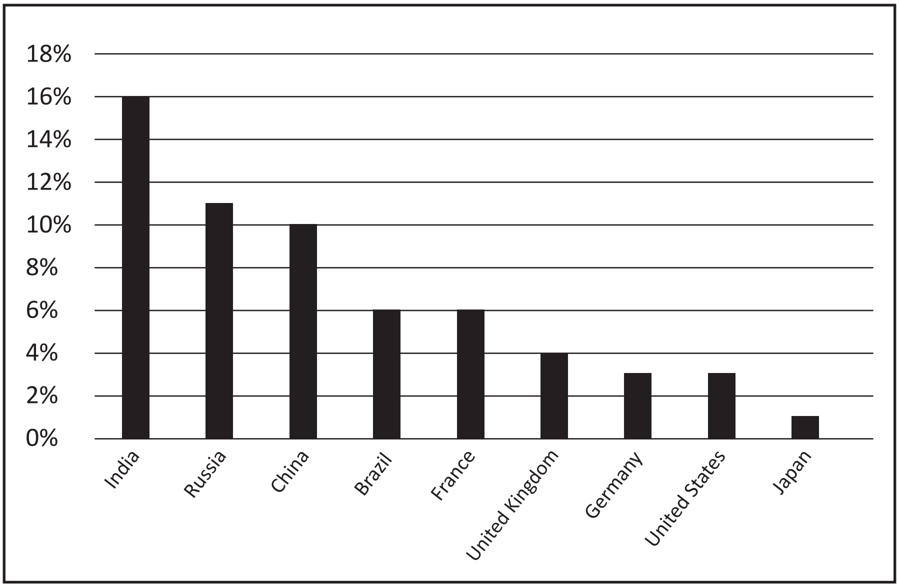
23. Shrtika Verma, "COD payments at e-commerce firms back to pre-demonetisation levels", *LiveMint*, 16 November 2017. https://www.livemint.com/Industry/VgOTW8ZS4RaHA5gd7iwM4N/COD-payments-at-ecommerce-firms-back-to-pre-demonetisation.html.

Figure 1 : Logistics Costs as % of Total Retail Costs 2015



Source: Euromonitor International, 2015

Development versus Regulation

E-commerce Policy

How can policy be deployed to harness e-commerce for sustainable development? Policymakers need to take on functions that extend beyond the government's role as a gate-keeper. Public policy should not be seen only from the prism of regulation but also from business promotion as well, geared towards helping Indian corporates, including MSMEs, to enter national and global supply chains. Policymakers need to assume a development role in investment and business promotion to complement their regulatory functions.

Aside from the well-known problems of doing business in India, the growth of e-commerce[24] is constrained by the absence of a clearly-articulated e-commerce policy based on a strong legal and regulatory framework. Restrictions on foreign investment into inventory-led models constrain foreign capital inflows, inducing Amazon and potential entrants to side-line this through online marketplaces. Policies on data standardisation, localisation and on addressing fraud need to be defined soon. The slow resolution of disputes and fraud cases, common to investment in other sectors as well, hinders longer-term investment. The problems distinct to e-commerce are of course, not unique to India alone.

Micro, Small and Medium Enterprises

E-commerce offers a promising market-driven avenue for the internationalisation of MSMEs by powering growth in cross-border retail trade. However, the recent surge in protectionism is likely to hinder such efforts in the immediate future. Policy initiatives have had limited success in boosting prospects for MSMEs. There may be useful lessons in the experiences of International Enterprise Singapore and its successor, Enterprise Singapore. The Small Business Administration in the US has also performed well in alleviating many of the constraints faced by SMEs.

A continued policy dialogue, endeavours at policy experimentation and subsequent refinement of policies, drawing upon experiences and best practices, can be a catalyst for the growth of e-commerce, and specifically, MSMEs. A common constraint in many public policy initiatives is the presence of 'silos' in policy formulation and the demarcation of responsibilities without engagement on initiatives that require

24 Policy towards e-tail is subsumed under a broader e-commerce policy.

coordination. As an illustration, the Ministry of MSME's capabilities in assisting enterprises in the technology sector are limited, with the ministry needing to coordinate between different government departments, including those in the technology and international commerce domains. With limited resources, MSMEs are challenged to access services and programs designed to benefit them. A single window for assistance can help tide over some of the common coordination problems.

E-commerce policies are evolving globally. Rather than withdraw from multilateral talks, as was the case in the past, it may be more useful for the government to engage with multilateral agencies as well as other governments on developing capacity. The alternative would be letting developed economies set the agenda, only to have developing economies contest later to modify the agenda during multilateral negotiations. Several developing economies share the same concerns about the vulnerability of domestic retail. It may be prudent to consult and engage to draw up a common platform for the multilateral negotiations.

The learning curve for all developing economies is steep. Experience from the past points towards the importance of concerted policy efforts among developing economies to share experiences, develop capabilities in implementing and monitoring policies and best practices, and shaping national and multilateral strategies on how to create synergies and scale in the e-commerce sector.

Digital Divide

Policies geared towards developing the IT infrastructure generate positive externalities. Increasing access to broadband boosts firm productivity. Digitisation is a powerful catalyst[25] for boosting employment, directly and through the 'gig economy'. The largest numbers of jobs are created through digitisation of the MSME sector.[26] A growing number of MSMEs are now able to access GVCs, boosting growth prospects. E-commerce has the potential to make a singular socio-economic impact by bringing marginalised groups, including women and entrepreneurs in the informal sector into the economic mainstream.

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25. World Economic Forum. *The Global Information Technology Report 2013.* Geneva.

26. McKinsey Global Institute. 2011. *Internet Matters: The Net's Sweeping Impact on Growth, Jobs, and Prosperity,* May 2018. http://www.mckinsey.com/industries/high-tech/our-insights/internet-matters. Accessed on 23 July 2018.

Table 5: Development and Regulatory Gaps in E-commerce

E-commerce regulatory imperatives	E-commerce sector development initiatives
1. Data protection; Data localisation 2. Consumer protection 3. Weak legal and regulatory framework 4. Lack of security and trust in online transactions 5. Absence of standardized data on E-commerce 6. Competition policy / anti-trust regulation 7. Taxes on repatriation of funds 8. Lack of awareness among governments and regulators 9. Inadequate online payment facilities 10. Lack of financing opportunities	1. Data collection and collationcapabilities in e-commerce; development of data bank for business development, facilitate funding, encouraging investments including joint ventures 2. MSMEs a. Capacity building in MSMEs, especially in digital skills b. Ease access to resources c. Harmonize tariffs for low d. Establish de minimis threshold for low value goods 3. Measures to mitigate digital divide 4. Availability of online information 5. Inadequate trade logistics and facilitation 6. PPP projects to reach rural areas 7. Programs for digital literacy 8. Electronic single-window clearance of e-commerce shipments 9. Establish programs to certify 'trusted e-commerce shippers' 10. Metrics for assessing policy effectiveness in e-commerce development

Source: Compiled by the author

Data

The poor quality of data on e-commerce hinders analysis and an understanding of the digital ecosystem, constraining informed policymaking. Governments cannot fine-tune decision making, nor can enterprises make informed decisions on important issues such as strategy and investment. For launching informed policy initiatives, it is incumbent on the private sector to develop the capacity to conduct micro-level surveys among households and enterprises to gauge digital strengths, weaknesses, responses to policy and private sector initiatives, and identify where structural impediments, such as logistics bottlenecks or financing constraints on working capital, lie. The returns on digital inclusion and enhancing GVC participation and the positive externalities generated will more than pay for any outlays in this domain. A clear policy is yet to be articulated on standardising data. A policy towards data localisation can constrain innovation and foreign investment.

Regulatory Problems

Regulatory problems, including tax laws for repatriating funds, establishing norms for assessing e-commerce shippers, tedious customs declaration forms, and barriers in the way of trade facilitation, persist. Foreign-owned firms are prohibited from owning inventory, unless it is under their own brand name. However, India has allowed 100 per cent foreign direct investment in e-commerce by firms selling their own products. The consequence of these restrictions is that companies have limited control over the quality of products sold on their platforms. Incidents of counterfeit goods being sold are pervasive, though improved monitoring has helped alleviate the problem. While this is possible in any market, there is an absence of universal 'certification' of sellers on e-platforms. Table 5 offers a list of themes that need to be addressed by policymakers and regulators. Other regulations that constrain business operations include taxation issues, the challenge of cyber security, inadequate infrastructure, low digital literacy – all of which are common to enterprises doing business in India. While the government is making an effort to reduce the regulatory burden, in aggregate, India remains a difficult country in which to do business.

India is in the process of articulating an e-commerce policy. The draft policy announced in August 2018 sought to focus on constraining existing practices rather than strike a balance between incentivising entrepreneurs and regulating unfair trade practices. Rather than regulate, the challenge in this promising sector should be to strike the right balance between development and regulation.

The Way Forward

The constantly shifting boundaries of e-commerce firms render the question of what shape e-tail will take in the future as an open one. Amazon started off selling books online. Since then, the firm has diversified into a wide range of consumer products. Today, it is the largest company in the world with its market value exceeding US$1 trillion (S$1.37 trillion), offering suites of products and services, its own streaming service, payments services, off-line groceries, developing cutting-edge technologies in logistics, and assisting hundreds of thousands of firms to register on online platforms.

Regulators are trying to catch up with the constantly evolving e-commerce model. Soon, we may see increased use of smarter 'bots', artificial intelligence, virtualisation, delivery by drones, the emergence of omni-channels in retail and the increasing use of social media to sell. Companies will be paying a great deal of attention to cyber-security, especially that of private data. For cultural reasons, personal preferences, data privacy, social norms, there may be limits to the reach of e-commerce. We are likely to see greater integration of offline and online retail, with the use of virtual and augmented reality programmes to integrate retail and expand the menu of choices.

The role of digitisation in daily lives is still at an early stage, the future course is likely to be shaped by technological progress and how consumers adapt or respond to emerging technologies and retail models.

India's e-commerce sector has been called the 'golden frontier'[27] – an allusion to the unrealised potential for growth and transformation of significant parts of the economy. From an analytical prism, the case for e-commerce is strengthened by its ability to address fundamental deviations from the perfectly competitive economic model. It helps increase competition, reduce market frictions, including transaction costs and information asymmetries by bringing together buyers and sellers across a common platform – effectively enhancing the efficiency of the retail sector. It can ameliorate the ill-effects of some of India's market and infrastructural deficiencies. Rather than seek to supplant the ubiquitous kirana (mom and pop) stores, the integration of online and offline e-tail is a promising trend.

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27. Michael Corkery "How Walmart, the Big Seller, Is Shopping for a Fight With Amazon", *New York Times,* 9 May 2018. Observation by Wal-Mart CEO Doug McMillon following US$16 billion acquisition of Flipkart - https://www.nytimes.com/interactive/2018/05/09/business/dealbook/walmart-acquisitions-flipkart.html.

The potential synergies could help inform the design of regulatory initiatives and offer an additional channel for integration of the Indian economy into the global trading system.

Online retail currently accounts for only about 2.9 per cent of India's retail market and the share is expected to increase to five per cent by 2020. The growth underscores the opportunities that exist for e-retailers to capitalise on the rapid growth of internet penetration in India. E-commerce offers the prospects of growth in not just volumes and the types of goods and services offered, but also benefits for the economy through the secondary effects on industries upstream (logistics – delivery services and fulfilment centres) and downstream (on agriculture and small and medium enterprises) in ways that could not have been envisioned as recently as a decade ago.

While e-commerce sales will inevitably plateau in India at some point, as it has in richer economies, nonetheless there is a strong tailwind for the foreseeable future. As was the case with telecommunications, it is conceivable that e-commerce may well lead to a leapfrogging of the traditional retail growth trajectory from an economy dominated by millions of tiny enterprises to a diverse, varied retail landscape which could bring marginalised groups into the mainstream economy.

About the Author

Dr Dipinder S Randhawa researches issues in the domain of economics and finance. His research interests and publications are on financing issues in infrastructure, micro-finance, the informal sector, constraints on investments, policy analysis and governance.

Before re-joining National University of Singapore (NUS), Dr Randhawa was the Deputy Head, Finance Programme, at the School of Business, SIM University. Prior to this, he was Fellow, and Coordinator, Research and Industrial Outreach at the Risk Management Institute, NUS. He has taught at the Department of Finance, NUS Business School. Dr Randhawa has also taught at the undergraduate, MBA and Executive MBA and in Executive Development Programs in the United States (Syracuse University and the State University of New York), China (University of Shanghai for Science and Technology), Singapore (NUS and SIM University) and Thailand (Mountbatten Institute – Naresuan University Campus). Besides other corporate entities, he has conducted consultation projects for Oxford Economics, Japan International Cooperation Agency (JICA), the Institute of Banking and Finance (Singapore). The transition to the world of academia was preceded by brief stints in banking and public policy analysis.

Dipinder received his PhD in Finance from the Whitman School of Management at Syracuse University, and master's degree in Economics from the Delhi School of Economics.

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