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The Challenge and Prospects for E-commerce in India

Despite its tiny presence, accounting for barely a fiftieth of sales, e-commerce looms large on India's retail horizon. Bypassing the myriad of regulatory, logistical and infrastructure constraints, it is growing rapidly. More consequentially, e-commerce offers hope in addressing some of India's basic economic challenges. What promise does it offer and what challenges does it face in the way of realising its potential?

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Introduction

Although it accounts for a tiny percentage of retail sales, the rapid increase in online commerce and its growing visibility in the eyes of all stakeholders – consumers, retailers big and small, the government, industry associations, local and global investors, has focused attention on its potential and the changes that may lie ahead. India's e-commerce sector has been called the 'golden frontier'² – an allusion to the immense unrealised potential for growth and transformation of significant parts of the economy.

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² Observation by Wal-Mart CEO Doug McMillon following US\$16 billion acquisition of Flipkart – “How Walmart, the Big Seller, Is Shopping for a Fight With Amazon”, Michael Corkery, *The New York Times*, 9 May 2018. <https://www.nytimes.com/interactive/2018/05/09/business/dealbook/walmart-acquisitions-flipkart.html>. Accessed on 25 July 2018.

From a base of US\$5.4 billion (S\$7.3 billion) in 2011, e-commerce sales grew to US\$38.5 billion (S\$52.4 billion) in 2017.³ At current growth rates exceeding 40 per cent per annum, it is projected to cross US\$103 billion (S\$140.1 billion) by 2020 and reach US\$200 billion (S\$272 billion) by 2026. If the prevailing growth trajectory is sustained, the e-commerce sector in India may surpass the United States (US) to become the second largest e-commerce market in the world by 2034. The major segment is e-tail,⁴ which forms the fastest growing segment, and is also expected to account for two-thirds (US\$68.8 billion) [S\$93.6 billion] of the total e-commerce market. The potential is vast, with the promise of benefitting large parts of the economy.

Outline

The massive growth of e-commerce in India raises questions about its role and potential impact on the broader economy. What has driven the growth of e-commerce? What functions does it perform? How does it bear on the fundamental objective of growth with equity? What specific benefits will it bring to India? What are the distributional implications? Will it replace existing retail and traditional manufacturing? What is the role for policymakers? This paper focusses on the fast growing business-to-consumer segment that dominates the ecommerce landscape and has significant effects across several important sectors in the economy, as well as the potential to influence employment and efficiency in the economy.

Evolution of Retail Trade

Retail trade typically evolves from small retail 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. In India, retail has evolved along a different trajectory. While in developed economies, small retail is followed by malls, department stores and hyper-marts, India's retail sector has long been dominated by thousands of small

³ Data from United Nations International Development organization (2017), "National Report on E-Commerce Development in India", Inclusive and Sustainable Industrial Development Working Paper Series WP 15.

⁴ E-tail is the retail segment of e-commerce.

neighbourhood grocery shops (that is kirana⁵ stores) that account for 98 per cent of food sales and 90 per cent of overall retail. These neighbourhood shops are located both in the urban and rural parts of the country and offer convenience, proximity, personalised service, credit and even home delivery to longstanding customers, and have relatively low infrastructure requirements. Online retail 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 in India to capitalise on the rapid growth of internet penetration in India. Contrary to what received wisdom suggests, kirana stores are able to compete with large supermarkets on prices and service.⁶ About 90 per cent of Indian retail is in the informal sector. Shopping malls and chain stores account for the remaining one-tenth of total retail sales.

Organised retail has been slow in gaining a foothold in the Indian market. A protectionist regulatory structure has 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 establishing retail chains. 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. All of these factors constrain efficiency and profitability, lowering the attractiveness of large multiproduct stores.

The highly fragmented retail sector in India provided a fertile ground for the advent of e-commerce. With competitive prices, a business model that entails low levels of sunk costs but predicated on efficient logistics, and a wide spectrum 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 demand for competitive prices, convenience, choice and the ability to verify product quality. It is conceivable that e-commerce, as was the case with telecommunications, may well lead to a leap-frogging of the traditional retail growth

⁵ 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 spectrum of food and food-related merchandise, as well as fast moving consumer goods. They have proven to be remarkably resilient over the decades, and, today, are even able to compete on prices with the large e-commerce firms.

⁶ "It is not easy to compete with kirana stores: Rajiv Lal", Vivek Kaul, *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; and "Most organised retail cannot handle competition from kiranas: Rajiv Lal", Devina Joshi, *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. Accessed on 22 July 2018.

trajectory from an economy dominated by millions of tiny enterprises to a few online e-commerce behemoths. It is also conceivable that the kirana stores, on which tens of millions directly or indirectly depend on for a living, are co-opted into the new retail model.

E-commerce offers the prospect 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 [SMEs]) in ways that could not have been envisioned before.

Growth of E-commerce

Since the acquisition of Flipkart by Walmart, two large e-tail platforms, Amazon and Flipkart-Walmart, dominate the e-commerce landscape and are expected to consolidate their positions. Notwithstanding early promise, Snapdeal's market share has been shrinking. The other major e-tailers are all niche players.

Several factors, including the rapid adoption of digital technologies by Indian customers in the form of smartphones, internet access, the growth of broadband, cheap data plans and innovative payment models have contributed to the growth of e-commerce. E-commerce companies operate through innovative business models and offer alternative payment options, such as cash-on-delivery (COD), which are drawing customers who do not have credit cards and are reluctant to use direct debit options for payments.

Table 1: Leading online stores in India (2017), ranked by net e-commerce sales

Company	Sales in 2017 (millions of US\$)
Amazon	561.4 ⁷
Flipkart	553.5
Myntra	342.7
Bigbasket	192.7
Jabong	159.7
Snapdeal	144.9
eBay	83.2

⁷ The table does not reflect the acquisition of Flipkart by Walmart which took place in May 2018. Walmart, however, has primarily a brick-and-mortar presence in the Indian market.

PaytmMall	46.5
Firstcry	40.6
Shopclues	39.2

Source: Statista.com <https://www.statista.com/statistics/297355/leading-e-retailers-in-india-ranked-by-annual-web-e-commerce-sales/>. The data in this table does not include Walmart's acquisition of Flipkart. Myntra was acquired by Flipkart in 2014, however the table shows their sales separately.

Internet penetration grew from about four per cent in 2017 to nearly 35 per cent by the end of 2017. Nearly one-third of the urban population and four-fifth of the rural population cannot access the internet, reflecting the untapped potential for expansion, particularly in rural markets. The gender gap is significant – far more men than women shop for cultural reasons and reflective of unequal gender relations. The earliest and most vigorous adopters of e-commerce are the tech-savvy young. However, usage amongst older cohorts has grown over the past few years. Most online shopping takes place over smartphones. By early 2019, smartphone ownership is expected to reach 500 million. A notable shift in the purchasing patterns is the increasing number of customers from small cities lacking organised retail that are drawn to e-commerce. To broaden the reach, a conscious effort to increase web content in Hindi and in regional languages is drawing increasing numbers of customers – this is a major growth driver.

Indian consumers are very price sensitive. The typical basket of goods that a middle-class family in the US or Europe may possess are far beyond the reach of the middle class in India. Lower levels of consumer durables, etc., for example, the sales of branded consumer durables or white goods by globally recognised electrical and electronic companies are miniscule compared to those in the West or even China (where incomes are about four times those of India).

Convenience

The convenience of choosing between multiple brands and retailers on a single website is a major attraction for sellers. Deep discounts offered during periodic sales, along with customer loyalty programmes, are leading to growing cohorts of committed customers. The introduction of chatbots and similar apps help consumers tide over their initial hesitation on e-commerce platforms.

Ancillary Services

A major advantage of e-commerce is the ancillary services offered, without incurring significant commitments. Subscription programmes offered by e-commerce companies have helped expand the subscriber base. Amazon Prime offers early access to select deals, free one day delivery and other benefits, including early knowledge of upcoming promotions. India is currently the fastest growing market for Amazon Prime. In an effort to attract and commit Indian customers to Amazon, Amazon Prime is expanding its original content in Indian languages,

Dedicated Payments Services and Cashless Transactions

FinTech or innovative technology-based solutions to basic financial processes, including payments and cash transfers, are an integral part of the e-commerce ecosystem. Websites are also introducing e-wallet services, for example, Amazon's Pay Balance Paytm's Payment Bank and Flipkart's Flipkart First offer low cost easy-to-use payment solutions, with no minimum balances, the equivalent of free debit cards and premium services (Amazon Prime and Flipkart First).

Benefits of E-commerce in India

Business

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 or effective the market is likely to be. E-commerce assists local businesses to access global value chains (GVC), enabling firms to engage with foreign markets through exports and draw upon overseas suppliers. Amazon contends its platform has enabled over 6,000 Indian SMEs to participate in overseas markets. Participation in GVC enables firms to increase productivity as the competitive stimulus results in more efficient use of technology, adds to consumer choice and creates jobs. Digital

channels enable firms to tide over physical distances, and resource and capability constraints impeding access to global markets.

Unlike running a business out of a building, office or retail space or a mall, e-commerce does not require physical storage space and the associated costs of insurance, rent, security costs and costs incurred in developing the physical infrastructure investment on the part of the retailer. The only pre-requisite is a well-designed website (a 'web storefront') to attract customers. Profit margins are higher for e-tailers than offline retail.

Additionally, e-commerce allows for higher profit margins as the cost of running a business is markedly less.

Customers

A major attraction of e-commerce is the ease of purchases 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 options on payment and delivery further add to the choices and appeal for the customer.

Financial Development

Small businesses, with their limited resources, sketchy credit histories and the inability to raise collateral, face substantial hurdles obtaining loans from banks. As a first cut, they draw upon their own reserves before turning to expensive financing by friends and other informal sources. E-commerce companies have strong incentives to offer better terms and draw businesses to their platforms. By compiling data on cash inflows and outflows for each participant in online markets, the e-commerce company can provide reliable measures of creditworthiness. With the credit histories, e-commerce firms are able to 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 credit worthiness, a more robust metric instead of relying on financial statements.

Employment

Employment in the e-commerce sector generates positive externalities. Every job created results in three to four new jobs in downstream industries, such as information technology (IT) and IT Enabled Service, marketing, sales, etc.,⁸ with the possibility of creating as many as five million jobs, many of which will be in the smaller cities and the semi-rural areas. The 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 of the new openings.⁹ As new enterprises come online, they are expected to create 10 million new opportunities in the entire spectrum of activities relevant to online sales, including IT skills, programming, web maintenance and marketing. The online seller base is expected to increase to 1.3 million, with 70 per cent in smaller cities and 20 per cent women entrepreneurs. As the seller base expands to smaller towns and semi-rural areas, the connectivity with the world outside will create an awareness of what lies beyond. The empowering effects of these changes are resulting in significant socio-economic changes as hitherto marginalised groups enter the mainstream economy.

Logistics – Delivery Services

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. Over the past several years, road construction has made impressive progress, in no small measure helping to integrate markets.

⁸ KPMG-Snapdeal "The Impact of E-commerce on Employment in India", 2016.

⁹ Technopak Report: "E-tailing in India, Unlocking the potential, The Need for India to Analyze E-tailing on its own merit" 2013.

When a consumer buys a product, the next task is delivery. Endemic traffic jams in metros, and confusing and chaotic norms for creating addresses complicate delivery services. In the absence of clearly demarcated and identifiable addresses in areas outside the large metros, delivery poses a serious challenge in India. India's postal service is ill-equipped to deliver large consignments of parcels. To deal with these challenging circumstances, start-ups are devising innovative solutions. A start-up in the logistics space, Delhivery,¹⁰ uses machine learning to subdivide India's postcodes and map idiosyncratic locations. It is because of the haphazard nature of generating addresses, that, in addition to the address and the postcode, online address forms also ask for the 'nearest landmark'. To avoid paralysing traffic jams, companies move goods at night to 700 distribution centres. These are then picked up during the day by thousands of delivery employees riding motorcycles. Flipkart has entered into an agreement with Mumbai's legendary *dabbawallas* – lunch delivery men – to drop off consignments when collecting their client's lunch pails. At the time of placing the order, the customer is given a choice of collecting his/her package from a network of pick-up points in the vicinity of the delivery address. Amazon has launched a pioneering pilot programme that will enable customers to collect groceries from their local kirana shop. Coupled with the Goods and Services Tax, India is better placed than ever before to create a unified nation-wide market.

Potential for the Micro, Small and Medium-Enterprises Sector

India has over 51 million micro, small and medium-enterprises (MSMEs) producing more than 6,000 products and employing 117 million workers. This sector accounts for 45 per cent of manufacturing output and 40 per cent of exports. The MSMEs in India are highly diversified across urban as well rural areas.¹¹ A large part of this cohort is in the informal sector. Many of these are seeking to register with the government and become formal business units. The growth of e-commerce has created unprecedented opportunities for the MSMEs to expand their access to national and global markets.

¹⁰ 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/>.

¹¹ Data from United Nations International Development Organization "Report on e-commerce, 2017".

The Internet and the growth of e-commerce firms are providing the MSMEs with unprecedented access to global markets. Studies¹² show that MSMEs that use e-commerce platforms are around five times more likely to export than those in the traditional economy. The extent of information communication and technology (ICT) use by MSMEs is contingent on the sector and size of the business. Export- or import-oriented as well those involved in the tourist sector have stronger incentives to invest in ICT in their businesses.

The 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.¹³ The benefits accrue from savings on marketing, storage and delivery costs and from not having to maintain large inventories. The interests of e-commerce companies and small businesses trading on the e-commerce platforms coincide. Amazon, Flipkart and Snapdeal actively help small businesses to enhance their marketing, advertising, inventory management, and in dealing with customers in real time – skills that the MSME would not be able to afford on its own.¹⁴ The benefits are not just in increasing productivity and sales – access to the digital world offers insights into reaching out to new markets, new technologies, engaging with government agencies and generally keeping abreast of cutting edge knowledge germane to the field of operation. How is this growth likely to affect the retail sector and consumer choice? Could it help bypass some of the structural rigidities that constrain efficiency and help enhance competitiveness of enterprises? The United Nations Conference on Trade and Development's Information Economy report reveals that the use of digital technologies by MSMEs has not only helped business performance, but can also help improve livelihoods in some of the most marginalised communities. Several innovative impact Startups in India have stepped into this space.

While most e-commerce sales are in the domestic market, cross-border purchases are increasing across the world. This creates possibilities of entering international markets for all firms, including the MSMEs.

¹² United Nations International Development organization (2017) "National Report on E-Commerce Development in India", op. cit.

¹³ Ibid.

¹⁴ Ibid.

Potential for Rural Areas

Nearly 50 per cent of the Indian population lives in rural areas. Innovations in domestic retail have almost completely bypassed the rural economy. Rural incomes have a profound impact of consumer purchases and thus on aggregate production and incomes. E-commerce companies seeking to expand their markets and also step into the groceries space need to engage directly with farmers. Forward markets to ensure price stability for produce and cold storage facilities are essential for integrating 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 should help increase rural incomes through higher demand for agricultural produce and offer incentives for rural entrepreneurship.

Private Investment in E-commerce

The remarkable growth in e-commerce over the past decade, and potential for the future has attracted funds from venture capitalists and private equity funds across the world. In 2017 there were 21 private equity and venture capital deals worth US\$2.1 billion (S\$2.86 billion) in 2017 with six deals worth US\$226 million (S\$307.4 million) during January-April 2018.¹⁵ The e-commerce sector has attracted the largest volume of funds in the start-up landscape. E-commerce start-ups in India received US\$66 million (S\$89.8 million) of funding between January and March 2018. Table 2 shows the wide range of firms that have attracted funding in the e-commerce space.

Table 2: Private Investments in E-commerce (Funding activities as of February 2018)

Company	Investor	Funding (US\$ million)
Flipkart	SoftBank	2,500
BigBasket	Alibaba Group Holding Ltd, Sands Capital, International Finance Corp, Abraaj Capital	300
Udaan	Lightspeed Venture Partners US and other	50

¹⁵ Data and table from India Brand Equity Foundation, E-commerce sector report, 2018.

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).

Challenges to E-commerce

E-commerce is still at a formative stage in India. Online sales currently account for 2.9 per cent of total retail sales, and under optimistic scenarios, are projected to rise to five per cent of total sales by 2020. While the momentum of growth is remarkable, the early generation of customers and subscribers are the tech-savvy. The embedded hurdles are substantial. The MSMEs in developing economies face formidable hurdles when seeking to avail of the benefits of the digital economy. The lack of resources and awareness of the benefits of digital access, low digital literacy levels, constrain prospects for accessing digital resources, and as a consequence new technologies and practices that could help enhance efficiency. Without access to the digital technologies, boosting productivity and competitiveness is challenging. Smaller firms are inherently constrained when trying to use the internet to enhance their performance.

The digital divide accentuates inequality, permanently leaving behind those lacking digital access. Seventy per cent of the population in advanced economies has access to the internet, while one in six in developing economies have internet connections. The risks of widening

income gaps, and more alarming accentuating increasing income and wealth gaps between digital 'haves' and 'have nots' is a real and present danger. The poor with low literacy levels are at acute risk of missing out on prospects of economic mobility.

Aggressive competition in the e-commerce sector has compelled companies to offer deep discounts, spend heavily on marketing and on commissions to vendors, increasing expenditures on personnel. None of the companies are close to making money yet. How the Indian consumer will react to rising prices remains a moot point. E-commerce companies are of course cognizant of this and have observed the same sequence in other countries as well as in other sectors, including ride-hailing apps.

Regulatory problems, including tax laws for repatriating funds, and banning foreign-owned firms from owning inventory, unless it is under their own brand name is prohibited. However, India has allowed 100 per cent foreign direct investment in the e-commerce sector. The consequence of these restrictions is that companies have limited control over the quality of products on their sites. Incidents of counterfeit goods being sold were pervasive, though improved monitoring has helped alleviate the problem. Other regulations that constrain business operations, for example, taxation issues, the challenge of cyber security, inadequate infrastructures, low digital literacy, 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.

The prevalence of payments by COD raises the cost of doing business. 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 ratio on COD transactions, raising costs for the company.

The sale of electronics (primarily mobile phones) and apparel accounts for 80 per cent of e-commerce sales. The market is yet to mature and diversify into other commodity groups to provide resilience to sales. The linguistic diversity renders marketing more complicated, as cultural nuances are not captured through simple translations.

Concluding Observations

E-commerce holds out great promise for India. The advent of e-commerce can help lower transaction costs, improve information flows that will help consumers and producers make more informed decisions. It can also help ameliorate the ill-effects of some of India's infrastructural deficiencies. Rather than seek to supplant the ubiquitous kirana (mom and pop) stores, it can help integrate them into the evolving retail landscape. The potential synergies could help inform the design of regulatory initiatives. The question of what emerges once the deep discounts offered through venture capital run out remains an open question.

The Indian government has announced a number of initiatives, including 'Digital India', 'Make in India' and 'Startup India' that should help overcome many of the hurdles and proactively encourage investment in e-commerce. A robust and growing e-commerce can help strengthen India's position in the multilateral trading system. E-commerce has already demonstrated the potential of enabling India to benefit from trade. Notwithstanding infrastructure and other constraints, e-commerce offers great promise for addressing not just problems in the retail sector, but also some of India's fundamental economic challenges. For sustained, inclusive growth that is within the reach of the economy, it is incumbent upon the government to broaden access to the digital economy and reduce the digital divide.

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