

E-commerce: A Gateway to Prosperity of Rural Youth in India

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Abstract

Mobile communications and advancement in information and communication technology has made a significant impact on socio economic culture of India. It has not only contributed to the growth of industries related to E-commerce but has also benefitted significantly, the end consumers with reduction in travel costs, delivery of better products at lower price, generation of job opportunities, and increase in market efficiency. The social benefits of mobile connectivity and E-commerce could be the reach and access to communication to rural India, stimulation of local content related to health, finance, education and agriculture. Mobile communications and E-commerce are very pertinent in this era as leads to a synergistic effect. Growth opportunities are generated to serve the rural masses and give a positive a flip to the economy. In fact, in the current parlance when we relook in the rural markets we find that it has a huge potential in terms of E-commerce in alignment with the Government policies and the outcome being synchronization with marketing and distribution network. In the current parlance it is tough to penetrate in the rural remote masses where there is no internet and a tough game to create a demand. Innovative logistics network is conceived by the rural E-commerce startups. Positive willingness to buy is created with E-commerce app to the customer buying groceries or medicines at chemist shops. To come up to the expectations of rural demand, E-commerce firms have to communicate with rural consumers in their local language to sell their products. Hence rural youth through training can create linkage in E-commerce transactions in rural India.

Keywords: Digital Economy, Foreign Direct Investment, Rural E-commerce, Rural Youth

JEL classification: B21, F41, F43, F63

1. Introduction

On 15th August 1995, Videsh Sanchar Nigam Ltd. (VSNL) had introduced internet to Indian consumers. In last 23 years in explicit as well as in implicit manner it has contributed in country's retail, education, health and financial sector growth. Internet usage from personal computer to mobile has brought fundamental changes in the operations of the traditional brick and mortar market model. Enormous growth trajectories have been seen in the E-commerce industry over the years.

Newer policies and Government initiatives have indeed helped the development processes by creation of E-commerce environment. Section 1 of the paper deliberates on an increased internet penetration is

expected to reach USD125-150 billion by financial year 2020 willed to E-commerce business. Affordable mobile data tariffs and increase in millennial disposable income have facilitated internet consumption in the country. An incremental jump to the tune of ten million daily internet users is envisaged seen over in the month. The contributory factors such as ease of access to information, discounted prices, improvised connectivity and the use of payment options will lead to 830 million internet subscribers by 2021 from the existing 560 million¹.

In rest of the sections as follows: Section 2 highlights the rationale for the enormous demand of local product for the rural consumers to be delivered to their doorsteps with expansion of rural E-commerce. Section 3 explains the extent of digital retail penetration in United States of

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America, China, Malaysia, Indonesia, South Korea and India. Section 4 deliberates upon the phenomenal growth of the E-commerce in the retail sector. It emphasizes on how the government of India has positively intervened to protect the interest of the consumers in light of draft E-commerce Policy. Section 5 explains the challenge faced by rural E-commerce firms to reduce the gap between supply and demand for the skilled labour force and how performance-based and effective labour policy in collaboration with rural youth and the private sector can improve the efficiency of labour market functioning in rural India. Section 6 explains growth potential and digital infrastructural constraints in rural India and how through public and private partnership, E-commerce and mobile network can gain voluminous information and data interpolation on the prevalent planting of crops amidst soil conditions enabling the farm productivity. Section 7 and 8 followed by conclusion and recommendations to strengthen the operational prospects of the business in rural India by training rural youth to become the mainstream contributor in E-commerce development for agro, allied, health, education, retail and financial services for social protection of rural youth.

2. Objectives

The E-commerce firms' in India is more of an urban phenomenon though it has immense scope in the rural areas as well. Domestic and global E-commerce firms in collaboration with government of India's digital support ecosystem can overcome the challenges and hindrances that may influence their outreach in the rural areas. The demand of rural consumers for local product with value for money to be delivered to their doorsteps with communication in local language can be a difficult task for firms but by training rural youth for rural E-commerce penetration, growth and sustainability can be a win-win strategy for all the stakeholders. The main objectives are:

- To get a hands-on view on the holistic approach of development of E-commerce and avenues in the developing countries by taking in account the policies for economic E-commerce development.
- To relook into the diversification presence of E-commerce in urban sector also thereby reflecting job creation.

- To find the extent of aftermaths of technology penetration and up gradation and its impact on rural consumers.
- To delve into opportunities and challenges of E-commerce firms penetration in rural India.
- To get insights to government of India's E-commerce policy and Digital India policy as a roadmap of job creation for rural youth in India.

3. E-commerce Growth: An International Perspective

The advancement and incorporation of information technology in business has helped international players to promote urban consumers consumption pattern. But the challenge is to enhance growth of local businesses, increase local rural employment opportunities and improve quality of life of the people resulting in higher productivity and improvement in Economic growth rate and tax revenue of the government. The goal of "Make in India" is to ease the accessibility of goods and services to rural masses by the strengthening the supply cycle of MSME sector by online modes rather than just offering discounts. This is evidenced by the phenomenal growth of the E-commerce in countries namely China, Malaysia, Indonesia, South Korea and India.

As estimated, "In relatively mature markets, like US, where the organized retail penetration is high, multi-channel retail chains lead to online markets. While in newer markets of developing countries like India and China, web-only players are dominating the market. A mere marginal 9 percent of the USD670 billion retail industry in India belongs to organized retail sector"².

In United States of America with increase in the pace of online sales, delivery warehouses are adding more inventories; the supply chain of E-commerce has resulted in multiple increases in the overall job growth in American context. The upsurge in E-commerce growth is a prime source of generation of jobs for the children of the employees of steel mills who lost their jobs because of closure of steel mills in Bethlehem and Pennsylvania. The job opportunities created due to the progress of E-commerce are relatively sustainable and generates higher income as compared to retail sector. It is important to emphasize here that the E-commerce warehouses require more land at a marginal price and better logistics than the impoverished Pennsylvania,

Appalachia, Tennessee, Kentucky, and rural Indiana. As a result the employment opportunity in the country has significantly increased. Walmart has two huge facilities in Bethlehem. Amazon logistics warehouses have created jobs, and helped to overcome the unemployment created in brick-and-mortar model.

Michael Mandel, The New York Times reporter (2017); quoted, since 2007 the E-commerce jobs and E-commerce companies in the well developed economies like USA created enormous job opportunities that has helped the economy to overcome the loss in jobs mainly from the brick-and-mortar retail market. It is emphasized that the unemployment rate for Missouri, Michigan, Illinois, Minnesota, Nebraska, Indiana, Ohio Iowa, Kansas, and Wisconsin had reduced to four percent from almost ten percent in the year 2009.

At the Pennsylvania warehouses human resource policy norms the workers gets health insurance benefits as per the policy norms of the government. The average income of the warehouse worker is estimated to be USD 14.46 per hour, compared to retail sector worker with USD12.67. In off line retail sector the participation of African-Americans and Hispanics is less than their ratio in the overall population. E-commerce in US has helped to reduce the racial imbalance in job creation.

3.1 China and its E-commerce Growth

As per the reports quoted below³, China overtook the digital technologies dissemination in 2013 and beat the US. In financial year 2017, China's with almost seven hundred and fifty million people that is fifty five percent population had access to internet services. In the year 2017, the online retail market in China has been expected to achieve twenty five percent growth rate, from the current growth rate of seventeen percent³.

This phenomenal growth of E-commerce exponentially has benefitted the country to strengthen its value-added services such as insurance, supply chain, security services and consumer finance. It is worth to know that rural people have been benefitted with adoption of E-commerce services by urban consumers.

As already laid down principle that the E-commerce market in the country are characterized by four main themes or growth waves comprising of online delivery channel technological advancement to facilitate consumer purchase transactions, with the growth of online payment channels, creation of an efficient digital ecosystem by

developing a strategic partnership between social media platforms and search engines, to enhance value-added services in the country⁴.

The online retail market of the country is expected to take over US and Japanese market with a growth rate of ten percent with a valuation of USD 713 billion and a compound annual growth rate of 8.5 percent in 2022.⁵

3.2 E-commerce Growth in Malaysia

E-commerce market in Malaysia has been benefitted due to the attention and support from the government. Increase in per capita income and increase in access to Smartphone and internet has significantly contributed to the growth of country's online market. People have started availing electronic travel services and this has benefitted the business-to-consumer (B2C) market in the country.

In a further study it is seen that the people of Malaysia prefer to buy online goods and services from South Korea, Singapore, the United States, and Japan. There is a huge preference of online products buying in the food and health items being 4 percent, Electronics being 7 percent, basic necessities as 39 percent, fashion and accessories as 23 percent, home appliances being 7 percent and of the unique items being 20 percent.⁶ This change in purchase pattern has benefitted small and medium enterprises in the country.⁷ The government is making an attempt to overcome infrastructure bottlenecks, higher logistics costs, constraints of supply chain, threat to online financial transactions, and lack of favorable investment climate in the country to facilitate E-commerce growth in the country. The removal of bottlenecks can help the country to achieve higher net disposable income of the people with improvement in accessibility to internet services and the promotion of mobile devices in the country.

3.3 Growth of E-commerce in Indonesia

E-commerce market growth in Indonesia has increased nearly eight-fold between 2017 and 2022. It is estimated by various studies that in 2017 the country's E-commerce market gross merchandise value (GMV) of goods and services purchased was at USD 8 billion. In 2017 country had only about 30 million online shoppers, comprising 15 percent of its total adult population of 195 million individuals. Further by numerous studies it is estimated that by the year 2022 the gross merchandise value will reach USD 40 billion and USD 25 billion respectively courtesy the social media platforms *viz.* Instagram, Facebook etc.

The contributory factors for rapid growth of E-commerce in Indonesia are continuous increase in smart phone and internet penetration of increasing number of people, strong macroeconomic growth factors like purchasing power and adaptability to new technologies show the desired results go growth in positive direction. Needless to say that for the sustainable E-commerce growth the government has to reduce the logistics costs, remove infrastructure bottlenecks, strengthen non-cash payment infrastructure system, create seamless, secured, and scalable payment opportunities for the citizens of the country. The policy initiative needs to enhance the nation's talent pool by creating favorable business environment for foreign investment in the country.

These factors have made a leap forward in the Indonesia E-commerce markets. More growth is foreseen in the future years. In fact currently the ecommerce hovers around 5 percent of country's total retail sales will be expected to be 17-30 percent shortly in next five years. Enormous job potential is envisaged from this.

By the year 2022, online commerce could directly or indirectly support up to 26 million full-time-equivalent jobs, representing around 20 percent of Indonesia's total workforce⁸.

3.4 E-commerce Growth in South Korea

Even the Korea speaks volumes on the growth of E-commerce. The main niche E-commerce is a key component of the overall consumer market in Korea. This country has 99.2 percent of households who have access to internet even by PCs, Tablets, and Mobile phones etc.

It is proven in studies that the domestic online purchases, including purchases of PCs and mobile phones, reached USD 69.2 billion in 2017 as compared to USD 55.9 billion in 2016

It is well accorded by researchers that South Korea has also witnessed phenomenal growth in E-commerce sales from USD 69.2 billion as in 2017, Travel and reservation outweighed all making up to 16.5 percent of the total sales. Apart from this the cosmetics sales had a major growth rate of 46.7 percent. Food and beverage grew by 29.5 percent and home appliances by 21.9 percent.

Primarily in the Business to Government (B2G) E-commerce, Korea out performed by using the On-Line E-procurement System (KONEPS) to quote that in 2015, 48,000 public organizations and 320,000 companies were registered on this system with a total volume of business at USD 42 billion. Depiction on the site has shown that more than 60 percent of Korea's public procurement market, which is about USD 105 billion and is recognized for its high standards by the UN and OECD.

To add on to this the credit card business has galloped phenomenally more through the Personal computers and mobile apps. The next preferred method is by debit card and account transfer (for both Internet and mobile banking service).

With the continuous growth of online shopping, electronic payment services via Personal Computer and mobile are increasing. Mobile E-commerce is the main driver of the explosive E-commerce growth. While online shopping grew by 19.2 percent in 2017, mobile E-commerce increased by 34.6 percent. Purchases from mobile platforms make up 61.1 percent of the total market value.

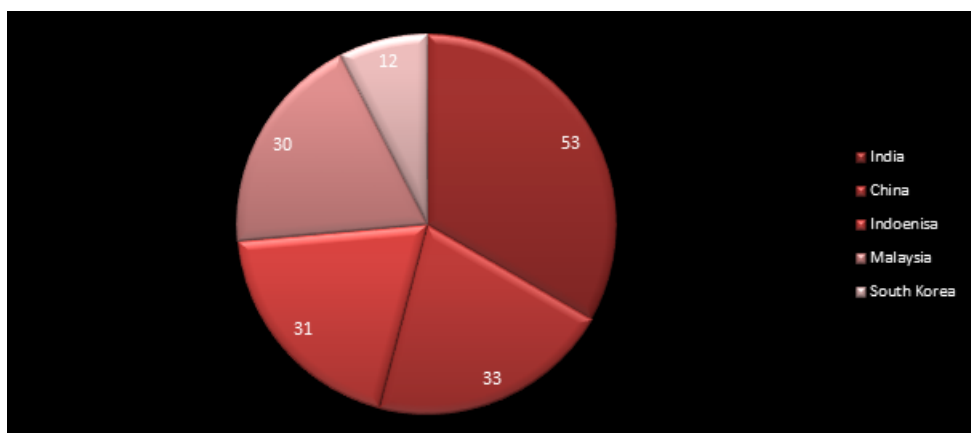


Figure 1. CAGR Growth Percentage of Retail E-Commerce in Developing Countries (2013-17).

Source: Authors' Compilation based on the report by Bain & Company (Nov 2018).

The above (figure 1) depicts the compounded annual growth percentage of retail E-commerce in India, China, Indonesia, Malaysia and South Korea. Since the year 2013 to 2017, the compounded annual growth rate of retail E-commerce in India is at 53 percent followed by China at 33 percent, Indonesia at 31 percent and Malaysia at 30 percent but South Korea with marginal increase of 12 percent.

4. E-commerce Growth in India

In Indian context E-commerce industrial expansion is expected to reach USD 125-150 billion by financial year 2020. In the year 2018 more than 500 million active internet users were recorded, and almost twenty percent of them have shopped online and it is estimated to be thirty two percent by 2022⁹.

Increase in online expenditure by consumers has attracted continuous increase in investments into the E-commerce sector with equity and venture capital investment of USD 2.1 billion and USD 1.12 billion during 2017 and 2018 respectively¹⁰. The new foreign direct investment guidelines that came into effect in the year 2019 have contributed positively to the expansion of E-commerce players like Walmart and Amazon in India. December 2018, with further relaxation of foreign direct investment norms for the E-commerce firms have given opportunities to domestic players to expand and sustain. The international players cannot sell their own products on their platform beyond a threshold limit to restrict monopoly in the market.

The constraints faced by E-commerce platforms in urban India, has not restricted the growth of retail and

financial transactions as well as employment growth among urban youth. The E-commerce sector in India with technological advancement and digital literacy is expected to create retail online market of more than USD 103 billion by 2020 with a compounded annual growth rate of forty one percent. It is expected that the consistent growth in this segment is expected to generate business of worth USD 68.8 billion. As depicted in (figure 2), the number of urban youth employed in leading E-commerce firms by March 2019 was 67,682 and it is expected the online seller base will increase to more than one million by 2020 with creation of more than ten million additional jobs in the country¹¹.

The growth of the retail E-commerce sector is an outcome of approximately 70 percent of the online sellers who are majorly from smaller towns, in other words; E-commerce is also creating a noticeable socio-economic impact by reaching interiors of the country.

The government through Skill India initiative is trying to reduce the gap between skill acquired by youth and skill required by industry through imparting knowledge and skill to people and achieve the target of 40 crore by 2022, with over 73 development programs focused on multiple sectors, emphasizing training and job placement.

The idea is to equip the youth with the right opportunities by generating a productive workforce capable of meeting the demands of local, national and global industries. Apart from this, training need to be provided to boost interpersonal, technical and critical thinking skills and meet the growing demand of E-commerce sector in India¹².

The government of India on 23rd February 2019 has released a draft national E-commerce policy to

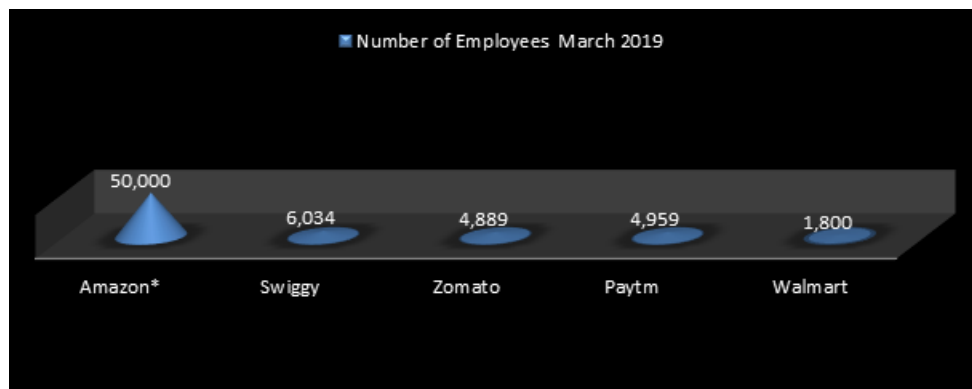


Figure 2. E-Commerce Firms and Job Creation in Urban India.

Source: Authors' Compilation.

strengthen the legal and technological ecosystem of E-commerce business in India with an objective to protect the E-commerce data from its misuse through cross border data flow as well as to create platform to develop infrastructure for E-commerce marketplaces and stimulate domestic digital economy with promotion of export of products and services through E-commerce and become the part of global value chain.

4.1 Draft E-commerce Policy of Government of India

Certain conditions as laid down in draft E-commerce policy are mandatory. An entity has to possess or collect data and store it abroad based on sensitivity. It is peculiar and pertains to a specific company. These data cannot be shared or available to third party or to a foreign entity without the permission of Government authority's. The policy encourages Foreign Direct Investment in market place model on a monopoly. Examples to this are Flipkart and Amazon. Moreover the ownership cannot be sold on its platform. It will restrict the small player's online mode of Purchases. It enlists certain steps, which has to be followed by all E-commerce websites/applications. Compliances have to make as per the laws, policies and regulations. This obviates the fraudulent methodologies and keeps the data private, secure and reliable. The contraventions on prohibitions, restrictions to pirated content still prevail. An increase to the existing limit of ₹25,000 to make Indian E-commerce exports attractive even for high-value shipments through courier mode is in pipeline.

Robust digital Economy is necessary for the safety and storage of data and infrastructure be made available

for that is in anvil. Job creation, opportunities germinate with the revenue generation and are not a limiting factor. Marginal effect is seen in these in the rural India. With the E-commerce opportunities even the urban consumers are benefitted. So, there is a dire need for a revamp of policies and greater focus be made on the Rural Youth programme, employment generation in this digitalization world.

4.2 Rural India and Digitalization

Mobile affordability in rural India as an information device has created growth path for E-commerce as a new way of conducting business. It has the potential to radically alter economic activities and the social environment and significantly contribute to the growth of telecommunications, finance, retail, international trade, education, health and effective execution of government welfare policy measures. At present rural E-commerce in India is in nascent stage but it has an immense potential to support the 850 million people living in 600,000 villages and 4738 towns of India.

The promotion of E-commerce in rural India will make ease access to better quality goods and services to rural people as well as development of infrastructure, strengthening of supply chain with access to financial, health, education and entertainment services at their door steps. India's rural FMCG market is expected to reach a size of USD 100 billion by 2025 and the annual real income per household in rural India is going to rise to 3.6 per cent by 2025, from 2.8 per cent in the last 20 years. Over the last few years in rural India, the consumption of smart phone users has increased as a means of communication and transfer of information. Figure 3, depicts the potential

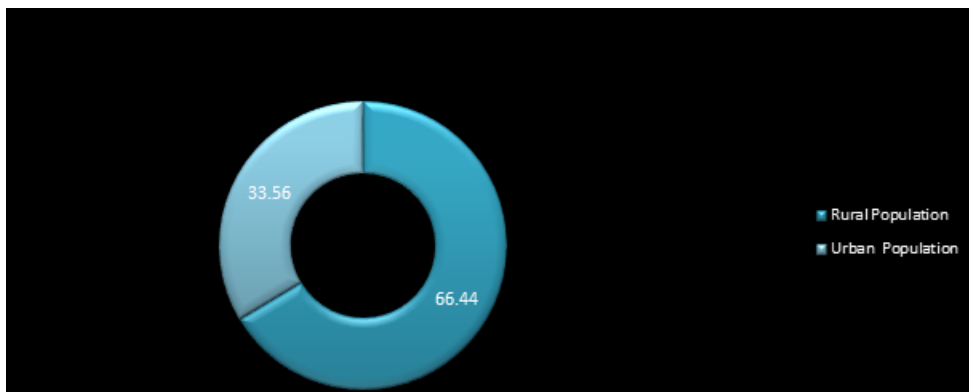


Figure 3. India's Population Residing in Urban and Rural India.

Source: Authors' Compilation.

of rural E-commerce with 66.4% of the total population of 1.34 billion of India (2017) residing in rural India and is forecasted to increase by 0.6% by 2020¹³.

In the year 2017, 109 million users (39% of all smart phone users in India) owned smart phones in rural India; this is likely to increase owing to fall in the prices of smart phone. The significant contributory factor to increase in E-commerce penetration has been decrease in average selling price (ASP) of smart phones from USD 131 in 2015 to USD 112 in 2020. Also, the government's Digital India program is further enabling internet penetration, which is expected to grow from 25% in 2016 to 55% by 2025. The data tariffs plummeted by 97% in 2017 after the launch of JIO thereby has further, increased the data consumption. At present, 86% of urban users and 87% of rural users consider mobile as the primary device for accessing the internet, largely driven by availability and affordability of smart phones¹⁴. The (figure 4) shows that the rural internet penetration in India is still at 18% despite of 66.4% of India's population residing in rural India. It can be concluded that there is immense scope of rural employment and growth of rural economy with internet penetration in rural India.

5. Employment in Rural India

Government of India through its policy measures can facilitate the transmission of knowledge for the use of new technologies to expand job search networks for youth in the rural India. The major challenge is to reduce the knowledge gaps between supply and demand of labour in E-commerce industry in India. The performance based and effective labour policy in collaboration with rural youth and private sector can improve the efficiency of labour market functioning in rural India.

The rural youth employment in E-commerce depends on three dimensions;

- (a) Demand for Labour,
- (b) Supply of Labour and
- (c) Labour Market Functioning

The labour demand depends on the growth and prospects of E-commerce industry and its contribution in development of rural economy. The supply of labour for E-commerce industry depends on support system to acquire soft skills related to marketing and Information Technology (IT) services. The effective skill acquisition depends on support system of coaching and mentoring and access to qualitative information. The labour market efficiency will depend on initiatives taken by central and state government in collaboration with Fintech and E-commerce companies to link various stakeholders of E-commerce industry through ease of credit facility, promotion of employment exchange services and business development services. The spillover effect of youth employment in rural India will be reflected through social and political stability and well-being of future generations. The contribution of rural workforce in net domestic product of the country is depicted in table 1.

Table 1 depicts that the Rural workforce engaged in agriculture as a principal activity has declined from 96.8 per cent in 1970-1971 to 95.9 per cent in 2011-2012, while the proportion of rural workforce engaged in manufacturing as a subsidiary activity has decreased from 51.5 per cent in 1970-1971 to 47.4 per cent in 2011-2012 and marginally increased in construction from 64.6 per cent in 1970-1971 to 74.6 per cent in 2011-2012. The non-agriculture employment has increased from 47.3 percent in 1970-1971 to 48.7 per cent in 2011-2012. This implies that there was the loss of jobs for people who



Figure 4. Rural - Urban Internet Penetration in India.

Source: Authors' Compilation.

Table 1. The Sectoral Employment and Contribution in Net Domestic Product of Rural Workforce

Year	Agriculture		Manufacturing		Construction		Services		Non-agriculture	
	EMP	NDP	EMP	NDP	EMP	NDP	EMP	NDP	EMP	NDP
1971	96.8	96.2	51.5	25.8	64.6	43.2	42.1	32.8	47.3	32.4
1981	95.9	94.9	48.1	31.8	58.8	45.6	41.7	34.0	44.9	35.0
1994	95.8	93.9	51.3	29.8	57.2	45.1	42.3	33.6	46.6	34.8
2000	96.6	93.2	51.5	41.6	57.6	43.3	40.7	27.1	45.8	31.8
2005	96.1	94.1	49.6	42.5	64.4	45.5	41.9	32.7	47.2	36.7
2012	95.9	95.1	47.4	51.3	74.6	48.7	39.6	25.9	48.7	35.3

Note: EMP - Employment, NDP - Net Domestic Product

Source: Data from Niti Aayog Report 2017²⁰.

were engaged in manufacturing. The lack of skills and technical knowledge is the biggest constraint for rural workers to get employment in manufacturing sector.

The National Sample Survey (NSS) organization in the year 2011-12 have found that 75 percent of the total rural workforce of 15-59 years were not eligible even up to secondary level, only 1.3 per cent of them possessed technical education. Similarly, only 14.6 per cent of the rural workforce of age group 15-59 years received vocational trainings, to gain competency in knowledge, skills and attitude to work in industry and be contributory in value chain of the country. On the other hand, there has been a 24 per cent increase in the number of female agricultural labourers between 2001 and 2011, from 49.5 million to 61.6 million. Nearly 98 million Indian women have agricultural jobs, but around 63 per cent of them are agricultural laborers, dependent on the farms of others. With mechanization of agriculture but lack of skill has resulted in confinement of women to traditional roles such as winnowing, harvesting, sowing seeds and rearing livestock, with a lower wage rate. This widens the economic disparity in rural household and hinders economic growth rate¹⁵. The rural E-commerce can provide the platform to women in rural areas to sell their farm and non-farm goods online and could improve their wage earnings and quality of life. But this would only be possible with collaborative strategic planning of government, corporate and people of rural India.

6. Startup and Rural E-commerce

The startup rural E-commerce firms; Storeking and Vakrangee have become vehicles for larger E-commerce companies to have access to rural India. Vakrangee, a

publicly listed company at present runs 26,000 stores across 16 states and Store King operates in 10 states with 55,000 retail outlets where customers can access its app¹⁶.

But rural India with just 17 percent internet penetration, is lagging behind in connectivity owing to challenges in deployment of fixed broadband networks.¹⁷

It is worth to note that E-commerce ecosystem comprising of sellers, merchants and SMEs, other players like Marketers and Payment Solutions Providers, E-commerce Companies, Logistics Players, IT/ITeS Organizations with government initiatives of Make in India, Digital India, Start-up India, Skill India will have positive socio-economic impact on traditional artists resurgence, rural-upliftment, women empowerment and return of talent with increase in rural income.

6.1 Challenges in Rural E-commerce

Infrastructure continues to be a challenge in rural India. Moreover, the lack of an efficient distribution network prevents penetration of products/services into rural India. One of the most innovative models in recent times has been the usage of the postal service by mobile operators to penetrate scratch cards to the villages. The majority of the rural population is still unbanked hence it is difficult to reach rural areas. Though it is easier to collect in larger amounts as every instance of collection and carrying of cash has associated costs. Disposable income in rural India is not high since the major population of rural India is dependent on agriculture income and, agricultural income cycles are very erratic and not as predictable as in the case of the urban Indian population.

The biggest challenge for rural E-commerce companies in retail segment is to work on the marketplace concept; they don't hold inventories; the whole deal, from

the warehouse of the brand to the rural E-commerce company's hub to the regional depot of the affiliate and finally the delivery to the village may take more than a week at times. Villagers, however, are often willing to wait because they trust the local retailer. To deliver goods and services in villages is a challenging task for firms as the houses in villages have no address as such but simply a closest landmark is the only identification. The product could also be for a consumer who has no unique identity of his /her in a village. The distance from the local hub to the village could be anywhere between 30-70 km.

The biggest challenge to embrace digital transformation in rural India is the lack of digital learning infrastructure. Digital literacy drive in rural India can be enhanced by creating a digital environment for rural local youth to make them understand the immense benefit of E-commerce firms in rural market for rural consumers to achieve higher market share and improve quality of life.

6.2 Scope of Rural E-commerce

Technological advancement, inclusive agriculture, rural growth and structural transformation from agriculture to high-productivity manufacturing and accelerated growth of other economic sectors can transform individuals' lives and enables Indian economy to progress at speeds and on scales. To realize the positive outcomes of this new industrial revolution, public policymaking must bridge the already widening gap between skilled and unskilled labour. The Government of India (GOI) is confronting these challenges through its Digital India Programme.

The Indian government is working to transform the country's rural economy through creation of skilled jobs in rural areas. But for the 156 million rural households, the government has to invest in transportation, power, and internet accessibility to create more employment for women and youth in rural areas.

Exploring the untapped 55% rural internet penetration (Figure 5) can increase operational efficiency of agricultural sector and non-farm income of the farmers in rural India. The agricultural sector through public and private partnership, E-commerce and mobile network can gain plethora of information on cropping patterns and soil conditions to increase farm yields. It can also be beneficial for retail and hyper markets to gain real-time information on crops from farmers across India. The government of India can give advice on cropping, fertilizer use, and market linkages and supply farm products to retail companies and hyper markets at good price. The biggest challenge for government is to overcome the untapped rural internet penetration, since internet is a prerequisite of promotion of E-commerce in the country.

As per the source of Digital Advancement by Rural Post Office for a new India with Core Banking Solution various sectoral schemes have been launched on behalf of the state and Central Government. Through these schemes the post offices in the rural areas will be provided with a hand held device enabled with biometric identification and Micro ATM functionality to perform various financial and postal transactions. This will involve digitization and networking of all branch post offices of the department. The objective is to provide a technology

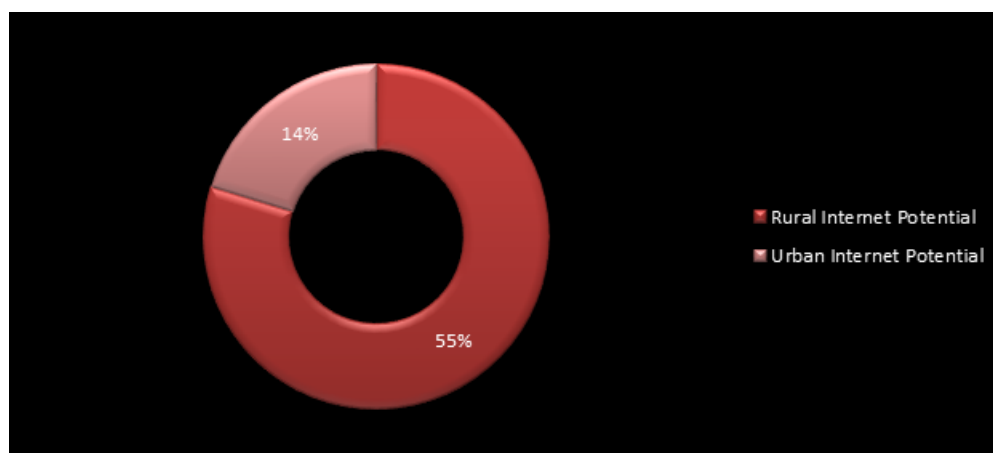


Figure 5. Untapped Rural and Urban Internet Penetration.

Source: Authors' Compilation.

solution which will enable each of the 1.29 lakh Branch Post Offices (BOs) to improve the quality of financial and other postal services being offered to the rural customers. This Scheme is also called in short DARPAN. DARPAN will facilitate the remittances, opening of savings accounts and also enrolment of various Life Policies. As on 17th January, 2018, 51361 branch post offices have been covered under DARPAN¹⁸.

Though the E-commerce is growing at a fast pace yet the retailing channels are suffering despite vast demand by the rural consumers. Convergence to other platforms is a big challenge indeed. In this era of increased TV home shopping, mobile shopping by familiar and popular platforms the consumer is satisfied only when reviews, pricing is up to their satisfaction E-tailing can be done thus with ease, compatibility and efficiency.

7. Conclusion

In India, the non-agriculture labour constitutes nearly 75 per cent of rural workers who are engaged in the unorganized sector, out of which 85 per cent have no job contract. Majority of workers in India have to work to survive, even though it may generate an income that is below subsistence level. The unorganized sector contributes almost 50 per cent of the national income. Small and medium enterprises contribute an estimated 8-9 per cent of GDP, providing employment to a vast majority of the workforce in the informal economy while representing more than 60 million jobs. Almost 75 percent of rural workers have no jobs as well as more than 64 percent population residing in rural India lacks access to the internet, explains the potential of rural E-commerce and gives an immense opportunity to all stakeholders of E-commerce to create an ecosystem of E-commerce in rural India (ILO, 2015)¹⁹.

In the age of “data as oil”, artificial intelligence, advent of robotics; the financial, retail and postal services through e-platform can transform rural India. In India we have more than 1,55,000 post offices in the remote areas well connected to deliver the goods to the customers, irrespective of the far-flung locations. The initiative of postal department of India to implement DARPAN will increase the rural reach of the postal department and enable branch post offices to increase transaction of financial remittances, opening of savings accounts and procurement of Rural Postal Life Insurance (RPLI) Policies. It is a welcoming scenario where E-commerce

industries are involved in helping our country to become digital through logistics channel. The rural E-commerce platforms will explore the option of having their own delivery system for remote locations, or they may use third party services like the postal services and other small agencies. However, there is also the need to understand the challenges of selling to the consumers who lack tech-savvy approaches and may not really be comfortable with the concept of making payments online. The best approach is to focus on the parameters such as a simple design, intuitive navigation, secure payments, and seamless experiences irrespective of the connectivity-related challenges. Additionally, they should also work on strengthening the operational aspects of the business in rural India by training rural youth to become the mainstream contributor in E-commerce development for agro, allied, health, education, retail and financial services for social protection of rural youth.

8. Recommendations

While recognizing the enormous challenges that rural areas face, which must be tackled with a comprehensive set of policies, the research proposal focuses on instruments for achieving a productive transformation to well defined rural E-commerce policy. As part of this policy, States should adopt instruments for strengthening productive activities in rural areas, in order to bring about a structural change through creating an ecosystem for facilitating linkage between agriculture, manufacturing and services with adding value to rural economy. Rural E-commerce can enhance existing productive capacities of rural India by linking secondary (such as agribusiness and handicrafts) and tertiary activities (such as technical and social education, skill development, female participation, rural tourism, consumer goods, financial services and insurance services). In order to achieve inclusive and resilient growth the implementation of exclusive rural e-commerce policy with new participatory instruments of data, technology, people and profit and involvement of the government, private sector and academic institutions is must. The PHD chamber of Commerce proposes the following measures to enhance the quality of life of rural India through technological adoption by rural people for rural people:

1. To have the long range internet connectivity in the low density non-farm areas. This will reduce the cost of

- goods and lower the transaction costs. The rural youth have to be trained in terms of internet connectivity.
2. To give adequate training to rural youth emphasizing the Fintech companies, financial inclusion and have online portals in their vernacular language. New platforms created will attract the customers according to their niche areas, demographics, preferences etc.
 3. To have links between the small traders, producers and synchronize accordingly. Emphasis is on making the youth as Brand ambassadors.
 4. To devise means of high value transactions in International markets by being monopolistic and offer innovative services. New products devised are uploaded and constant updating be made.
 5. To give a Buyer decisive model having a command on the prices and modalities of delivery value chains, Incentives , subsidies and tax benefits will nudge the corporate
 6. To devise major procedures and policies beyond the agro reforms by increasing the farm income, majorly the profits be capitalised. International affiliations are also ventured.
 7. To encourage the s small players in the rural areas to achieve both economies of scale and scope in a holistic manner. Bargaining power in the Co-operative sector and producing organisations be focussed areas. Export and its marketing, agribusiness, traders will be the buzzword in the E- commerce world. In this ways there will be a link between the Co-operatives Vis a Vis with the farmers and retailers.
 8. To take the benefits of infrastructure Public Private Partnership model, financing from banks and financial Institutions and overcome the challenges faced in E-commerce business. The government should open more of corridors for Foreign Direct Investments and remove the barriers in setting up the digital infrastructure in rural masses. Optimal utilisation of resources vis-a-vis with the resources, investments be offered to achieve the digital transformation.

9. References

1. Source: <https://www.care.org/newsroom/annual-reports> accessed on June 28, 2020
2. Source: <https://www.care.org/newsroom/annual-reportsas> accessed by authors dated 28 June, 2020
3. Source: <https://www.pwc.nl/nl/assets/documents/pwc-annual-report-2017-2018.pdf> as accessed on 28 June 2020
4. Source: 2018 Report the 'E-commerce in China: Trends and Outlook for the Largest E-Commerce Market in the World'. <https://www.forrester.com/report/eCommerce+In+China+Trends+And+Outlook+For+The+Largest+eComm+Market+In+The+World/-/E-RES143994>
5. Source: <https://www.pwc.in/consulting/financial-services/fintech/fintech-insights/the-continued-momentum-of-e-commerce-growth-in-china.html><https://www.pwc.in/>
6. Source: <https://www.fitchratings.com/Fitch-report-2018>
7. Source: <https://www.export.gov/article?id=Malaysia-E-Commerce><https://www.trade.gov/knowledge-product/exporting-malaysia-market-overview?section-nav=2162>
8. Source: <https://www.mckinsey.com/~media/mckinsey/featured%20insights/asia%20pacific/the%20digital%20archipelago%20how%20online%20commerce%20is%20driving%20i>
9. Source: <https://www.ibef.org/industry/ecommerce.aspx>
10. Source: <https://www.careratings.com/>
11. Source: <https://assets.kpmg/content/dam/kpmg/in/pdf/2016/12/impact-of-ecommerce-on-employment-in-india.pdf>
12. Market research firm Nielsen Report 2018 and McKinsey Global Institute forecasts 2018. [mckinsey.com/~media/McKinsey/Industries/Retail/Our%20Insights/Perspectives%20on%20retail%20and%20consumer%20goods%20Number%207/Perspectives-on-Retail-and-Consumer-Goods_Issue-7.ashx](https://www.mckinsey.com/~media/McKinsey/Industries/Retail/Our%20Insights/Perspectives%20on%20retail%20and%20consumer%20goods%20Number%207/Perspectives-on-Retail-and-Consumer-Goods_Issue-7.ashx)
13. World Bank Report 2017. <https://openknowledge.worldbank.org/handle/10986/27986>
14. Source: Compiled by PHD Chambers of Commerce; Rural E-commerce: The Untapped Potential EY Report 2018.
15. Source: <https://www.censusindia.gov.in/2011Census/pes/Pesreport.pdf>
16. Source: <http://storeking.in>
17. Source: <https://www2.deloitte.com/content/dam/Deloitte/in/Documents/technology-media-telecommunications/int-tmt-predictions-2018-noexp.pdf>
18. Source: https://www.indiapost.gov.in/VAS/DOP_PDFFiles/Post_AR_English_2017-18.pdf Annual Report 2017-18
19. Source: https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_627189/lang-en/index.htm
20. Ramesh Chand, S. K. Srivastava and Jaspal Singh. (2017). Discussion Paper, "Changing Structure of Rural Economy of India Implications for Employment and Growth". National Institution for Transforming India, NITI Aayog November, 2017. pp.4 https://niti.gov.in/writereaddata/files/document_publication/Rural_Economy_DP_final.pdf