Is India's **services sector** *induced growth* **sustainable**? *How is this country's development trajectory* **unique**?

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Grade 10/2

Contents

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Introduction

This report will investigate the sustainability of economic growth due to changes in India's employment structures. It will specifically focus on whether the growth driven by India's services (tertiary) sector is sustainable and how it has helped India achieve its current economic status, and briefly look at the contribution of India's IT sector to its economic progress. It will discuss whether or not India's increasing dependence on its tertiary sector is viable. The report will also highlight reform measures that will enable the services sector not only to grow at a faster pace but also create more employment and attract investments. It will also be drawing comparisons between each India's path and the universal route to achieve economic growth, and how in India's trajectory, a different employment structure enabled development and growth. The report will also elucidate the country's placement in Rostow's model.

I have mainly chosen India as I find its economic history extremely fascinating. Its path to achieving its current strong economic status has been astonishingly divergent from that of other South Asian counties and challenges the western route to development. I also have a personal interest in learning in more depth about my country's employment sectors and how its industries have played a role in its development. I will also discuss China's contrasting trajectory very briefly. China is the world's largest manufacturing economy and exporter of goods. China's economic importance has massively grown in the past two decades, hence I am intrigued to find out how it became the economic powerhouse it is today and the contributions that its manufacturing sector has made to its economy.

This report will be focusing on the role of India's tertiary sector and assess truly how sustainable the growth actuated by the sector is in the long run and whether or not this rapid growth is beneficial for India's economic future. I have chosen this particular sector as it is highly important for us as aspiring economists to not only understand the role of certain employment sectors and their growth and role in the economy but also analyse their concomitance to predict future economic patterns and find ways in which the growth of these sectors can be optimised or improved to be more serviceable and financially rewarding. This research question is highly relevant as it also answers various other questions pertaining to India's economy, such as, 'what other sectors should India expand?' and 'whether India does need an industrial revolution?' On a larger scale, it will aid me in establishing what is the most effective path for a country to achieve its economic potential and which sectors should developing countries like India invest in.

Overview : The Indian economy

India is a newly emerging economy and its financial system is often characterised as a developing market, which indicates that it is constantly progressing and has outpaced its developing counterparts and is competing with an economic highflier like the US. In recent times, its economy has taken big strides towards economic development. India's economy has attained the title of the world's fastest-growing economy in 2018, with promising economic growth forecasts that predict an increase in GDP growth rates, from 7.1% in 2016 to 7.8% in 2019 as shown by figure 1. 'The

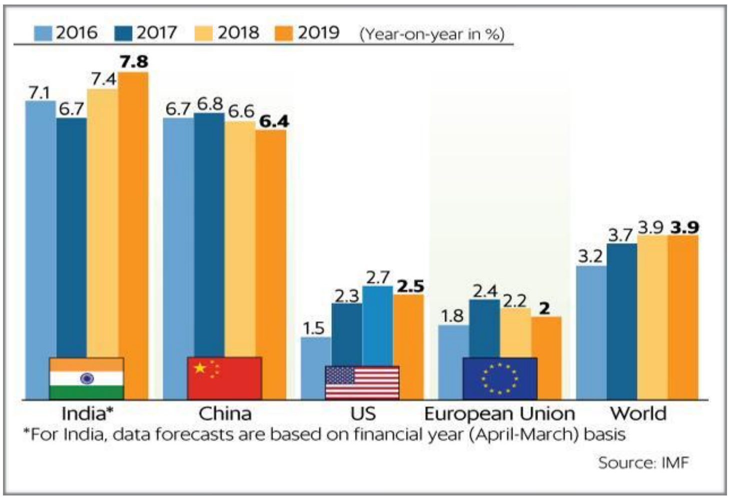


Figure 1: GDP growth rates of growing markets for years 2016-2019

World Bank has stated that private investments in India are expected to grow by 8.8 % in FY 2018-19 to overtake private consumption growth of 7.4 %, and thereby drive the growth in India's gross domestic product in FY 2018-19'[1]. Given that private investment will supersede consumption, economic development is bound to happen. India's trade has also ameliorated with 'exports increasing 4.32 per cent year-on-year to US$ 92.33 billion in April-May 2019'[2].

The immense growth India has experienced in the past five years has been a result of its stable government, strong international relations, and favourable demographic dividend. India differs from many countries in its route to diversify and improve its economy. It shifted from agriculture to services and expanded its tertiary sector instead of its secondary sector, as the manufacturing industry is often tightly regulated and requires more time to show financial benefits. During 2014–

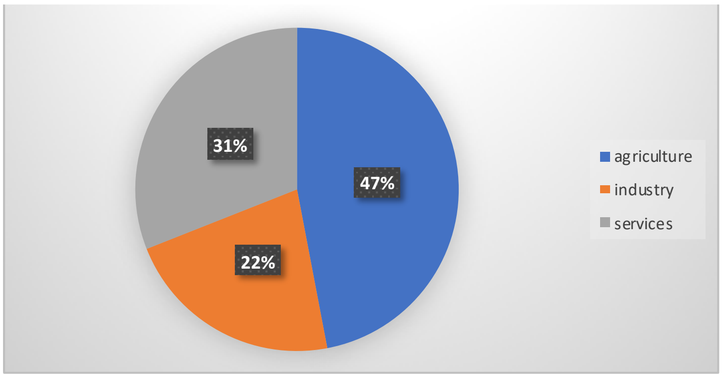


Figure 2: India's labour force by occupation

[1] *https://www.ibef.org/economy/indian-economy-overview*

[2] *- same as above-*

15, India's services sector grew by 10.1%, manufacturing sector by 7.1%, and agriculture by 0.2%. Despite this, as seen in figure 2, the Indian labour force still comprises mainly of the agriculture sector with 47% of occupation in that sector, followed by 31% in services and 22% in the manufacturing sector. That being said, the Indian economy still contains many emerging manufacturing giants with brands like Maruti Suzuki leading the automobile industry. These brands are employment-intensive and have been drivers of economic growth in India for the past two decades. During April-September 2018, 'Gross value added [the measure of the value of goods and services produced in an area, industry or sector of an economy[3]] from the manufacturing sector grew 14.8% year-on-year to US$ 198.05 billion'[4]. Evidently, the manufacturing sector has emerged as a sector characterised by dynamic growth in India and the government has also implemented initiatives to encourage this to continue. On 25th September 2015, Indian Prime minister Modi launched the 'Make in India' campaign through which the government intended to increase the contribution of the manufacturing sector to the GDP to 25 percent by 2022, which would birth new employment opportunities, creating approximately 100 million new jobs by 2022.

Policy support through stratagems like this, positive business conditions, and growing investments (with 10.4% increase in gross fixed capital formation) have enabled India to become a global manufacturing hub. India is globally reputed as one of the largest manufacturing countries. India's huge demand produced by its rapidly increasing middle-class population and increasing share of youth participants in the workforce has also helped it achieve these tremendous feats. In fact, the country has displayed huge potential in the automotive industry. Figure 3 states that India was

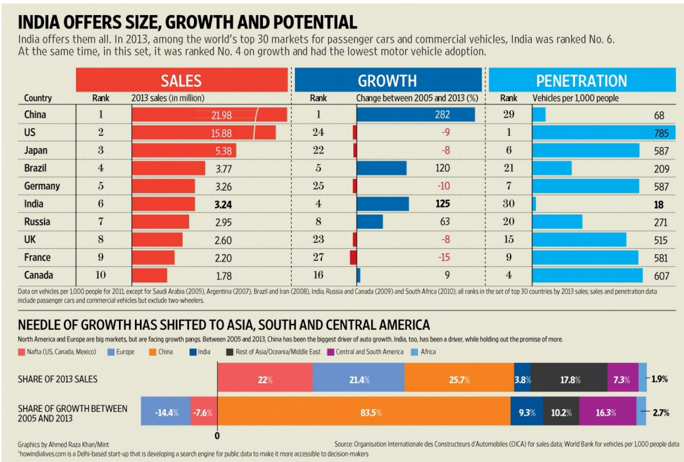


Figure 3: Growth and share of countries in global shares of the automobile industry (2013)

ranked 6th amongst the world's top 30 markets for passenger seats and commercial vehicles in 2016 and has also been a driver of auto-growth with a 9.3% share of global growth between 2015 and

[3] *https://en.wikipedia.org/wiki/Gross_value_added*

[4] *https://www.ibef.org/industry/manufacturing-sector-india.aspx*

2013. All this helped India regain its status as the world's fastest-growing economy in October 2018, surpassing its economic rival China as well.

How India defies Rostov's model 'Farm to frontier, not factory'

Rostow's model was created in there 1950s to display the different stages of development and the paths to achieve development. Depending on their levels of development which can be measured using different factors, a country will fall into one of 5 categories (*see figure 4)*. However, his model does not take into account the histories of other countries, especially those in Africa and South-east Asia. His model is too focused on the western ideas of development and conforms to the American norm that high mass consumption and expansion of the manufacturing sector is necessary for economic progress. His model does not apply to Asian and African countries who have proven

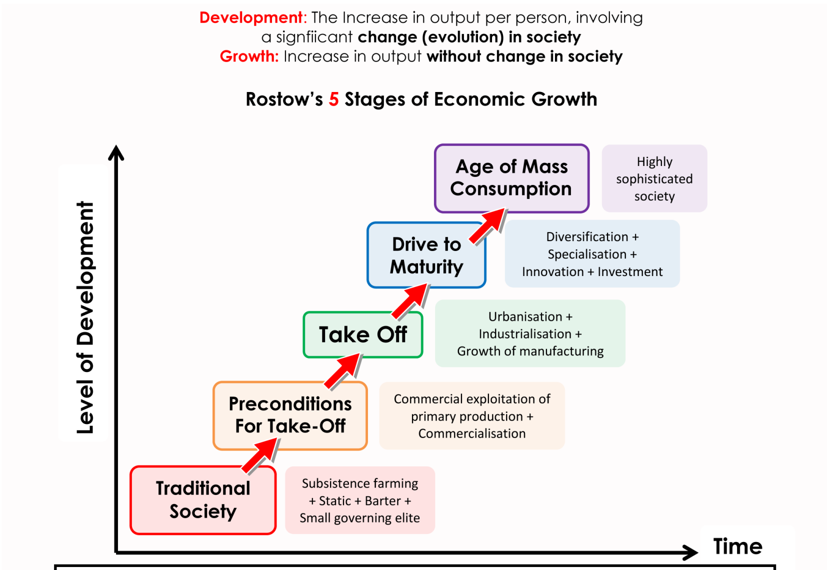


Figure 4: Rostow's 5 stages of economic growth

that the path to becoming fully developed does not always require urbanisation and can be achieved through local efforts as well such as stimulating the Economy With Deregulation or more simply spending money on infrastructure and direct it to 'build or repair the physical structures and facilities needed for commerce and society as a whole to thrive'. This is why 'India is a difficult country to place on the model, due to its many regional variations. However, as a nation, it would probably be currently placed somewhere between stages 3 and 4'[5].

Stage 3, take off, is characterised by dynamic economic growth. It involves the rapid spread of industrialisation as well as the transition of a society's provincial landscape to an urban and streamlined one following advances in agriculture, industry, and trade. The growth of industry promotes economic growth and higher rates of employment in the industrial sector lead to higher wages. These investments and savings are used to ameliorate people's living standards and lifestyles. There is an automatic increase in literacy rates as eduction becomes mandatory and the

[5] *https://www.bbc.co.uk/bitesize/guides/zgwm4j6/revision/2*

society witnesses improvements in healthcare which leads to higher life expectancy rates. The social and political climate becomes more progressive and technological breakthroughs occur.

In the late 1980s, 'a major shift in the macroeconomic policies accelerated the pace of the structural transformation of the Indian economy and set India on a high growth trajectory'[6]. This was India's equivalent to stage 3 as it employed an econometric method to influence technological change in its production process, which led to an increase in the elasticities of demand and supply on both production and consumption sides. High demands for services allowed the tertiary sector to expand and also created employment, and the profits generated were directed towards developing the nation.

Stage 4 is the drive to maturity. As the economy matures, the industry is diversified and technology is heavily employed. The economy is stable and growth becomes self-sustaining. The accumulation of wealth enables further investment in value-adding industries and further increases rates of development. The society undergoes a technological revolution and begins to innovate with the expansion of previous industries and the birth of newer, more profitable businesses. As a result of these technological changes, society becomes increasingly globalised and medical facilities, as well as education, are permanently established. Political freedom is granted as a society undergoes social progress and social infrastructure improves. Output levels grow, enabling increased consumer expenditure.

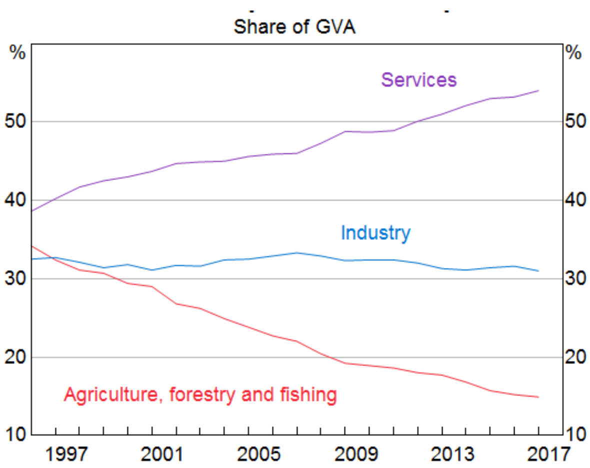


Figure 5: changes in the composition of GDP output of India's sectors

As seen by figure 5, India's output levels of services have increased by 15%, with approximately 40% in 1996 to 55% in 2017 while the output levels of agriculture have experienced a massive decline. In the past two decades, India has emerged into exactly the modern and consumerist society mentioned before, as evidenced by figure 6 which shows the increase in India's final consumer expenditure (USD) across the years. In 2000, this expenditure measured $341,457,000,000 but just under the span of two decades the number has quadrupled and reached the trillion-dollar mark at $1,609,160,000,000[7]

The main reason why India does not comply with Rostow's model and the generally accepted path to development is that it did not undergo the transition from a rural agricultural economy to an industrialised one. 'At the time of independence, the Indian economy was primarily a rural economy, with agriculture contribution for approximately 75 percent of the workforce and 55 percent of GDP'. This number has now decreased to 47% and

[6] *https://shodhganga.inflibnet.ac.in/bitstream/10603/103366/13/13_chapter%204.pdf*

[7] *https://www.indexmundi.com/facts/india/final-consumption-expenditure*

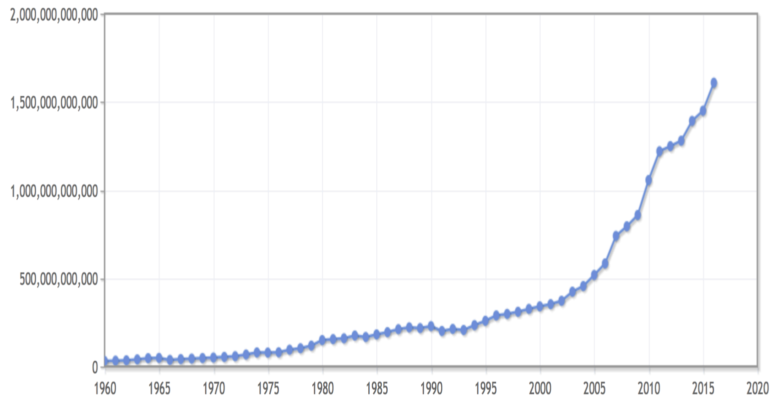


Figure 6: graph showing India’s final consumption expenditure (1960-2016)

15% respectively. This was a result of the take-off of the service sector in the mid-1970s and this is where India’s path stands out. Unlike most countries where a shift from agriculture to industries is what provides the way to economic development, India employed its strong services sector. Therefore many economists consider India an outlier among South Asian countries and other emerging markets and a harbinger of a new system: ‘the farm to frontier model’ as opposed to the ‘farm to factory model’[8].

‘It is a development model based on innovation-driven service industries that are at the global productivity frontier. These industries use technology platforms to enable workers to produce at high output levels’. In order to produce high outputs, the workers are required to be highly specialised in their field and constantly enhance their skills, which helps them attain a higher salary. The jobs in this sector indirectly stimulate other jobs as they have two sectors operating below them, increasing employment. A great example is the tourism industry in beach areas of India which are famous tourist hotspots during the summer. Travellers pay directly to airlines, car rentals, cruise lines, hotels, restaurants. These industries are supplied by outer facilities and services such as cleaning and maintenance, marketing and advertising, catering and food production, etc. This creates jobs which pay salaries and give employment to a majority of the local population. These jobs consist of hotel managers, chefs, bus drivers, lifeguards, adventure experience managers, party event managers and more, creating a multiplier effect.

‘By following this development model, India’s GDP per capita will likely increase from about $1,800 to $5,400 and overall GDP will reach about $10 trillion in the next 20 years, making it a prosperous middle-income country’. On the other hand, China followed the mercantilist approach, which means that it encouraged governmental regulation of its economy in order to promote domestic industry. The nation’s manufacturing sector comprises 52% of its GDP and employs 29% of the workforce while India’s leading sector, the services sector comprises 62% of its GDP, 10% more profitable than China’s dominating sector. The service industry is also much more sensible

[8] *https://timesofindia.indiatimes.com/blogs/toi-edit-page/farm-to-frontier-not-factory-forget-rapid-industrialisation-india-is-now-following-a-unique-new-model-to-growth/*

and abstemious in its handling and employment of natural resources, as compared to the manufacturing industry which produces megatons of waste and produces an insurmountable amount of pollution. China's energy consumption demonstrates how unsustainable the manufacturing sector can be. Over the past four decades, China has transitioned from a state of energy self-sufficiency to a high degree of energy dependence, with energy consumption in the industrial sector accounting for over 80% of the national total.[9] The rapid increase in energy consumption levels has also caused severe air contamination and the 2016 Report of Trends in Global CO_2 emissions states that in years 2002-2001, China's emissions grew by 10%. Although China does not rank among nations with extremely high CO_2 emissions per capita, in 2016, it was the world's highest carbon emitter, with total CO_2 emissions of 10,433 Mt in 2016. 84% of these emissions have been imputed to China's manufacturing sector. On the other hand, areas of the service sector are becoming increasingly sustainable with the implementation of long-term solutions such as ecotourism and green IT and IT Enabled Services where more energy efficient alternatives are being used. An example is the Tata consultancy service which has a 'globally recognised Sustainability practice and has already topped the Newsweek's top World's Greenest Company title. It also has a global green score of 80.4% and this has mainly happened due their initiative of creating technology for agricultural and community benefits'. This highlights the economic and environmental sustainability of services-induced growth and development in India.

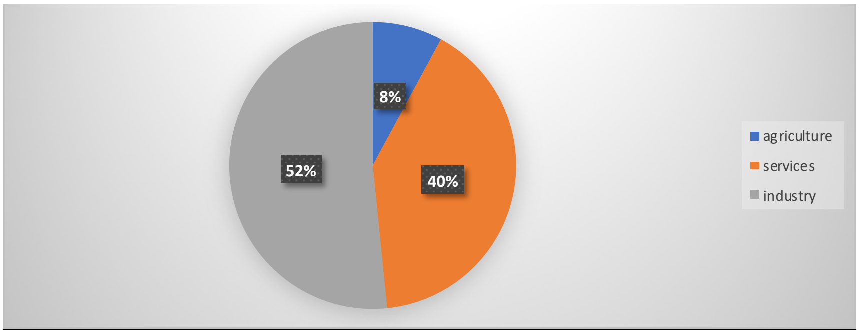


Figure 7: China's GDP composition, by sector of origin

Tertiary sector driven growth : The role of the services sector in India's development

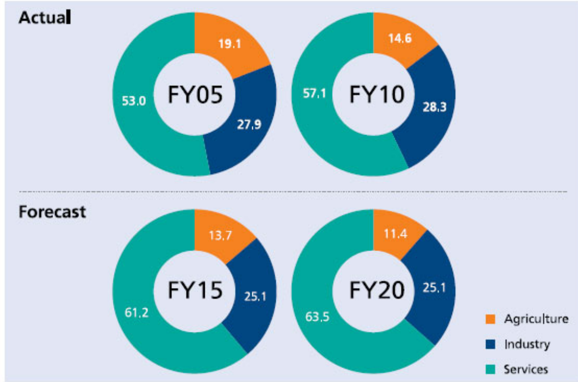
The Indian economy is extremely diverse as it encompasses subsistence farming and modern agriculture, handicrafts, textiles but also pharmaceuticals, steel, transportation equipment, and a flourishing software industry. However, its strength and growth can be credited to its services (tertiary) sector. Services often serve a highly significant role in the economies of both developed and developing countries. They account for over half of the gross domestic product of all developed economies and account for the single largest sector in most developing economies.

[9] *Sustainable Development of China's Industrial Economy: An Empirical Study of the Period 2001–2011*

The wave of capitalism and economic liberalisation that took over India in the early 1990s has promoted the country's growth and hugely raised the average growth percentage to 7% per year from 1997 to 2017. To provide context, the annual growth rate of the US has been 3.2% and decreased to 2.2% at the end of last year, almost a fourth of the size of India's. India is rapidly developing into an open-market economy and integrating with other economic powerhouses. Jobs are becoming available as companies are increasing trade, offshoring outsourcing and expanding private state-owned enterprises due to lifted bans and eased restrictions on foreign trade and investment. The rise to prominence of India's services sector goes back to its economic liberalisation, which initiated in 1991 with the goal of making the economy more service-oriented, and expanding the role of private and foreign investment. This is when the government welcomed foreign transnational cooperations into India which established their factories because the labour was cheaper. These companies are often labelled as exploitative and considered the enemies of liberty and democracy. However, in India's case, they promoted capitalism and enriched the economy. They also expanded their business, creating huge markets both domestically and internationally and advancing India by introducing foreign machinery and new management while generating massive employment opportunities. The construction of factories allowed the expansion of the secondary sector which created a multiplier effect. As salaries were increased, society became more consumerist and people could afford healthcare and see entertainment. These disposable incomes enabled the growth of the services sector. In addition, India's societal structures became more progressive and there was a higher number of women in the workforce, with many women shifting from performing traditional household tasks and domestic affairs to doing a regular 9-5 job. As a result of this social change, household incomes witnessed an increase which in turn generated a higher demand for consumer services such as real estate, investment, and banking facilities. The increase in salaries enabled families to expend more and more on travel and entertainment which boosted the services sector. Globalisation has also impacted this growth as it has increased mobility of knowledge and encouraged culture intermingling. Information is easily accessible due to improved communication and there is a newfound desire amongst people to learn new skills. The competition for knowledge and information has become global and there is an increasing availability of technically skilled manpower. Tax advantages, as well as rapid industrialisation of IT firms in India has also opened avenues for growth in IT-based services. Improvements in transport have influenced rapid growth in long-haul travel. This demand has been met by tourism/travel agents and the information technology industry. All these areas are promoted by advertising and marketing services which all constitute the tertiary sector. Economic growth in India, diversification of pubic sectors and thriving trade requires more legal and professional services which have also increased growth in the services sector. 'Life expectancy has raised which results in a higher retired population. Due to an increase in India's retired population, there is a larger demand for travel and leisure, as well as for healthcare, nursing and life insurance services'. Other drivers of growth in the service sector have been the use of new technologies like cloud computing and the government established Special Economic Zones. All this has helped create a favourable climate for the growth of India's services sector which will have a rising share in India's GDP from 53% in 2005 to a predicted value of 63.5% in 2020 as demonstrated by figure 8.

	Agriculture	manufacturing	services	
1993-94	496.11 (3.34)	2221.24 (14.97)	7824.49 (52.72)	**14841.65 (100)**
1994-95	542.19 (3.44)	2461.61 (15.60)	8276.79 (52.44)	**15783.17 (100)**
1995-96	574 (3.39)	2842.21 (16.76)	9069.51 (53.49)	**16956.99 (100)**
1996-97	577.18 (3.16)	3112.26 (17.01)	9688.7 (52.96)	**18292.98 (100)**
1997-98	633.8 (3.32)	3113.85 (16.30)	10571.63 (55.32)	**19108.61 (100)**
1998-99	651.71 (3.20)	3211.37 (15.76)	11421.86 (56.05)	**20376.97 (100)**
1999-00	679.02 (3.09)	3384.58 (15.42)	12662.3 (57.68)	**21953.85 (100)**
2000-01	694.72 (3.03)	3631.63 (15.85)	13353.55 (58.29)	**22907.45 (100)**
2001-02	707.66 (2.93)	3714.08 (15.35)	14227.32 (58.81)	**24190.63 (100)**
2002-03	767.21 (3.05)	3969.12 (15.78)	15239.95 (60.59)	**25151.87 (100)**
2003-04	787.92 (2.90)	4220.62 (15.52)	16545.05 (60.83)	**27197.5 (100)**
2004-05	850.28 (2.92)	4532.25 (15.58)	18051.1 (62.06)	**29087.89 (100)**
2005-06	861.41 (2.70)	4990.2 (15.66)	20063.02 (62.97)	**31859.5 (100)**
2006-07	925.78 (2.65)	5704.58 (16.34)	22087.76 (63.27)	**34910.02 (100)**
2007-08	959.97 (2.51)	6290.73 (16.48)	24370.56 (63.84)	**38172.06 (100)**
2008-09	980.55 (2.41)	6563.02 (16.10)	26655.8 (65.40)	**40756.26 (100)**
2009-10	1038.3 (2.34)	7304.35 (16.50)	29326.01 (66.23)	**44278.53 (100)**
2010-11	1089.38 (2.25)	8014.76 (16.54)	32203.42 (66.48)	**48442.33 (100)**
2011-12	1082.49 (2.10)	8230.23 (16.00)	34740.01 (67.52)	**51447.68 (100)**
2012-13	1076.19 (1.99)	8316.48 (15.39)	37096.4 (68.67)	**54025.17 (100)**
Total	**21082.6 (2.75)**	**119945.03 (15.67)**	**452860.66 (59.16)**	**765499.05 (100)**

Figure 8: chart showing the rising share of services sector in India's GDP



All figures are at factor cost constant prices
Source: Mospi, D&B India

Fi*gure 9:* table shows the sectoral composition of Gross Domestic Product in India (Rs. Crore)

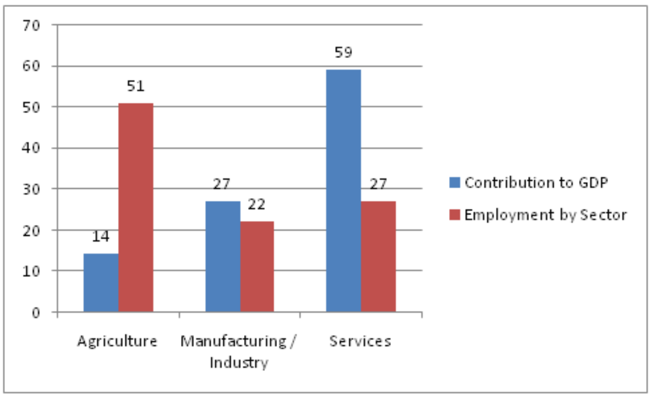


Figure 10: chart showing India's labour force by occupation and GDP composition by sector

Figure 9 borrowed from a recent study shows that the share of agriculture and allied activities has declined from 53.3% in India's GDP in 1950-51 to 13.95% in 2012-13'. On the other hand, manufacturing's share has grown by 6.17 % and stood at 15.39 % in 2012-13. 'The share of the services sector improved from 35.59 % in 1950-51 to 68.67 % in 2012-13. It shows that the services sector has the overall highest share of GDP (59.16%) among all other sectors.

Currently, the services sector is the main driver of economic growth in India 'accounting for nearly two-thirds of India's output but employing less than one-third of its labor force'. 'Banking, Finance, Business Process Outsourcing - and most importantly Information Technology services have seen double-digit growth'[10]. The services sector contributes 59% to the GDP and employs 27% of the work force whereas Manufacturing or Industry (petroleum, pharmaceuticals, gems, jewellery, textile, mining, engineering industry) contributes 27% and employs 22% of the total workforce. Agriculture contributes 14% but employs 51% of the total workforce as shown in figure 10. However, it is clear that although the services sector yields more profits and financial gain, its employment percentage is significantly low, as compared to the manufacturing industry in

[10] *https://www.investindia.gov.in/team-india-blogs/indian-economy-overview*

which the GDP contribution and percentage of workforce employed differs by 5% in contrast to 26% in the services sector.[11] This can especially create problems in a densely populated country like India, with a fast-growing population of working age. This issue is important as it emphasises the importance of viability in economic choices a country makes and proves that services induced growth can cause problems to arise in the future. This will be elaborated later onwards in the report.

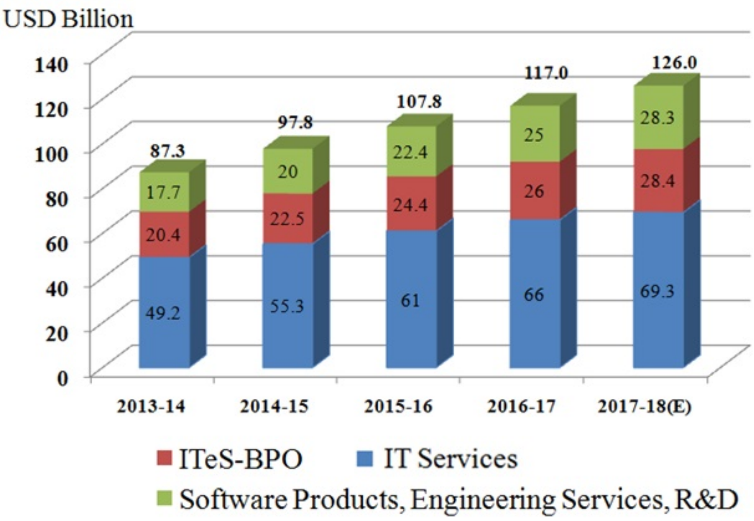
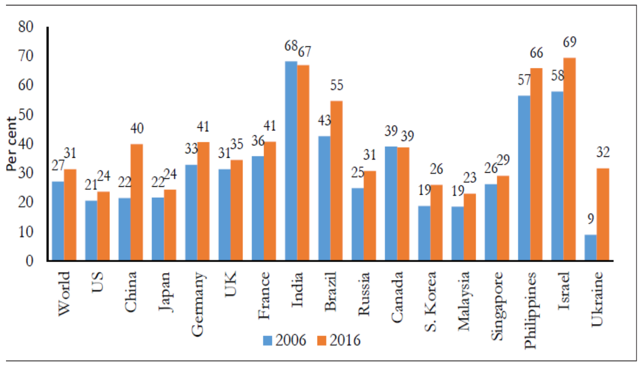


Figure 11: India's export revenue (2013-2018)



ce: Based on World Bank Database accessed on 19 January, 2018
...: ICT- Information and communication technology service exports include computer and communications services (telecommunications and postal and courier services) and information services (computer data and news-related service transactions).

Figure 12: ICT service exports (% of service exports)

However, India's service sector has shown the most growth potential with a remarkable expansion of the IT industry in the mere span of five years. As shown in figure 11, India's export revenue in the IT department has increased by almost 50%, having accumulated 87.3 billion dollars in the term of 2013-14 and a whopping 126 billion dollars in 2017-18. This is also scheduled to increase by 7-9% year-on-year to US$ 135-137 billion in 2019. 'The Highest ever revenue was generated by Indian IT firms at US$ 181 billion in 2018-19'[12]. 'The global sourcing market in India continues to grow at a higher pace compared to the IT-BPM industry. India is the leading sourcing destination across the world, accounting for approximately 55 % market share of the US$ 185-190 billion global services sourcing business in 2017-18'. Indian IT & ITeS companies have also successfully formed 1,000 global delivery centres and the industry has tremendously benefited India's economy and left a global footprint with about 200 established Indian IT firms in over 80 countries across the world.

Statistically, India has cemented its reputation as a leading IT-based economy with a vast majority of digital pioneers and prowess of IT skills with around '75 per cent of global digital talent present in the country'. Already, India's top IT firms including Infosys, Wipro, TCS and Tech Mahindra . These companies are proposing advanced projects, and incorporating artificial intelligence to attract

[11] *http://yesvinay.blogspot.com/2014/10/make-in-india-reality-check-and-road.html*

[12] *https://www.ibef.org/industry/information-technology-india.aspx*

clients by employing 'innovation hubs, research and development centres' and creating differentiated offerings. The IT industry is clearly the most prominent export earner in India with the increase in proportion of software exports to merchandise exports , with negligible amounts in 1990 to over 6% in 1998-99. India also ranks second in ICT service exports, with 67% of ICT exports in 2016. What is even more fascinating is that these exports have been produced by the handwork and labour of Indian firms rather than foreign subsidiaries and in the period of 1998-99, only six of the main twenty firms were foreign companies. The employment of workforce remains to show scope for improvement but has notably increased by 250,000 with '160,000 of India's total employed workforce in 1997 to 410,000 software workers in 2000'. [13]Apart from increasing human capital, the high profits gained by the software industry has had a considerable impact on Indian society and raised literacy rates. These high earnings have been directed towards improving areas like education and enabled the formation of 'a successful self-financing model' of higher education throughout India.

The report has established how the IT industry is the pillar of India's economy and the star performer in the services sector but the sector also comprises of trade, hotels & restaurants, construction, electricity, transport, storage, communication, banking, insurance, education & research, medical & health, ownership of dwellings, real estate & business services, etc.

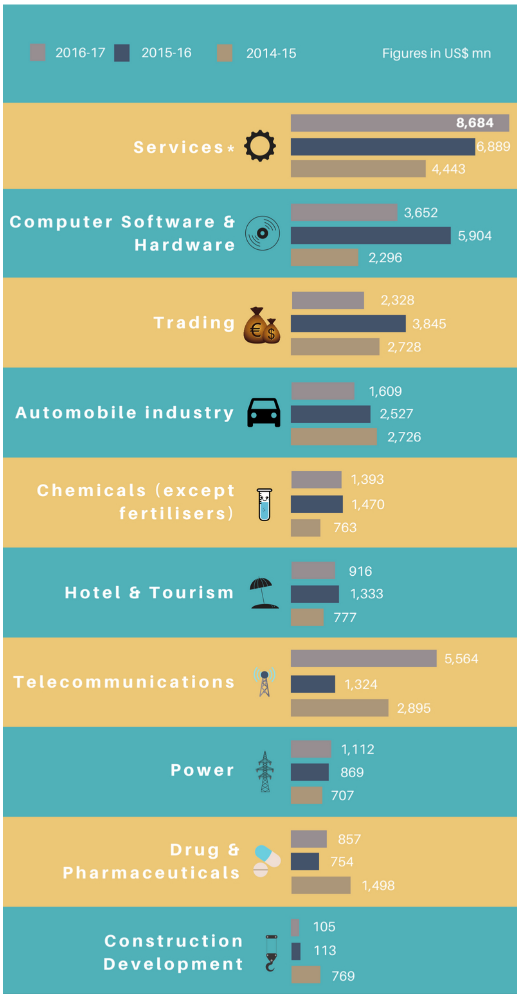


Figure 13: India's FDI (in US$ million)

'The successful growth of the primary and secondary activities in the economy, to a large extent, is dependent on services offered by banking, insurance, trade, commerce, entertainment, maintenance of machinery and equipment and numerous other services categorised as tertiary activities' (Soni & Parashar, 2013). Two highly important areas in the Indian services sector are health and education. They are two of the largest service sectors and have greatly facilitated the country's development. A strong healthcare system enables the creation of a healthy workforce and also helps decrease death and infant mortality rates and improve life expectancy. Overall, it helps ameliorate living standards and stabilise and control population growth while benefiting the economy. 'The OCED Observer also cements the idea of how the economy depends on a strong healthcare system. Through the data they collected, they state a 10% increase in life expectancy creates an economic growth of around 0.3%-0.4% a year'[14]. In fact, Addressing the 2018 Partners' Forum here, Indian Prime minister Modi said the central

[13] *http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1005.2352&rep=rep1&type=pdf*

[14] *https://community.mbaworld.com/blog/b/weblog/posts/healthcare-its-influence-and-importance-in-the-economy*

government is set to increase its spending on public health to 2.5 per cent of the GDP. The banking sector has also developed, and the Reserve Bank of India has transitioned from being a regulator to a facilitator. This has liberalised the market and allowed commercial banks to decide their own interest rate without the pressures of external market forces. This has further enabled a more extensive penetration of banking services and a 'considerable improvement in forex reserves' as well as more diversified investments. 'The top five services with highest labour productivity in 2014-15 were non−life insurance (₹67,94,000 per worker per year) following by Banks (₹14,59,000 per worker per year), Air Transport (₹11,48,000 per worker per year), Communications (₹10,53,000 per worker per year) and Computer relating services (₹7,87,000 per worker per year)'[15] India's service sector also holds the top spot in foreign direct investments as evidenced by figure 13.

Is India's increasing dependency on its tertiary sector viable?

Now that we've weighed the contribution of the tertiary sector to India's economy and the growth its induced, it is important to assess its sustainability. The two sides of this argument have been equally mooted by economists, and the question is still an ongoing discussion.

The section about Rostow's stages has highlighted way in which the service-induced growth can be economically and environmentally sustainable. The services sector has also proven to be socially sustainable. The human development index of India has been rising consistently since 1980s. It has increased from 0.427 in 1980 to 0.612 in 2007. The per capita income has also registered a rise since 1980 and services growth has led to a decrease in poverty as seen in figure 14. The coefficient

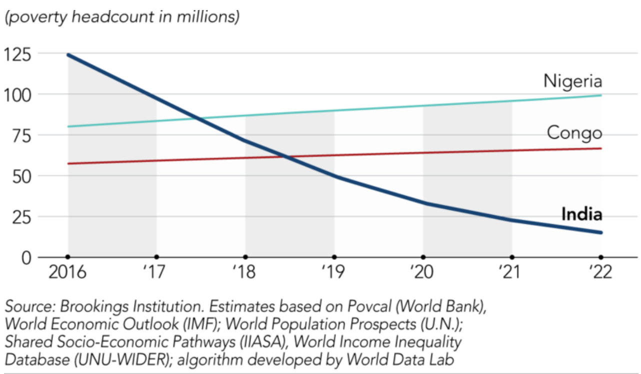


Figure 14: India's improvement in global poverty rankings

of variation also halved during 1992 to 1999 showing an improvement in quality of growth. However, many have also critiqued that these changes in human development aren't as unequivocal as they seem. In fact, India lags behind the global average on all three sub-parameters of HDI—health, education, and income—with the gap between India and the developed countries widest in

[15] *The Role of the Service Sector in the Indian Economy. https://ssrn.com/abstract=3000398 or http://dx.doi.org/10.2139/ssrn.3000398*

education and income[16]. As seen in figure 15, India's HDI is closer to Sub−Saharan Africa than to countries such as China, Brazil and the US, indicating that the country's economic growth is not necessarily translating into social development.

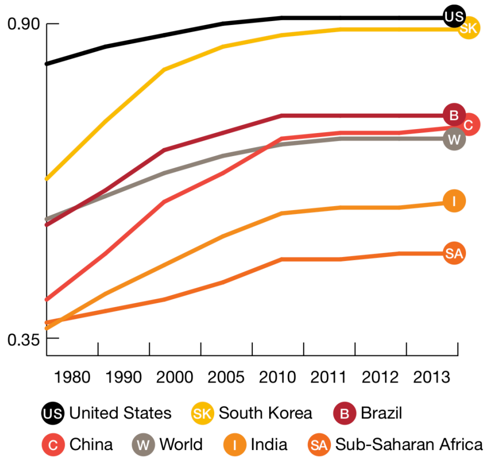


Figure 15: yearly HDI of different countries

Other sustainable aspects of this sector include its conducive business environment, which in the future can yield more opportunities for international deals which can bring higher incomes. The workforce in these sectors are required to be determined and aim at making a long term career in the field. This promises a stable future for a large majority of the population. However, many have pointed out that higher incomes and high gross household savings also reflect higher social inequality. Most jobs in this sector are highly specialised and an individual working in this field needs to have a strong education. For the top tier of the population in this sector, household incomes and savings are high. However, for the 37% of India's population which are illiterate, a job in this sector is out of the question. India's manufacturing sector or agricultural sector is also not large enough to accommodate 287 million people (37% of the population). The diversity of educational background and polarising literacy rates in different parts of India mean that not everyone will be able to develop the skillset for service sector jobs. Already, despite being the most profitable sector, the service industry only employs 31% of the population. Hence, it can be said that unless there are considerable improvements in education standards and literacy rates in poorer parts of India, the growth of the services sector will not be feasible choice in terms of the future of India's employment even if it might accumulate high profits. This raises another question: Is India caught in the groove of 'jobless growth'?

Recent months have also witnessed a rise in the level of attrition rates amongst IT workers who are quitting their jobs to pursue higher studies. This indicates a strong lack of employee satisfaction and retention in Indian IT companies and shows how the sector is not entirely socially sustainable.
The cost of telecom and network infrastructure is also much higher in India than it is in the US which means that eventually, the industry's profits will not be enough to sustain the expenses of technology and infrastructure. Regular upward revisions in the wages of those employed by the services sector are driving up India's wage bills, and its cost is being reflected in larger budget and current account deficits, financed by domestic and foreign debt.

There is also a decline in investment and lack of financial suppliers and the local infrastructure in many parts of India is very primitive and not suitable for the establishment of service-intensive sectors. Many of the strengths of this sector also seem to benefit other countries more. For example, if an Indian IT firm, known for its low response time, efficient services, operational excellence, and

[16] *https://www.pwc.in/assets/pdfs/future-of-india/future-of-india-the-winning-leap.pdf*

high technology databases is hired by a foreign company, the Indian firm will be cheaper compared to its western counterparts. In this way, the profits being produced are not as high as they can be and the foreign companies can easily take advantage of the significant wage differences. Even though TNCs have aided India in improving infrastructure and creating jobs, this action has now transformed into labour exploitation in many areas of India.

In addition, India's labour force is expected to touch 160-170 million by 2020, based on rate of population growth. The services sector has intrinsically limited potential when it comes to expansion and is not capable of generating enough jobs. This poses the threat of an unemployment crisis, especially considering that India's unemployment rate now sits at a 45-year high which is attributable to India's economic slowdown caused due to declining investments and demonetisation. 'The rise in the share of services in employment has been much slower than the decline in the share of agriculture and manufacturing in total employment. This shows that while output generation has shifted to services, employment generation in services has lagged far behind. In the year 1999 services contributed around 28.5 % of total employment in contrast to 30 % in middle income countries, 70 % in Singapore and around 39 % in Indonesia'[17]. Since income might grow faster than employment in the organised services sector, service-led growth can have serious implications for inflation, income distribution and balance of payments and will not be sustainable in the long run. Already, there is a high current account deficit and gross fiscal deficit in India, and continuance of a high rate of inflation are worrying signs for the policy makers.

There has also been political opposition from developed countries to hinder growth of the Indian economy. For example, the anti-outsourcing legislation in the American State of New Jersey or workers in British telecom who have protested against outsourcing of work to Indian BPO companies. There is also increasing competition as China, Philippines and South Africa also have the same 'low cost factor' and have cheaper workforces available. The service industry also promises long term careers but the whole service sector, regardless of the subset or type of service, relies on customer demands which are changing at a rate faster than ever seen before due to developments in technology and increasing customer indecisiveness and slowdown of demand.

Solutions

Part 1: improving service sector

Indian ITES companies should work closely with western governments and assuage their concerns and issues. To improve its branding, India should work with associations like NASCOM to portray itself as the most favoured ITES destination in the world. This would also portray India as a quality ITES destination rather than a cheap one. India should liberalise service sub sectors and further improve the ease of doing business-de-licensing measures. Deregulating rules imposed on businesses in the service sector has been massively successful in the past, and India should extend this economic liberalisation even further as it will enable growth, both in terms of the economy and

[17] *http://www.icrier.org/pdf/WP171.pdf*

employment and facilitate the country in covering its trade deficits, as currently, the trade surplus comprises only 1/5 of the trade deficit.

India's fastest growing sectors are also the least labour intensive as seen in figure 16. India needs to work on diminishing this striking divergence in the services sector's contribution to GDP and its employment growth (which is significantly lower). This can be achieved by investing in service sectors that are employment-intensive and design policies to push growth in these sectors. These sectors 'build the social chassis on which an economic growth engine can be mounted' and include healthcare, education, and transportation. Other job-generation sectors are shown in figure 17.

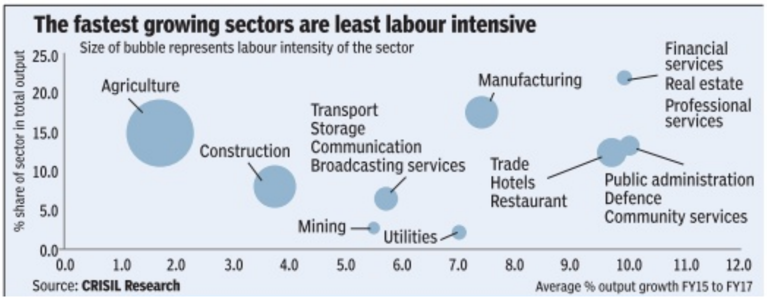
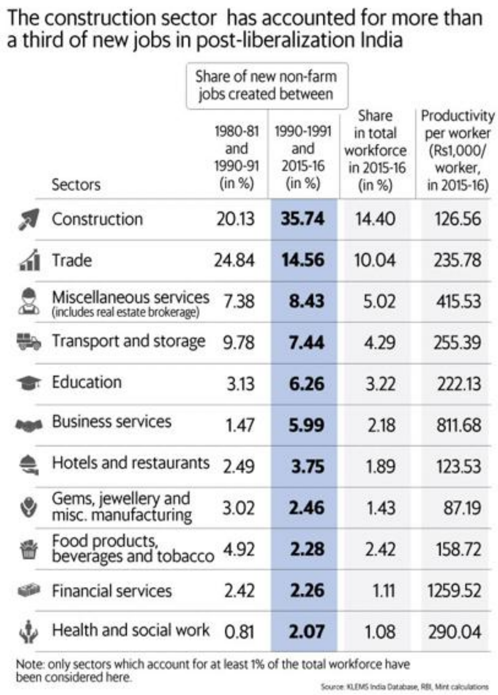


Figure 16: India's leading sectors' growth and their labour intensity



The construction sector has accounted for more than a third of new jobs in post-liberalization India

Sectors	Share of new non-farm jobs created between 1980-81 and 1990-91 (in %)	Share of new non-farm jobs created between 1990-1991 and 2015-16 (in %)	Share in total workforce in 2015-16 (in %)	Productivity per worker (Rs1,000/ worker, in 2015-16)
Construction	20.13	**35.74**	14.40	126.56
Trade	24.84	**14.56**	10.04	235.78
Miscellaneous services (includes real estate brokerage)	7.38	**8.43**	5.02	415.53
Transport and storage	9.78	**7.44**	4.29	255.39
Education	3.13	**6.26**	3.22	222.13
Business services	1.47	**5.99**	2.18	811.68
Hotels and restaurants	2.49	**3.75**	1.89	123.53
Gems, jewellery and misc. manufacturing	3.02	**2.46**	1.43	87.19
Food products, beverages and tobacco	4.92	**2.28**	2.42	158.72
Financial services	2.42	**2.26**	1.11	1259.52
Health and social work	0.81	**2.07**	1.08	290.04

Note: only sectors which account for at least 1% of the total workforce have been considered here.

Source: KLEMS India Database, RBI, Mint calculations

Figure 17: India's top 10 job generators

Part 2: expanding manufacturing sector

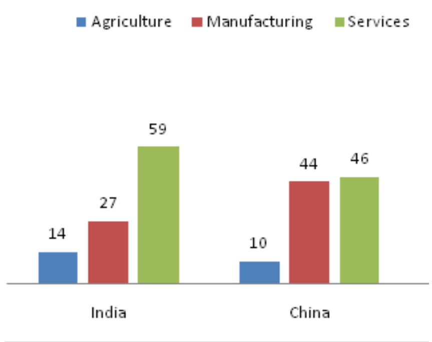


Figure 18: GDP composition of sectors

India needs to prioritise labour over capital, and expand its manufacturing sector. China is the top nation in terms of manufacturing output and the largest percentage of its national output is generated by that sector. This helps corroborate China's president, Xi Jinping's recent statement: "the combination of the world's factory and the world's back office will produce the most competitive production base"[18]. India needs to learn that its service-led development model would be even more beneficial if there is increased growth in the manufacturing sector. This is because the services sector is emerging with respect to the demands created by industries to support its development. Banks, for example, need industry for

[18] *https://www.thehindu.com/opinion/op-ed/towards-an-asian-century-of-prosperity/article6416553.ece?homepage=true*

financial transactions[19]. Generally, the enlargement of the industrial sector will help India in mitigating the risk of mass employment. India should also aim to equalise the GDP composition of its two sectors like China, as seen in figure 18. One of the ways in which this can be done is through the mechanisation of agriculture. The agriculture sector need to be mechanised in a way that ensures the per-person productivity goes up exponentially, which will also ensure food security to billion plus population. India can also collaborate with China on this venture. GDP growth rates in China have averaged 10% over the last 30 years, proving that it is possible for huge, populous countries to sustain periods of high growth. If India could replicate this growth trajectory, it would achieve upper, middle-income status as soon as 2034.[20] The possibilities of better cooperation between the two engines of the Asian economy are boundless and will spearhead growth. The combination of China's energy plus India's skilled population holds extremely strong potential.

Part 3: changes on a larger scale

India should focus on providing quality education to everyone instead of simply improving skills as this will ensure that a larger portion of the population can participate in the service sector. The education systems needs to be redesigned in a way that helps individuals to recognise occupational needs and India needs to identify skills gaps in the context of future work. To improve its performance on these and other fronts, India needs to view its challenges as interconnected. For instance, healthier citizens get more from their education. Better-educated graduates enter the workforce with stronger skills and can get higher-paying jobs. Therefore, India needs to focus on four components of growth that are shown in figure 19.

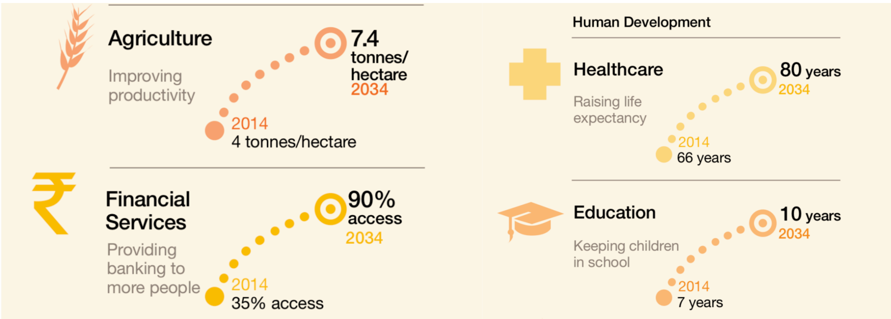


Figure 19: four areas of focus

Conclusion

In conclusion, although India's service sector has provided massive economic benefits, it does pose the risk of a massive employment crisis which makes this growth unsustainable. A high growth sector like the services needs to absorb the large amounts of under- and unemployed workers in India, to ensure that the 'welfare implications of the growth trajectory' are positive. India's unique, alternative growth model, which encourages the growth of the service sector rather than the

[19] *https://www.researchgate.net/post/Why_is_the_services_sector_growing_faster_than_the_industry_sector_even_in_economies_where_there_is_no_substantial_production_sector*

[20] *https://www.pwc.in/assets/pdfs/future-of-india/future-of-india-the-winning-leap.pdf*

manufacturing base now requires improvements and the development of an industrial sector, in order to increase productivity and create jobs. 'This can be achieved through a skew in consumption demand towards capex-lite services sector such as healthcare, financial services, as opposed to capital-intensive sectors such as utilities, transportation, and housing in the period'[21]. India's target in the next few years should be this transition, and it can imitate China's mercantilist approach to attain its desirable status as a developed, market economy. This approach will truly help India harness its growing human capital and an increase in transportable, tradable and scalable modern services would enable India to attain economically, socially and environmentally sustainable service induced growth.

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[21] *https://www.citigroup.com/commercialbank/insights/assets/docs/2018/Securing-Indias-Growth-Over-the-Next-Decade//files/assets/common/downloads/publication.pdf?uni=279b9671efcc777ce2bed95e198e8a84*

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