INDIA IN 2030

Presented By:

180 Degrees Consulting SGGSCC

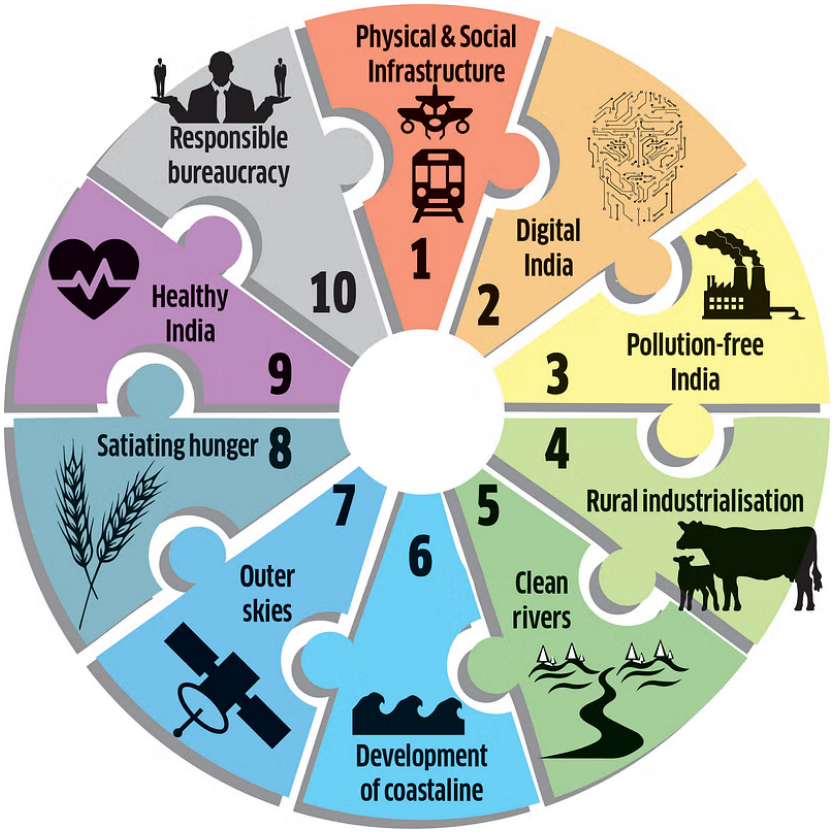
INDEX

OVERVIEW OF THE REPORT ON INDIA IN 2023

INDIA, A $7 TRILLION ECONOMY?

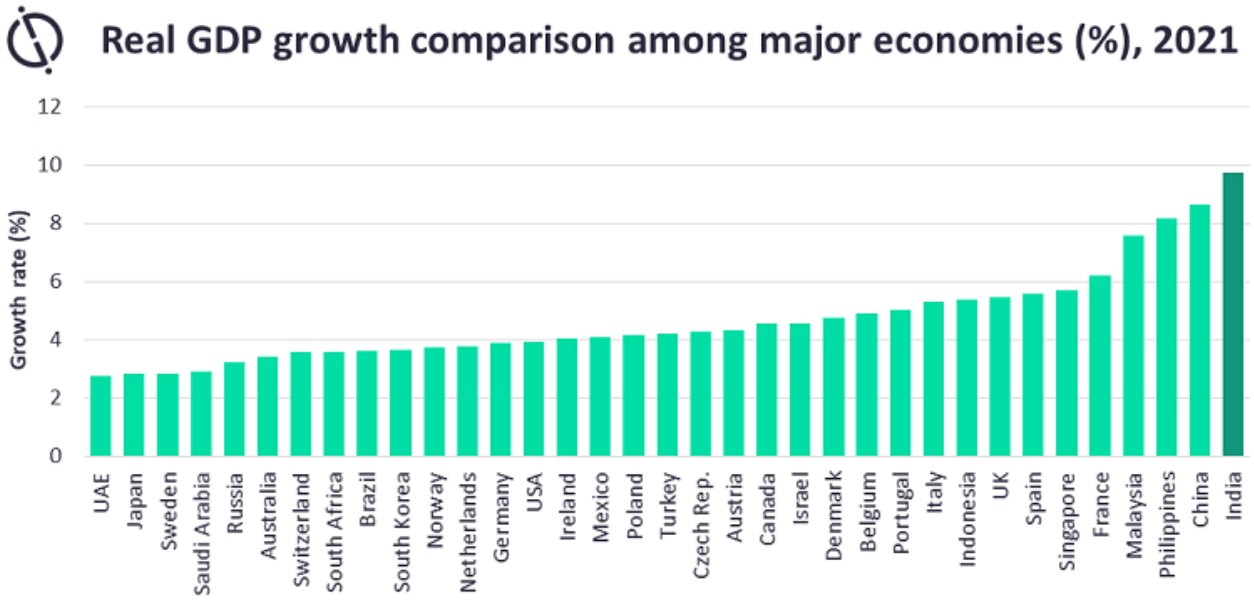
India is at a crossroads, and the choices it makes in the next decade will determine its future. If India can continue to grow and innovate, it will become a major force in the world. This report explores the key factors driving India's economic expansion in the coming decade and the challenges it must address to ensure inclusive and sustainable progress.

India has emerged as one of the fastest-growing major economies in the world, with a projected growth rate of 7.5% in the next fiscal year. The India economy in 2030 is expected to not only become the third largest economy, but also a major player in the global technology industry, a leader in renewable energy, with a workforce of 800 million people belonging to the middle class. India will have 68 cities with a population of more than 1 million; up from 42 today.



India's future holds promising economic growth, driven by factors like a young workforce, a burgeoning middle class, and a commitment to reform. This growth potential positions India to become a global economic powerhouse, potentially doubling its economy to $7 trillion by 2030 and boosting per capita income.

India's economy has grown at an impressive average rate of 7.5% per annum over the past two decades, second only to China. By 2030, India's median age will rise to 31.4 years, still lower than the US and China. The country is on track to double its current GDP. To support this growth, India plans to allocate 7-8% of its GDP for infrastructure development, including transportation, energy, and digital connectivity, recognizing the importance of these investments for sustaining and accelerating economic progress.



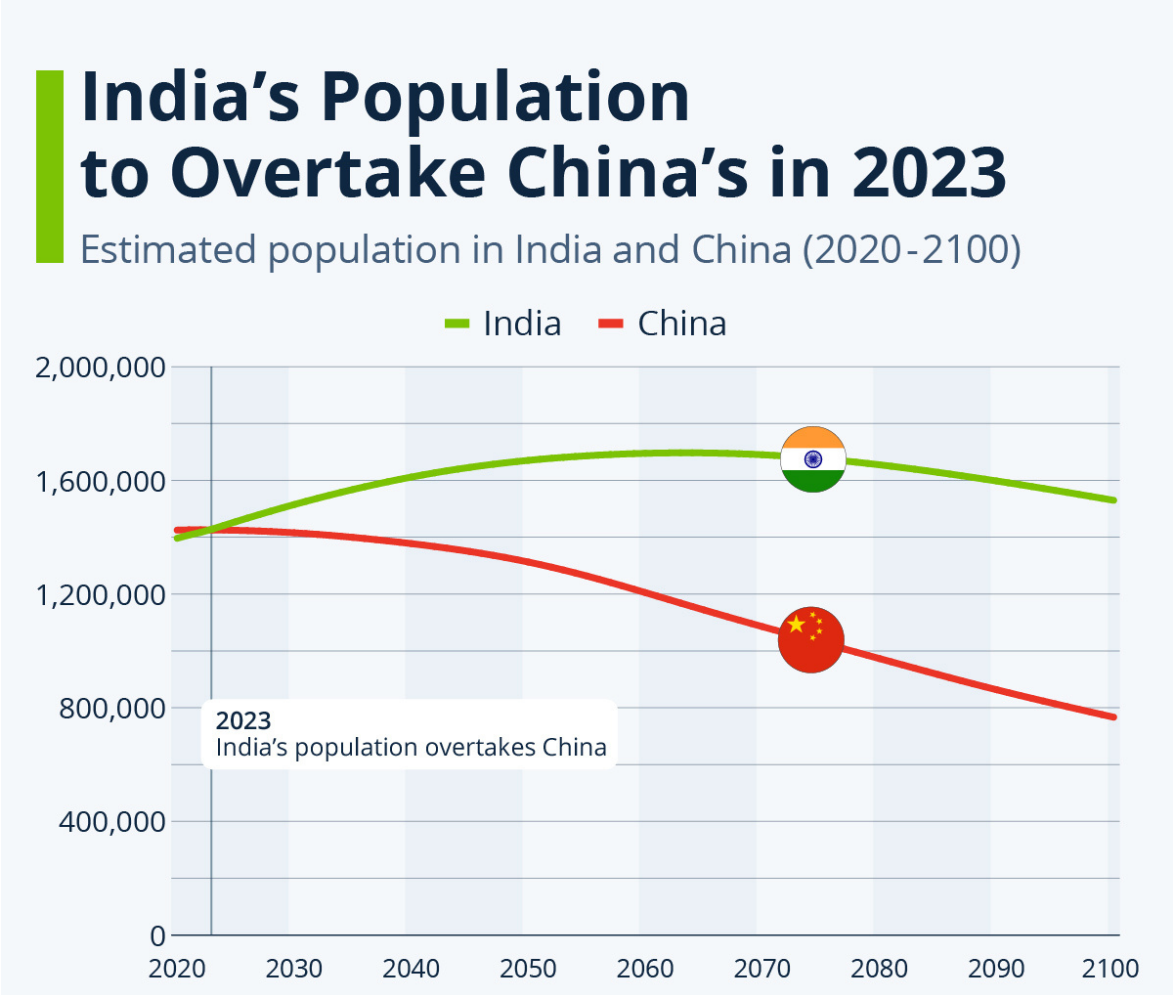
Despite its tremendous potential, India faces several challenges. Challenges such as income inequality, lack of access to education and healthcare, and environmental concerns must be addressed to ensure sustainable and inclusive growth for all Indians.

SOCIOECONOMIC OUTLOOK

PROJECTED POPULATION TRENDS AND DEMOGRAPHICS

India's population plays a significant role in its growth by 2030. With more than 1.4 billion people, India is expected to drive a fifth of the world's expansion this decade, making it one of the few countries capable of generating over $400 billion in annual output growth.

India recently claimed the title of the world's most populous country, surpassing China with a population of 1.4286 billion, and UN projections suggest this trend will persist for the next three decades before eventual decline. Despite reaching the replacement fertility rate, India's population will continue to grow due to the momentum phenomenon, as outlined in the United Nations' World Population Prospects-2022.



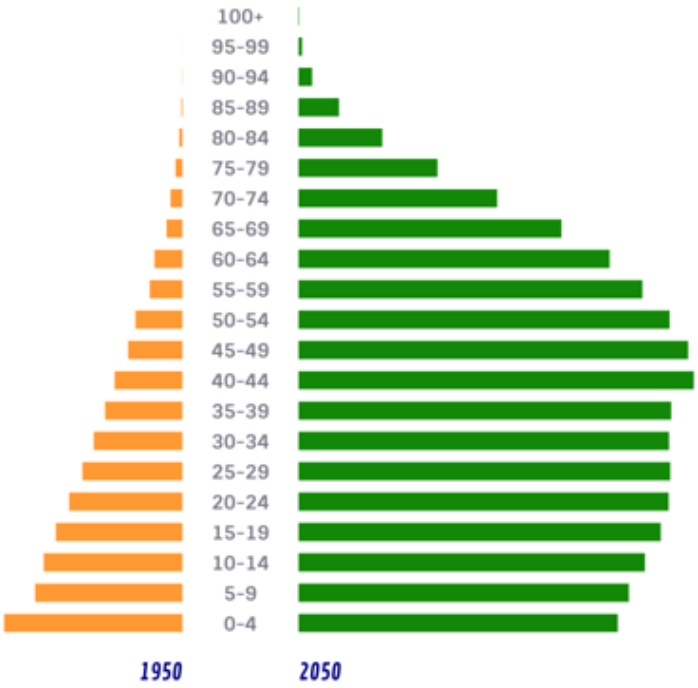
India's population is relatively young—half of its population is under 30, and only an eighth is over 60. As of 2022, India's workforce participation rate sits at 46%, compared to China's 68%.

Population growth varies across states. Over the next decade, India will enjoy the largest workforce growth of any single country in the world and account for 22% of global workforce growth., As affluence has risen, India has also become home to the largest middle class in the world, now estimated at 371mn.

Reforms in rural areas have been initiated including access to electricity, cooking gas, and clean water, allowing them to engage in economic activities like handicrafts and poultry farming, boosting household economic well-being.

India's fertility rate has been declining rapidly in recent decades. Fertility rates vary widely by community type and state in India. On average, women in rural areas have 2.1 children in their lifetimes, while women in urban areas have 1.6 children

In part as a result of such measures, population expansion has slowed, particularly since the 1990s. After surging by nearly 25% in the 1960s and again in the 1970s, growth in the 2001-2011 census decade fell below 20%.



INDIA POPULATION BY 2050

By 2050, India is anticipated to have 1.668 billion inhabitants, while China's population is projected to decrease to 1.317 billion. Notably, India's population demographics vary significantly across states, with states like Kerala and Punjab having an aging population, while Bihar and Uttar Pradesh maintain youthful demographics.

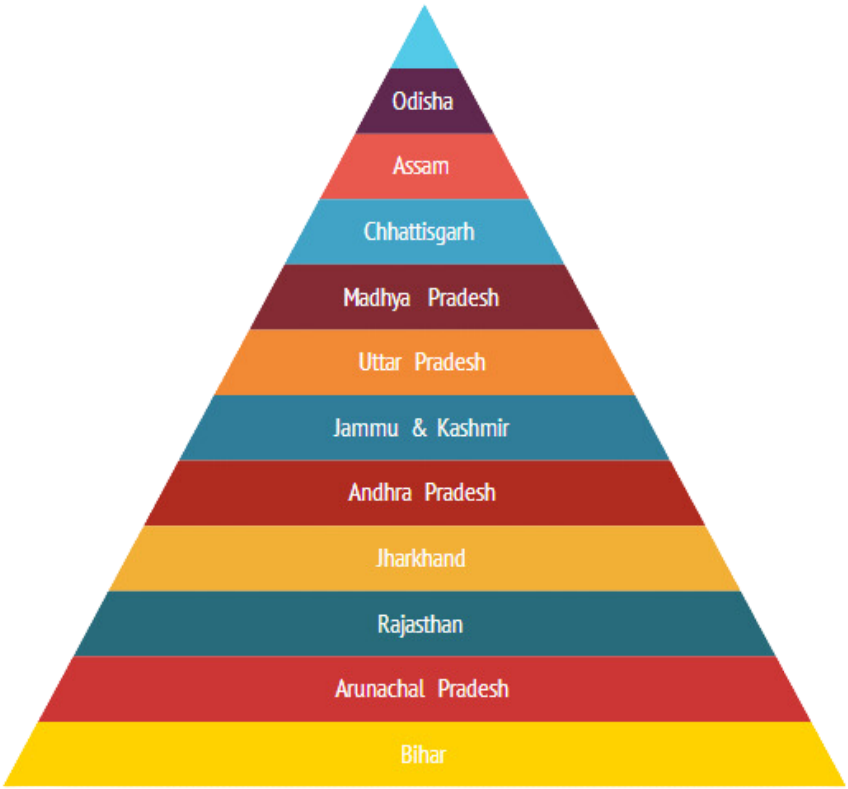
LITERACY RATE IN INDIA

Literacy in India is a key for social-economic progress. The 2011 census, indicated a 2001–2011 literacy growth of 97.2%, which is slower than the growth seen during the previous decade. An old analytical 1990 study estimated that it would take until 2060 for India to achieve universal literacy at then-current rate of progress.

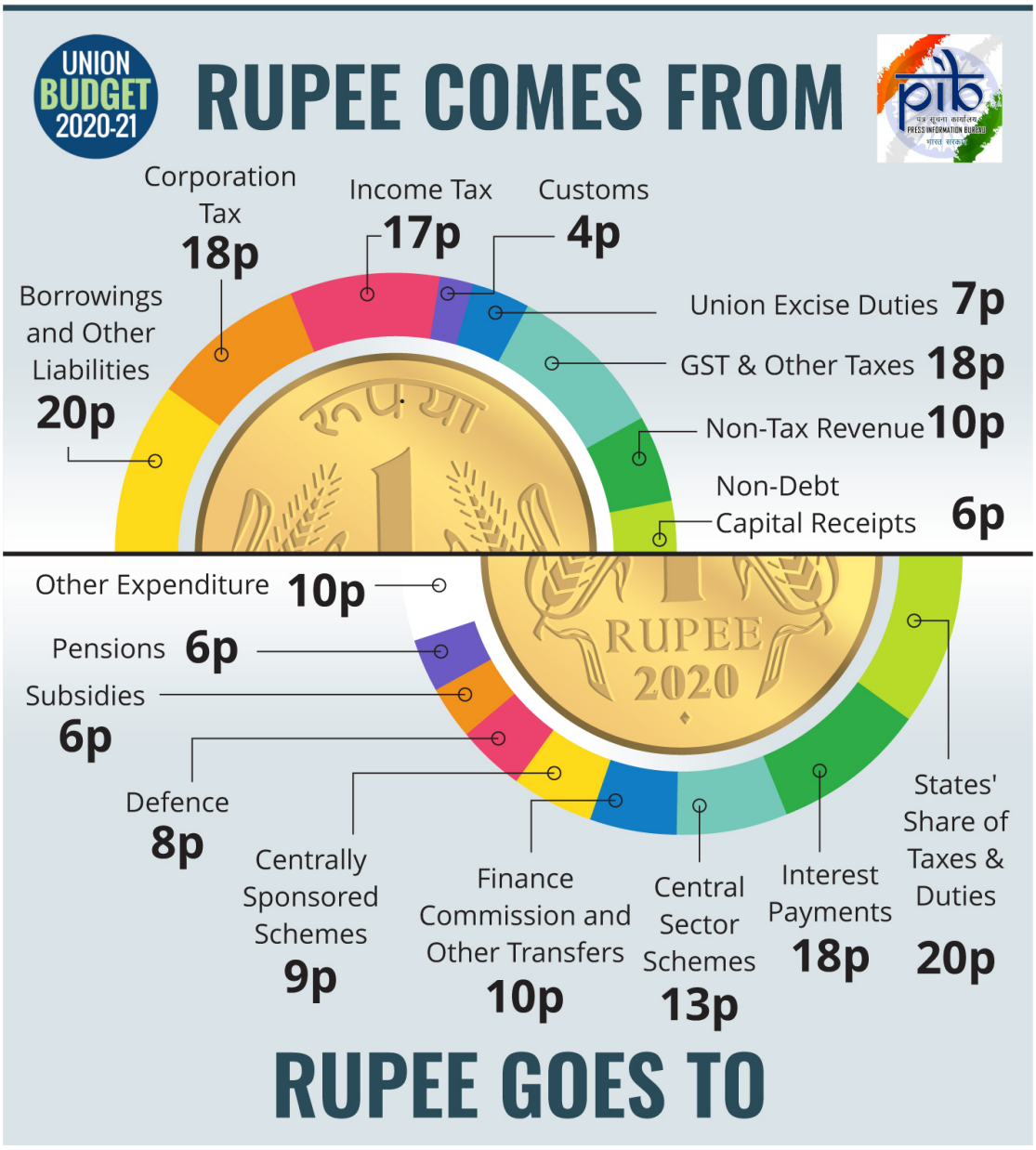
Census of India pegged the average literacy rate to be 73% in 2011 while National Statistical Commission surveyed literacy to be 77.7% in 2017–18. Literacy rate in urban areas was 87.7%, higher than rural areas with 73.5%. There is a wide gender disparity in the literacy rate in India and effective literacy rates (age 7 and above) was 84.7% for men and 70.3% for women.

The projected population trends and demographics of India in 2030 will have a significant impact on the country's economy, society, and environment. The large and young working-age population will be a major asset for the economy, but it will also put a strain on resources such as education and healthcare.

The decline in the dependency ratio will free up resources that can be used for other purposes, such as infrastructure development. The urbanization of the population will lead to challenges such as traffic congestion and air pollution, but it will also create new opportunities for economic growth.



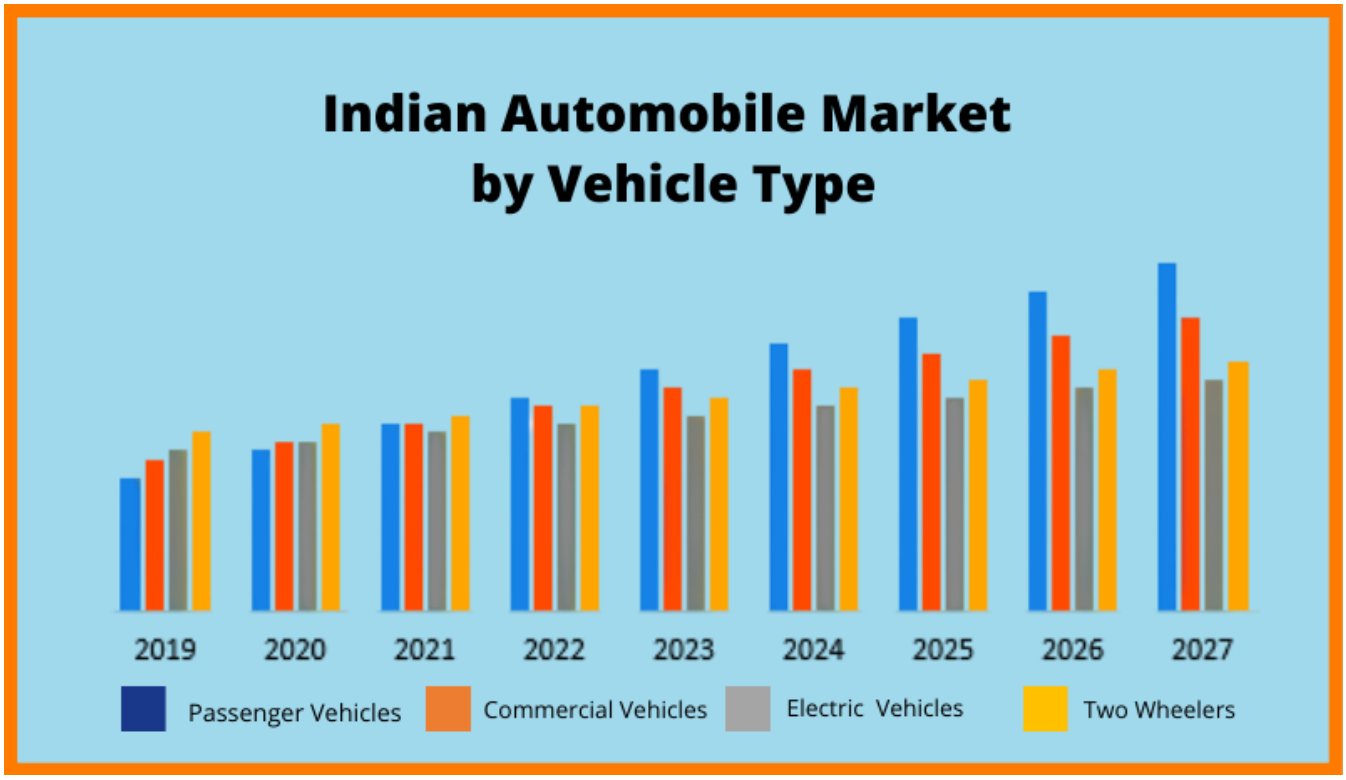
NATIONAL ECONOMIC PRIORITIES AND GROWTH SECTORS



Looking at India's economic priorities, the 2023-24 national budget places focus on creating both physical and digital infrastructure, as well as the areas of manufacturing, fintech, green growth, and new technologies. These priority sectors will be supported by government investment.

Automobile Industry: According to a report by McKinsey, India's automotive industry is poised to become the world's third-largest market by 2030. The industry is expected to contribute more than 12% of the nation's GDP, of which 7.1% has been achieved until now. It also aspires to constitute at least 40% of the manufacturing sector by the end of 2026.

The Indian government is driving the auto industry and emissions reduction through initiatives like the Automotive Mission Plan and NEMMP, aiming for a majority of EVs by 2030, supported by policies like FAME, PLI, and tax incentives. India's EV market is set to boom, with a 49% CAGR between 2022 and 2030, reaching 10 million annual sales by 2030, and generating 50 million jobs by that year.

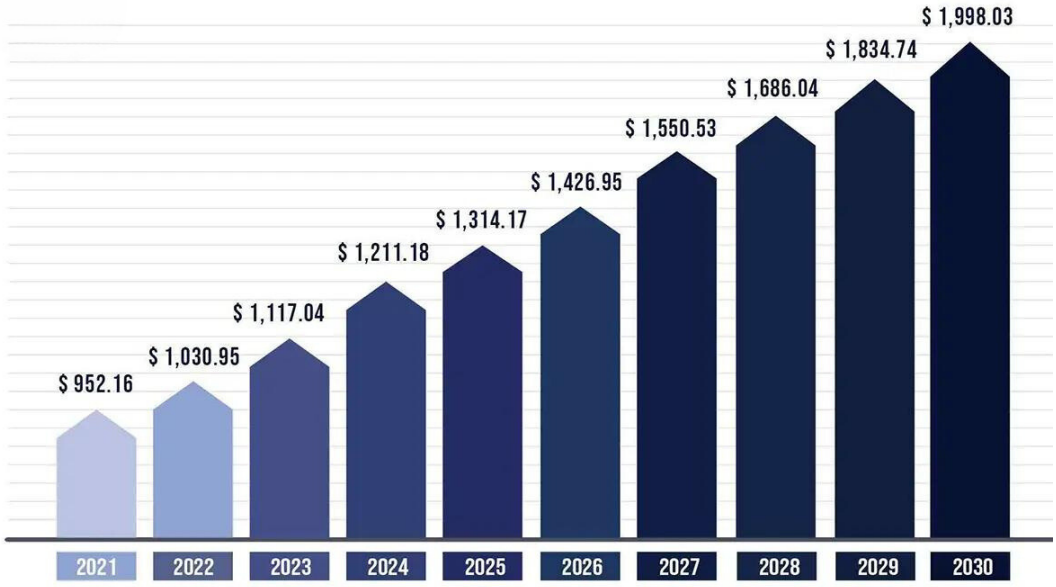


Pharmaceutical Industry: India ranks third in global pharmaceutical production, supplying 60% of vaccines and 20% of generic medicines. Market size to reach $65 billion USD by 2024 and around $130 billion USD by 2030.
The Indian government aims to grow its pharmaceutical industry to a USD 120-130 billion market by 2030. Key strategies include clear pricing policies, streamlined approvals, a dedicated Ministry of Pharmaceuticals, and specialized research and manufacturing zones. These efforts aim to foster innovation, improve medicine accessibility, and boost the industry's growth, benefiting the nation's economy by 2030.

Renewable Energy: India targets 500 GW non-fossil capacity by 2030, with 66% power from non-fossil sources, including a $200 billion USD investment plan and a green hydrogen policy.

The Indian government has set ambitious renewable energy goals for 2030, aiming for 500 GW of total installed capacity, including 280 GW of solar and 140 GW of wind power. They've allocated Rs 2.44 lakh crore for transmission enhancements to boost domestic production and achieve a 50% share of cleaner energy in the power mix. Additionally, the plan includes 515 GW of battery storage to ensure continuous power supply, aligning with India's commitment to reduce carbon emissions and meet the Sustainable Development Goals outlined in the Paris Agreement.

Renewable Energy Growth



Fintech Sector: India's fintech market, valued at $50 billion USD in 2021, set to triple by 2025, with over 2,000 startups. Gujarat International Fin-tech City aims to create an innovative financial ecosystem.

The Indian government is actively promoting the fintech sector's growth. The Reserve Bank of India (RBI) underscores customer-centricity, governance, and self-regulation for a resilient fintech ecosystem. Moreover, fintech firms are encouraged to form a self-regulatory organization (SRO) to advocate for their needs and uphold ethical business standards. These efforts are geared towards nurturing a sustainable and ethical fintech industry in India.

INCOME INEQUALITY IN INDIA

Economic growth is a key indicator of an economy's well-being, reflecting changes in output. The focus on growth stems from its potential to benefit everyone, particularly the poor. Yet, historically, the income growth of the poor has lagged behind that of the wealthy. Interestingly, recent data indicates a narrowing gap in income growth rates between the rich and the poor, marking a positive trend.

- According to the CIA World Factbook, the Gini coefficient of India, which is a measure of income distribution inequality, was 35.2 in 2011, ranking 95th out of 157.
- Wealth distribution is also uneven, with one report estimating that 54% of the country's wealth is controlled by millionaires, the second highest after Russia, as of November 2016.
- The richest 1% of Indians own 58% of wealth, while the richest 10% of Indians own 80% of the wealth. This trend has consistently increased, meaning the rich are getting richer much faster than the poor, widening the income gap.

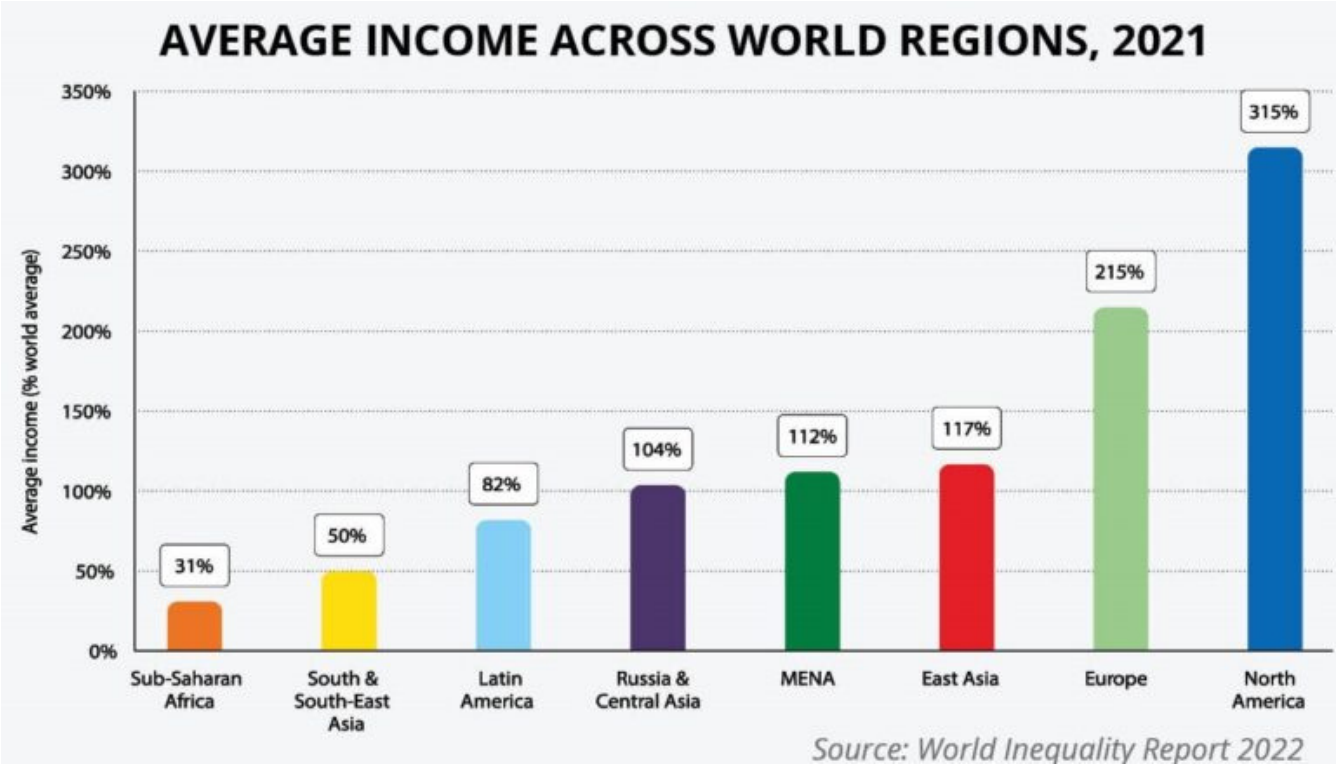
Table 4: Average Share of Income by Economic Group in India (1951-2020)

Year	Average Share of Income of Bottom 50%	Average Share of Income of Top 10%	Average Share of Income of Top 1%
1951-1960	18.56%	38.62%	13.13%
1961-1970	20.10%	36.98%	12.91%
1971-1980	20.75%	34.62%	10.05%
1981-1990	20.24%	34.69%	9.87%
1991-2000	19.08%	38.75%	13.26%
2001-2010	16.26%	47.37%	19.42%
2011-2020	13.25%	56.74%	21.74%

Note: The data is obtained from the World Inequality Database. The average income share is computed by a simple arithmetic average of annual income shares.

When comparing income distribution in India with peer and advanced economies, striking disparities emerge. Since 1980, the share of the national income for the bottom 50% in India has dropped by approximately 40%. In sharp contrast, the top 10% saw an 80% increase, while the top 1% experienced a staggering 180% rise in their share of national income during the same period.

Notably, among the economies under comparison, India stands out with the most substantial increase in income concentration among the top 1% and top 10% since 1980. This pattern of widening income gaps is reminiscent of other emerging economies like China and South Africa, reflecting a global trend towards greater income inequality.



POVERTY ALLEVIATION EFFORTS

India has launched several poverty alleviation programs to eradicate poverty and provide basic amenities to the poor households. The Indian government has taken various programs, schemes, policies based on two main objectives: Launching anti-poverty programs to address a specific group of people and increasing economic growth of the country by providing job opportunities to the lower-income groups.

Integrated Rural Development Program 1978

The Integrated Rural Development Program is a combination of the Community Area Development Programmes, Drought Prone Area Program, Small Farmer Development Agency, and Marginal Farmers and Agricultural Labourer Agency. The prime motive for introducing integrated rural development programs was to eradicate the problem of unemployment, poverty, and hunger in rural India.

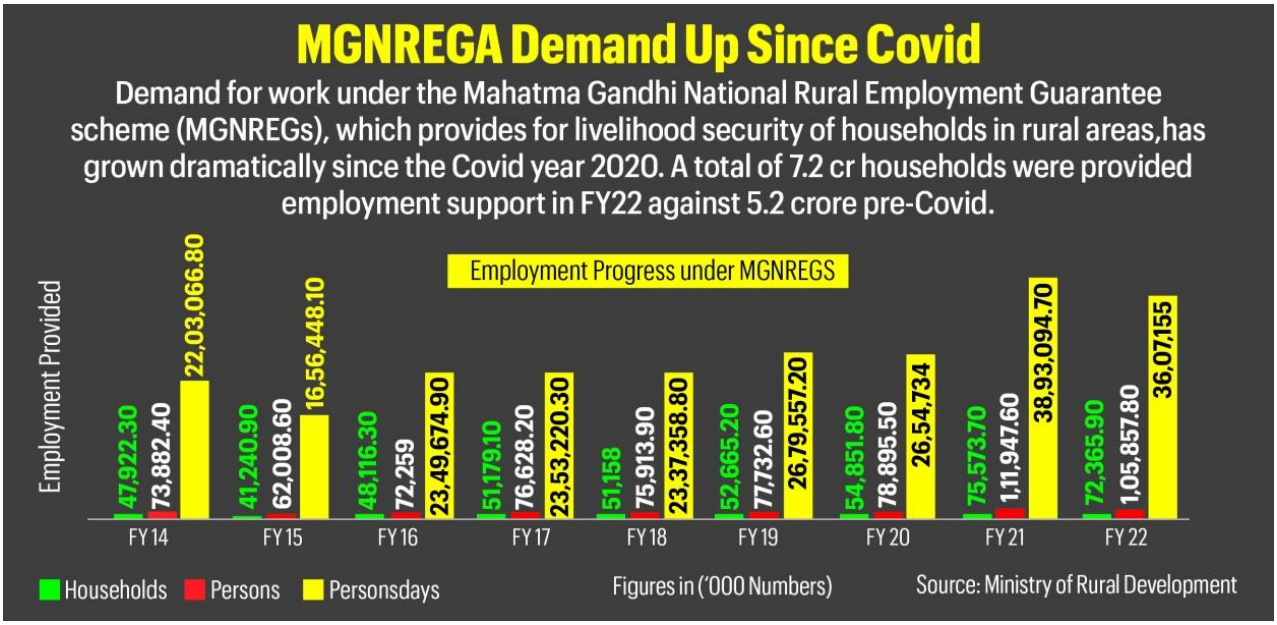
Pradhanmantri Gramin Aawas Yojana 1985

To build 13 lakh residential areas for rural regions and to provide homes for everyone. To offer loans to the general public at reasonable discounts. The objective of this poverty alleviation programme is to increase the number of wage job possibilities available to households by offering both annual guaranteed pay employmen

Jawahar Gram Samridhi Yojana 1999

The Jawahar Gram Samridhi Yojana (JGSY), launched in 1999, is a comprehensive rural development initiative aimed at enhancing the infrastructure and overall well-being of remote areas in India. The program focuses on improving essential facilities such as schools, connecting these regions with urban areas through the construction of roads, and establishing healthcare facilities like hospitals.

One of the primary objectives of JGSY is to uplift families falling under the Below Poverty Line (BPL) category by providing sustainable employment opportunities. By creating long-term wage opportunities, the program aims to not only alleviate immediate financial challenges but also foster lasting economic stability within these households.



Mahatma Gandhi National Rural Employment Guarantee Act 2005

Every rural family is given 100 days of guaranteed work each year under this act. Women would only be eligible for 1/3rd of the planned positions. National Employment Guarantee funds will also be provided by the Union government under this act. State governments will also create sales Employment Guarantee funds to carry out the program. A participant in the program is eligible for a daily employment benefit if they are not offered work within 15 days.

National Rural Livelihood Mission 2011

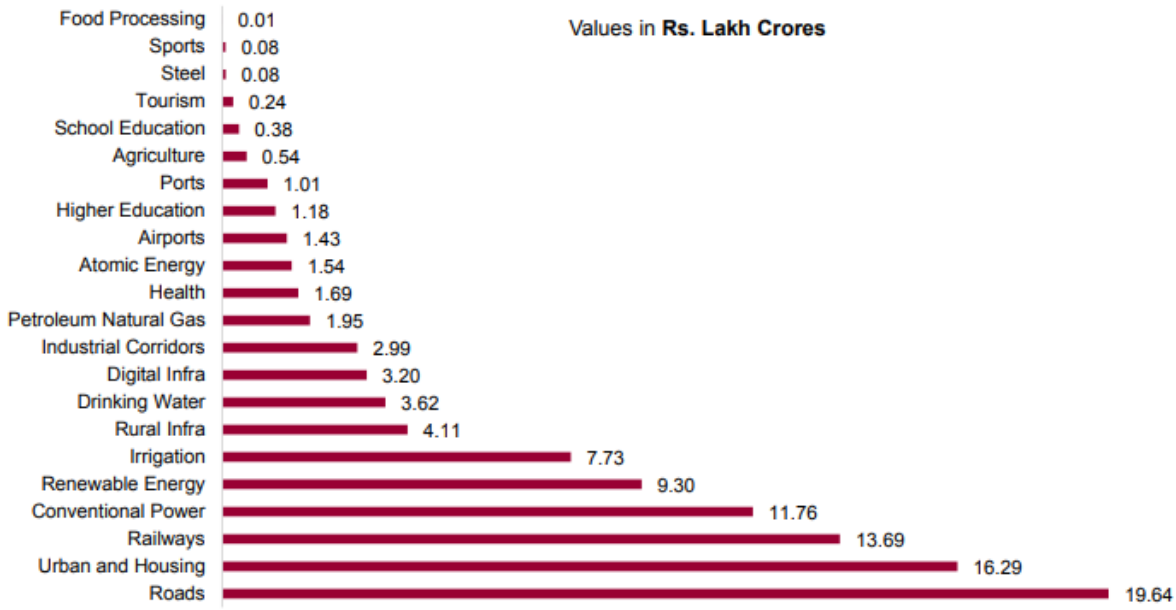
It developed out of the necessity to give the impoverished in rural areas work that pays a consistent monthly wage and to diversify their requirements. To assist the impoverished section, self-help groups are established at the village level.

INFRASTRUCTURE DEVELOPMENT IN INDIA

India is undertaking ambitious infrastructure projects such as the Chenab Bridge in the state of Jammu and Kashmir, one of the tallest arch railway bridges in the world, which is built at one of the highest altitudes with a broad-gauge Indian Railway line throughout its entire span.

The Indian government focuses on India's infrastructural needs and has developed various schemes and policies in this regard. The National Infrastructure Pipeline (NIP), introduced in 2019 emphasizes social and infrastructure projects including energy, roads, railways, and urban development projects worth INR 102 lakh crores. The Centre and States have nearly equal contributions (39% and 40%) while the private sector has a 21% share. NIP is complemented by the PM Gati Shakti Master Plan which is dedicated to improving India's logistics network.

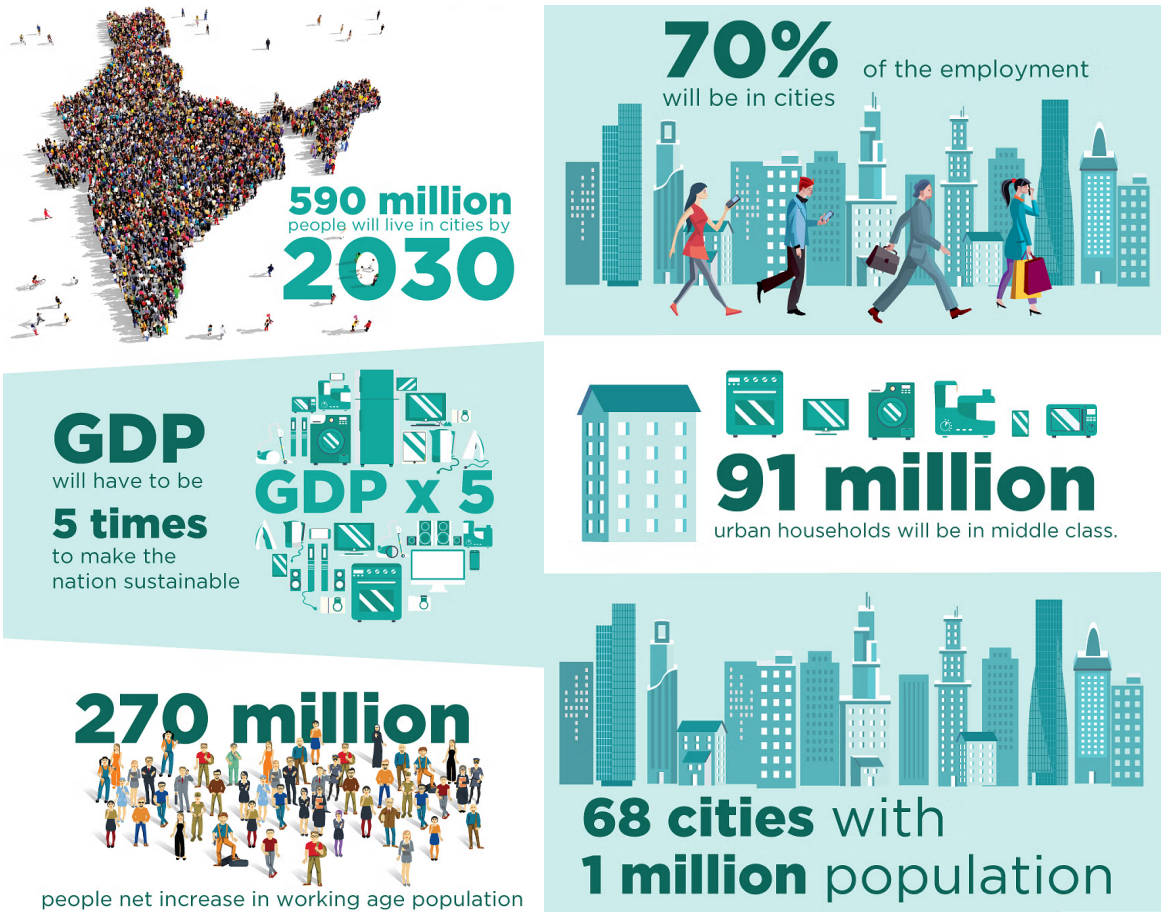
Sector-wise break-up of the NIP



Infrastructure is universally acknowledged as a key driver of growth. The term infrastructure, however, is usually associated with physical assets, such as roads, ports, power transmission lines, etc. However, in recent years, India's growth story has been closely associated with a strong focus on not only physical but also social and digital infrastructure.

In India Budget 2023-24, the Indian government emphasized the need for increased spending in the infrastructure sector and nearly trebled its infrastructure spending to 3.3% of GDP compared to its spending in 2019-20. The Budget has allocated INR 75000 crores for 100 projects deemed critical to improving the overall multimodal logistics infrastructure.

The targeted investments will not only create vital physical infrastructure and improve connectivity that will accelerate the movement of passengers and freight, but also create jobs, spur private investments, and provide a cushion against global headwinds.



CHANGES IN CONSUMER TRENDS BY 2030

Anticipated consumer trends in India for the year 2030 are likely to be influenced by a blend of global and country-specific factors. Projections indicate that consumer spending in India is poised to reach approximately USD 4 trillion by 2030. This substantial growth is expected to be driven by a compound annual growth rate (CAGR) of 10 percent. As India continues to evolve economically and socially, these trends suggest a robust trajectory for consumer spending, reflecting the dynamic interplay of both global and local dynamics.

CONSUMER ELECTRONICS MARKET SIZE, 2021 TO 2030 (USD BILLION)

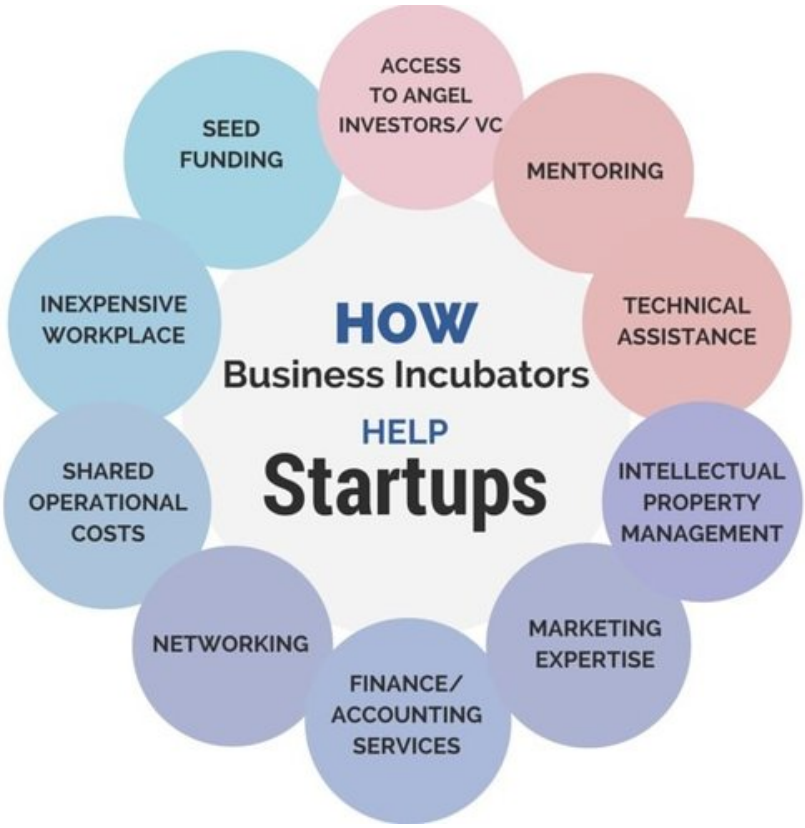
As 140 million households move into the middle class and another 20 million move into the high-income bracket, they will spend 2-2.5x more on essential categories (food, beverages, apparel, personal care, gadgets, transport and housing) and 3-4x more on services (healthcare, education, entertainment and household care). Upper-middle-income and high-income entrants will drive a 15-20% increase in the ownership of durables (washing machines, refrigerators, TVs, and personal vehicles).

Half the incremental consumer spends by 2030 will be simply to buy more of the products and services being consumed today. Affordable options will continue to be important. The remaining half will be split nearly equally on upgrading to premium offerings and including new variants in existing routines. Premiumization and category addition will drive a significant share of incremental spending on eating.

Consumption would be heavily digitally influenced by 2030. Consumers will buy things heavily influenced by the latest trends on social media. E-Commerce would thus also continue its rapid expansion.

STARTUP INCUBATORS

In the context of India's developing economy, the significance of startup incubators is expected to grow substantially by 2030. These incubators are set to become increasingly vital as they provide a structured ecosystem that proves particularly beneficial for emerging entrepreneurs. In a nation renowned for its entrepreneurial spirit and a rapidly expanding startup ecosystem, the support offered by these incubators is pivotal. Serving as crucial facilitators, Indian incubators furnish startups with essential resources and guidance, expediting their growth in a dynamic business environment.



TECHNOLOGICAL OUTLOOK

SHAPING INDIA IN 2030, DIGITAL INDIA

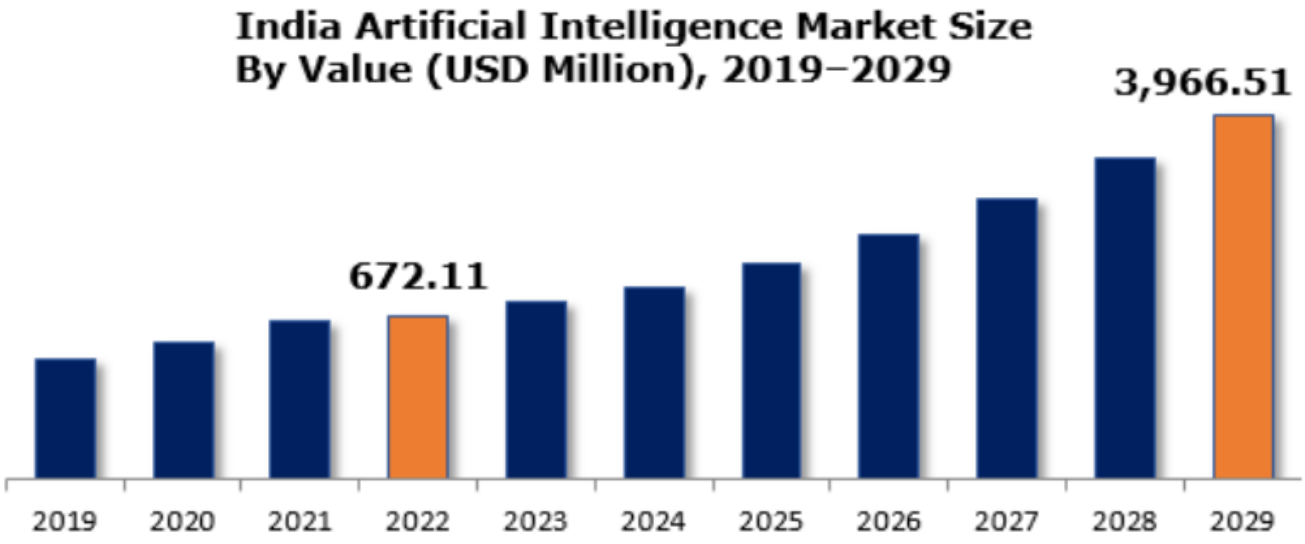
India is on the cusp of a digital revolution. With its young and tech-savvy population, India is well-positioned to take advantage of emerging technologies like artificial intelligence, blockchain, 5G, the Internet of Things, and quantum computing.

Technology hold the transformative potential to revolutionize various facets of India's development. These innovations can enhance government service efficiency by automating administrative tasks and freeing up resources for more strategic initiatives. Moreover, they fuel economic growth by spawning new businesses and employment opportunities, like AI-powered customer service chatbots and blockchain-enabled supply chain tracking.

The government's Digital India program is playing a key role in this transformation. The program aims to make India a digitally empowered society and knowledge economy. It has made significant progress in recent years, connecting over 100,000 villages with broadband internet and providing digital literacy training to over 500 million people.

Here are some specific examples of how emerging technologies are already being used in India:

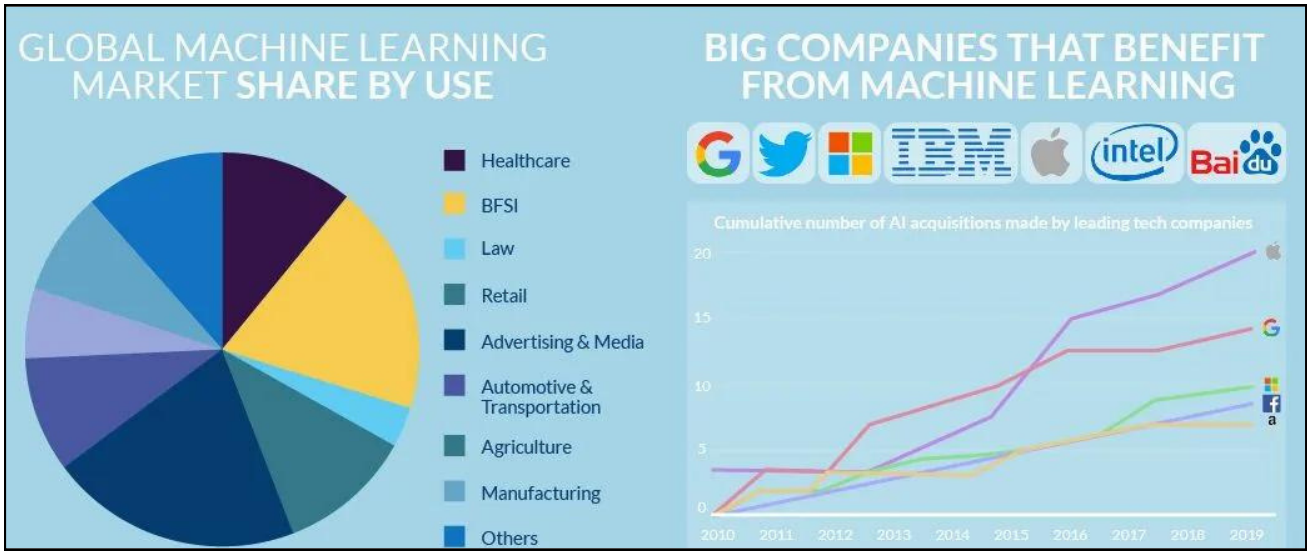
- AI is being used to diagnose diseases: In 2018, the AI-powered app, mFine, was launched in India. The app can diagnose diseases like diabetes, hypertension, and asthma with 90% accuracy.
- Blockchain is being used to track food safety: The government of India is using blockchain to track the movement of food from farm to fork. This helps to ensure that food is safe and secure.
- 5G is being used to provide high-speed internet access in rural areas: In 2022, the government of India launched a pilot project to provide 5G internet access in rural areas. The project is expected to help bridge the digital divide between rural and urban areas.
- The IoT is being used to monitor crops: Farmers in India are using IoT sensors to monitor their crops. This helps them to improve yields and reduce crop losses.
- Quantum computing is being used to develop new drugs: Researchers in India are using quantum computing to develop new drugs for diseases like cancer and Alzheimer's.



ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING APPLICATIONS

Artificial Intelligence (AI) and Machine Learning (ML) are expected to have a transformative impact on the world by 2030. . As India continues to invest in and harness the power of these technologies, it is poised to drive significant advancements across healthcare, meteorology, and multiple industries, ushering in a new era of innovation and progress

.



In agriculture, AI and ML are being used to develop precision agriculture techniques. These techniques use data from sensors and drones to optimize crop yields and reduce food waste. For example, AI-powered drones can be used to monitor crops for pests and diseases.

In transportation, AI and ML are being used to develop self-driving cars and improve traffic management. Self-driving cars have the potential to reduce traffic accidents and congestion. AI-powered traffic cameras can be used to detect traffic violations and improve traffic flow.

In education, AI and ML are being used to develop personalized learning tools. These tools can adapt to the individual needs of each student and help

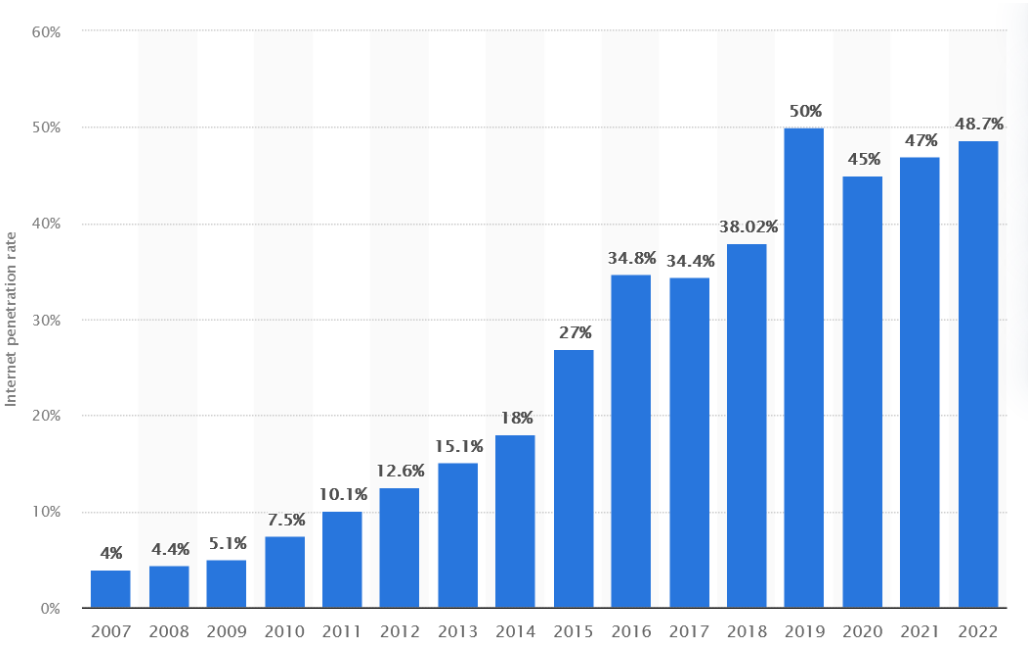
INTERNET OF THINGS (IOT) AND CONNECTIVITY ADVANCEMENTS

The Internet of Things (IoT) is a rapidly growing technology that is having a major impact on the world. In India, the IoT market is expected to grow to $200 billion by 2030. This growth will be driven by a number of factors, including the increasing adoption of smart devices, the development of new IoT applications, and the improvement of connectivity infrastructure. The improvement of connectivity infrastructure is also driving IoT growth in India. The government of India is investing in the development of new connectivity infrastructure, such as 5G networks and fiber optic cables. This will make it easier to connect IoT devices and to exchange data.

One of the key drivers of IoT growth is the increasing adoption of smart devices. Smart devices are connected devices that can collect and exchange data. They are used in a wide variety of applications, such as wearables, smart homes and industrial automation. The number of smart devices in India is expected to reach 1.5 billion by 2030.

DATA OF INTERNET USER IN INDIA AND IN WORLD DATA

The growth of IoT in India will have a major impact on the country's economy and society. IoT applications have the potential to improve efficiency, productivity, and sustainability in a wide range of industries. They can also help to improve the quality of life for people in India.Here are some specific examples of how IoT and connectivity advancements are expected to be used in India in 2030:



Smart agriculture: IoT devices can also be used to track the movement of livestock and to monitor the health of animals. This information can be used to optimize irrigation, fertilization, and pest control.

Smart healthcare: IoT devices will be used to monitor patient health, track medication adherence, and provide remote care. This can help to improve the quality of care and reduce healthcare costs.

Smart transportation: IoT devices will be used to monitor traffic conditions, optimize routes, and improve safety. This can help to reduce congestion and accidents.

Smart manufacturing: IoT devices will be used to monitor production lines, optimize processes, and improve quality control.

However, there are also some challenges that India will need to address in order to fully realize the potential of these technologies. These challenges include:

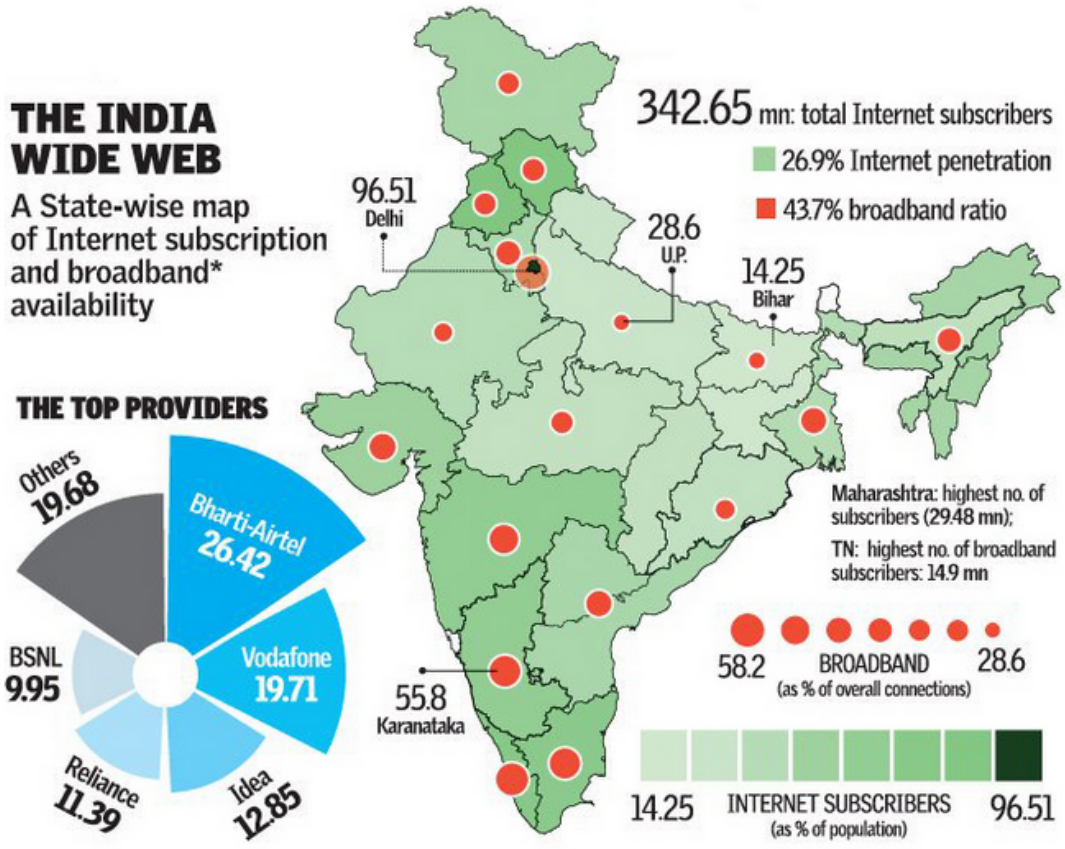
Digital illiteracy: A large number of people in India still do not have access to the internet or do not have the skills to use it. This will need to be addressed in order to ensure that everyone can benefit from these technologies.

Data privacy and security: The use of emerging technologies raises concerns about data privacy and security. These concerns will need to be addressed in order to build trust in these technologies.

The digital divide: The digital divide between rural and urban areas is a major challenge in India. This divide will need to be narrowed in order to ensure that everyone can benefit from these technologies.

Infrastructure: These technologies require a high-speed, reliable, and secure internet infrastructure. India's internet infrastructure is still developing, and this is a major bottleneck for the adoption of these technologies.

Policy and regulations: The government will need to develop clear policies and regulations for the development and use of these technologies. This is important to ensure that these technologies are used in a responsible and ethical manner.

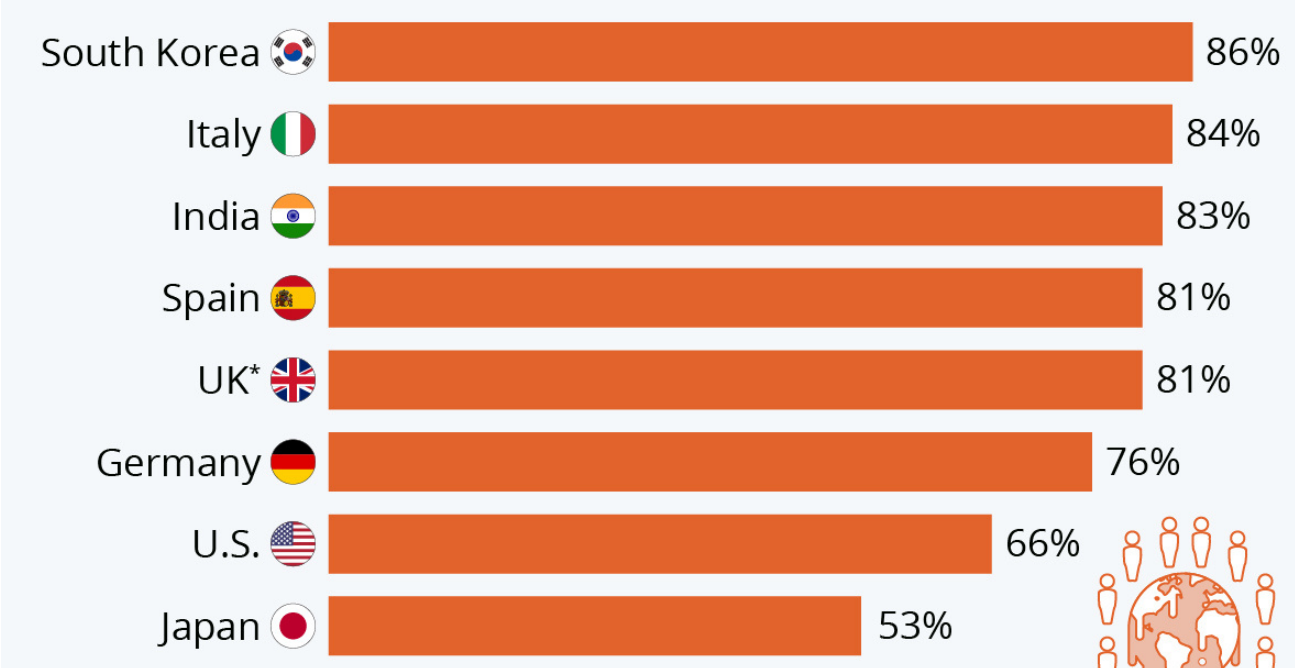


ENVIRONMENTAL SUSTAINABILITY

CLIMATE CHANGE & INDIA RESPONSE

Climate change in India is having profound effects on India , which is ranked seventh among the list of countries most affected by climate change in 2019. UNICEF's 2021 report , presents the first child-focused global climate risk index. And India is ranked 26th out of 163 countries implying increasing risk on children in India due to climate change threatening their health, education, and protection .

CLIMATE CHANGE HIGHEST TO LOWEST



INDIA'S CLIMATE RESPONSE & ENVIRONMENT SUSTAINABILITY

India has bolstered its climate change efforts by pledging to reduce the emissions intensity of its GDP by 45% by 2030, exceeding its previous target of 33-35% after COP26. However, it's important to note that this reduction in emissions intensity may not lead to an overall reduction in emissions.

India's National Action Plan on Climate Change (NAPCC) emphasizes eight key "national missions" covering solar energy, energy efficiency, sustainable housing, water management, Himalayan ecosystem preservation, afforestation (green India), sustainable agriculture, and climate change knowledge enhancement. These missions prioritize adaptability and sustainability, showcasing India's commitment to combatting climate change and promoting environmental resilience.

India commits to generating 50% of its electricity from non-fossil fuels by 2030 and maintaining forest cover as a carbon sink. Notably, the 500 GW energy capacity target from non-fossil fuels announced at the last COP is missing from the updated UN pledges.

NAPCC

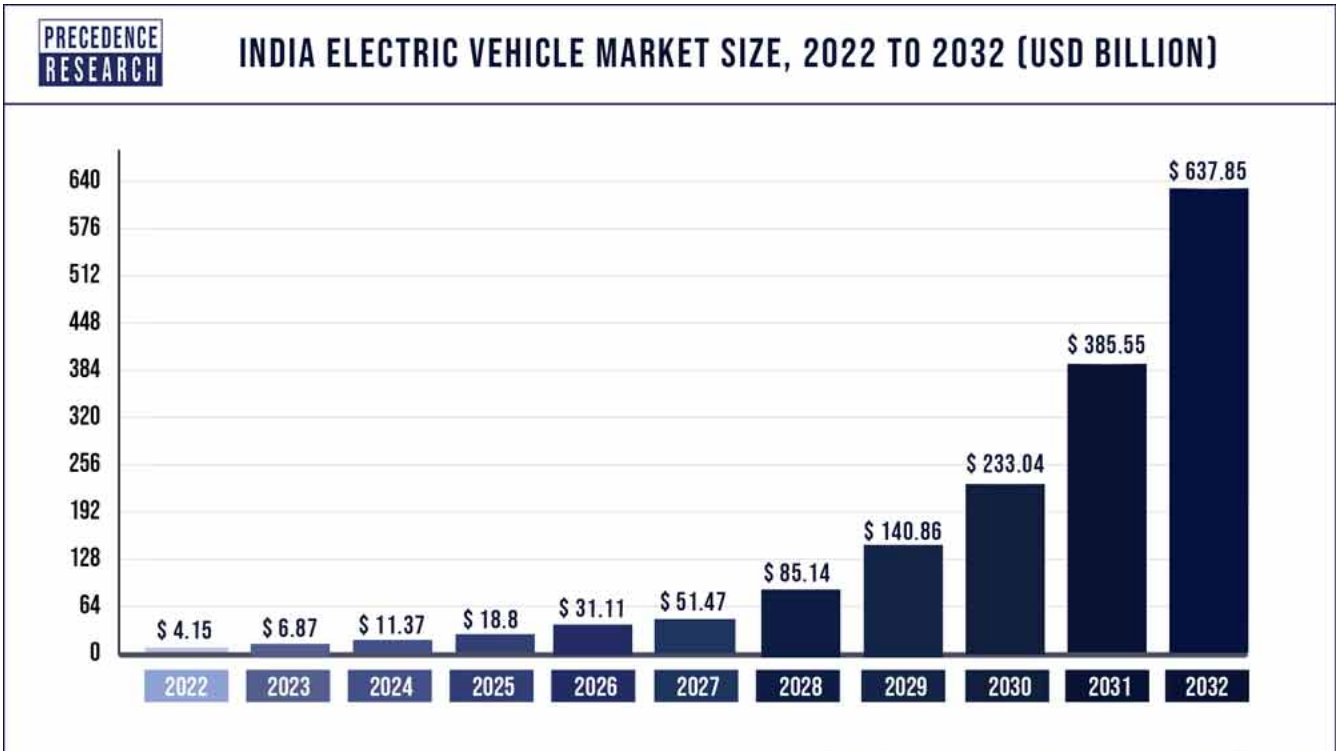
RENEWABLE ENERGY ADOPTIONS AND TARGETS

Environmental sustainability is the responsibility to conserve natural resources and protect global ecosystems to support health and wellbeing, now and in the future. The adoption of renewable energy is a key component in achieving this goal. Renewable energy sources such as wind and solar are poised to become the backbone of the world's power supply as countries aim to reach ambitious decarbonization targets.

India currently has a total renewable energy capacity of 168.96 GW (as on 28th February 2023) with about 82 GW at various stages of implementation and about 41 GW under the tendering stage. This includes 64.38 GW Solar Power, 51.79 GW Hydro Power, 42.02 GW Wind Power and 10.77 GW Bio Power.The government of India has set an ambitious target of having 500 GW of installed renewable energy by 2030, which includes the installation of 280 GW of solar power and 140 GW of wind power. This is part of India's commitment to environmental stewardship, climate action, and focus on renewables to decarbonize the way the country operates.

ROLE OF EV

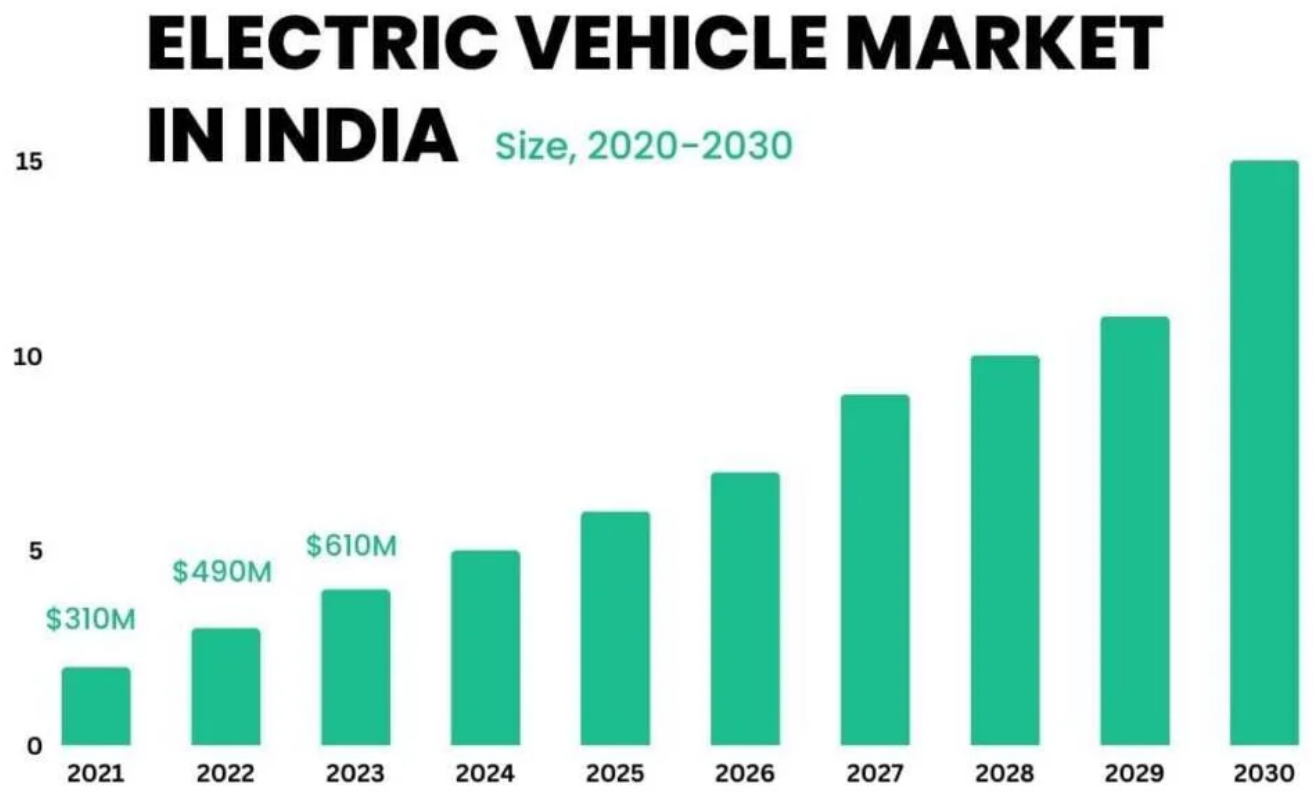
EVs in India have emerged as a successful alternative to traditional ICE vehicles that emit harmful emissions into the environment. As a result, the adaptation has also experienced swift growth, especially in E2W (electric two-wheelers). The India electric vehicle market size was valued at USD 220.1 million in 2020 and is expected to grow at a compound annual growth rate (CAGR) of 94.4% from 2021 to 2030



Report on the role of electric vehicles (EVs) in environmental sustainability. EVs are responsible for considerably lower emissions over their lifetime than conventional internal combustion engine vehicles. If powered by clean energy sources, EVs can help in increasing the share of renewables in the energy mix and contribute to tackling air pollution and related health effects.

The Government of India is continuously showing its support to develop India as a global leader in the EV sector. Several schemes and incentives have been launched by the government to boost the demand for electric vehicles as well as motivate manufacturers to invest in the R&D of electric vehicles and related infrastructure.The government of India has launched so far – FAME-II (The FAME India initiative was launched on April 1, 2015, by the Indian government to reduce the usage of petrol and diesel automobiles.
And its main aim was to drive greater adoption of ev in India)

Popular companies Tata Motors and Mahindra & Mahindra are investing in electric vehicles due to high demand and expected future growth. Electric car sales in India increased by 109% from 2,814 units in 2019 to 5,905 units in 2020, with the Tata Nexon EV accounting for 64% of sales.Electric vehicles (EVs) have many benefits over traditional gasoline-powered cars, including Reduced air pollution , low maintenance and running cost and reduced noise pollution.The adoption of EVs is crucial in achieving environmental sustainability. The Indian government is committed to achieving 30% electrification of total mobility by 2030.

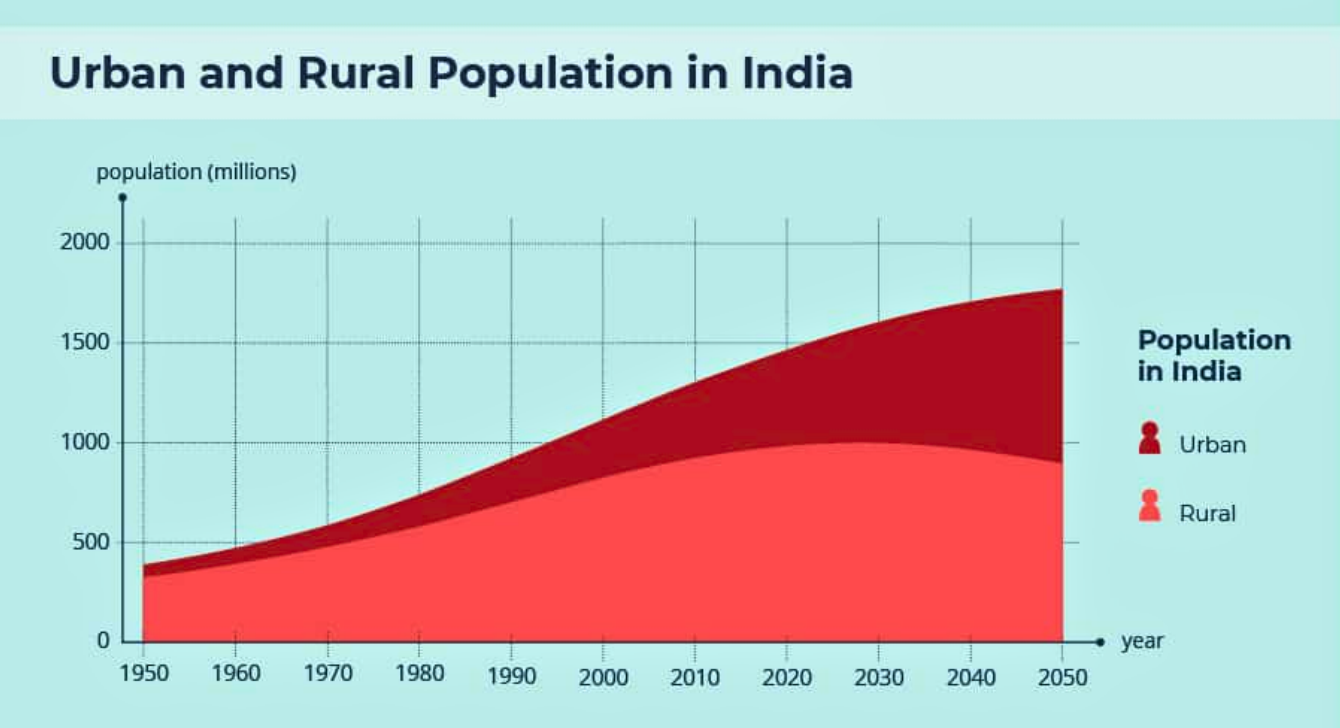


EDUCATION AND SKILLING

As of April 2023, India is on track to become the world's most populous nation, with an estimated 1.428 billion people. Despite a declining total fertility rate since the 1980s, India maintains a youthful population, with a median age of 28.7 years in 2022. The working-age population will continue to grow until 2040, and India is incredibly diverse, with over 2000 ethnic groups, various religions, and languages.

Considering "India in 2030," it's vital to examine evolving education and skill development. Education serves as the foundation for personal growth and success, while skill-building adds practical tools to this foundation. India must align education and skill-building to enhance the country's prospects.

Challenges lie ahead, such as ensuring high-quality education, closing the skills gap, and promoting universal access to learning. With government support, collaboration with businesses, and diligent progress monitoring, India can overcome these obstacles and pave the way for a brighter future with improved education and skills for all. In summary, education and skill-building are the cornerstones of India's 2030 vision.



EDUCATION SYSTEM REFORMS AND QUALITY ENHANCEMENT

The Current State of Education in India: Challenges and Opportunities

1) The World Economic Forum predicts that 65% of today's primary school children will hold jobs that don't exist yet. To prepare for the 21st century, India's education system must evolve beyond rote learning and standardized testing. It should emphasize creativity, innovation, critical thinking, problem-solving, collaboration, and lifelong learning.

2) UNESCO's 2021 Education Report reveals that only 2.3% of India's workforce has formal vocational skills. Over 50% of the youth will lack employable skills by 2030, potentially costing 2.3% of annual growth by 2028.

3) Leveraging digital technologies like AI, machine learning, cloud computing, and blockchain can enhance learning, expand access, personalize education, and improve assessments. The COVID-19 pandemic underscores the need for blended learning and AI-powered models.

4) India's STEM education heritage can be further developed to meet global economic demands. Recent reports show a surge of Indian students pursuing STEM programs in the United States, reflecting the appeal of US STEM education, high salaries, and favorable visa regulations.

HIGHLIGHT 1
Replacing 10+2 with 5+3+3+4

- The present 10+2 structures in school education will be modified.
- With a new pedagogical and curricular restructuring of 5+3+3+4 covering ages 3-18
- Named as foundational, preparatory, middle, and secondary.

HIGHLIGHT 2
Early Childhood Care & Education (ECCE)

- Presently, quality ECCE is not available to crores of young children, particularly children from socio-economically disadvantaged backgrounds
- Universal provisioning of quality ECCE ensures that all students entering Grade 1 are school ready

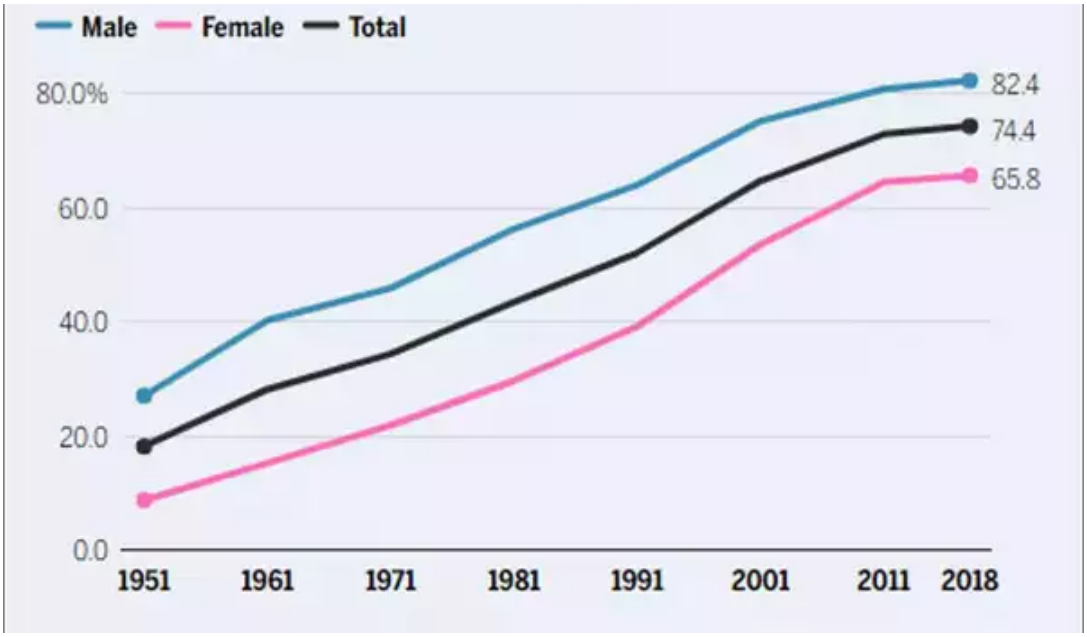
HIGHLIGHT 3
Foundational Literacy & Numeracy

- Over 5 crores students currently in elementary schools have not attained foundational literacy and numeracy
- Attaining foundational literacy and numeracy for all children will thus become an urgent national mission

SKILL DEVELOPMENT PROGRAMS AND VOCATIONAL TRAINING, NEP

The National Education Policy 2020 (NEP 2020) is a government framework to revolutionize India's education system. Its main goals include providing equitable, high-quality education from preschool to higher education. NEP 2020 aims for universal early childhood care and education (ECCE) by 2030, 100% enrollment in schooling, and a new 5+3+3+4 curricular structure aligned with children's development.

Multilingualism, teacher standards (NPST), and a National Curriculum Framework (NCFSE) are key aspects. It also establishes the National Assessment Center "PARAKH" to track learning outcomes.

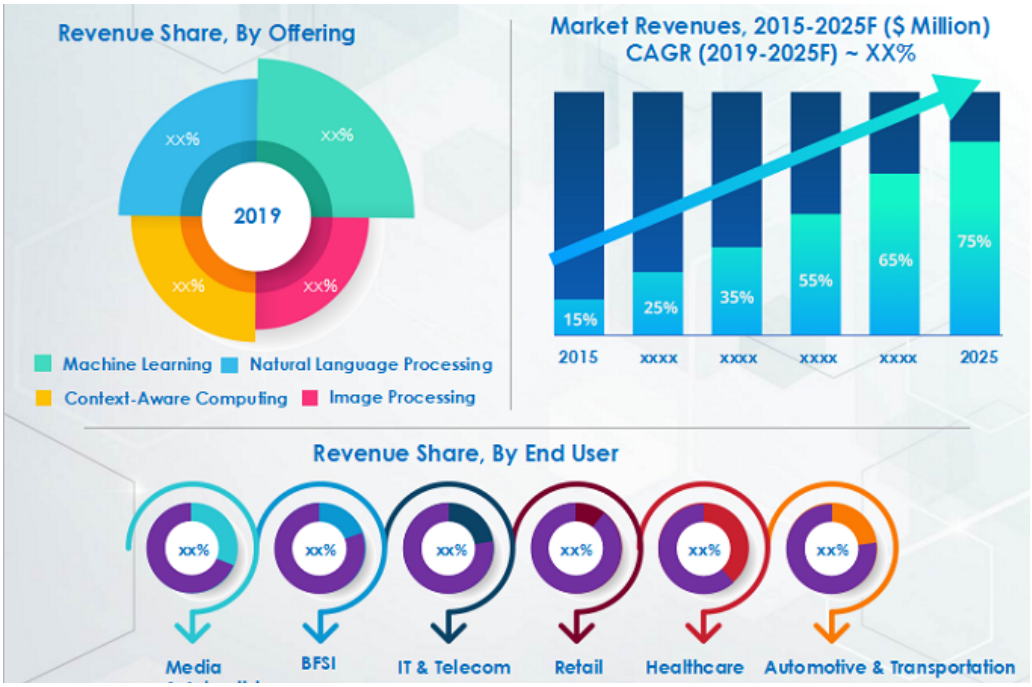


In higher education, NEP 2020 targets a 50% GER by 2035, multidisciplinary institutions, flexible undergraduate programs, and a National Research Foundation (NRF) for research and innovation. It promotes internationalization, digitalization, and links education with skill development and entrepreneurship, positioning India as a global knowledge and innovation hub. NEP 2020 aims for a more inclusive and promising education system.

EMERGENCE OF RESKILLING DUE TO EMERGENCE OF AI

The rise of artificial intelligence (AI) has reshaped work dynamics, bringing automation, efficiency, and innovation alongside new challenges. Adapting to evolving labor market demands is a pressing concern.

India's tech sector, contributing 7.5% to the GDP, anticipates a $245 billion revenue boost in FY 2023. Key growth drivers include application modernization, cloud migration, platformization, and cybersecurity, expected to fuel an 8.3% growth in IT services. The sector's workforce expanded, establishing India as a "Digital Talent Nation."



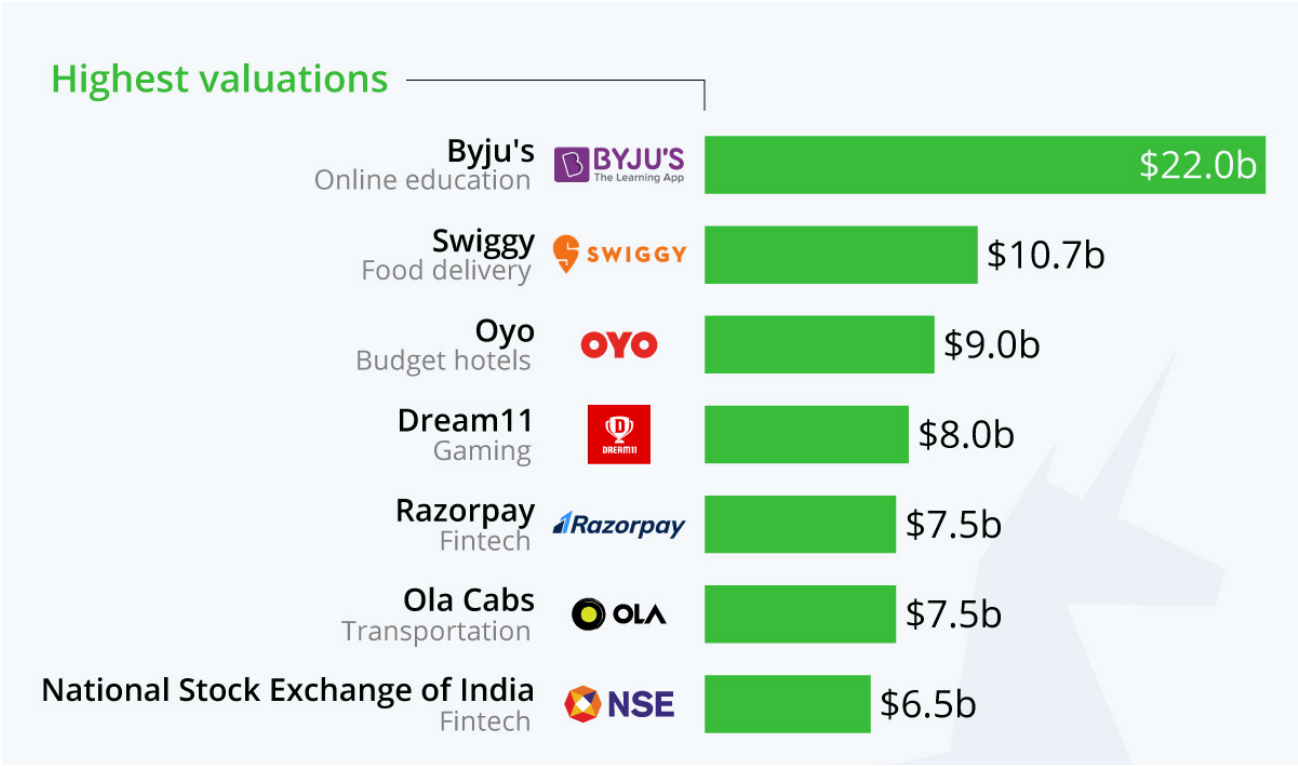
India Artificial Intelligence Market Overview

AI's market is set to grow at a 20.2% CAGR over five years. However, there's a 51% gap in the supply of AI/ML, Big Data Analytics, and Data Science talent, with 60% of workers needing training by 2027, but only half having access today.

Reskilling, essential due to AI's disruptive impact, is globally critical, with AI displacing 85 million jobs by 2025 but creating 97 million new roles. India, with a vast, young population and a burgeoning digital economy, sees reskilling as vital to realizing its 2030 economic vision.

THE RISE OF ENTREPRENEURSHIP

Anticipated to be a major driver of economic growth by 2030, entrepreneurship is poised to redefine India's economic landscape, shifting from a job seeker economy to a job creator economy. This transformative shift is already evident in the substantial job creation facilitated by entrepreneurial ventures in recent years. According to recent reports by Hindustan Times, the impact of entrepreneurship is set to become even more profound, with women-led businesses expected to play a pivotal role in generating between 150-170 million jobs. This constitutes more than 25% of the new jobs required for the entire working-age population by 2030, showcasing the significant potential of entrepreneurship in addressing employment needs.



Entrepreneurship's role as a catalyst for job creation extends beyond sheer numbers, as it contributes to stimulating innovation and enhancing competitiveness within the Indian economy. The entrepreneurial spirit fosters a culture of creativity and risk-taking, leading to the development of novel solutions and services. This, in turn, has a cascading effect on various sectors, spurring technological advancements and fostering a more dynamic and adaptive business environment.

GOVERNMENT'S ROLE IN PROMOTING ENTREPRENEURSHIP

1. Startup India

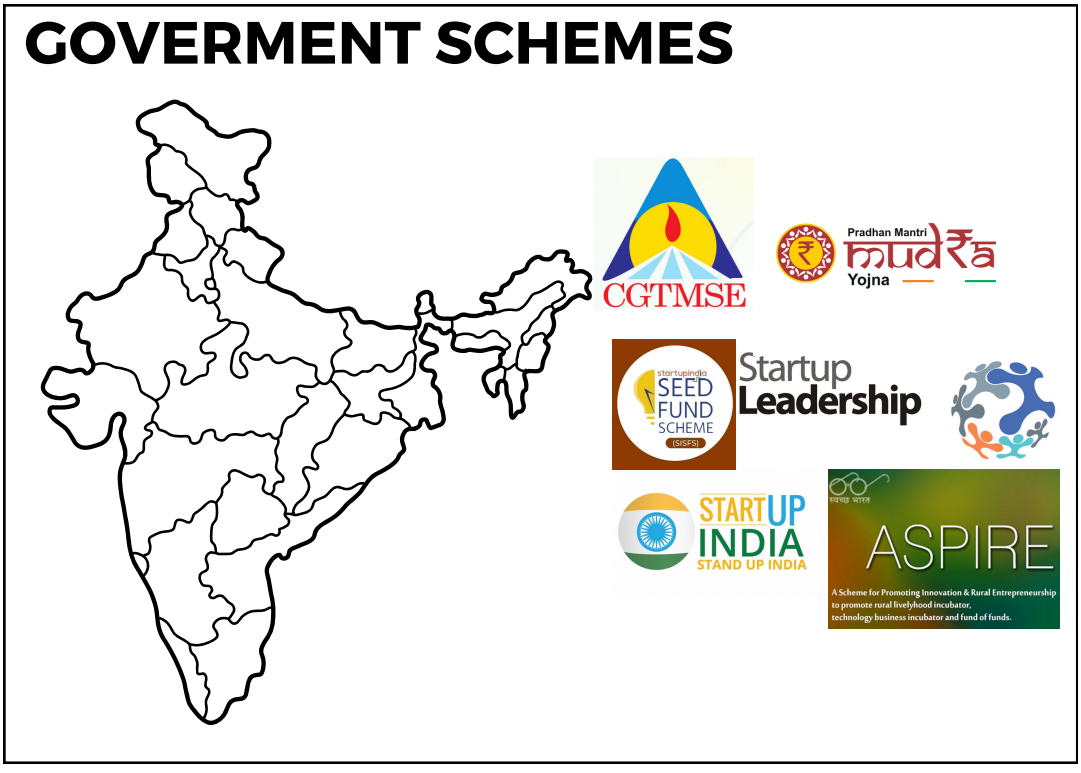
Startup India, launched in 2015 by Prime Minister Narendra Modi, offers benefits like self-certification, tax exemptions, and expedited patent approval to empower startups. Eligible entities receive a three-year tax holiday on profits. The initiative has streamlined entity registration, with 92,683 startups recognized by DPIIT as of February 28, 2023.

2. Digital India

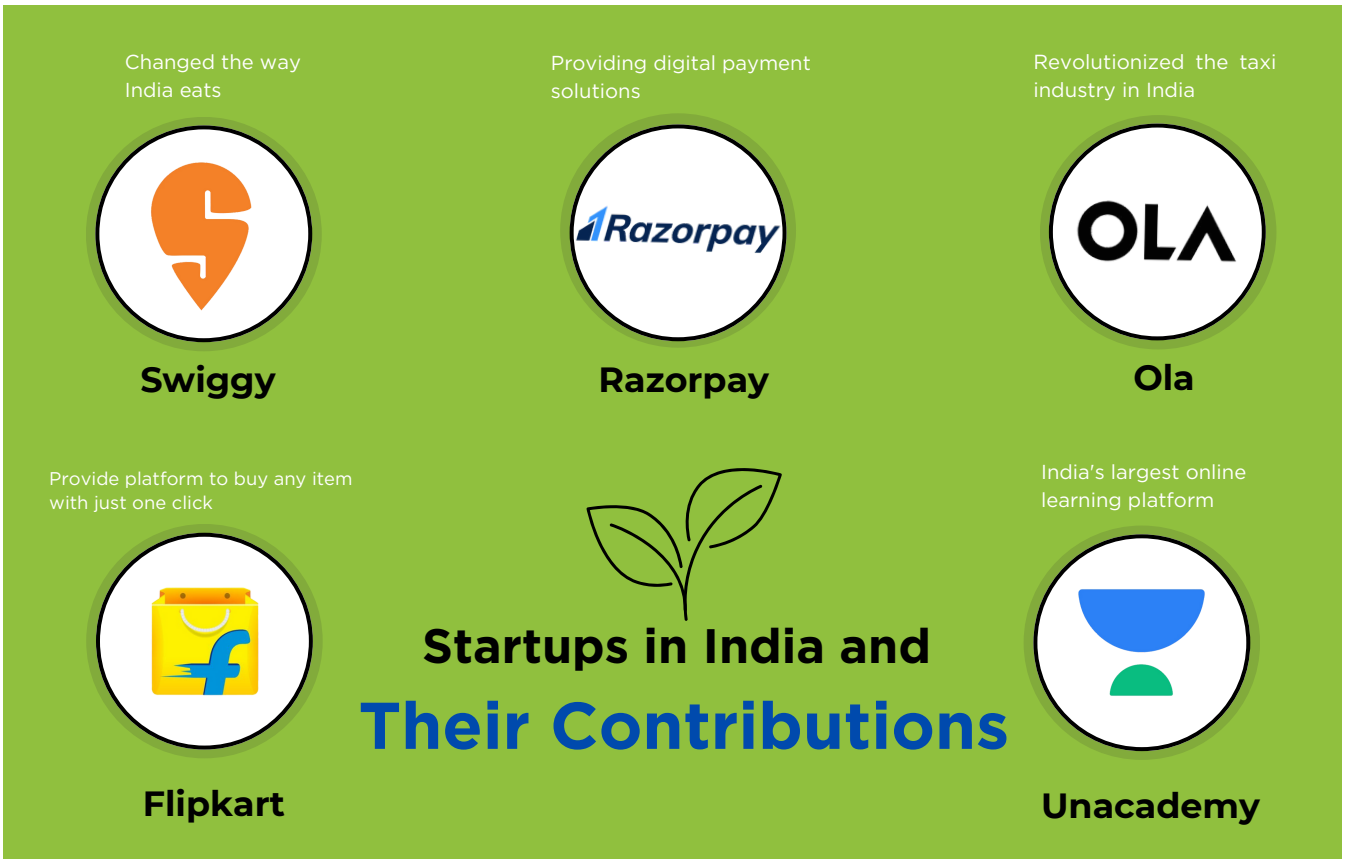
Digital India, launched by the Government of India, aims to digitize the country and foster tech innovation. It connects rural areas with high-speed internet, promoting rural startups. Key facilities include BharatNet, digital locker,
e-education, e-health, e-sign, e-shopping, and the National Scholarship Portal.

3. MUDRA Scheme

The MUDRA scheme aids micro enterprises and startups through last-mile agents. It targets 57.6 million small businesses identified in the 2013 NSSO survey and allocates an additional ₹1 trillion ($13 billion) for this purpose.



STARTUPS IN INDIA AND THEIR CONTRIBUTIONS



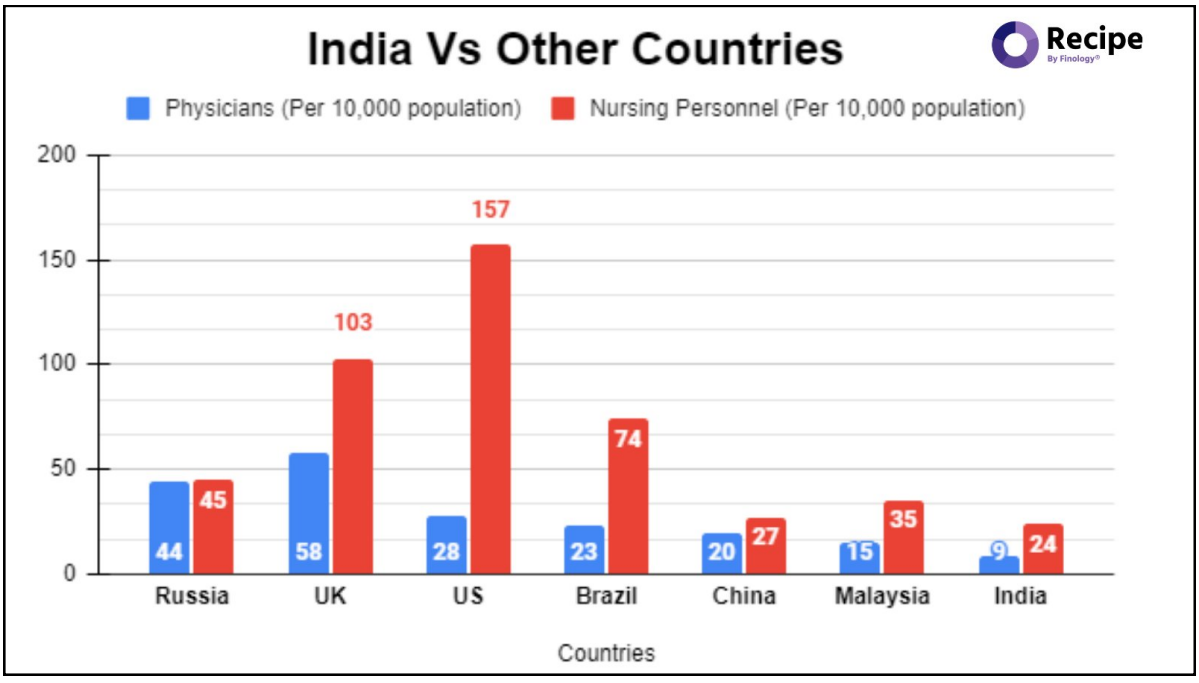
India's entrepreneurial landscape is undergoing a swift transformation, heralding a promising future. Fueled by ongoing government support and the advent of cutting-edge technologies, startups are poised to assume a pivotal role in shaping the nation's economy and steering it towards a brighter future for all. The dynamic synergy between innovative ventures and supportive policies is expected to drive sustained growth, fostering job creation, economic development, and overall societal betterment. As this ecosystem continues to evolve, the collaborative efforts of government initiatives and technological advancements are likely to catalyze a robust and inclusive entrepreneurial environment, unlocking new opportunities and possibilities for India's economic trajectory.

HEALTHCARE AND WELLNESS

HEALTHCARE INFRASTRUCTURE AND ACCESSIBILITY

India's healthcare system urgently needs reform as it lags behind in key health indicators. The WHO ranks India 145th out of 194 countries in health statistics. Shortages exist with 6 lakh physicians, 20 lakh nurses, and 2 lakh dentists, as recommended by NITI Aayog. Rural India faces a severe doctor shortage, with ratios as low as 1:28391 in Bihar.

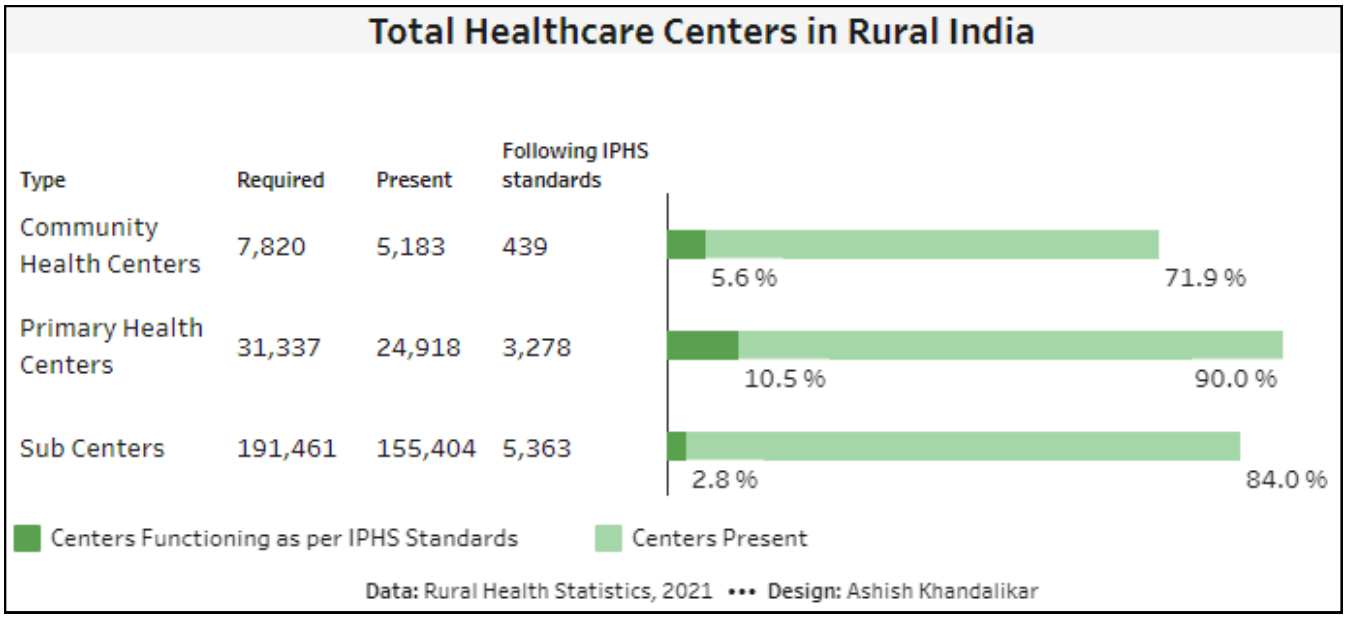
The World Bank highlights the economic benefits of better health, especially for the poor who bear a disproportionate burden of disease. India's healthcare spending heavily relies on out-of-pocket costs, reaching 62.6%, compared to the global average of 1.4% of GDP. The government's per capita healthcare spending is just Rs. 1,112, significantly lower than neighboring countries like Bhutan, Sri Lanka, and Nepal. Insufficient healthcare infrastructure and high healthcare costs result in approximately 10 lakh premature deaths and push 7% of the population below the poverty line annually .Having the proper infrastructure is necessary before providing any services. The Indian healthcare system is made up of a variety of public, private, indigenous, and nonprofit organisations.



INDIA'S HEALTH CARE INFRASTRUCTURE ISSUES

India's healthcare system, encompassing both public and private facilities, has failed to adequately serve its 1.3 billion citizens. New public health challenges arise annually due to shifting demographics, environmental degradation, the emergence of novel infectious diseases, and increasing antimicrobial resistance. However, the healthcare infrastructure remains ill-equipped to address these evolving issues, as it lacks adaptability to the changing requirements of the population The infrastructure for Indian healthcare is plagued by the following issues:

- According to the government's Rural Health Survey, only 55.6% of Community Health Centers (CHCs) have functioning X-ray machines, and just 18% of required specialists (surgeons, physicians, gynecologists, and pediatricians) are employed. This shortage of personnel and equipment is particularly pronounced in northern states.
- Private healthcare dominates with 75% of hospitals, 50.7% of hospital beds, and 54.3% of medical facilities, primarily concentrated in urban areas. The ratio of allopathic doctors to patients is a staggering 1:11,082, far from the WHO's recommended 1:1000. While some states like Delhi, Karnataka, Kerala, Tamil Nadu, Punjab, and Goa meet the WHO norm, their doctors are mostly in urban areas, leaving rural regions underserved.



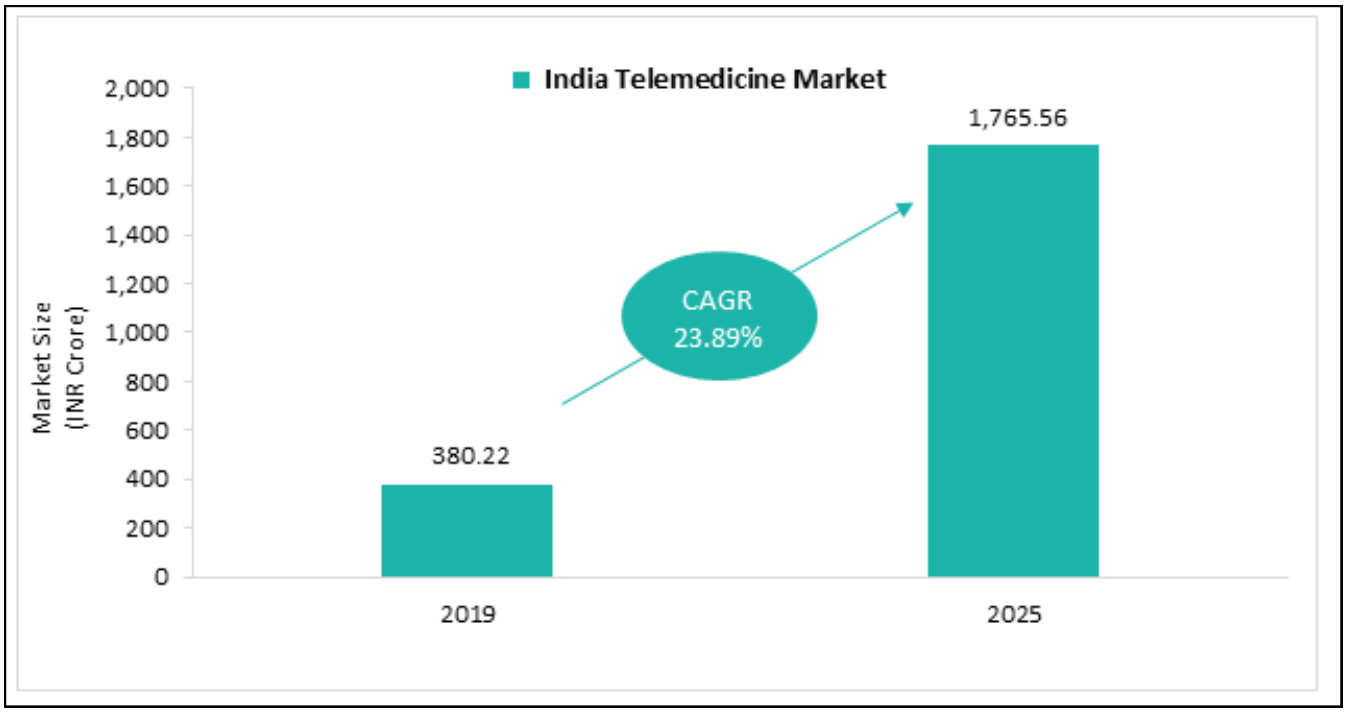
- There are substantial variations in healthcare availability both between states and within them. States like Kerala, Tamil Nadu, and Delhi offer effective public healthcare services, while Uttar Pradesh, Bihar, and Jharkhand heavily rely on the private sector, leading to nurse and doctor shortages.
- In addition to personnel shortages, the private sector includes practitioners without proper training, with only one in five rural doctors licensed to practice medicine, according to the WHO. Addressing these issues requires a comprehensive strategy:

1. **Improve Primary Healthcare:** Prioritize the enhancement of Primary Healthcare Centers (PHCs), potentially through Health and Wellness Centers (HWCs) to achieve Universal Health Coverage (UHC).
2. **Promote Preventive Care:** Increase awareness and incentivize preventive healthcare measures.
3. **Utilize AI and Technology:** Harness AI and technology for better access, treatment, and diagnosis.
4. **Balance Public and Private Sectors:** Strive for equitable access while finding the right balance between public and private healthcare providers, drawing from successful models in other countries.
5. **Invest in Hospital Infrastructure**: Increase the number and quality of healthcare facilities, particularly in rural areas, to expand access to medical care.

ADVANCES IN MEDICAL TECHNOLOGY AND TELEMEDICINE HEALTH

Telemedicine stands at the forefront of healthcare innovation, utilizing advanced telecommunications technologies to transcend geographical, temporal, social, and cultural barriers in the seamless exchange of health information and delivery of medical treatments. This transformative approach relies on electronic information transfer, incorporating a diverse array of technologies such as broadcast video, compressed video, full-motion video, virtual reality, and narrow/high bandwidth computer systems.

A noteworthy aspect of telemedicine lies in its adaptability, with numerous medical devices tailored for remote use. This adaptation has proven particularly beneficial in extending healthcare access to underserved regions, allowing patients to receive various clinical treatments from the comfort of their homes. This not only addresses the challenges posed by geographical constraints but also enhances healthcare accessibility, especially in remote or rural areas where traditional healthcare infrastructure may be limited.

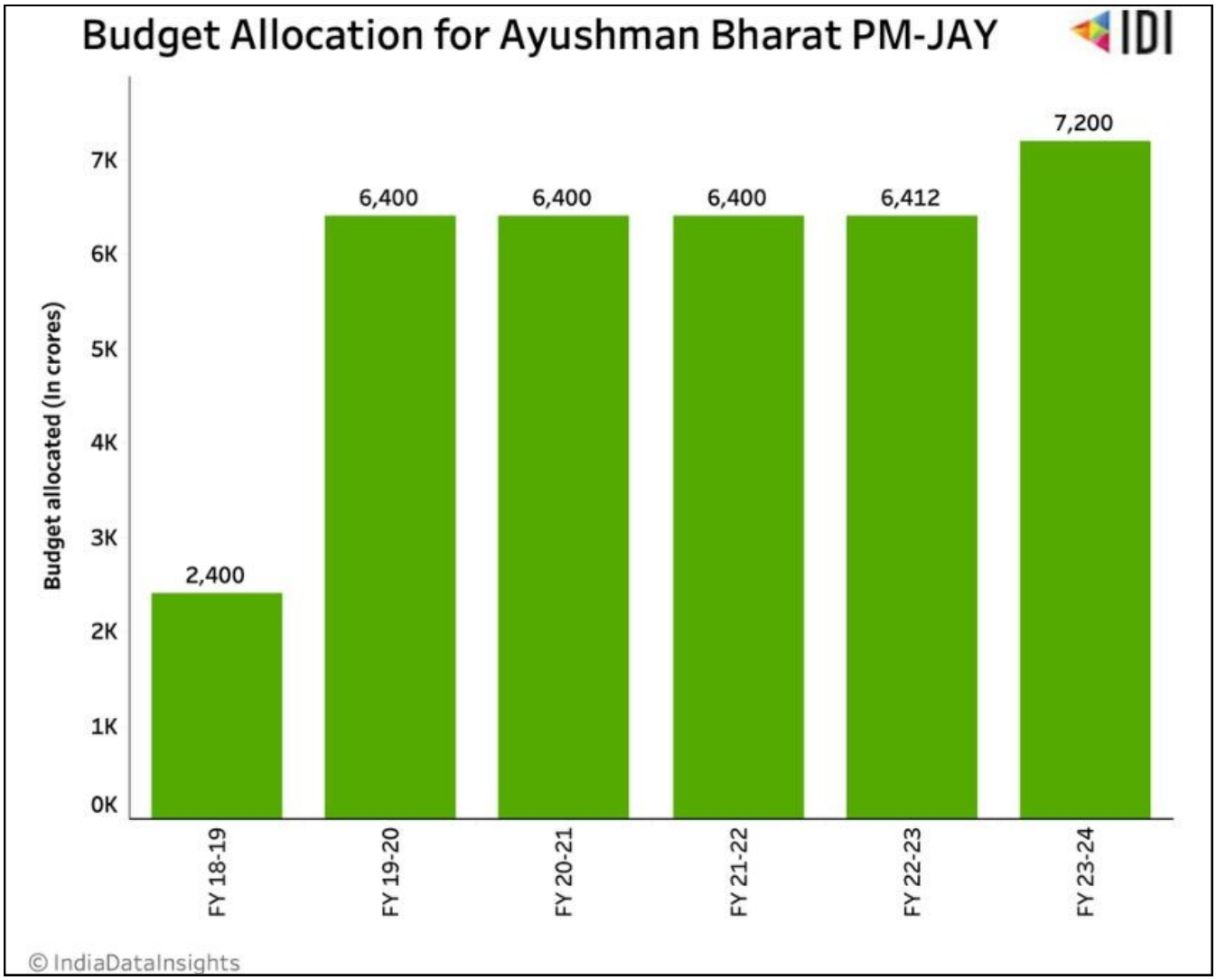


- **Market Size**: According to the India Telemedicine Market Analysis Report, India's telemedicine market was estimated to be worth $830 million in 2019 and is projected to grow to $5.15 billion by 2030.
- **Market Development:** During the years 2023 to 2028, the Indian telemedicine market is anticipated to grow at a compound annual growth rate (CAGR) of about 27.93%.
- **Telehealth Services**: the demand for remote patient monitoring is driving expansion, with an estimated CAGR of 25.5% by 2028. Post-COVID, telemedicine is becoming a reality in India, with anticipated growth to $5.4 billion by 2025 at a CAGR of 31%, as reported by Inc42

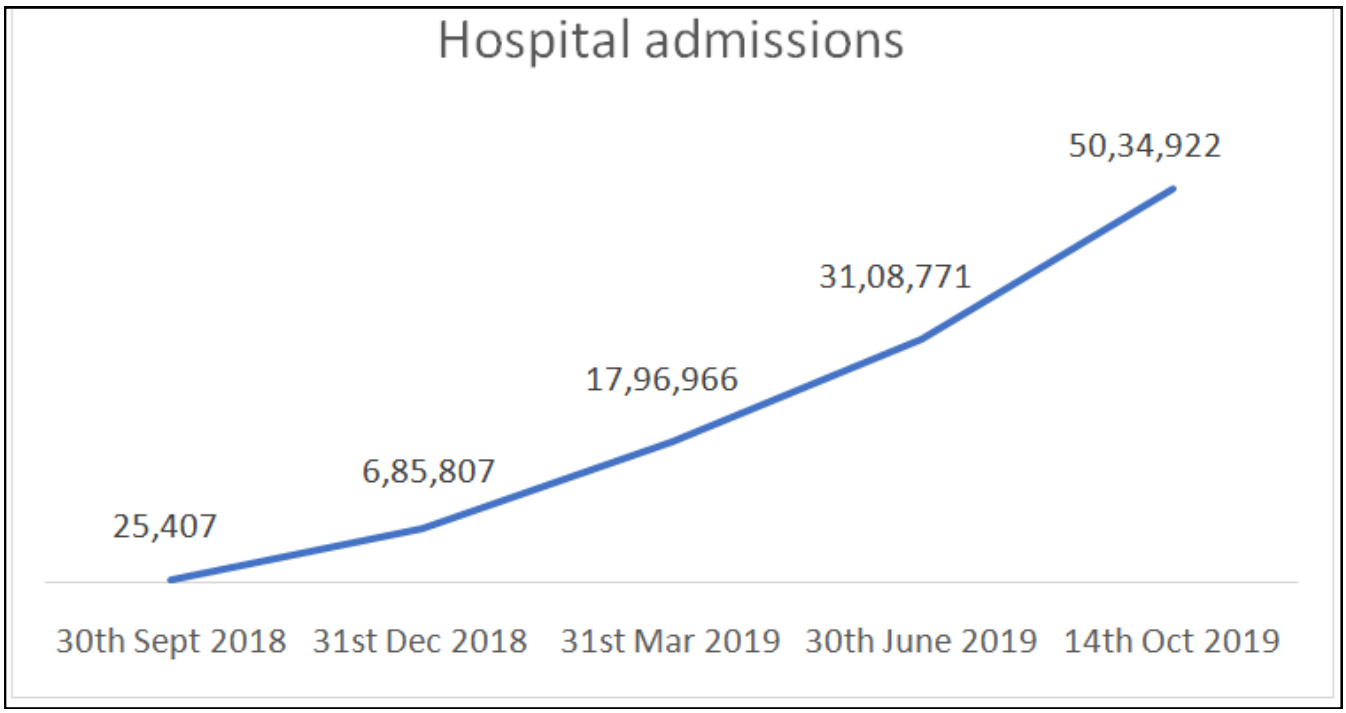
HEALTH INSURANCE: AYUSHMAN BHARAT

One of the biggest health insurance programmes in the world is Ayushman Bharat, commonly known as the Pradhan Mantri Jan Arogya Yojana (PM-JAY). By 2023, there were more Ayushman Bharat Health & Wellness centres than the previous record-holder of 1.5 lakh. The programme has accomplished more than: since HWCs were established.

- Non-communicable disease screenings totaled 86.90 crore.
- 9.3 billion teleconsultations were conducted.
- 135 crore total pedestrians
- 1.60 billion wellness visits to HWCs.



India's healthcare system faces challenges like a shortage of medical experts, urban-focused care, and inconsistent state healthcare. Ineffective regulation leads to unskilled private practitioners. Solutions should prioritize primary care, prevention, AI, and a balance between public and private providers. Critical investments in rural hospital infrastructure are needed to enhance quality and access



Following are some significant figures related to Ayushman Bharat:

- **Beneficiaries:** As of January 4, 2023, about 22 crore Ayushman Bharat beneficiaries had been confirmed, according to a press statement by the Press Information Bureau.
- **Coverage**: According to a study referenced on PubMed Central, approximately 54.74% of families aware of the Ayushman Bharat initiative are covered by the programme.
- **Health Coverage**: For inpatient secondary and tertiary treatment, Ayushman Bharat offers a health cover of Rs. 5 lakhs per family per year.
- **Financial Inclusion:** The programme intends to protect the finances of over 50 crore individuals

GOVERNANCE AND POLICY

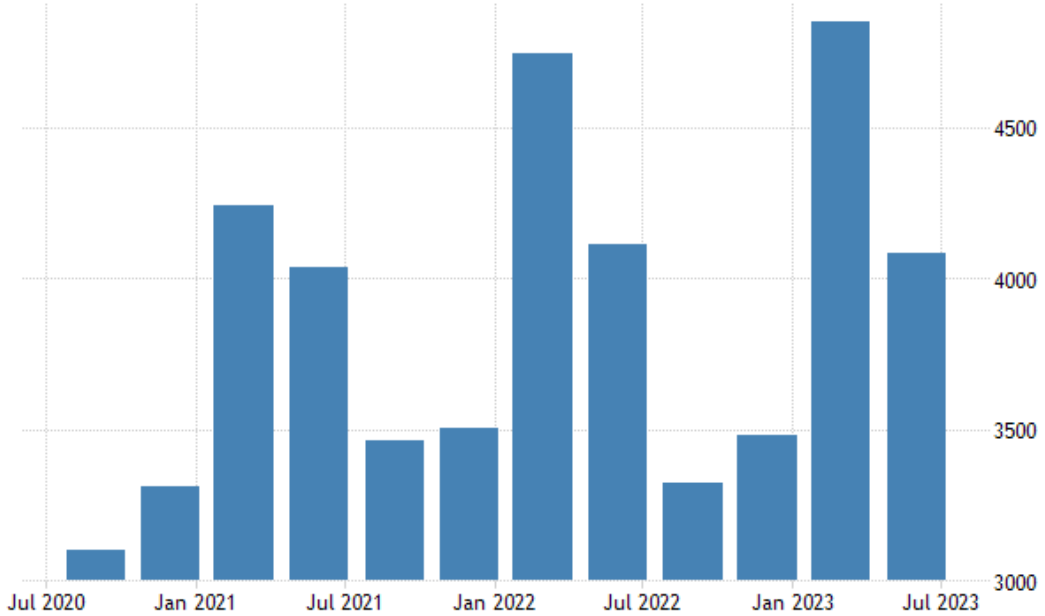
GOVERNMENT REFORMS AND REGULATORY FRAMEWORKS

India's recent focus is on government spending toward infrastructure investment, consolidating labor regulations, privatizing underperforming state-owned assets, and modernizing and integrating the logistics sector. The direction of India's growth is being determined by the strong momentum in domestic consumption, services, digital economy, and infrastructure. The estimated real growth in consumption is the 3rd highest behind only the US and China while the fast-expanding digital economy is expected to reach US$ 1 trillion by 2025.

India's flagship program "Make in India" completes its eighth anniversary this year and various reforms that have been undertaken to make India competitive have shown good results. In the future too, the manufacturing sector will continue creating larger opportunities for India.

India is prioritizing the strengthening of bankruptcy resolution laws, developing a medium-term fiscal strategy, reviving private investments through improved state-capital relations, and enhancing procedural transparency for greater support and adoption of digital transformation. These measures aim to bolster economic resilience and sustainability in the years ahead.

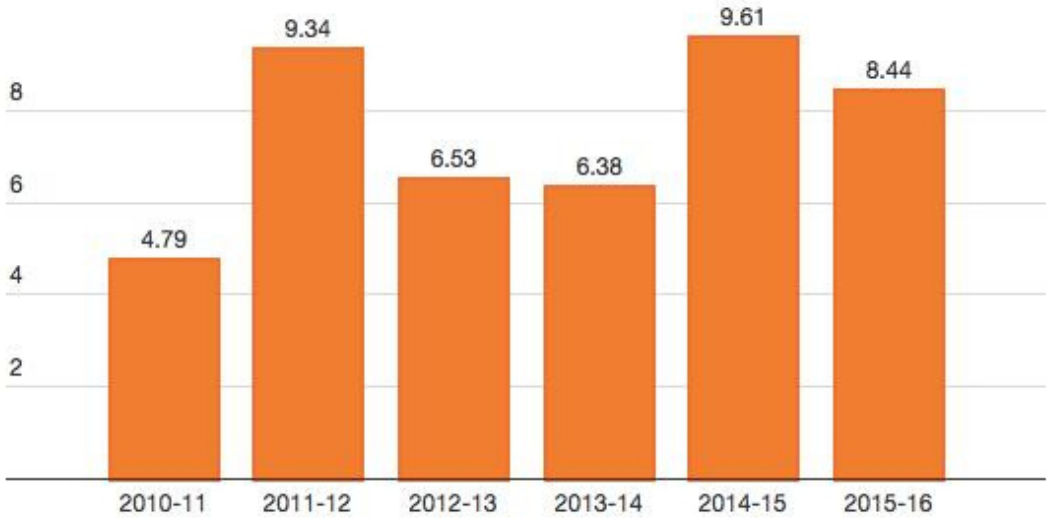
India Central Government Spendings From Year 2020 to 2023



G20 SUMMIT AND HOW IT'S AIDING INDIA

Hosting the G20 provides India with an opportunity to invest in its domestic infrastructure, such as transportation and communication networks. This not only ensures a successful summit but also lays the foundation for future economic growth and improved living standards for its citizens. India is a country with a large and growing population, and the improvement of its infrastructure will be essential to support the needs of its citizens and businesses. The G20 presidency offers an opportunity for India to demonstrate its commitment to improving the quality of life for its citizens and creating a more prosperous and equitable society.

India Foreign Direct Investment



OBJECTIVES OF MAKE IN INDIA

1. To increase the manufacturing sector's growth rate to 12-14% per annum.
2. To create 100 million additional manufacturing jobs in the economy by2022;
3. To ensure that the manufacturing sector's contribution to GDP is increased to 25% by 2022 (later revised to 2025).

Make in India boosted manufacturing growth, averaging 6.9% annually from 2014–15 to 2019–20, and surging to 11.4% in 2022. Despite a drop in the manufacturing share of GDP from 16.3% in 2014–15 to 14.3% in 2020–21, it rebounded to 17% in 2022.

E-GOVERNANCE AND DIGITISATION

Digital India's pioneering efforts, including Aadhaar for universal digital identity, Jan Dhan Yojana for financial inclusion, and targeted food distribution, have transformed India into a digitally empowered society and knowledge-based economy. Its impact fosters innovation, extends e-governance to grassroots levels, and promotes inclusive growth. Guided by "Sabka Saath, Sabka Vikas" (Inclusive development for all),

At the heart of India's DPI ecosystem lies the innovative India Stack, a collection of interconnected yet independent "blocks" that function as identity, payment, data sharing, and consent mechanisms. This digital infrastructure not only enhances accessibility and affordability but also reduces credit expenses, thus opening up opportunities to elevate India's credit-to-GDP ratio from its current 57% to potentially 100% in the coming decade. Credit availability is pivotal to economic growth, making this achievement significant for India's future prosperity.

Figure 5-6: Potential digital economic value ($ billion nominal)

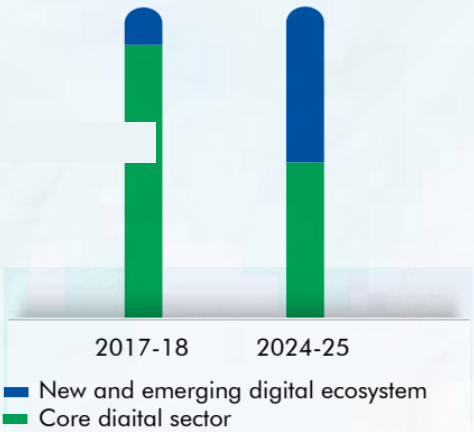
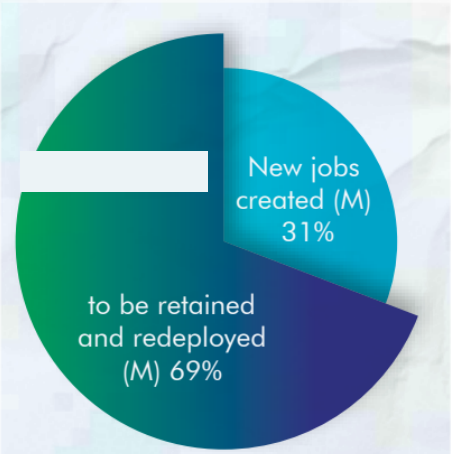


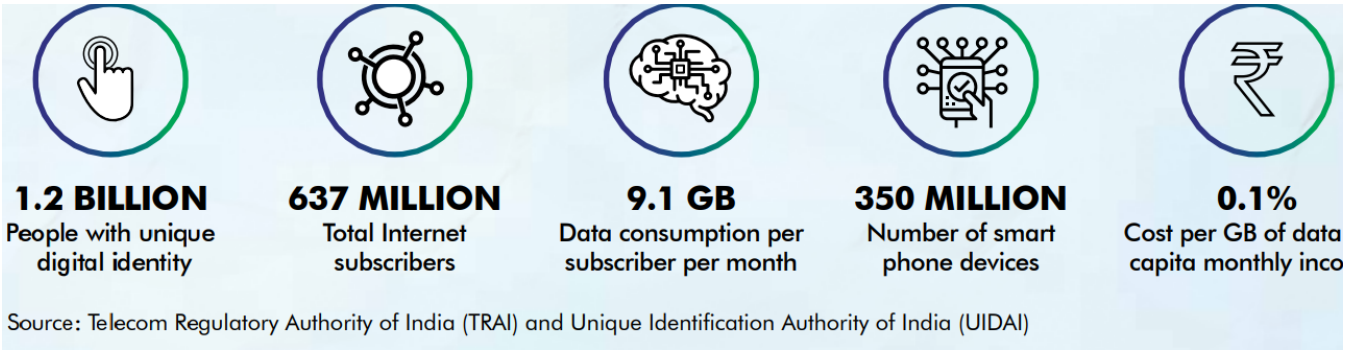
Figure 5-7: Jobs created by digital boom by 2025



Digital India's influence extends globally, playing a pivotal role in achieving the Sustainable Development Goals (SDGs) by 2030. With access to more than one-sixth of the world's population, Digital India's initiatives significantly impact the SDGs. The Jan Dhan, Aadhaar, and Mobile (JAM) trinity, along with tools like Unified Payment Interface (UPI), Bharat Interface for Money (BHIM), and e-Trade MMP, contribute to SDG 17. These efforts prioritize financial inclusion, skill development, trade promotion, multi-stakeholder collaborations, data monitoring, technology integration, and improved accountability measures.

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) stands as a pivotal rural employment program in India, embodying the commitment to provide a minimum of 100 days of work to impoverished residents in rural areas. This initiative aligns seamlessly with the global goal of poverty eradication by addressing the economic needs of those in rural communities. MGNREGA's significance lies in its role as a social safety net, ensuring that vulnerable populations have access to employment opportunities and, consequently, a means to improve their livelihoods.

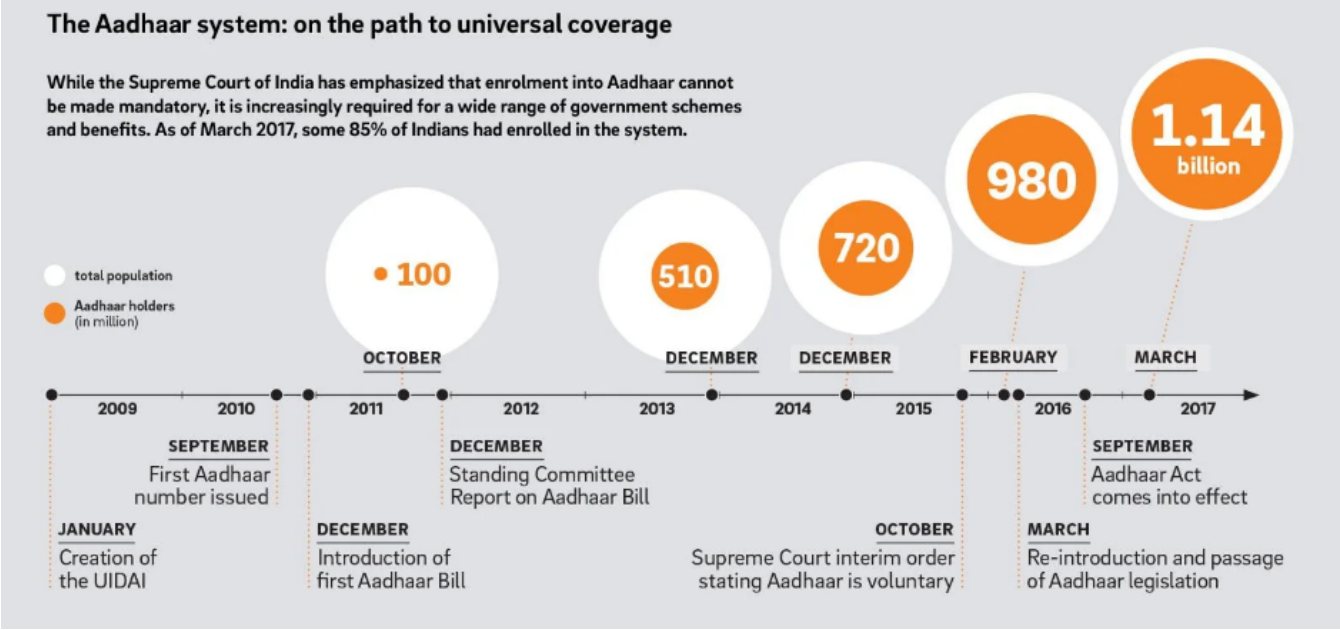
Under the umbrella of the Digital India campaign, the NREGA Soft Payments project has been a transformative step forward in modernizing the administration of MGNREGA. Leveraging Aadhaar-linked Direct Benefit Transfer (DBT), the initiative has streamlined wage distribution, facilitating efficient and transparent disbursal of funds to the intended beneficiaries. The use of Aadhaar ensures accuracy and accountability in identifying and delivering benefits to eligible individuals. By embracing DBT, the program not only expedites wage disbursement but also aligns with broader financial inclusion initiatives such as the Pradhan Mantri Jan Dhan Yojana (PMJDY). This integration into the larger framework of financial inclusion reflects a global effort to bridge gaps and empower individuals at the grassroots level, fostering a more inclusive and resilient economy.



The Indian government's collaboration with technology stakeholders brought transformative change to rural healthcare through "Digital LifeCare." This innovation empowered healthcare providers to proactively detect and manage non-communicable diseases. Additionally, the government's adoption of digital solutions via the Government eMarketplace (GeM), with an annual GMV of approximately US$14.2 billion, has been a global success. This digital infrastructure also played a pivotal role during the pandemic, exemplified by the COWIN platform managing the world's largest vaccination drive, showcasing digital tools' potential in aiding citizens during crises.

HOW WILL AADHAR MAKE INDIA GROW?

India's Aadhaar system is highly successful, serving as the primary ID for 1.3 billion Indians. It excels in cost-effective, high-volume transactions, particularly for small amounts, transforming social benefits and supporting an impressive 4.5 billion monthly payments through the Unified Payments Interface (UPI).

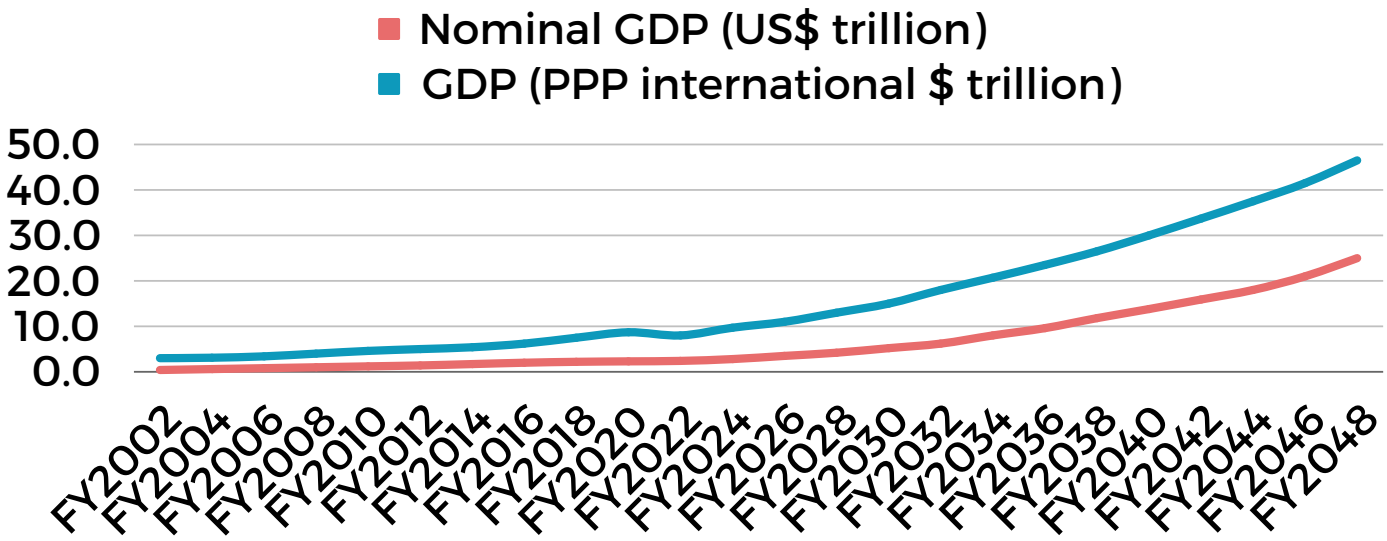


Aadhaar is poised to drive India's 2030 growth by enhancing financial inclusion, reducing fraud through secure identity verification, and streamlining government services. The system's efficiency gains are expected to contribute to a 1.5% to 2% GDP boost, according to the National Institute of Public Finance and Policy.

By 2030, Aadhaar is projected to generate 10 million jobs, increase India's exports by $1.2 trillion, and reduce business costs by $100 billion. India has been expanding its road network at a rate of 36 kilometers daily, totaling 73,000 kilometers in the past decade. Complete electrification has been achieved, and the Jal Jeevan Mission aims to provide clean water to all villages, with 56% coverage already attained and full coverage targeted by 2024. The Production Linked Incentive scheme has enticed investments, particularly in electronic manufacturing, attracting global corporations and aiming to create six million jobs.

ECONOMIC POLICIES AND PPP

India's GDP is poised to reach USD 7 trillion by 2030, growing at 9% annually, contingent on robust policy reforms. In the absence of such reforms, GDP is expected to reach USD 6.5 trillion. Reversal of reforms could limit GDP to USD 4.3 trillion. Key drivers of growth include manufacturing and infrastructure sectors, relying on liberalization, labor market reforms, infrastructure investment, and human capital development. India aspires to become an export-driven hub through initiatives like the Production Linked Incentive Scheme, targeting a rise in manufacturing's GDP share from 15.6% to 21% by 2031, emphasizing education, skills development, and healthcare enhancement.



Public Private Partnerships (PPPs) play a vital role globally, including India's National Monetisation Pipeline (NMP) encouraging private sector investment for improved public assets. Over 1,100 PPP projects worth $275 billion are underway in India, driving economic growth and sustainability. Initiatives like PM Gati Shakti Master Plan focus on inclusive and eco-friendly infrastructure development, with projects like 'From Local to Global – creating a model for Eco-Villages' showcasing collaborative efforts for sustainability.

The question of the government's role in India in 2030 is complex, considering economic development, social needs, and the political landscape. While a strong government can achieve important goals like poverty reduction and healthcare improvement, there are concerns about potential overreach, stifling innovation, corruption, and inefficiency. Ultimately, the role of the government in 2030 will depend on various factors.

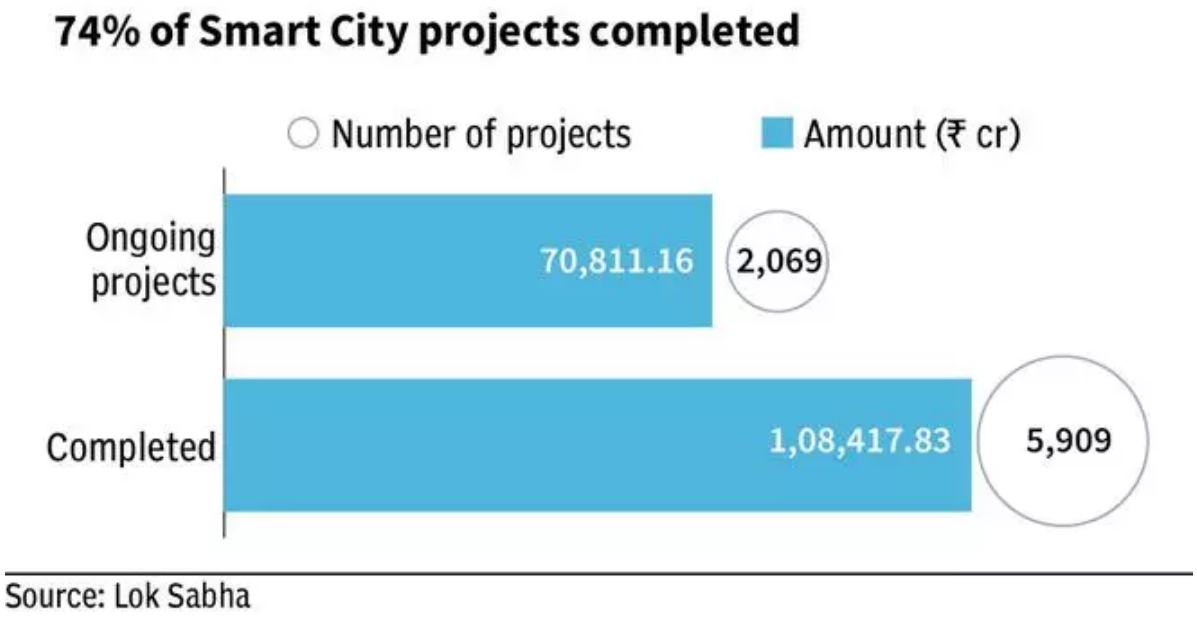
SMART CITIES & URBAN DEVELOPMENT

SMART CITIES INITIATIVES

A **Smart City** is a city that uses information and communication technologies (ICT) to improve the efficiency of its operations and services, and to make better decisions about the use of resources. Smart cities are designed to be more liveable, sustainable, and resilient.

The Smart Cities Mission is a national urban renewal program of India launched by the Ministry of Housing and Urban Affairs (MoHUA) in 2015. The mission aims to develop 100 smart cities across India by 2030. The mission defines a smart city as "a city that uses digital technology to improve the quality of life of its citizens, efficiency of its operations and services, and the sustainability of its infrastructure and environment."

Complementing the ambitious Smart Cities Mission, several other initiatives in India contribute to the overarching goal of fostering sustainable urban planning. The National Urban Policy (2014) is a foundational framework that outlines strategic directions and principles for urban development. This comprehensive policy aims to address various challenges faced by urban areas, including infrastructure development, housing, transportation, and environmental sustainability. By providing a holistic vision, the National Urban Policy acts as a guiding force for cities to develop in a planned and sustainable manner, promoting inclusivity and resilience.

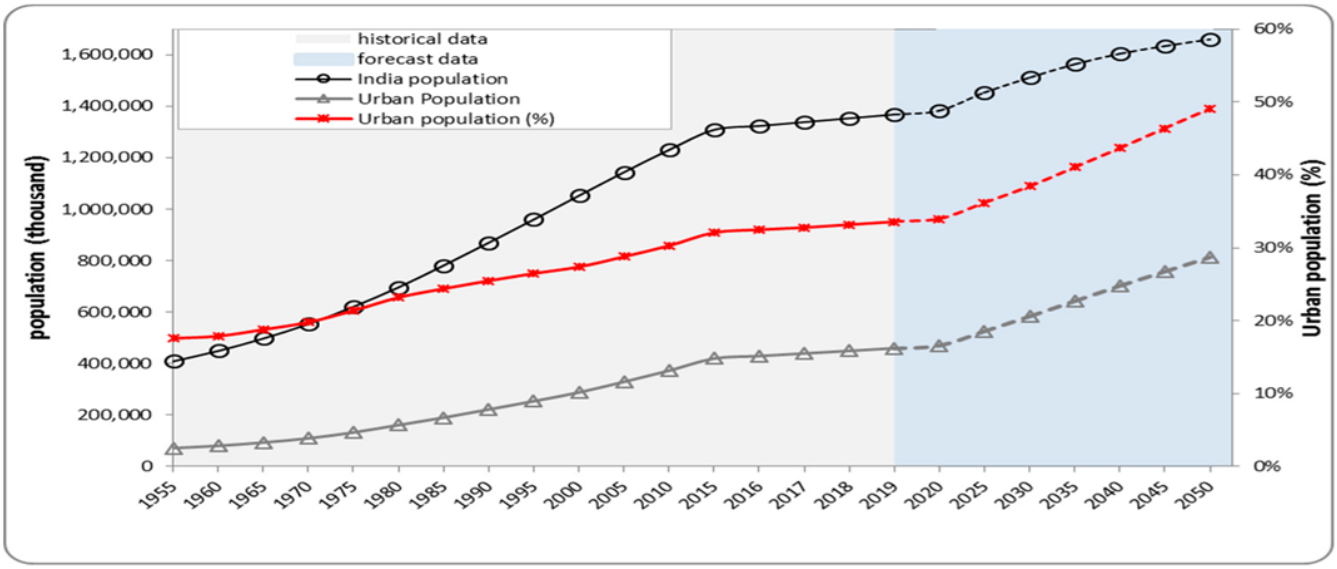


SUSTAINABLE URBAN PLANNING

Sustainable Urban Planning is the process of designing and developing cities in a way that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable urban planning considers the environmental, economic, and social impacts of development. Smart cities and sustainable urban planning are both important for the future of our cities. Smart cities and sustainable urban planning are both important for the future of our cities. By working together, we can create cities that are more livable, sustainable, and resilient.

The integration of Information and Communication Technology (ICT) into urban systems plays a pivotal role in promoting sustainability within smart cities. One key avenue is the enhancement of energy efficiency. Smart cities leverage ICT to optimize energy consumption in various sectors, with smart buildings serving as exemplary models. These structures employ sensors to meticulously track energy usage patterns, enabling automated adjustments to lighting, heating, and cooling systems. Through real-time data analysis, smart buildings can dynamically respond to occupancy levels, weather conditions, and other variables, ultimately reducing overall energy consumption and fostering a more sustainable urban energy landscape.

Smart waste management systems harness ICT to optimize the collection and disposal of waste. Sensors and data analytics are employed to monitor waste levels in bins, enabling timely and efficient waste collection. Additionally, these systems facilitate recycling initiatives and promote waste reduction through data-driven insights into consumption patterns. able approach to waste disposal.



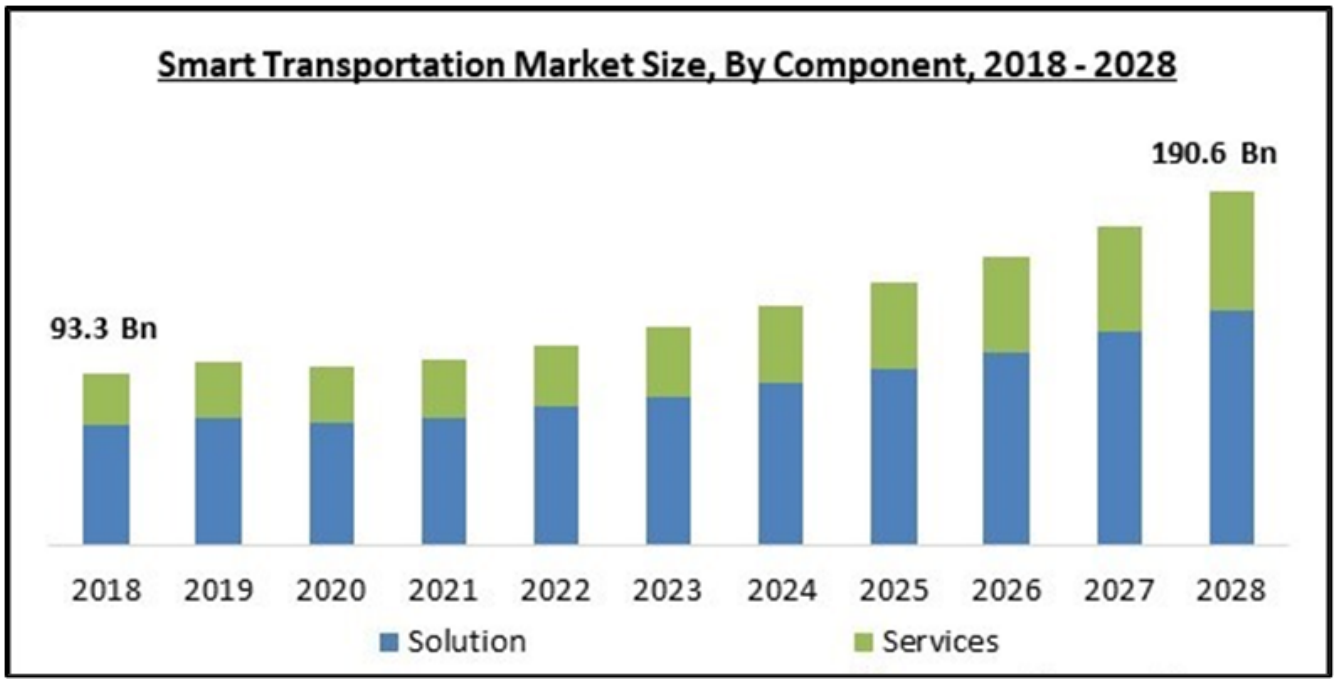
TRANSPORTATION & MOBILITY

India is experiencing a transformative shift in its transportation and mobility landscape, driven by rapid urbanization and a staggering increase in the number of vehicles on the road. As urban areas expand to accommodate a growing population, the strain on existing transportation infrastructure has become palpable, giving rise to a host of challenges that range from traffic congestion to heightened levels of air pollution and environmental degradation.

The surge in urbanization has led to a significant rise in the demand for personal and public transportation. Cities are grappling with the repercussions of this surge, as road networks designed for a different era struggle to cope with the escalating vehicular load. This poses severe health risks, with respiratory ailments becoming more prevalent.

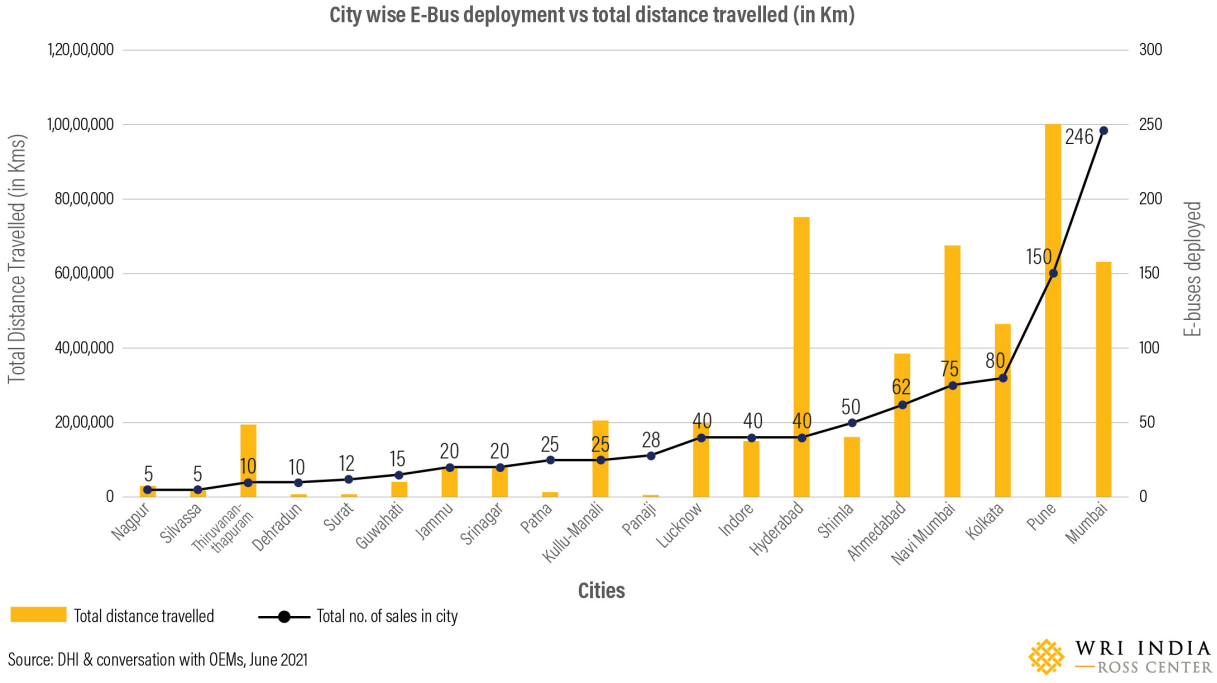
In order to address these challenges, the Indian government is investing in a number of new transportation and mobility solutions. These include:

- Expanding public transportation: The government is building new metro lines, buses, and trams in major cities. It is also promoting the use of shared mobility services, such as bicycles and scooters.
- Developing smart transportation systems: The government is investing in intelligent traffic management systems and other technologies to improve the efficiency of the transportation system.
- Promoting non-motorized transport: The government is building more sidewalks and cycle tracks to encourage people to walk and cycle more



Here are some specific examples of transportation and mobility solutions that are being developed in India:

- The Delhi Metro is one of the largest metro systems in Asia. It is currently undergoing expansion, and it is expected to have a total of 388 km of track by 2030.
- The Pune BRT is a bus rapid transit system that is currently under construction in Pune, Maharashtra. It is expected to be operational by 2023.
- The Smart Mobility India Challenge is a competition that is being held to develop innovative transportation solutions for Indian cities. The challenge is being run by the Ministry of Housing and Urban Affairs and the World Bank.
- The FAME India scheme is a government program that is offering subsidies and other incentives to promote the adoption of electric vehicles.
- The National Urban Transport Policy (NUTP) is a policy that sets out the government's vision for urban transportation in India. The NUTP emphasizes the need for sustainable transportation solutions, such as public transportation and non-motorized transport.



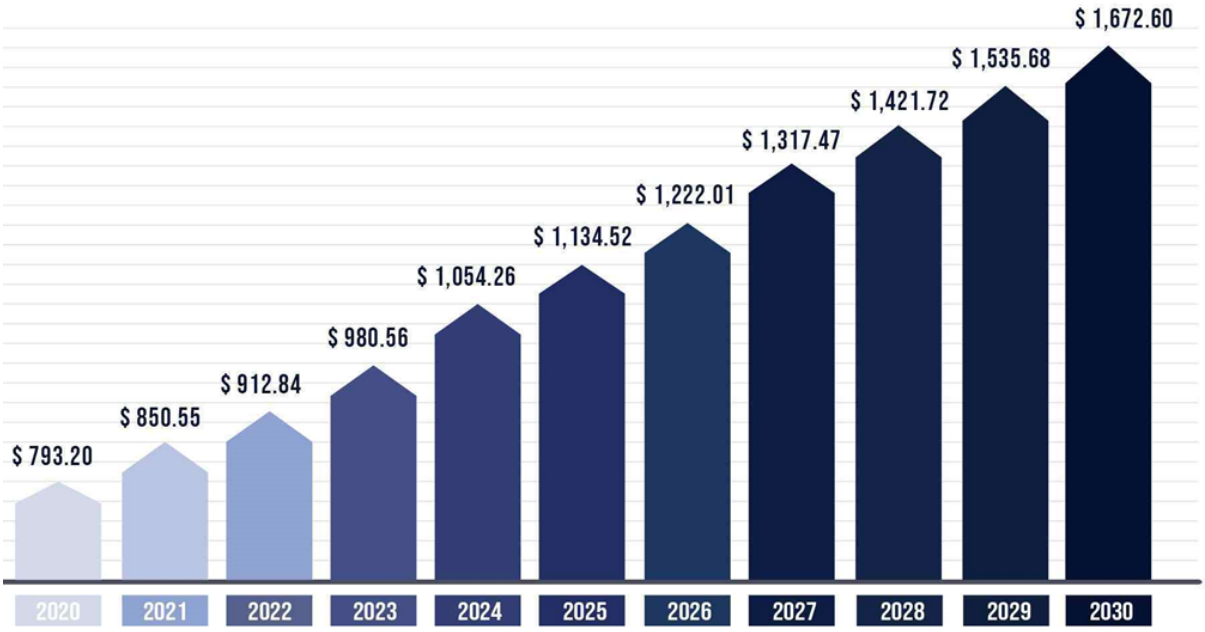
Several innovative transportation and mobility solutions are taking shape in India, aiming to transform the landscape by 2030 and create a more efficient and sustainable transportation system. One key focus is the promotion of public transportation as a viable and eco-friendly alternative. Metro rail networks are expanding in major cities, providing a fast and reliable means of commuting that can significantly reduce dependence on individual vehicles. Integrated urban planning initiatives are also emphasizing the development of bus rapid transit (BRT) systems and last-mile connectivity solutions to enhance the accessibility and attractiveness of public transit options.

IMPACT ON TOURISM

The tourism industry in India is expected to grow significantly in the coming years. According to the World Travel and Tourism Council (WTTC), India's tourism industry is expected to grow at an average annual rate of 7.7% between 2022 and 2032.The WTTC estimates that the tourism industry will contribute $350 billion to India's GDP by 2030 and create 90 million jobs.

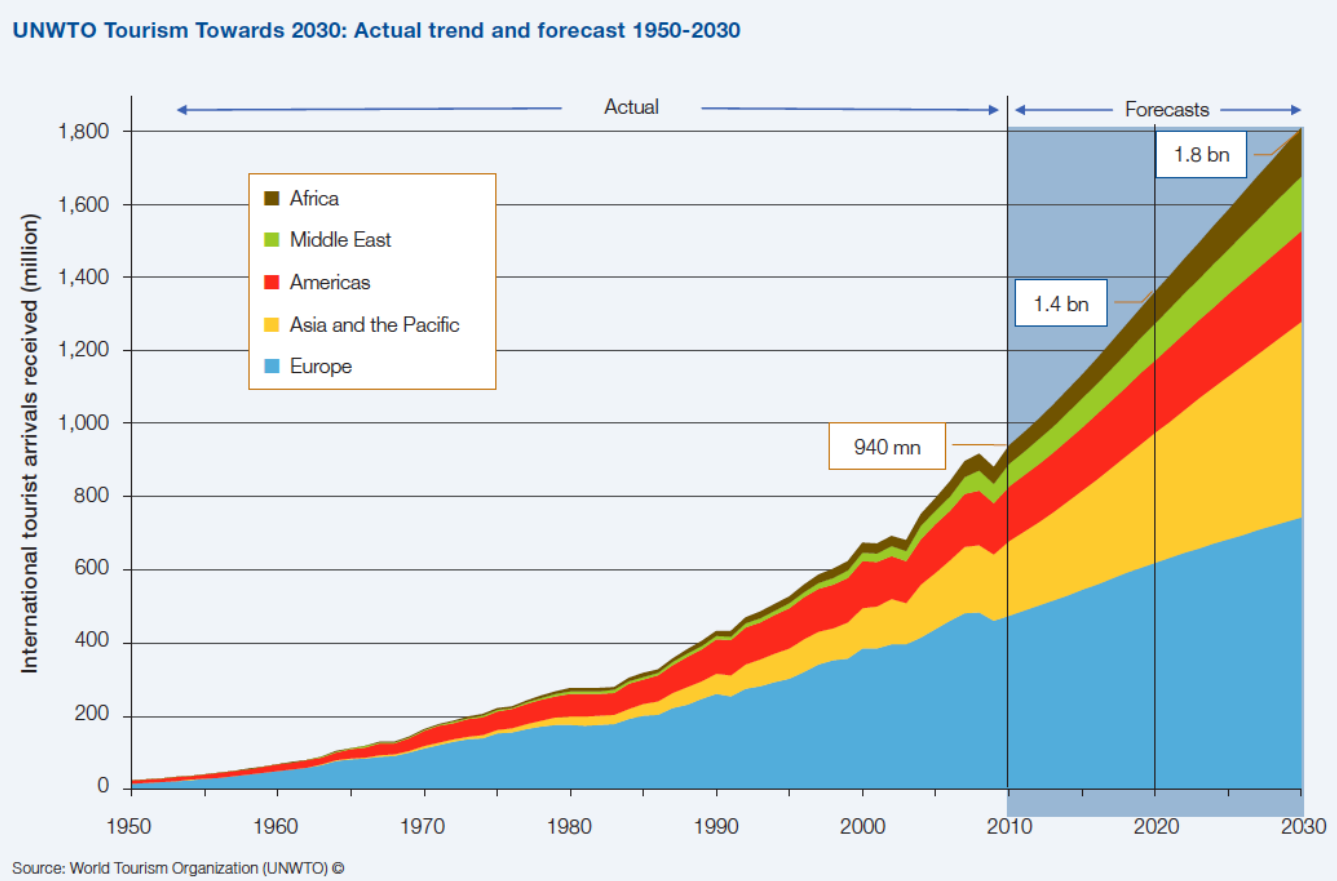
Here are some of the key trends that are expected to impact tourism in India in 2030:

- Growing popularity of domestic tourism: The Indian middle class is growing rapidly, and more and more people can afford to travel domestically.
- Increasing popularity of adventure tourism: India is a country with a diverse range of landscapes, This diversity is attracting more and more adventure tourists, who are looking for new and exciting experiences.
- Development of new tourism destinations: The Indian government is investing in the development of new tourism destinations, such as the Buddhist circuit in the north. This will create new opportunities for tourists to explore India.
- Improvement in infrastructure: The Indian government is also investing in the improvement of infrastructure, such as roads, airports, and railways.
- Focus on sustainable tourism: The Indian government is also focusing on sustainable tourism, which aims to protect the environment and local communities. This is expected to attract more responsible tourists.



By 2030, the industry is projected to contribute $250 billion to the country's GDP, generate 137 million jobs, and attract 25 million foreign tourists. There are several factors that are driving the growth of the tourism industry in India. These include:

- The growing middle class in India: The Indian middle class is growing rapidly, and this is leading to an increase in disposable income.
- The government's focus on tourism: The Indian government is increasingly focusing on tourism as a way to boost the economy and create jobs.
- The country's rich cultural heritage: The country has a wide variety of cultural heritage for tourist destinations, from ancient temples and forts to bustling cities and stunning natural landscapes.



The tourism industry in India is facing some challenges, such as safety and security concerns. However, the government is working to address these challenges. India is well-positioned to be a global leader in smart cities and urban development. The country has a strong track record of innovation and a young and tech-savvy population. With the right policies and investments, India can become a model for smart city development in the years to come.

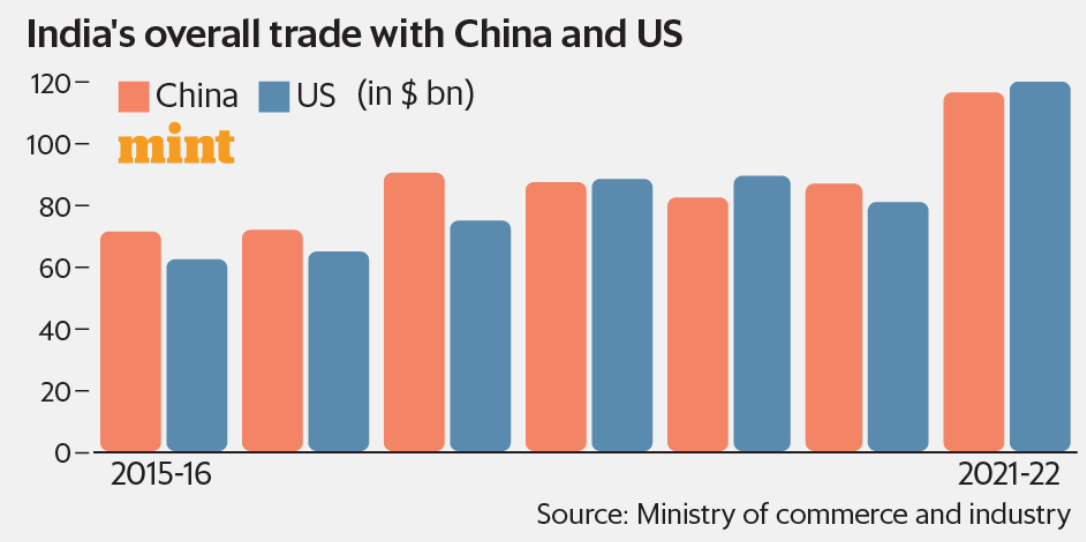
ROLE OF FDI IN FOREIGN RELATIONS

BILATERAL AND MULTILATERAL RELATIONSHIPS

By 2030, India is expected to continue its rise as a global power, driven by its fast-growing economy, technological prowess, and youthful population. India's strategic geopolitical location will play a pivotal role in determining its value on the global stage. Let's look at some key anticipated bilateral and multilateral ties for India in 2030:

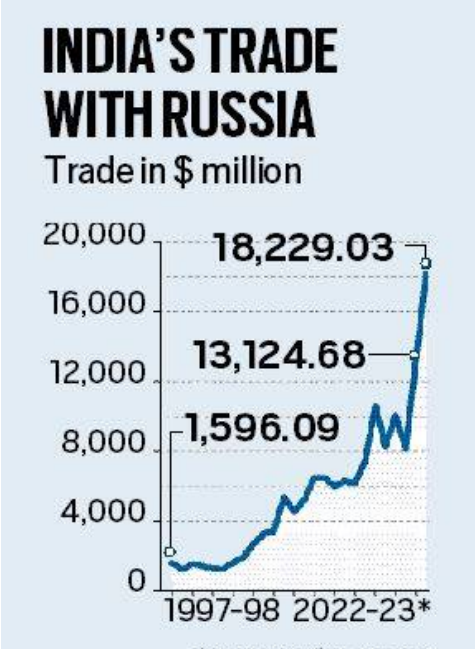
United States: India-US relations are expected to remain robust, with a focus on strengthening bilateral trade and investment in sectors like technology, defense, and energy. The Quadrilateral Security Dialogue (Quad) could strengthen further, promoting a free and open Indo-Pacific. There will be cooperation on initiatives such as the Clean Energy Partnership, Infrastructure for Resilient Island States (IRIS), and Digital Partnership.

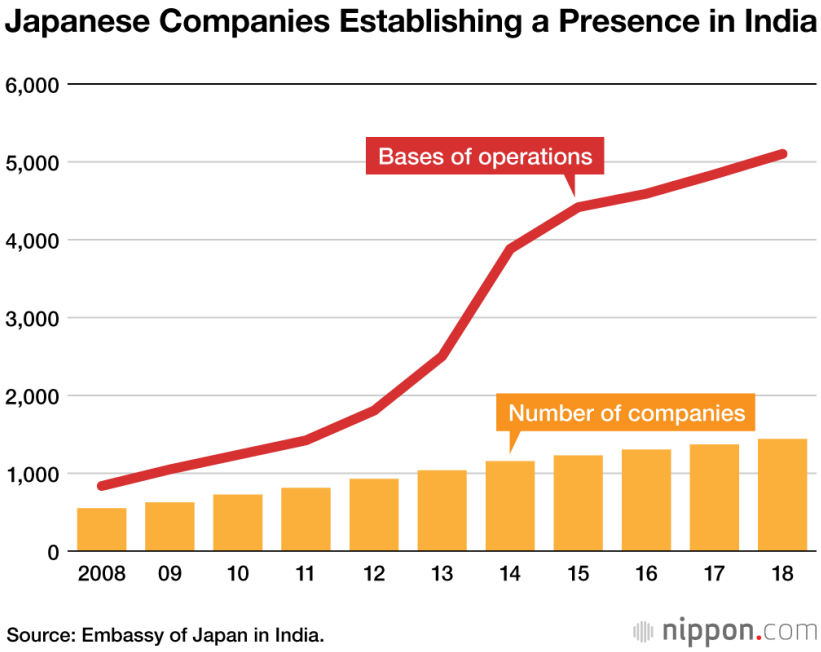
China: India and China, both major economic and military powers, will have a complex relationship characterized by collaboration and competition. Economic ties may flourish, but border disputes and regional influence could be sources of tension. Both countries may continue cooperating on initiatives like the Belt and Road Initiative, the Regional Comprehensive Economic Partnership (RCEP), and the China-India-Japan-South Korea (CJK) Economic Corridor.



Russia: India's historical ties with Russia are expected to endure challenges. Cooperation can generate substantial revenue through trade in petroleum, coal, and joint projects in third countries. Defense cooperation, energy trade, and collaboration in multilateral forums will be key aspects of this relationship. However, challenges such as US sanctions on Russia and competition in Middle East and African markets must be addressed.

Japan: The India-Japan relationship is expected to strengthen, with common interests in promoting economic growth and security in the Indo-Pacific. Bilateral trade, joint infrastructure projects, and collaborations in infrastructure, technology, and automotive sectors are anticipated to grow.





Pakistan: India-Pakistan relations may remain tense, with sporadic diplomatic efforts to improve ties. Challenges include border conflicts, political and economic system differences, and lack of trust. However, there is potential for growth in areas like agriculture, tourism, and education if these challenges can be overcome.

Other Countries: India has flourishing relations with various other countries, including Greece and the UK. These relationships are expected to boost tourism, cultural exchanges, trade, and investment.

In summary, India's global impact in 2030 is likely to expand through diverse bilateral and multilateral ties. While there will be challenges, cooperation in various sectors and regions will contribute to India's continued growth and influence on the world stage.

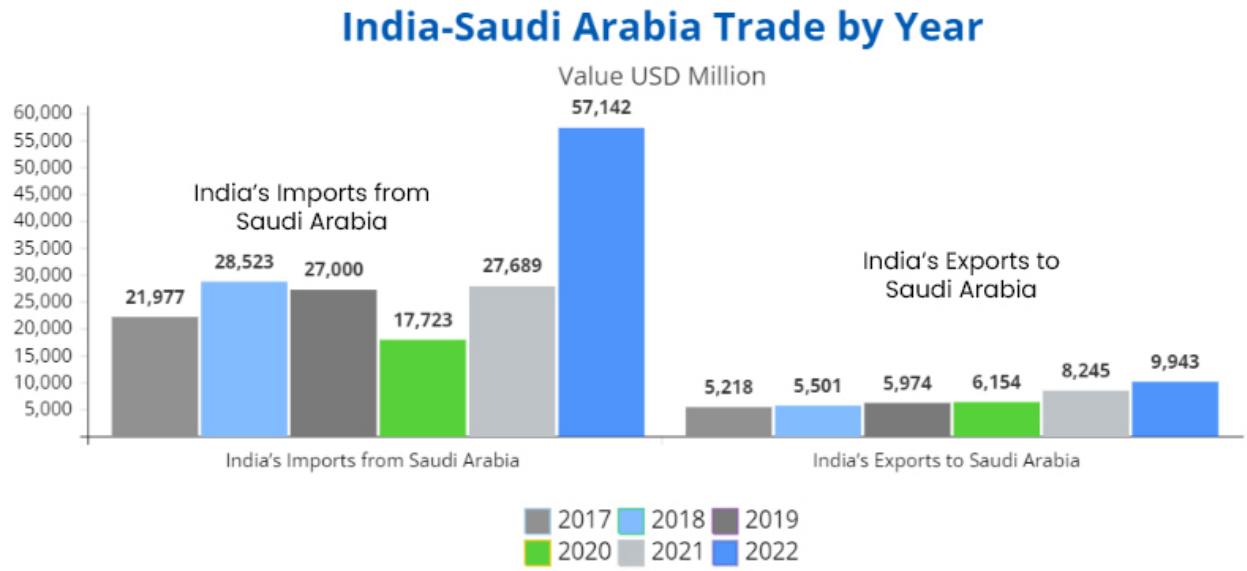
TRADE AND ECONOMIC PARTNERSHIPS

India is a country of culture, It knows how to build as well as nurture its relationships, and this inclination of India has led to various mutually beneficial trade and economic partnerships.
Let us take a look at the major trade and economic partnerships of India that are definitely going to benefit the nation in leaps and bounds.

United Nations (UN): The UN will continue to modernize and harmonize the rules of international business to help facilitate international trade and investment. and India is expected to take on a more prominent role within the UN, possibly seeking a permanent seat on the UN Security Council. It will continue to be a major contributor to peacekeeping, development assistance, and climate change negotiations.

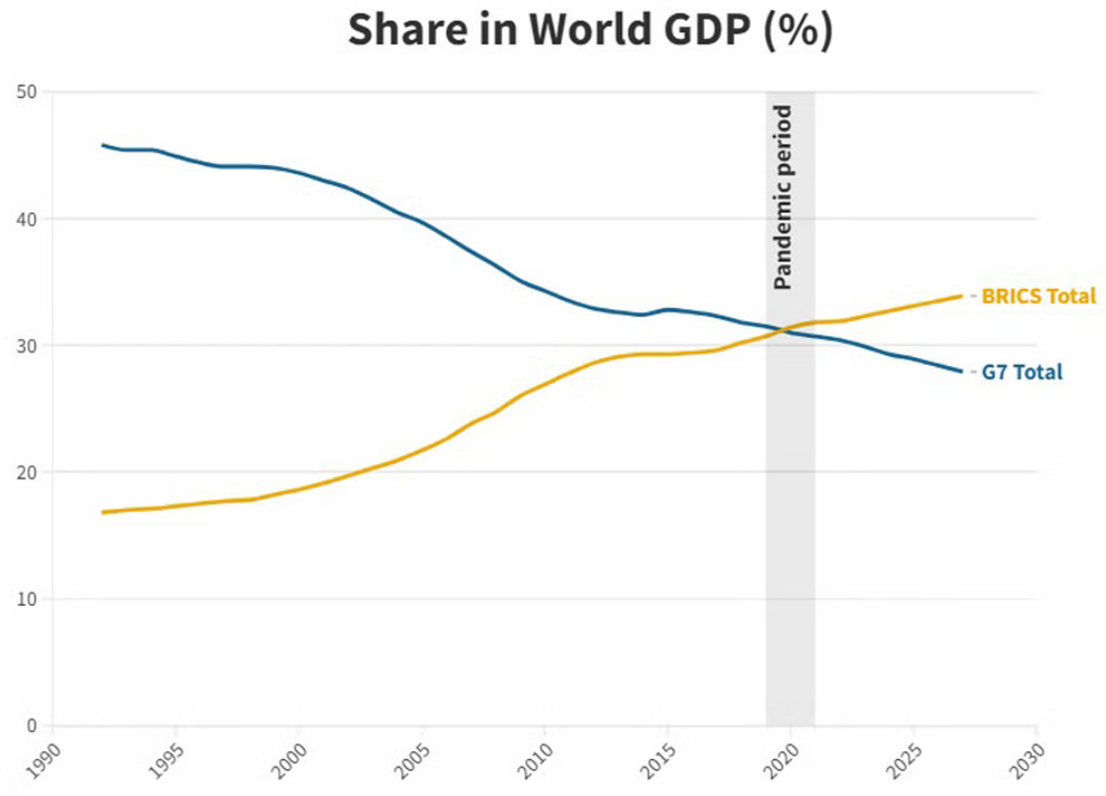
European Union (EU): India-EU trade relations will evolve further, with a potential comprehensive Free Trade Agreement (FTA). By 2030, bilateral trade is estimated to reach $300 billion. Investment cooperation, technology collaboration, and climate change initiatives will strengthen ties.

Middle East and Gulf Nations: India's economic engagement with Middle Eastern and Gulf nations will expand, focusing on energy, infrastructure, and labour migration. Energy security will depend on oil and gas imports from this region, and strategic partnerships will deepen. Saudi Arabia is set to invest $100 billion in energy, refining, petrochemicals and also in the fields of agriculture, infrastructure, mining and other allied sectors.



Shanghai Cooperation Organization (SCO): India's SCO membership offers opportunities for regional cooperation in security, counterterrorism, and economic development. However, India's decision not to sign the Shanghai Cooperation Organisation's (SCO) Economic Development Strategy for 2030 has raised eyebrows and highlighted its concerns about China's influence within the organisation.Overall, the future of India-SCO bilateral trade and economic cooperation doesn't look particularly optimistic but if both parties can overcome their obstacles, they may be able to accomplish major economic cooperation in the coming years.

BRICS (Brazil, Russia, India, China, South Africa): India will continue to collaborate with other emerging economies in BRICS on various economic and geopolitical matters. By 2030, the BRICS are predicted to contribute more than 50% of global GDP. India and the BRICS countries are already significant trading partners, and this is anticipated to rise in the coming years, alongside cooperation in technology.



In conclusion, India's diplomatic and economic ties with these key partners will play a crucial role in shaping its position on the global stage in 2030. These relationships are expected to be mutually beneficial, fostering economic growth, development, and cooperation in various sectors. However, challenges and geopolitical considerations will also influence India's foreign policy decisions.

ROLE OF FDI

Amidst of the chaos in the global economic in trade and geopolitical landscape as well as a crisis going on in various war engaged countries,—India has emerged as the next “bright spot” for global investors. Indeed, the World Bank has recently highlighted that India is better positioned relative to most other emerging markets.

In recent years, India has become increasingly attractive to multinational corporations, with record-breaking foreign direct investment (FDI) inflows reaching $84.8 billion in fiscal 2022. The manufacturing sector saw a significant 76% increase in FDI, surpassing $21 billion. Technology-related investments, particularly in computer software and hardware, played a crucial role.

India's appeal stems from its massive domestic market and improving global competitiveness. It boasts one of the world's largest domestic markets, poised for robust growth, outpacing many other emerging economies. Over the past decade, growing FDI inflows have bolstered India's foreign exchange reserves and reduced external account vulnerabilities.

In 2030, FDI is expected to play an even more important role in India's development by creating jobs and improving the standard of living for Indians. Here are some specific ways in which FDI can contribute to India's foreign relations and geopolitical landscape in 2030:

- Economic Development
- Technology Transfer
- Infrastructure Development
- Skill Development
- Innovation
- Geopolitical Influence

Of course, FDI is not without its challenges. For example, it can lead to job losses in some sectors of the economy. It can also lead to environmental damage if not properly managed. However, the potential benefits of FDI are significant, and India should continue to welcome foreign investment in the years to come.

CHALLENGES AND MITIGATION STRATEGIES

ADDRESSING INCOME INEQUALITY AND SOCIAL DISPARITIES

- **Widening Gap:**
  - Challenge: The rich becoming significantly richer while a large portion of the population lives in poverty.
  - Mitigation: Progressive taxation policies to ensure a larger tax contribution from higher-income individuals and corporations.

- **Urban-Rural Divide:**
  - Challenge: Stark differences in income opportunities, infrastructure, and services between urban and rural areas.
  - Mitigation: Focus on regional development to reduce disparities, emphasizing infrastructure and job creation in rural areas.

- **Formal vs. Informal Sector:**
  - Challenge: Limited opportunities and benefits in the informal sector compared to the more stable and higher-paying formal sector.
  - Mitigation: Labor market reforms to improve conditions in the informal sector, ensuring job security and better working conditions.

- **Gender Disparities:**
  - Challenge: Women earning less than men and facing limited participation in the labor force.
  - Mitigation: Women's empowerment through policies promoting gender equality, equal pay, and initiatives encouraging women's workforce participation.

- **Caste and Social Disparities:**
  - Challenge: Historical implications of the caste system leading to discrimination and fewer economic opportunities.
  - Mitigation: Strengthen affirmative action policies to uplift marginalized communities and reduce caste-based inequalities.

- **Regional Disparities:**
  - Challenge: Significant economic and development disparities between different states and regions.
  - Mitigation: Focus on balanced regional development, addressing infrastructure and economic opportunities in less-developed regions.

- **Political Resistance:**
  - Challenge: Resistance to policies involving wealth redistribution or affirmative action measures.
  - Mitigation: Sustained effort to build political will and public awareness on the necessity of addressing income inequality.

- **Lack of Education and Skills:**
  - Challenge: Limited access to quality education contributing to income disparities.
  - Mitigation: Investment in education and vocational training programs to equip individuals with skills for higher-paying jobs.

MANAGING ENVIRONMENTAL CHALLENGES AND SUSTAINABILITY

- **Air Pollution**

Challenge: Widespread air pollution from various sources.

  - Mitigation: Champion the adoption of electric vehicles and invest substantially in public transportation.
  - Mitigation: Rigorously enforce stringent emission standards for industries.

- **Water Pollution**

Challenge: High levels of water pollution from industrial and domestic sources.

  - Mitigation: Bolster the capacity of wastewater treatment facilities and advocate responsible industrial waste management practices.
  - Mitigation: Introduce more stringent regulations for industries with pollution potential.

- **Climate Change**

Challenge: The impact of climate change affecting weather patterns and ecosystems.

  - Mitigation: Transition towards renewable energy sources, enhance energy efficiency measures, and curtail greenhouse gas emissions originating from industrial processes.

- **Waste Management**

Challenge: Inefficient waste management leading to pollution and environmental degradation.

  - Mitigation: Cultivate efficient waste segregation and recycling systems, encourage composting practices, and actively discourage the use of single-use plastics.

- **Biodiversity Loss**

Challenge: Threats to biodiversity due to habitat loss and illegal activities.

  - Mitigation: Safeguard and rejuvenate vital ecosystems, institute wildlife corridors, and rigorously enforce legislation against poaching and the illegal wildlife trade.

- **Urbanization and Infrastructure Development**

Challenge: Rapid urbanization impacting natural landscapes and increasing pollution.

  - Mitigation: Prioritize sustainable urban planning, make substantial investments in green infrastructure, and encourage the use of public transportation to reduce reliance on private vehicles.

- **Overpopulation**

Challenge: High population density leading to increased resource consumption and environmental pressure.

  - Mitigation: Implement comprehensive family planning programs, enhance access to education, particularly for girls, and intensify awareness campaigns promoting responsible family planning.

- **Education and Awareness**

Challenge: Lack of awareness and environmental education.

  - Mitigation: Invest in environmental education initiatives, conduct awareness campaigns, and engage citizens through programs designed to instill a culture of sustainability.

STRATEGIES FOR SOCIOECONOMIC DEVELOPMENT IN INDIA

- **Income Inequality**

Challenge: Widespread income inequality impacting marginalized groups.

  - Mitigation: Implement progressive taxation for equitable wealth distribution.
  - Mitigation: Targeted social programs for marginalized groups to enhance income opportunities.

- **Education Access**

Challenge: Inaccessibility of quality education, particularly in rural areas.

  - Mitigation: Invest in improving the quality of education in rural areas.
  - Mitigation: Expand access to vocational and skill-based training for broader skill development.

- **Healthcare Disparities**

Challenge: Inadequate healthcare infrastructure, especially in rural and underserved areas.

  - Mitigation: Improve healthcare infrastructure and access, especially in rural areas.
  - Mitigation: Implement universal health coverage and health insurance schemes.

- **Urbanization Issues**

Challenge: Rapid urbanization leading to slums and unequal access to urban services.

  - Mitigation: Focus on affordable housing and efficient public transportation in urban planning.
  - Mitigation: Inclusive infrastructure development to address disparities in urban services.

- **Environmental Sustainability**

Challenge: Environmental challenges like air and water pollution, deforestation, and climate change.

  - Mitigation: Promote sustainable development practices, including investments in clean energy.
  - Mitigation: Ensure equitable access to environmental resources through conservation efforts.

- **Unemployment**

Challenge: High unemployment rates requiring job creation for inclusive growth.

  - Mitigation: Encourage entrepreneurship and create a conducive business environment.
  - Mitigation: Invest in sectors with high employment potential.

- **Lack of Social Safety Nets**

Challenge: Limited financial support for vulnerable populations.

  - Mitigation: Implement and strengthen direct benefit transfer schemes.
  - Mitigation: Introduce employment guarantee programs for financial support.

- **Inadequate Digital Connectivity**

Challenge: Limited access to reliable internet, creating a digital divide.

  - Mitigation: Ensure affordable and reliable internet access across the country.
  - Mitigation: Bridge the digital divide to facilitate access to information and online opportunities.

CONCLUSION

KEY FINDINGS ON INDIA IN 2030

- The Indian Story is at a huge revolutionary point. It is uniquely positioned among major economies with its large and growing middle class and a young working-age population.
- India has been witnessing relatively high growth rates for a couple of decades, but we have only recently seen the consolidation of several structural tailwinds in the last few years, and these have the potential to take India to USD 7 Trillion economy by 2030. Besides the demographic advantage, policy reforms aimed at creating an environment that is conducive to investment and entrepreneurship has been critical to increasing consumption, investments and savings.
- India has already been working on various social responsibility initiatives and has achieved ambitious targets in terms of the shift to clean energy for strategic and economic objectives. Aided by government subsidy and geography, it currently has access to one of the world's cheapest renewable energy supplies.

Parameters	India in 2019	India in 2030
GDP	USD 2.6 trillion	USD 9* trillion
GDP / capita	USD 1,336	USD 5,625
Population	1.3 billion	1.5 billion
Share of urban population	33.6%	38.5%
Jobs created for every 1% GDP growth	750,000	1,000,000
Median Age	27.0	31.4
Workforce	Dominated by Gen-X[1] and Gen-Y[2]	Dominated by Gen-Y, Gen Z[3]

- In under a decade, nearly 100% of the country's population has been given a digital identity which is now powering a digital revolution providing tremendous efficiency gains in both public and private sectors. This is also being fueled by Digital Public Infrastructure as discussion in G20 Summit.
- Finally, aided by the above trends, the country's massive informal sector is now being rapidly included into the formal economy leading to increasing financialization of assets. All these structural shifts set the stage for India to become the fourth largest economy in the world by the end of this decade.

Global economies have remained resilient amid an uncertain and volatile economic environment.

Advanced economies have been resilient to purchasing managers' index (PMI) for services for all major economies in positive territory. Labour markets are tight. However, inflation, though declining, continues to be above target levels. Several factors, such as the impact of increased interest rates on the financial services sector, continuing geo-political conflict and high debt to GDP ratios, make for an uncertain and challenging global economic environment.

Indian economy grew at 6.1% in Q4 of 2023 and at 7.2% for FY 23.

India's economic growth that had slowed to 4.4% in the third quarter of FY23, picked up to 6.1% in the last quarter, taking the growth for the full fiscal 2022-23 to 7.2% which is above the 7% projection made by the RBI and Government earlier. The growth has been driven by pick up in private investments, capital spending by the government and sharp growth in service exports.

Consumer confidence is high

Private final consumption expenditure (PFCE) grew 7% in FY 23 over FY 22. However, Q4 of FY 23 witnessed a decline in PFCE as compared to Q3. In contrast, RBI's Consumer Confidence Survey, growth in registrations of passenger vehicles and two-wheelers and over 19% growth in personal loans by schedule commercial banks suggests that the consumer confidence is strong.

External sector is steady with robust growth in service exports

India's service exports grew at over 28% in FY 23 in dollar terms as against 9% growth for non-oil merchandise exports. Non-oil merchandise exports have contracted over the last 5 months vis-à-vis the previous year. There has been a significant drop in commodity prices from the peaks of early 2022. As a result, there has been a fall in India's goods imports. India's foreign exchange reserves, after declining to US$531b in October 2022, have since risen to nearly US$600b. US Dollar has traded in a narrow band since October 2022.

The Government of India's capex continues to be a key growth driver

GFCF has increased from 28.9% of the nominal GDP in FY 22 to 29.2% in FY 23. This augurs well for future growth. Gross fixed capital formation (GFCF) grew 11.4% in FY23 in an overall GDP growth of 7.2%. This was supported by a 24% growth (in nominal terms) in central government's capital expenditure focused on infrastructure.

VISION AND GOALS FOR THE FUTURE

Optimism for the medium term

In terms of medium-term growth, India is well positioned. Macro-economic factors are stable, external sector is steady, NPAs are at an all-time low, corporate balance sheets have been deleveraged, consumption story is intact, service exports are booming, Government expenditure is focused on growth and India is steadily digitizing and transitioning to a greener pathway. With a pickup in the private investment cycle for manufacturing and infrastructure, India could look towards a multi-year growth cycle.

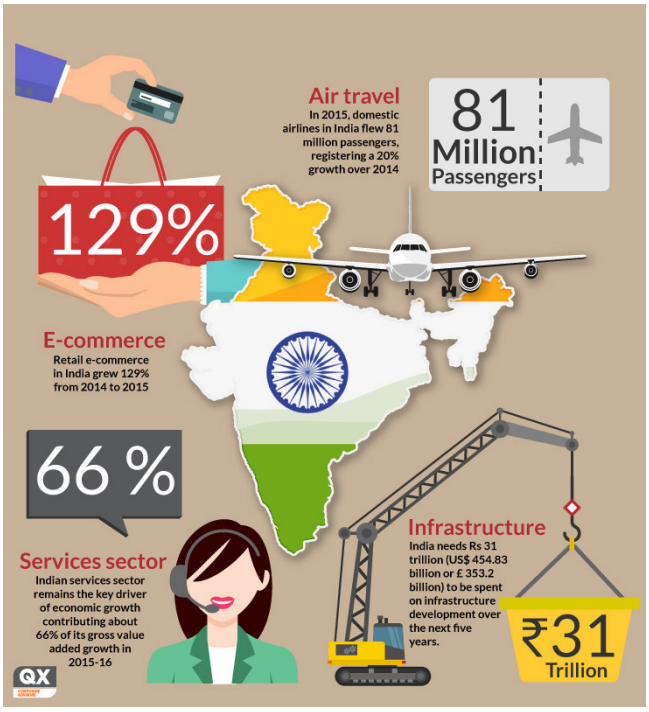
Growth for FY 2024 is projected at 6% to 6.5%

The Government and the RBI have projected the Indian economy to grow by 6.5% in FY 2024. Most agencies have projected the Indian economy to grow at 6 to 6.5%. The PMI for manufacturing and services and business confidence, as per RBI surveys, provide confidence about India's growth prospects.

However, there are many simmering variables as the global geopolitical fragmentation and uncertainties in the global economy continue. FY 2022-23 has witnessed a marginal decline in FDI and a significant reduction in VC/PE investments and money raised from the markets.

Multi-faceted Growth

Rural economy, as evidenced by growth in agriculture, tractor sales and growth in credit to the agricultural sector, has been steady. It is expected to grow at a stable rate. All parts of the services sector, construction and real estate continue to do well. This is expected to become stable by increased cement and steel sales, The manufacturing sector is putting the overall growth in positive territory at 1.1% for FY 23. Growth in credit to manufacturing, especially large industry, has reduced sharply since September 2022.



AREAS FOR FURTHER RESEARCH AND ACTION

Digitisation to boost jobs and skills markets and we need to keep up with this trend

While most people associate digitisation with job losses, the reality is that it boosts growth and productivity, thereby providing new and improved employment opportunities. The value created through digitisation could result in 60-65 million direct jobs in India by 2025. It would also require the retraining and redeployment of nearly 40-45 million workers as digital technologies would reshape their current job profiles.

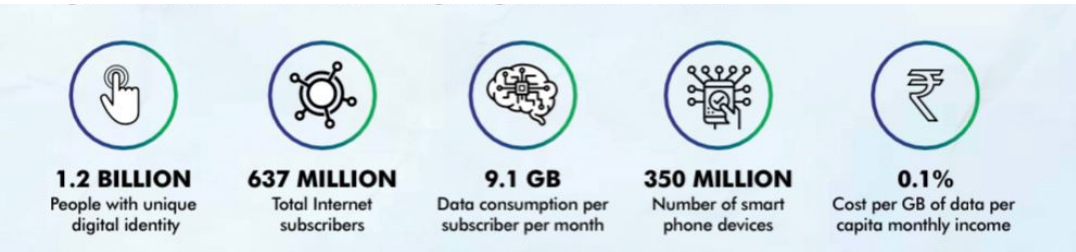
Leading from the front Changing global work patterns and a pro-tech government stance is likely to encourage public enterprises and private businesses to adopt newer technologies. Thereafter, our ecosystem of start-ups is expected to dive headfirst into the race to apply these technologies to solve unique Indian problems in sectors as diverse as agriculture, urban transport, energy management, affordable healthcare, etc. Areas such as AI, AR, Blockchain need to be dwelled deeper into for making optimum utilisation of innovation.

Moderating Climate Change

The way-out Develop building energy efficiency regulations and policy packages aimed at limiting the energy use of new buildings Adopt Energy Conservation Building Code (ECBC). The code sets a goal to achieve 50% reduction in energy usage by 2030.

Energy optimisation

Globally, buildings and construction together account for more than 35% of final energy use and between 35-40% of energy-related CO 2 emissions. The energy intensity per square meter of the global buildings sector needs to improve on an average by 30% by 2030 (compared to 2015) to be on track to meet global climate ambitions set forth in the Paris Agreement32

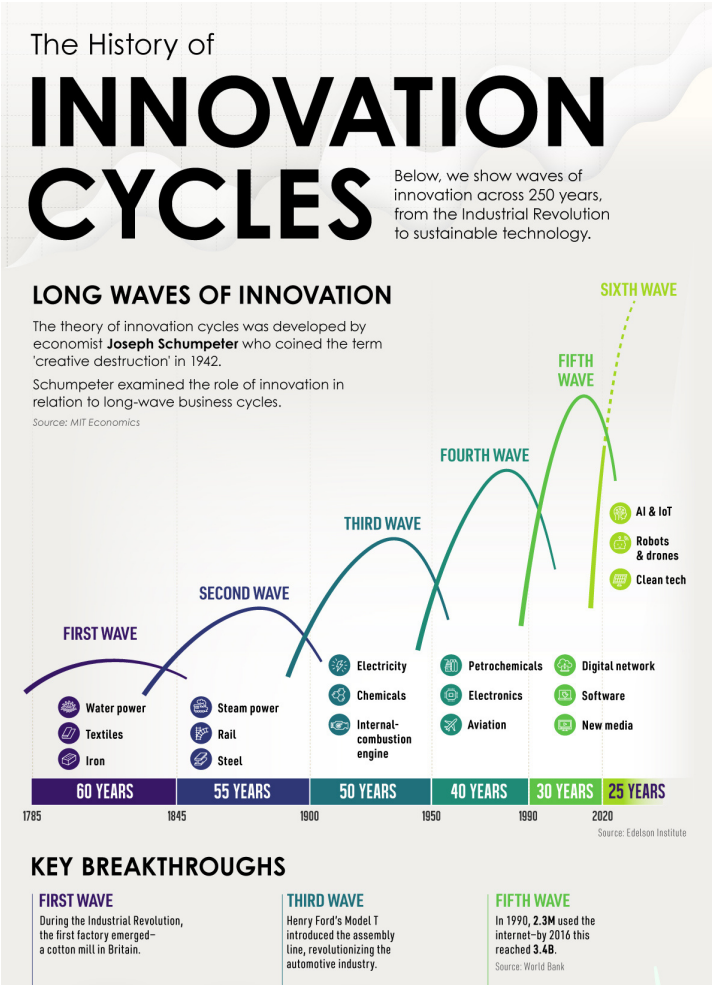


How can energy optimisation be done?

-Heating Costs : About 40-60% of a building's total energy goes into heating, ventilation and air-conditioning. An important method of saving costs is ensuring passive solar and radiant heating. Such methods have been used in the large glass dome of the German Bundestag in Berlin and the new Raiffeisen RHW-2 building.

-Lightning Costs : Keeping our homes and workplaces well-lit is responsible for 10-30% of a building's total energy consumption. LEDs/ OLEDs can reduce this significantly as they consume about 1/10th of the energy of incandescent light bulbs and roughly half of that of CFLs and last at least 40 times longer.

-Green Buildings: Green buildings are not only extremely efficient, but also produce enough power to cover their own energy requirements and can even send excess energy back into the power grid. Solar power is the most widely tested method for renewable energy. Photovoltaic cells can be installed not only on rooftops but also on building facades and even in transparent modules used as windows and skylights.



Innovations will drive the future

Innovations in the field of technology are the major driver of growth and development. The figure shows major technological innovations impacting the overall economic growth. In this decade, India is moving forward with exponential growth and development. As we have read, all the major indicators are pointing towards the golden position of India in 2030. However, a lot more require to be analyzed and predicted.

The infographic on the left shows history of innovation cycles which divides the innovation of past into different waves based of the time period .

ACKNOWLEDGEMENT

180 Degrees Consulting SGGSCC expresses profound appreciation to each team member for their invaluable contributions in shaping the report titled 'India in 2030.' The collaborative efforts, unwavering dedication, and insightful perspectives brought forth by the team have significantly enriched the quality and depth of this document.

We extend our sincere gratitude to Sri Guru Gobind Singh College of Commerce for their steadfast support and guidance throughout the creation of this report. Their partnership has been instrumental in ensuring the success and relevance of 'India in 2030.

This report serves as a testament to the team's collective spirit, analytical prowess, and unwavering commitment to delivering a comprehensive and well-informed overview of India in the year 2030. The individual expertise of each contributor has played a pivotal role in ensuring the document meets the highest standards of accuracy and thoroughness.

1. Divya
2. Divyam
3. Garima Pandey
4. Gursheen
5. Hardit
6. Harjas
7. Harsh
8. Harsimran
9. Manit Garg
10. Mannatjeet Singh
11. Paremeet Singh
12. Prabhjot kaur
13. Ratanjot Singh
14. Vibhav Anand
15. Yash Aggarwal
16. Yash Aggarwal

REFRENCES

How India will consume in 2030: 10 mega trends | World Economic Forum (weforum.org)

https://www.livemint.com/economy/india-to-become-third-largest-economy-in-the-world-by-2030-gdp-to-grow-to-7-s-p-global-11701771509438.html#:~:text=India is set to become,fastest-growing emerging market globally.

https://www.reuters.com/world/india/india-be-worlds-third-largest-economy-by-2030-sp-global-ratings-2023-12-05/

https://credai.org/console/public/upload/4de5a183620d1ae193c813f2d20c7dec.pdf

https://economictimes.indiatimes.com/news/economy/indicators/india-set-to-become-3rd-largest-economy-by-2030-sp/articleshow/105745906.cms?from=mdr

https://www.thehindubusinessline.com/economy/india-set-to-become-3rd-largest-economy-by-2030-says-sp-global/article67607959.ece

https://www.livemint.com/economy/india-to-be-a-usd-7-trillion-economy-by-2030-finance-ministry-nirmala-sitharaman-11706525095022.html

https://www.thehindu.com/business/Economy/india-to-be-worlds-third-largest-economy-by-2030-sp/article67607577.ece

https://www.hindustantimes.com/india-news/india-to-become-a-7-trillion-economy-by-2030-finance-ministry-report-101706523360384.html

REFRENCES

https://www.businesstoday.in/latest/economy/story/india-set-to-become-3rd-largest-economy-by-2030-gdp-to-be-around-7-in-2026-27-sp-global-ratings-408245-2023-12-05

https://www.business-standard.com/economy/news/india-set-to-become-third-largest-economy-by-2030-s-p-global-ratings-123120500284_1.html

https://economictimes.indiatimes.com/news/economy/indicators/indias-growth-story-2030-private-sector-to-play-a-key-role/articleshow/104969849.cms?from=mdr

https://www.thehindubusinessline.com/economy/india-can-aim-to-be-7-trillion-economy-by-2030-growth-in-fy25-to-be-closer-to-7-economic-review/article67788463.ece

https://ddnews.gov.in/business/india-will-become-worlds-third-largest-economy-2030-sp

https://news.abplive.com/india-at-2047/third-largest-economy-by-2030-how-india-can-achieve-this-milestone-and-what-stands-in-the-way-abpp-1649730

https://indianexpress.com/article/india/india-3rd-large-economy-2030-sp-9055116/

https://www.cnbctv18.com/market/jpmorgan-forecasts-structural-shifts-in-indian-economy-remains-bullish-on-china-18071051.htm