GSMA Intelligence

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Mobile Economic Impact
India

Analysis as of March 2022

The GSMA is a global organisation unifying the mobile ecosystem to discover, develop and deliver innovation foundational to positive business environments and societal change. Our vision is to unlock the full power of connectivity so that people, industry and society thrive. Representing mobile operators and organisations across the mobile ecosystem and adjacent industries, the GSMA delivers for its members across three broad pillars: Connectivity for Good, Industry Services and Solutions, and Outreach. This activity includes advancing policy, tackling today's biggest societal challenges, underpinning the technology and interoperability that make mobile work, and providing the world's largest platform to convene the mobile ecosystem at the MWC and M360 series of events.

We invite you to find out more at www.gsma.com

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GSMA Intelligence is the definitive source of global mobile operator data, analysis and forecasts, and publisher of authoritative industry reports and research. Our data covers every operator group, network and MVNO in every country worldwide – from Afghanistan to Zimbabwe. It is the most accurate and complete set of industry metrics available, comprising tens of millions of individual data points, updated daily.

GSMA Intelligence is relied on by leading operators, vendors, regulators, financial institutions and third-party industry players, to support strategic decision-making and long-term investment planning. The data is used as an industry reference point and is frequently cited by the media and by the industry itself.

Our team of analysts and experts produce regular thought-leading research reports across a range of industry topics.

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The mobile industry at a glance

TOTAL IMPACT

In 2021, the mobile ecosystem generated **4.7% of GDP** in India, or more than **$136 billion** in value added.

This is forecast to increase to almost **$155 billion in 2025**, due to the continued expansion of mobile services in the country.

EMPLOYMENT

Firms in the mobile ecosystem directly supported almost **3.4 million** jobs in India in 2021.

Their activity also indirectly supported the employment of more than **1.25 million** people.

PUBLIC FUNDING

In 2021, the mobile ecosystem in India contributed almost **$17 billion** to public funding, through direct taxes (VAT on handsets and services) and indirect taxes (e.g. corporation and employment taxes).

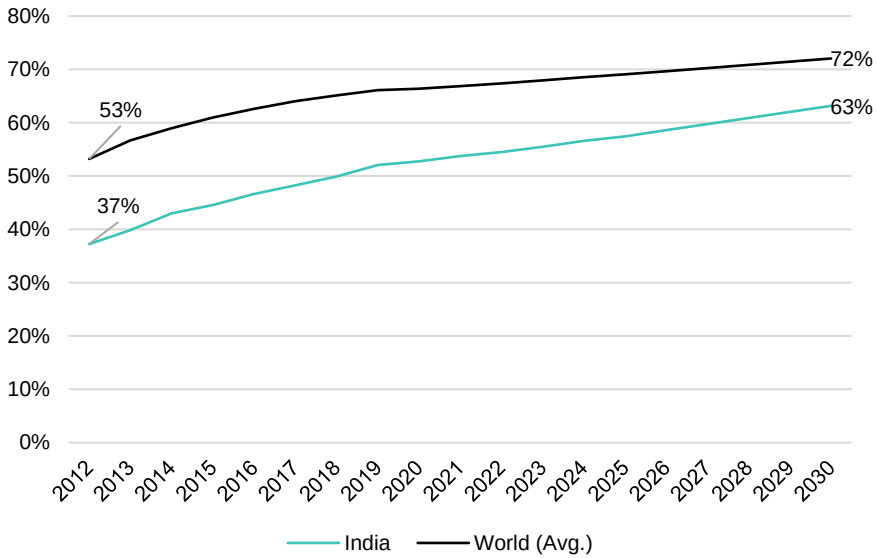
Mobile operators in India are also subject to spectrum usage charges **(~3% of annual revenue**).


GSMA
Intelligence
State of the industry
India

Subscriber penetration forecast

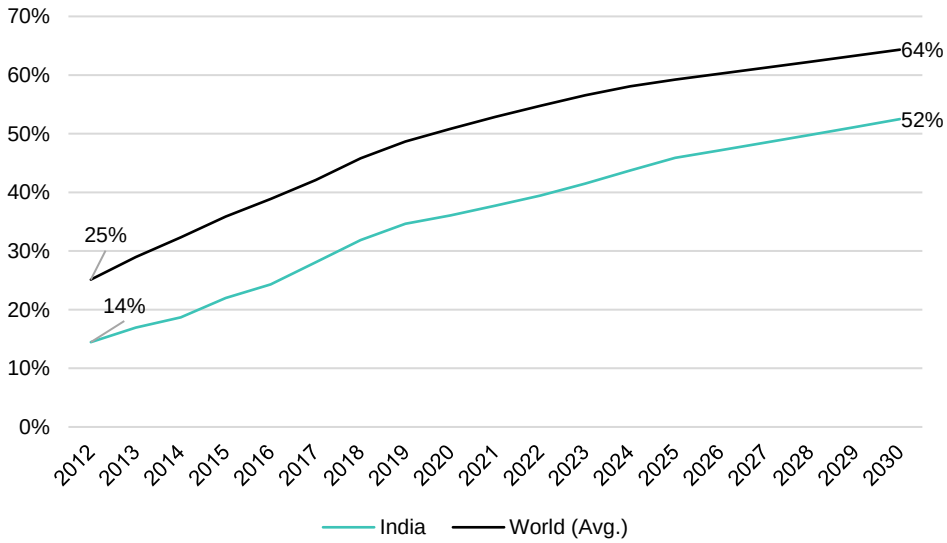
Mobile subscribers and mobile internet subscribers are expected to continue to grow in India, reaching six in 10 and five in 10 of the population, respectively, by 2030.

Mobile subscribers as a percentage of population



Source: GSMA Intelligence

Mobile internet subscribers as a percentage of population

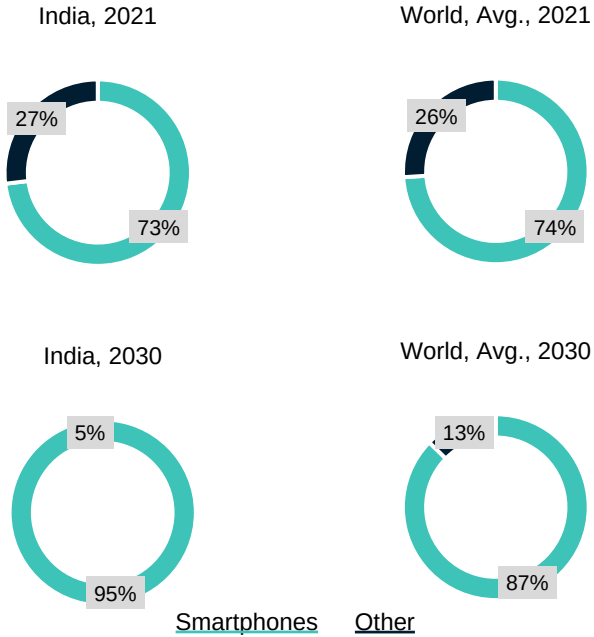


Source: GSMA Intelligence

State of the industry
Smartphone and 5G forecast

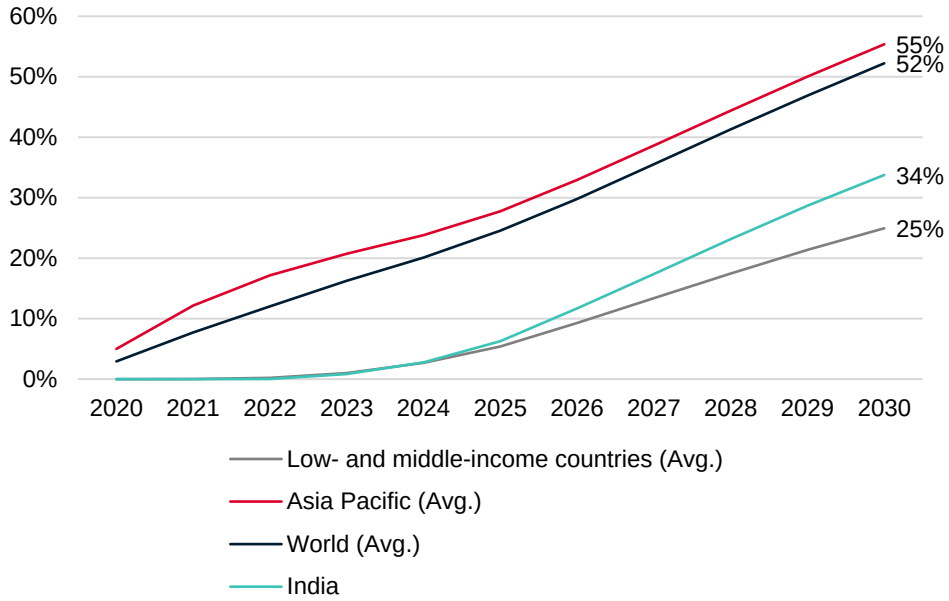
Smartphone connections as a share of total connections in India are expected to grow to 95% in 2030, supporting the expansion of 5G services from around 2023.

Smartphones as a percentage of total connections



Source: GSMA Intelligence

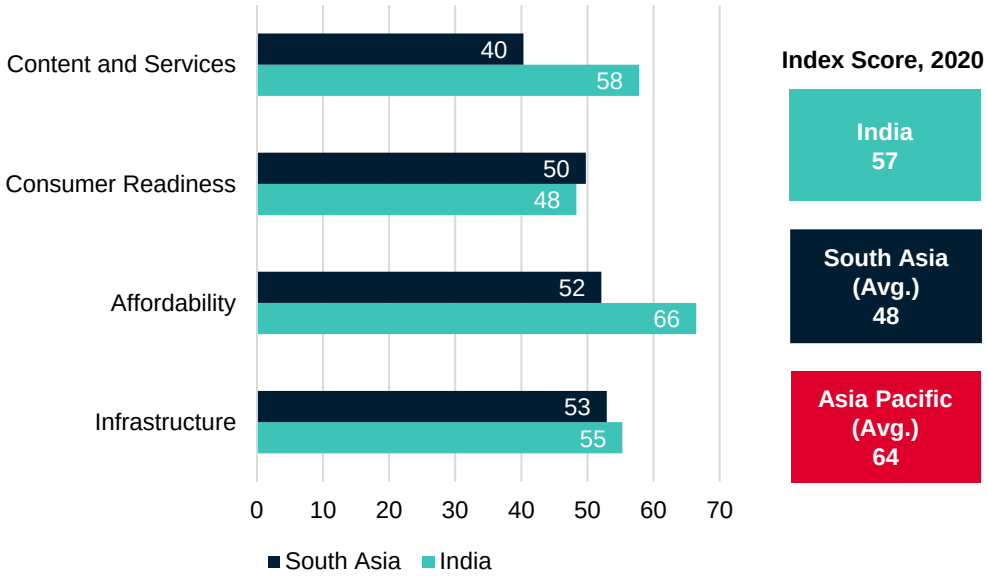
5G as a percentage of total connections



Source: GSMA Intelligence

State of the industry
Connectivity enablers

Mobile Connectivity Index (MCI)



Note: the MCI measures the performance of 150 countries against four key enablers of mobile internet connectivity: infrastructure, affordability, consumer readiness, and content relevance.
Source: GSMA Mobile Connectivity Index 2020

India scored higher than average for South Asia in the GSMA Mobile Connectivity Index 2020.

India outperformed the region in the **affordability, content and services, and infrastructure segments,** though issues remain in terms of quality of service and spectrum availability.

India outperformed the region on the **affordability** measure due to handset prices and taxation being among the lowest worldwide.

India also scored higher on **content and services,** which is primarily driven by better availability (e.g. the number of apps available in the national language).

For the **consumer readiness** enabler, India scored slightly lower than the regional average in areas such as educational attainment and gender parity in education, as well as income. Improvements in such areas would improve the score for the consumer readiness enabler.

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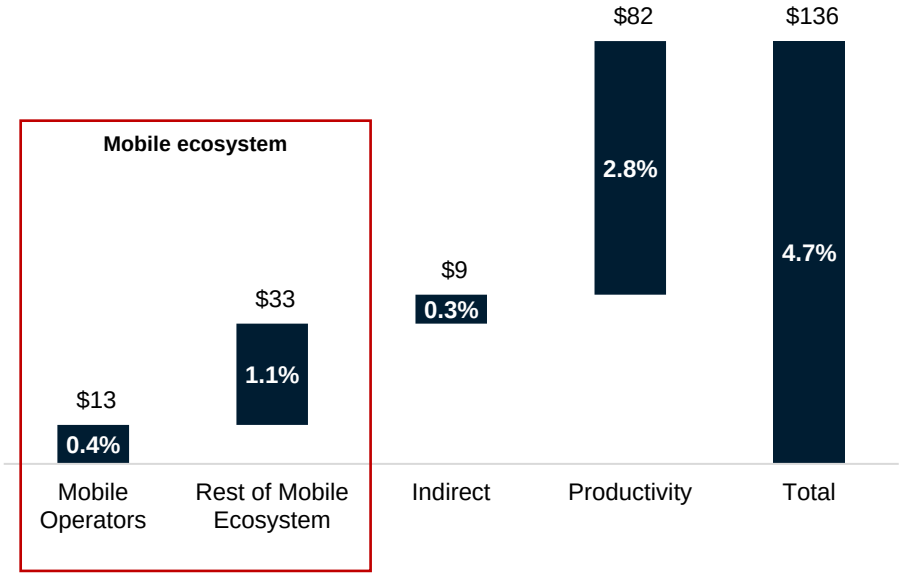
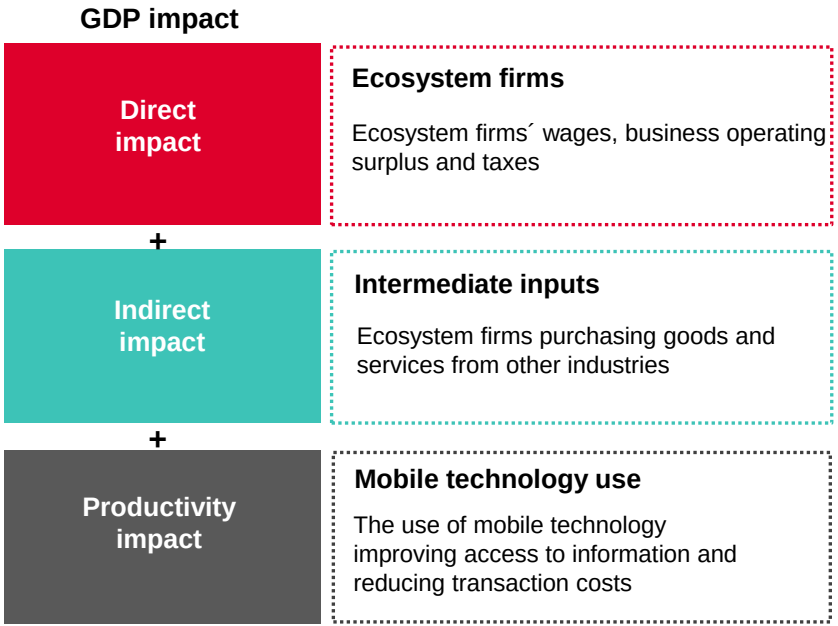
Economic impact of the mobile ecosystem

India, 2021

Economic impact of the mobile ecosystem
Total contribution to GDP

Total economic contribution of the mobile ecosystem
$ billion, % of India GDP, 2021

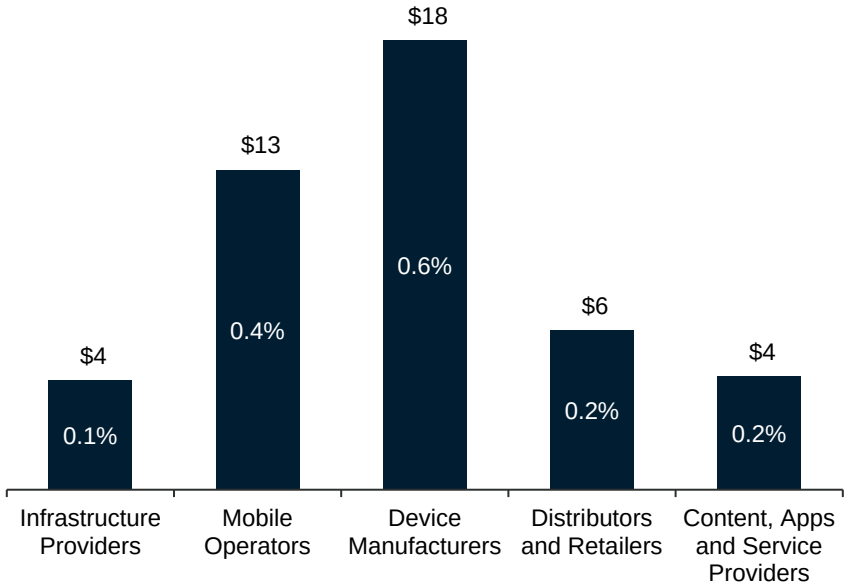




Note: Totals may not add up due to rounding, and percentages may not precisely reflect absolute figures.
Source: GSMA Intelligence analysis

Economic impact of the mobile ecosystem
Direct contribution to GDP

Direct economic contribution
$ billion, % of India GDP, 2021



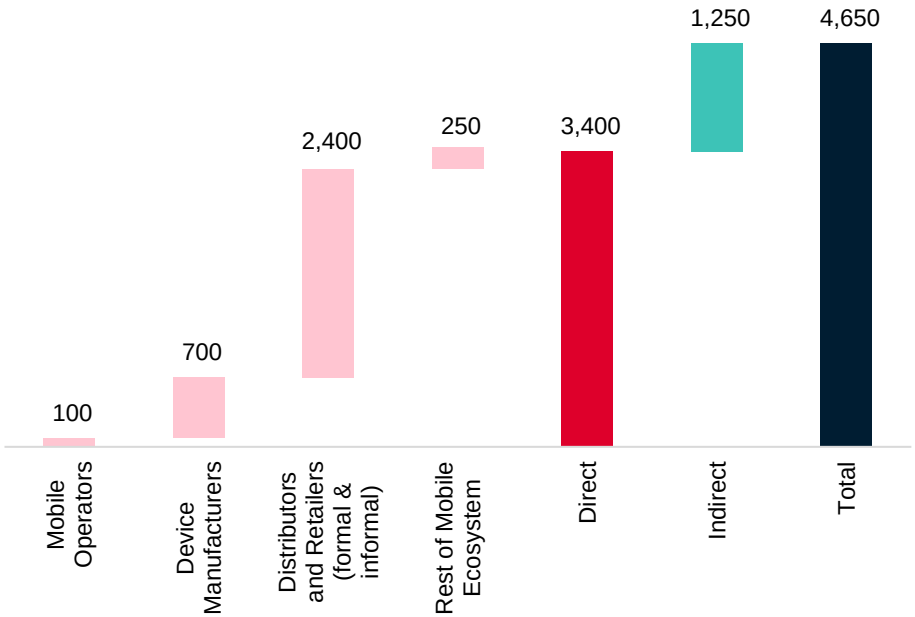
Mobile ecosystem: example players

Operators	Airtel	BSNL	Jio	Vodafone Idea
Device manufacturers	IN by Micromax	Intex	Lava	
Distributors and retailers	Ingram Micro	Creative Peripherals	Redington	
Infrastructure providers	GTL Infrastructure	HFCL Group	ITI	

Note: Totals may not add up due to rounding, and percentages may not precisely reflect absolute figures.
Source: GSMA Intelligence analysis

Economic impact of the mobile ecosystem
Employment impact

Employment impact
Jobs (thousands), 2021



In 2021, the mobile sector and related industries directly supported just over 4.6 million jobs in India, of which more than 3.4 million jobs were provided directly by the mobile ecosystem.

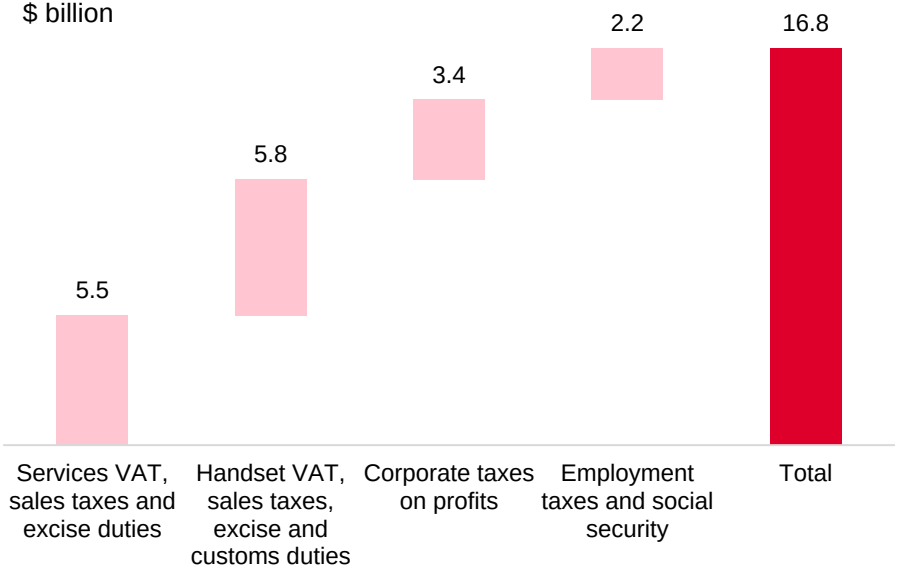
The mobile ecosystem buys goods and services from an extensive supply chain, which in turn employs more staff. As these industries further interact with supply chains throughout the economy, the effect multiplies across India, supporting 1.25 million jobs.

Under the broader initiative of 'Make in India' and the National Policy on Electronics 2019 (NPE 2019), the government has set out to transform the country into a global manufacturing hub. Electronics manufacturing is a top goal. With mobile phones one of the most important electronic devices today, there is a policy push to scale up mobile phone manufacturing and assembly operations in the country. Under the NPE 2019, a production target of 1 billion mobile phones has been set for 2025; this includes around 600 million units for export.

Note: Totals may not add up due to rounding.
Source: GSMA Intelligence analysis

Economic impact of the mobile ecosystem
Fiscal contribution

Fiscal contribution, excluding spectrum fees
$ billion



Note: Totals may not add up due to rounding.
Source: GSMA Intelligence analysis

In 2021, the mobile sector and related industries directly contributed approximately $17 billion to India's public finance, through direct and indirect taxation.

Direct taxation, including VAT on mobile services and handsets, accounted for more than $11 billion in 2021.

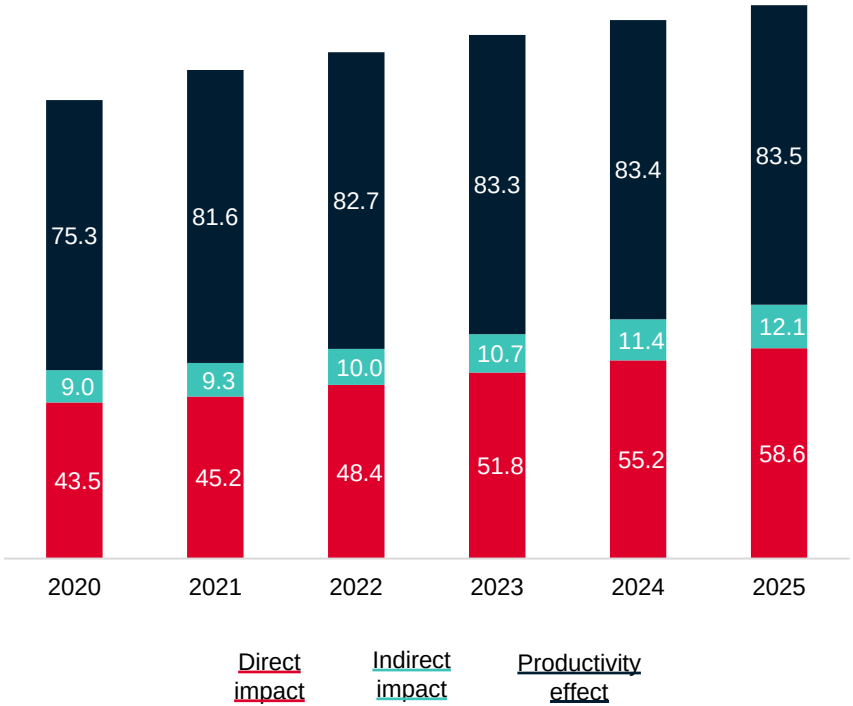
Indirect taxation, such as taxes on corporate profit and employment, accounted for more than $5.5 billion.

These estimates do not include spectrum fees, such as funds raised from spectrum auctions.

Furthermore, the total cost of spectrum in India is increased by spectrum usage charges (around 3% of operator revenues annually).

Economic impact of the mobile ecosystem
Forecast to 2025

Outlook for economic contribution of mobile ecosystem
$ billion



Source: GSMA Intelligence analysis

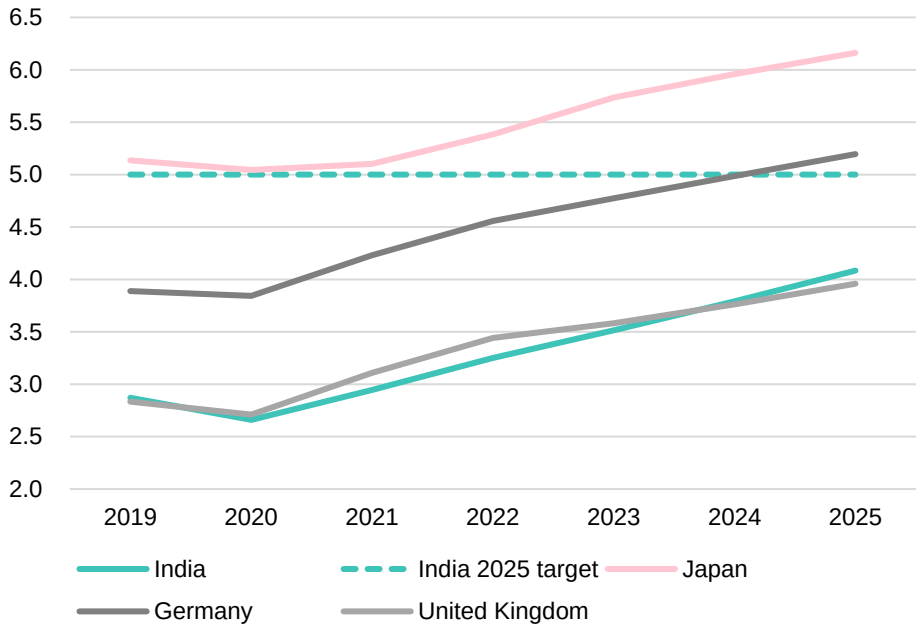
The mobile ecosystem will continue to provide significant contributions to the Indian economy over the coming years – up to around $155 billion in 2025.

This is mainly driven by the continued expansion of the mobile ecosystem, which will grow due to the number of subscribers, expected to rise from 752 million in 2021 to 833 million in 2025.

India could see additional productivity gains associated with the deployment of 5G networks, expected to reach up to 5% market penetration by 2025.

Economic impact of the mobile ecosystem
India targets a $5 trillion economy by 2025

GDP
$ trillion, 2020 prices



Source: IMF, October 2021

Covid-19 has resulted in an economic and human development crisis in India and worldwide.

India's economy contracted by 8% in 2020, but the government remains committed to India becoming a $5 trillion economy by 2025.

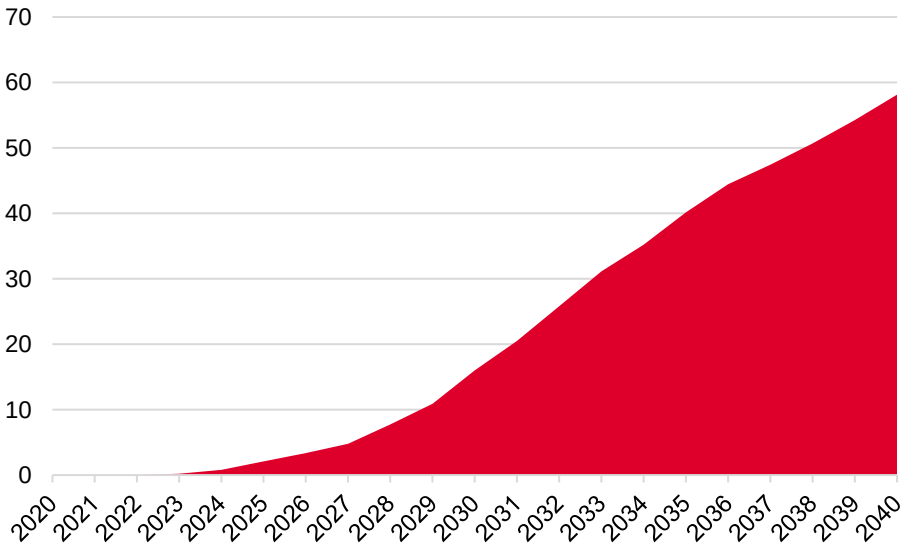
This ambitious goal will require a post-pandemic acceleration in growth.

As a general-purpose technology, mobile can enable other sectors to work towards this goal. Studies have shown that a 10% increase in mobile broadband penetration can increase GDP by 1–2%.

Economic impact of the mobile ecosystem
5G could contribute $455 billion in GDP by 2040

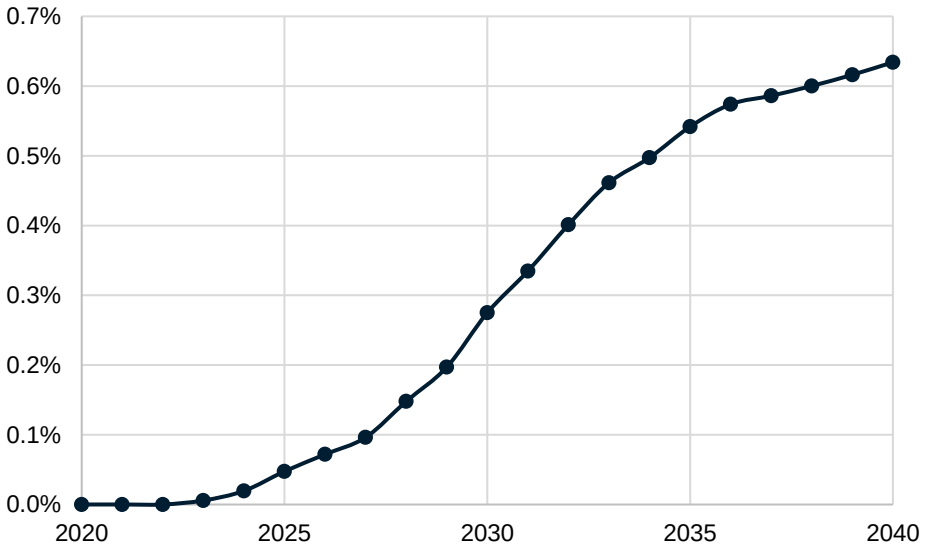
5G could benefit the Indian economy by $455 billion between 2020 and 2040, or more than 0.6% of forecast GDP forecast for 2040.

Economic contribution of 5G
GDP uplift, $ billion



Source: GSMA Intelligence analysis

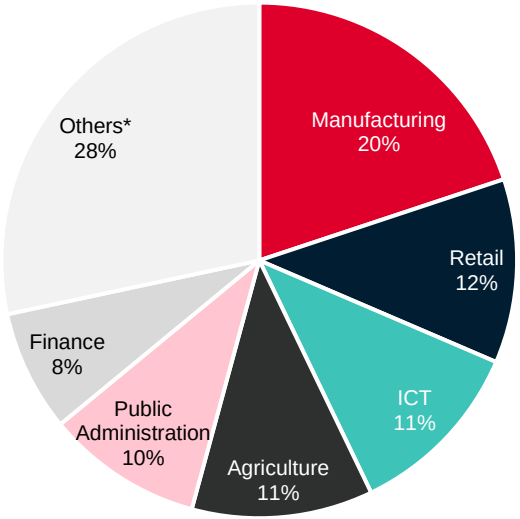
Economic contribution of 5G
Percentage of annual GDP



Source: GSMA Intelligence analysis

Economic impact of the mobile ecosystem
Manufacturing, retail and ICT expected to be the most affected sectors

5G benefit by sector, 2040
Percentage of total benefit



*Others includes the following sectors: construction, transport, services, education, mining, healthcare, utilities, accommodation and the arts sector.

Source: GSMA Intelligence analysis

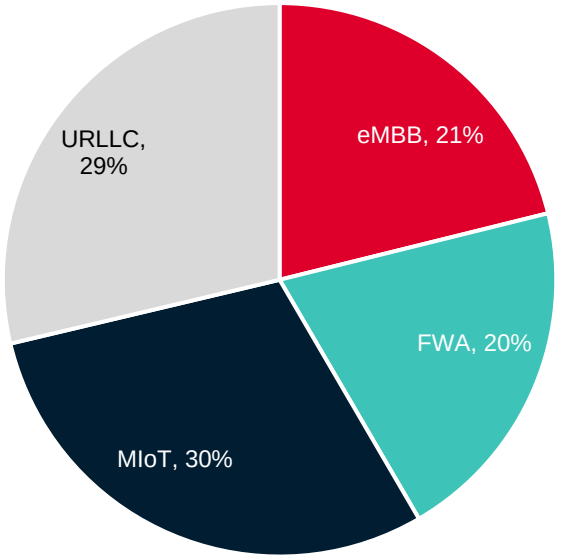
5G is forecast to deliver a $455 billion GDP uplift in India between 2020 and 2040, accounting for more than 0.6% of annual GDP in 2040.

5G is expected to deliver important socioeconomic benefits in India, due to a large number of 5G use cases that could be implemented in the main sectors of India's economy.

5G benefits are expected to be realised in new applications in the manufacturing sector, representing 20% of the total benefit, and in the retail, ICT and agricultural sectors. The services sector, particularly healthcare and education, is also expected to benefit from 5G, driven by smart cities and smart government 5G-enabled applications.

Economic impact of the mobile ecosystem
5G use cases will enable new applications across all sectors

5G benefit by use case, 2040
Percentage of total benefit



Source: GSMA Intelligence analysis

Enhanced mobile broadband (eMBB): 5G will enable a range of new applications, including reliable mobile internet services for mass gatherings and events (where current mobile technology can be stretched to its limits).

Fixed wireless access (FWA): 5G will allow network operators to deliver ultra-high-speed broadband to suburban and lower-density areas, supporting home and business applications (home office, education, business support) where fibre is prohibitively expensive to lay and maintain.

Ultra-reliable, low-latency communications (URLLC): 5G's low latency and high reliability will enable new applications in manufacturing, logistics, healthcare and transport.

Massive IoT (MIoT): 5G will facilitate a large network of IoT devices, supporting the creation of smart cities, smart infrastructure and (in the utility sector) smart grids capable of self-identifying network issues.

Economic impact of the mobile ecosystem
Wider socioeconomic impacts

In addition to the macroeconomic impacts, 5G is set to enhance the wider socioeconomic benefits that mobile and mobile broadband are known to provide.

Poverty reduction: Mobile broadband can help reduce poverty. For example, during 2010–2016, it lifted 2.5 million people out of extreme poverty in Nigeria.[1]

Well-being: Mobile ownership combined with internet connectivity is shown to be associated with an improvement in peoples' happiness and well-being.[2]

Health: Mobile phones are associated with lower maternal and child mortality and allow women to be better informed about reproductive health services.[3] More than a quarter of users in India use mobile to access health information at least once per month (according to a GSMA Intelligence consumer survey).

Education: Mobile improves the quality of teaching and learning, and facilitates reading and enhanced literacy.[4] More than a third of users in India use mobile to improve their education or that of their children at least once per month (according to a GSMA Intelligence consumer survey).

1 The poverty reduction effects of mobile broadband in Africa: Evidence from Nigeria, GSMA and The World Bank, 2020
2 The Impact of Mobile on People's Happiness and Well-Being, GSMA and Gallup, 2018
3 Leveraging mobile phones to attain sustainable development, Rotondi et al, 2020
4 Reading in the Mobile Era, Unesco, 2014

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