

INTERNATIONAL BUSINESS

Made in India

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India is emerging as a global manufacturing hub.

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Approximately **12% of** Apple's iPhones are being manufactured in India. In 2017, 0% were. This progress in a mere five years, by the world's most valuable merchandiser, shows how India has emerged as a global powerhouse for manufacturing. While India is a known global leader in providing cutting-edge **research services**, its growing prowess as a manufacturing hub, particularly in high-tech sectors, is relatively unknown. Managers of multinational corporations (MNCs) now must consider India in their global sourcing plans, especially for accessing the world's **fastest-growing consumer market**.

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I. A shift from China to India

India is the second most sought-after location for manufacturing, followed by Indonesia, Malaysia, and Thailand. China has been the world’s main factory for the last five decades or so. China retains its top rank in the **Cushman & Wakefield Manufacturing Risk Index** (MRI) as the most attractive location for production, based on three aspects: business environment, operating costs, and risks. However, US MNCs perceiving China as one of their top three investment priorities has **dropped** from 77% in 2010 to 45% in 2022. Business risks for American companies in China are increasing, and, at an extreme, **calls** have been made for exiting China altogether.

Many companies are pursuing a **China Plus One** policy; that is, diversifying their manufacturing base instead of relying on China as their sole sourcing nation. This development is epitomized by Apple. While battling production shortfalls and a violent **workers’ revolt** in 2022, spurred on largely by Beijing’s harsh virus containment policies, Apple began **reducing** its exposure to Chinese manufacturing. It shifted to India so fast that, in fiscal year 2023, Apple produced phones worth **\$12.5 billion** in that country alone. It plans to assemble **a quarter of all its iPhones in India** by 2025. That is a big leap in a span of a few years.

Cushman & Wakefield ranks India second for its attractiveness as a manufacturing base based on several factors: low labor costs, abundant manpower, affordable electricity, and cost-effective real estate construction. **Morgan Stanley**, utilizing data from Euromonitor, the World Bank, the International Labour Organization (ILO), and the United Nations Industrial Development Organization (UNIDO), reported that India had the most economical manufacturing labor costs in the South Asian region in 2022. With costs of just

\$0.8 per hour, India's labor rate is 20% lower than that of Indonesia (\$1/hr) and about half of Vietnam's (\$1.6/hr) and the Philippines's (\$1.5/hr), roughly one-third of Thailand's (\$2.6/hr), and only one-sixth of Malaysia's (\$4.7/hr). Meanwhile, China's manufacturing labor costs escalated to \$7.1 per hour.

China outscores everyone, based on sheer numbers, **in labor force**: 793 million against 491 million in India (every other country lags significantly behind). **Among the working-age population** in China, almost 76% are employed in factories. This compares with 51% in India, as many Indian workers still work in **agriculture** and female participation in industrial labor force is abysmally low. But these differences between India and China are diminishing. China's **population** is aging and declining. In addition, **reverse migration** in China—from urban, industrial employment back to rural homes—is reducing the manpower availability. China's labor participation rate is **declining** by 0.7% each year while India's is increasing by the same percentage each year. India is expected to contribute an additional 22% (**97 million people**) to the global working-age population by 2031. More women are now participating—**70% of the workers** in Apple's new assembly plants are women.

It's not just about numbers. The pool of professional, technical, manufacturing, accounting, English-language, and soft skills would make India the most endowed resource-rich nation, in terms of manpower, by **2030**. With **1.5 million new engineering graduates** every year, India's technological talent is the world's envy, as is evident from the chief executive officers (CEOs) of Adobe, Alphabet, IBM, and Microsoft being India-educated engineers. India thus is ideally positioned for experiments and pilot projects for novel products and high-tech manufacturing, particularly those requiring fusion **strategy**. The Unified Payments Interface, commonly called **India Stack**, which links people with banks and mobile money apps developed by India's fintech sector, is perhaps the most advanced in the world.

Another important factor in production location decision is economic and political risk. **India's risk score** trails behind G-7 and European Union nations but is ahead of other Asian manufacturing giants such as Thailand and Vietnam.

II. Examples of MNCs setting up production centers in India

Google recently announced its intention to manufacture its flagship Pixel smartphones in India. And it's not just Google. Multinational corporations across various sectors are turning their attention to India for their manufacturing needs, be it to set up shop or expand their existing production capacities. Elon Musk is in talks with the government of India to set up a **Tesla manufacturing plant** and invest up to \$2 billion. **Micron** started the construction of its \$2.75 billion semiconductor factory in Gujarat, **AMD** opened its largest global design center in Bengaluru, and **Intel** partnered with local firms to boost laptop manufacturing in India, all of which and more were achieved within the last year.

More MNCs setting up production in India, for example, Apple, Hewlett Packard, General Electric, Airbus, Proctor & Gamble, Merck, Bosch, and Skoda & Volkswagen.

A. Apple

Apple and its key suppliers are setting ambitious targets to significantly ramp up iPhone production in India, aiming to manufacture more than 50 million units annually by 2025, that is, **a quarter** of its global production. The significance of this shift was highlighted when India-manufactured iPhones were included in the global sales launch for the latest model, a first for the country.

Foxconn Technology Group, a leading supplier for Apple, is central to this expansion, with **new plants underway in Karnataka** and plans for another significant facility. These efforts were bolstered by investments exceeding \$1.5 billion, announced in November 2023. Furthermore, Apple has chosen India for the new product introduction stage **for lower-end iPhones** planned for 2025, marking a departure from the China-exclusive strategy for these preproduction processes. Notably, **Japanese battery maker TDK** is reported to be setting up a factory in Haryana to supply battery cells for Indian-made iPhones, indicating the growing ecosystem of suppliers in India.

B. Hewlett Packard (HP)

HP India has established **two manufacturing sites**: a self-owned facility in Uttarakhand, operational from 2006, and another within the Flex Ltd. complex in Chennai, initiated in 2020. The company produces an **extensive range of computing devices in India**, such as laptops, desktop computers, mini desktops, tablets, servers, and display monitors.

In July 2023, HP unveiled its plans to begin manufacturing high-volume servers worth \$1 billion in the first five years of production from India. This move leverages India's burgeoning electronics manufacturing landscape. In collaboration with VVDN Technologies, an Indian firm, HP plans to produce its servers at a facility in Haryana. "Today's announcement marks a significant milestone for HPE and reiterates our commitment to the Government of India's 'Make in India' initiative for a self-reliant India," said Antonio Neri, president and CEO, Hewlett Packard Enterprise (HPE). "India is a strategic market for HPE's business, talent, innovation—and now, manufacturing." **From October** 2023, Google, in partnership with HP, started manufacturing Chromebooks in India.

C. General Electric (GE)

General Electric's presence **in India** is marked by five technology centers and 12 production sites focused on creating a wide spectrum of cutting-edge products. The manufacturing sites produce a range of products, from aviation parts and power generation systems to healthcare devices and industrial equipment. The Indian workforce has been instrumental in driving technological advancements and innovations, particularly in wind and gas power and advanced manufacturing techniques. Since the **John F. Welch Technology Center** (JFWTC) in Bengaluru opened its doors in September 2000, its teams have been pivotal in the development of **more than 4,000 patent applications for GE**, spanning the aviation and energy sectors, among others.

In the last 12 months, **GE Aerospace** signed a memorandum of understanding with Hindustan Aeronautics Limited (HAL) to produce military fighter jet engines, **GE Healthcare** made plans to expand manufacturing operations in India to balance global manufacturing while taking advantage of the National Medical Devices Policy, and **GE Vernova** and Bharat Heavy Electricals Limited (BHEL) announced the continuation of their

long-term cooperation with the fourth extension of the Technical Assistance and License Agreement, including the engineering and manufacturing of heavy-duty gas turbines in India.

D. Airbus

Airbus boasts a **substantial footprint in India**, hosting centers for engineering, customer support, and information management. Launched in 2007, the Airbus Engineering Center in Bengaluru has expanded to employ more than 700 engineers, forming a critical support pillar for its Commercial, Defense & Space, and Helicopters divisions.

Airbus **recently announced** the formation of partnerships with several Indian suppliers such as Aequs, Dynamatic, Gardner, and Mahindra Aerospace for airframe and wing components for its A320neo, A330neo, and A350 aircraft. The collaboration was extended earlier this year with new contracts for Tata Advanced Systems Limited (TASL) and Mahindra Aerospace Structures Private Limited (MASPL) to manufacture metallic parts and assemblies for different aircraft models, reinforcing Airbus's commitment to leveraging Indian manufacturing expertise.

“Make in India is at the core of Airbus' strategy in India. We are proud that we are putting in place all the critical building blocks for an integrated industrial ecosystem that will propel India into the front ranks of aerospace manufacturing nations,” **said Rémi Maillard**, president and managing director, Airbus India and South Asia.

E. Procter & Gamble (P&G)

P&G is a major producer of consumer goods in India, covering categories such as home care, personal care, and healthcare. The company **plans to invest** around \$244 million to establish an export hub in Gujarat. This new venture will focus on manufacturing healthcare products. The initiative enhances P&G India's manufacturing network, which already has eight facilities across the country, and builds upon its existing operations in Gujarat, where it has operated a plant near Ahmedabad since 2015. The **upcoming facility**, covering 530,000 square feet, will specialize in digestive wellness products and is set to feature full automation in line with 'Industry 4.0' principles.

“The new manufacturing facility in Gujarat is a testament of our belief in the immense growth potential that the country offers. With the new state-of-the-art facility, our objective is to transform India into an export hub for P&G globally. The fact that P&G chose to put that in India gives a feel for the kind of confidence the company has on the long-term prospects here and also using India not just for consumption alone, but also looking at manufacturing,” L. V. Vaidyanathan, CEO, P&G India, told **ET**.

F. Merck

Merck operates **three production facilities in India**, with two expansive sites near Bengaluru (encompassing 61,000 square meters) and another near Mumbai. These sites are pivotal in manufacturing an extensive array of products within the pharmaceutical and life sciences sectors, such as active pharmaceutical ingredients (APIs), finished dosage forms, biopharmaceuticals, reagents, chromatography products, and analytical instruments.

Merck India **recently unveiled plans** to enhance its infrastructure, tapping into the substantial growth prospects of India within the global pharmaceutical sector. The company has forged a partnership with India’s Heavy Water Board, targeting the burgeoning market for deuterated raw materials, which presently holds a value of approximately \$100 million and is anticipated to surge to \$1 billion in the next five to ten years. Merck’s goal is to supply premium compounds for use in pharmaceuticals, semiconductors, organic light-emitting diodes (OLEDs), and electronics manufacturing. Furthermore, Merck made significant investments in its **Jigani** facility located near Bengaluru, reinforcing its commitment to expanding its operational capacity in India.

“Merck’s Jigani facility in India is poised to play a crucial role as a significant export centre to markets like the United States and Europe, strengthening India’s global footprint in deuterated products and expanding its market share,” **said Eileen McCracken**, head of diagnostics and regulated materials, Science and Lab Solutions, Merck Life Science.

G. Bosch

Since establishing its **manufacturing presence in India** in 1951, Bosch has significantly expanded its operations to encompass 17 manufacturing facilities and seven development and application centers, employing about 38,700 people. The manufacturing sites produce **a diverse portfolio**, including automotive components, power tools, home appliances, and industrial and building technologies. Bosch has successfully harnessed India's manufacturing landscape, incorporating cutting-edge digital technologies and solutions that have propelled the creation of innovative and robust manufacturing setups.

Bosch is looking to **boost manufacturing in India** over the next two to four years, according to its chief financial officer Karin Gilges. The technology provider plans to increase the percentage of goods produced locally in India to lower its imports of components. "Currently, we have roughly 54% traded goods and 46% manufactured goods," Gilges said in a press conference, adding that Bosch plans to change this ratio in favor of manufactured goods.

H. Skoda & Volkswagen

Based in Pune, Maharashtra, Skoda Auto Volkswagen India Private Ltd. (**SAVWIPL**) celebrated a **significant achievement** in March 2022 by producing its 1.5 millionth vehicle in India, a milestone that reflects both domestic sales and exports, the latter amounting to 545,700 units. The Volkswagen plant in Pune occupies an area of over 2.3 million square metres with buildings covering about 115,000 square metres. The plant has a production capacity of up to 200,000 vehicles a year in a full three shift system.

SAVWIPL managing director Piyush Arora said, "The production milestone is a significant achievement and a testament to the success of our products in the domestic as well as export market." It highlights the seamless collaboration between the group's global and Indian teams, who have been instrumental in putting the engineering and manufacturing expertise of India on the global map, he added.

Currently, the Volkswagen Group is in the process of firming up fresh investments to **manufacture electric vehicles (EVs) in India**. In pursuit of export prospects, the company is targeting Southeast Asia, the Gulf Cooperation Council (GCC) nations, and North Africa

as promising markets, leveraging their expertise in exporting gasoline vehicles from India. Arora highlighted that recent changes in regulatory and safety standards in India have simplified export processes, enhancing global competitiveness.

III. Remaining challenges in India and future progress

A. Infrastructure and logistics

The biggest challenges in India are congested transportation networks, inconsistent power supply, and underdeveloped port facilities. These logistics challenges contribute to increased operational costs and delays. The World Bank's **Logistics Performance Index** (LPI) places India at 38th among 139 countries in 2023, though significant progress has been made since 2018.

India's logistics costs stand at 12%–13% of gross domestic product (GDP), well above the global average of 8%–10%. The **National Logistics Policy** (NLP), unveiled in September 2022, aims to decrease logistics expenses to a single-digit percentage of GDP within the next five years. The pace of **constructing national highways** has significantly increased. Over the past five years, India has seen substantial growth in port capacity and container handling, and forecasts are for a 2.7% annual growth in capacity from 2023 to 2030, alongside a 6.5% increase in container traffic.

B. Bureaucracy and slow judicial system

Uncertain time frames for obtaining land approvals, regulatory clearances, and business licenses extend project time lines and are a **big hinderance** to India's appeal as a manufacturing hub. Indian bureaucracy is one of the **most stifling ones** in Asia. The situation is changing, however. **National Single Window System** (NSWS) is an innovative digital initiative launched in mid-2021, designed to streamline the process for businesses, investors, and entrepreneurs in India to obtain necessary approvals and clearances. This comprehensive platform serves as a one-stop solution, facilitating the identification and application for various approvals required for business operations.

Another hinderance to doing business in India is slow settlement of commercial disputes. The enforcement of contracts is a major drag on India's ranking in the **World Bank's ease of doing business**, which when last counted was 62. India's ranking on the enforcement of contract indicator was **163** in 2020. The Department of Justice in India introduced the **Enforcing Contracts Portal** in 2021, aiming to establish a process that is efficient, effective, and transparent. Furthermore, specialized commercial courts were set up in Bengaluru, Delhi, Kolkata, and Mumbai to expedite the resolution of commercial conflicts.

C. Workers union

Trade unions in India have raised concerns regarding the government's trade agenda and its potential impact on labor rights. These unions are wary of MNCs pushing for policies that could undermine labor regulations, particularly in the digital economy, and the role of controversial investment arbitration tribunals.

The **Industrial Relations Code**, IRC 2020, introduced by the Ministry of Labour and Employment, consolidates and simplifies regulations regarding trade unions, industrial employment, and dispute resolutions. It places a greater focus on fostering positive employer-employee relations, improving working conditions, promoting collective bargaining, and supporting employee re-skilling efforts.

D. India's manufacturing future

Despite these problems and issues, India is emerging as the world's leading manufacturing hub. Every MNC must consider India in its global sourcing plans, while keeping in mind India's leadership in research and service capabilities, cost-effective raw material and labor, and growing consumer market. Not engaging with India's burgeoning manufacturing sector could mean losing access to one of the most attractive markets in the world. The **Indian government** increasingly requires a minimum percentage of value to be added in India for products sold in India. The government also **encourages** production in India through **purchase preferences** and direct and indirect subsidies. No MNC manager can afford to ignore the fastest-growing consumer market that comes endowed with the most cost-effective talent for manufacturing.



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