Indian Lab Grown Diamond Industry



28th August 2026

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List of Abbreviations

Abbreviations	Acronyms
B2B	Business-to-Business
BIS	Bureau of Indian Standards
CAGR	Compounded Annual Growth Rate
CCPA	Central Consumer Protection Authority
CEPA	Comprehensive Economic Partnership Agreement
COGS	Cost of Goods Sold
CPI	Consumer Price Index
Cr	Crore
CVD	Chemical Vapor Deposition
CY	Calendar Year
DGCIS	Directorate General of Commercial Intelligence and Statistics
DGFT	Directorate General of Foreign Trade
DREAM City	Diamond Research and Mercantile City
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortization
FDI	Foreign Direct Investment
FTA	Free Trade Agreements
FTC	Federal Trade Commission
FY	Financial Year
GDP	Gross Domestic Product
GHB	Gujarat Hira Bourse
GIA	Gemological Institute of America
GJEPC	Gem & Jewellery Export Promotion Council
GNDI	Gross National Domestic Income
GSI	Gemmological Science International
GST	Goods and Services Tax
HPHT	High Pressure High Temperature
IDI	Indian Diamond Institute
IGI	International Gemological Institute
IMF	International Monetary Fund
INR	Indian Rupee
LFPR	Labor Force Participation Rate
LGD	Lab-Grown Diamond
LLP	Limited Liability Partnership
MCA	Ministry of Corporate Affairs
MFN	Most Favoured Nations
MoSPI	Ministry of Statistics and Programme Implementation
MPCVD	Microwave Plasma Chemical Vapor Deposition
ODM	Original Design Manufacturer
OEM	Original Equipment Manufacturer
PAT	Profit After Tax
PFCE	Private Final Consumption Expenditure
PLI	Production Linked Incentive
RBI	Reserve Bank of India
RCEP	Regional Comprehensive Economic Partnership
ROCE	Return on Capital Employed
ROE	Return on Equity
RoW	Rest of the World
SDB	Surat Diamond Bourse
SuRSEZ	Surat Special Economic Zone

UAE	United Arab Emirates
UK	United Kingdom
UN Comtrade	United Nations Commodity Trade Statistics Database
USA	United States of America
USD	United States Dollar
USTR	United States Trade Representative

Chapter 1 - Overview of global economy

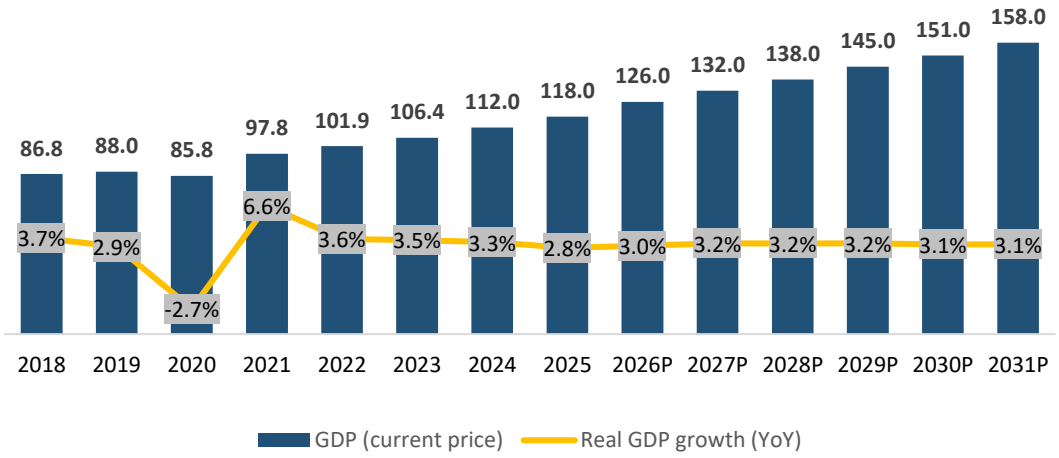
1.1. GDP and GDP growth

As per the International Monetary Fund (IMF), the global economy (GDP at current prices) was USD 118 trillion and USD 126 trillion in CY 2025 and CY 2026 respectively. Global growth was 3.4% in CY 2025 and is projected to fall to 3.1% in CY 2026 and is expected to remain stable between 3.1%-3.2% till CY 2031. Emerging and developing economies are expected to witness stable growth during this period, subject to regional variances. Key macroeconomic factors including rising per capita income, population growth, and increasing levels of urbanization are anticipated to drive sustained economic expansion. Consequently, the global GDP is projected to reach approximately USD 158 trillion by the year 2031.

Source: IMF

Note: P – Projected; Data represents calendar year

Figure 1-1: Global GDP at current price (USD trillion) and real GDP growth (%), In CY



1.2. Outlook of GDP growth in key global economies

Amid global geopolitical tension, trade wars, and tough market conditions, India continues to exhibit strong economic growth. The Indian economy remained the fastest-growing major economy in the world during CY 2025. The forecast GDP growth rate for India is the highest amongst the G20 nations, at an expected growth rate of 6.5% during CY 2026 and projected to remain stable till CY 2031.

Table 1-1: Real GDP growth YoY (%) comparison of major economies with world, In CY

Country	2018	2019	2020	2021	2022	2023	2024	2025	2026E	2031P
USA	3.0%	2.6%	-2.1%	6.2%	2.5%	2.9%	2.8%	2.1%	2.3%	2.1%
UK	1.6%	1.3%	-10.0%	8.5%	5.1%	0.3%	1.1%	1.3%	0.8%	1.3%
Europe	2.3%	2.0%	-5.4%	6.5%	2.6%	1.2%	1.9%	1.5%	1.3%	1.4%
China	6.8%	6.1%	2.3%	8.6%	3.1%	5.4%	5.0%	5.0%	4.4%	4.0%
Japan	0.8%	-0.3%	-4.3%	3.6%	1.3%	0.7%	-0.2%	1.2%	0.7%	0.6%
India	**6.5%**	**3.9%**	**-5.8%**	**9.7%**	**7.6%**	**7.2%**	**7.1%**	**7.6%**	**6.5%**	**6.5%**

Source: IMF

Note: E: Estimated; P: Projected data; Data represents calendar year

GDP per capita is expected to continue its steady global rise, with advanced economies maintaining higher absolute income levels, while emerging markets demonstrate faster growth momentum. Between CY 2026 and CY 2031, regions such as the USA, UK, Europe, and Japan are projected to see moderate income growth, led by the USA, where GDP per capita is forecasted to reach USD 112,242 by CY 2031, growing at a 3.5% CAGR.

In contrast, emerging economies like India and China are expected to post higher growth rates, albeit from a lower base. India stands out with the highest projected growth at 9.5% CAGR from 2026 to 2031, with per capita disposable income likely to reach USD 4,421 by CY 2031. China is also expected to grow steadily at 6% CAGR from 2026 to 2031, reaching USD 19,883 by 2031. The income gap between advanced and emerging economies is expected to gradually narrow, highlighting the rising influence of emerging markets in shaping global consumption dynamics.

Table 1-2 GDP per capita (USD), In CY

Country	2018	2019	2020	2021	2022	2023	2024	2025	2026E	2031P	CAGR (2026-2031)
USA	63,165	65,561	64,454	71,232	77,801	82,254	85,812	89,991	94,430	1,12,242	3.5%
UK	43,275	42,713	40,231	46,731	46,234	49,213	52,648	57,608	61,056	75,761	4.4%
Europe	29,723	29,310	28,363	32,582	32,871	34,949	36,591	40,558	43,762	51,597	3.3%
China	10,040	10,334	10,696	12,878	12,968	12,961	13,313	13,968	14,874	19,883	6.0%
Japan	39,850	40,548	40,160	40,155	34,080	33,845	32,498	35,973	35,703	43,038	3.8%
India	1,974	2,050	1,916	2,250	2,361	2,547	2,711	2,675	2,813	4,421	9.5%

Source: IMF

Note: E: Estimated; P: Projected data; Data represents calendar year

1.3. Review and outlook of global inflation

Global inflation is expected to slightly increase from 4.1% in CY 2025 to 4.4% in CY 2026, driven by factors that vary across countries. Inflation has remained volatile and is expected to remain so due to supply chain disruptions, rising commodity prices, and geopolitical tensions, prompting central banks to implement aggressive monetary tightening. Global inflation is expected to moderate once the uncertainties around geopolitical conditions subside and is expected to reduce to 3.2% by 2031.

India's inflation has moderated from a peak of 6.7% in CY 2022 to 5.4% in CY 2023, with a further decline to 4.7% for CY 2024, and 2.1% in CY 2025 and is expected to go back to 4.7% in CY 2026. The outbreak of conflict, geopolitics, and consecutive disruptions along critical maritime shipping routes have triggered fresh surge in global energy benchmarks and logistics costs. Additionally, a sub-par monsoon in 2026 may impact output of key agricultural commodities and may lead to increase in inflation.

Table 1-3: Inflation rate, average consumer prices (annual % change) of major economies, In CY

Country	2018	2019	2020	2021	2022	2023	2024	2025	2026P	2031P
USA	2.4	1.8	1.3	4.7	8.0	4.1	3.0	2.7	3.2	2.2
UK	2.5	1.8	0.9	2.6	9.1	7.3	2.5	3.4	3.2	2.0
Europe	2.2	2.0	1.2	3.6	10.0	6.3	3.6	3.7	3.4	2.4
China	2.1	2.9	2.5	0.9	2.0	0.2	0.2	0.0	1.2	2.0
Japan	1.0	0.5	0.0	-0.2	2.5	3.3	2.7	3.2	2.2	2.0
India	3.4	4.8	6.2	5.5	6.7	5.4	4.7	2.1	4.7	4.0
World	3.6	3.5	3.3	4.7	8.6	6.6	5.7	4.1	4.4	3.2

Source: IMF

Note: E: Estimated; P: Projected data; Data represents calendar year

1.4. Global outlook on private final consumption expenditure (PFCE)

PFCE, which includes spending on goods (such as food, lifestyle, home essentials, and pharmaceuticals) and services (such as education, healthcare, and food services), plays a critical role in sustaining economic momentum. Global private final consumption expenditure (PFCE) has witnessed steady growth, reaching USD 63.2 trillion in CY 2024, up from USD 49.9 trillion in CY 2019, reflecting a CAGR of 5% (CY 2019–2024). Emerging economies, including India and China, continue to witness strong PFCE growth, driven by rising incomes and expanding middle-class populations.

The USA leads in absolute PFCE, reaching USD 19.9 trillion in CY 2024 with a 7% CAGR (CY 2019-2024), underscoring its consumer-driven economy. India's PFCE stood at USD 2.1 trillion in CY 2024, accounting for 56% of GDP, highlighting its growing domestic demand and reinforcing its position as a consumption-driven economy. China recorded consumption at USD 7.5 trillion in CY 2024, with a 6% CAGR and consumption accounting for 40% of GDP, reflecting a relatively lower consumption intensity compared with India. Japan PFCE declined to 2.2 trillion in CY 2024 registering a negative CAGR of 5% amid demographic challenges and subdued consumption growth.

Table 1-4: Private final consumption expenditure (at current prices) for key economies, In CY

Country	2019	2020	2021	2022	2023	2024	CAGR (2019-2024)	% of GDP		
								2019	2020	2024
USA	14.4	14.2	16.1	17.7	18.8	19.9	7.0%	67%	67%	68%
China	5.7	5.7	7.0	6.9	7.2	7.5	6.0%	39%	38%	40%
India	1.7	1.6	1.9	1.9	2.0	2.1	4.0%	61%	61%	56%
Japan	2.8	2.7	2.8	2.4	2.4	2.2	-5.0%	54%	53%	53%
World	49.9	47.8	54.2	56.8	60.4	63.2	5.0%	56%	55%	57%

Source: World Bank

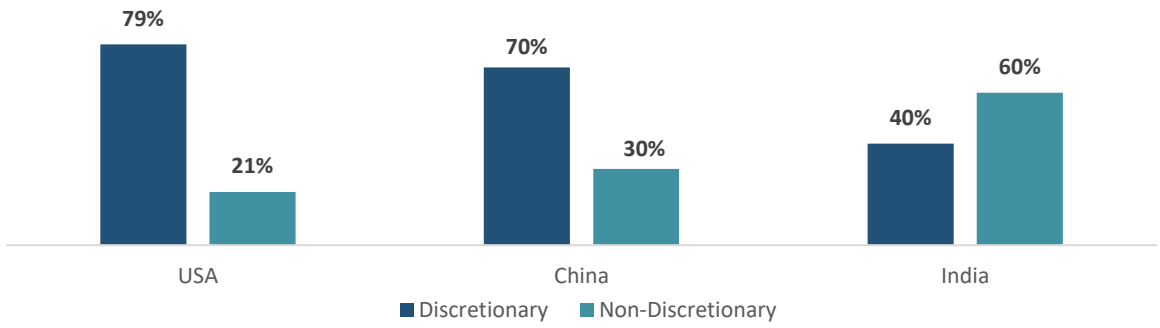
Note: Data represents calendar year; Values in USD trillion

1.5. Retail market by discretionary and non-discretionary expenditures

In CY 2024, discretionary spending accounted for 79% of total retail in the USA, amounting to approximately USD 4.41 trillion out of a total retail market of USD 5.58 trillion. In China, discretionary spending was 70%, or about USD 4.07 trillion of the USD 5.82 trillion retail market. India recorded the lowest discretionary share, with discretionary spending at 40%, totalling USD 0.43 trillion out of a total USD 1.08 trillion retail market.

As consumption continues to grow, a larger portion is expected to shift toward discretionary categories across all markets. In India, however, non-discretionary spending remains dominant at USD 0.65 trillion (60%), reflecting the significant share of household expenditure on essential items such as food and basic goods.

Figure 1-2: Discretionary and non-discretionary expenditures: USA, China and India, In CY 2024



Source: Wazir analysis

Note: Discretionary expenditures include spending on categories such as food (dining out/ordering in), lifestyle purchases, online gaming, entertainment, travel, and liquor and spirits, among others. These tend to have cyclical demand, fluctuating with economic conditions. Non-discretionary expenditures encompass spending on essential categories such as staples, pharmaceuticals and fresh food; Data represents calendar year 2024

1.6. Global population and demographic changes

Emerging economies, especially India, benefit from a young population, with a median age of 29.2 years. As the youngest among major economies, India is well-positioned to capitalize on its growing workforce, rising disposable incomes, and expanding consumer demand. In contrast, the USA, with 34.9 crore people and a median age of 38.7 years, has a comparatively older population. Similarly, China and Japan, with populations of 141.2 crore and 12.2 crore and median ages of 40.6 and 50.2 years respectively, are witnessing a demographic shift towards an aging population, potentially impacting their labour force over the long-term posing challenges to future economic expansion. This demographic edge positions India as a high-growth consumer hub, where rising income, digital adoption, and evolving preferences continue to drive sustained economic growth and market opportunities.

Table 1-5: Median age and population of key global economies, CY 2026

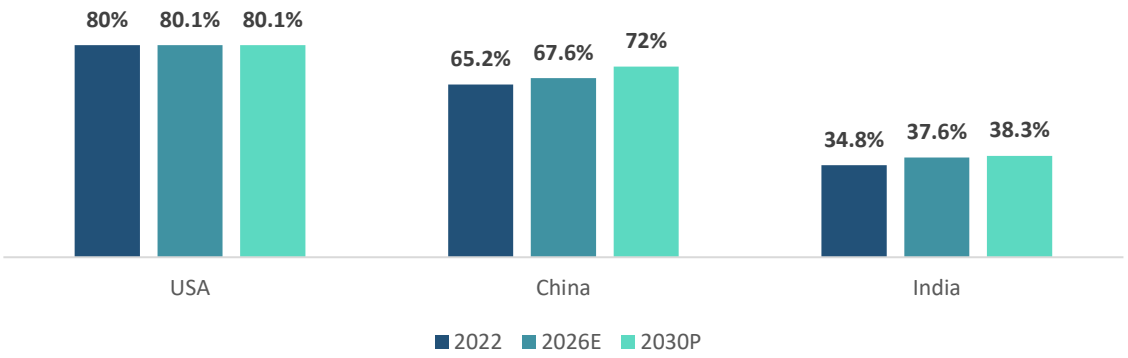
Country	US	China	India	Germany	France	UK	Japan	World
Population ('Crore)	34.9	141.2	147.6	8.3	6.7	6.9	12.2	830.1
Median Age (Years)	38.7	40.6	29.2	45.7	42.5	40.2	50.2	31.1

Source: United Nations Population Division, Wazir analysis
Note: Data represents calendar year

Rapid Urbanization:

Urbanization is important for economic growth because it increases consumption, improves infrastructure and services, and creates bigger markets for goods and services. In CY 2022, the urban population constituted approximately 80.0% in the USA, 65.2% in China, and 34.8% in India. These figures are expected to rise modestly in CY 2026 becoming 80.1% in the USA, 67.6% in China, and 37.6% in India reflecting growth across all three countries. By CY 2030, the urban population in USA, China and India is projected to be 80.1%, 72.0%, and 38.3% respectively.

Figure 1-3: Percentage of Urban Population – USA, China and India, In CY



Source: World Population Prospects, World Bank
Note: E: Estimated; P: Projected data; Data represents calendar year

1.7. Overview of the emerging geo-political scenario

On July 30, 2025, the U.S. administration announced a 25% reciprocal tariff on select Indian exports, effective August 7, 2025, under its broader tariff harmonization policy. This was followed by an additional 25% levy announced on August 6, 2025, bringing the cumulative duty on Indian gems and jewellery to 50%, effective August 27, 2025, with limited exemptions for consignments already in transit. The increase in duties altered prevailing pricing structures, compressed operating margins, and put pressure on working capital cycles across India's gem and jewellery supply chain. India's gem and jewellery exports to the U.S. declined by 44.42% between April 2025 and December 2025, with cut and polished diamonds bearing the sharpest impact, falling over 60% from US$ 3.64 billion to US$ 1.45 billion over the same period.

At the consumer end, the higher tariffs also led to upward price revisions in the U.S. for both natural and lab-grown diamonds. While this created near-term challenges for Indian exporters, it simultaneously accelerated consumer substitution towards more affordable options such as lab-grown diamonds, thereby reshaping long-term demand dynamics in favour of LGDs.

The geopolitical landscape has since evolved materially since February 2026:

- On February 7, 2026, Prime Minister Narendra Modi and President Donald Trump finalized an interim trade framework that reduced the 50% duties on Indian goods to an 18% reciprocal tariff. The interim trade agreement is yet to be signed.
- On February 20, 2026, the US Supreme Court ruled against the global tariffs post which the tariffs were reset to 10% from February 24, 2026.
- As per the notification of US Trade Representative (USTR) issued on July 24, 2026, a 10% tariff on Indian exports is expected to continue, however as depicted in the table below, rates on most of the categories relevant for lab grown diamond and jewellery would fall in the bucket of 0-7%.
- As per the ruling of Supreme Court, the extra tariffs collected between April 2025-Feburary 2026 will be refunded back.

Separately, India and the European Union finalized a free trade agreement on January 27, 2026, under which gems and jewellery will incur zero duty once the agreement comes into force, with bilateral trade targeted to double to US$ 10 billion within three years and placing India on par with China and Thailand in the European market.

These bilateral trade developments are set against a more volatile geopolitical backdrop. On February 28, 2026, the United States and Israel launched military operations against Iran, causing severe disruption of commercial shipping through the Strait of Hormuz, through which approximately 20% of the world's daily oil supply transits while Houthi forces simultaneously resumed attacks on Red Sea shipping. Brent crude surged past US$ 120 per barrel in the opening weeks before settling above US$ 100, a cumulative increase of more than 40% over pre-war levels, adding inflationary cost pressures across the value chain. A ceasefire framework was announced in early April 2026, with a memorandum of understanding set to be signed on June 19, 2026, intended to bring the conflict to a formal end within 60 days, however the situation is again escalated thus resulting in increased volatility. As of 10th August 2026, there are active discussions going on to achieve an agreement and de-escalating the situation.

Table 1-6: Applicable tariffs in USA on the imports of Gem and Jewellery products from India from 5th April 2025 to 23rd February 2026

Commodity	MFN duty applicable in USA for India	Baseline Duty (10%) Effective from 5th Apr 2025	Total Applicable Tariff (5th Apr – 6th Aug 2025)	Baseline Duty (25%) Effective from 7th Aug 2025	Total Tariff (7th Aug – 26th Aug 2025)	Baseline Duty (25%+25%) Effective from 27th Aug 2025-23rd Feb 2026	Total Tariff (27th Aug 2025-23rd Feb 2026)
Cut and Polished Natural Diamonds	NIL	10.0%	10.0%	25.0%	25.0%	25.0% + 25.0%	50.0%
Gold Jewellery	5.0% – 7.0%	10.0%	15.0% -17.0%	25.0%	30.0% -32.0%	25.0% + 25.0%	55.0%-57.0%
Platinum Jewellery	5.0% – 7.0%	10.0%	15.0% -17.0%	25.0%	30.0% -32.0%	25.0% + 25.0%	55.0%-57.0%
Silver Jewellery	5.0 – 13.5%	10.0%	15.0% – 23.5%	25.0%	30% – 38.5%	25.0% + 25.0%	55.0%-63.5%
Articles of Silver	2.7 – 3.5%	10.0%	12.7% – 13.5%	25.0%	27.7% – 28.5%	25.0% + 25.0%	52.7%-53.5%
Articles of Gold	3.0% – 7.9%	10.0%	13.0% – 17.9%	25.0%	28.0% – 32.9%	25.0% + 25.0%	53.0%-57.9%
Worked Coloured Gemstones	0%-10.5%	10.0%	10.0%-20.5%	25.0%	25.0%-35.5%	25.0% + 25.0%	50.0%-60.5%
Polished Lab Grown Diamonds	0%-6.4%	10.0%	10.0%-16.4%	25.0%	25.0%-31.4%	25.0% + 25.0%	50.0%-56.4%
Pearls	NIL	10.0%	10.0%	25.0%	25.0%	25.0% + 25.0%	50.0%
Imitation Jewellery	0% – 11.0%	10.0%	10.0% – 21.0%	25.0%	25.0% – 36.0%	25.0% + 25.0%	50.0%-61.0%

Source:

Harmonized Tariff Schedule of the United States (2026) Revision 13, USITC (United States International Trade Commission) & Executive Order dated August 6, 2025, and Detailed Modified Tariffs Applicable for India's Exports of Gem and Jewellery Products, U.S Trade Dataweb

Table 1-7: Applicable tariffs in USA on the imports of Gem and Jewellery products from India from 24th February 2026 onwards

Commodity	MFN duty	Baseline Duty Effective from (24th Feb 2026 – 23rd Jul 2026)	Total Applicable Tariff (24th Feb 2026 – 23rd Jul 2026)	Baseline Duty Effective from (24th Jul 2026)	Total Applicable Tariff Effective from (24th Jul 2026)
Cut and Polished Natural Diamonds	NIL	10.0%	10.0%	10.0%	10.0%
Gold Jewellery	5.0% – 7.0%	10.0%	15.0% -17.0%	10.0%	15.0% -17.0%
Platinum Jewellery	5.0% – 7.0%	10.0%	15.0% -17.0%	10.0%	15.0% -17.0%
Silver Jewellery	5.0 – 13.5%	10.0%	15.0% – 23.5%	10.0%	15.0% – 23.5%
Articles of Silver	2.7 – 3.5%	10.0%	12.7% – 13.5%	10.0%	12.7% – 13.5%
Articles of Gold	3.0% – 7.9%	10.0%	13.0% – 17.9%	10.0%	13.0% – 17.9%
Worked Coloured Gemstones	0%-10.5%	10.0%	10.0%-20.5%	10.0%	10.0%-20.5%
Polished Lab Grown Diamonds	0%-6.4%	10.0%	10.0%-16.4%	10.0%	10.0%-16.4%
Pearls	NIL	10.0%	10.0%	10.0%	10.0%
Imitation Jewellery	0% – 11.0%	10.0%	10.0% – 21.0%	10.0%	10.0% – 21.0%

Source: Harmonized Tariff Schedule of the United States (2026) Revision 13, USITC (United States International Trade Commission) & Executive Order dated August 6, 2025, and Detailed Modified Tariffs Applicable for India's Exports of Gem and Jewellery Products, U.S Trade Dataweb

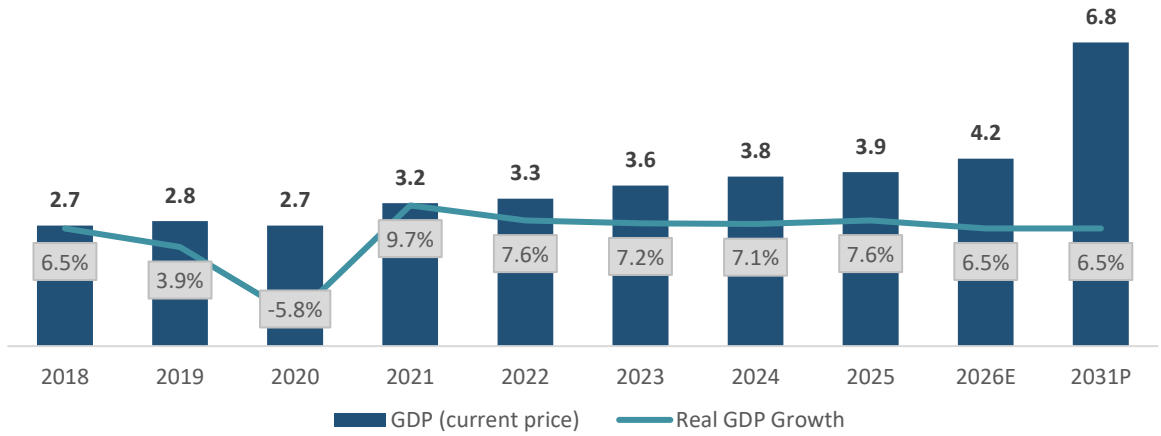
Chapter 2 - Overview of Indian Economy

2.1. Macro-economic overview

In CY 2025, India, ranked as the sixth largest economy by GDP, has demonstrated strong economic resilience, with a GDP of USD 3.9 trillion at current prices in CY 2025. Real GDP is expected to grow with 7.6% year-on-year increase from CY 2025 to CY 2026, with GDP reaching USD 4.2 trillion in CY 2026. The country's GDP has maintained a steady upward trajectory, rising from USD 2.7 trillion in CY 2018 to an estimated USD 4.2 trillion in CY 2026. After a contraction of -5.8% in CY 2020 due to COVID-19 pandemic where lockdowns halted economic activities, the economy rebounded with 9.7% growth in CY 2021, and growth has since stabilized at 7-7.6% from CY 2022 to CY 2025, reinforcing India's status as one of the fastest-growing major economies. Key sectors such as agriculture, benefiting from favourable monsoon conditions and increased rural demand, infrastructure, driven by heightened government spending on urban development, manufacturing, supported by strengthening domestic demand, lower input costs, and a conducive policy environment led to GDP growth.

Source: IMF

Figure 2-1: India GDP at current price (USD trillion) and real GDP growth at constant price (%), In CY



Note: E: Estimated; P: Projected; Data represents calendar year

Emerging vs. Advanced Economies: Developing economies are projected to grow faster than advanced economies, though their pace of expansion is expected to slow gradually between CY 2024 and CY 2031. The average real GDP growth rate for developing economies is estimated at 4.3% in CY 2024, gradually easing to 4% by CY 2031. In comparison, advanced economies are likely to follow a slower but stable path, with growth projected at 1.8% in CY 2024 and marginally softening to 1.5% in CY 2031.

Among global economies, India stands out with one of the strongest and most consistent growth trajectories. From CY 2026 to CY 2031, India's real GDP growth is projected to remain steady at ~6.5% annually; well above both advanced economies and emerging market peers. This sustained momentum positions India as a key driver of global growth, outperforming major economies such as China and Brazil.

Table 2-1: Real GDP growth (%) comparison of developing economies and advanced economies, In CY

Economy	2018	2019	2020	2021	2022	2023	2024	2025	2026E	2031P
India	6.5%	3.9%	-5.8%	9.7%	7.6%	7.2%	7.1%	7.6%	6.5%	6.5%
Developing	4.7%	3.7%	-1.7%	7.0%	4.1%	4.7%	4.3%	4.4%	3.9%	4.0%
Advanced	2.3%	1.9%	-4.0%	6.0%	2.9%	1.7%	1.8%	1.9%	1.8%	1.5%
World	3.6%	3.0%	-2.7%	6.7%	3.8%	3.3%	3.4%	3.4%	3.1%	3.1%

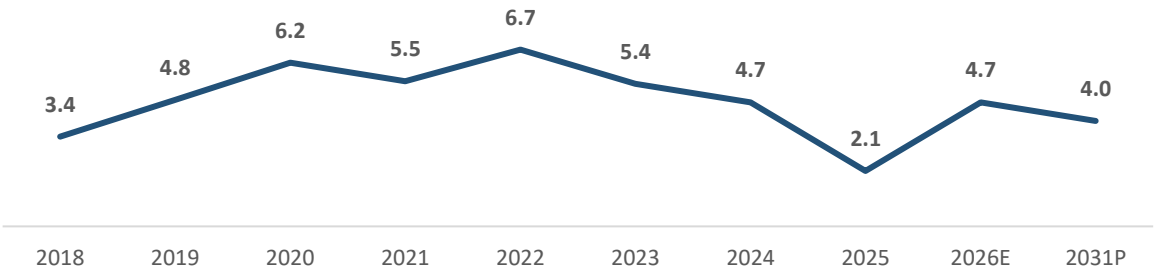
Source: IMF

Note: E: Estimated; P: Projected data; Developing economies include India, Brazil, China, etc.; Advanced economies include USA, UK, Germany, France, Japan, Australia, etc.; Data represents calendar year

2.2. Near term review and outlook on inflation

The Consumer Price Index (CPI) demonstrated an upward trend from CY 2018 to CY 2022, indicating a persistent increase in the overall price level of goods and services over this period. Beginning at 3.4% in CY 2018, the CPI climbed steadily to 6.2% in CY 2020 signalling rising inflationary pressures. This upward trajectory continued into CY 2022 with the CPI reaching 6.7%, reflecting sustained inflationary trends and potentially impacting consumers' purchasing power. However, CY 2025 saw a sharp decrease in the CPI to 2.1%, suggesting a possible moderation in inflation rates. Inflation is expected to increase to 4.7% in CY 2026 and is further projected to decline to 4% by CY 2031.

Figure 2-2: Inflation rate, average consumer price index (%), In CY



Source: IMF

Note: P: Projected data; Data represents calendar year

Over the past five years, India's repo rate has steadily risen from 4.2% in CY 2020 to a peak of 6.5% in CY 2023 & CY 2024, before easing slightly to 5.2% in 2025. This reflects the RBI's proactive approach to manage inflation. Cutting the repo rates would increase the average consumption and spending capability, which would help accommodate the inflation. Whereas China's 7-day rate (the country's main policy rate) shows an increasingly accommodative stance, with rates falling to 1.4%% in CY 2026. The US Federal Reserve saw sharp rate hikes post CY 2022 to combat inflation, peaking at 5.1% in CY 2024 which fell to 3.6% in CY 2026. India's stable yet elevated rate indicates a focus on balancing growth with inflation control. RBI has reduced the repo rate to 5.2%, which is likely to support increased consumption and contribute positively to overall economic growth. India's relatively higher policy rate highlights the RBI's continued focus on macroeconomic stability while supporting sustainable growth.

Table 2-2: Central bank rates for India, China and USA, In CY

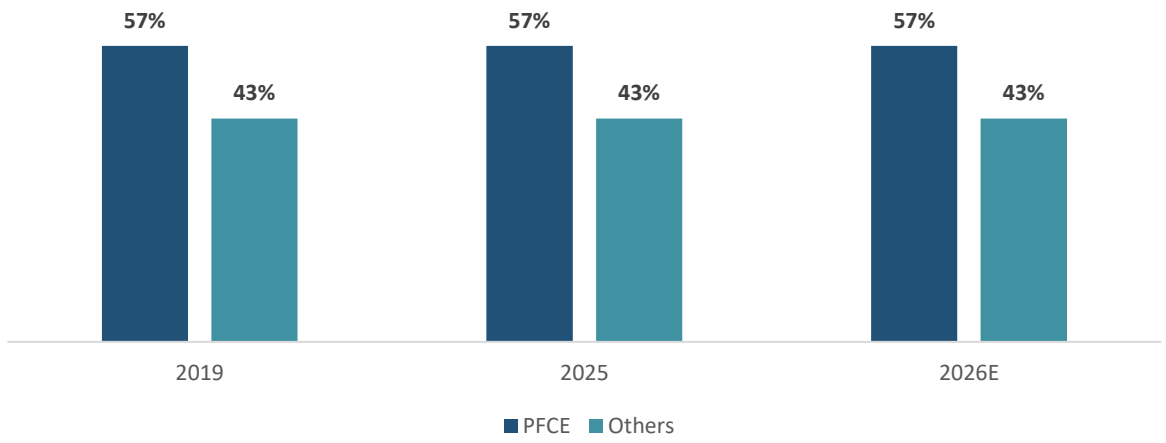
Country	2020	2021	2022	2023	2024	2025	2026 (Jun)
India (RBI)	4.2%	4.0%	5.0%	6.5%	6.5%	5.2%	5.2%
USA (US Federal Reserve)	0.4%	0.0%	1.7%	5.0%	5.1%	3.6%	3.6%
China (People's Bank of China)	2.3%	2.2%	2.1%	1.9%	1.7%	1.4%	1.4%

Source: Reserve Bank of India, The People Bank of China, Board of Governors of the Federal Reserve System (US)
Note: Data represents calendar year

2.3. Share of private consumption in India's GDP

India is largely a consumption-led economy with Private Final Consumption Expenditure ("PFCE") as a share of GDP has remained stable from FY 2019 to FY 2026. The majority of share of PFCE in GDP is mainly driven by a confluence of factors including a burgeoning middle class with growing purchasing power, a young and large working population along with rapid urbanization leading to lifestyle changes and increasing consumer credit availability, facilitating higher spending.

Figure 2-3: PFCE as a % of Indian GDP at current prices, In FY



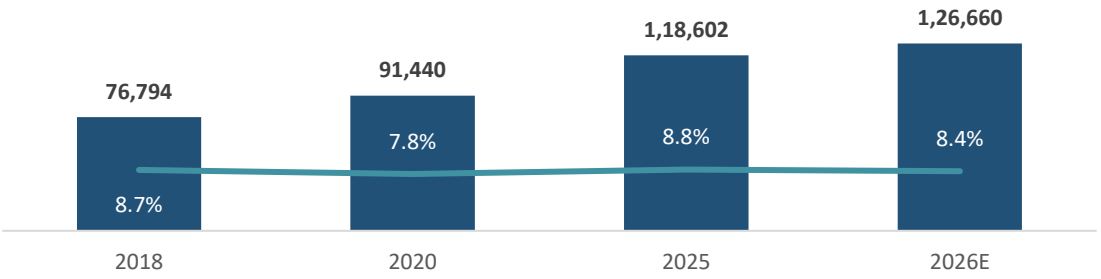
Source: MoSPI
Note: E: Estimated data; Data represents financial year; Others include Government Final Consumption Expenditure (GFCE), Gross Fixed Capital Formation (GFCF), Exports, Imports, etc.

2.4. Increasing per capita PFCE

PFCE in India serves as a critical indicator of household spending patterns and economic well-being. Analysing the data from FY 2018 to FY 2026 indicates significant growth in both nominal and real terms. At current prices, per capita PFCE witnessed a steady increase and is expected to grow with CAGR of 8.7% from INR 76,794 in FY 2018 to INR 1,26,660 in FY 2026, indicating overall growth in consumer spending over the period. However, when adjusted for inflation to reflect constant prices, the per capita PFCE figures present a clearer picture.

As consumer spending continues to grow, the demand for high-end products, such as gems and jewellery, designer apparel, and premium electronics, is gaining momentum. This trend is further fuelled by the expanding aspirational middle class, which increasingly seeks to indulge in high-quality, status-symbol products. The economic recovery, combined with rising disposable incomes, is shifting consumer preferences towards premium goods, leading to a greater focus on quality and exclusivity.

Figure 2-4-: Per capita PFCE at current price with % change (Values in INR), In FY



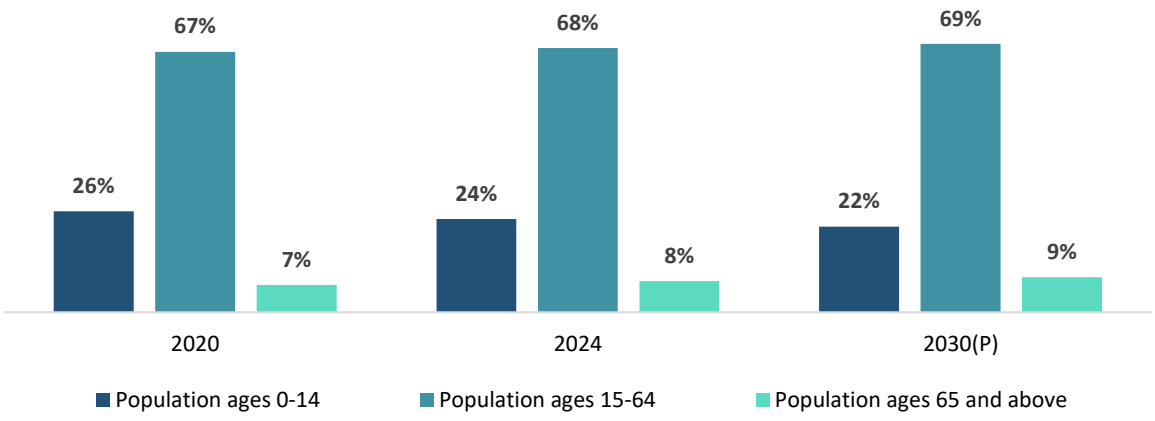
Source: MoSPI
Note: E: Estimate; Data represents financial years

2.5. Share of working population

India's working population (15-64 years) was 67% of the total population in CY 2020 which is expected to increase to 69% by CY 2030. A higher proportion of the population in the working age creates potential for higher consumption. India's population distribution has undergone a significant demographic shift, with a rising share of the working-age population and a declining proportion of the (0-14) age group. However, realizing the full potential of this demographic advantage requires strategic investments in employment generation, skill development, healthcare, and social security to ensure a productive and sustainable workforce.

With median age of 29.2 India has one of the youngest populations globally. With vast resources of young citizens entering the workforce every year, it is expected to create a 'demographic dividend'. India is home to a fifth of the world's youth demographic and this population advantage is expected to play a critical role in economic growth.

Figure 2-5 : India demographic trend (% of total population), In CY

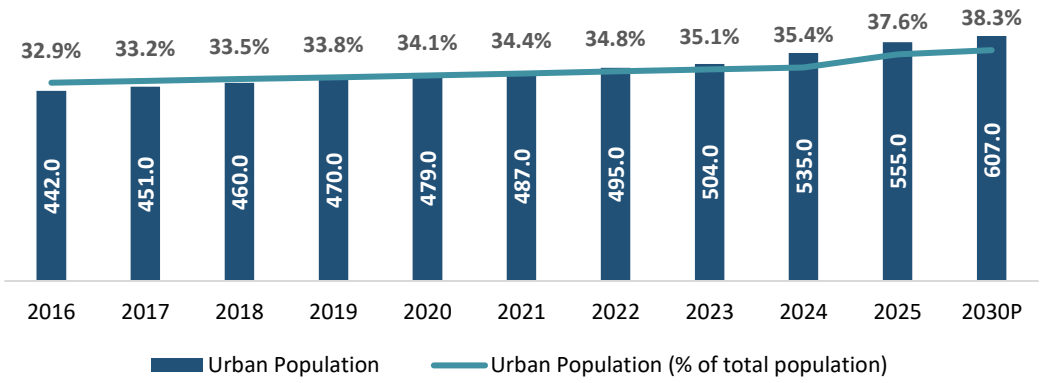


Source: World population prospects, UN
Note: P – Projected Data; Data represents calendar year

2.6. Increasing urbanization and disposable incomes

India's urbanization is reshaping its workforce, driving a shift from low-productivity sectors like agriculture to higher-productivity sectors such as services and industry. This transition is fuelled by better economic opportunities, industrialization, and infrastructure development in urban areas. The urban population has grown from 442 million in CY 2016 to 555 million in CY 2025, with its share of the total population rising from 32.9% to 37.6%. This is further expected to increase to 38.3% by CY 2030.

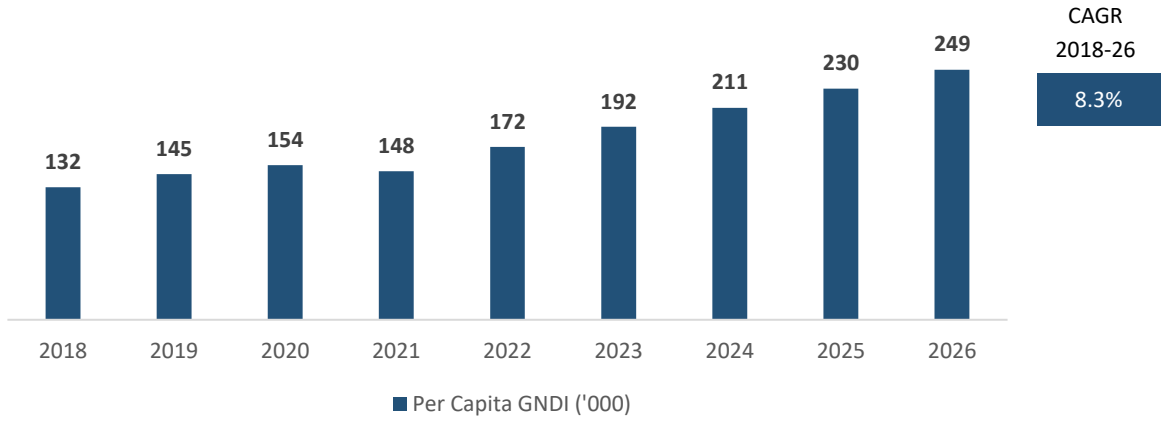
Figure 2-6: India's urban population and its share of the total population (%), In CY



Source: World bank
Note: E – Estimated; P – Projected Data; Data represents calendar year; Values in million

India's per capita Gross National Disposable Income (GNDI) has shown consistent growth in recent years. According to the First Advance Estimates for the FY 2026, the per capita GNDI stood at INR 2,49,195 marking an 8.0% increase from INR 2,30,474 in FY 2025. From FY 2020, where GNDI stood at INR 1,54,349, this represents a CAGR of approximately 8.3%, indicating a sustained improvement in the overall disposable income available to individuals.

Figure 2-7: India's per capita GNDI (INR thousand), In FY

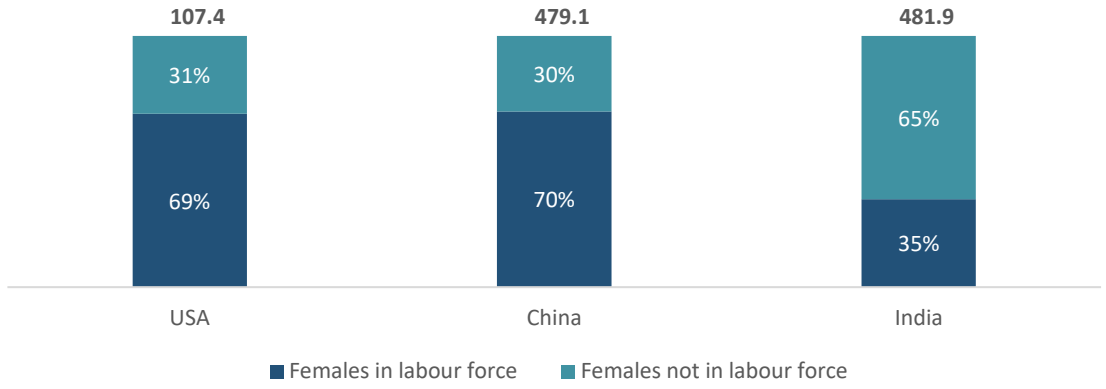


Source: MoSPI
Note: E: Estimated data; Data represents financial year

2.7. Increasing women in workforce

Large and increasing participation of women in the workforce (15-64 years) is boosting economic productivity and reshaping purchasing patterns as they make more autonomous consumption choices. The USA and China have high female Labor Force Participation Rate (LFPR) with ~69% and ~70% of females between ages 15-64 in the workforce in CY 2024, respectively, while India's female LFPR stands at ~35% in the same year.

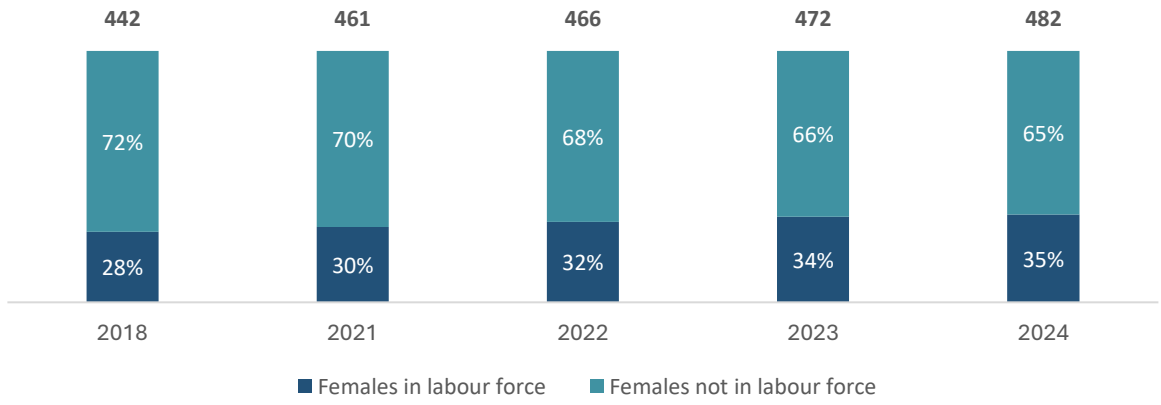
Figure 2-8: Total female population (15-64 years) by workforce participation, In CY 2024



Source: International Labour Organization (ILO)
Note: Data represents calendar year 2024, value in millions

In India, the percentage of females in labour force increased from 28% in CY 2018 to 35% in CY 2024. This growth has been attributed to reduced barriers for working women, coupled with focused efforts by the government and private sector employers to increase female participation in the workforce. Consequently, this has increased dual-income households, resulting in increased discretionary expenditure and a preference for aspirational products. These households increasingly opt for aspirational products, driven by a combination of elevated lifestyle goals and the pursuit of quality goods at competitive prices.

Figure 2-9: India's total female population (15-64) by workforce participation, In CY

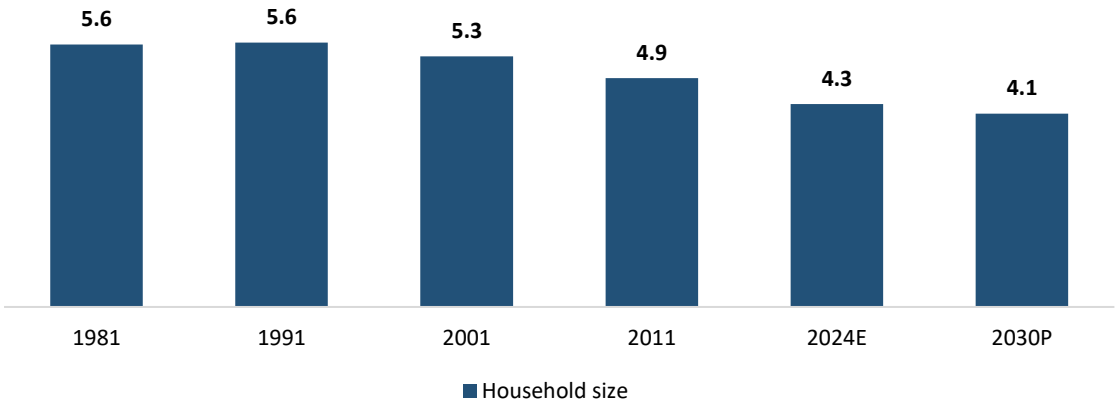


Source: International Labour Organization (ILO)
Note: Data represents calendar year; Values in millions

2.8. Nuclearization of households in India

The average household size in India has declined from 5.6 in FY 1981 to 4.9 in FY 2011, reflecting shifts in family structures and broader demographic changes. This trend is expected to continue, with household size projected to drop further to 4.1 by 2030. This economic and social transformation is unlocking growth opportunities across sectors such as real estate, retail, infrastructure, and financial services, while also emphasizing the need for thoughtful urban planning, affordable housing, and sustainable development to support India's evolving workforce and urban landscape.

Figure 2-10: Households' size in India, In CY



Source: Wazir analysis, Census

Note: E: Estimated; P: Projected data; Data represents calendar year

2.9. Socio-economic break-up of Indian households

Between FY 2016-2021, India witnessed considerable growth, especially among households earning between INR 15-30 lakhs annually, which grew at a rate of 6.4% per year. Households earning between INR 5-15 lakhs also experienced a growth of 4.8%. Notably, the income group earning over INR 2 crore annually grew by 13.3% per year, rising from 1.1 million households in FY 2016 to 3.4 million in FY 2025. Overall, households earning over INR 30 lakhs increased from 7 million in FY 2016 to 17.1 million in FY 2025.

This trend signals a positive structural shift in India's economy, with a growing affluent and middle-income population. The expansion of the middle-income group reflects a deeper integration of more people into higher income brackets. Furthermore, the reduction in lower-income households indicates substantial progress in poverty alleviation, pointing to an overall improvement in living standards.

Table 2-3: Income-wise breakup of households in India, In FY

Income class in lakhs	Number of households (In millions)				Growth	
	FY 2016	FY 2021	FY 2025	FY 2031P	FY 2016-25	FY 2021-31P
>200	1.1	1.8	3.4	9.1	13.36%	17.83%
100-200	1.5	2.4	4.2	9.3	12.12%	14.2%
50-100	2.0	3.2	4.9	9.3	10.47%	11.3%
30-50	2.3	3.3	4.6	7.5	8.01%	8.5%
15-30	10.1	13.8	18.7	29.4	7.08%	7.8%
5-15	61.1	77.1	96.7	135.6	5.23%	5.8%
1.25-5	156.0	160.8	150.5	136.2	-0.4%	-1.7%
<1.25	46.5	45.2	32.5	19.9	-3.90%	-7.9%
Total	**280.6**	**307.6**	**315.4**	**356.3**	**1.31%**	**2.1%**

Source: ICE 360 Surveys (2016 and 2021), PRICE

Note: P – Projected data: Data represents financial year

Chapter 3 - Global and Indian lab grown diamonds market

3.1. Global diamond market size: Volume

The global diamond market, including natural and lab-grown diamonds was estimated at 169-173 million carats in FY 2026, growing at a CAGR of ~4-5% from 126-137 million carats in FY 2020. The overall market is projected to grow at a CAGR of ~2% to reach 182-188 million carats in FY 2030. Natural diamond continues to dominate the market but are witnessing a decline in share. In FY 2020, natural diamonds accounted for 95% of the market at 126-137 million carats, the share of which declined to 78% in FY 2026 and is further projected to decline to 69% by FY 2030. Lab grown diamond production, on the other hand, is growing rapidly. Production increased from 6-7 million carats in FY 2020 to 37-38million carats in FY 2026, at a CAGR of 33-35%. It is projected to grow at a CAGR of 13-15%, accounting for 34% of the global diamond market at 63-65million carats by FY 2030.

Figure 3-1: Rough natural and lab grown diamond production (Million carats), In FY

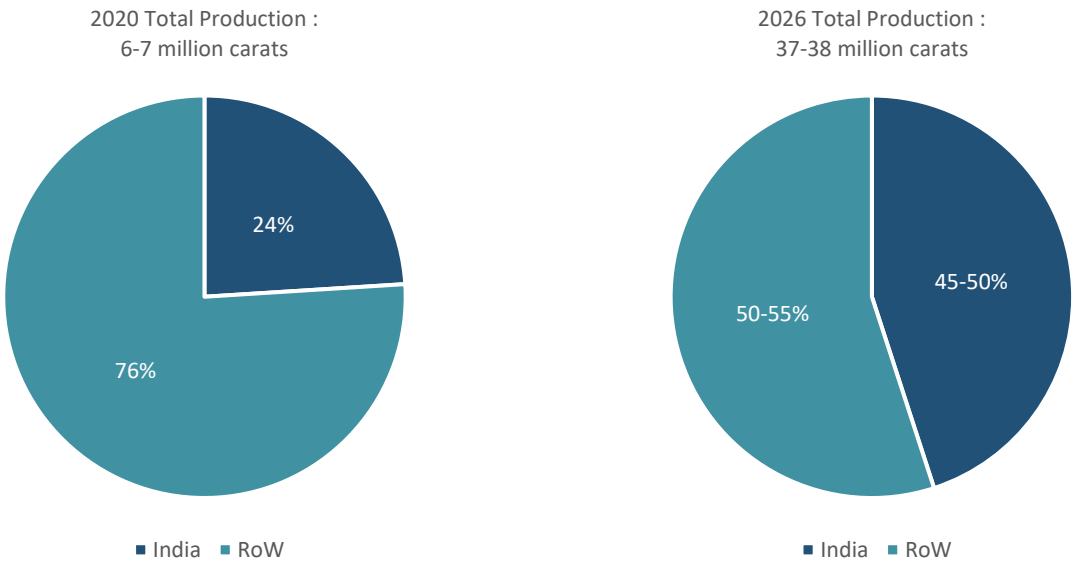


Source: Wazir analysis

Note: E: Estimated; P: Projected data; Data represents financial year

India is expected to play a crucial role in global rough lab grown diamond production, with its share increasing from 25% in FY 2020 to ~45-50% in FY 2026. This dominant position is driven by India's rapid scale-up in production capacity, supported by investments in advanced technology, a skilled and cost-efficient workforce, favourable regulatory environment, and competitive pricing. The country has also witnessed increased access to LGD growing machines and a strong ecosystem of manufacturers focused on both export and domestic markets. Besides India, China and United States hosts several prominent lab-grown diamond companies, primarily focused on high-quality production for both jewellery and industrial applications.

Figure 3-2: Rough lab grown diamond production (million carats) by country - share %, In FY



Source: Wazir analysis
Note: E: Estimated; Data represents financial year

The retail prices of polished lab-grown diamonds witnessed fluctuations during Jan'25–Jun'26, before trending downward across all size categories by Jun'26. The 2-carat segment ranged from USD 1,189–1,545, while 1-carat lab-grown diamonds were priced between USD 561–780, and the 0.5-carat segment ranged from USD 271–425 during the period. Prices of larger-sized lab-grown diamonds, such as 3-carat and 5-carat stones, also experienced corrections by Jun'26 despite remaining significantly higher in absolute terms. The 4-carat segment, however, remained relatively stable compared to the other size categories. This overall moderation reflects a normalization in pricing trends and highlights the increasing maturity and stability of the lab-grown diamond market.

Table 3-1: Quarterly global lab grown diamond price index (USD), Jan'25-Jun'26

Carat	Jan-25	Mar-25	Jun-25	Sep-25	Jan-26	Mar-26	Jun-26
0.5	405	313	322	420	425	355	271
1	615	563	569	610	725	780	561
2	1,312	1,189	1,198	1,490	1,545	1,400	1,202
3	2,007	1,915	1,872	2,210	2,185	2,055	1,702
4	2,329	2,315	2,313	2,795	2,760	2,735	2,162
5	2,935	2,639	2,556	2,905	2,860	2,880	2,494

Note: Prices denote the monthly average price
Source: Secondary research

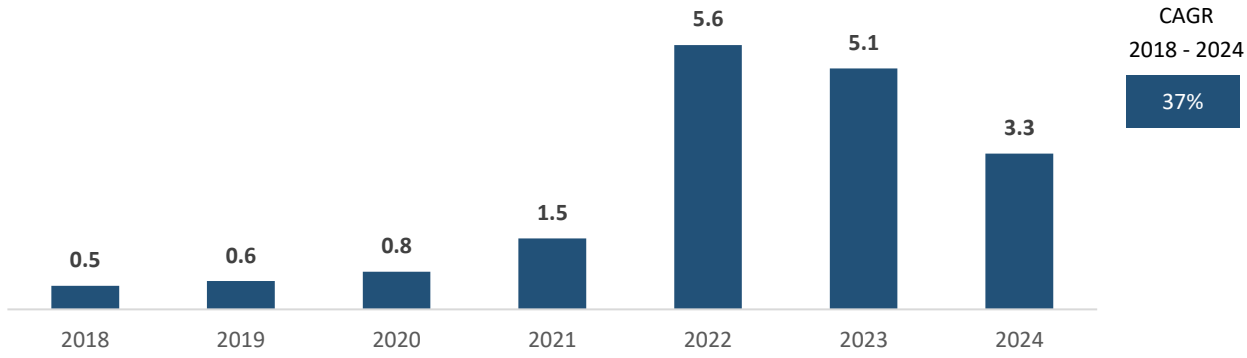
The most preferred size in lab-grown diamonds is in the mid-range, especially for engagement rings, with 1.5 carats being the ideal balance of size, sparkle, and daily wear. Since lab-grown diamonds are typically 70-80% less expensive than natural ones, buyers are now more open to choosing larger sizes while maintaining high quality.

- **1.0 to 1.5 carats:** Popular for their elegance without being too flashy.
- **2.0 to 2.5 carats:** Favored for a bigger, more luxurious appearance.
- **3.0+ carats:** Increasingly chosen for bold, statement looks.

3.2. Global trade of lab grown diamonds (rough and polished)

The global lab-grown diamond (LGD) trade grew from USD 0.5 billion in CY 2018 to USD USD 3.3 billion in CY 2024, at a CAGR of 37%.The growth during the initial period was supported by increasing consumer acceptance, expansion in manufacturing capacity and demand for relatively affordable alternatives to natural diamonds. However, as LGD production capacity expanded significantly, particularly in key manufacturing markets such as China and India, resulting in heightened competitive intensity and a correction in wholesale prices on a per-carat basis. Consequently, the increase in traded volumes was accompanied by a decline in unit realisations, exerting pressure on industry profitability and overall trade value. From CY 2023 onwards, the growth in trade value moderated amid softer demand in certain key Western markets, geopolitical uncertainties, sanctions and trade-related restrictions affecting the broader diamond industry.

Figure 3-3: Global trade of lab grown diamonds (rough and polished) in (USD billion), In CY

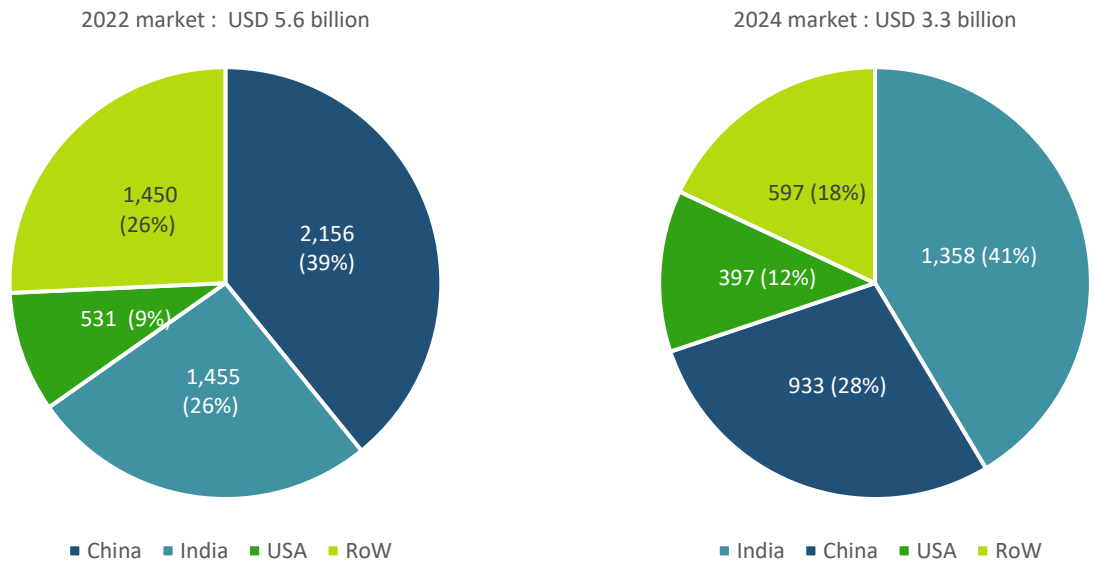


Source: UN Comtrade
Note: Data represents calendar year

Key exporters of lab grown diamonds (rough and polished)

Global trade of lab-grown diamonds declined from USD 5.6 billion in CY 2022 to USD 3.3 billion in CY 2024, largely due to price reductions across leading consumption centres.

Figure 3-4: Key exporters of lab grown diamonds (rough and polished) with export values in USD billion, In CY

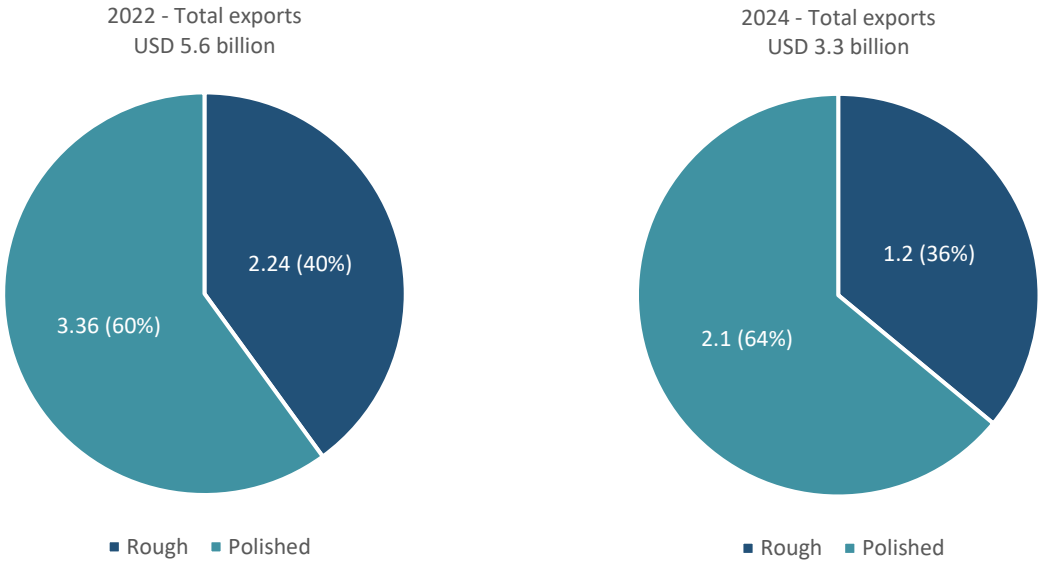


Source: UN Comtrade
Note: Data represents calendar year

Segmentation of global trade (rough and polished)

Global lab-grown diamond trade declined from USD 5.6 billion in 2022 to USD 3.3 billion in 2024 reflecting a weaker demand and market correction dynamics. Despite the overall contraction, the share of polished lab-grown diamond increased from 60-65%, highlighting a gradual shift toward value-added exports. Meanwhile rough LGD exports witnessed a decline both in value and share primarily driven by oversupply and pricing corrections.

Figure 3-5: Lab grown exports, rough vs polished, (USD billion), In CY



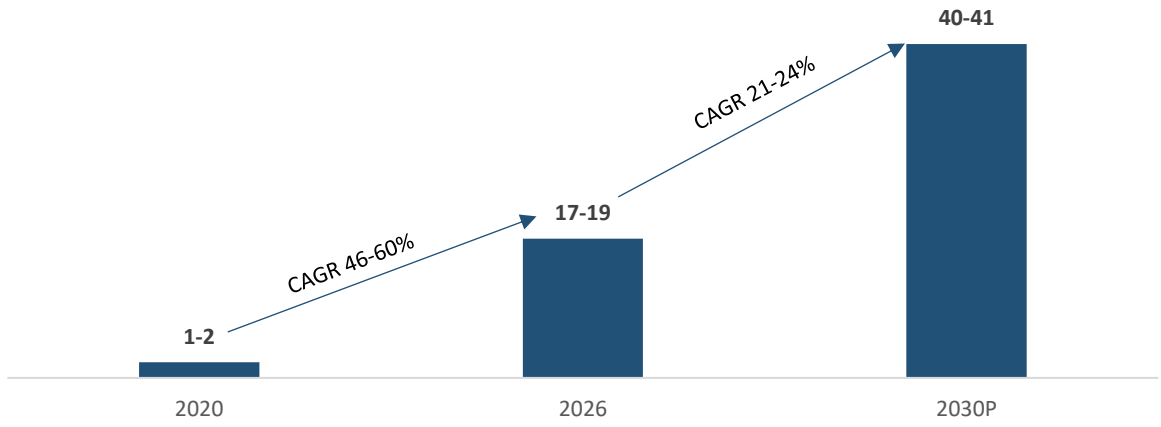
Source: UN Comtrade
Note: Data represents calendar year

3.3. India's LGD market and exports

India's production of rough lab grown diamonds

The Indian rough lab grown diamond market is estimated to be at 17-19 million carats in FY 2026, having grown at a CAGR of 46-60% from 1-2 million carats in FY 2020. This strong growth highlighted the growing confidence and investment in lab grown diamonds as a viable substitute for mined diamonds. The market is projected to grow at a CAGR of 21-24% to reach 40-41 million carats by FY 2030.

Figure 3-6: India's annual rough lab grown diamond production (million carats), In FY

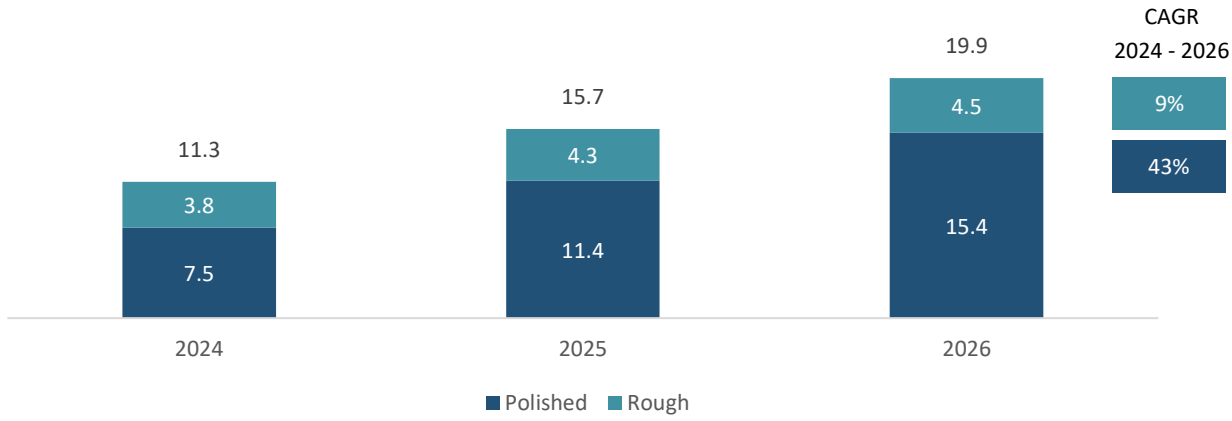


Source: Wazir analysis

India's lab grown diamonds exports

India exported 19.9 million carats of LGDs (rough and polished) in FY 2026, highlighting its growing supply strength. Export volumes increased steadily from 11.3 million carats in FY 2024 to 19.9 million in FY 2026. Polished LGD continued to lead the export mix, but rough LGD exports also saw strong growth. Between FY 2024 and FY 2026, rough LGD exports recorded a CAGR of 9%, while polished LGD grew at 43%, reflecting India's rising capabilities across both segments of the lab-grown diamond value chain.

Figure 3-7: India's LGD exports by volume (million carats), In FY

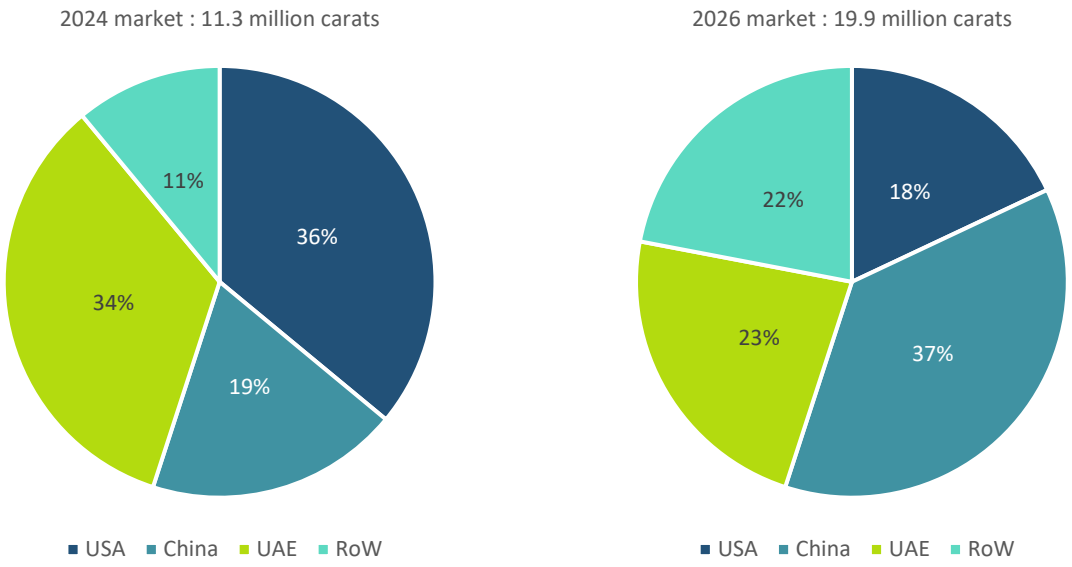


Source: DGCIS
Note: Data represents financial year

Key exports destination markets for LGD

India's lab-grown diamond exports saw strong growth and wider market reach between FY 2024 and FY 2026. China's share increased to 37% in FY 2026 due to growing demand for LGD, while the UAE accounted for 23% in FY 2026, strengthening its role as a re-export hub supported by low trade barriers and strong global connectivity.

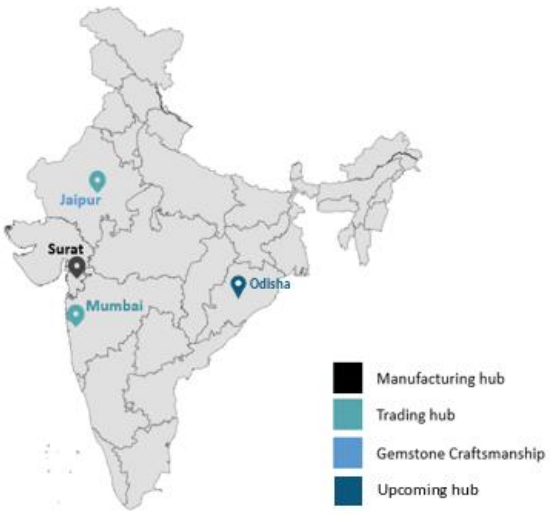
Figure 3-8: Key export destinations for Indian LGDs (Share of total export volume, million carats), In FY



Source: DGCIS

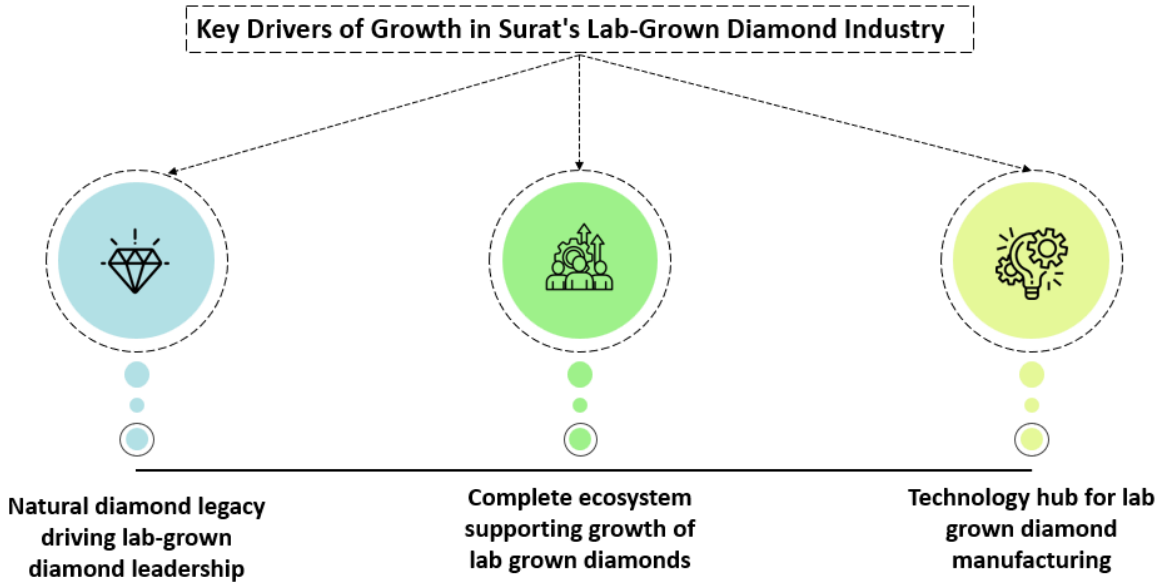
Note: Data represents financial year

3.4. LGD hubs in India



India is witnessing the rise of three key hubs driving the growth of the LGD industry. Surat, a major hub in Gujarat, dominates the sector, accounting for over 90% of India's LGD production. The city benefits from a well-established diamond processing ecosystem, skilled labour, and many processing units. Mumbai Metropolitan Region, alongside Surat, has emerged as a significant centre for the LGD industry, playing a crucial role as a trading and commercial hub. Jaipur is steadily carving out its niche in the LGD market, leveraging its rich heritage in gemstone craftsmanship to fuel innovation and industry growth. Meanwhile, Odisha is a potential upcoming hub after having approved three major manufacturing projects in Khordha district, bringing massive investments and creating thousands of jobs.

3.4.1 Surat: From natural diamond legacy to global leader in lab-grown diamonds



Surat, historically known as the global hub for natural diamond cutting and polishing, has successfully evolved into a major centre for lab-grown diamond (LGD) production. The city now accounts for ~90% of India's LGD output, with around 60% of polishing activity focused on LGDs. Legacy players have swiftly pivoted to LGDs, leveraging decades of expertise in sourcing, cutting, and trading.

This transformation is underpinned by a comprehensive ecosystem:

- **Skilled Workforce & Training:** Institutions like the Indian Diamond Institute (IDI) support a well-trained workforce with tailored programs for the LGD segment.
- **Production Capacity:** Surat houses over 85-90% of MPCVD machines, with the top 10 players accounting for ~80% of total capacity.
- **World-Class Infrastructure:** Surat benefits from strong connectivity such as air, rail, road, and port; alongside reliable utilities that support industrial growth.
- **Integrated Diamond Ecosystem:** Infrastructure such as the Surat Diamond Bourse (SDB), DREAM City, Gujarat Hira Bourse (GHB), and the Surat Special Economic Zone (SuRSEZ) strengthens trade, investment, and economic activity in the region.

Surat as a Technology Hub for LGD Manufacturing

Surat is not just producing lab-grown diamonds, it is increasingly becoming self-reliant in the technology that powers the industry:

- **Emerging Machinery Manufacturing Base:** Companies like SP3 Technologies, Anjali LabTech, and Maitri Diamonds are developing and commercialising in-house MPCVD machines, reducing reliance on imports and building local technological capability.
- **Ancillary Equipment Production:** The city also manufactures laser cutting and sewing machine essential to both natural and lab-grown diamond processing, further cementing its position as a holistic diamond technology hub

(for illustrative purposes)





Source: India today, The Indian express

3.4.2 Mumbai and Jaipur's roles as accelerators in supply chain

Mumbai's role as a trading and sales hub

- **Emerging Role in LGD Trading:** Mumbai is establishing itself as a key hub for lab-grown diamond (LGD) trade, complementing Surat's manufacturing strength. With the Bharat Diamond Bourse (BDB) providing a major platform, the city's financial and global market ties support high-value trading and exports.

- **Distribution, Sales & Export Gateway:** Mumbai acts as a key distribution centre for LGDs produced in Surat and other regions, with companies like KIRA Diam Tech Private Limited routing ~35% of polished production through the city for domestic and international sales.

- **Skilled Talent Pool & Business Ecosystem:** The city offers a deep talent pool in trading, design, marketing, finance, and logistics, making it ideal for operations like branding, B2B sales, and exports.

- **Access to Global & Domestic Markets:** Mumbai's global business connectivity ensures easy access to international buyers, especially from the USA, UAE, Hong Kong, and Europe, while also offering proximity to India's high-end retail markets.

Jaipur: From gemstones to lab-grown diamonds

Jaipur is rapidly emerging as an important hub in India's LGD market, leveraging its rich legacy in gemstone craftsmanship. The city's rise is marked by developments like Gemmological Science International (GSI) setting up a new advanced laboratory in Jaipur in 2021, offering certification services for both natural and LGD. Jaipur's skilled artisans, traditionally known for cutting and polishing-coloured stones, are now transitioning to lab-grown diamonds, enhancing the city's value chain. Additionally, the growth of LGD startups in India, with Jaipur as one of the emerging centres, is boosting its prominence in the sector.

Odisha: Upcoming LGD Hub

Odisha may emerge as a major lab-grown diamond hub on account of the state government's approval of 3 large-scale manufacturing projects located in the Khordha district on 17 June 2026. These projects may bring a combined investment of INR ~10,000 crore and are expected to create 8,100 new employment opportunities. Building on this momentum, Odisha is preparing to unveil its dedicated Gems and Jewellery Policy 2026 expected to be finalised within two to three months (September–October 2026) alongside a planned Gems and Jewellery Park along the Khurda–Nayagarh road. This signals Odisha's entry into the global gemstone market and reflects growing confidence in the state for business expansion in gems and jewellery industry.

3.5. Government initiatives to boost the lab-grown diamond industry

Table 3-2: Timeline: Government Support for Lab-Grown Diamonds in India

Timeline	Government initiatives	
2019	Policy Recognition	• Lab-grown diamonds begin gaining policy-level attention as part of India's broader strategy to diversify exports and promote sustainable alternatives. • In 2019, the Indian government permitted 100% Foreign Direct Investment (FDI) in the lab-grown diamond sector under the automatic route.
2021	Customs Duty Rationalization	• The Union Budget 2021 reduced customs duty on cut and polished diamonds (including lab-grown) from 7.5% to 5%, making exports more competitive.
2022	PLI Scheme Discussions Start	• The Ministry of Commerce and Industry begins exploring inclusion of lab-grown diamonds under the Production Linked Incentive (PLI) scheme to boost manufacturing.
2023	Union Budget 2023-24	• Grant for IIT Madras to develop indigenous LGD technology. The establishment of an India Centre for Lab grown Diamond (In Cent-LGD) at IIT Madras is proposed with an estimated cost of ₹242.96 crores over 5 years. • Recognizes LGDs as a sector with high employment and export potential.
	Implementation Begins	• The Gem & Jewellery Export Promotion Council (GJEPC) and government collaborate to facilitate skill training, tech access, and export promotion for LGDs.
	Duty Relief on LGD Seeds	• Customs duty on LGD seeds was reduced from 5% to 0% (nil). This measure was aimed at reducing the cost of production for LGD manufacturers and making Indian LGD exports more globally competitive.
	Safe Harbour Rules	• The Union Budget 2024 proposed allowing Safe Harbor Rules for the sale of rough diamonds in Special Notified Zones (SNZs). Safe Harbour Rules aim to create a more favourable trading environment and reduce regulatory liability. This is aimed at making India a trading hub for rough LGDs, similar to Dubai and Belgium for natural diamonds.
2024	Export Growth Recognition	• LGD exports amount to approximately 10 million carats, driven by government incentives and increasing global demand. • Ministry of Commerce includes lab-grown diamonds in key export promotion strategies under the India-UAE CEPA and India-US trade dialogues. • Surat Diamond Bourse Development: The Surat Diamond Bourse, the world's largest diamond bourse, continues development, strengthening Surat's position as a hub for both natural and lab-grown diamonds.
2025	BIS Terminology Standard	• India's Bureau of Indian Standards (BIS) introduced new terminology rules under standard IS 19469:2025, which reserves the term "diamond" exclusively for natural stones, effective January 27, 2026

		• Lab-grown diamonds must now be disclosed using only the full terms "laboratory-grown diamond" or "laboratory-created diamond," prohibiting shortened forms and misleading descriptors like "eco-friendly" or "cultured." • Significant consumer protection and transparency measure, signalling policy maturity in how the government distinguishes and regulates LGDs vs. natural diamonds.
2026	Customs Continuity & US Trade Framework	• The nil customs duty exemption on LGD seeds, introduced in a prior budget, was extended and continued to support domestic manufacturing cost competitiveness through FY 2025–26. • From July 2026, Indian gem and jewellery exports pay the normal US MFN duty plus an additional 10% tariff. India did, however, secure placement in the lower 10% tariff band after adopting a prohibition on forced-labour imports, giving it a 2.5 percentage-point advantage over competing hubs such as China, Hong Kong, Thailand, Türkiye, the UAE, Israel and Vietnam, all of which face 12.5%.

Source: Wazir analysis

3.6. Favourable government policies and trade duties supporting the growth for LGD industry

The Indian government's decision, announced during the annual budget presentation on February 1, 2023, to completely remove the 5% import duty on lab-grown diamond seeds is a strategic move aimed at boosting the country's gem and jewellery industry. This policy change is primarily aimed at providing a major boost to the domestic lab-grown diamond manufacturing sector.

Key anticipated impacts include:

- **Reduced Production Costs**: By eliminating customs duties on the essential seeds used in the creation of rough synthetic diamonds, manufacturers are likely to experience a notable decrease in their production costs
- **Government Support:** This initiative underscores the government's supportive stance towards the gem and Jewellery industry, fostering a more favourable environment for business operations and exports.
- **Potential for Affordability:** The reduction in costs for manufacturers and potentially retailers may translate to more affordable lab-grown diamond Jewellery for consumers in both domestic and international markets

The Indian government, through the Central Consumer Protection Authority (CCPA), is actively developing a regulatory framework aimed at safeguarding consumer interests in the diamond industry. This initiative is a response to the evolving diamond market, particularly with the increasing presence of lab-grown diamonds (LGDs) alongside natural diamonds.

Key aspects of this developing regulatory framework include:

- **Clear Definitions and Mandatory Labelling:** The government is drafting guidelines to establish explicit definitions for natural diamonds and lab-grown diamonds. These guidelines will mandate clear and specific labelling and certification for all diamonds, requiring the disclosure of their origin (natural or lab-grown) and, for LGDs, the production method (e.g., CVD, HPHT). This builds upon existing standards, such as the Bureau of Indian Standards (BIS) Standard IS 15766:2007, which stipulates that the term "diamond" alone refers to natural diamonds, and synthetic diamonds must be clearly identified as such.

- **Collaborative Approach with Industry Stakeholders:** The CCPA has engaged in consultations with representatives from the diamond industry to discuss and determine appropriate terminology and regulations. This collaborative effort, involving bodies like the Gem & Jewellery Export Promotion Council (GJEPC), the Directorate General of Foreign Trade (DGFT), and the Union commerce ministry, reflects a

commitment to creating a balanced and effective regulatory environment that protects consumers while considering the interests of both the natural and lab-grown diamond sectors.

The Indian government, through the Ministry of Electronics and Information Technology (MeitY) and the India Semiconductor Mission (ISM), is actively supporting the development of a robust semiconductor ecosystem in the country. This initiative involves multi-year funding and partnerships with institutions like IIT Madras, aiming to foster indigenous research, innovation, and manufacturing capabilities in semiconductor technologies. The establishment of the Silicon Photonics Research Centre of Excellence at IIT Madras exemplifies this focused effort to achieve self-reliance in advanced semiconductor components over the next five years.

India holds a strong competitive edge in the lab-grown diamond (LGD) jewellery sector due to its well-established diamond processing ecosystem, established linkages with large buyers, development of infrastructure, cost-efficient manufacturing, and skilled workforce. Backed by government incentives and rising investments in LGD production, India is rapidly expanding its capacity and export capabilities. Its trusted position in global trade, focus on sustainability, and ability to deliver high-quality, customized jewellery at scale make it a preferred destination over other countries for LGD sourcing and manufacturing.

3.7. India's advantages and opportunities in lab grown diamonds

India holds several competitive advantages in the lab-grown diamond (LGD) export market, driven by its established diamond ecosystem, skilled labour force, and cost-efficient infrastructure. The country's position as a global hub for diamond cutting and polishing, handling over 90% of the world's natural diamonds has enabled a seamless extension and transition LGD manufacturing.

Key strengths include:

- **Established Infrastructure:** Major cities like Surat, Mumbai, and Jaipur offer robust facilities and a well-developed supply chain suited for LGD production and sale.
- **Skilled Workforce:** India's legacy in diamond processing ensures access to highly skilled artisans capable of delivering precision and quality in LGDs.
- **Cost Efficiency:** Competitive labour costs and operational efficiencies allow India to produce LGDs at globally attractive price points.
- **Policy Support:** Government initiatives, including reduced import duties and investment incentives, are actively promoting growth and exports in the LGD sector.
- **India-UAE Comprehensive Economic Partnership Agreement (CEPA):** Signed in February 2022 and in force since May 2022, CEPA gives duty-free access to all Indian gem and jewellery products in the UAE, including polished natural and lab-grown diamonds. UAE-bound exports have grown sharply across categories, with worked lab-grown diamonds up 58.16% in FY2024. A wider Gulf access is being built separately through the India–Oman CEPA (in force 1 June 2026, 5% duty eliminated) and the India–GCC FTA, whose negotiations were formally launched in February 2026.
- **India-Australia Economic Cooperation and Trade Agreement (ECTA):** Operational since December 2022, ECTA now provides 100 percent of Indian tariff lines duty-free access to the Australian market from 1 January 2026, benefiting gems and jewellery among other sectors. The ECTA has removed tariffs and driven nearly 36% export growth to Australia in the April–November 2025 period.
- **Europe (India-EFTA / India-EU):** India signed the Trade and Economic Partnership Agreement (TEPA) with the EFTA bloc (Switzerland, Norway, Iceland, Liechtenstein) in March 2024, while the FTA with EU was announced in January 2026 and is expected to be formally signed by December 2026 and implemented by March 2027.

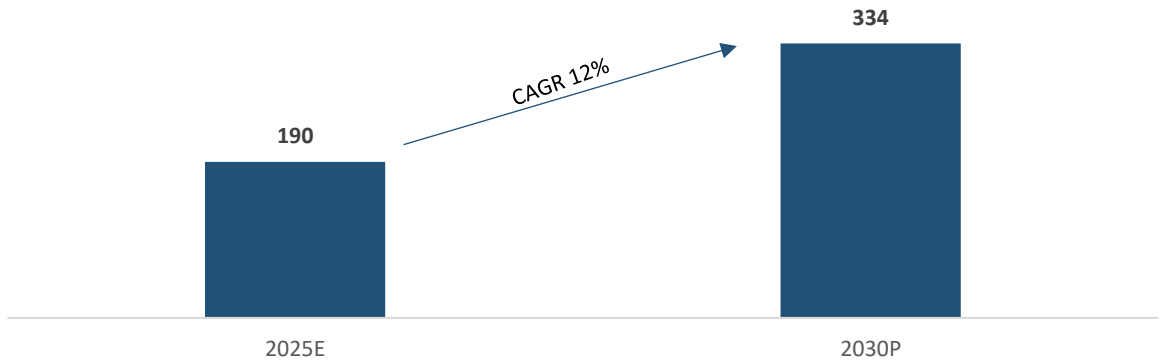
3.8. Lab grown diamonds semiconductors substrates

Lab-grown diamond substrates are thin diamond wafers used as base materials for growing single-crystal diamonds through the Chemical Vapor Deposition (CVD) and High-Pressure High Temperature (HPHT) method. They are essential in both gem-quality diamond production and advanced industrial applications. Their high thermal conductivity, exceptional hardness, wide bandgap, and broad optical transparency make them ideal for use in semiconductors, quantum computing, optics, lasers, and the gemstone industry.

Market size and growth of LGD semiconductor substrates

The lab grown diamonds substrates-based semiconductors market is estimated to be USD 190 million in CY 2025 and is projected to grow at a CAGR of 12%, reaching USD 334 million by CY 2030. The market is expected to be dominated by the Asia-Pacific region followed by North America, driven by increasing demand from the electronics and semiconductor industries in countries like China, Japan, and South Korea.

Figure 3-9: Market size of LGD semiconductor substrates (USD millions), In CY



Source: Wazir analysis
Note: E: Estimated; P: Projected data; Data represents calendar year

Lab-grown diamond substrate-based semiconductors are advanced electronic materials that utilize synthetic diamond wafers mainly produced via Microwave Plasma Chemical Vapor Deposition (MPCVD) as the foundational substrate. Due to diamond's exceptional thermal conductivity, wide bandgap, and high breakdown strength, these semiconductors offer significant performance advantages over conventional materials such as silicon (Si), silicon carbide (SiC), and gallium nitride (GaN). They hold strong potential for high-power, high-frequency, and high-reliability applications, particularly in next-generation power electronics, quantum technologies, and extreme-environment systems.

Key global players producing lab grown diamond substrate semiconductors

Table 3-3: Global key players, lab grown diamond substrates for semiconductors

Company name	Country	End user companies/organizations
Element Six Holdings Ltd. (De Beers Group)	U.K.	Bosch, DARPA, Amazon Web Services' Center
Diamond foundry Inc.	USA	Nvidia
Orbray Co. Ltd.	Japan	NA
New Diamond Technology LLC	USA (primary operations in Russia)	NA
WD Advanced Materials, LLC (WDAM)	USA	Pentagon
Xiamen Powerway Advanced Material Co. Ltd.	China	NA
Sumitomo Electric Industries Ltd.	Japan	NA

AKHAN Semiconductor Inc.	USA	NA
EDP Corporation	Japan	NA
Diamfab SA	France	NA
Akash Systems Inc.	India	Pixxle, NxtGen Datacenter and Cloud Technologies Pvt. Ltd.
Anjali LabTech Ltd.	India	Diamond Technology Group Sarl (Switzerland), Entegris INC (USA) Trinity Co. Ltd. (Japan), Aria Labs Inc (Canada), Zhuji Che Hui Import & Export Co Ltd (China)

Source: Wazir analysis, Secondary
Note: NA denotes absence of data for public access

Key differences between lab grown diamond semiconductor substrates and natural diamond semiconductor substrates

Table 3-4: Key differences, lab grown and natural diamond substrates

Parameters	MPCVD diamond substrates	HPHT diamond substrates	Natural diamond substrates
Purity and defect control	They generally exhibit exceptional purity, and their more uniform and controllable growth leads to fewer defects.	HPHT diamonds generally exhibit higher nitrogen impurities, as compared to a MPCVD grown diamond due to extreme conditions, however it has less defects than a natural diamond.	They are produced under variable environment, which causes variation and structural defects hence impacting their conductivity
Doping capabilities	Doping is more controllable during growth; nitrogen doping can be precisely managed, which is important for applications like detectors.	Doping is less controlled as compared to a MPCVD diamond; nitrogen uptake varies with crystal orientation; it is only possible to some extent.	Tweaks in its properties during its formation period is impossible, so they cannot be customised as per needs.
Size and scalability	It is possible to produce larger single crystals with high uniformity; growth rates are relatively fast, hence allowing scalability.	Growth is slower and size may be limited; however, HPHT can produce larger stones but with more imperfections.	They are restricted in size and changes to it cannot be made. This makes it less practical for semiconductor applications.
Cost and affordability	This method incurs lower production costs due to lower temperature and pressure requirements.	This method usually involves a higher production cost due to more extreme conditions than the MPCVD process.	They are rare in nature which makes it an expensive option for industrial applications.
Reproducibility and Homogeneity	These diamonds have high reproducibility with uniform crystal quality and fewer growth-related defects, resulting in homogeneous substrates.	These diamonds are less reproducible; growth sectors can cause colour and impurity variations, leading to heterogeneity.	They will always have inconsistencies which make it unfit for standardisation.
Surface preparation and usability	Surfaces of these diamonds have low defect density; it's substrate side and growth side are well-defined for further deposition.	Surfaces may have more impurities and inclusions; substrate quality depends on initial seed and growth conditions, sometimes requiring more preparation.	They require custom shaping which makes it expensive and time consuming to prep for further substrate usage.

Source: Wazir analysis

Growth drivers- Industrial applications

Diamond semiconductor substrates are gaining traction for their industrial use due to their properties and cost-effectiveness as compared to a natural diamond substrate. This makes it scalable for industrial use and positions them as a key enabler as compared to a natural diamond substrate semiconductor in the next-generation semiconductor applications, some of which are:

- **Power electronics:**
  Lab-grown diamond semiconductors outperform traditional materials like silicon, SiC, and GaN due to their superior thermal conductivity, wider band gap and higher breakdown strength, which enables greater efficiency, higher operating temperatures, and voltage handling. These advantages make them especially suited for demanding applications in aerospace, defence, and nuclear environments where conventional semiconductors fall short.

- **5G technology:**
  Lab-grown diamond semiconductors are increasingly considered for 5G applications due to their exceptional thermal and electronic properties. They can effectively dissipate heat generated by high-frequency components, enhancing device reliability and performance. Additionally, diamond's ultra-wide bandgap and high breakdown electric field enable devices to operate at higher voltages and frequencies, which are essential for the demands of 5G technology. These characteristics make diamond a superior alternative to traditional semiconductor materials like silicon, SiC, and GaN in high-power, high-frequency applications.

- **High frequency devices:**
  Lab-grown diamond substrate-based semiconductors exhibit higher carrier mobility and saturation velocity compared to traditional semiconductor materials. This allows faster charge transport and improved device performance at high frequencies. Electronics made using diamond substrate semiconductor hold promise of operating in high frequencies (sub-THz and THz) and hence are being explored for transistors designed to operate at terahertz frequencies, a range of electromagnetic radiation used in 6G communications and other emerging technologies.

Technological advancements:

Companies are leveraging their advanced technology platforms to enter new segments beyond semiconductors. This strategic move reduces over-dependence on a single market and enhances the commercial viability of LGD applications across industries.

- Anjali LabTech Limited has conducted R&D on CVD diamonds post-growth focuses on enhancing thermal management, tooling efficiency, and semiconductor performance through control of surface orientation, grain size, impurities, stresses, film thickness, and dopant properties, with additional applications in optics, quantum technologies, and radiation detection.
- Advent Diamond, a single crystal diamond device manufacturer based in The US has pioneered the growth of phosphorus-doped single-crystal diamond, enabling the creation of n-type semiconductors essential for electronic devices.
- Advancements in wafer bonding technologies have facilitated the integration of single-crystal diamond wafers with materials like silicon (Si), silicon carbide (SiC), and gallium nitride (GaN), enhancing thermal performance and efficiency in electronic devices.
- Orbray, which is one of the leading companies in Japan producing lab grown diamond substrates using the MPCVD method, has achieved mass production of high-quality, self-standing, large-diameter single-crystal diamond substrates, aiming to commercialize large (111) diamond substrates by 2026.

- Sumitomo Electric, which makes high power equipment in Japan has made advances in diamond semiconductor quality for high-power electronics and stable supply chains.
- Element Six is collaborating with Amazon Web Services' Center for Quantum Networking to develop scalable, high-purity synthetic diamonds for advancing quantum communication and networking technologies.
- Bosch Quantum Sensing and Element Six have jointly established a new company called Bosch-Element Six Quantum Wafers to manufacture high-quality synthetic diamond wafers for next-generation quantum sensors. These wafers provide the exceptional sensitivity and spatial resolution needed for compact quantum magnetometers and gyroscopes which are key pillars in future-tech sensing applications.
- Nvidia is collaborating with Diamond Foundry to use lab-grown diamond wafers as thermal substrates, enabling GPUs to run up to three times faster by vastly improving heat dissipation.
- Akash Systems specializes in diamond-based semiconductor technology, GaN-on-Diamond "Diamond Cooling" technology to create industrial cooling wafers. This combination boosts thermal conductivity, enabling high-power electronics like AI servers, satellite radios, and datacenter GPUs to run cooler, faster, and more reliably. Notable collaborations include Pixxel for satellite communications, and India's NxtGen Datacenter for AI compute workloads.

Table 3-5: Investments in R&D and technology advancements by Anjali LabTech Limited since 2021

R&D Area	Description	Application / impact
Diamond Wafer development	Developed mono- and polycrystalline diamond wafers for advanced material uses	Used in semiconductors, optics, lasers, gemstone industry and quantum computing
Green hydrogen from plasma methane	Established a process for hydrogen generation via plasma methane cracking	Provides hydrogen for fuel cells and produces solid carbon as an industrial by-product
LGD seed re-use	Developed technique allowing multiple seed re-uses in MPCVD reactors	Reduces input costs and enables more uniform diamond crystal growth
MPCVD component backward integration	Designed and manufactured MPCVD equipment components and control systems in-house	Enables quality control and minimises reliance on third-party suppliers
Growing of below one-carat Rough LGD	Achieved efficient manufacturing of polished LGDs below one carat	Addresses demand for small-stone segments in the jewellery market. Furthermore, this development will enable us to compete directly with HPHT diamonds and capture a wider segment of the LGD market.

Investment trends:

- Diamond Foundry secured an €81 million (about $85 million) EU grant to build a solar-powered lab-grown diamond factory in Spain, supporting a total €675 million investment and valued at $3.5 billion.
- Diamfab, a France based company has raised USD 8.7 million in a first funding round (2024) to advance diamond-based substrates for semiconductors for power electronics, electric vehicles, and quantum technologies. The startup specializes in doped synthetic diamond layers for high-performance applications.
- Element Six, a UK based lab grown diamond producer, invests in synthetic diamond substrates for defence and high-power electronics, partnering with DARPA's LADDIS program.

- The Indian government had allocated ₹242 crore in FY 2023-24 Union Budget to the India Centre for Lab Grown Diamond (InCent-LGD) at IIT Madras to advance research on lab-grown diamonds for semiconductor applications.
- India and the Netherlands are exploring collaborative research opportunities to harness lab-grown diamonds in semiconductor manufacturing, aiming to leverage traditional diamond trade linkages and technological expertise.

Key challenges in the lab grown diamond substrate semiconductors market

- **High Production Costs:**
  Lab grown diamond substrates, particularly those made through Chemical Vapor Deposition (CVD), are expensive to manufacture as compared to the raw material used to manufacture a traditional semiconductor. This is because of its high energy demands, specialized equipment used in manufacturing, and costly raw materials. The precision required for diamond growth further necessitates advanced facilities, driving up capital expenditures. As a result, production costs far exceed those of traditional semiconductors, limiting large-scale adoption in the semiconductor industry

- **Scalability Constraints:**
  Producing large, high-quality single-crystal diamond wafers is challenging. Techniques MPCVD often yield small substrates, typically under 1 inch in diameter, which are insufficient for mainstream semiconductor applications. Whereas materials like Si, SiC, and GaN can be grown into large, uniform wafers (e.g., 6–12 inches in diameter), facilitating high-volume manufacturing and integration. It also has low coefficient of thermal expansion (CTE) compared to other materials leads to thermal stresses during high-temperature CVD growth, causing warping, cracking, or delamination. Lab grown diamond substrates also result in high production costs as compared to a traditional semiconductor, which makes it harder to scale.

- **Material Quality Control and Technical Expertise:**
  Lab-grown diamond semiconductor substrates need more stringent material quality control than traditional semiconductors. The chemical vapor deposition (CVD) growth process for LGD substrates is highly sensitive to parameters such as gas composition, pressure, and temperature, leading to variations in crystallinity and defect density. Furthermore, achieving large, high-quality single-crystal diamond wafers is challenging, with current methods often yielding smaller substrates. These factors collectively demand advanced quality control measures and investment in gaining technical expertise to ensure the reliability and performance of LGD-based semiconductor devices. In contrast, traditional semiconductor materials like silicon (Si), silicon carbide (SiC), and gallium nitride (GaN) benefit from well-established manufacturing processes and infrastructure, allowing for more consistent material quality and easier scalability.

- **Competitive Landscape:**
  The lab grown diamond substrate semiconductor market remains in its early stages, with major players such as the U.S. and China leading in research and development. Established semiconductor hubs like Taiwan, South Korea, and the U.S. present strong competitive barriers due to their advanced R&D, infrastructure, and capital resources. The continued dominance of silicon-based semiconductors

further challenges new entrants, making it difficult to compete on both cost and innovation. However, this could be a potential market for India to tap into as it already is one of the key exporters of LGDs. Given that the quality of diamond required for a substrate is achieved domestically, India could steer this opportunity to be one of the key exporters of LGDs for its substrates use.

- **Costly Integration with Existing Technology:**
  Integrating lab grown diamond substrate semiconductors into existing production lines that use traditional semiconductors demand new manufacturing techniques and equipment, creating significant entry barriers. With substantial investments already committed to silicon-based technologies, industry players are reluctant to transition, despite diamond's superior thermal conductivity and efficiency. Shifting to lab grown diamond substrates would require major infrastructure overhauls, making widespread adoption costly and less appealing to established manufacturers.

Lab grown diamond substrate semiconductors show great promise, but widespread adoption hinges on overcoming challenges in cost, scalability, and competition through innovation and industry collaboration.

Chapter 4 - Indian lab-grown diamond market and manufacturing landscape overview

4.1. Overview of the lab-grown diamond market

The global diamond market is witnessing a steady upward trajectory, driven by rising consumer demand, evolving luxury trends, and increasing interest in sustainable alternatives. Both natural and lab-grown segments are expanding, supported by advancements in technology and shifting consumer preferences. India holds a pivotal position in the global diamond industry, supported by its deep-rooted heritage in gemstone craftsmanship and its dominance in diamond cutting and polishing. Surat, the traditional hub, processes over 90.0% of the world's natural diamonds and supplies finished jewellery to key markets such as the USA and UAE. This well-established infrastructure, along with skilled labour and strong trade experience, provides a solid foundation for the growth of lab-grown diamonds (LGDs) as a new segment within the Indian diamond economy. Lab-grown diamonds (LGDs) represent a significant transformation in the diamond industry, offering a sustainable, cost-effective, and socially responsible alternative to natural diamonds.

Lab-grown diamonds created using advanced technologies such as Microwave Plasma Chemical Vapour Deposition (MPCVD) and High-Pressure High Temperature (HPHT), mirror natural diamonds in physical, chemical, and optical characteristics but differ in origin, cost, and perception. While LGDs are already regarded as a more environmentally friendly alternative to mined diamonds, using solar energy in the integrated value chain process will further enhance this advantage.

The global LGD market is expanding rapidly, with production expected to reach 37-38 million carats in FY 2026 which is about 22% of the total diamond supply. India is poised to contribute 17-19 million carats, representing 45–50% of global LGD output. It has emerged as a global leader in MPCVD-based production, driven by approximately 13,700 operational machines and a competitive cost structure. LGDs are gaining traction in jewellery for their affordability and sustainability, while their industrial applications in electronics and semiconductors offer promising future growth. As global demand rises, LGDs represent a strategic opportunity for India to sustain its leadership in both traditional and next-generation diamond segments.

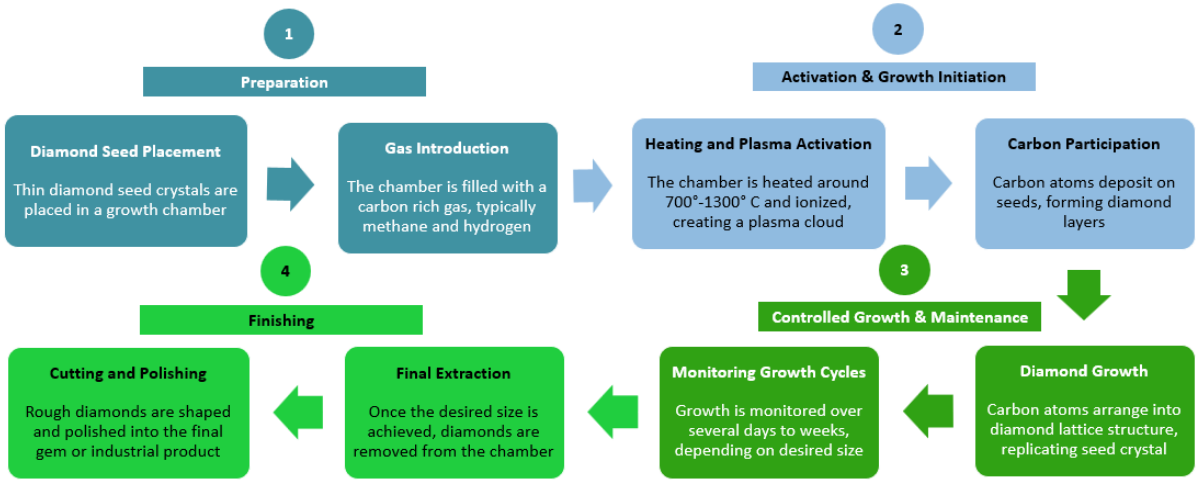
4.2. Lab-Grown Diamond production methods

Lab-grown diamonds are manufactured through advanced technological processes designed to replicate the natural diamond formation environment.
The two major technologies in LGD production are:

- **MPCVD**: Generally, enables production of larger (>1 carat) gem-quality diamonds
- **HPHT**: Typically yields smaller (<1 carat) gem-grade diamonds.

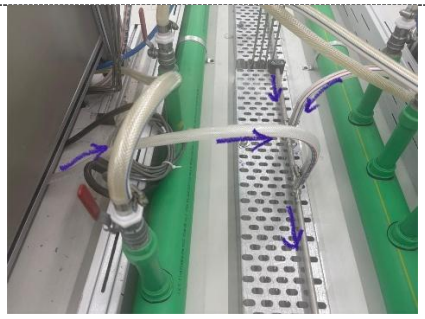
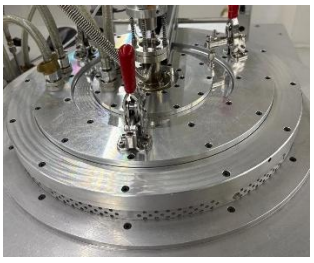
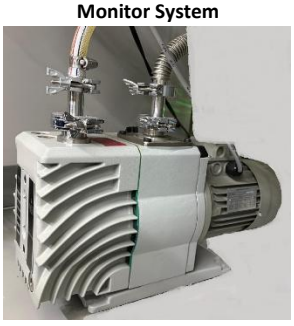
Microwave Plasma Chemical Vapor Deposition (MPCVD)
MPCVD involves the deposition of carbon atoms onto a diamond seed within a vacuum chamber using ionized gases such as methane and hydrogen. Operating at lower pressures and moderate temperatures (700°C to 1,300°C), MPCVD technology enables the production of larger, high-clarity diamonds. It is generally more energy-efficient and cost-effective compared to HPHT. India, particularly Surat, has emerged as a major hub for MPCVD-based lab-grown diamond manufacturing.

Figure 4-1: Lab grown diamond process - MPCVD



Source: Wazir analysis

Table 4-1: Representative Images of MPCVD Machine Components

		
Control System	**Exhaust System**	**Gas Delivery System**
		
Heating System	**Monitor System**	**Reaction Chamber**
		
Substrate Handling	**Vacuum System**	

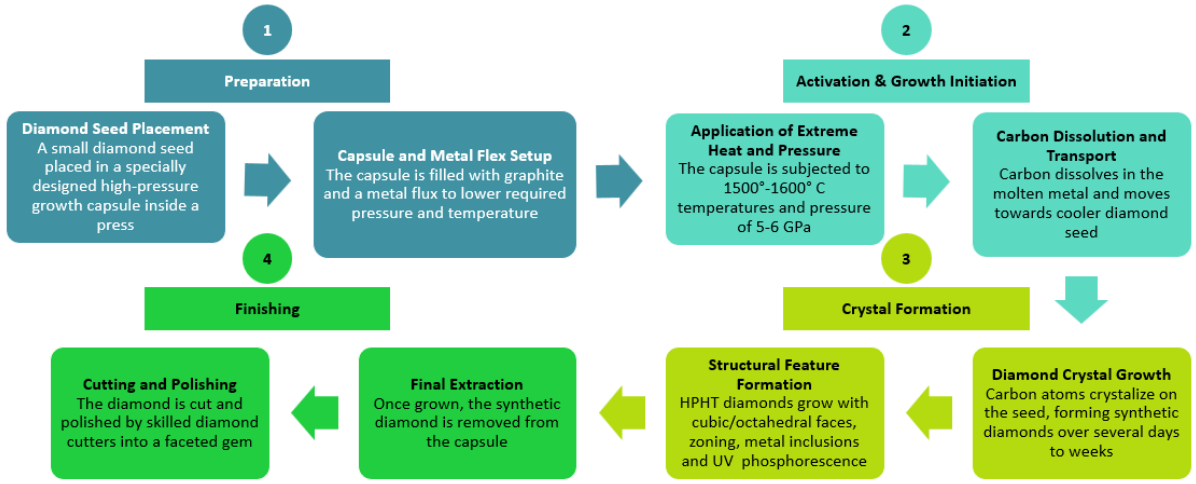
Source: Anjali LabTech Limited

Note: Pictures of the components in no specific order

High Pressure High Temperature (HPHT):

Developed in the 1950s, the HPHT process replicates natural diamond formation by subjecting carbon to extreme conditions, which are pressures of 5–6 Gigapascals and temperatures between 1,500°C and 1,600°C typically around a diamond seed. While widely used to enhance or modify diamond colour, HPHT technology is primarily employed to produce smaller diamonds, typically below 1 carat. This is not by market preference but due to inherent technical limitations that restrict growth size. The process also involves high energy consumption and significant capital investment, with Chinese manufacturers dominating global HPHT production.

Figure 4-2: Lab grown diamond process - HPHT



Source: Wazir analysis

4.3. Evolution of MPCVD and HPHT technology

	Microwave Plasma Chemical	High Pressure High Temperature
1950 - 1970	**Early Research Phase**: Initial experiments with CVD diamond growth begin in the US and Soviet Union, but results are limited to non-gem-quality diamonds.	**Breakthrough**: In 1954, General Electric achieved the first commercially successful diamond synthesis using the high-pressure, high-temperature method, and the diamonds created using this process were put to industrial use. It was the first reproducible diamond synthesis process.
1970 - 1980	**Birth of MPCVD in Japan:** NIRIM (National Institute for Research in Inorganic Materials) developed microwave plasma CVD for polycrystalline diamond films for industrial use.	**Early Gem-Quality Production**: GE develops gem-quality lab-grown diamonds, although they were typically yellowish due to nitrogen and had notable inclusions and fluorescence under UV light.
1980 - 2010	**Refinement Phase**: Improvements in plasma stabilization and machine design enable growth of better-quality single-crystal diamonds. **Entry into Gem Market:** High-quality, colourless gem-grade CVD diamonds begin entering the commercial jewellery market.	**Purity Improvements:** Technological refinements enhance diamond purity, yet nitrogen contamination remains a challenge. **Colour & Clarity Enhancement:** HPHT begins to be used in post-treatment of natural and CVD diamonds to improve colour and clarity.
2010 - 2020	**Indian firms begin reverse engineering machines:** Indian entrepreneurs pioneered R&D to build advanced MPCVD machines for gem-quality lab-grown diamonds, enabling larger and purer stones, precise colour control through gas composition, and improved efficiency via computer and AI automation. **Regulatory Milestone:** The US FTC recognizes lab-grown diamonds as “real diamonds,” accelerating market acceptance.	**Rise of China:** China becomes the global leader in HPHT machine production and dominates the market for small-size (<1 carat) synthetic diamonds.
Current Scenario	**Rise of India:** India becomes a hub for machine development, introducing modular, scalable MPCVD machines. **Diversified Application:** Research and development are focused on expanding applications beyond jewellery, with increasing interest in electronics, semiconductors, and advanced materials.	**Complementary Role:** HPHT is primarily used for industrial purpose and often in conjunction with CVD for post-processing to enhance gem quality.

4.4. Different types of CVD technology

There are various types of CVD technology, differentiated based on energy source, pressure conditions, plasma utilization, and temperature control mechanisms. These technologies are designed to meet specific requirements related to the material being deposited, the deposition environment, and the intended application.

Popular types of CVD machines include:

- Microwave Plasma CVD (MPCVD)
- Hot Filament CVD (HFCVD)
- Radio Frequency Plasma CVD (RF Plasma CVD)
- Capacitive Coupled Plasma CVD (CCP-PECVD)
- Direct Current Arc CVD (DC Arc CVD)

Among these, **Microwave Plasma CVD** is the most widely used to produce lab-grown diamonds for jewellery applications, due to its ability to produce high-purity, gem-quality diamonds with excellent control on growth parameters.

4.5. Microwave Plasma CVD machine (MPCVD)

An MPCVD machine is a highly complex system, assembled from ~300-350 precision-engineered components forming critical units such as the reaction chamber, gas delivery system, heating system, cooling system, control interface etc. In India, key players assemble their machines in-house, sourcing components from both global and domestic suppliers. Some companies use their machines exclusively for production to ensure efficiency and quality control, while others commercialize the machines.

Table 4-2: Key components of MPCVD machine

Component	Function	Key features
Reaction Chamber	Core component where deposition occurs	High-temperature resistance, controlled atmosphere for uniform deposition
Gas Delivery System	Supplies precursor and reactive gases	Mass flow controllers, precise gas flow regulation
Heating System	Provides thermal energy for vaporization and reactions	Uniform temperature distribution, resistive heaters or induction coils
Vacuum System	Maintains low-pressure environment	Vacuum pumps, pressure gauges, contaminant removal
Exhaust System	Removes by-products and unreacted gases	Scrubbers, filters, exhaust pumps for safety and purity
Control & Monitoring	Automates and optimizes the deposition process	Sensors, software for real-time parameter monitoring
Substrate Handling	Loads, positions, and unloads substrates	Robotic arms, trays, and holders for minimal contamination
End-User Configurations	Tailored for specific applications	Optimized for high-throughput or precision deposition based on industry needs

Source: Wazir analysis, Primary research

MPCVD enables greater control over diamond growth, producing higher purity stones with minimal metal contamination. MPCVD diamonds are typically colourless or near colourless, making them ideal for premium jewellery and advanced applications in electronics and optics. The process is also more energy-efficient and customizable, allowing for engineered properties. In contrast, HPHT involves extreme conditions, often yields lower carat and lower-purity stones with metallic inclusions.

Table 4-3: Comparison of LGD production technologies: MPCVD and HPHT

Parameter	MPCVD	HPHT
Process Description	Grows diamond from carbon plasma in a vacuum chamber	Uses extreme pressure and temperature to replicate natural diamond formation
Raw Material	Diamond seed, methane (CH_4), hydrogen (H_2)	Diamond seed, graphite, metal catalyst
Temperature Range	900–1,200°C	1,300–1,600°C
Technological Advancement	More advanced; newer generation with scope for precision and innovation	Relatively older and matured technology
Automation Level	High; integration with digital control systems and further scope for improvement	Limited; more manual intervention required
Pressure Range	Low pressure (~20-300 Torr)	Very High (37.5 million to 45 million Torr)
Maintenance Requirements	Moderate; fewer mechanical components	High; frequent maintenance due to wear and tear
Equipment Size	Machines are lighter and portable and can be stacked or networked	Large and heavy machinery need high-capacity power and reinforced floors
Machine Downtime	Lower; more stable operation	Higher; due to intensive mechanical stress
Equipment footprint	High	Low
Diamond Size Output	Capable of producing all sizes of LGDs however largely used for larger gem-quality LGD due to cost efficiency	Typically, <1 carat (gem-grade)
Colour Clarity	High clarity	Often yellowish due to nitrogen; colour-treated post-process
Energy consumption	Low consumption	Higher consumption
Suitability	Gem-quality diamonds	Industrial diamonds, smaller gemstones
Use in Colour Enhancement	Not applicable	Used for treating colour in mined/ CVD diamonds
Return on Capital Investment	Better ROI with growing demand for gem-grade diamonds	Lower ROI
Payback Period	Relatively faster payback	Longer payback period due to operational costs and lower margins
Price (INR Mn)[1]	3 – 10[#]	15 – 25[*]

Source: Wazir analysis

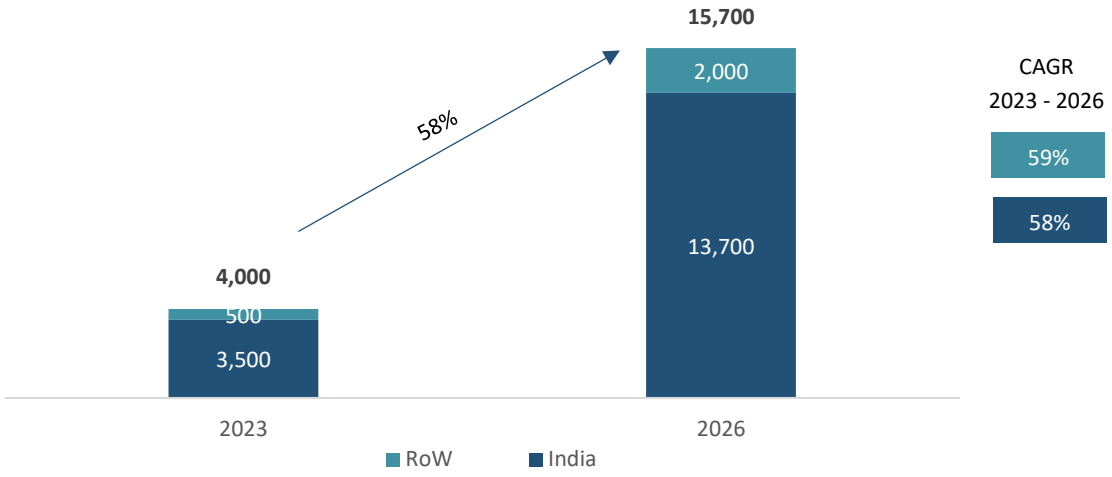
Note: 1- Price as on 24 April 2025; *44-ton HPHT Cubic Press Synthetic Diamond Making Machine for lab grown diamond, made by Henan Huanghe Whirlwind International; # 6kW MPCVD Diamond Growing Machine by multiple sellers

4.6. Global MPCVD landscape

The global lab-grown diamond (LGD) industry has witnessed rapid expansion, driven by rising demand across the gems and jewellery segment and advancements in production technologies, particularly Chemical Vapor Deposition (CVD) methods such as Microwave Plasma CVD (MPCVD). Leading global CVD machine manufacturers like Diamond Foundry (USA), Lusix (Israel), and Ningbo Crysdiam Technology (China) are utilising these technologies to scale operations and meet growing market needs. India has emerged as a leading hub for LGD production, supported by a sharp increase in the deployment of MPCVD machines. Between FY 2023 and

2026, the global installed base of MPCVD machines grew at a CAGR of 58% (from 4,000 units to 15,700 units) with India contributing to 87% of the market in FY 2026.

Figure 4-3: No. of installed lab grown MPCVD diamond reactors in India and RoW, in FY

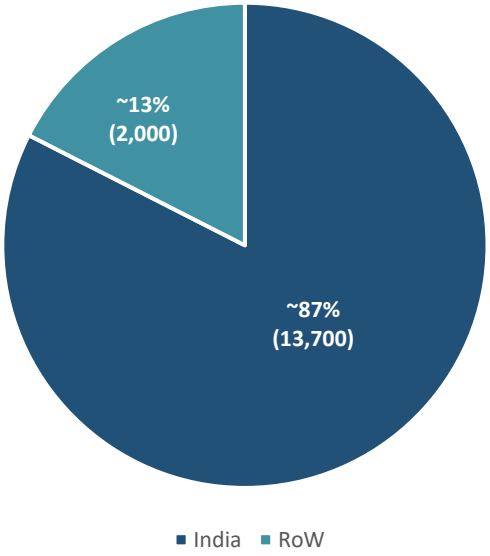


Source: Wazir analysis
Note: Data represents financial year

Anjali LabTech is one of the leading global manufacturers of MPCVD machines used for growing lab-grown diamonds (LGDs), with a cumulative supply of 5,635 machines which translates to global market share of 36% as of March 31, 2026, in volume terms. As of March 31, 2026, Anjali LabTech had manufactured 5,635 MPCVD machines and sold 4,875 MPCVD machines to third parties and balance 760 MPCVD machines were installed in-house for growing of LGDs compared to 1,283 MPCVD machines manufactured and sold to third parties as of March 31, 2023. This reflects a significantly higher growth in the Anjali's installed base over the period, substantially outpacing the growth in the global installed base of MPCVD machines.

Financial Year	2022	2023	2024	2025	2026
External Sale - No. of Machines	75	1,208	994	1,152	1,446
Captive Use - No. of Machines	NA	NA	NA	288	472
Total No. of Machines	75	1,208	994	1,440	1,918
Cumulative No. of Machines	75	1,283	2,277	3,717	5,635

Figure 4-4: MPCVD machine manufacturing share %, In FY 2026



Source: Wazir analysis

Globally, the lab-grown diamond (LGD) industry has largely concentrated on producing industrial-grade diamonds for electronics and tooling applications. However, limited players have the capability and technology to manufacture high-quality gem-grade LGDs, which require superior clarity, colour, and crystal structure. This limited supply presents a strong opportunity in the growing market for LGD gemstones.

Table 4-4: Key International manufacturers for MPCVD machinery

Company	Year of establishment	Headquarters	Specialization
Element Six -Subsidiary of De Beers Group	1946	UK	Synthetic diamonds and other super hard materials for industrial and tech applications
Seki Diamond Systems	1948	Japan	CVD diamond machines for research and gemstone production
Plassys Bestek	1987	France	CVD diamond machines, MEB-Ebeam evaporation, MP-sputtering, ME-thermal evaporation
IPLAS Innovative Plasma Systems	1995	Germany	Plasma systems for research and industrial processing
Shanghai Zhengshi Technology	2002	China	MPCVD diamond machines, rough and loose lab-grown diamonds
Henan LiLiang	2010	China	Lab-grown diamonds using advanced CVD technology
Diamond Foundry	2012	USA	Lab-grown diamonds for jewellery and semiconductors; single-crystal diamond wafers
Ningbo Crysdiam Technology	2013	China	CVD lab-grown diamonds for jewellery, optics, semiconductors, quantum tech, and precision tools
Lusix Limited	2016	Israel	Lab-grown diamonds using advanced CVD technology
Adamas One Corp.	2018	USA	CVD diamond machines, rough and loose lab-grown diamonds

Source: Secondary research

Table 4-5: Product offerings of key international manufacturers of MPCVD machines

Company	MPCVD machine manufacturing	Diamond Wafer	Rough LGD	Polished LGD	Retail presence
Element Six -Subsidiary of De Beers Group	✓	✓	✓	×	×
Seki Diamond Systems	✓	✓	×	×	×
Plassys Bestek	✓	×	×	×	×
IPLAS Innovative Plasma Systems	✓	×	×	×	×
Shanghai Zhengshi Technology	✓	✓	✓	✓	×
Diamond Foundry	✓	✓	✓	×	✓
Ningbo Crysdiam Technology	✓	✓	✓	×	×
Lusix Limited	✓	✓	✓	×	×
Adamas One Corp.	✓	✓	✓	✓	✓

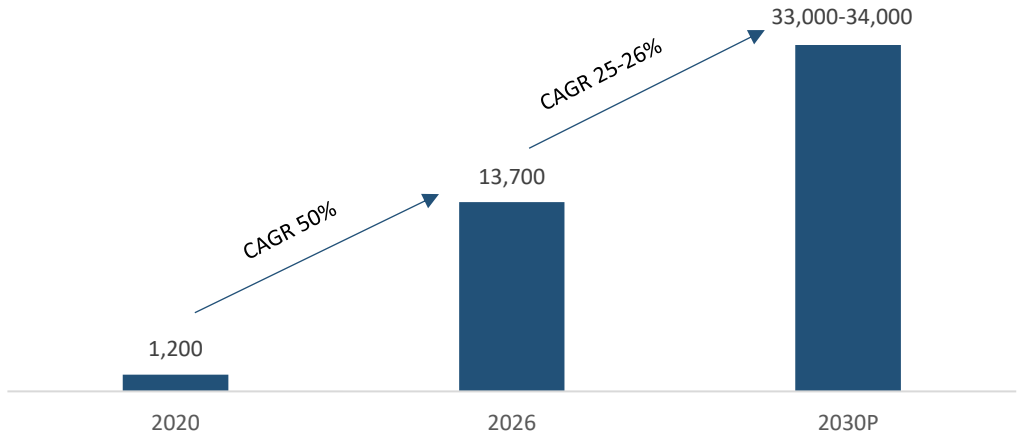
Source: Wazir analysis

Note: ✓ indicate the company's involvement in the product portfolio; × indicate the company's absence in the product portfolio

4.7. India MPCVD landscape

The number of operational MPCVD machines in India has grown from approximately 1,200 units in FY 2020 to an estimated 13,700 units in FY 2026, representing a CAGR of 50%. It is projected to reach ~33,000-34,000 units by FY 2030, growing at a CAGR of 25-26% between FY 2026 and FY 2030. This rapid scale-up highlights India's increasing strategic importance in the global lab-grown diamond value chain. India is uniquely positioned to lead in the production of MPCVD machinery, on account of its engineering talent pool, cost-efficient manufacturing ecosystem, and established presence in the global natural diamond value chain.

Figure 4-5: Number of MPCVD machines in India, In FY



Source: Wazir analysis

Note: P: Projected data; Data represents financial year

The surge in machine deployment has been driven by a mix of structural and macroeconomic factors. Rising global acceptance of lab-grown diamonds, particularly in the United States, has fuelled demand. In India, traditional diamond hubs like Surat and Mumbai are seeing established players move upstream into lab-grown

diamond manufacturing, driving greater demand for MPCVD machines. Additionally, Lab-grown diamonds (LGD) are not only gaining traction in the fashion sector but are also being increasingly utilized in industrial applications like electronics, optics, and cutting tools. This expanding use is driving significant demand for MPCVD machines across both markets.

The Indian MPCVD machine manufacturing industry is currently dominated by 6kW MPCVD machines, which account for ~90% of the installed machines. These machines typically produce around 120–160 carats of rough LGDs per machine per month. In contrast, 10kW MPCVD machines represent only about 10% of the installed base but offer higher productivity, with each machine yielding 180–200 carats rough LGDs per machine per month. The limited adoption of 10KW MPCVD machines is likely due to their higher capital costs and stringent operational requirements. These requirements include enhanced utility infrastructure to handle increased power loads, advanced cooling systems capable of managing higher thermal outputs, precise control systems for maintaining stable plasma conditions, and high safety measures to mitigate risks associated with high-power operations. Such complexities, significant investment, and technical expertise can be barriers for widespread adoption despite the potential for increased productivity. Manufacturing MPCVD machines requires specialised expertise in plasma physics, materials science, and precision engineering. The design of critical components such as reactor chambers, microwave generators, and gas flow systems demands significant R&D and capital investment. These technical and financial barriers limit market entry, resulting in a small number of capable players globally.

Table 4-6: MPCVD installed machines by type

MPCVD Machine	Installed machines in India (%)	LGD rough output (Carats/Machine/Month)	Average price (INR million)
6KW Machine	~90%	120-160 Carat	3 – 10#
10KW Machine	~10%	180-200 Carat	7 – 12*

Source: Wazir analysis

Note: # 6KW MPCVD LGD growing machine by multiple sellers; * 10KW MPCVD LGD growing machine by multiple sellers

Table 4-7: Key Indian manufacturers for MPCVD machines

Company	Year of establishment	Headquarters	Specialization	Captive utilization	Supplier to other players
Anjali LabTech Limited	2021	Surat, Gujarat	MPCVD machines, lab-grown diamonds, LGD studded jewellery	✓	✓
Bhathwari Technologies Private Limited	2021	Surat, Gujarat	MPCVD machines, lab-grown diamonds	✓	✓
Jaipur Gems	2016	Jaipur, Rajasthan	MPCVD machines	×	✓
Bhanderi Lab Grown Diamonds*	2013	Surat, Gujarat	MPCVD machines, lab-grown diamonds	✓	✓
Maitri Lab-Grown Diamond Private Limited	2012	Surat, Gujarat	MPCVD machines, lab-grown diamonds	✓	✓
SP3 Technologies LLP	2016	Surat, Gujarat	MPCVD machines, lab-grown diamonds	✓	×

Asian Lab Grown Diamonds LLP	2017	Surat, Gujarat	MPCVD machines, lab-grown diamonds	✓	✓
DNK Excel System LLP	2018	Surat, Gujarat	MPCVD machines	×	✓
Sahajanand Laser Technology Limited	1992	Gandhinagar, Gujarat	MPCVD machines, Industrial laser machine	×	✓

Source: Primary and secondary research

Note: ✓ indicate the company's involvement in the segment; × indicate the company's absence in the product portfolio; NA - Information not available; *Bhanderi Lab Grown Diamonds includes Bhanderi Lab Grown Diamond Private Limited, and its LLP entity, Bhanderi Lab-Grown Diamond LLP

Table 4-8: Key Indian manufacturers for MPCVD machines (INR million), FY 2025

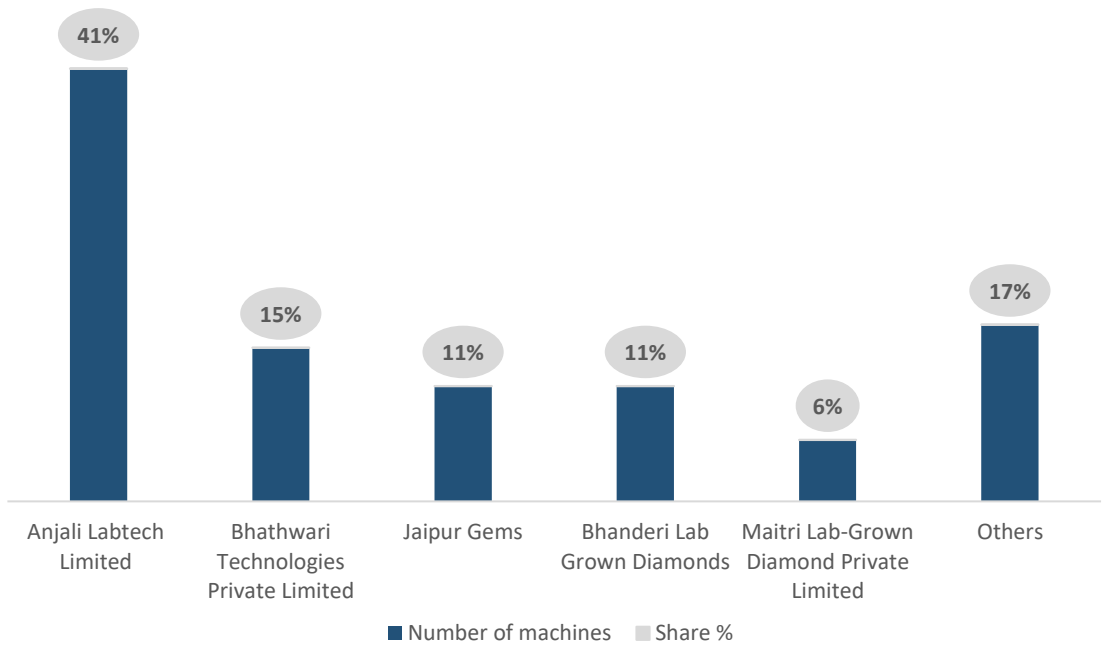
Company	Revenue*	EBIDTA	EBITDA %	PAT	PAT%
Anjali LabTech Limited[1]	6,155	2,642	42.9%	2,009	32.2%
Bhanderi Lab Grown Diamonds	2,531	127	5%	-7	-0.3%
Bhathwari Technologies Private Limited	461	181	39.3%	-54	-11.4%
Sahajanand Laser Technology Limited	1,782	112	6.3%	-12	-0.7%
SP3 Technologies LLP	1,071	289	26.9%	60	5.6%
Maitri Lab-Grown Diamond Private Limited	1,663	534	32.2%	253	15.1%
Asian Lab Grown Diamonds LLP	1,032	147	14.22%	13	1.2%
DNK Excel System LLP	38	1	2.6%	0.3	0.7%
Jaipur Gems	NA	NA	40.5%	NA	31.1%

Source: Company annual filings, Primary and secondary research

Note: NA - Information not available; *Revenues included revenue from operations and exclude other income; 1- Numbers for FY26;

India has emerged as a leading hub for LGD production, supported by a sharp increase in the deployment of MPCVD machines. India accounts for ~87% of global MPCVD machine manufacturing, with ~40–50 domestic manufacturers operating in the domestic ecosystem. While some firms manufacture MPCVD machine for captive use, a few still rely on imports. The top 5 manufacturers collectively dominate around 80% of the domestic market. India's growing capabilities in equipment manufacturing makes it a critical player in meeting the rising global demand for ethical, sustainable, and cost-effective lab-grown diamonds. Anjali LabTech is the largest manufacturer of MPCVD machinery for growing lab-grown diamonds (LGDs) in India, holding a market share of approximately 41% as of March 31, 2026, in volume terms.

Figure 4-6: Key Indian MPCVD machine manufacture with nos. of machines manufactured and share %, In FY 2025



Source: Wazir analysis; Primary and secondary research

Note: Others include Creative Diam, Asian Lab Grown Diamonds, etc.; Data represents financial year

Table 4-9: Key players captive vs domestic vs global sales, as on FY 2026

Company	Total machines	Captive usage	Domestic sales	International Sales
Anjali LabTech Limited	5,635	760	96%	4%
Bhathwari Technologies Private Limited	1,300 – 1,500	800 – 900	100%	0%
Jaipur Gems	1,300-1,500	NA	NA	NA
Bhanderi Lab Grown Diamonds	1,800-2,000	NA	100%	0%
Maitri Lab-Grown Diamond Private Limited	700 – 800	700 – 800	NA	NA

Source: Wazir analysis, Company annual filings, Primary and secondary research

Note: NA – Information not available; Companies mentioned above are manufacturing machines for both captive usage and selling purpose

Table 4-10: Product offerings of key Indian manufacturers of MPCVD machines

Company	MPCVD machine manufacturing	Diamond Wafer	Rough LGD	Polished LGD	B2B LGD Studded Jewellery	B2C Retail LGD Studded Jewellery
Anjali LabTech Limted	✓	✓	✓	✓	✓	✓
Bhathwari Technologies Private Limited	✓	✓	✓	✓	✓	✓
Jaipur Gems	✓	×	×	×	×	×
Bhanderi Lab Grown Diamonds	✓	×	✓	✓	✓	×
Maitri Lab-Grown Diamond Private Limited	✓	✓	✓	✓	✓	×
SP3 Technologies LLP	✓	✓	✓	✓	✓	×
Asian Lab Grown Diamonds LLP	✓	✓	×	✓	×	×

Source: Wazir analysis; Primary and secondary research

Note: ✓ indicate the company's involvement in the product portfolio; *Retail includes LGD studded jewellery, × indicate the company's absence in the product portfolio;

Anjali LabTech is the first and leading vertically integrated Indian player in the lab-grown diamond ("**LGD**") industry, with a presence across the entire LGD value chain. Its capabilities include the designing, manufacturing and supplying microwave plasma chemical vapour deposition ("**MPCVD**") machines used for growing LGD, as well as in-house growing of rough LGDs, processing and sale of polished LGDs, and the sale of LGD studded jewellery.

MPCVD technology growth opportunities in India

The MPCVD machine market is growing rapidly, driven by technological advancements that improve efficiency, yield, and reliability, reducing the cost per carat and enhancing commercial viability. Localized manufacturing, economies of scale, and design improvements have lowered both capital and operational expenditures as the industry shifts toward more energy-efficient and automated systems.

India has become a global leader in MPCVD technology, as shown by its achievement in producing the largest lab-grown diamonds in the world. For example, Ethereal Green Diamond LLP in collaboration with RockRush made" Celebration of India" and "Infinity Ring"; 75.33 carat square emerald cut lab grown diamond, the world's largest to date along with a unique 30.69 carat ring-shaped diamond, which was said to be crafted from CVD method. Building on its traditional strength in diamond cutting and polishing, India is now advancing in R&D and

manufacturing of high-purity, defect-free diamonds. Companies like Anjali LabTech, Maitri Diamonds, and SP3 Technologies are playing key roles, operating at strong PAT (profit after tax) margins with Anjali LabTech leading at 32.2% , reflecting robust demand and efficiency.

Recognizing the market potential, selected manufacturers such as Anjali LabTech have developed the ability to grow smaller-sized diamonds (<1 carat) using MPCVD technology. This emerging capability could enable MPCVD players to compete directly with HPHT diamonds and capture a wider segment of the lab-grown diamond market.

Growth drivers for MPCVD technology

- **Rising lab-grown diamond exports fuel MPCVD technology investments:** India's expanding lab-grown diamond exports, driven by growing global demand, are strengthening its position in the international value chain. To meet this demand and enhance production capacity, manufacturers are accelerating investments in high-efficiency MPCVD machines. This rise in exports is creating a strong need for advanced and scalable machine technology, which helps lab grown diamond producers stay competitive in the international market.
- **India's strategic advantage in gem-focused MPCVD machinery**: The global MPCVD market has historically focused on industrial-grade diamond applications, leaving a gap in equipment tailored for gem-quality production. This presents a high-value opportunity for Indian MPCVD machine manufacturers to innovate and specialize in machines optimized for gem-grade diamond growth. By innovating around gem-grade specifications, Indian OEMs can establish a differentiated position in a fast-growing niche strengthening domestic capabilities and expanding their footprint in global markets. This shift not only bridges a critical equipment shortfall but also reinforces India's strategic role in the evolving lab-grown diamond ecosystem.
- **Growing demand of lab grown diamond in India:** With diamond ownership still limited to a small percentage of Indians, the market presents a significant growth opportunity. Rising purchasing power among youth and aspirational consumers makes Lab-Grown Diamonds (LGDs) an affordable luxury. As demand for value-driven alternatives to natural diamonds increases, Indian manufacturers are poised to invest in MPCVD machine to scale production and capitalize on the growing domestic market.
- **Established natural diamond players entering the lab grown diamond market:** Leading natural diamond players like Hari Krishan Exports, Kiran Gems, Shree Ramkrishna Exports are diversifying into the lab-grown diamond segment, recognizing its strong growth potential. This shift is expected to boost investment in LGD manufacturing in India.
- **India's strategic advantage in the lab grown diamond value chain:** Historically, India was only known for its expertise in cutting and polishing natural diamonds, India now has a unique advantage with its growing presence in MPCVD machine manufacturing. This enables Indian companies to be part of the entire lab-grown diamond value chain, from production to finishing. As a result, India is well-positioned to dominate the global lab-grown diamond market, leveraging its established manufacturing capabilities to capture significant market share.
- **Growing demand for MPCVD diamond semiconductor substrates in industrial applications:** MPCVD-produced diamond semiconductor substrates are gaining traction in industrial applications, offering superior properties and cost advantages over natural diamond substrates. Their scalability makes them a key enabler for next-generation technologies in electronics, optics, and thermal management, positioning them as a competitive alternative. This shift is driving increased demand for MPCVD machines both domestically and globally.

4.8. Technological advancements in MPCVD technology and production efficiency

Strengthening domestic capabilities: The success of the CVD process relies on both the machinery and proprietary "LGD growing process technology" that determine diamond quality, based on gas mixtures and other parameters. Most of the LGD companies in Surat, such as Anjali LabTech, Bhathwari Technologies, Maitri Diamonds and Bhanderi Lab Grown Diamonds develop their own recipes, and machine designs to improve efficiency. In 2023, the Indian government has granted Rs. 242.96 crores to IIT-Madras over five years to establish an India Centre for Lab grown Diamond. The aim of this project is to provide technical assistance to the industries, and entrepreneurs in the country, to promote indigenous manufacturing of both CVD and HPHT systems. The CVD technology offers significant potential for diversification into multiple product categories beyond gem-grade diamonds. For instance, companies such as Anjali are actively exploring the application of MPCVD systems in the production of green hydrogen, demonstrating the broader industrial relevance and scalability of the technology.

Operational advancements in Indian MPCVD manufacturing: Indian manufacturers are actively investing in research and development to optimize growth recipes, with iterative refinements made every few months to enhance diamond yield and machine productivity. In parallel, there is a growing adoption of robotic automation across production lines, aimed at improving throughput, reducing manual intervention, and enhancing overall operational efficiency. Anjali LabTech is the only company among the selected Indian peers to deploy robotic automation in the diamond polishing process, offering a distinct technological edge over its competitors. Anjali LabTech has also successfully developed the capability to grow below 1 carat lab-grown diamonds (LGDs) using the MPCVD system. Unlike traditional methods, the MPCVD process developed by Anjali does not require the removal of LGDs during the growth cycle. This advancement enables the company to produce below 1 carat LGDs in a cost-competitive manner compared to the HPHT process, enhancing operational efficiency and price competitiveness. Ongoing R&D initiatives in the market are focused on expanding the application of CVD technology beyond gemstones to high-growth sectors such as semiconductors, green hydrogen production, and advanced materials, highlighting the technology's broader industrial relevance and long-term scalability.

4.9. Key challenges in the MPCVD machinery market

- **High capital and R&D investment:** High investment is required in machinery set-up, research, precision engineering, and prototyping. Smaller entrants often lack the resources to compete with established players.
- **Technical complexity and process control:** Precise management of plasma conditions, gas composition, temperature, and pressure are essential. Achieving stable, gem-grade quality output consistently remains technically challenging.
- **Quality consistency and yield management:** Variability in yield and crystal quality affects profitability. Producing uniform diamonds in terms of size, clarity, and color requires advanced process calibration.
- **Pricing pressure and cost competitiveness:** Intense competition from cost-efficient Indian and Chinese manufacturers limits pricing flexibility and market entry for global players.
- **Maintenance and after-sales service gaps:** MPCVD machine require skilled maintenance and prompt technical support. Inadequate after-sales infrastructure leads to machine downtime and operational inefficiencies.
- **Lack of global standardization:** The absence of standardized performance benchmarks makes it difficult for buyers to assess or compare equipment across manufacturers.
- **IP protection and technology leakage:** Limited enforcement of intellectual property rights in certain regions has led to design replication and an influx of low-quality machine in the market.

4.10. Regulatory framework and compliance standards

Indian regulations for MPCVD machines

- **Directorate General of Foreign Trade (DGFT)**, which operates under the Ministry of Commerce and Industry. DGFT is responsible for assigning HSN (Harmonized System of Nomenclature) codes for lab-grown diamonds and related products. These codes are essential for customs classification and international trade, ensuring proper docu mentation and compliance during import and export processes. DGFT also governs licensing policies and foreign trade incentives that affect the lab-grown diamond industry.

- **The Bureau of Indian Standards (BIS)** is tasked with developing and maintaining national standards for products, including jewellery and gemstones. BIS certification ensures product quality, safety, and traceability, although mandatory hallmarking for lab-grown diamonds is still under discussion as part of evolving regulatory frameworks. BIS is also working on setting standards that help distinguish between different diamond growth techniques, such as CVD (Chemical Vapor Deposition) and HPHT (High Pressure High Temperature), and establishing grading parameters for lab-grown diamonds.

- **Semiconductor Equipment and Materials International (SEMI)** certification refers to compliance with the standards set by SEMI, which is a global industry association that develops standards for semiconductor and electronics manufacturing equipment, materials, and processes.

- **Central Board of Indirect Taxes & Customs (CBIC)**: Since December 2024, CBIC mandates explicit disclosure of the production method (e.g., HPHT or MPCVD) during import/export declarations. This regulation facilitates efficient customs processing and enhances transparency in trade.

- **International Organization for Standardization (ISO) certification** is a formal recognition that a company, process, product, or service complies with the standards set by the ISO which is an independent, non-governmental international body that develops globally accepted standards to ensure quality, safety, efficiency, and consistency.

- **MSME Udyam Certificate** is an official document issued by the Ministry of Micro, Small and Medium Enterprises (MSME), Government of India, upon successful registration of a business on the Udyam Registration Portal. It serves as formal recognition that the business qualifies as a Micro, Small, or Medium Enterprise (MSME) under the Government of India's classification and help to gain benefit from government-led incentives.

Global certifications for LGD

The certification market has high entry barriers, with top two players (IGI and GIA) account for 80.0% of the global market.

- **International Gemological Institute (IGI)** serves as a leading global certification body. Though not a government agency, IGI provides essential services by offering independent grading and certification for lab-grown diamonds. These certificates validate a diamond’s cut, clarity, colour, and carat weight, while clearly stating its lab-grown origin. IGI’s certifications are widely trusted by both domestic and international buyers, strengthening transparency and consumer confidence in the market.

- **Gemological Institute of America (GIA)** is the leading certification and research authority in the USA It provides independent grading reports for both natural and lab-grown diamonds, detailing cut, clarity, colour, carat weight, and growth method. Like IGI, GIA certificates are globally respected and help ensure consumer confidence. However, beginning later this year, it has announced to shift to use of descriptive

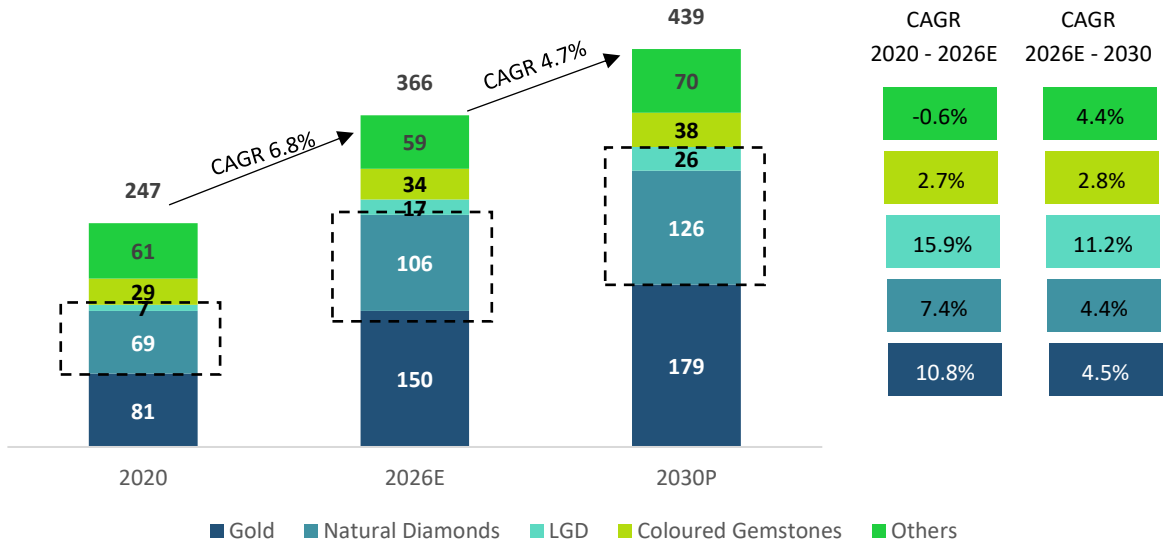
rating terms for grading lab grown diamonds such as 'premium', 'standard' or ungraded if the quality is insufficient, to characterise the quality of lab grown diamonds.

Chapter 5 - Lab grown diamond studded jewellery overview

5.1. Global jewellery market

The global jewellery market is estimated to be USD 366 billion in CY 2026, growing from USD 247 billion in CY 2020 at a CAGR of 6.8%. The market is anticipated to reach USD 439 billion in CY 2030, maintaining a stable growth momentum with a CAGR of 4.7% from CY 2026 to CY 2030.
Gold remains the largest segment with 41% share in CY 2026, growing fastest at a CAGR of 8.3% from USD 81 billion in CY 2020 to USD 179 billion in CY 2030. Diamonds which include both natural and lab grown diamonds, increase at a steady CAGR of 7.2% from USD 76 billion in CY 2020 to USD 152 billion in CY 2030. Coloured gemstones and 'Others' category, which includes platinum, palladium, silver and semi-precious stones studded jewellery are also gaining traction with both segments showing steady growth.

Figure 5-1: Global jewellery market size (USD billion), In CY



Source: Wazir analysis
Note: E: Estimated; P: Projected data; Gold includes gold jewellery market, Diamonds includes both natural diamonds and lab-grown diamonds studded in jewellery, Coloured gemstones include coloured gemstones studded jewellery, i.e., sapphires, emeralds, rubies, jade, etc. excluding diamonds, Others include platinum, palladium, silver, and semi-precious stones studded jewellery market.; Data represents calendar year

The market is poised for long-term growth, driven by rising disposable incomes, expanding middle-class populations in emerging economies, and evolving consumer preferences toward personalized, sustainable, and occasion-driven jewellery. Continued demand from developing economies, particularly China and India, remains a key growth engine, supported by deep-rooted cultural affinity for jewellery and increasing aspirations for premium products. At the same time, the rise of digital and omnichannel retail, coupled with innovations in AR/VR and AI-powered shopping, is enhancing consumer engagement and accessibility. Together, these trends are reinforcing the global jewellery industry's growth trajectory.

5.2. Global diamond jewellery and global lab grown diamond jewellery

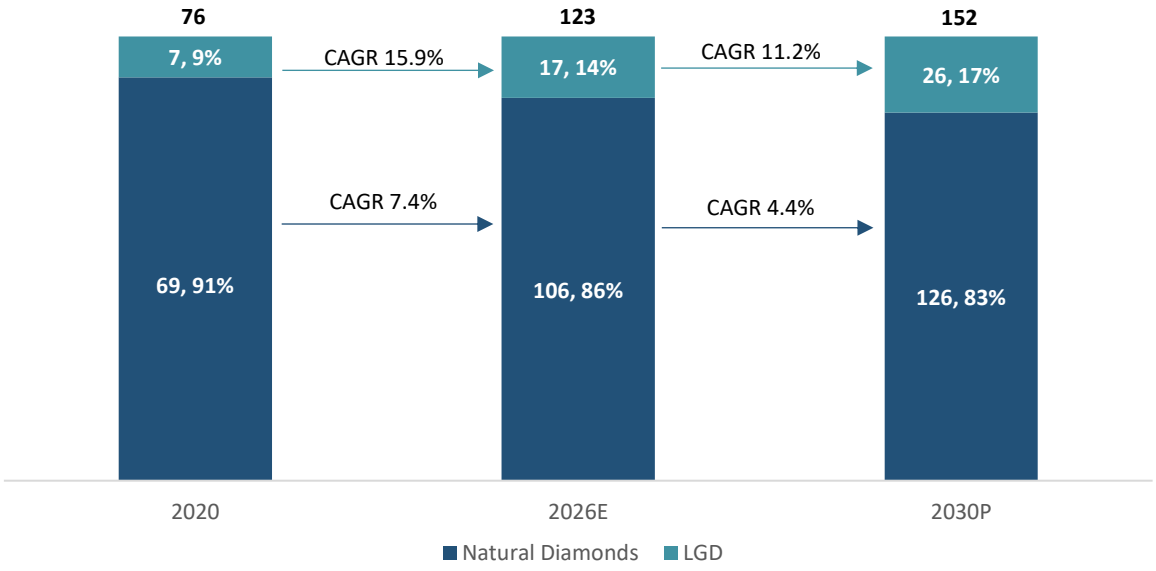
The global diamond jewellery market has expanded from USD 76 billion in CY 2020 to an estimated USD 123 billion in CY 2026. In CY 2020, the market was overwhelmingly dominated by natural diamonds, which accounted

for USD 69 billion, or 91% of the total market, while lab-grown diamonds comprised the remaining 9%, valued at USD 7 billion.

Between CY 2020 and CY 2026, the lab-grown diamond (LGD) jewellery segment is projected to grow from USD 7 billion to USD 17 billion, reflecting a strong CAGR of 15.9%. This surge in demand is primarily driven by growing consumer awareness of ethical sourcing, environmental sustainability, and cost-effectiveness. Consumers especially those from Millennial and Gen Z cohorts, are increasingly favouring lab-grown diamonds for their lower environmental impact and superior value-for-money proposition. Moreover, the rising acceptance of lab grown diamond jewellery in key developing markets, such as India and China, is further fuelling this growth trajectory.

The global diamond jewellery market is forecasted to grow from USD 123 billion in CY 2026 to USD 152 billion by CY 2030, with natural and lab-grown diamonds following different growth paths. The natural diamond jewellery segment is expected to grow at a moderate CAGR of 4.4%, reaching USD 126 billion by CY 2030. Similarly, lab-grown diamond jewellery is expected to grow at a significantly higher CAGR of 11.2%, expanding from USD 17 billion in CY 2026 to USD 26 billion by CY 2030. Consequently, lab grown diamond jewellery's share of the global market is expected to rise from ~13.8%in CY 2026 to ~17.1% by CY 2030.

Figure 5-2: Global diamond jewellery market by natural and lab grown diamond jewellery (USD billion), In CY

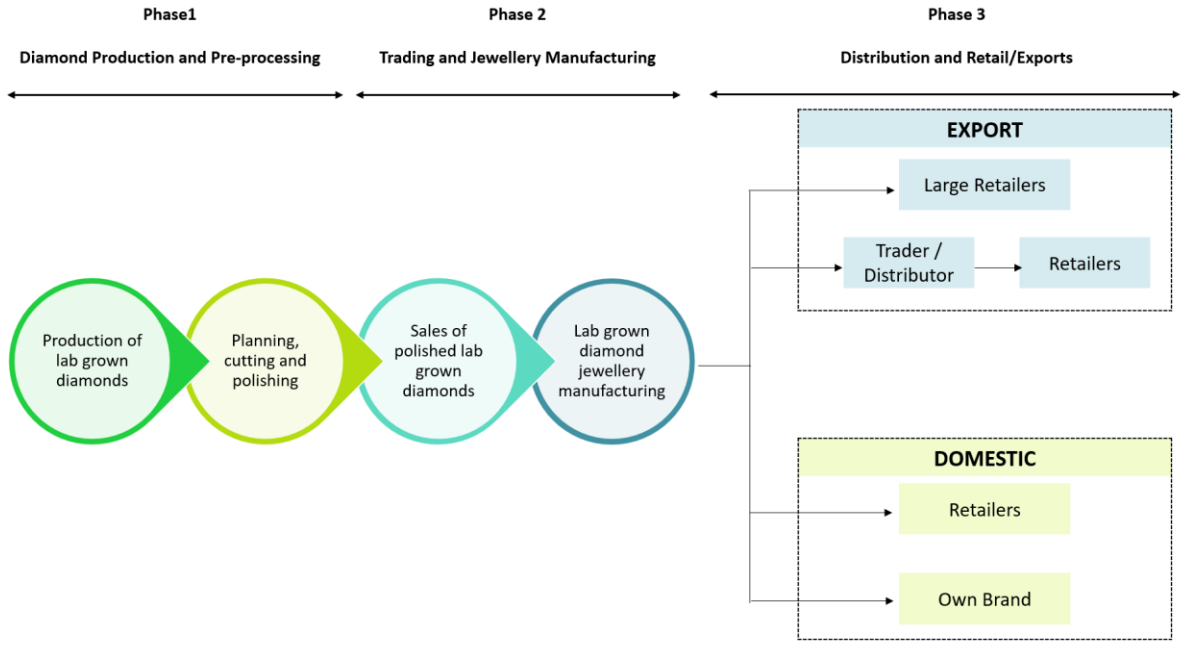


Source: Wazir analysis
Note: E: Estimated; P: Projected data; Data represents calendar year

5.3. Value chain of lab grown diamond jewellery market

The value chain of lab-grown diamond jewellery outlines the journey from synthetic diamond creation to final retail. It is structured into three key phases, each adding critical value through technology, craftsmanship, and consumer engagement.

Figure 5-3: Value chain of lab grown diamond jewellery market



Source: Wazir analysis

Phase 1 – Diamond Production & Pre-Processing:

This phase involves the creation and preparation of lab-grown diamonds:

- **Production:** Diamonds are grown using technologies like HPHT (High Pressure High Temperature) and CVD (Chemical Vapor Deposition), including the advanced MPCVD method. These methods simulate natural conditions to produce rough diamonds.
- **Planning & Cutting:** Once grown, the rough stones are analysed for size, clarity, and internal structure. Laser technology and robotic automatic machine are used to determine the most efficient and valuable cuts, ensuring precision and minimizing material loss.
- **Polishing:** The rough stones are polished to enhance their brilliance, clarity, and visual appeal, preparing them for sale or jewellery setting.

Phase 2 – Trading & Jewellery Manufacturing:

This stage bridges production and retail by adding design and branding value:

- **Sales of Polished Diamonds:** Polished diamonds are sold in the B2B market to jewellery manufacturers, brands, and wholesalers.
- **Jewellery Manufacturing:** Manufacturers design and craft jewellery pieces by setting the polished diamonds into rings, earrings, necklaces, etc. This stage involves metal sourcing, setting, and final product design.
- **Certification:** Reputable third-party labs (e.g., IGI, GIA) grade and certify diamonds based on the 4Cs (cut, colour, clarity, carat), adding credibility and transparency to the product.

Phase 3 – Distribution & Retail/Exports:

This final phase is customer-facing, focused on delivering value through branding and customer experience:

- **Retail Sales/Exports:** Retail sales and exports are carried out through multiple channels, including physical retail stores, e-commerce platforms, and branded boutiques, or through direct exports of finished jewellery to client markets worldwide.
- **Branding & Customer Engagement:** Retailers highlight sustainability, affordability, and ethical sourcing, key appeals of lab-grown diamonds, while offering personalization options and after-sales services.

The lab-grown diamond jewellery value chain transforms a raw, synthetically grown stone into a finely crafted, certified, and consumer-ready piece of jewellery. It leverages advanced technology, skilled craftsmanship, certification standards, and omnichannel retailing to meet the evolving demands of modern, conscious consumers.

5.4. Operating models in the lab grown diamond jewellery market

The lab-grown diamond jewellery industry features a variety of operating models, each aligned with distinct strategic priorities, value chain control, and capital intensity. The primary models include:

- **End to End Jewellery Manufacturers/Solution Providers**:

These players manage the entire process—from diamond production (via CVD or HPHT) to jewellery manufacturing and certification, operating as OEMs/ODMs for global and domestic retailers and distributors. Rather than building their own brand, they export finished products to retailers and traders.

Key players: Kiran Gems (India), Goldiam International (India), Greenlab Diamonds LLP (India), Bhanderi lab Grown Diamonds (India), Messi Gems (China), Zhongnan Diamond (China), Huanghe Whirlwind (China), Henan Liliang Diamond (China).

- **Retail-Only Brands**:

These companies focus on building aspirational, often digital-first, consumer brands. They typically outsource diamond production and jewellery manufacturing while concentrating on marketing, design, and customer engagement.

Key players: Jewelbox (India), Giva (India), Clean Origin (USA), Lark & Berry (UK), DFLY Paris (France)

- **Vertically Integrated Players**:

These companies manage the entire value chain—from LGD production (via MPCVD or HPHT methods) to cutting, certification, branding, and retail of their jewellery. This model allows for quality control, brand consistency, and margin retention.

Key players: Anjali LabTech (India), Goldiam International (India), Greenlab Diamonds (India), Diamond Foundry (USA), La Brilliante (USA)

Note: Vertical integration here refers only to the jewellery value chain here (production, cutting, branding, and retail) and does not include LGD machine manufacturing

These varied models reflect the dynamic and evolving nature of the lab-grown ecosystem, where strategic positioning hinges on cost control, branding, and channel strategy.

5.5. Growth drivers of lab grown diamond jewellery

The accelerated adoption of lab-grown diamonds reflects a deeper shift in values, lifestyle choices, and luxury consumption; particularly among younger, digitally native generations. This shift is driven by a blend of ethical imperatives, economic practicality, design innovation, and evolving definitions of status.

- **Affordability & Value Proposition**
  One of the most prominent demand drivers for lab-grown diamonds is their pricing advantage over mined diamonds. Lab-grown diamonds typically cost between 70-80% less than natural diamonds of comparable carat weight, cut, and clarity. This pricing differential has expanded access to larger and higher-quality stones for aspirational and value-conscious buyers. It also enables jewellery brands to offer differentiated product lines with premium aesthetics at relatively accessible price points, thereby tapping into a wider consumer base without compromising margins.

- **Rising Demand in Emerging Markets**
  Developing economies such as India and China are expected to play a pivotal role in driving the next phase of growth for lab-grown diamond jewellery. With relatively low diamond penetration rates and a rapidly expanding base of aspirational, first-time buyers, these markets present substantial untapped potential. As rising disposable incomes, urbanization, and digital exposure reshape consumer behaviour, lab-grown diamonds offer an accessible entry point for modern, design-conscious consumers.

- **Growing Preference for Ethical and Sustainable Diamond Jewellery**
  Consumers, particularly Millennials and Gen Z, are increasingly opting for lab-grown diamonds due to their ethical sourcing and reduced environmental footprint. Produced in controlled settings, these diamonds offer a conflict-free and fully traceable alternative to mined diamonds. As concerns around labour practices, environmental harm, and supply chain transparency grow, lab-grown diamonds stand out for their sustainability and accountability. Moreover, their comparatively accessible price point and modern appeal foster an aspiration for repeat purchases, allowing consumers to explore and own a variety of designs without compromising on quality or ethics.

- **Growing Acceptance in Wedding Segments**
  The bridal jewellery category, historically dominated by mined diamonds, is witnessing a significant shift in consumer behaviour. Lab-grown diamonds are becoming socially and culturally acceptable alternatives in engagement rings and wedding collections, particularly in the United States, wherein roughly half of all engagement ring buyers today are choosing lab grown diamond, United Kingdom, and Australia. In India as well, urban millennials are increasingly embracing lab-grown options for bridal wear, secondary wedding sets, and gifting purposes.

- **Social Media & Influencer Endorsements**
  The growth of lab-grown diamonds has been strongly supported by digital platforms and influencer culture. Prominent public figures, including celebrities and environmental advocates, have endorsed lab-grown diamonds, lending credibility and visibility to the category. Social media platforms such as Instagram, YouTube, and Pinterest are playing a key role in educating consumers, showcasing design innovations, and reshaping the narrative around lab-grown diamonds. This digital-first outreach is particularly effective in influencing younger buyers and accelerating mainstream acceptance.

(for illustrative purposes)

Leonardo DiCaprio invests in Diamond Foundry


LUXURY TRIBUNE

Leonardo DiCaprio invests in lab-grown diamonds

American actor Leonardo DiCaprio, Diamond Foundry's major investor, has decided to finance part of the construction of a synthetic diamond production plant in Spain. This unit will be powered by solar energy

Source: Luxury Tribune

Hon'ble Prime Minister Narendra Modi gifting a Surat manufactured lab grown 7.5 carat green diamond to US First Lady Jill Biden

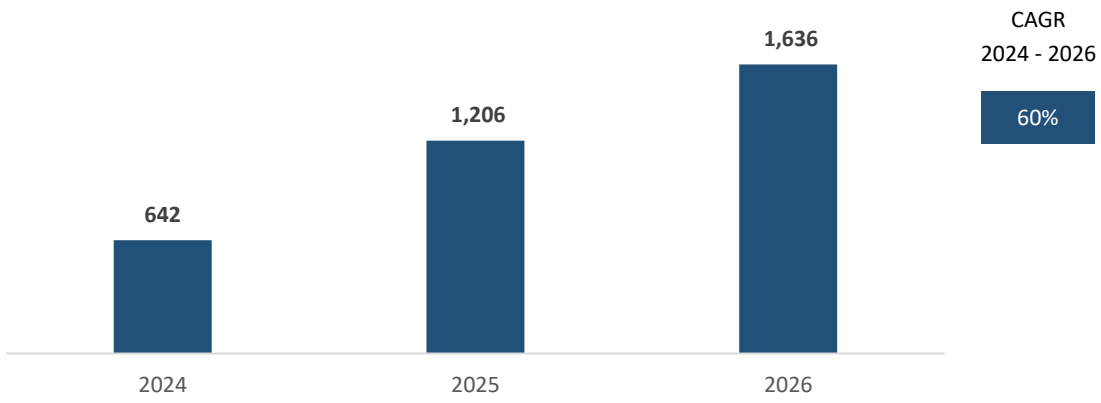


Source: The Hindu

5.6. India's export presence in global lab grown diamond jewellery market

India's lab-grown diamond jewellery exports have shown robust growth, rising from USD 642 million in FY 2024 to USD 1,636million during FY 2026, registering a CAGR of approximately 60% during the period. This strong momentum reflects rising global acceptance, expanding export demand, and India's strengthening position in the global lab-grown diamond value chain.

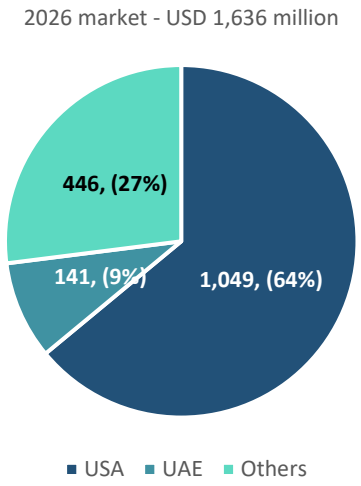
Figure 5-4: India's lab grown diamond jewellery export (USD million), In FY



Source: DGCIS
Note: Data represents financial year

In 2026, United States remained the largest export destination, accounting for 64% of India's lab-grown diamond jewellery export, followed by the UAE at 9%, while the remaining 27% was distributed across other markets. India's strong trade relationships with key markets, particularly with the US and UAE, coupled with its established cutting and polishing ecosystem continue to support export growth.

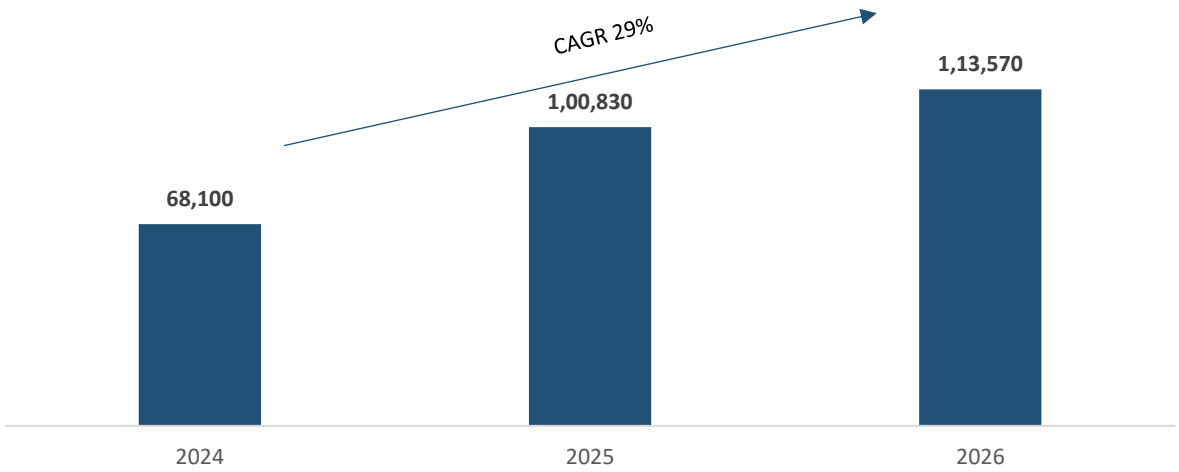
Figure 5-5: Key export destinations of lab grown diamond jewellery for India, FY 2026



Source: DGCIS
Note: Data represents financial year

India's lab-grown diamond jewellery exports have witnessed strong volume growth, increasing from approximately 68,100 carats in 2024 to 113,570 carats in 2026, registering a CAGR growth of around 29% during the period. This growth underscores sustained global demand for LGD jewellery and India's strengthening position as a leading exporter in the segment.

Figure 5-6: India's lab grown diamond jewellery export (carat), In FY



Source: DGCIS
Note: Data represents financial year

Factors Driving India's Growing Role in Lab-Grown Diamond Jewellery Exports:

- **Entry of large natural diamond exporters to the lab grown diamond market:**
  The entry of major natural diamond exporters into lab-grown diamonds is accelerating market acceptance of the latter. These players bring established infrastructure, global distribution networks, and brand credibility, driving growth and reshaping industry dynamics.

- **Expertise in jewellery craftmanship and diamond setting:**
  India has a long-standing heritage in fine jewellery manufacturing, with specialized skills in designing, cutting, polishing, and setting diamonds. This craftsmanship has seamlessly transitioned into the lab-grown diamond jewellery segment, allowing India to meet both mass and premium global demand.

- **Competitive advantage in design innovation and customization:**
  Indian manufacturers offer a high degree of flexibility in design and customization, catering to diverse consumer preferences across global markets. Their ability to quickly adapt to fashion trends and personalize jewellery pieces has strengthened their export competitiveness.

- **Strong manufacturing ecosystems in hubs like Surat and Mumbai:**
  World-class infrastructure, skilled workforce availability, and established supply chains in cities like Surat and Mumbai have supported the growth of lab-grown diamond jewellery manufacturing. These hubs have also attracted significant investments in modern production technologies and quality assurance.

- **Strategic focus on branding, quality, and international retail partnerships:**
  Indian players are investing in branding initiatives, digital presence, and collaborations with leading global retailers to elevate the perception of lab-grown diamond jewellery. Focus on product certification, traceability, and consistent quality has further enhanced India's reputation in international markets.

5.7. Key challenges and threats for lab grown diamond jewellery export

US Tariffs

Although the withdrawal of the additional tariffs from July 2026 restores the normal U.S. MFN duty. LGD continues to attract a baseline duty of 10%. This additional duty is material in a price-sensitive segment and may impact growth in the U.S. market.

Regulatory challenges for lab grown diamond jewellery exports

Table 5-1: Key regulatory challenges in lab grown diamond exports

Challenge Area	Description
Product Disclosure & Labelling	Regulators like the US Federal Trade Commission (FTC) and the Bureau of Indian Standards (BIS) mandate that lab-grown diamonds be clearly labelled as such to avoid misleading consumers. Misrepresentation risks legal and reputational fallout.
Import/Export & Quality Certification Standards	Differentiated import duties and varying certification norms (e.g., GIA vs IGI) across countries complicate international trade. Countries like India recently reduced import duties on LGD seeds to support domestic manufacturing, creating a favourable policy shift.
Sustainability Certifications	Increasing emphasis on carbon neutrality and ethical sourcing audits—but lack of globally standardized frameworks leads to inconsistent compliance expectations. This adds cost and complexity for cross-border players.
Traceability Mandates	Regulatory bodies are pushing for end-to-end traceability (blockchain, origin tags), especially in the EU and North America, adding infrastructure and compliance burden for manufacturers.

Source: Wazir analysis

Competition with mined diamonds

Despite growing awareness and acceptance, lab-grown diamonds continue to face competition from the entrenched mined diamond industry. Several structural challenges persist, ranging from emotional perceptions to pricing pressures, limiting the lab-grown segment's ability to achieve full parity in the broader fine jewellery market. The following table outlines key pressure points that define this competitive landscape.

Table 5-2: Pressure points faced by lab grown diamonds in comparison with mined diamonds

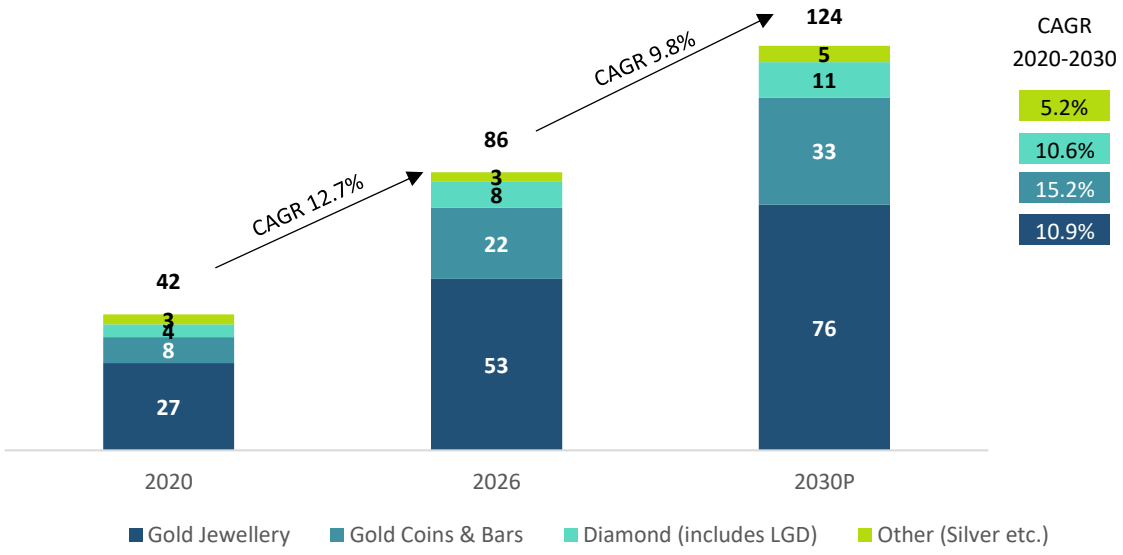
Key Pressure Point	Description
Consumer Trust & Perception	Natural diamonds carry deep emotional and cultural value; Lab grown diamonds lack equivalent resonance and perceived lasting worth, impeding price parity.
Price Undercutting	Lab grown diamond prices have fallen sharply while mined diamond prices remain stable, squeezing margins and creating inventory-value volatility.
Retailer Resistance	Legacy retailers, especially in luxury and bridal, continue to favour natural diamonds, limiting lab grown diamonds shelf space and promotional support.
Brand Power of Natural Diamond Players	Established natural diamond brands benefit form entrenched trust, reach and aspirational appeal; Lab grown diamond brands must invest heavily in promotion and storytelling.

Source: Wazir analysis

5.8. Indian jewellery market size

The Indian jewellery market was estimated to be approximately USD 86 billion by FY 2026, growing from USD 42 billion in FY 2020 at a CAGR of 12.7%. It is further expected to expand to USD 124 billion by FY 2030, registering a CAGR of 9.8% between FY 2026 and FY 2030.

Figure 5-7: Indian jewellery market size (USD billion), In FY



Source: Wazir analysis
Note: E: Estimated; P: Projected data; Data represents financial year

The growth of the jewellery market is increasingly fuelled by evolving personal consumption patterns. Jewellery is no longer seen only as an investment or traditional purchase, but as an expression of individuality, personal achievement, and emotional milestones. Consumers, especially younger generations, are purchasing jewellery for self-reward, lifestyle statements, and everyday wear, not just for weddings or festivals.

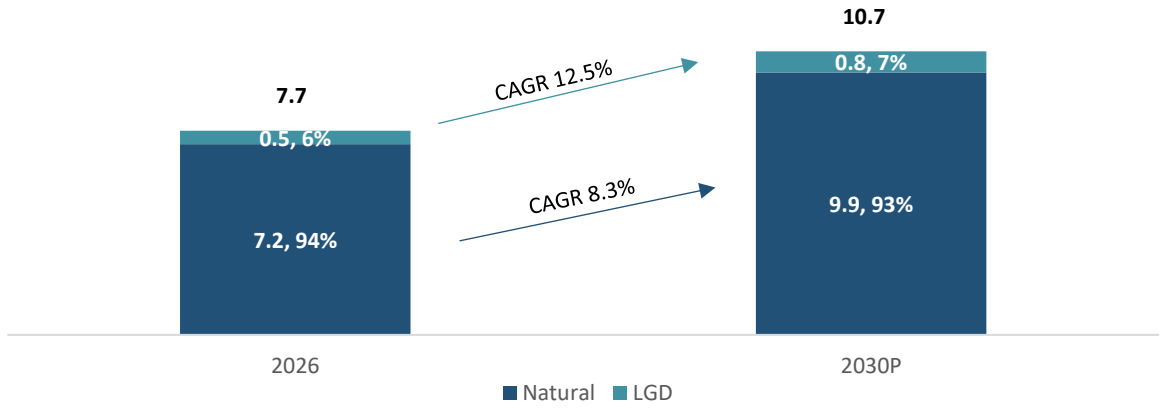
Gold will continue to hold its dominant position in India's jewellery market. Gold's appeal is deeply rooted in its cultural significance, traditional role in ceremonies, and ability to symbolize auspiciousness and prestige. It is also valued as a reliable store of value and a safe investment, while its versatility in design, ranging from heavy wedding sets to lightweight, everyday wear, helps it retain a strong market share. At the same time, while diamond jewellery is growing, it's not expected to undermine gold's share. Studded jewellery is witnessing increased demand, driven by evolving consumer tastes and the growing preference for modern, wearable designs. Additionally, lab-grown diamonds are gaining ground, reflecting changing consumer preferences and greater price accessibility.

5.9. Indian diamond jewellery market size

The Indian diamond jewellery market is expected to expand from USD 7.7 billion in FY 2026 to USD 10.7 billion by FY 2030. Within this growth trajectory, lab-grown diamonds are projected to steadily increase their market share, rising from 6% in FY 2026 to 7% by FY 2030. This expansion is underpinned by a higher CAGR of 12.5% for LGDs, compared to a 8.3% CAGR for natural diamonds over the same period.

India continues to have relatively low diamond penetration offering significant headroom for growth. This expansion is supported by a noticeable shift in consumer preferences toward more affordable, value-driven, and ethically sourced alternatives. As awareness and availability of LGDs grow, they are increasingly being viewed as aspirational products, enabling access to larger, higher-quality stones at accessible price points. With rising urban incomes, evolving fashion sensibilities, and growing demand for everyday wear and gifting options, lab-grown diamond jewellery is steadily moving beyond traditional use cases like weddings, finding resonance with a new generation of consumers who prioritise sustainability, transparency, and design relevance.

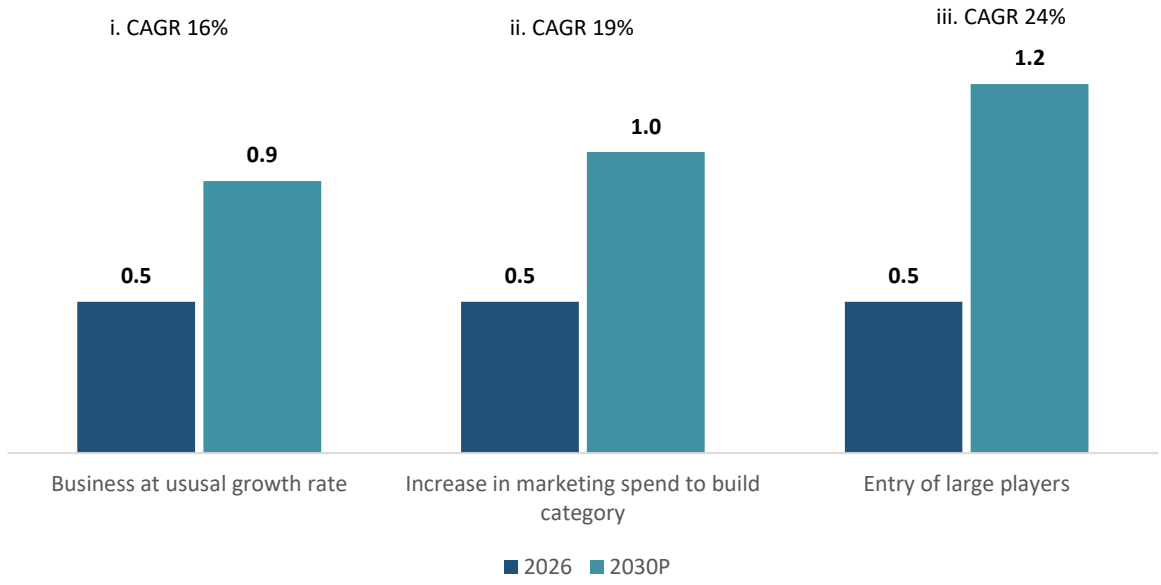
Figure 5-8: Indian diamond jewellery market split by natural and lab grown diamond jewellery (USD billion), In FY



Source: Wazir analysis
Note: E: Estimated; P: Projected data; Data represents financial year

The lab grown diamond jewellery market is poised for strong growth, with significant potential to accelerate further through category building initiatives and entry of established players. Currently, the market is projected to grow at a CAGR of 16% under its business-as-usual trajectory. However, with increased marketing efforts, the growth could accelerate to a CAGR of 19%, reaching USD 1 billion. Further, the entry of large players, backed by growing consumer awareness and strategic investments, could push the CAGR to 24%, yielding a market size of USD 1.2 billion by 2030.

Figure 5-9: India's lab grown diamond jewellery market growth scenarios (USD billion), In FY



Source: Wazir analysis
Note: E: Estimated; P: Projected data; Data represents financial year

5.10. Key Indian players of lab grown diamond jewellery market

Table 5-3: Key lab grown diamond jewellery players in India

Segment	Brand	Established	Online/Offline Stores[1]
Brands launched by established jewellers/retailers	Pome (Trent)	2024	15
	Sennes (Senco Gold)	2024	16
	Sky Gold	2024	Online Only
	Ivana Jewels (Jindal Group)	2023	11
	Avira Diamonds (Pooja Gold Palace)	2021	4
	Svaraa (Kalamandir)	2019	5
	Firefly Diamonds (Prism Jewellery)	2024	10
	beYon (Titan)	2025	4
	Divaa (Oraa)	2022	2
Brands launched by polishers and manufacturers	Limelight (Bhathwari & Emerald Group)	2019	71
	Wondr Diamonds (D Gem Mount)	2021	27
	Origem (Goldiam)	2024	25
	House of Quadri	2022	4
	Aigiri (Greenlab Diamonds)	2024	6
	Diai Designs	2018	1
	Geer (Anjali LabTech)	2024	Online Only
	DLV Jewelry (Dev Labtech)	2023	Online Only
	Pure Traces (Diyora)	2022	Online Only
	Varniya (Vummidi Bangaru)	2017	2
	Sonani	2022	1
	SGI (Shree Giriraaj Impex)	2023	Online Only
Startup led brands	Giva	2019	346[2]
	Solitario	2023	21
	Aukera	2023	30
	Elevé Lab Diamonds	2023	5
	Fiona Diamonds	2017	7
	Jewelbox	2022	16
	Syndiora	2017	1
	Cosmos	2020	2
	Emori	2019	4

	True Diamond	2024	7
	Myza	2022	1
	Itara	2020	1

Source: Wazir analysis
Note: 1 – Store count as of July 2026; 2 – Includes overall store count; (Parent Company)

5.11. Key trends and growth drivers of lab grown diamond jewellery market in India

- **Low diamond penetration, High aspirational demand**
  India's diamond jewellery penetration remains relatively low, presenting a large untapped market where lab-grown diamonds offer aspirational appeal at accessible price points. The penetration in Indian market is less than 10% in 2025
- **Shift to consumption-led jewellery**
  Consumers are purchasing jewellery for fashion and self-expression rather than traditional investment reasons, boosting the demand for stylish LGD pieces.
- **Private equity and VC investments**
  Increased funding is enabling growth in the lab-grown diamond sector, fuelling innovation and scaling production to meet rising demand.

Table 5-4: Private Equity & Strategic Investments driving India's lab-grown diamond industry

Companies	Date	Key Investors	Recent Investment ($Mn)
Dholakia Lab Grown Diamond	May'26	**Institutional:** Abakkus Four2Eight Opportunities Fund (Abakkus PE), ICICI Ventures India Advantage Fund Series 5 (IAF5) **Angel:** Amal Parikh	96.0
Aukera	Jun'25	**Institutional:** Peak XV Partners, Fireside Ventures, Sparrow Capital, Prath Ventures, Alteria Capital	15.0
True Diamond	May'25	**Institutional:** India Quotient, Huddle Ventures, Titan Capital Winners Fund	3.0
Ivana Jewels	Apr'25	**Institutional:** Avinya Ventures	0.2
Jewelbox	Apr'25	**Corporate:** Infinyte Club, Indian Silicon Valley, Touchstone Group **Institutional:** V3 Ventures, Atrium Angels, Dexter Ventures, Samarthya Investment Advisors, JITO Incubation & Innovation Foundation, Verlinvest, Singularity AMC, Rosebay Consultants **Angel:** Anish Vasantraj Birawat, Ankiot Kiranraj Birawat, R Prathik, Aman Jain, Yash Jain, Mita Shailesh Mehta	3.2
Firefly Diamonds	Mar'25	**Institutional:** WestBridge Capital **Angel:** Manoj Agarwal, Kamla Rani, Indu Agarwal	3.0
Limelight	Feb'25	**Corporate:** Capri Global Capital, Dalal & Broacha, Arihant Capital, Finavenue, Own Infracon, Hathor Corporate Advisors,	11.0

		Prosurge Advisors **Institutional:** Compact Structure Fund **Angel:** Inder Soni, Aartie Anandpara, Kaushik Daga, Shweta Aggarwal, Manisha Shah, Nishant Aggarwal, Hardik Meghraj Jain, Upkaran Chawla, Sukhbir Dhingra	
Solitario	Feb'25	**Corporate:** Vicco Group, FPI Investi Global (Mauritius) **Angel:** Neeraj Gupta (Founder, Meru Cabs), Seema Manish Nuwal (Promoter, Solar Industries), Amit Agarwal, Rajesh Singla, Garima Theti, Sandeep Singh	3.6

Source: Secondary research

- **Entry of established retailers and jewellers**
  Jewellery brands like Senco and Malabar Gold & Diamonds, along with large retailers such as Trent through its brand (Pome), are entering the lab-grown diamond jewellery market boosting consumer confidence, brand visibility, and market growth.
- **Design versatility and contemporary appeal**
  Indian consumers are gravitating toward versatile, modern designs that align with evolving fashion sensibilities and lifestyle needs.
- **Growing retail & e-commerce presence**
  Increased availability through organized retail and online platforms is improving accessibility and consumer trust in LGDs.

5.12. Key challenges in the lab grown diamond jewellery market

- **Low consumer awareness**
  Many consumers continue to confuse lab-grown diamonds with lower-value alternatives, resulting in hesitation and hindering broader market adoption.

- **Scepticism among traditional buyers**
  Older generations tend to see lab-grown diamonds as inferior to natural diamonds, preferring gold and mined diamonds for traditional celebrations.

- **Wedding market dependence**
  A large portion of India's jewellery market is still dependent on wedding sales, where natural diamonds and gold remain preferred.

- **Retail resistance and lack of trust**
  Legacy retailers are slow to adopt lab-grown diamonds due to concerns about resale value and a lack of trust among traditional buyers.

5.13. Government regulations and tax structures

The lab-grown diamond jewellery market in India is subject to a unique regulatory and tax framework designed to ensure transparency, sustainability, and consumer protection. With the increasing demand for lab-grown diamonds, the Indian government has put in place regulations, such as labelling requirements from the Bureau of Indian Standards (BIS), ensuring clear differentiation from natural diamonds. Additionally, the industry benefits from a favourable tax structure, with a reduced Goods and Services Tax (GST) on both finished jewellery

and raw LGD materials, promoting further growth in the sector. The removal of import duties on diamond seeds in recent budgets has also lowered production costs, further enabling domestic manufacturers to thrive. As the industry continues to evolve, these regulations and tax structures play a pivotal role in fostering growth while maintaining industry integrity.

Table 5-5: Government regulations in the lab grown diamond jewellery market in India

Regulation	Description
BIS IS 15766:2007 Labelling Requirements	The Bureau of Indian Standards mandates that synthetic diamonds must be explicitly labelled as "synthetic diamonds" and prohibits grading them alongside natural diamonds, ensuring consumers are not misled by unclear terminology.
US FTC Terminology Adoption	The Gem & Jewellery Export Promotion Council has aligned with US Federal Trade Commission guidelines, requiring qualifiers such as "laboratory-grown" or "cultured" whenever "diamond" is used for synthetics and disallowing the word "diamond" on its own.
Self-Regulation Framework	Ministry of Commerce has affirmed that the LGD industry will continue under existing self-regulation, with no new domestic rules introduced, while engaging in international talks to maintain traceability standards.

Source: Wazir analysis

Table 5-6: Tax structure for lab grown diamond jewellery in India

Regulation	Rate/Status	Description
GST on diamond jewellery	3%	Levied on the total invoice value of diamond jewellery, including stones, metal and making charges, ensuring a uniform tax across all jewellery sales.
GST on loose lab grown stones	0.25%	Applied to unmounted or ungraded synthetic diamonds, facilitating a lower rate for raw lab grown diamond material before setting.
Import duty on lab grown diamond 'seeds'	Exempted	The 2025 union budget removed tariffs on the import of diamond seeds used for lab grown diamond production, reducing input costs for domestic manufacturers.

Source: Wazir analysis

Chapter 6 - Operational and financials benchmarking

Operational benchmarking

6.1. Introduction

Table 6-1: Introduction of key players in the lab-grown diamond industry

Company	Legal Name	Established	About
Anjali LabTech	Anjali Labtech Limited	2021	Vertically integrated player with in-house CVD machines, diamond wafers, LGD production, jewellery manufacturing, and retail presence
Goldiam International	Goldiam International Limited	1986	Presence in rough, polished, and studded LGD jewellery with retail reach, but not present in CVD machines or wafers
KIRA Diam*	KIRA Diam Tech Private Limited	2022	Part of Kiran Gems, one of the largest players in the diamond industry, KIRA Diam operates across LGD production and jewellery, but does not manufacture CVD machines or wafers
Greenlab Diamonds	Greenlab Diamonds LLP	2018	Strong in rough, polished, and jewellery manufacturing, with global retail presence but limited in CVD machines
Bhanderi Lab Grown Diamonds	Bhanderi Lab-Grown Diamonds LLP & Bhanderi Lab-Grown Diamonds Private Limited	2013	Capabilities across CVD machines, rough and polished LGDs, jewellery, has no retail presence
Bhathwari Technologies	Bhathwari Technologies Private Limited	2021	CVD machines and participates across LGD production and jewellery, has retail presence through investment in Limelight
SP3 Technologies	SP3 Technologies LLP	2016	Provides CVD machines and participates across LGD production and jewellery, doesn't have retail presence
Maitri Diamonds	Maitri Lab-Grown Diamond Private Limited	2012	Operations across rough and polished LGDs and jewellery. No retail presence
Asian Lab Grown Diamonds	AsianLab Grown Diamonds LLP	2017	Focuses on LGD production and processing with jewellery capabilities but lacks retail presence

Source: Company website, Primary and secondary research; Wazir analysis

Note: Competitors have been classified as Direct and Indirect, with Direct competitors possessing integrated capabilities across machinery, lab-grown diamond rough, polishing and jewellery, while Indirect players operate in select segments of the value chain; Competitor benchmarking includes companies with turnover exceeding INR 50 crore; *V-Grown Tech Private Limited changed its legal name to KIRA Diam Tech Private Limited in January 2026

Disclaimer: *There are currently no direct or pure-play listed peers of the Company, either in India or globally. Goldiam International Limited may, however, be considered as an indirect listed peer, given its presence in certain business segments that are also addressed by Anjali LabTech Limited*

6.2. Product portfolio

Table 6-2: Product offerings of key Indian and international lab-grown diamond companies, FY 2026

Company	MPCVD Machine*	Diamond Wafer	Rough LGD	Polished LGD	LGD Studded Jewellery
Anjali LabTech Limited	✓	✓	✓	✓	✓
Goldiam International Limited	×	×	✓	✓	✓
KIRA Diam Tech Private Limited**	×	×	✓	✓	✓
Greenlab Diamonds LLP	×	×	✓	✓	✓
Bhanderi Lab-Grown Diamonds	✓	×	✓	✓	✓
Bhathwari Technologies Private Limited	✓	✓	✓	✓	✓
SP3 Technologies LLP	×	✓	✓	✓	✓
Maitri Lab-Grown Diamond Private Limited	✓	✓	✓	✓	✓
Asian Lab Grown Diamonds LLP	✓	✓	×	✓	×

Source: Company website, Primary and secondary research; Wazir analysis;

Note: × indicate the company's absence in the product portfolio; NA - Information not available; *MPCVD machine denotes equipment offered as part of the company's product portfolio; Competitor benchmarking includes companies with turnover exceeding INR 50 crore; **V-Grown Tech Private Limited changed its legal name to KIRA Diam Tech Private Limited in January 2026

6.3. Value chain presence

Table 6-3: Value chain presence of key Indian and international lab grown diamond companies, FY 2026

Company	R&D Capabilities	MPCVD Manufacturing*	MPCVD Selling	Rough & Polished LGD Processing	LGD Jewellery Manufacturing	Retail Presence
Anjali LabTech Limited	✓	✓	✓	✓	✓	✓
Goldiam International Limited	✓	✓	×	✓	✓	✓
KIRA Diam Tech Private Limited**	✓	×	×	✓	✓	×
Greenlab Diamonds LLP	✓	×	×	✓	✓	✓
Bhanderi Lab-Grown Diamonds	✓	✓	✓	✓	✓	×
Bhathwari Technologies Private Limited	✓	✓	✓	✓	✓	✓

SP3 Technologies LLP	✓	✓	×	✓	✓	×
Maitri Lab-Grown Diamond Private Limited	✓	✓	✓	✓	✓	×
Asian Lab Grown Diamonds LLP	✓	✓	✓	✓	×	×

Source: Company website, Primary and secondary research, Wazir analysis.

Note: × indicate the company's absence in the product portfolio; NA - Information not available; *MPCVD Manufacturing indicates whether a company manufactures MPCVD machines, irrespective of whether these are sold externally or used for captive purpose; Competitor benchmarking includes companies with turnover exceeding INR 50 crore; **V-Grown Tech Private Limited changed its legal name to KIRA Diam Tech Private Limited in January 2026

6.4. Domestic vs exports revenue

The LGD sector exhibits varied market orientation, with some players generating 100% revenue domestically, while others are fully export driven. This reflects differences in target markets, supply chain integration, and distribution strategies.

Table 6-4: Revenue from operations breakdown into Domestic vs Exports (INR Million), FY 2025

Company	Revenue	Domestic	Exports
Anjali LabTech Limited[1]	6,155.13	66%	34%
Goldiam International Limited[1]	9,768.60	12%	88%[2]
KIRA Diam Tech Private Limited[#]	14,599.00	83%	17%
Greenlab Diamonds LLP	6,091	56%	44%
Bhanderi Lab-Grown Diamonds	2,530.77	100%	0%
Bhathwari Technologies Private Limited	460.81	100%	0%
SP3 Technologies LLP	1,070.61	100%	0%
Maitri Lab-Grown Diamond Private Limited	1,663.42	NA	NA
Asian Lab Grown Diamonds LLP	1,031.73	78%	22%

Source: Company annual filings, MCA reports, Wazir analysis

Note: 1- Revenue for FY26; 2- Share for Q4 FY2026; NA - Information not available; Data represents financial year Competitor benchmarking includes companies with turnover exceeding INR 50 crore; #V-Grown Tech Private Limited changed its legal name to KIRA Diam Tech Private Limited in January 2026

6.5. Certification Landscape

Certifications such as IGI and GIA ensure standardization in quality grading, enhancing credibility in both domestic and export markets. SCS-007 certification reflects sustainability and ethical sourcing practices, which are increasingly important for global compliance and ESG alignment.

Table 6-5: Certification overview of key Indian lab grown diamond companies

Company	IGI	GIA	SCS-007
Anjali LabTech Limited	✓	✓	✓
Goldiam International Limited	✓	✓	NA
KIRA Diam Tech Private Limited[#]	✓	✓	✓

Greenlab Diamonds LLP	✓	✓	NA
Bhanderi Lab-Grown Diamonds	✓	✓	NA
Bhathwari Technologies Private Limited	✓	NA	NA
SP3 Technologies LLP	✓	✓	✓
Maitri Lab-Grown Diamond Private Limited	✓	NA	✓
Asian Lab Grown Diamonds LLP	✓	NA	NA

Source: Company website, Primary and secondary research, Wazir analysis

Note: NA - Information not available; Competitor benchmarking includes companies with turnover exceeding INR 50 crore; #V-Grown Tech Private Limited changed its legal name to KIRA Diam Tech Private Limited in January 2026

Financial benchmarking

6.6. Revenue from operations

Revenue from operations is the top line parameter for assessing a company's financial performance. Anjali LabTech Limited has exhibited the strongest growth trajectory among peers, recording a CAGR of ~66% over FY2024–26 in comparison to its peers.

Table 6-6: Revenue from operations (INR Million) of major Indian companies, In FY

Company	2024	2025	2026
Anjali LabTech Limited	2,231.9	4,725.0	6,155.1
Goldiam International Limited	6,028.7	7,809.8	9,768.6
KIRA Diam Tech Private Limited#	7,148.1	14,599.0	NA
Greenlab Diamonds LLP	5,901.1	6,091.2	NA
Bhanderi Lab-Grown Diamonds*	3,087.8	2,530.8	NA
Bhathwari Technologies Private Limited	1,882.9	460.8	NA
SP3 Technologies LLP	1,202.9	1,070.6	NA
Maitri Lab-Grown Diamond Private Limited	785.0	1,663.4	NA
Asian Lab Grown Diamonds LLP	634.2	1,031.7	NA

Source: Company annual filings, MCA reports, Wazir analysis

Note: Data represents financial year, NA - Information not available; *Bhanderi Lab Grown Diamonds financials represent the combined financials of its private entity, Bhanderi Lab Grown Diamond Private Limited, and its LLP entity, Bhanderi Lab-Grown Diamond LLP; Competitor benchmarking includes companies with turnover exceeding INR 50 crore; #V-Grown Tech Private Limited changed its legal name to KIRA Diam Tech Private Limited in January 2026

Formula adopted for the company and its peers: Revenue from Operations as per Restated Consolidated Financial Statements

Formula adopted for Goldiam International Limited: Revenue from Operations means the Revenue from Operations as appearing in the Consolidated Financial Information. Goldiam International Limited financials have been sourced from its placement document (2025)

6.7. EBITDA

EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization) assesses a company's operational performance by excluding expenses not related to its core activities. Anjali LabTech Limited has grown its EBIDTA at CAGR of ~55% over FY 2024-26.

Table 6-7: EBITDA (INR Million) of major Indian companies, In FY

Company	2024	2025	2026
Anjali LabTech Limited	1,098.7	1,846.4	2,642.2
Goldiam International Limited	1,282.0	1,826.0	2,487.0
KIRA Diam Tech Private Limited#	2,140.7	3,800.8	NA
Greenlab Diamonds LLP	1,994.0	3,298.9	NA
Bhanderi Lab-Grown Diamonds*	-201.0	127.4	NA
Bhathwari Technologies Private Limited	1,450.0	181.3	NA
SP3 Technologies LLP	330.9	288.9	NA
Maitri Lab-Grown Diamond Private Limited	349.4	534.8	NA
Asian Lab Grown Diamonds LLP	114.9	146.7	NA

Source: Company annual filings, MCA reports, Wazir analysis

Note: Data represents financial year, *Bhanderi Lab Grown Diamonds financials represent the combined financials of its private entity, Bhanderi Lab Grown Diamond Private Limited, and its LLP entity, Bhanderi Lab-Grown Diamond LLP; NA - Information not available; Competitor benchmarking includes companies with turnover exceeding INR 50 crore; #V-Grown Tech Private Limited changed its legal name to KIRA Diam Tech Private Limited in January 2026

Formula adopted for the company and its peers: EBITDA is calculated as Profit Before Tax plus Finance Costs, Depreciation & Amortisation expense, less share of profit of associate and other income

Formula adopted for Goldiam International Limited: EBITDA is calculated as Profit before tax for the year, plus finance costs and depreciation and amortisation expenses, less other income. Goldiam International Limited financials have been sourced from its placement document (2025)

6.8. EBITDA margin

EBITDA margin is largely used to compare the profitability of the companies against competitors. It is also used to standardize the business performance against the industry averages.

Table 6-8: EBITDA margins (%) of major Indian companies, In FY

Company	2024	2025	2026
Anjali LabTech Limited	49.2%	39.1%	42.9%
Goldiam International Limited	20.8%	22.8%	24.3%
KIRA Diam Tech Private Limited#	29.9%	26.0%	NA
Greenlab Diamonds LLP	33.8%	54.2%	NA
Bhanderi Lab-Grown Diamonds*	-6.5%	5.0%	NA
Bhathwari Technologies Private Limited	77.0%	39.3%	NA

SP3 Technologies LLP	27.5%	26.9%	NA
Maitri Lab-Grown Diamond Private Limited	44.5%	32.2%	NA
Asian Lab Grown Diamonds LLP	18.1%	14.2%	NA

Source: Company annual filings, MCA reports, Wazir analysis

Note: Data represents financial year; NA - Information not available; *Bhanderi Lab Grown Diamonds financials represent the combined financials of its private entity, Bhanderi Lab Grown Diamond Private Limited, and its LLP entity, Bhanderi Lab-Grown Diamond LLP; Competitor benchmarking includes companies with turnover exceeding INR 50 crore; #V-Grown Tech Private Limited changed its legal name to KIRA Diam Tech Private Limited in January 2026

Formula adopted for the company and its peers: EBITDA Margin is calculated as EBITDA as a percentage of Revenue from Operations

Formula adopted for Goldiam International Limited: EBITDA Margin (%) is calculated as EBITDA divided by Revenue from Operations. Goldiam International Limited financials have been sourced from its placement document (2025)

6.9. Profitability before tax (PBT)

Profit Before Tax (PBT), also referred to as Earnings Before Tax (EBT) or pretax profit, is derived by deducting interest expenses from operating profit. Although it is not regarded as a primary performance indicator, PBT serves as an important measure for evaluating the impact of taxation and the cost efficiency of a company.

Table 6-9: Profitability before tax (INR Millions) of major Indian companies, In FY

Company	2024	2025	2026
Anjali LabTech Limited	1,106.9	1,750.6	2,412.9
Goldiam International Limited	1,220.9	1,725.2	2,308.2
KIRA Diam Tech Private Limited#	1,225.8	2,119.0	NA
Greenlab Diamonds LLP	514.8	726.2	NA
Bhanderi Lab-Grown Diamonds*	-5.3	-7.4	NA
Bhathwari Technologies Private Limited	1,209.2	NA	NA
SP3 Technologies LLP	150.1	60.3	NA
Maitri Lab-Grown Diamond Private Limited	145.6	305.0	NA
Asian Lab Grown Diamonds LLP	18.6	12.9	NA

Source: Company annual filings, MCA reports, Wazir analysis

Note: Data represents financial year; NA - Information not available; *Bhanderi Lab Grown Diamonds financials represent the combined financials of its private entity, Bhanderi Lab Grown Diamond Private Limited, and its LLP entity, Bhanderi Lab-Grown Diamond LLP; Competitor benchmarking includes companies with turnover exceeding INR 50 crore; #V-Grown Tech Private Limited changed its legal name to KIRA Diam Tech Private Limited in January 2026

Formula adopted for the company and its peers: Profit Before Tax as per Restated Consolidated Financial Statements

Goldiam International Limited financials have been sourced from its placement document (2025)

6.10. Profitability before tax (PBT) margin

The PBT margin provides a ratio of profits before taxes to the total revenue from operations which shows how efficient is the business based on revenue generated from operating activities.

Table 6-10: PBT margins (%) of major Indian companies, In FY

Company	2024	2025	2026
Anjali LabTech Limited	48.6%	36.6%	38.6%
Goldiam International Limited	NA	NA	NA
KIRA Diam Tech Private Limited#	17.1%	14.5%	NA
Greenlab Diamonds LLP	8.7%	11.9%	NA
Bhanderi Lab-Grown Diamonds*	-0.6%	-0.3%	NA
Bhathwari Technologies Private Limited	63.6%	NA	NA
SP3 Technologies LLP	12.3%	5.6%	NA
Maitri Lab-Grown Diamond Private Limited	18.5%	18.3%	NA
Asian Lab Grown Diamonds LLP	2.9%	1.3%	NA

Source: Company annual filings, MCA reports, Wazir analysis

Note: Data represents financial year; NA - Information not available; *Bhanderi Lab Grown Diamonds financials represent the combined financials of its private entity, Bhanderi Lab Grown Diamond Private Limited, and its LLP entity, Bhanderi Lab-Grown Diamond LLP; Competitor benchmarking includes companies with turnover exceeding INR 50 crore; #V-Grown Tech Private Limited changed its legal name to KIRA Diam Tech Private Limited in January 2026

Formula adopted for the company and its peers: Profit Before Tax Margin (%) is calculated as Profit Before Tax for the year as a percentage of Total Income

6.11. Profitability after tax (PAT)

Profit After Tax (PAT) is a crucial metric for gauging a company's profitability after all operational and overhead expenses have been considered. This metric provides a transparent perspective on the company's efficiency in managing its operations and producing net income. Anjali LabTech Limited has shown ~49% CAGR rate among its competitors over FY 2024-26.

Table 6-11: Profitability after tax (INR Millions) of major Indian companies, In FY

Company	2024	2025	2026
Anjali LabTech Limited	900.6	1,467.9	2,009.2
Goldiam International Limited	909.1	1,171.1	1,705.9
KIRA Diam Tech Private Limited#	1,011.2	1,756.3	NA
Greenlab Diamonds LLP	514.8	471.8	NA
Bhanderi Lab-Grown Diamonds*	-54.3	-7.41	NA
Bhathwari Technologies Private Limited	1,165.3	-53.9	NA

SP3 Technologies LLP	150.1	60.4	NA
Maitri Lab-Grown Diamond Private Limited	135.7	253.3	NA
Asian Lab Grown Diamonds LLP	18.6	12.9	NA

Source: Company annual filings, MCA reports, Wazir analysis

Note: Data represents financial year, NA - Information not available; *Bhanderi Lab Grown Diamonds financials represent the combined financials of its private entity, Bhanderi Lab Grown Diamond Private Limited, and its LLP entity, Bhanderi Lab-Grown Diamond LLP, Competitor benchmarking includes companies with turnover exceeding INR 50 crore; #V-Grown Tech Private Limited changed its legal name to KIRA Diam Tech Private Limited in January 2026
Formula adopted for the company and its peers: Profit After Tax for the year as per Restated Consolidated Financial Statements

Formula adopted for Goldiam International Limited: Profit after tax (PAT) refers to Restated Profit/(Loss) for the year from Continuing Operations as appearing in the Consolidated Financial Information. Goldiam International Limited financials have been sourced from its placement document (2025)

6.12. Profitability after tax (PAT) margin

Similarly, Anjali LabTech has maintained a competitive PAT margin among its competitors over the past years. PAT margin is the financial metric representing a company's net income after deducting all applicable taxes.

Table 6-12: PAT margins (%) of major Indian companies, In FY

Company	2024	2025	2026
Anjali LabTech Limited	39.5%	30.7%	32.2%
Goldiam International Limited	14.7%	14.6%	16.7%
KIRA Diam Tech Private Limited#	14.1%	14.6%	NA
Greenlab Diamonds LLP	8.7%	7.7%	NA
Bhanderi Lab-Grown Diamonds*	-1.6%	-0.3%	NA
Bhathwari Technologies Private Limited	61.3%	-11.4%	NA
SP3 Technologies LLP	12.3%	5.6%	NA
Maitri Lab-Grown Diamond Private Limited	17.3%	15.1%	NA
Asian Lab Grown Diamonds LLP	2.9%	1.2%	NA

Source: Company annual filings, MCA reports, Wazir analysis

Note: Data represents financial year; NA - Information not available; *Bhanderi Lab Grown Diamonds financials represent the combined financials of its private entity, Bhanderi Lab Grown Diamond Private Limited, and its LLP entity, Bhanderi Lab-Grown Diamond LLP; Competitor benchmarking includes companies with turnover exceeding INR 50 crore; #V-Grown Tech Private Limited changed its legal name to KIRA Diam Tech Private Limited in January 2026

Formula adopted for the company and its peers: Profit After Tax Margin (%) is calculated as Profit After Tax for the year as a percentage of Total Income

Formula adopted for Goldiam International Limited: PAT Margin (%) is calculated as Profit for the year as a percentage of Total Income. Goldiam International Limited financials have been sourced from its placement document (2025)

6.13. Return on equity (ROE)

Anjali Labtech Limited has consistently given high returns on equity over the years. Return on Equity (ROE) assesses a company's profitability by measuring its ability to generate profit from shareholders' equity. This ratio is calculated by dividing Profit After Tax (PAT) by shareholders' equity. ROE offers critical insights into how well a company leverages investor funds to produce earnings and is a significant indicator of financial performance and management effectiveness.

Table 6-13: Return on equity (%) of major Indian companies, In FY

Company	2024	2025	2026
Anjali LabTech Limited	70.5%	59.8%	48.0%
Goldiam International Limited	14.8%	17.0%	18.4%
KIRA Diam Tech Private Limited#	64.2%	44.7%	NA
Greenlab Diamonds LLP	28.0%	9.1%	NA
Bhanderi Lab-Grown Diamonds*	-23.9%	-4.8%	NA
Bhathwari Technologies Private Limited	92.9%	-4.5%	NA
SP3 Technologies LLP	15.3%	3.6%	NA
Maitri Lab-Grown Diamond Private Limited	NA	NA	NA
Asian Lab Grown Diamonds LLP	3.2%	2.2%	NA

Source: Company annual filings, MCA reports, Wazir analysis

Note: Data represents financial year; NA - Information not available; *Bhanderi Lab Grown Diamonds financials represent the combined financials of its private entity, Bhanderi Lab Grown Diamond Private Limited, and its LLP entity, Bhanderi Lab-Grown Diamond LLP; Competitor benchmarking includes companies with turnover exceeding INR 50 crore; #V-Grown Tech Private Limited changed its legal name to KIRA Diam Tech Private Limited in January 2026

Formula adopted for the company and its peers: Return on Equity is calculated as Profit After Tax divided by Average Total Equity. (Average Total Equity is calculated as the arithmetic average of opening and closing balance of Total Equity)

Formula adopted for Goldiam International Limited: Return on Equity is calculated as Profit attributable to owners of the Company divided by Total Equity for the year. Goldiam International Limited financials have been sourced from its placement document (2025).

6.14. Return on capital employed (ROCE)

ROCE indicates the company’s efficiency by measuring the profitability of the business after factoring in the capital used by the company to generate profits. ROCE is a good indicator of the company’s performance over long period. Anjali Labtech Limited has consistently given the highest return on capital employed compared to its competitors over the years.

Table 6-14: Return on capital employed (%) of major Indian companies, In FY

Company	2024	2025	2026
Anjali LabTech Limited	80.9%	58.0%	46.2%
Goldiam International Limited	19.2%	23.2%	NA
KIRA Diam Tech Private Limited#	35.7%	17.5%	NA

Greenlab Diamonds LLP	10.8%	21.6%	NA
Bhanderi Lab-Grown Diamonds*	-2.9%	NA	NA
Bhathwari Technologies Private Limited	101.4%	NA	NA
SP3 Technologies LLP	11.3%	3.6%	NA
Maitri Lab-Grown Diamond Private Limited	17.0%	23.4%	NA
Asian Lab Grown Diamonds LLP	4.0%	7.0%	NA

Source: Company annual filings, MCA reports, Wazir analysis

Note: Data represents financial year; NA - Information not available; *Bhanderi Lab Grown Diamonds financials represent the combined financials of its private entity, Bhanderi Lab Grown Diamond Private Limited, and its LLP entity, Bhanderi Lab-Grown Diamond LLP; Competitor benchmarking includes companies with turnover exceeding INR 50 crore; #V-Grown Tech Private Limited changed its legal name to KIRA Diam Tech Private Limited in January 2026

Formula adopted for the company and its peers: Return on Capital Employed is calculated as EBIT as a percentage of Average Capital Employed wherein Capital Employed calculated as Total Equity plus Total Borrowings (part of non-current as well as current liabilities) and Deferred Tax Liabilities less Deferred Tax Assets. EBIT is calculated as Profit Before Tax less share of profit of associate plus Finance Costs. (Average Capital Employed is calculated as the arithmetic average of opening and closing balance of Capital Employed

Formula adopted for Goldiam International Limited: ROCE is calculated as Earnings before interest and taxes (EBIT) divided by Capital Employed. EBIT is calculated as Profit before tax plus finance costs. Capital Employed is sum total of Total Net Worth and Total Debt. Goldiam International Limited financials have been sourced from its placement document (2025)

6.15. Debt to equity

The debt to equity ratio measures how much financial leverage a company has by comparing it's net debt to it's shareholder equity. It reveals the extent to which a company relies on borrowed money versus its own capital to finance operations, with a higher ratio indicating a higher financial risk. Anjali Labtech Limited has consistently shown <1 Net det to equity ratio, indicating lesser debts compared to it's equity.

Table 6-15: Debt to equity of major Indian companies, In FY

Company	2024	2025	2026
Anjali LabTech Limited	0.1	0.4	0.3
Goldiam International Limited	0.0	0.0	0.0
KIRA Diam Tech Private Limited#	4.3	4.5	NA
Greenlab Diamonds LLP	2.0	0.6	NA
Bhanderi Lab-Grown Diamonds*	10.2	12.6	NA
Bhathwari Technologies Private Limited	1.0	1.8	NA
SP3 Technologies LLP	0.0	NA	NA
Maitri Lab-Grown Diamond Private Limited	33.6	4.0	NA
Asian Lab Grown Diamonds LLP	0.9	NA	NA

Source: Company annual filings, MCA reports, Wazir analysis

Note: Data represents financial year; NA - Information not available; *Bhanderi Lab Grown Diamonds financials represent the combined financials of its private entity, Bhanderi Lab Grown Diamond Private Limited, and its LLP entity, Bhanderi Lab-Grown Diamond LLP; Competitor benchmarking includes companies with turnover exceeding INR 50 crore; #V-Grown Tech Private Limited changed its legal name to KIRA Diam Tech Private Limited in January 2026

Formula adopted for the company and its peers: Debt to Equity ratio is Total Borrowings (part of non-current as well as current liabilities) divided by Total Equity

6.16. Net working capital days

Net working capital days measure the average time it takes for a company to convert it's investments in inventory and other operational resources into cash from sales, hence lower the days; it indicates a better efficiency. Anali LabTech Limited has consistently had low net working capital days as compared to it's peers.

Table 6-16: Net working capital days of major Indian companies, In FY

Company	2024	2025	2026
Anjali LabTech Limited	47.0	44.0	62.0
Goldiam International Limited	135.0	211.0	136.0
KIRA Diam Tech Private Limited#	NA	NA	NA
Greenlab Diamonds LLP	5.0	NA	NA
Bhanderi Lab-Grown Diamonds*	63.0	NA	NA
Bhathwari Technologies Private Limited	156.0	NA	NA
SP3 Technologies LLP	82.3	51.4	NA
Maitri Lab-Grown Diamond Private Limited	123.0	NA	NA
Asian Lab Grown Diamonds LLP	157.0	175.9	NA

Source: Company annual filings, MCA reports, Wazir analysis

Note: Data represents financial year; NA - Information not available; *Bhanderi Lab Grown Diamonds financials represent the combined financials of its private entity, Bhanderi Lab Grown Diamond Private Limited, and its LLP entity, Bhanderi Lab-Grown Diamond LLP; Competitor benchmarking includes companies with turnover exceeding INR 50 crore; #V-Grown Tech Private Limited changed its legal name to KIRA Diam Tech Private Limited in January 2026

Formula adopted for the company and its peers: Net Working Capital (in days) is calculated as Average Net Working Capital divided by Revenue from Operation and multiplied by number of days in the financial year (365 days). Net Working Capital is defined as the difference between Current Assets and Current Liabilities. (Average Net Working Capital is calculated as the arithmetic average of opening and closing balance of Net Working Capital)

Formula adopted for Goldiam International Limited: Net Working Capital Days is calculated as Inventory Days (Inventory / COGS * No. of Days) Plus Receivables Days (Trade Receivables / Revenue from Operations * No. of days) minus Payable Days (Trade Payables / COGS * No. of Days). Goldiam International Limited financials have been sourced from its placement document (2025)