CBRE

Education Sector Industry Overview

Prepared for JV Ventures & Veld Capital

CBRE South Asia Pvt. Ltd.

Report Date: October 2023

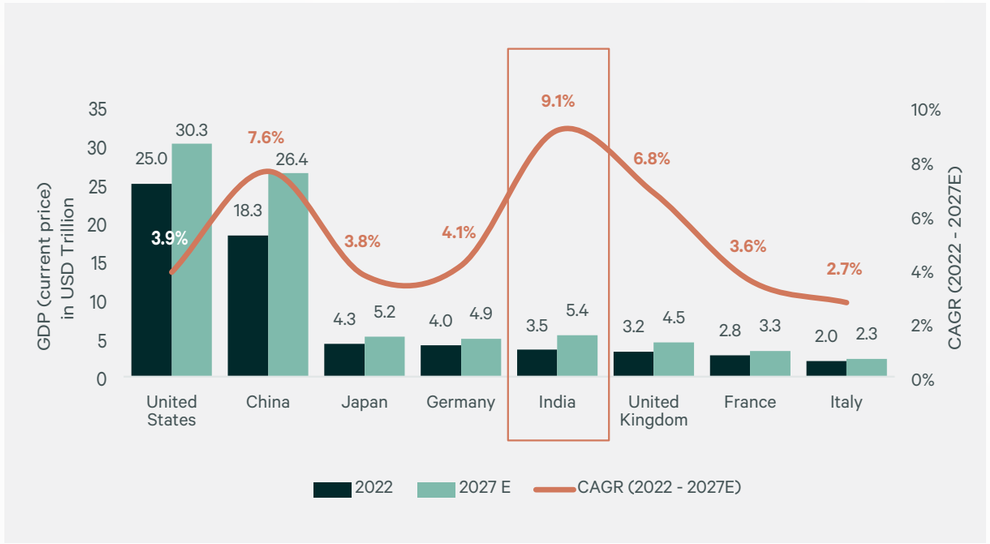
Contents

Executive Summary – K-12 Segment

ONE OF THE LARGEST & FASTEST GROWING ECONOMIES GLOBALLY

India is one of the fastest growing economies globally with an 8.7% growth witnessed in CY2021. At USD 3.5 trillion (current prices, 2022), it is the fifth largest economy and is expected to reach USD 5.4 trillion by 2027, surpassing Japan and Germany to be the third largest economy globally (Source: IMF).

FIGURE 1: India's economic size and growth vis-à-vis major economies

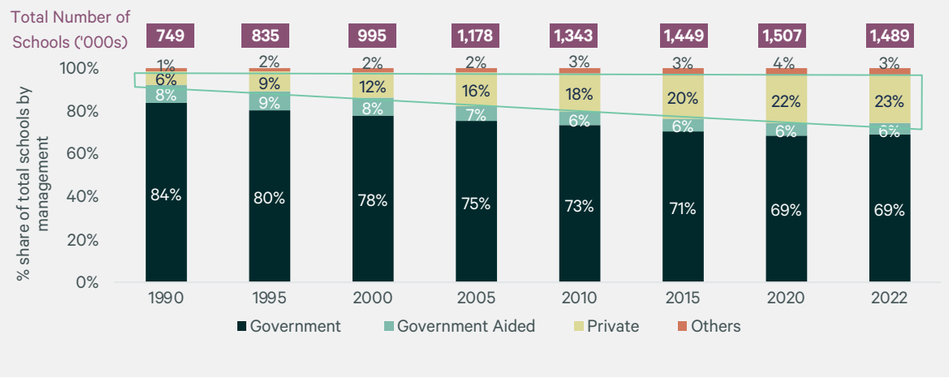


Source: CBRE, IMF

LARGEST K-12 EDUCATION SYSTEM IN THE WORLD WITH LIMITED REQUISITE PUBLIC INFRASTRUCTURE TO SUPPORT SCHOOLING

India is the largest K-12 education system in the world with over 265 million students enrolled in more than 1.49 million schools as of FY 2021-22. While majority of the schools in the country are government schools, due to underlying challenges of inferior physical infrastructure, lack of amenities & sports facilities, quality of education, limited experience and skill sets of teachers and inadequate student teacher ratio, public schools have witnessed higher dropout rates. Consequently, private schooling has witnessed a higher growth in the country. (Source: UDISE)

FIGURE 2: Split of total schools in India – Higher Y-o-Y growth witnessed in private schools



Source: CBRE, UDISE 2021-22

INCREASING PREFERENCE FOR PRIVATE K-12 EDUCATION OVER THE LAST FEW DECADES

India is the largest private K-12 market in the world growing at a CAGR of 11.2% between FY 2019-20 to FY 2021-22 for schools affiliated to national and international boards. The market size for K-12 private enrolment in India in Fiscal 2021-22 was 88 mn students which constitutes 33% of the total enrolment.

Source: UDISE 2021-22

FIGURE 3: Number of schools over the years

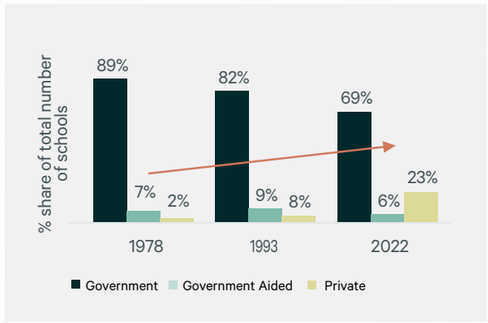
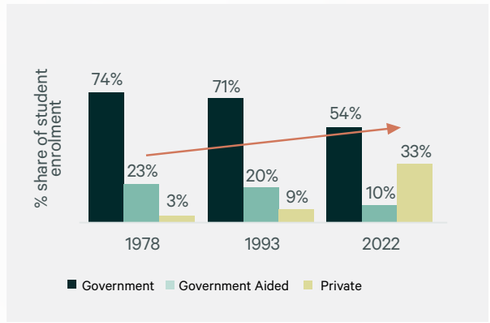


FIGURE 4: Enrolment over the years



Source: CBRE, UDISE 2021-22, Central Square Foundation - 'State of the Sector Report – Private Schools in India'

With 2% share in the overall schools in the country in 1978, private schools now account for approx. 23% of the total schools. Private enrolment levels have also grown from 3% to 33% during the same period. (Source: UDISE)

Schools affiliated to national and international boards such as CBSE[1], ICSE[2], IB[3], CIE[4] have grown at a CAGR of approx. 8%, from over 13,500 schools in 2010-11 to more than 32,000 schools in 2021-22. This growth in the private K-12 sector has been driven by:

- **Sustained preference of parents towards private schooling** – For quality education and holistic development of students

- **Rapidly Growing Economy** – With India being the fifth-largest economy in the world today, education sector will play a pivotal role in promoting the national economic growth.

- **Large Education Seeking Population Base** – With highest young population (5-19 years), in the world of approx. 372 mn, the Indian education sector has the highest education seeking population base.

- **Rapid Urbanization** – India is witnessing an increasing trend of population moving to urban areas with urban population share expected to grow from 35% as of 2021 to 43% by 2035.

- **Rising Per Capita Income** – India has witnessed a CAGR of approx. 4.7% over the last decade from USD 1,285 in 2011 to INR 1,937 in 2021, resulting in higher spending propensity towards better quality education.

EVOLVING ORGANISED PRIVATE K-12 LANDSCAPE AND INCREASING INVESTMENT TRENDS

The operating models of private schools have evolved from an asset heavy model to asset light model. New operating structures like the franchisee model and management contract model are being implemented, which provide requisite capital for business expansion and stable returns over a longer period.

The increasing penetration of school chains nationwide has brought in standardization, operational efficiency, innovative approach to learning, technology, and well-planned infrastructure.

1. Prominent operators active in the industry – **Cognita, Gems Education, Nord Anglia Education, Globeducate, Lighthouse and Crimson, etc.**
2. New operators planning to enter the Indian K-12 market – **Harrow International School** (in partnership with Amity Education Group), **American Eduglobal School** (in partnership with Edovu Ventures), **Wellington College International** (in partnership with Unison Group) and **Millfield School.**

[1]CBSE: Central Board of Secondary Education
[2]ICSE: Indian Certificate of Secondary Education
[3]IB: International Baccalaureate
[4]CIE: Cambridge Assessment International Education

The private education sector generates an estimated annual revenue of USD 27 bn in FY2022-23 and is expected to reach USD 99 bn by FY2032-33 growing at a CAGR of approx. 14%.

Based on market estimates, the Edu-Infra size is at 1.6 bn sft as of FY2022-23 and is expected to grow to 3.9 bn sft by FY 2032-33, growing at a CAGR of approx. 9%.

The real estate infrastructure investment opportunity with estimated market size of USD 73 bn in FY2022-23 is expected to register over 4x growth growing to USD 262 bn by FY2032-33.

FIGURE 5:

MARKET SIZE[5] - ANNUAL REVENUE (USD BN)

FIGURE 6:

K-12 EDU-INFRA SIZE (BN SFT)

FIGURE 7:

K-12 EDU-INFRA VALUE (USD BN)

Source: CBRE, UDISE 2021-22

Private K-12 refers to private schools affiliated to national and international boards.

Target set refers to private schools affiliated to national and international boards charging an annual fee of INR 60,000 and above.

KEY POTENTIAL INVESTMENT HOTSPOTS IN PRIVATE K-12 SEGMENT

CBSE Schools -

Uttar Pradesh, Haryana, and Delhi account for

30%

of the total CBSE schools in the country.

ICSE Schools -

Uttar Pradesh, West Bengal, and Karnataka account for

47%

of the total ICSE schools in the country.

International (IB/CIE) Schools -

Tamil Nadu, Maharashtra, and Karnataka have the largest international school footprint followed by Telangana accounting for

59%

of the total international schools.

5. CBRE estimates; Market Size by Revenue (USD Bn) of private schools affiliated to national and international boards

01

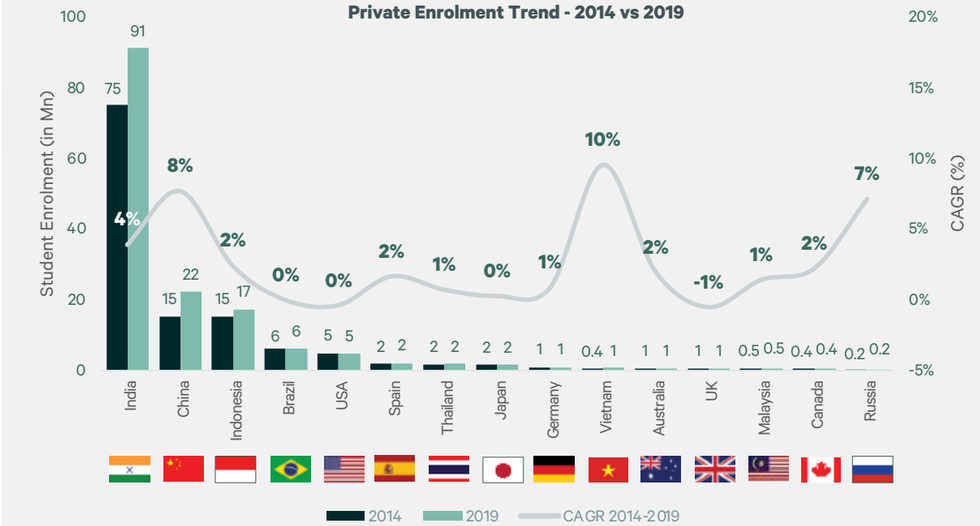
Global K-12 Education Overview

The K-12 system is an acronym for **"Kindergarten to 12th Grade"** and constitutes primary and secondary education that is attained prior to college education. It is estimated that **over 140 countries have adopted the K-12 education structure** as part of their education system, and as of 2019, approximately 1.3 billion students were enrolled in K-12 schools globally. Formal education primarily consists of three levels of education:

1.1. GROWING PRIVATE SCHOOLING TREND GLOBALLY

A growing phenomenon of private schooling has been witnessed across prominent economies in the recent past. While majority of the students are enrolled in public schools in developed economies, a higher growth has been witnessed in private school enrolment vis-à-vis public school enrolment between the years 2014 – 2019.

FIGURE 8: Student enrolment in private schools across prominent economies (in mn) – 2014 vs 2019



Source: Respective Country's Education Ministry, CBRE

1.2. OVERVIEW OF K-12 GLOBAL EDUCATION HUBS – KEY STATISTICS

TABLE 1: Key statistics - Global K-12 education hubs

	USA	UK	AUSTRALIA	GCC	ASEAN COUNTRIES			CHINA	INDIA
				UAE	INDONESIA	THAILAND	VIETNAM		
Total Population (Mn) (2021)	336.4	67.2	25.8	9.3	273.8	71.6	97.5	1,425.9	1,412 (2022)
Expenditure on Education as % of GDP (2020)	6.1%	5.5%	6.1%	3.9%	3.5%	3.1%	4.1%	3.6%	4.5%
Total No. of Schools	128,961 (2019)	24,454 (2022)	9,614 (2022)	1,219 (2018)	222,600 (2018)	77,600 (2021)	26,590 (2019)	523,861 (2021)	1,489,115 (2022)
No. of Private Schools	30,492 (2019)	2,394 (2022)	1,149 (2022)	580 (2018)	100,000 (2018)	4,928 (2021)	371 (2019)	184,849 (2021)	335,844 (2022)
% Share of Private Schools	23.6% (2019)	9.8% (2022)	12.0% (2022)	47.6% (2018)	44.9% (2018)	6.4% (2021)	1.4% (2019)	35.3% (2021)	22.6% (2022)
Total Student Enrolment (Mn)	53.86 (2019)	9.00 (2022)	4.04 (2022)	1.08 (2018)	37.10 (2018)	8.95 (2021)	17.75 (2019)	242.54 (2021)	265.24 (2022)
Total Private Enrolment (Mn)	4.65 (2019)	0.58 (2022)	0.64 (2022)	0.79 (2018)	17.22 (2018)	1.84 (2021)	0.68 (2019)	23.92 (2021)	88.27 (2022)
% Share of Private Enrolment	8.6% (2019)	6.5% (2022)	15.9% (2022)	73.4% (2018)	46.4% (2018)	20.5% (2021)	3.8% (2019)	9.9% (2021)	33.3% (2022)
Average Fee[6] in USD[7] (2022)	12,350	17,900	19,650	4,770	2,000	9,150	4,200	7,280	1,900

Source: CBRE, Government websites of respective countries
[6] Average Fee for Private Schools
[7] 1 USD = 80 INR

1.3. GLOBAL K-12 EDUCATION HUBS: KEY INSIGHTS

- Education in major economies like USA, UK and Australia are dominated by state / government-run schools.
  - **Australia, USA and UK spend approx. 5.5-6% of their GDP towards education in form of grants for infrastructure and subsidised fees.** This has resulted in a traditionally robust public-school infrastructure at par with private schools and better accessibility.
  - **These countries have historically witnessed a higher number of public-school enrolments** owing to the fact that the fee is highly subsidized along with the facilities and infrastructure in public schools being broadly at par with private schools
- Private schools in these developed nations have witnessed range bound growth in enrolment rates compared to public schools. Primary reason could be attributable to the significantly higher cost of education in private institutions making it less accessible. USA has witnessed flattish trend in private school enrolment while UK witnessed a negative trend.
- Australia has witnessed a positive trend in enrolment in private schools primarily due to increased funding to private schools under Schooling Resource Standard (SRS), a needs-based education funding legislation which was passed in 2017. 80% of Commonwealth fund is contributed to private schools funding under SRS.
- On the contrary, countries like India and UAE have a relatively higher enrolment in private schools, approx. 33% and 73% respectively.
  - **UAE has approximately 73.4% of its total enrolment in private schools.** As part of their Vision 2030, the country is encouraging private investments in the education sector to provide quality education to the local UAE students and the growing expat student base in the country.
  - **A higher share in private enrolments is witnessed in India on account of** better physical infrastructure, skilled teachers, holistic learning & development and better opportunities for higher education at college level.
  - China saw a rise in private enrolments till 2021 reaching a share of 9.9% of total enrolment. However, with the **government policy to restrict private participation** in school education, the **enrolments numbers are expected to decline.**
  - Like most countries, public education In Vietnam is free but there is an **additional charge for students who are not from poor background.** Additional fee called 'Social fee' is charged from students towards meals, infrastructure and construction, etc. This, combined with the **emergence of many private schools,** there has been a growth in number of **private school enrolments** over the past few years.

India is the largest education market in the world and also the largest private education market with over 88 mn students enrolled in private K-12 schools as of 2021-22.

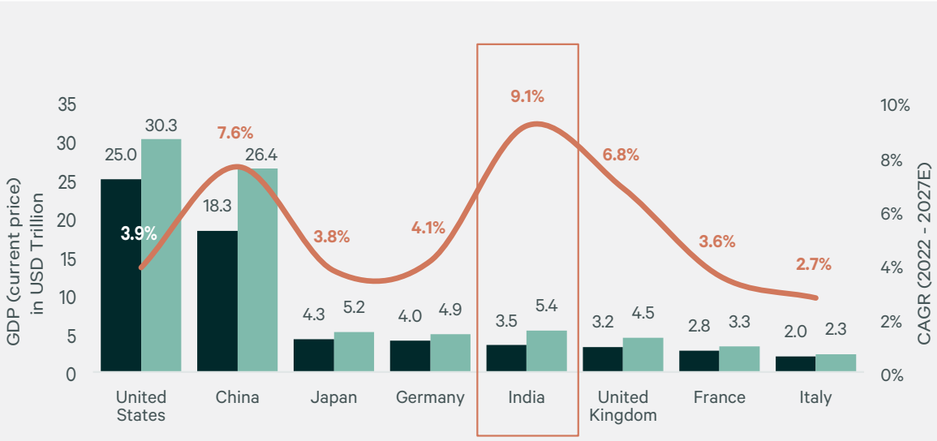
02

Indian Economy Overview

2.1. FASTEST GROWING ECONOMY GLOBALLY

India is the fifth-largest economy globally, seventh-largest country by area and the second-most populous country in the world. In FY2022, India's economy was estimated to be approximately US$ 3.5 trillion (representing approximately 3.7% of the world's GDP) growing at a CAGR of 6.7% over the last decade. By 2027E, the Indian economy is expected to grow by 9.1% CAGR and become a US$ 5.4 trillion economy.

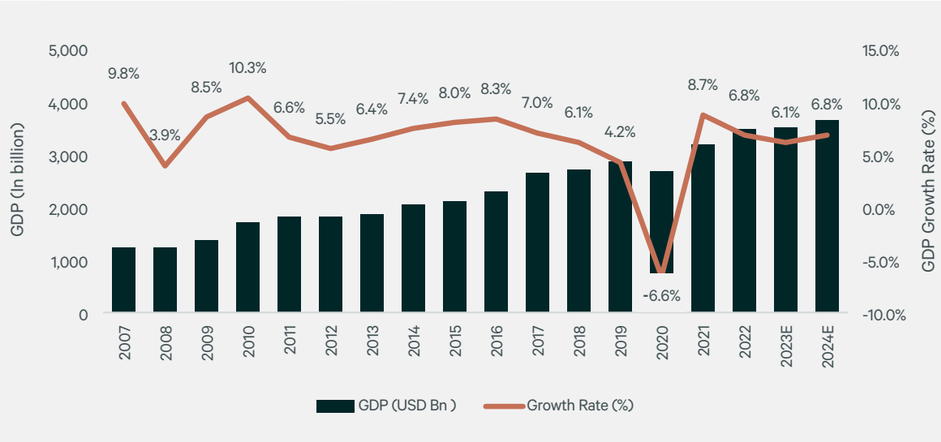
FIGURE 9: India's economic size and growth vis-à-vis major economies



Source: CBRE, IMF

For FY 2022, India had a GDP growth rate of 6.8% as compared to the world average of 3.2% demonstrating a strong economic rebound post Covid-19, which had impacted economies across the world over 2020 and 2021. Going forward, IMF projects a growth of 6.1% for 2023, recovering to 6.8% in 2024 as inflationary pressures ease and domestic demand increases.

FIGURE 10: A snapshot of India's GDP from 2007 – 2024E

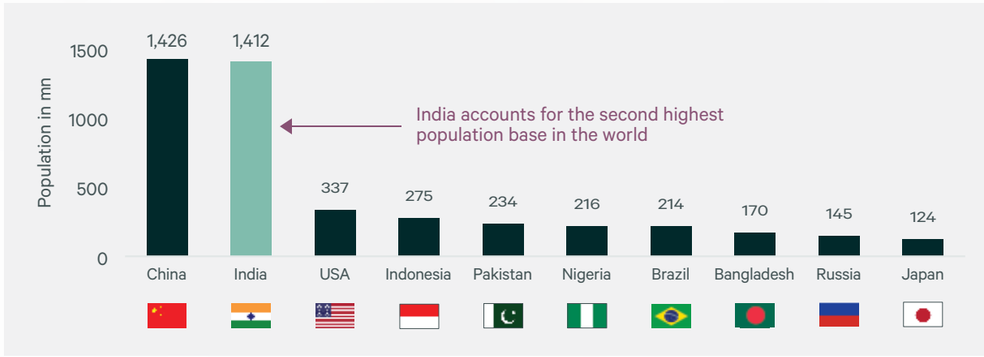


Source: CBRE, IMF

2.2. RAPIDLY GROWING HUMAN CAPITAL

India's population is estimated at 1.41 bn as of 2022, depicting a decadal growth of 15% from 2011 to 2022 and is expected to overtake China as the most populous nation in the world by 2023. As of 2022, approximately 372 mn, 26% of the population is in the age group of 5-19, which makes it the country with the largest education-seeking population base globally. The education sector in the country will be a key beneficiary of the long-term growth drivers like favourable age demographics.

FIGURE 11: India's population base comparison



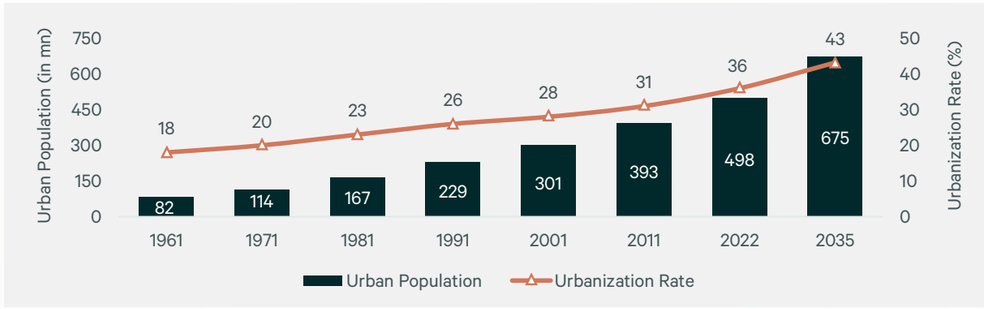
Source: CBRE, United Nations Estimate 2022

2.3. RAPID URBANIZATION

India's urban population is expected to grow from 36% of the total population in 2022 to 43% in 2035. Urban areas offer better job opportunities and a relatively higher pay in turn increasing the spending propensity. Further, urban areas also provide better access to quality education leading to higher spend on education.

High influx of population to urban areas coupled with a growing middle class and quality education expectation by parents presents ample opportunities for private players in the sector.

FIGURE 12: India's urban population (in mn) and urbanization rate



Source: CBRE, World Bank

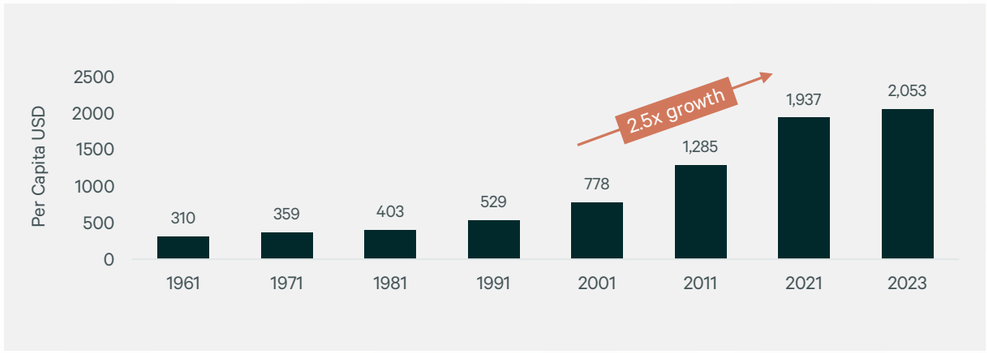
The Smart Cities mission aims to facilitate this rapid urbanisation through development of 100 smart cities and modern satellite towns around the existing cities. These smart cities will create new urban pockets thereby creating the need for new schools at these locations. Smart cities will rejuvenate several Tier-II cities, making them a more attractive destination thereby stimulating economic growth in India. Few proposed smart cities include Bhubaneshwar, Pune, Jaipur, Indore, New Delhi, Chennai, Lucknow, Raipur, Nagpur, Kanpur and Varanasi among others.

2.4. PER CAPITA INCOME TREND

GDP per capita of India has witnessed significant growth over the past two decades registering approx. 2.5x growth between 2001 and 2021. At constant prices, the GDP per-capita is expected to reach USD 2,053 by the end of 2023. Urban population contributes to 63%[8] of India's GDP and as per estimates, urban GDP per capita is at USD 4,016 compared to rural GDP per capita of 1,279.

With the increase in the per capita income and consequently disposable income, there will be increasing affordability for quality education which is being primarily serviced by private sector. This will further boost investments in private K-12 segment.

FIGURE 13: India's GDP per-capita at constant prices (at 2015; in USD)

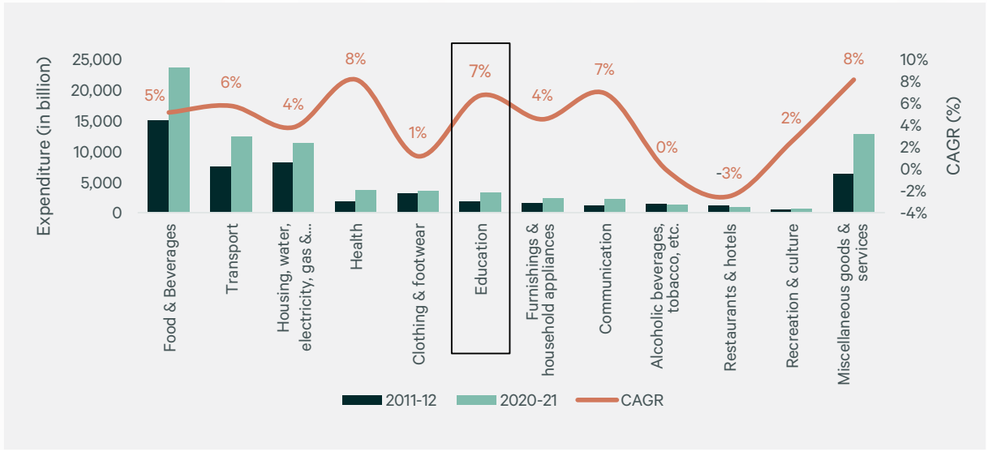


Source: CBRE, World Bank 2021

2.5. PRIVATE FINAL CONSUMPTION EXPENDITURE

Private Final Consumption Expenditure (PFCE) incurred on education has witnessed faster growth than the overall PFCE. While the overall PFCE has grown at a CAGR of 5%, from INR 49,360 billion in 2011-12 to INR 77,493 billion in 2020-21, the private consumption expenditure towards education has grown at a CAGR of approx. 7%, from INR 1,824 billion in 2011-12 to INR 3,258 billion in 2020-21.

FIGURE 14: India's private final consumption expenditure of households

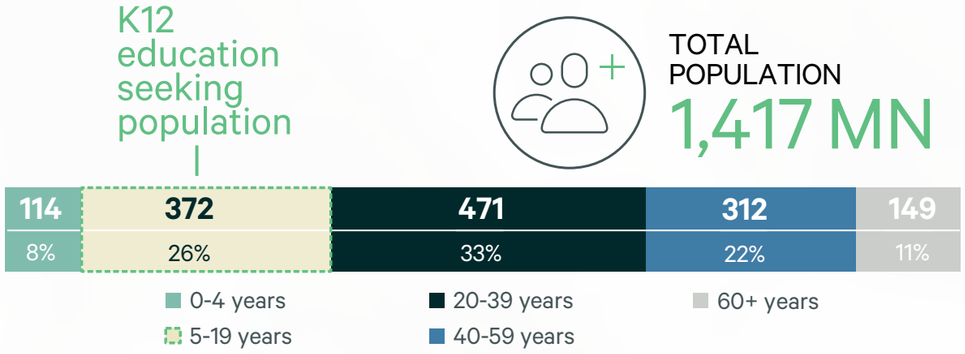


Source: CBRE, World Bank
[8]India 2030: CREDAI-CBRE Report

03

Indian K-12 Education Segment

FIGURE 15: India - age wise population break-up (mn)

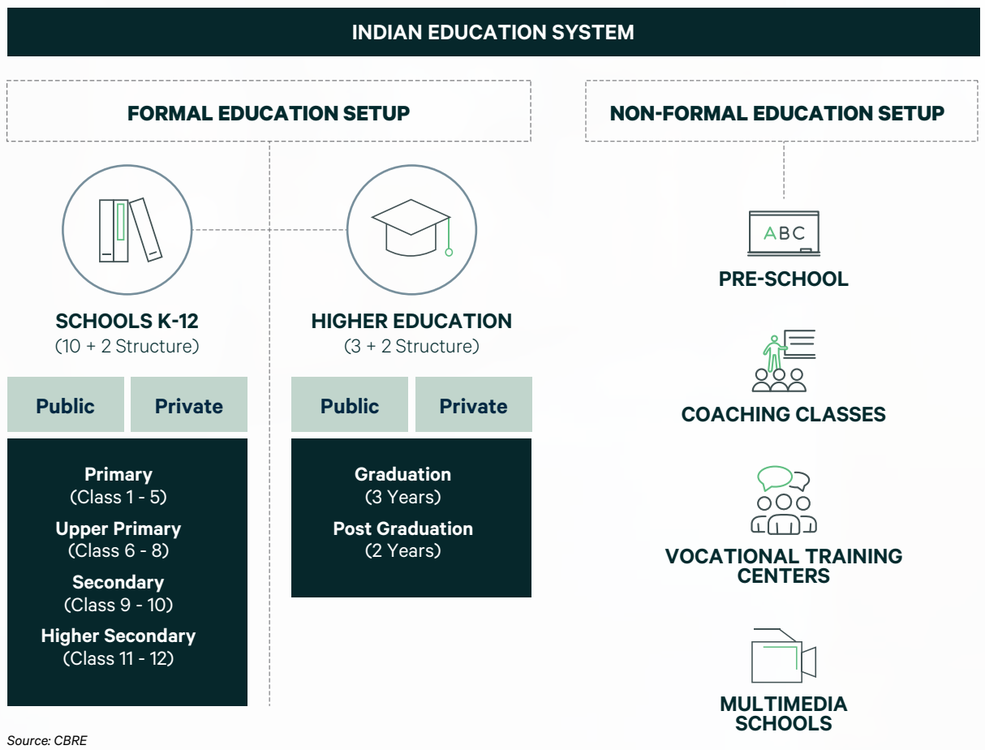


With the second largest population base of approx. 1,417 mn (2022), India is home to the largest and most diverse education system in the world with education seekers of over 372 mn in the country within 5-19 years age.

Source: Population.org, CBRE; Data as of 2022

3.1. STRUCTURE OF INDIA'S EDUCATION SECTOR

FIGURE 16: Structure of Indian education sector

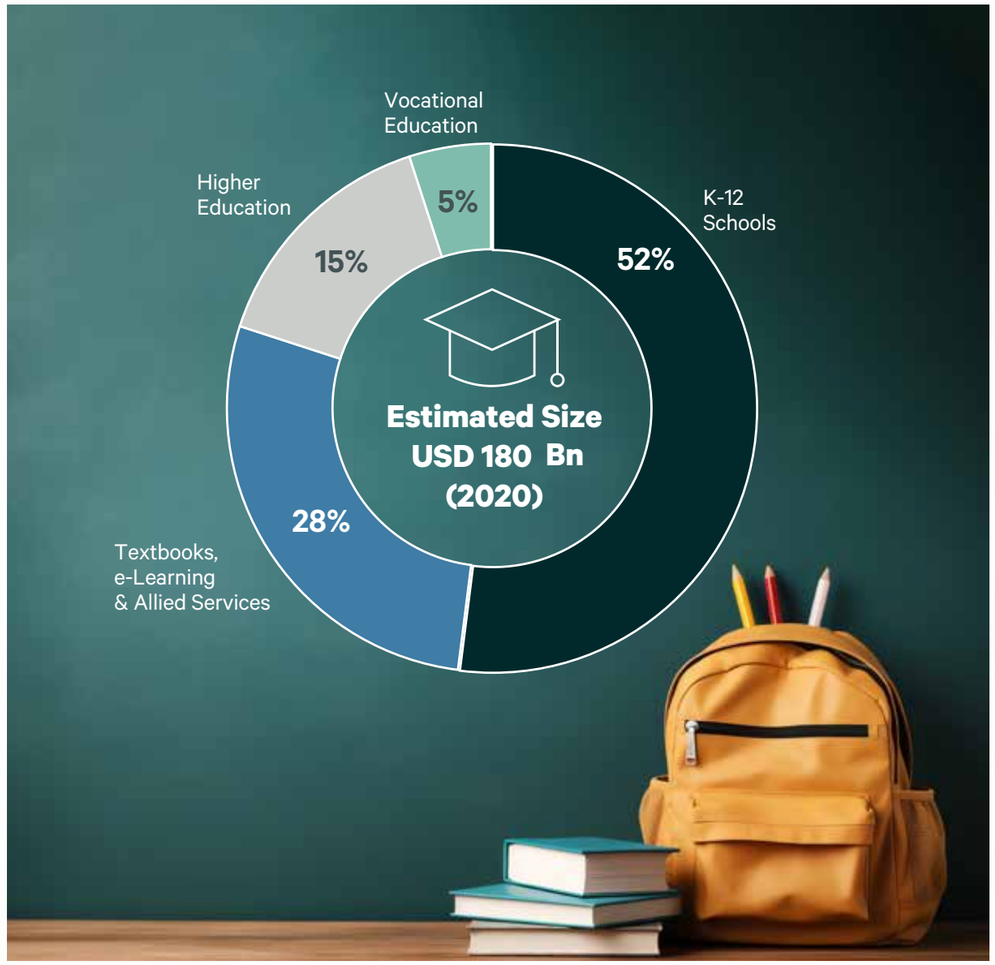


Source: CBRE

Education in the country is the responsibility of both the centre and state government. At present, the education structure of 10+2 is further bifurcated in four levels as highlighted in the chart above. In addition, other educational formats such as pre-schools, coaching classes, vocational training centres, and multimedia schools have also been developed as a non-formal set up.

3.1.1. EDUCATION INDUSTRY MARKET SIZE

FIGURE 17: Percentage share of education sector



India's education industry was estimated at USD 180 Bn in 2020 with K-12 school segment accounting for the highest share of approx. 52% at USD 94 Bn. Further, the Indian education industry is expected to reach USD 225 Bn by 2025.

As of 2022-23, the market size of private K-12 segment affiliated to national and international boards is estimated at USD 27 Bn and is further expected to reach USD 35 Bn by 2024-25.

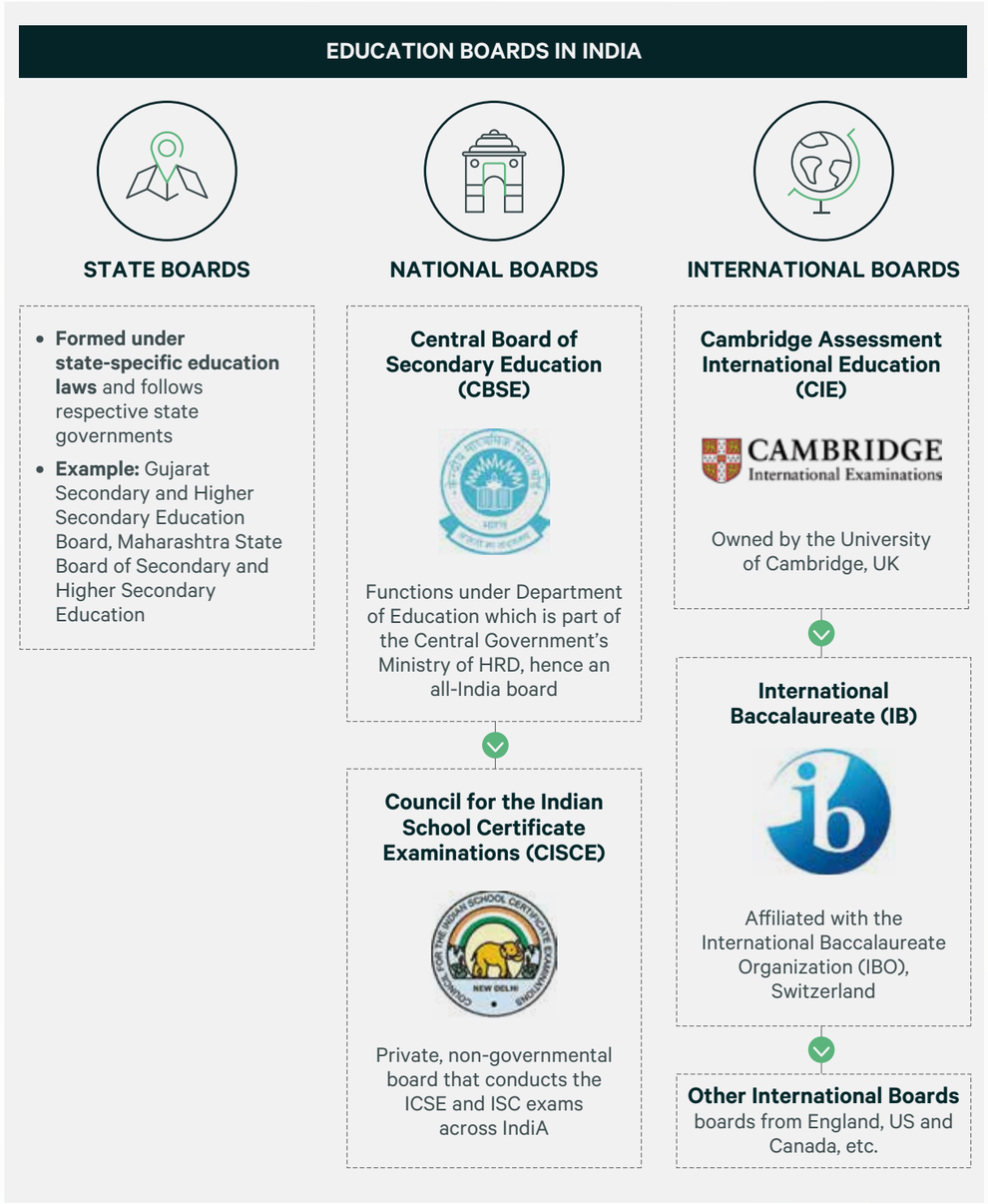
*Source: Technopak, VC Circle, *CBRE estimates*

[$]CBRE estimates; Market Size by Revenue (USD Bn) of private schools affiliated to national and international boards

3.1.2. SNAPSHOT OF EDUCATION BOARDS

There are over 30+ education boards in India, most amongst them being respective state boards followed by national boards viz. CBSE and ICSE and international boards, viz. IB and CIE. These boards govern aspects such as entity format, minimum land and infrastructure requirement, faculty-student ratios, corpus funds, admission, and fee structures. Education boards in India can be segregated under the state, national and international categories as depicted in the following figure:

FIGURE 18: Education boards in India



Source: CBRE

TABLE 2: Brief comparison of curriculum across boards

Parameters	CBSE	ICSE	CIE	IB
Founded in year	1962	1958	1858	1968
Headquarters	New Delhi, India	New Delhi, India	Cambridge, UK	Geneva Switzerland
Governance	Union Government of India	Private, Non-Governmental Board of school education in India	University of Cambridge	Non-profit educational foundation, led by Board of Governors
Number of Schools (2022)	28,445	2,743	571	156
Ownership of schools (Public /Private)	**1. PRIVATE -** run by registered companies /societies /trust)	**PRIVATE** - run by registered companies / societies /trust)	**PRIVATE** - run by registered companies /societies /trust)	**PRIVATE** - run by registered companies /societies /trust)
	2. PUBLIC – run by govt. departments (govt. & govt. aided schools)			
Curriculum In-charge	**NCERT Curriculum Framework** (National Council of Educational Research and Training)	**CISCE Curriculum** (Council of Indian School Certificate Examinations)	**Cambridge Pathway -** curriculum framework for the five academic programs	**IB Curriculum -** framework for the four programs

Source: CBRE; Data as of September 2022, respective boards' website

Under the formal education system, K-12 schools are further segmented by ownership, management and board of affiliation as highlighted in the table below:

TABLE 3: K-12 by ownership, management and affiliation

Parameters	Government Schools	Government Aided Schools	Private Schools
Ownership	Government	Private	Private
Management	Financed & managed by government	Financed & partly managed by government	Financed & managed by private management only
Affiliation	**National Boards** • Central Board of Secondary Education (CBSE) • Council for the Indian School Certificate Examinations (CISCE)	**National Boards** • Central Board of Secondary Education (CBSE) • Council for the Indian School Certificate Examinations (CISCE)	**National Boards** • Central Board of Secondary Education (CBSE) • Council for the Indian School Certificate Examinations (CISCE)
	State Boards – state specific boards under Department of Education	**State Boards** – state specific boards under Department of Education	**State Boards** – state specific boards under Department of Education
	International Boards – NA (only private schools are affiliated to international boards)	**International Boards – NA** (only private schools are affiliated to international boards)	**International Boards** CAMBRIDGE International Examinations edexcel

TYPES OF SCHOOLS IN INDIA:

1. Government Schools – It is owned, operated, and wholly financed by either the central or state government. The government is in charge of the curriculum, study materials, fee structure, syllabus, faculty norms and examinations. All schools operated by the following bodies fall under government schools:

a. Department of Education	g. Central Tibetan School
b. Tribal Welfare Department	h. Social Welfare Department
c. Local Body	i. Ministry of labour
d. Other Govt. managed schools	j. Kendriya Vidyalaya/ central school
e. Sainik School	k. Jawahar Navodaya Vidyalaya
f. Railway School	

2. Government Aided Private Schools – These includes government aided or private aided institutions which receive regular maintenance grant from the government, local body or publicly authority. Although the private management controls the curriculum, study materials, syllabus, and examinations it follows the academic rules and regulations as defined by the government. Recruitment of faculties are also dependent on the norms of government schools.

3. Private Schools – They are managed by an individual or a private organization and do not receive maintenance grant either from the government, local body, or any public authority. Private schools are subject to government rules and regulations, specifically in monetary aspects. School curriculum and admission criteria is designed by the management.

3.2 GROSS ENROLMENT RATIO (GER) TRENDS

GER compares the enrolment in a specific level of education to the population of the age-group which is most age-appropriate for that level of education. For example, the GER of primary level is student enrolment in class 1 to 5 expressed as a % of population in age group of 6-10 years. GER greater than 100% indicates presence of over or under-age children in a particular segment of education. (Source: UDISE)

An increase in gross enrolment ratio has been observed at all levels of education between the periods 2018-19 to 2021-22. Higher secondary and upper primary levels registered the highest growth during the said period of 7.5% and 7% respectively.

TABLE 4: K-12 by ownership, management and affiliation

Education Level	2018-19	2021-22
Primary (1-5)	101.3	103.4
Upper Primary (6-8)	87.7	94.7
Secondary (9-10)	76.9	79.6
Higher Secondary (11-12)	50.1	57.6

While GER has increased over the years, a drop in GER is witnessed as the level of education progresses attributable to factors such as:

1. Students dropping out at higher levels to economically support family.
2. Lower number of schools offering higher levels of education, only 20% of total schools in the country offer education upwards of elementary level (above class 8)
3. Lower accessibility to schools offering various levels of education.

3.3. SCHOOLS AND ENROLMENT TRENDS IN INDIA

As of 2021-22, India had approximately 1.49 mn schools comprising of a 23% share for private schools enrolling approximately 88.3 mn students (33% of the total K-12 student base).

The figure below highlights the total number of schools and enrolment split in the country:

FIGURE 19: Number of schools split by management

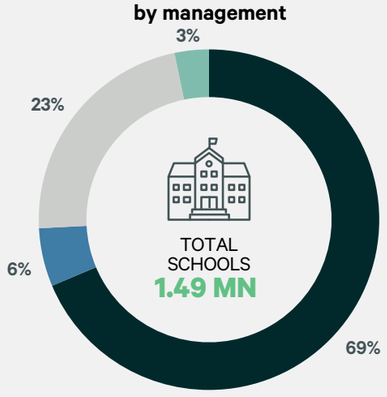
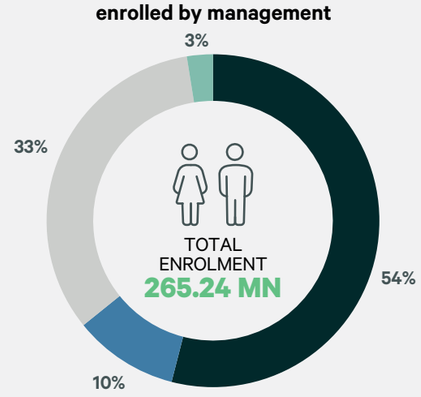


FIGURE 20: Number of students enrolled by management



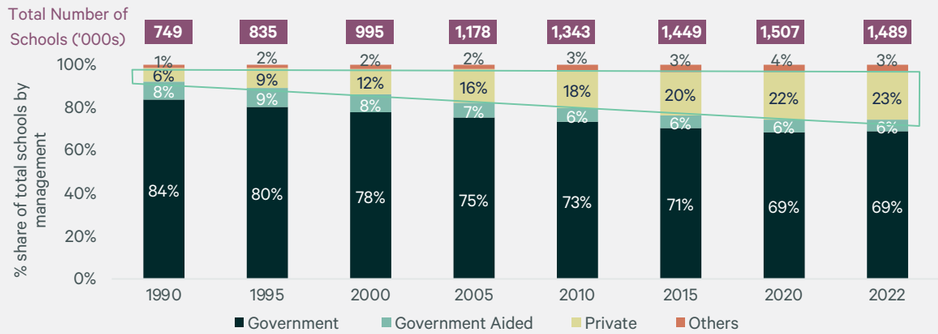
Source: CBRE, UDISE 2021-22

Private schools have grown 7x between 1990 to 2022 compared to a 2x growth in government schools during the same period. Share of private school has increased from 6% in 1990 to over 23% in 2022, while government schools declined from 84% to 69% during the same period.

For the purpose of study, the **report covers private schools** in subsequent sections and private schools affiliated to national and international boards which is the relevant target set for this market sizing.

The figure below highlights of the share of total schools by management type:

FIGURE 21: Split of government, government aided & private schools



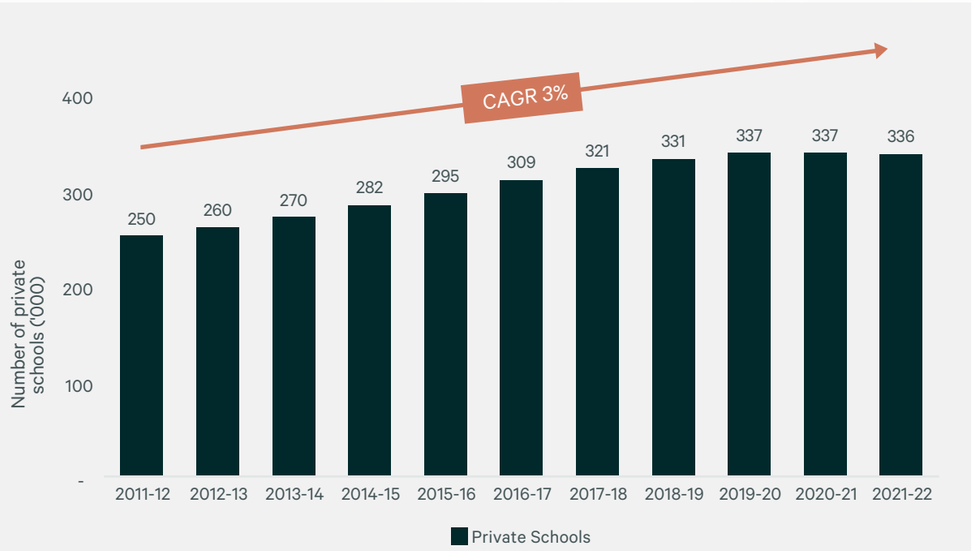
Source: CBRE, UDISE 2021-22

Source: CBRE, UDISE 2021-22

India is the largest private K-12 market in the world with approx. 0.34 mn private schools growing at a CAGR of 3% between FY 2011-12 to FY 2021-22.

The figure below highlights the growth in private schools affiliated to all education boards including state boards over the years:

FIGURE 22: Growth in private schools



Source: CBRE, UDISE 2021-22

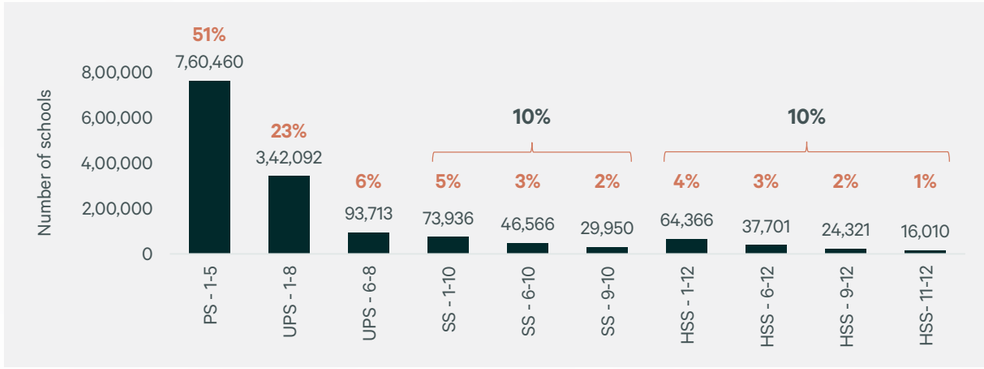
While India has over 1.49 mn schools, only 4% of these schools offer all levels of educations i.e., classes 1 – 12.

Further, 81% of the total schools offer only elementary education i.e., upto class 8, 10% offer secondary (upto class 10) and 10% higher secondary level of education (upto class 12).

The above statistics is indicative of an existing need gap in the sector for schools providing comprehensive K-12 education i.e., all levels of education.

The graph below depicts the share of schools by the levels of education offered:

FIGURE 23: School share split by level of education

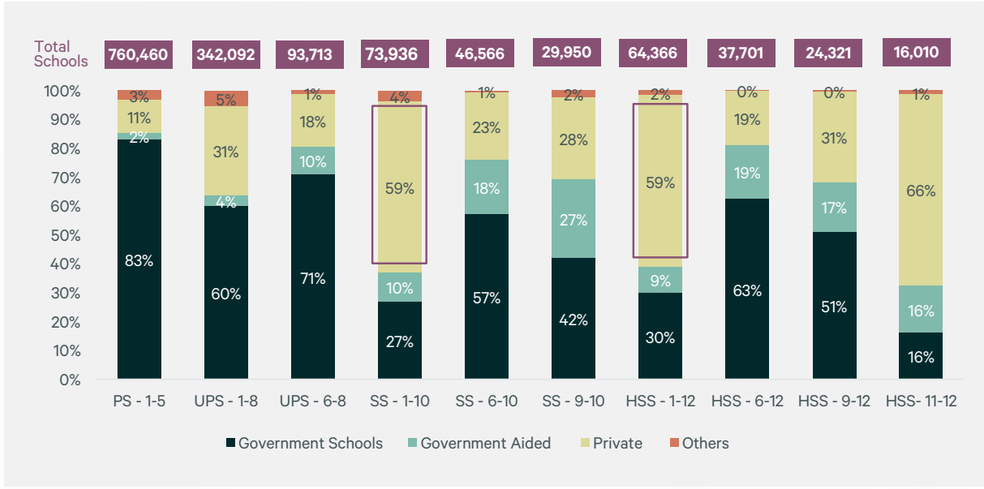


Source: CBRE, UDISE 2021-22; PS – Primary School, UPS – Upper Primary School; SS – Secondary School; HSS – Higher Secondary School

Private schools account for a higher share for schools that offer entire 1-12 levels of education. For instance, private schools account for 59% of the schools that offer classes 1 – 10 and classes 1 – 12.

The graph below further depicts the share of schools by management type across various levels of education.

FIGURE 24: School share split by level of education and management type

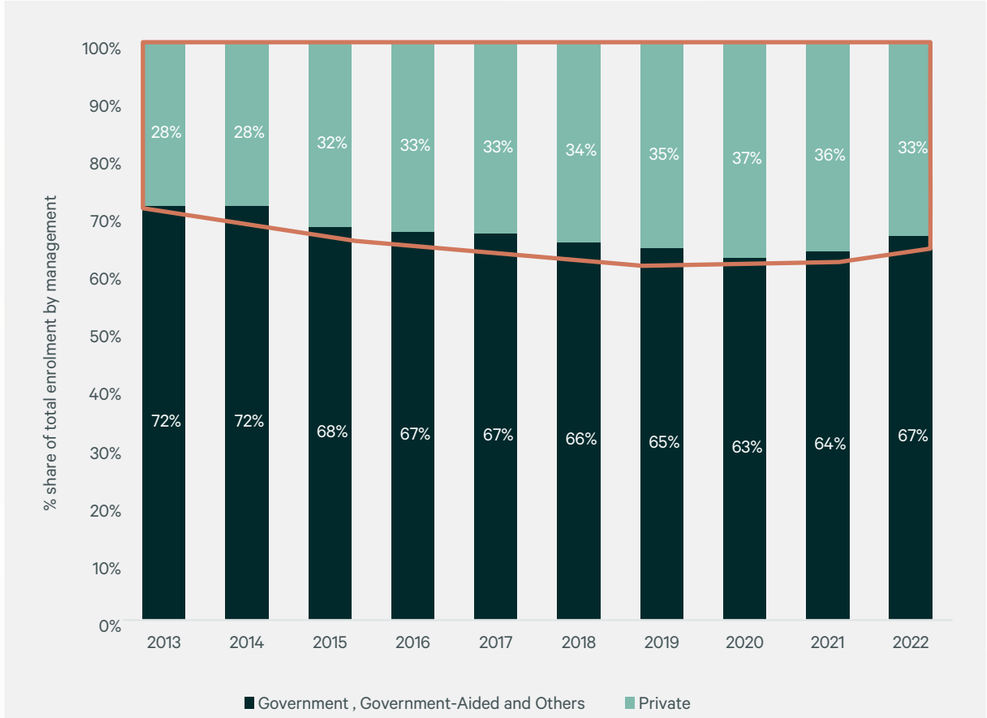


Source: CBRE, UDISE 2021-22; PS – Primary School, UPS – Upper Primary School; SS – Secondary School; HSS – Higher Secondary School

In terms of enrolment trends, private school share in total enrolments has increased from approx. 28% in 2013 to over 33% in 2022, while enrolments in other school categories declined from approx. 72% to less than 67% during the same period.

The following graph highlights the share of total enrolment by management type:

FIGURE 25: Split of government, government aided & private enrolment



Source: CBRE, UDISE 2021-22

Expenditure on private education is a non-discretionary spend of an average family's income. Due to behavioural and/or social factors, students enrolled at kindergarten level, stay enrolled in a school for an average of 7 to 9 years. This results in greater visibility of potential revenue streams for school operators, and by and large, school revenues have steadily increased, even after accounting for fee moratoriums or exemptions granted during COVID -19.

Top 10 states account for 70% of the total schools in the country while in terms of private schools, top 10 states account for 79% of the total private schools.

FIGURE 26: States wise split of schools (top 10 states)

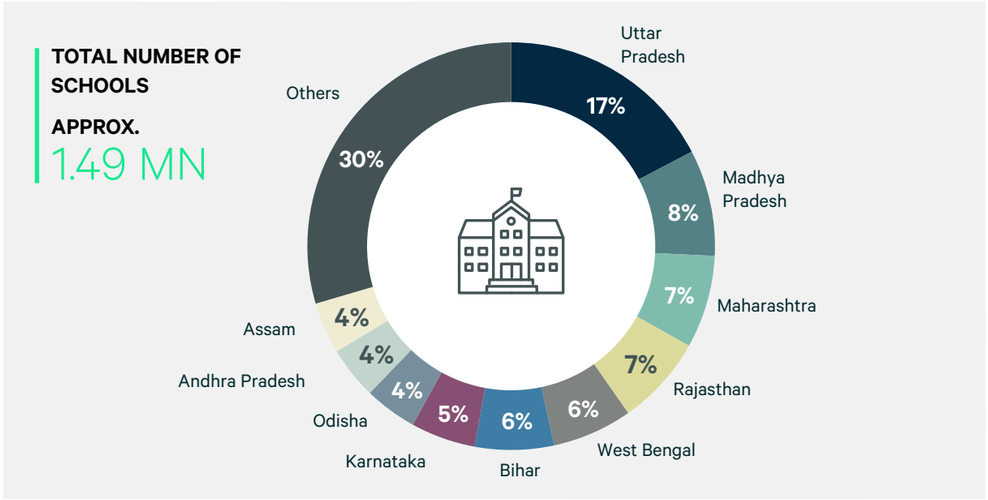
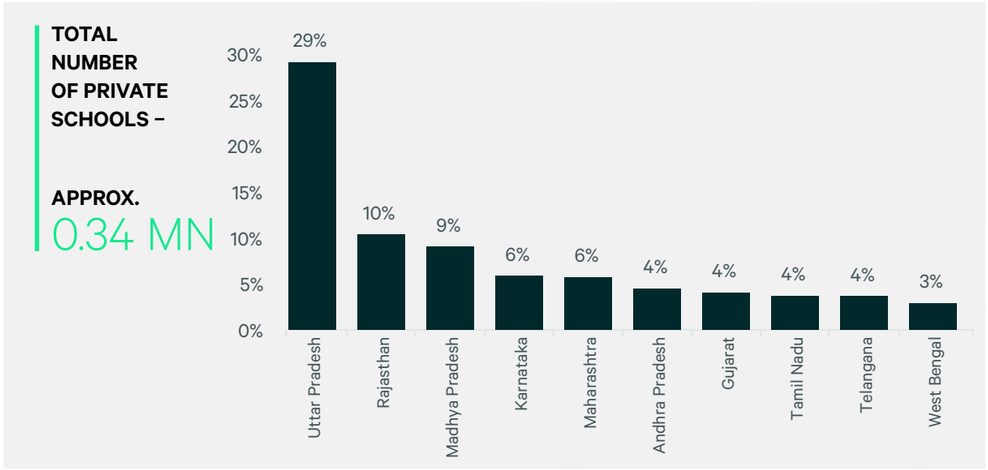


FIGURE 27: States with high concentration of private schools



Source: CBRE, UDISE 2021-22

Top 10 states account for 73% of the total enrolment in the country while in terms of enrolment in private schools, top 10 states account for 75% of the total private enrolment.

The market size for K-12 private enrolment in India in Fiscal 2021-22 was 88 mn students which constitutes 33% of the total enrolment

FIGURE 28: States wise split of enrolment (top 10 states)

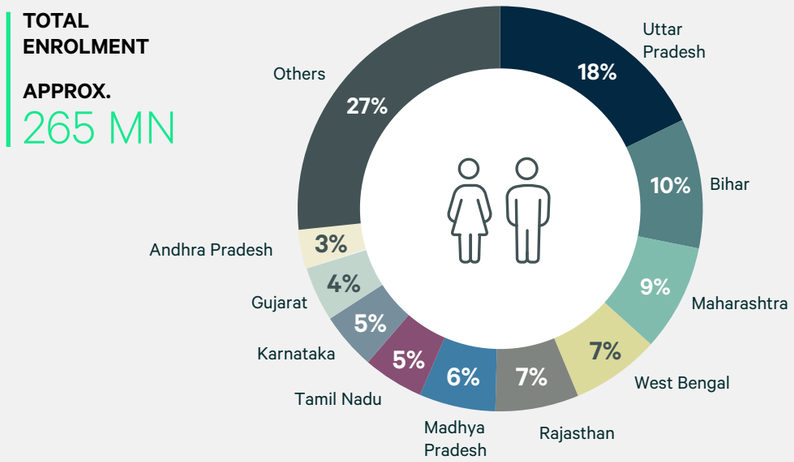
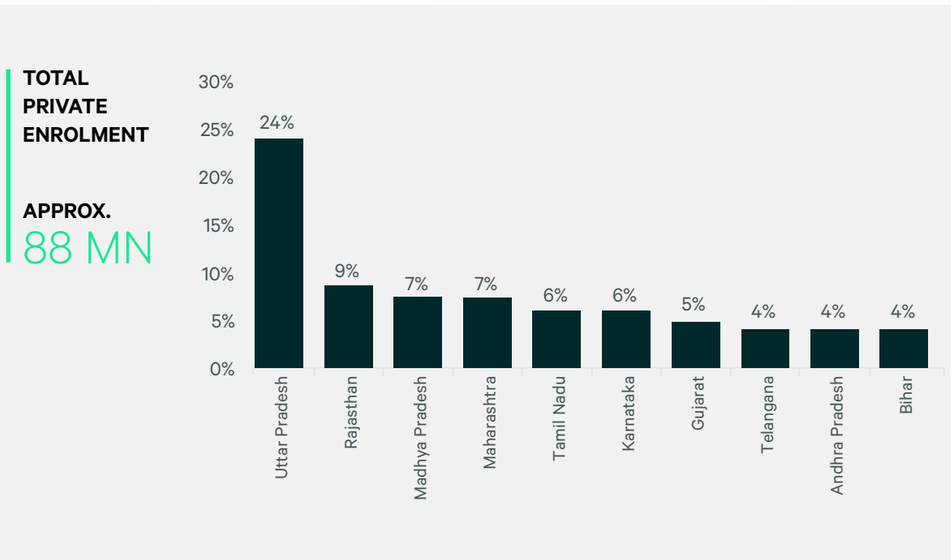


FIGURE 29: States with high concentration of enrolment in private schools



Source: Source: CBRE, UDISE 2021-22

Source: CBRE, UDISE 2021-22

3.4. EVOLUTION OF PRIVATE EDUCATION IN INDIA

Over the last 3 decades, private K-12 segment has grown significantly from 8% to 23% share in schools and from 9% to 33% share in students' enrolment in private schools.

The graphs below highlight the change in share of schools and enrolment by management type over the last 4 decades:

FIGURE 30: Number of schools over the years

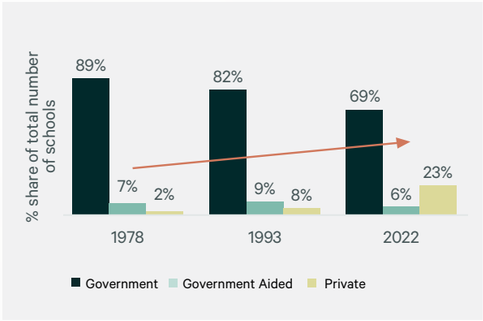
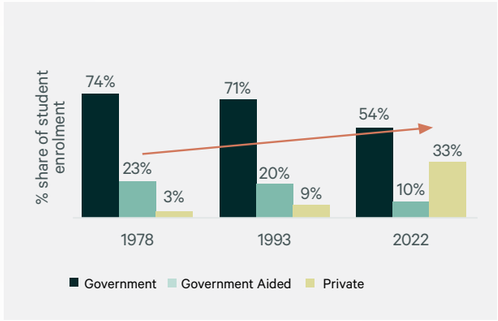


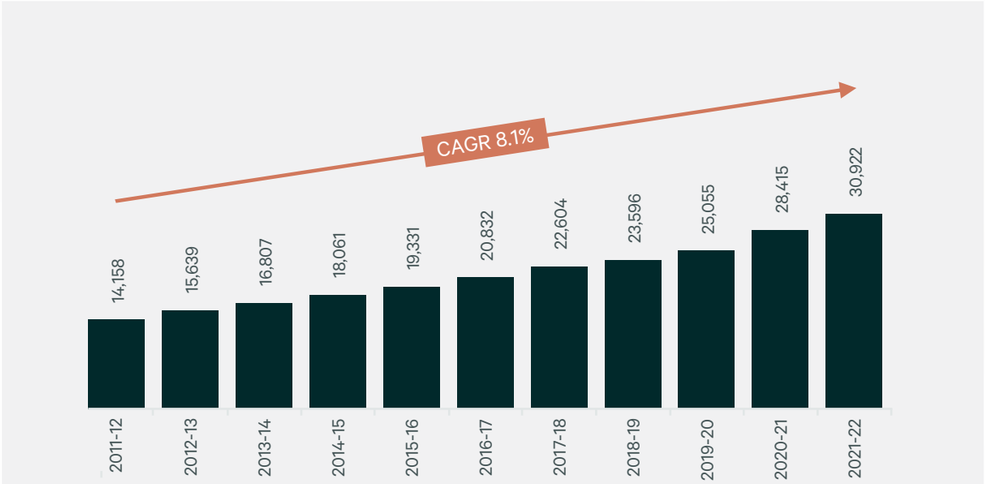
FIGURE 31: Enrolment over the years



Source: CBRE, UDISE 2021-22; Central Square Foundation - 'State of the Sector Report – Private Schools in India'

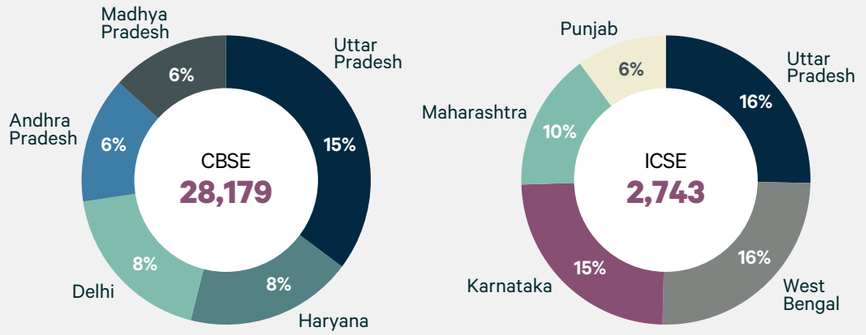
There are over 30+ education boards in the country with majority of the schools being affiliated to state boards followed by national boards such as CBSE and ICSE. The schools affiliated to national boards have witnessed a phenomenal growth of approx. 8.1% CAGR over the last decade.

FIGURE 32: Number of CBSE & ICSE schools



Source: CBRE, CBSE & ICSE websites

FIGURE 33: States with high concentration of CBSE & ICSE schools



Source: CBRE, CBSE & ICSE websites

The figure below represents the spatial spread of CBSE & ICSE schools in India:

FIGURE 34: Spatial spread of CBSE schools

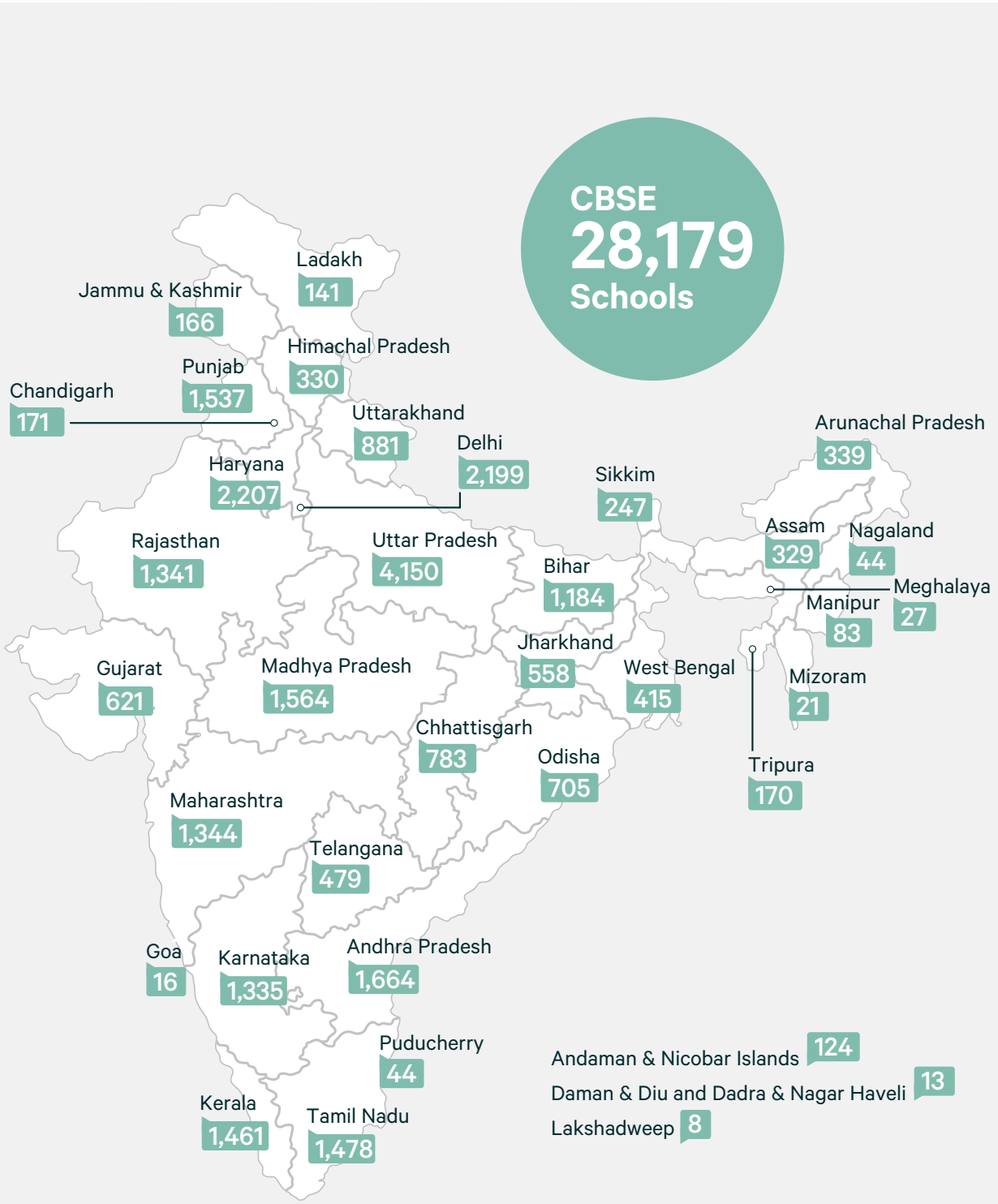
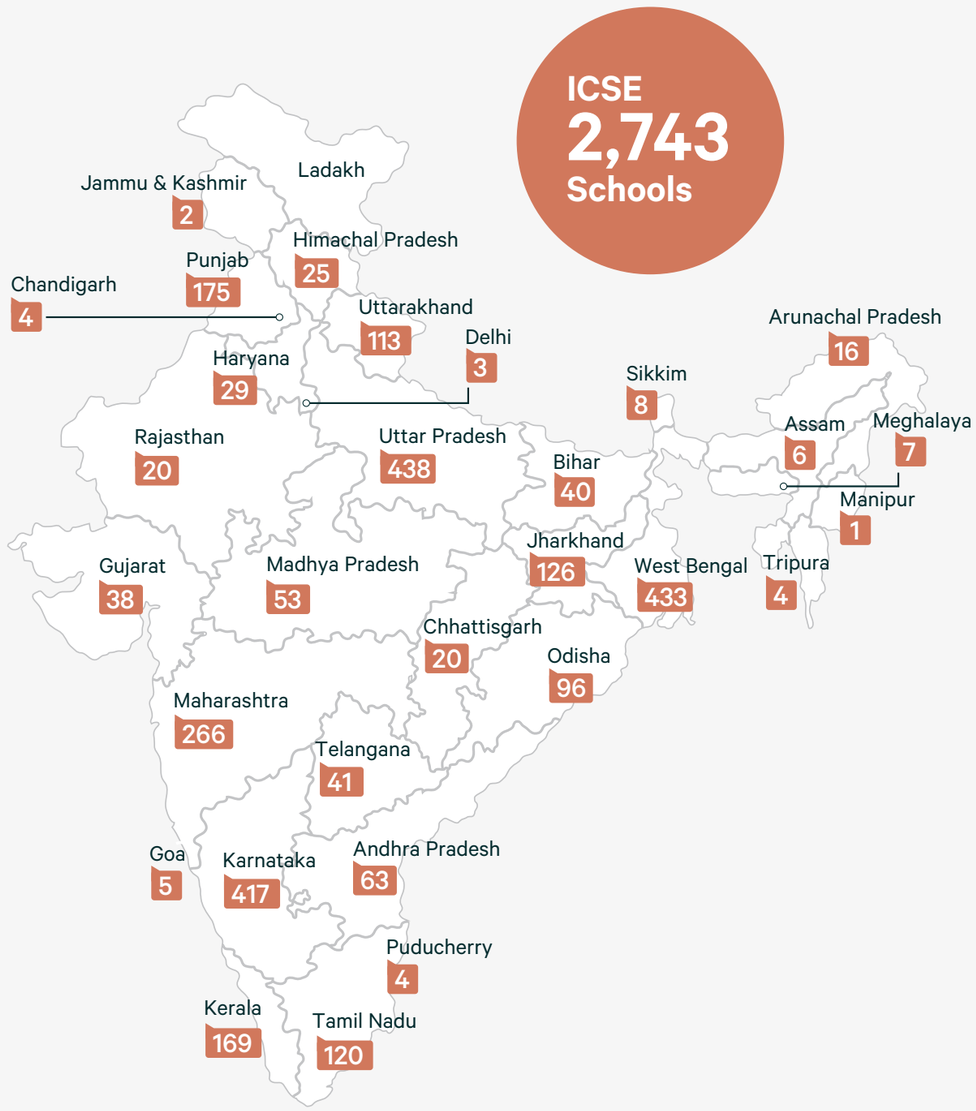


FIGURE 35: Spatial spread of ICSE schools



Source: CBRE, CBSE & ICSE websites

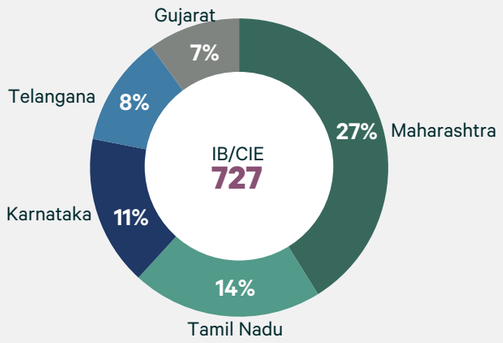
EMERGENCE OF INTERNATIONAL BOARDS

While state and national boards are popular and widespread in the country, over the past few years a large number of schools in India have been tying up with international boards given the rapid economic growth stimulating strong demand for private, international education among India's growing middle class. Prominent international boards in India are **Cambridge International Examinations (CIE), International Baccalaureate (IB) and Edexcel Examination Board.**

Key factors for the growing preference towards international schools are:

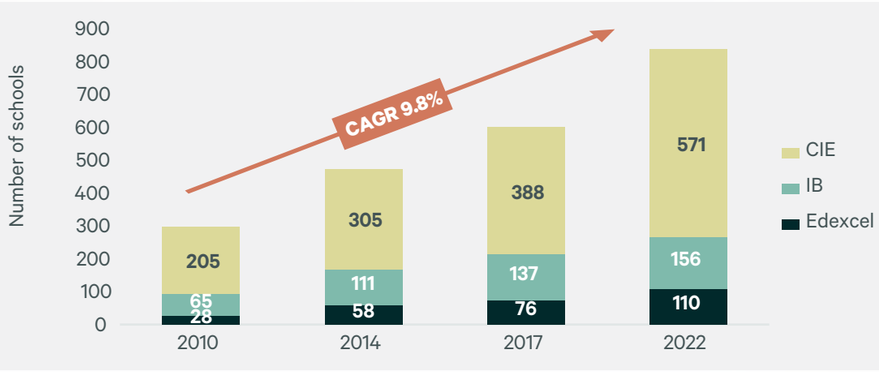
- Surge in students migrating to other countries for higher studies, from 0.45 mn in 2017 to 0.65 mn in 2022, registering a 7% compounded annual growth rate.
- Rising middle class population with international awareness and aspirations
- Increasing personal disposable income and propensity to spend for better quality
- Increasing acceptance of international board students by Indian universities

FIGURE 36: States with high concentration of IB & CIE schools



Source: CBRE, CBSE & ICSE websites

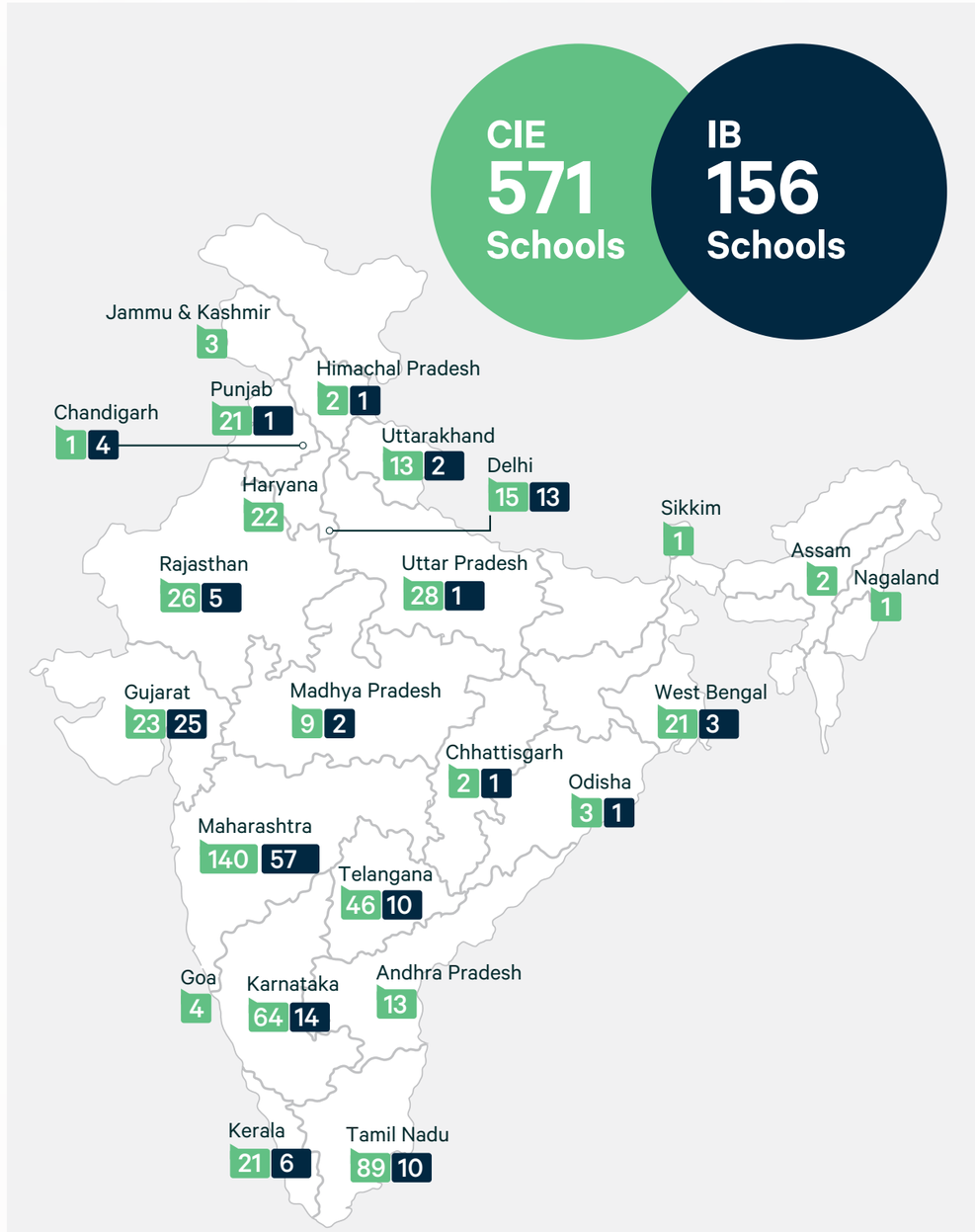
FIGURE 37: Growth of International schools



Source: CBRE, Respective boards' website

The figure below represents the spatial spread of CIE & IB schools in India:

FIGURE 38: Spatial spread of CIE schools and IB schools



Source: CBRE, Respective boards' website

3.5. CLASSIFICATION OF SCHOOLS BASED ON INFRASTRUCTURE, AMENITIES AND FEE RANGE

While the primary aim of an educational institution is to impart knowledge, the way of imparting knowledge has evolved tremendously over the years. A shift from traditional teaching /learning methods to activity-based learning is observed in current times. In addition, the infrastructure and amenities provided as part of K-12 schools is also constantly evolving.

Further, the teaching methods, physical infrastructure and amenities & facilities offered as part of schools today vary based on the fee chargeable. A clear distinction in infrastructure and amenities /facilities offerings is observed for different fee levels. The offerings as part of K-12 schools can broadly be defined as under:

Academic based infrastructure

Library, Computer labs, Science labs, Digital boards, Innovative labs, ICT labs, Biotechnology labs, STEM labs, etc.

Sports & Facilities (Indoor and Outdoor)

Cricket, Football, Basketball, Swimming Pool, Gymnasium, Skating Rink, Badminton, Table Tennis, Taekwondo, Martial Arts, Karate, Carrom, Chess, etc.

Extracurricular Activities

Music Room, Dance Room, Auditorium, Amphitheatre, Visual Arts Studio, etc.

Eating /Dining Facilities

Cafeteria, Dining Halls, Multicuisine Mess.

Medical Facilities

Infirmary / Medical Rooms, Wellness Centres

Based on the above offerings, in terms of number of offerings and also the quality, a variance in the fee chargeable is witnessed. Five broad fee categories identified are:

1. Less than INR 60,000 per annum
2. INR 60,000 - 120,000 per annum
3. INR 120,000 - 225,000 per annum
4. INR 225,000 - 300,000 per annum
5. More than INR 300,000 per annum

The following figure highlights broad classification of schools based on the fee chargeable, and amenities provided:

FIGURE 39: Classification of K-12 private schools[10]

Less than INR **60,000** p.a.	INR **60,000 - 120,000** p.a.	INR **120,000 - 225,000** p.a.	INR **225,000 - 300,000** p.a.	More than INR **300,000** p.a.
Academic based infrastructure • Library • Computer Lab • Science Lab • Digital Boards **Sports Facilities – Indoor & Outdoor** • Table Tennis • Chess • Cricket • Basketball • Football • Badminton • Martial Arts / Karate **Extracurricular Activities** • Music /Dance Room • Multipurpose Hall • Arts & Crafts Room **Medical Facilities** • Medical Room	**Academic based infrastructure** • Library • Computer Lab • Science Lab • Digital Boards • Innovative Labs • Virtual Integration Platform • Interactive Boards **Sports Facilities – Indoor & Outdoor** • Table Tennis • Chess • Cricket • Basketball • Football • Badminton • Martial Arts /Karate • Volleyball • Yoga Centre • Swimming Pool **Extracurricular Activities** • Music /Dance Room • Multipurpose Hall • Arts & Crafts Room • Indoor /Outdoor Auditorium • Theatre **Eating /Dining Facilities** • Cafeteria **Medical Facilities** • Medical Room	**Academic based infrastructure** • Library • Computer Lab • Science Lab • Digital Boards • Innovative Labs • Virtual Integration Platform • Interactive Boards • Soft Skills & Personality Lab • Digital Classrooms • ICT Lab **Sports Facilities – Indoor & Outdoor** • Table Tennis • Chess • Cricket • Basketball • Football • Badminton • Martial Arts /Karate • Volleyball • Yoga Centre • Swimming Pool • Handball • Taekwondo • Sports Complex • Gymnasium • Skating Rink **Extracurricular Activities** • Music /Dance Room • Multipurpose Hall • Arts & Crafts Room • Indoor /Outdoor Auditorium • Theatre • Visual Arts Studio **Eating /Dining Facilities** • Cafeteria • Dining Hall **Medical Facilities** • Medical Room	**Academic based infrastructure** • Library • Computer Lab • Science Lab • Digital Boards • Innovative Labs • Virtual Integration Platform • Interactive Boards • Soft Skills & Personality Lab • Digital Classrooms • ICT Lab • Biotechnology Lab **Sports Facilities – Indoor & Outdoor** • Table Tennis • Chess • Cricket • Basketball • Football • Badminton • Martial Arts / Karate • Volleyball • Yoga Centre • Swimming Pool • Handball • Taekwondo • Sports Complex • Gymnasium • Skating Rink • Synthetic Turfs • Athletics • Aerobics • Archery **Extracurricular Activities** • Music /Dance Room • Multipurpose Hall • Arts & Crafts Room • Indoor /Outdoor Auditorium • Theatre • Visual Arts Studio • Language Lab **Eating /Dining Facilities** • Cafeteria • Dining Hall **Medical Facilities** • Medical Room	**Academic based infrastructure** • Library • Computer Lab • Science Lab • Digital Boards • Innovative Labs • Virtual Integration Platform • Interactive Boards • Soft Skills & Personality Lab • Digital Classrooms • ICT Lab • Biotechnology Lab • Science Park • STEM Lab • DIY Lab • Writing Lab • Social Science Lab **Sports Facilities – Indoor & Outdoor** • Table Tennis • Chess • Cricket • Basketball • Football • Badminton • Martial Arts /Karate • Volleyball • Yoga Centre • Swimming Pool • Handball • Taekwondo • Sports Complex • Gymnasium • Skating Rink • Synthetic Turfs • Athletics • Aerobics • Archery • Hockey • Equestrian • Rowing • Adventure Sports • Snooker **Extracurricular Activities** • Music /Dance Room • Multipurpose Hall • Arts & Crafts Room • Indoor /Outdoor Auditorium • Theatre • Visual Arts Studio • Language Lab • Amphitheater **Eating /Dining Facilities** • Cafeteria • Dining Hall • Multicuisine Mess **Medical Facilities** • Medical Room • Wellness Centre

Source: CBRE

3.5.1. GROWING PRIVATE SCHOOL LANDSCAPE AND EVOLVING BUSINESS MODELS

At present, there are approx. 45+ private school chains in the country. Further, the mode of operating a private school is evolving from an asset heavy model (owned asset with operations) to asset light model with various structures being implemented like the franchisee model, management contract model, etc.

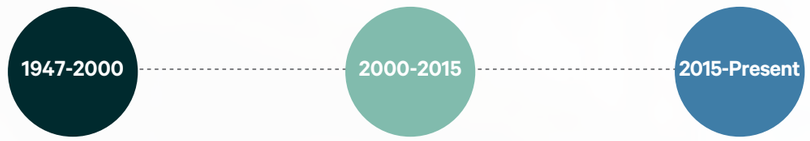
3.5.2. PRIVATE SCHOOL EVOLUTION

School chains are schools that have multiple branches across the country and may be present globally. These school chains bring in standardization of infrastructure, quality and operational efficiency. The curriculum of these schools can be affiliated to both or either of national or international boards.

School chains were part of the education landscape in India and has evolved significantly over the years. Prior to independence, school chains were conventional in nature with an emphasis on academics. These school chains were mostly owned, operated and managed by the same entity. Post-Independence, emergence of such prominent school chains was witnessed with a focus on enhanced learning and provision on high-quality infrastructure. These schools operated on both owned and franchise models.

Post 2000, school chains further evolved with innovative operating models backed by private equity institutions. These chains focus on latest and innovative approach towards learning through high usage of technology and modern infrastructure.

FIGURE 40: Evolution of school chains in India



Key Features		
• Growth of Franchise Model • Shift towards Private Schools • Academic focused educational programme in schools	• Growth and focus on Ownership model • International curriculums (IB and Cambridge) gained popularity • Extra-curricular focused curriculum educational programme in schools • Entry of P.E Investors (Gaja Capitals - EuroKids, NSPIRA – Narayana)	• Entry of International operators • Focus on holistic development through educational programme in schools • Increased interest of institutional investors
Examples		
• Delhi Public School • Jain Group of Schools • Mount Litera Zee School • GD Goenka School	• Lighthouse Learning Group • Sri Chaitanya Schools • Narayana Group of Schools • Global Indian International Schools • VIBGYOR Group	• International Schools Partnership Limited • Nord Anglia Education • Cognita Schools

Source: CBRE

School chain operators are the companies that operate one or more schools which are part of a school chain or franchise or even different school chains across various locations.

Rising income levels and rate of urbanization has led to the advent of international school chain operators in India. **Singapore based Global Indian International School** is the first international school chain operator to enter India in 2002 with its first school in Noida. Today, more than **40+ school chain operators** (local & international) are active in India.

In addition, established global K-12 school operators such as Nord Anglia, Cognita, and private equity firms such as KKR, Morgan Stanley have ventured into K-12 schools in India due to long term growth opportunity. Further, few school chains in India are focusing on operations, quality, and brand building with a focus to be asset light through management contract models with physical infrastructure being financed / invested by strategic investors.

Long term trends that are enabling institutional investment in K-12 education sector in India are as follows:

1. Increasing Demand for International Affiliation & Better Infrastructure: With a change in parent's aspirations and international exposure coupled with rising incomes, there is an increasing preference towards better brands which are internationally affiliated. In addition, growth in the numbers of students going abroad for higher studies have led to the rise of international schools that have grown at an average rate of 8.6%[11] since 2014. Considering international schools require better infrastructure specifications leading to higher capex, this gap provides an opportunity to institutional investors for the long-term growth.

2. Increasing Pool of Organized Operators: There are close to 40 school operators running more than 1,000 schools across various fee ranges in K-12 space with majority of operators running schools in mid and premium segments. In order to fulfil their expansion plans, there would be significant need of institutional capital.

3. Stable Returns over Longer Period: Management Contract / Asset Light Models are becoming prominent in recent years as K-12 schools require significant capital investment in land, building and other technical infrastructure. Traditional school operators cum owners and particularly chain operators are showing inclination towards asset light growth models as it provides requisite capital for business expansion and stable returns to investors for long period typically 15 years & above.

Presence	Franchise-based School Chains	Owned School Chains
Regional Player	• Jaipuria Schools (Uttar Pradesh, Bihar, Madhya Pradesh)	• Jain Group of Schools (Karnataka) • Velammal Vidyalaya (Tamil Nadu) • Abhinav Vidyalaya (Uttar Pradesh) • City Montessori School (Lucknow) • Ravindra Bharathi Public School (Telangana, Andhra Pradesh) • Dr. KKR's Gowtham Educational Institutes (Telangana, Andhra Pradesh) • Vignan Schools (Telangana, Andhra Pradesh)
National Player	• Delhi Public School • Shemford Group of Schools • Mount Litera Zee School • GD Goenka School • Ryan International Group of Institutions • Podar International School • Edify Schools	• Sri Chaitanya Schools • Narayana Group of Schools • Lighthouse Learning Group • ORCHIDS The International School • VIBGYOR Group of Schools • Amrita Vidyalayam

[11] *Respective boards' website*

3.5.3. PROMINENT SCHOOL CHAINS AND OPERATORS IN INDIA

TABLE 6: Prominent school chains & operators in India

Name of School Chain	Operator	Franchise/ Owned	Year of Establishment of School		No. of Schools	No. of Students	Fee Range per annum (USD)	Presence
Podar Group of Schools	Podar Education Network	Franchise	1927		139	200,000+	1,250-5,600	12 States Majorly in Maharashtra
Oakridge International Schools	Nord Anglia Education	Owned	1994		5	3,500+	1,875 – 13,700	4 States Mostly in South India
Delhi Public School	The Delhi Public School Society	Franchise	1941		223	220,000+	1,875 – 5,000	24 States Present all across India
GD Goenka Group of Schools	GD Goenka Group	Franchise	1994		78	50,000+	10,000 – 11,250	16 States Majorly towards North India and East India
Shemford Group of Schools	SHEMGroup	Franchise	1989		54	15,000+	500 – 700	14 States Punjab, Uttar Pradesh, West Bengal, Odisha
Mount Litera Zee School	Essel Group	Franchise	2012		123	65,000+	500 – 700	21 States Majorly in Uttar Pradesh, Bihar, Tamil Nadu, Maharashtra and Punjab
Ryan International School	Ryan International Group of Institutions	Franchise	1976		135	2,50,000+	600 – 800	14 States Maharashtra and Delhi
Edify Schools	MDN Edify Education Pvt. Ltd.	Franchise	2003		28	15,000+	300 – 500	10 States Karnataka, Tamil Nadu and Maharashtra
Sri Chaitanya Schools	Chaitanya Group of Educational Society	Owned	2986		528	6,80,000+	300 – 500	18 States Majorly in Andhra Pradesh and Telangana

Source: CBRE, School websites

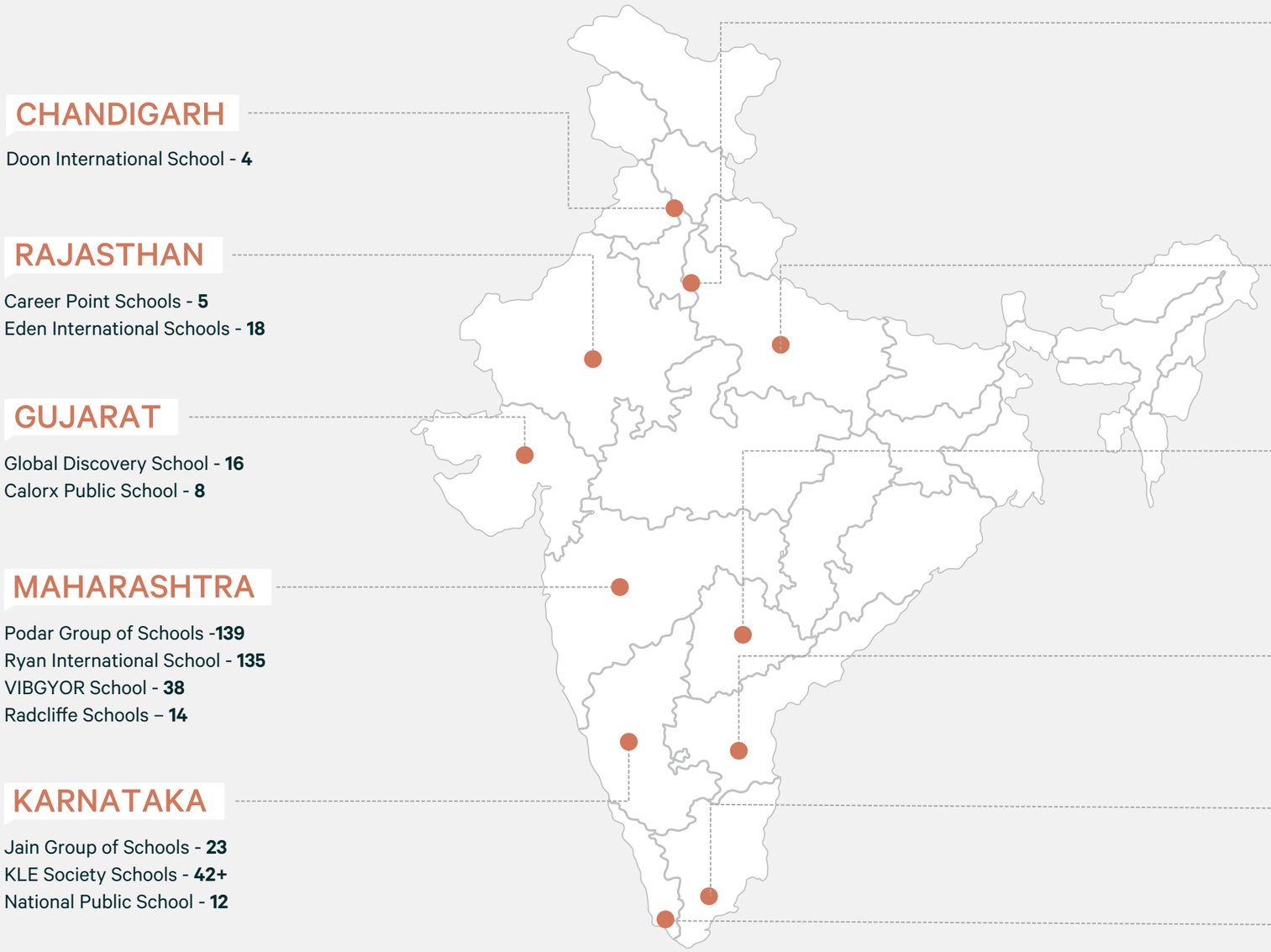
TABLE 6: Prominent school chains & operators in India

Name of School Chain	Operator	Franchise/ Owned	Year of Establishment of School	No. of Schools	No. of Students	Fee Range per annum (USD)	Presence
Narayana Group of Schools	Nspira Management Services	Owned	1979	312	4,00,000+	300 – 500	14 States Majorly in Andhra Pradesh followed by other South Indian states
Amrita Vidyalayam	Mata Amritanandamayi Math	Owned	1987	90	75,000+	400 – 600	9 States Majorly in Kerala
Billabong High International School	Lighthouse Learning	Owned	2012	25	20,000 +	1,250 – 3,750	Tamil Nadu, Maharashtra, Madhya Pradesh, Uttar Pradesh
VIBGYOR Schools	VIBGYOR Group	Owned	2004	38	55,000+	1,000 – 1,625	Maharashtra, Karnataka
Global Schools Foundation	Global Schools Foundation	Franchise	2002	7	31,500+	1,250 – 3,750	NCR, Karnataka, Telangana, Maharashtra, Gujarat
Orchids International School	K 12 Techno services Pvt Ltd	Owned	2002	66	75,000+	625 – 2,750	Karnataka, Maharashtra, Telangana and 6 other states
The Indian Public School (TIPS)	Globeducate	Owned	2006	12	10,000+	1,125 – 1,875	4 states – Majorly in Tamil Nadu
CS Academy Schools	CS Academy	Owned	2009	4	5,500+	1,000 – 1,875	Tamil Nadu

Source: CBRE, School websites

The following figure shows the prominent school chains (headquarter based) across India.

FIGURE 41: PROMINENT SCHOOL CHAINS IN INDIA



CHANDIGARH

Doon International School - **4**

RAJASTHAN

Career Point Schools - **5**
Eden International Schools - **18**

GUJARAT

Global Discovery School - **16**
Calorx Public School - **8**

MAHARASHTRA

Podar Group of Schools -**139**
Ryan International School - **135**
VIBGYOR School - **38**
Radcliffe Schools – **14**

KARNATAKA

Jain Group of Schools - **23**
KLE Society Schools - **42+**
National Public School - **12**

DELHI-NCR

Delhi Public Schools - **223**
GD Goenka Schools - **78**
Shemford Schools - **35**
Central Academy School - **18**
Amity International Schools - **13**
Apeejay Schools - **18**

UTTAR PRADESH

Sunbeam Schools - **17**
Seth Anadaram Jaipuria Schools - **19**
Aditya Birla Group Schools **- 11**
Mount Litera Zee School **- 123**

TELANGANA

Oakridge International School - **05**
FIITJEE World Schools - **04**
Orchids International School - **66**
Edify Schools - **28**

ANDHRA PRADESH

Sri Chaitanya School - **500+**
Narayana Group of Schools - **300+**
Gowtham Model School - **60**

TAMIL NADU

CS Academy - **04**
The Indian Public School (TIPS) - **12**

KERALA

Amrita Vidyalayam - **90**

Source: CBRE

3.6. BUSINESS MODELS OF K-12 SCHOOLS

Education is a not-for-profit activity in India and institutions are under an obligation to not profiteer from such occupation. However, making reasonable surplus /profits from such activity is allowed. The education business is therefore an amalgamation of non-profit activities and for-profit administration. Private players have developed several business models to increase participation in the sector which can be in the form of any one activity or a combination of the following activities:

Providing infrastructure and facilities

Providing investment for future expansion

Providing management and administrative services

3.6.1. PROMINENT OPERATING MODELS

Operating models can be segregated under two broad categories keeping in perspective the number of participants:

1.Single Party Model

This is a traditional model where the school is operated and managed by the same entity i.e., either a Trust, Society or Section 8 company. The company undertakes investment /development of the educational infrastructure (greenfield /brown field) and is responsible for setting up of the Educational Trust (Not for Profit) and day-to-day management /operations of educational institution.

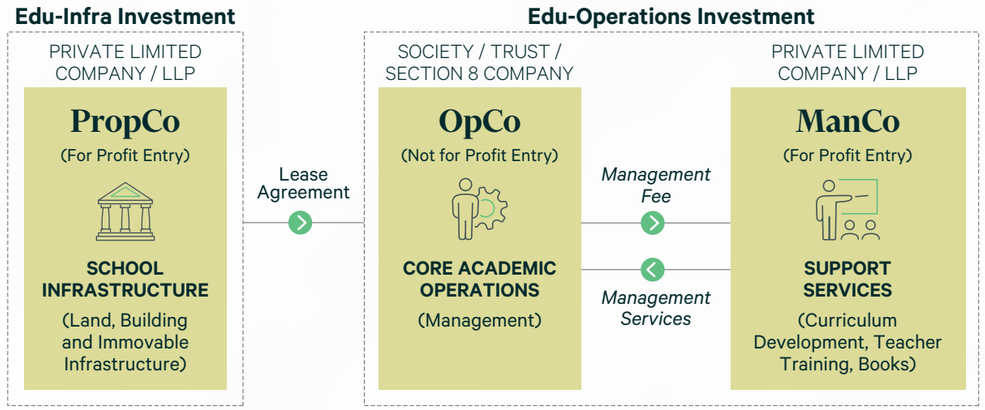
2.Multiple Party Model

New age models have emerged in the recent years where multiple entities are involved in the management and operations of the school such as follows:

- **Franchise Model –** this model has two prominent entities namely the 'Franchisor' and the 'Franchisee'. The two entities share the responsibilities and cost in the initial years in an agreed upon proportion.
- **Management Contract Model –** It is a new age asset model (popularly known as OpCo–PropCo–ManCo model) in which three entities enter into a tripartite agreement.
  - **i. Infrastructure development company /Property Owning Company (Prop-Co)**
  - **ii. Owners /Operations –** can be either Trust /Society as Operating Company (Op-Co) and
  - **iii. Education Service Provider –** Management Company (Man-Co)

A typical structure of the tripartite model is given below:

FIGURE 42: OpCo-PropCo-ManCo structure



PropCo

Private Limited Company owning educational infrastructure

Long-term lease agreement ranging from 15-30 years

OpCo

Society /Trust /Sec-8 Company

Undertake core activities of imparting education and hiring teachers and leasing land and building from PropCo

ManCo

ManCo enters into a management contract with OpCo, to provide management and administrative services to educational institutions in lieu of management fee

OpCo-ManCo structure enables efficient cashflow management, scalability and ease of exit

Source: CBRE

Management Contract Model is increasingly becoming popular and more acceptable to investors and school operators in Indian education sector because of the following advantages:

Advantages for Investors in Infrastructure

- Double-Net and Triple-Net lease provide competitive yields compared to other asset classes
- Independent landlord-tenant structure
- Strong operator covenants ensure regular lease payments and for longer period (15 to 30 years) compared to other asset classes where the lease term is between 9 to 15 years
- Pre-agreed yields on expansion opportunities on existing assets

Advantages for School Operators

- Ensures asset-light and cost-effective structure
- Efficient capital structure compared to bank debt
- Provides long-term capital for expansion opportunities
- Unlocks value in assets and Improves return on equity as opportunity cost of capital otherwise blocked in brick-and-mortar, could be ploughed back to mainstream operations

JV VENTURES

Is one of the initial investors/funds to adopt this model in K-12 sector by raising capital and acquiring select K-12 school assets.

The table highlights the comparative advantage of education infra vis-à-vis other income generating assets:

TABLE 6: Advantages of Edu-infra

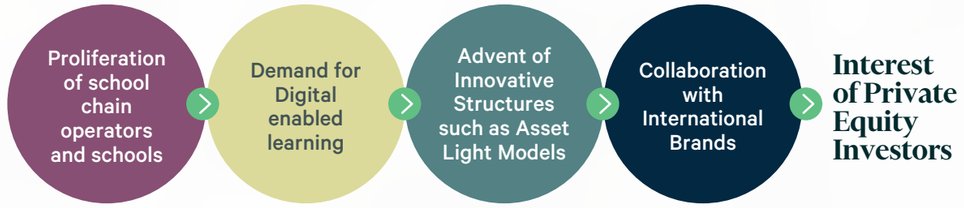
Particulars	Edu-Infra Assets	Commercial Real Estate Assets	Infrastructure Assets
Lease Tenure	15 –30 years	Typically, 7 –9 years	Typically, concession agreement of 25 – 40 years
Lease Lock-in	10+ years	Typically, 3 years	Entire tenure
Tenant Stability	• 15 - 30 year leases • School reputation intertwined with infrastructure asset	• Usually, replaceable • Non-sticky	Combination of sticky / replaceable counterparties
Skin in the Game / Critical Asset Nature	• > 30% margin in operating business • Unlocked capital re-invested to generate better retur	Rent as % of income not significant	Typically, not critical nature of asset
Capex Risk	Typically, capex incurred will be incrementally yielding	Capex at the risk of asset owner	Capex at the risk of asset owner
Re-investment Requirement	• Very low depreciation / amortizing component • Negligible investment requirement	Re-investment every 5-7 years for upkeep	Limited re-investment requirement
Vacancy	Fully leased out	• Potential to vacate the premises easily • High vacancy risk • Structural vacancy of 5% -7%	• Limited vacancy (sectoral growth impact) • Dependent on market cycles
Development Potential	• Embedded within the premises • Pre-agreed yields	• Speculative development • No rent generation till completion	Typically, pre-committed with limited development potential

Source: CBRE

3.6.2. INSTITUTIONAL INVESTMENTS IN K-12 SCHOOLS IN INDIA

Private investments in the K-12 education sector have seen significant traction over the last few years in India due to rising income levels and the existing gaps in public schooling. Majority of the private investments have been undertaken at company /institutional level. KKR, BPEA, Gaja Advisors, Sequoia Capital, Sofina are some of the key institutional investors who have invested in this segment in the last decade.

FIGURE 43: Factors that led to institutional investors interest



Source: CBRE

Advent of asset light model has curated an opportunity for investment in school infrastructure which has attracted the interest of investors. JV Ventures was the first organized player in the country to start investing in this asset class as a real estate opportunity to generate recurring income in 2016. Other investors like Investcorp and Opium have been planning to venture in K-12 infra opportunity as well.

Table below highlights the key investments witnessed in the private sector between 2017 – 2021:

TABLE 7: Key private equity transactions in India since 2017

S. No.	Segment	Investor	Seller	Location	Year of Transaction	Deal Type	Stake Share
1	K-12	**JV Ventures**	Jain International Residential Schools	Telangana	2021	Sale and Leaseback Infra	100%
2	K-12	**JV Ventures**	St. Andrews Schools	Telangana	2021	Sale and Leaseback Infra	100%
3	K-12	**Sofina, Sequoia Capital and Navneet Learning**	K12 Techno Services Pvt. Ltd	Pan India	2020	Private Equity	Sequoia Capital - 64% & Navneet Learning - 36%
4	K-12	**BPEA and CPP Investment Board (Operator - Nord Anglia)**	Oakridge Schools	Pan India	2020	Private Equity	100%
5	K-12	**Jacobs, Sofina and BDT Capital (COGNITA is operator)**	CHIREC School	Telangana	2020	Private Equity	100%
6	K-12 + Pre-schools	**KKR**	EuroKids Group	Pan India	2019	Private Equity	KKR - 90%
7	K-12	**Foundation Holdings**	Ryan International	Pan India	2019	Private Equity	-
8	K-12	**JV Ventures**	Billabong High International School	Maharashtra	2019	Sale and Leaseback Infra	100%
9	K-12	**Morgan Stanley's Banyan Tree**	Narayana Schools	Pan India	2018	Private Equity	
10	K-12	**JV Ventures**	Sancta Maria International School	Telangana	2017	Sale and Leaseback Infra	100%
11	K-12 + Student Housing Assets	**JV Ventures**	Jain Group of Institutions	Pan India	2017	Sale and Leaseback Infra	100%

Source: CBRE, VC Circle

The mode of operating a private school is evolving from an asset heavy model to asset light model with various structures being implemented like the franchisee model and management contract model which provides requisite capital for business expansion and stable returns over a longer period. With these changes, many institutional investors have started evaluating to invest in this sector either in the business or infrastructure. Morgan Stanley PE, Banyan Tree, KKR, Sequoia, Xander, Sofina, CPPIB, JV Ventures & Veld Capital and Providence Equity Partners are amongst the prominent institutional investors investing in the K-12 education segment of the country.

In addition, there are various operators which are backed with prominent institutional investors such as follows:

TABLE 8: Prominent institutional investor backed school chains in India

Name of the School Chain	Operator		Institutional Investor	Year of Establishment of School	No. of Schools	Presence
Narayana Educational	NSPIRA	Nspira Management Services	Morgan Stanley's Banyan Tree	1979	300+	**14 States** Andhra Pradesh, Assam, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Puducherry, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, West Bengal
Ryan International	RYAN	Ryan International Group	Foundation Holdings	1976	135+	**11 States** Chhattisgarh, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh
Oakridge Schools	NORD ANGLIA EDUCATION	Nord Anglia Education	BPEA and CPP Investment Board	2001	5	**4 States** Telangana, Andhra Pradesh, Karnataka, Punjab
Orchids International	K12	K12 Group	Sequoia, Xander and Sofina	2002	66	**7 States** Haryana, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu, Telangana, West Bengal
Jain Group of Institutions	JAIN GROUP	JGI Group	JV Ventures and Veld Capital	1994	23	**4 States** Andhra Pradesh, Karnataka, Maharashtra, Telangana
The Indian Public School	globeducate	Globeducate	Providence Equity Partners	2006	7	3 States Tamil Nadu, Kerala, Karnataka
Billabong High International & Euro School	LIGHTHOUSE	Lighthouse Learning Group	KKR Asia Ltd.	1995	25	**7 States** Gujarat, Kerala, Maharashtra, Madhya Pradesh, Tamil Nadu, Telangana, Uttar Pradesh Maldives
Manthan International School	International Schools Partnership	International Schools Partnership	Omers	2009	1	Telangana
Crimson World Schools	CRIMSON	Crimson Education Global	JV Ventures	2020	4	**4 States** Maharashtra, Telangana, Uttar Pradesh, Uttarakhand

Source: CBRE

3.7. REGULATORY FRAMEWORK

3.7.1. NATIONAL EDUCATION POLICY (NEP) 2020

The National Education Policy 2020 (NEP 2020) was formulated by the government considering the needs and aspirations of modern India in the 21st century. The policy proposes revision and revamping of all aspects of education including regulation, governance, curriculum, and assessment in order to be at par with global standards.

KEY FEATURES:

Following are the key features of the policy pertaining to the K-12 segment:

- **Change in the Structure –** The policy proposes a complete change in the education structure from the 10+2 pattern to a 5+3+3+4 structure i.e., a shift from the:

Old	New
i. 10 – Primary to secondary level (class 1-10)	i. 5 – Foundation Stages (playgroup to class 2)
ii. 2 – Higher secondary level (class 11-12)	ii. 3 – Preparatory Stage (class 3-5)
	iii. 3 – Middle Stage (class 6-8)
	iv. 4 – Secondary Stage (class 9-12)

- **Proposes Flexibility in Subjects** – The policy proposes no hard separation between streams i.e., there is a flexibility provided to students to choose a combination of subjects from either arts, commerce, or science fields in order to build a career path of choice and interest
- **Curriculum Revision and Easing of Board Exams** – The policy proposes to revise the curriculum and make it more experiential learning and promote critical thinking and therefore reduce curriculum content in each subject to its core. Further, board exams to be made 'easier', by primarily testing core capacities/competencies. Board exams to be introduced in 3rd, 5th, and 8th grades and 10th and 12th board exams to continue
- **360 Degree Assessment Procedure** – Shift from a summative culture that primarily tests rote memorization skills to one that is more regular and formative. The new assessment system to include
  - a) self-assessment
  - b) peer-assessment and
  - c) teacher-assessment
- **Minimum Qualification and Skilled Teachers** – The policy lays significant emphasis on the quality of teachers for K-12 schools. Professional standards for teachers to be created; all teachers to have 4-year B.Ed. degree. Minimum qualifications for teachers to be integrated 4-year B.Ed. by 2030
- **Digital Integration** – Technology adoption across all facets of education in the new policy for online learning, e-program delivery, teacher training or e-assessments.

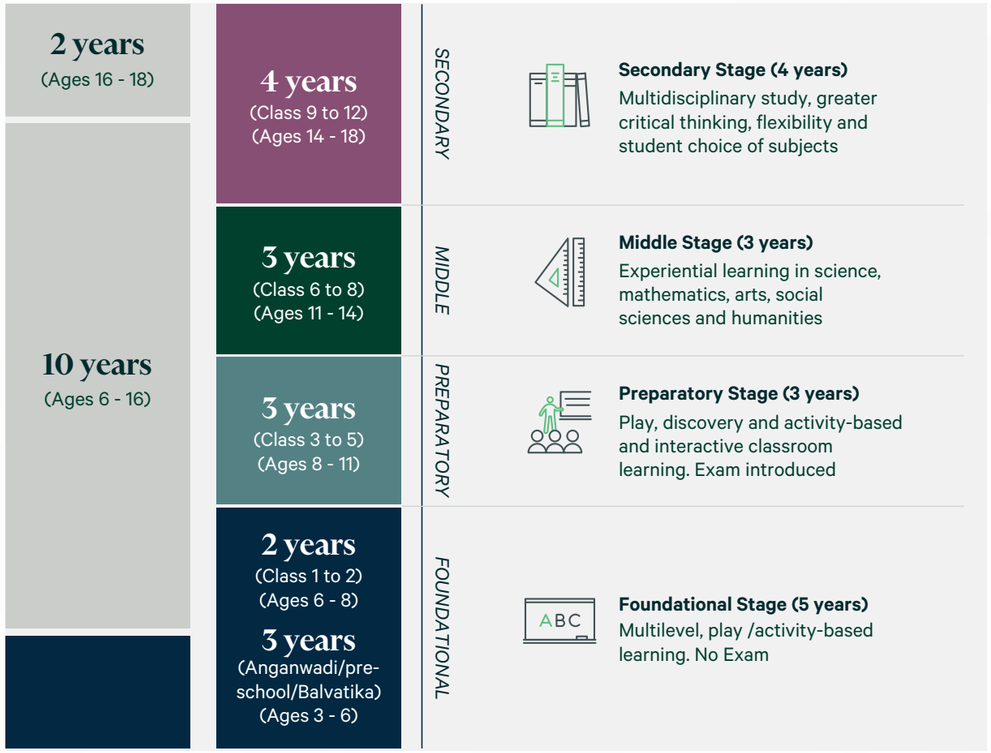
EXPECTED OUTCOMES:

Based on the new education policy proposed, the government aims to achieve the following in the K-12 segment:

- **Reducing Dropout Rates and ensuring universal access to education at all levels** – a top priority for the government is to bring the dropout children back into the educational fold as early as possible, and to prevent further students from dropping out, with a goal to achieve **100% Gross Enrolment Ratio in preschool to secondary level by 2030 (every child in school)**
- **Student-Teacher Ratio** of under 30:1 to be ensured at each school; areas having large numbers of socio-economically disadvantaged students to aim for a student-teacher ratio of under 25:1

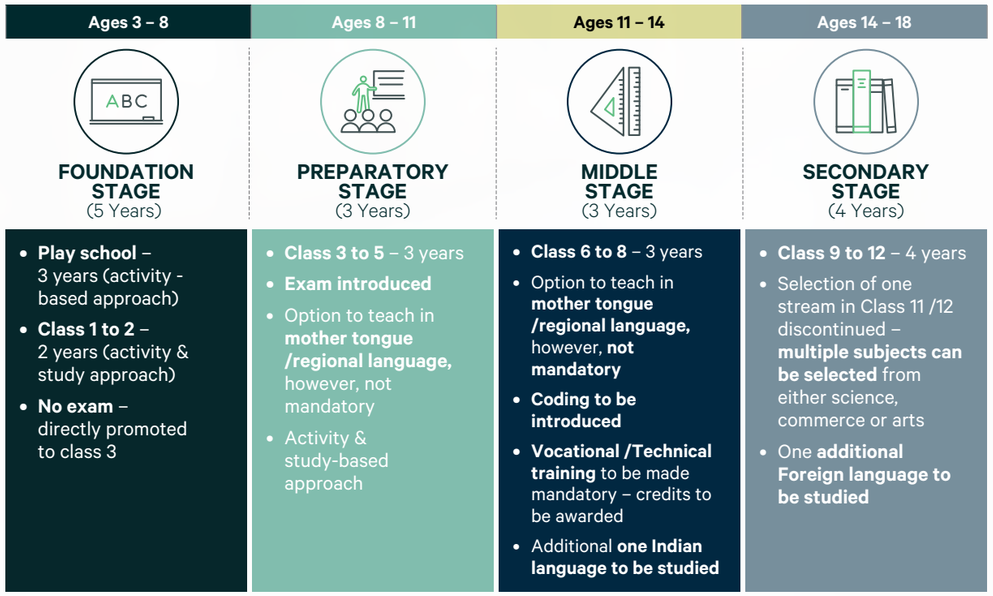
The figures below detail out the changes and the key features in the new academic structure proposed as part of the policy:

FIGURE 44: Change in academic structure



Source: National Education Policy (NEP) 2020; CBRE

FIGURE 45: Snapshot of the new academic structure



Source: New Education Policy (NEP) 2020; CBRE

NEP 2020 envisages a systemic transformation of the Indian education system and is focused on building strong foundational skills and improve quality of learning across all levels of education.

The Indian education system is expected to align to global standards, thus opening various avenues of opportunities for the future students. With the expected standardization in the sector, the policy is expected to open avenues for global school operators to enter India and would drive institutional investments in the sector.

3.7.2. FEE REGULATION OF PRIVATE SCHOOLS BY STATE GOVERNMENTS

Over the years, a growing preference towards private education has been witnessed given better infrastructure & amenities offerings and the quality of education imparted. More and more parents are choosing to send their wards to a private school however, high fee charged coupled with the annual fee hike being higher than average salary increment over the past few years has caused parents to call for a fee regulation of private schools by the state government. The following issues have prompted parents to petition the government:

Private schools charging higher tuition fee
coupled with an annual hike along with additional costs such as fees for transportation, extra-curricular activities, and sports

Ambiguous annual fee escalation
post admission – schools do not commit to a certain % fee escalation leaving parents uncertain about expenditures

Charging Capitation /Admission fee
several private schools charge a one-time fee during admissions

Mandating parents to purchase stationery, uniform, etc. from the school
Parents demand a flexibility to choose from external vendors

Based on the above concerns, few states have implemented a Fee Regulation Act, passed a Bill, or have set up a Committee to regulate the annual fee escalation of private schools. While the fee escalation is decided under the guidance of these acts, bills or committee, the **base tuition fee chargeable is independent and determined by the school management and is not regulated by the act**. Under this act, a Fee Regulatory Committee is set up for tending to the matters of fee escalation. Fee escalation is determined by either:

School Management
decides the fee escalation and seeks the approval from the Fee Regulatory Committee, or,

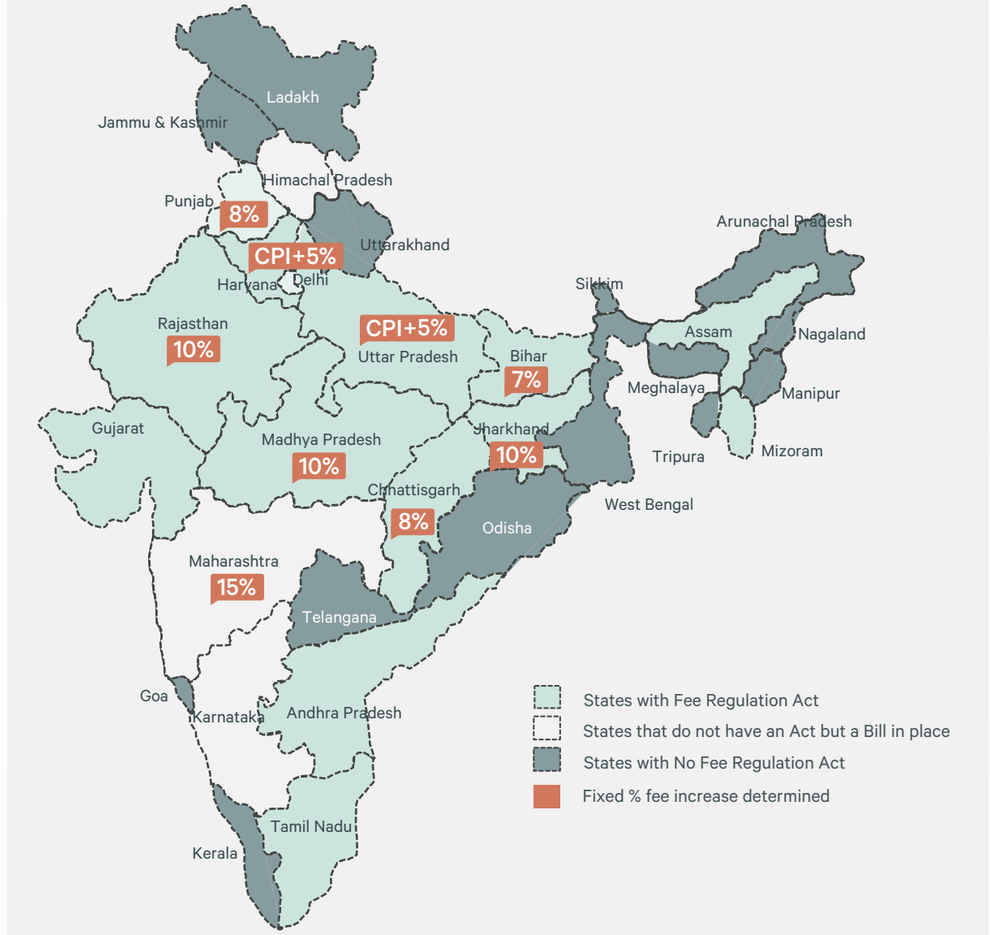
Fee Regulatory Committee
decides the fee escalation and communicates to the school management. If acceptable, the management complies and implements the fee hike proposed by the committee

In case of any disagreement on the decisions by any of the parties i.e., the Fee Regulatory Committee /School Management /Parent, **a Fee Revision Committee** is set up for tending to these disputes /disagreements.

The following table depicts status of various states with the kind of regulation in place:

Fee Regulation Act in place	Does not have an act but has a Bill in place	Does not have an act or bill but has a Fee Committee in place	Non - regulated states
Gujarat	Madhya Pradesh	Jammu & Kashmir	West Bengal
Tamil Nadu	Karnataka		Odisha
Maharashtra	Himachal Pradesh		Meghalaya
Rajasthan			Uttarakhand
Uttar Pradesh			Kerala
Bihar			Arunachal Pradesh
Assam			Nagaland
Chhattisgarh			Tripura
Andhra Pradesh			Manipur
Jharkhand			Sikkim
Punjab			Goa
Delhi			Puducherry
Haryana			Daman & Diu and Dadar & Nagar Haveli
Mizoram			Andaman & Nicobar Islands
			Ladakh
			Lakshadweep
			Chandigarh
			Telangana

FIGURE 46: Indicative map with status of regulations in various states



Source: CBRE; map not to scale, for representation purposes only

18 of the 36 states and union territories have implemented a fee regulation act, bill, or committee while only 9 of these 18 states have determined a fee escalation percentage.

Further, **the fee escalation percentages are not final and non-binding which can be surpassed at the discretion of the school management committee with logical justifications for a higher applicable escalation, if applicable.**

Every state has different escalation percentages mentioned under the fee regulation act, ranging from 5-15%.

Additionally, while the regulation stipulates the annual increases, it does not govern the base fee itself; the schools are free to fix their base fee as per their pricing structures and thereafter aim to follow the required escalations.

The following table highlights which **states, barring those that do not have any act in place, are highly favourable, moderately favourable, or relatively less favourable from a fee regulation standpoint,** keeping all other considerations at status quo:

Parameters	Highly Favourable	Moderately Favourable	Relatively Less Favourable
Fee Escalation %	Previous academic year fee + **above 10% escalation**	Previous academic year fee + **10% escalation**	Previous academic year fee + **below 10% escalation**
	• Maharashtra - 15%, Uttar Pradesh & Haryana - CPI + 5%,	• Rajasthan, Madhya Pradesh, Jharkhand	• Bihar, Chhattisgarh, Punjab
Defined Fee Threshold – If applicable or not	**No fee threshold defined** - private schools at liberty to charge fee	• **Exempt from fee escalation norms** on charging a certain fee level	• **Fixed fee chargeable** by private schools defined by government
	All states including Karnataka, Maharashtra, Telangana, Tamil Nadu, Rajasthan, Uttar Pradesh, Chhattisgarh, Kerala, West Bengal, Delhi, Odisha, Madhya Pradesh **excluding Andhra Pradesh, Haryana, Gujarat and Assam**	• Andhra Pradesh - schools charging tuition fee of INR 12,000 pa exempt from fee escalation norms • Haryana - schools charging INR 12,000 - 15,000 pa exempt from fee escalation norms	• Gujarat - Fee Limit of INR 15,000 - 27,000 pa • Assam - Fee Limit of INR 27,000 - 37,000 pa • However, private schools in Gujarat and Assam can submit a proposal to their respective fee regulation committee, justifying a higher fee and get it approvals

> Most states have specified an ideal maximum but have not given any mandatory fee cap for the schools. Only 4 states have slated a maximum fee chargeable by private schools, with a provision that a school can charge a higher fee by obtaining an approval from the Fee Committee.

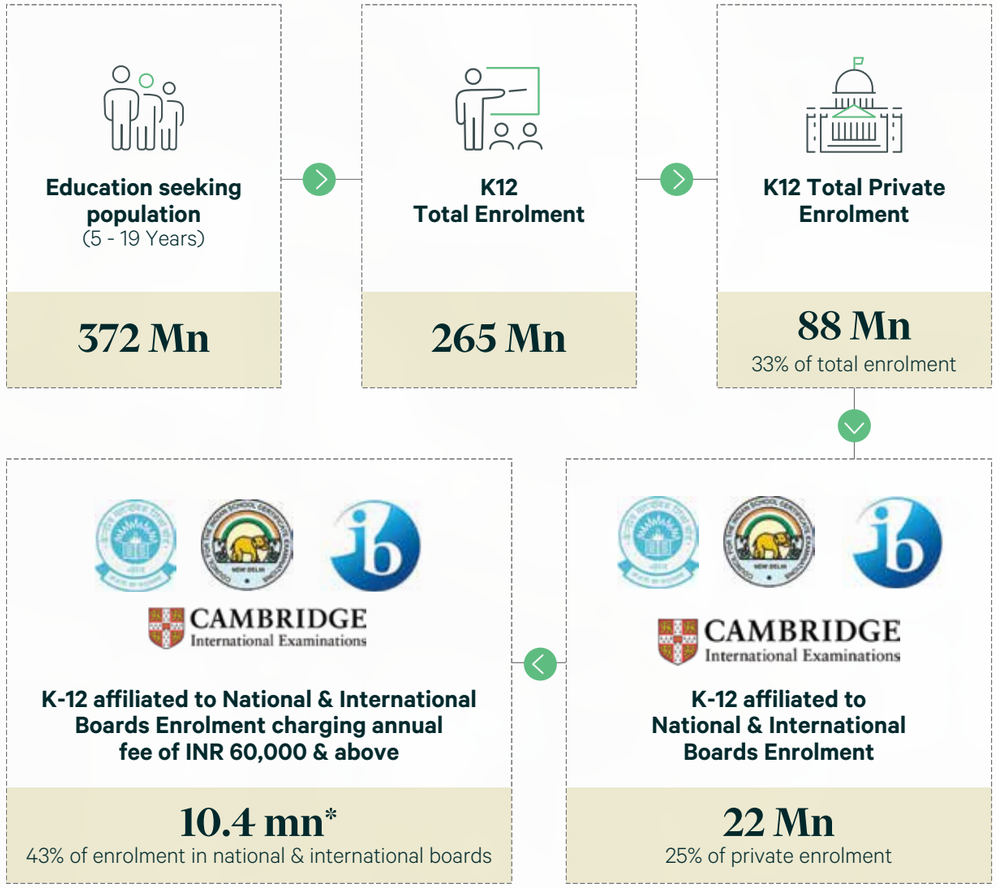
> In most states a maximum of 5 - 15% increase in fee is permitted so far, which can be exceeded post review by the Fee Committee.

04

K-12 Market Size Estimation

The figure below depicts K-12 education landscape in India and the identified target set with investible opportunity.

FIGURE 47: K-12 education landscape[12]



Source: CBRE; Data as of 2021-22

[12]K-12 Total Enrolment refers to total students enrolled in all schools (government, government aided, private and others)

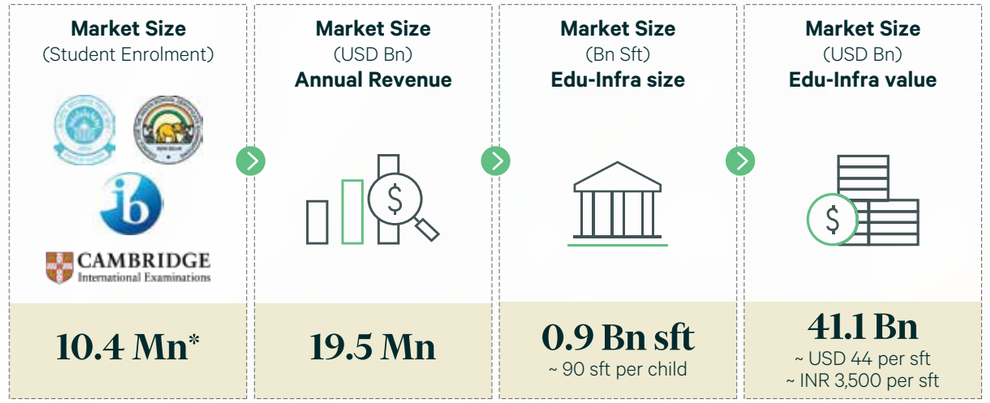
K-12 Private Enrolment refers to total students enrolled in private schools (can be affiliated to state boards, national boards (CBSE /CICSE) and international boards

K-12 affiliated to national and international boards enrolment refers to total students enrolled in private schools affiliated to national boards (CBSE /CICSE) and international boards (IB /CIE)

**10.4 mn student enrolment is the estimated student enrolment in private schools affiliated to national and international boards projected from 9.5 mn students base as on 2021-22*

FIGURE 48: K-12 Market Size – Target Set

K-12 students enrolled in private unaided schools affiliated to national & international boards charging an annual fee of INR 60,000 & above.



*Source: CBRE; Estimated data as of 2022-23; *10.4 mn student enrolment is the estimated student enrolment in private schools affiliated to national and international boards projected from 9.5 mn students base as on 2021-22*

4.1. KEY FINDINGS OF MARKET SIZE ESTIMATION

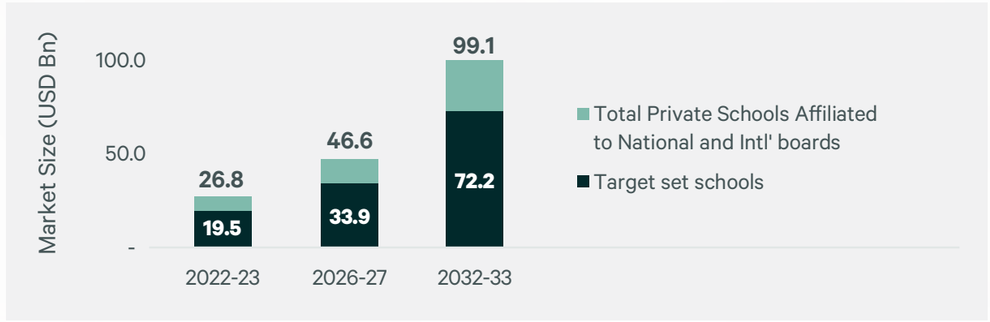
TABLE 9: K-12 market size estimation – key findings

PARAMETERS	2021-22	2022-23	2026-27	2032-33	CAGR (2023–33)
All schools – government, government aided, private and others					
Total Schools (Mn)	0.34	0.34	0.38	0.42	2.1%
Total Enrolment (Mn)	88.3	92.2	110.0	135.2	3.9%
Private schools					
Total Schools (Mn)	0.34	0.34	0.38	0.42	2.1%
Total Enrolment (Mn)	88.3	92.2	110.0	135.2	3.9%
Private schools affiliated to national and international boards					
Total Schools	26,356	28,880	41,708	67,898	8.9%
% share of total private schools	8%	8%	11%	16%	-
Target Set[13] – Total Schools	11,200	12,294	17,755	28,904	8.9%
Total Enrolment (Mn)	22.4	24.5	35.1	59.0	9.2%
Target Set – Total Enrolment (Mn)	9.5	10.4	14.9	25.1	9.2%
Market Size – Revenue (USD Bn)	23.3	26.8	46.6	99.1	14.0%
Target Set – Market Size – Revenue (USD Bn)	16.9	19.5	33.9	72.2	14.0%
Infrastructure Opportunity (Mn sft)	1.5	1.6	2.3	3.9	9.2%
Target Set – Infrastructure Opportunity (Bn sft)	0.8	0.9	1.3	2.2	9.2%
Infrastructure Opportunity (BUA) USD Bn	65	73	123	262	13.5%
Target Set - Infrastructure Opportunity (BUA) USD Bn	36	41	69	147	13.5%

Source: CBRE Estimates

[13]Target Set – private schools affiliated to national and international schools charging annual fee upwards of USD 750 (INR 60,000)

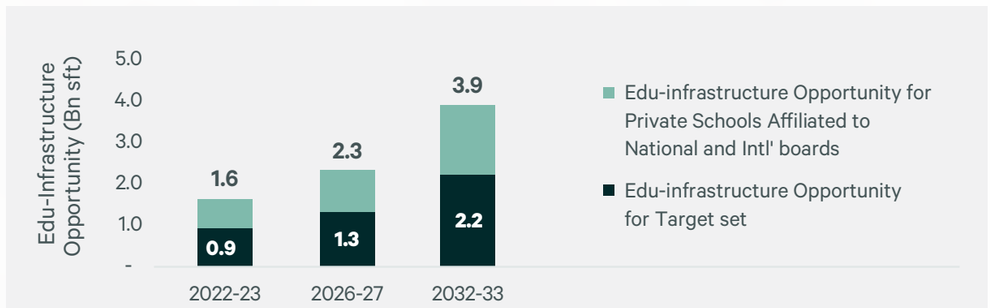
FIGURE 49: Taregt set – annual revenue forecast



Source: CBRE Estimates

Target market size in terms of annual revenue is estimated to grow at a CAGR of 16.2% between the forecasted period and is expected to account for 93% of total market by 2033.

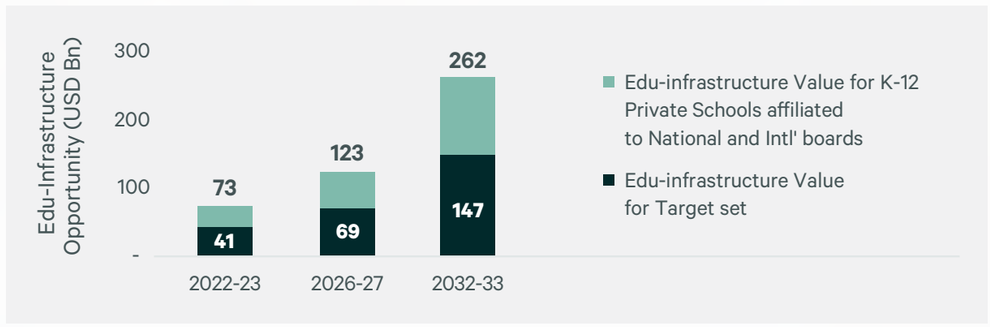
FIGURE 50: Edu-Infrastructure opportunity (Bn sft)



Source: CBRE Estimates

Edu Infrastructure size (sft) is estimated to grow at a CAGR of 9.2% from 0.9 Bn sft to 2.2 Bn sft between the forecasted period and is expected to account for 56% share of total infrastructure opportunity of private schools affiliated to national and international boards.

FIGURE 51: Target set EDU infrastructre opportunity (USD Bn)



Source: CBRE Estimates

Edu Infrastructure investment opportunity is estimated to grow at a CAGR of 13.5% from USD 41 Bn to USD 147 Bn during the forecasted period with 56% share

05

Key Hubs / Cities in India for K-12 Infra Opportunity

Subsequent to the market sizing at an India level, CBRE has undertaken a top-down approach to shortlist the key cities for K-12 Infra opportunity. A wide range of factors were assessed to highlight and shortlist the key hubs in India. The below section highlights the overall methodology adopted for identifying key cities across tier categories.

5.1. APPROACH & METHODOLOGY

FIGURE 52: Approach & methodology for identifying key hubs for K-12 education

01
IDENTIFICATION OF KEY FACTORS

Data for all districts and cities were analyzed based on critical factors such as the total number of students - urban, number of schools (CBSE, ICSE, IB/CIE, number of private school teachers, etc.)

02
ALLOCATION OF WEIGHTS

Each factor was allocated a particular weightage to further filter out states that were ranked higher across multiple categories

03
WEIGHTED AVERAGE SCORE

An average score was calculated for each states based on their respective performance across the shortlisted factors and parameters

04
RANKING & INDEXING BASED ON SCORES

Districts were then ranked and indexed based on their final weighted average score

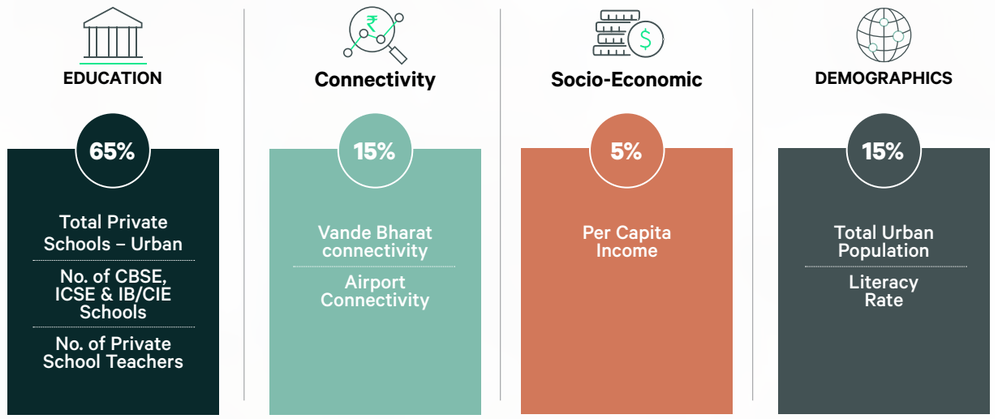
05
IDENTIFICATION OF KEY HUBS /DISTRICTS

The states & UTs were then ranked based on their final score to highlight the key districts/cities for K-12 education in India

5.2. KEY FACTORS FOR IDENTIFYING K-12 EDUCATION HUBS

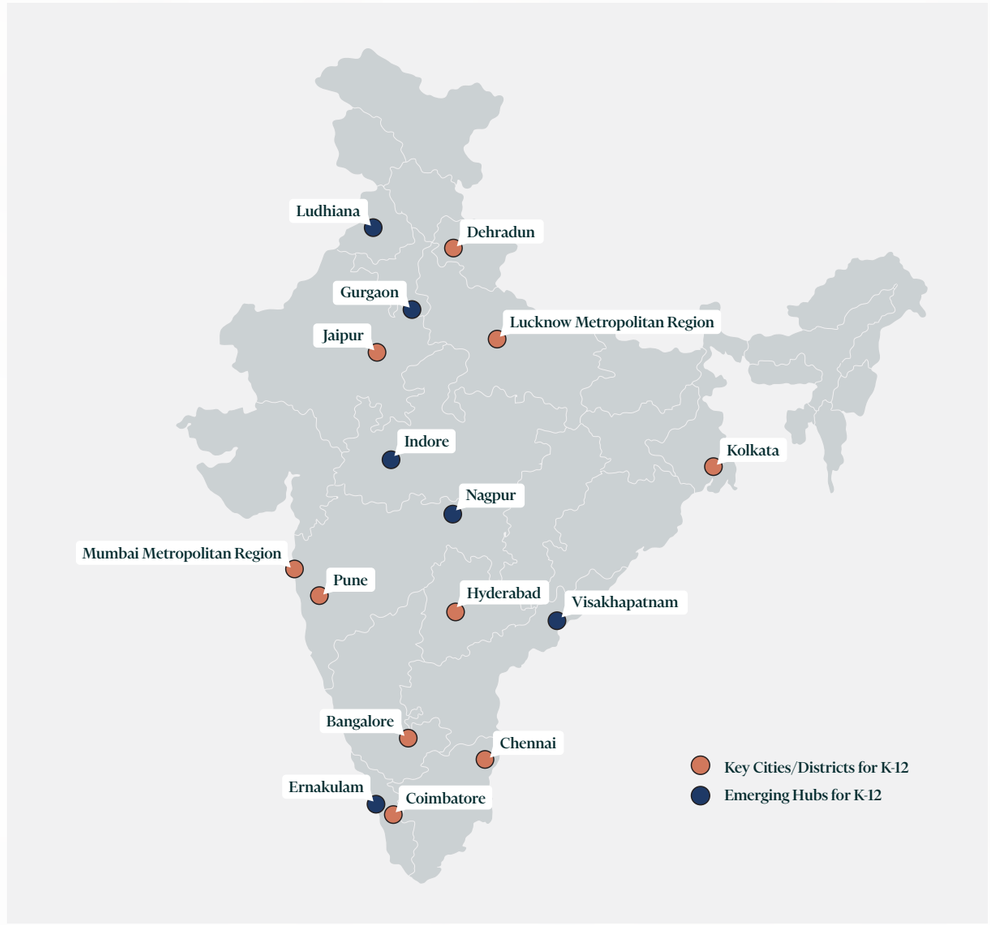
The following factors were considered while assessing the potential of states and districts in India for K-12 segment. These factors were bifurcated into four buckets i.e., education, regulatory, socio-economic and demographics. Further, each bucket was given a weightage with respect to their direct impact on the K-12 segment.

FIGURE 53: Bifurcation of factors considered for identifying K-12 hubs



% Represents the weightage considered for the mentioned parameter

FIGURE 54: Top K-12 Education hubs in India



Source: CBRE; map not to scale, for representation purposes only

The highlighted cities emerged as the key hubs for K-12 education with a strong foundation and significant potential for future growth and expansion.

- They also emerged as frontrunners in terms of critical support parameters such as higher presence of urban population, literacy rate, higher spending propensity, superior connectivity via air and road, etc.
- Most of the prominent school chains and operators are spread across these prominent districts/cities.

Most of the prominent school operator chains are spread across these prominent states.

- Uttar Pradesh, Haryana, and Delhi account for 30% of the total CBSE schools in the country.
- Uttar Pradesh, West Bengal, and Karnataka account for 47% of the total ICSE schools in the country.
- Maharashtra, Tamil Nadu, and Karnataka have the largest international school footprint followed by Telangana accounting for 59% of the total international schools.

Contacts

Consulting & Valuation

Alok Puri
Head of Business Development, CRM,
New Initiatives & Alternate Assets
Alok.Puri@cbre.co.in

Vaibhav Jakhodia
Director
Vaibhav.Jakhodia@cbre.co.in

Deepti Dhawan
Associate Director
Deepti.Dhawan@cbre.co.in

Ankita Gupta
Deputy General Manager
Ankita.gupta2@cbre.com

Vishal Makala
Senior Associate
Vishal.Makala@cbre.com

Follow Us

CBREalty

CBRE Research

To learn more about CBRE Research, or to access additional research reports, please visit the Global Research Gateway at www.cbre.com/research-and-reports

CIN - U74140DL1999PTC100244

CBRE