



Human Resource and Skill Requirement in the Media & Entertainment Sector (2020-25)

Media and Entertainment Skills Council (MESC)

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Section A: Media & Entertainment Sector Overview

A.1 Sector Introduction Background

The Media and Entertainment (M&E) industry is one of the flourishing industries for the Indian economy and is making substantial advances. India has the 5th largest Media and Entertainment (M&E) market in the world that generated a revenue of INR 2,60,035 Crore in the financial year 2019. The Media and Entertainment sector's contribution to the GDP in financial year 2019 was 1.27 percent.¹ The industry has the potential to drive a much larger contribution in India's USD 5 Trillion GDP goals. The industry is expected to recover to its 2019 levels by the year 2022. Further, it is expected to reach INR 4,41,217 Crore in financial year 2025 due to acceleration of digital adoption among users across geographies.

The M&E industry is on the verge of a robust stage of growth and progress. This is due to rising consumer demand and improving advertising revenue. The industry has also largely been driven by increasing digitisation and higher internet usage in the past few years. Internet has almost become a mainstream media for entertainment for most of the people. Across demographics, media is consumed by varied audiences through various avenues such as Television, Films, Radio, Online and Print.

The Government of India has backed M&E Industry's growth by taking several initiatives such as digitizing the cable distribution sector to encourage larger institutional funding, increasing Foreign Direct Investment (FDI) limit from 74 percent to 100 percent in cable and direct-to-home (DTH) satellite platforms and conferring industry status to the film industry for simpler access to institutional finance. In September 2020, Government of India announced its plans to develop an Animation, Visual Effects, Gaming and Comic (AVGC) Centre for Excellence in collaboration with IIT Bombay.

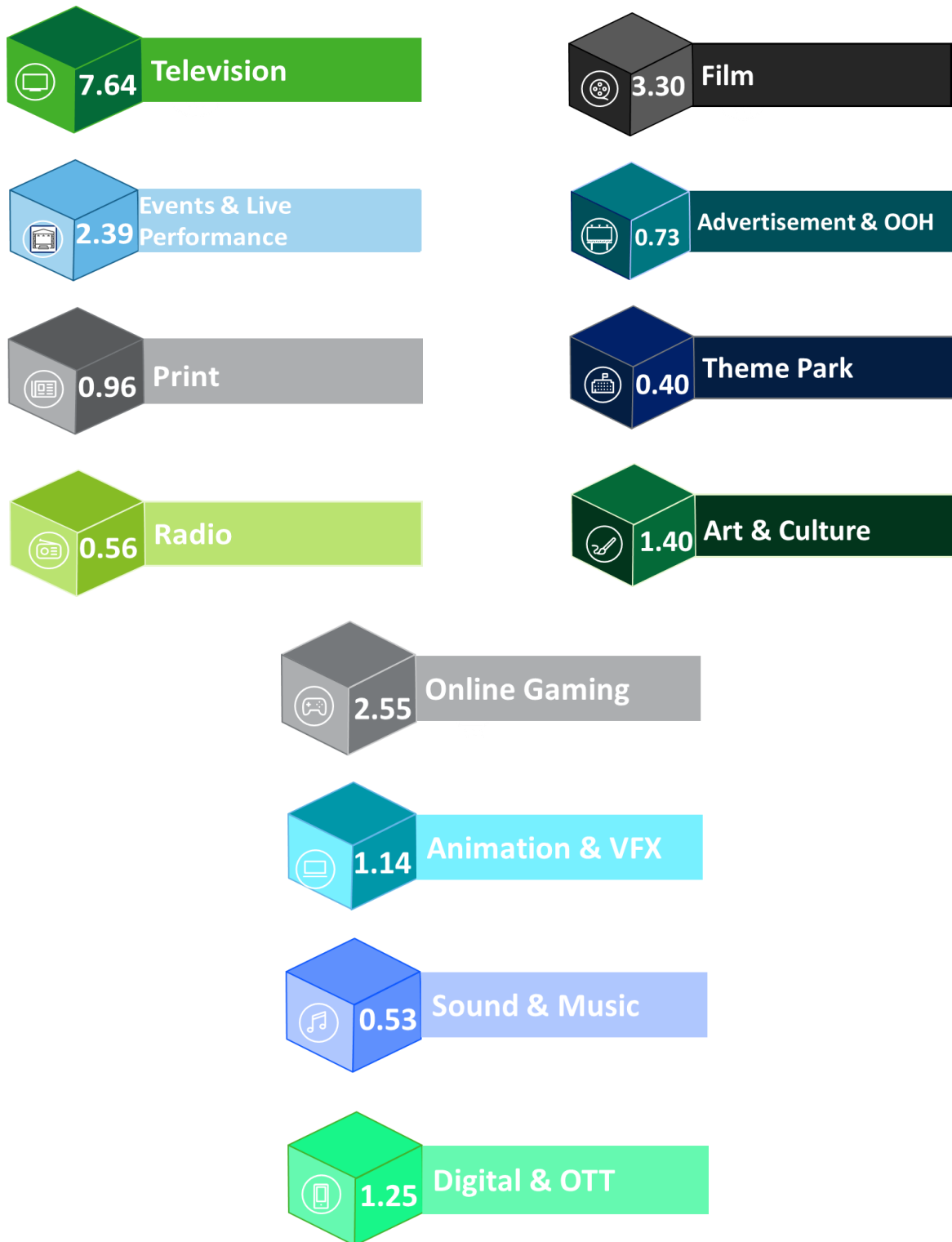
Current trends show that Digital Media, Over the top (OTT) and Online gaming are the three segments which are showing a lot of growth and this growth can be attributed to the increased availability of affordable data and increasing penetration of mobile devices and smartphones. During the year 2020, television also increased its reach and engagement with the audience, retaining its position as the default entertainment medium for Indian consumers.

M&E industry is also greatly impacted by the ongoing pandemic owing to lockdowns and widespread travel restrictions. The hardest hit sectors were Events and Live Performances, Theme Parks and Art & Culture. The M&E sector overall also met with substantial challenges as all modes of outdoor entertainment had come to a complete halt and there were many operational disruptions with difficulties in content creation and distribution through the traditional media outlets.

However, post pandemic, these sub-sectors are anticipated to play a vital role again in the industry which is likely to stabilize after 2023.

¹ pib.gov.in and Analysis

Figure 1: Employment Projection in Media & Entertainment Sector in FY 2025 (In Lakhs)

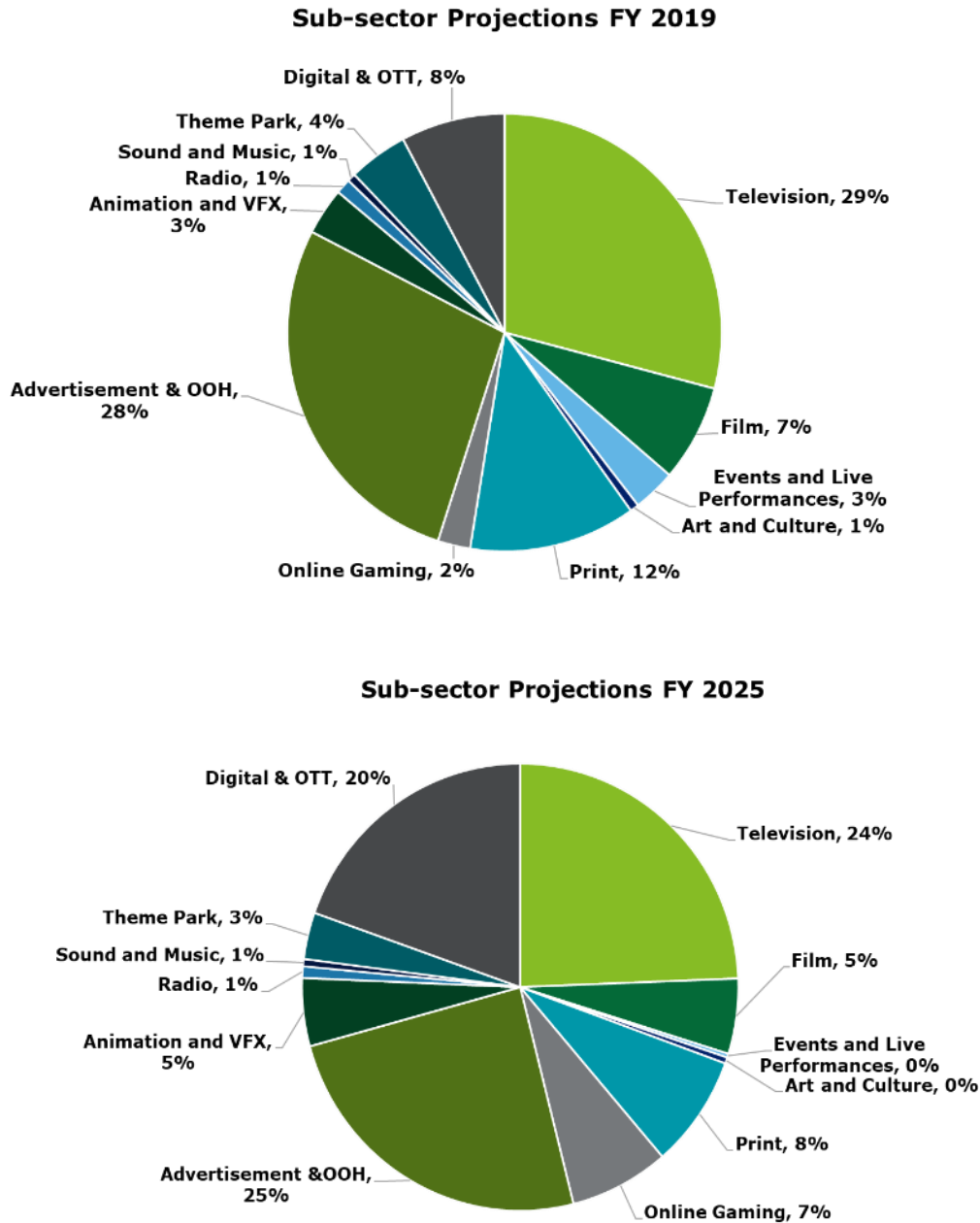


M&E Industry had 15.1 Lakh people in the workforce in 2019 which is estimated to reach 22.9 Lakh by 2025 creating 7.79 Lakh additional employment opportunities during 2020-2025.

Industry performance:

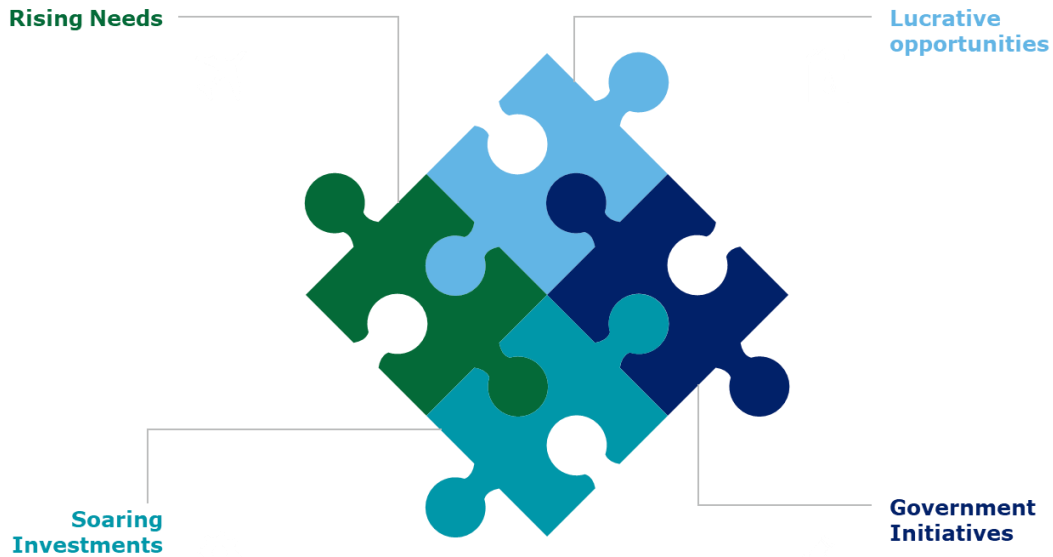
Indian M&E industry has tremendous scope for growth in all the segments due to rising income and evolving lifestyle.

Figure 2: Sub-sector Growth Projections for FY 2019 & FY 2025



A.2 Growth Drivers of M&E Sector

Figure 3: Growth Drivers of M&E Sector



Rising needs

- Increase in earning power and evolving lifestyles, leading to an increase in demand for aspirational products and services under M&E.
- Expanding consumer base and a rapidly increasing young population, along with the increased usage of mobile and greater internet adoption driving digital media growth. This increased user-base is due to reduced costs and growing accessibility to smartphones and availability of high-speed internet connectivity, driving the digital media consumption.
- Rapid growth in the use of Mobile Devices as mobile devices have taken over as the preferred medium of consuming online media. Internet traffic arising from mobile devices like smartphones and tabs in India has already exceeded the desktop internet traffic.
- As the internet penetration is expected to increase further in the next few years, the streaming service is estimated to grow even more. There has also been a growth in video streaming owing to the success of Bollywood and regional cinemas.
- The digitalization of the media industry has been driven by changing consumer behavior and expectations, especially among younger generations who demand instant access to content, anytime, anywhere. While the internet consumer base in India is growing at a rapid rate, most of these users belong to the age group of less than 35 years.
- Longer session duration for games and growth in digital infrastructure is expected to fuel consumption, resulting in further revenue growth (primarily on account of growth in advertising revenues).
- Flexible monetization strategies and on-demand content driving Digital and OTT media platforms growth.

Lucrative opportunities

- Digitization of cable distribution to enable viewer's choice and higher growth.
- Digitization of OOH (Out of Home) Media

- Innovation and technology leading to increase in user base. For instance, use of technologies like AI/ML in evolution of targeted advertising
- Digitization of Events and Live Performances
- Rise of digital platforms
- Television and AGV (Animation, Gaming and VFX) segments are expected to lead the industry growth, with opportunities in digital technologies as well.
- Government of India has plans to undertake several sector focused initiatives including developing an Animation, Visual Effects, Gaming and Comic (AVGC) Centre of Excellence in collaboration with IIT Bombay.

Soaring investments

- Increase in number of and spread of multiplexes.
- International studios now have shown an encouraging interest in India. Factors like cost efficiency, skilled and inexpensive manpower are some of the advantages that film makers tap into India for. Several renowned international agencies like Walt Disney, Viacom18, Fox Star, Warner Bros, Dreamworks etc. now have notable stake in Indian Film sub sector.
- India is also becoming a hub for international production houses when it comes to animation services, due to India's cost effectiveness. International production houses save significant costs in India, as compared to countries like Korea and Philippines. This is further strengthened by factors like sizeable English-speaking customer base and a robust studio infrastructure.
- Foreign investments are flowing in Indian gaming industry and are foreign firms are opening gaming studios in India. Various Vietnamese and Chinese companies are also looking to invest in Indian gaming industry.
- The rapid growth of OTT channels, increased emphasis on animated Intellectual Property (IP) content and growing inclination towards VFX by studios has provided animation and VFX studios with domestic and international market business opportunities and exposure.

Government initiatives

- The Government has increased the FDI limit in teleports, DTH, cable networks, Multi-System Operators (MSOs), mobile TV, headend-in-the-sky broadcasting services from 74 percent to 100 percent.
- Additionally, the Government has allowed 100 percent under FDI route in publishing/ printing of scientific and technical magazines/specialty journals/ periodicals and in the publication of facsimile editions of foreign newspapers.
- TRAI announced the New Tariff Order (NTO) 2.0 which by amending the existing NTO. This was to address the teething issues faced by the consumers. After implementation of NTO 1.0, despite of the options being available of selecting each channel and paying only for those channels, 80-85% customers opted for boutique packs only. This was due to huge discount given by the distributors on the bouquet of channels. After the implementation of NTO 2.0, bouquet channels can be offered at maximum 33% discount and 200 Channels are offered at the base NCF (Network Capacity Fee) price of Rs. 130 while NCF rates for Multi TV connections were slashed. This has been a huge growth factor for the television industry.
- In Sep 2018, the Government introduced National Digital Communications Policy 2018 (NDCP-2018) for affordable digital communications infrastructure and services.
- The government has also targeted to have large investment in digital infrastructure over the next few years as part of the recently proposed National Infrastructure Pipeline (NIP) including universal digital services, high-speed and quality

broadband services, availability of digital payments and e-governance infrastructure for delivery of banking and public services etc.

- A government scheme called Pradhan Mantri Gramin Digital Saksharta Abhiyaan (PMGDISHA) is a scheme which aims at making 6 Crore people in rural India, across States/UTs, digitally literate, reaching to around 40% of rural households by covering one member from every eligible household including the marginalized sections of society.
- Ministry of Information & Broadcasting, Government of India, announced 90 percent subsidy for the North Eastern States and 75 percent subsidy for other States in setting up of community radio stations. Further, the Indian Government approved the Production Linked Incentive (PLI) Scheme for Telecom and Networking Products as a component of Atma Nirbhar Bharat to make India a global hub for manufacturing telecom equipment including core transmission equipment, 4G/5G next generation Radio Access Network and wireless equipment, access & Customer Premises Equipment (CPE), Internet of Things (IoT) access devices, other wireless equipment and enterprise equipment like switches, routers etc. With the introduction of this scheme, the Government plans to reinforce the production and use of “Made in India” products both for domestic markets and exports.
- In 2017, Ministry of External Affairs introduced a Film Visa (F-Visa), for film professionals. Having the provision of multiple entry, this visa allows a person to stay up to one year in India. In 2018, film facilitation office portal was launched as a one stop shop for all the details pertaining to shooting locations, facilities available for animation, online submission of applications. In addition to this, it maintains a database of talent available in the Indian film industry. This has been a major growth factor for the film industry.
- Government has launched various schemes and updated policies to stimulate growth in the print media. Time to time updates and favorable policies help print media in India to grow. Recent approval of the Print Media Advertisement Policy 2020 of the Government of India will act as a growth driver for the print media in India.
- As a boost to arts and culture industry in Budget 2020, an allocation of INR 3,150 Crore was made to the Ministry of Culture. The amount allocated is proposed to help in the opening of maritime museum in Lothal, Gujarat among other projects. The budget also proposed establishing an Indian Institute of Heritage and Conservation under the Ministry of Culture.
- National Community Radio Sammelan was organized in 2019 by the Ministry of Information and Broadcasting, to nurture, promote and empower the community radio sector so that it realizes its full potential in the country’s development journey. Also, Ministry of Information & Broadcasting announced in 2019 the setting up of 118 new Community Radio Stations (CRS) in Left Wing Extremism affected districts, Jammu and Kashmir, North East, etc.
- In an initiative to provide 100,000 gram-panchayats (village councils) with high-speed broadband connectivity, the Government of India in its Union Budget has proposed to provide USD 845 million to Bharatnet programme in 2020-21.

A.3 Impact of COVID-19

COVID-19 has severely affected all aspects of the economy bringing a complete transformation in the way people live, work and communicate with each other. The disruptions in supply chain, shortage of labour and varying demands were few of the big challenges the economy has been facing due to the pandemic. The jolt of COVID-19 and the resultant lockdowns had been felt by all sectors of the economy and even within a sector there are variations in terms of the scale and extent of the issues encountered.

The Media and Entertainment sector is one of those sectors where the sub sectors have coped and performed differently to one another. Some subsectors like Film, Radio, Print, Art & Culture, Theme Parks, Sound & Music, Live Events & Performances had an adverse impact because of the pandemic but some others like Online Gaming and Digital Media remained unaffected. However, in some subsectors like Television, Advertising & OOH, Animation & VFX, COVID-19 has adversely affected revenue projections, but the user base or viewership has increased tremendously during the pandemic. Overall, like in the case of other sectors, the M&E sector overall has met with substantial challenges with all modes of outdoor entertainment coming to a complete standstill and there were several operational disruptions with difficulties in content creation and distribution through the traditional media outlets. These issues became graver due to the monetary setbacks due to decreasing ad spends across several media outlets except Digital media.

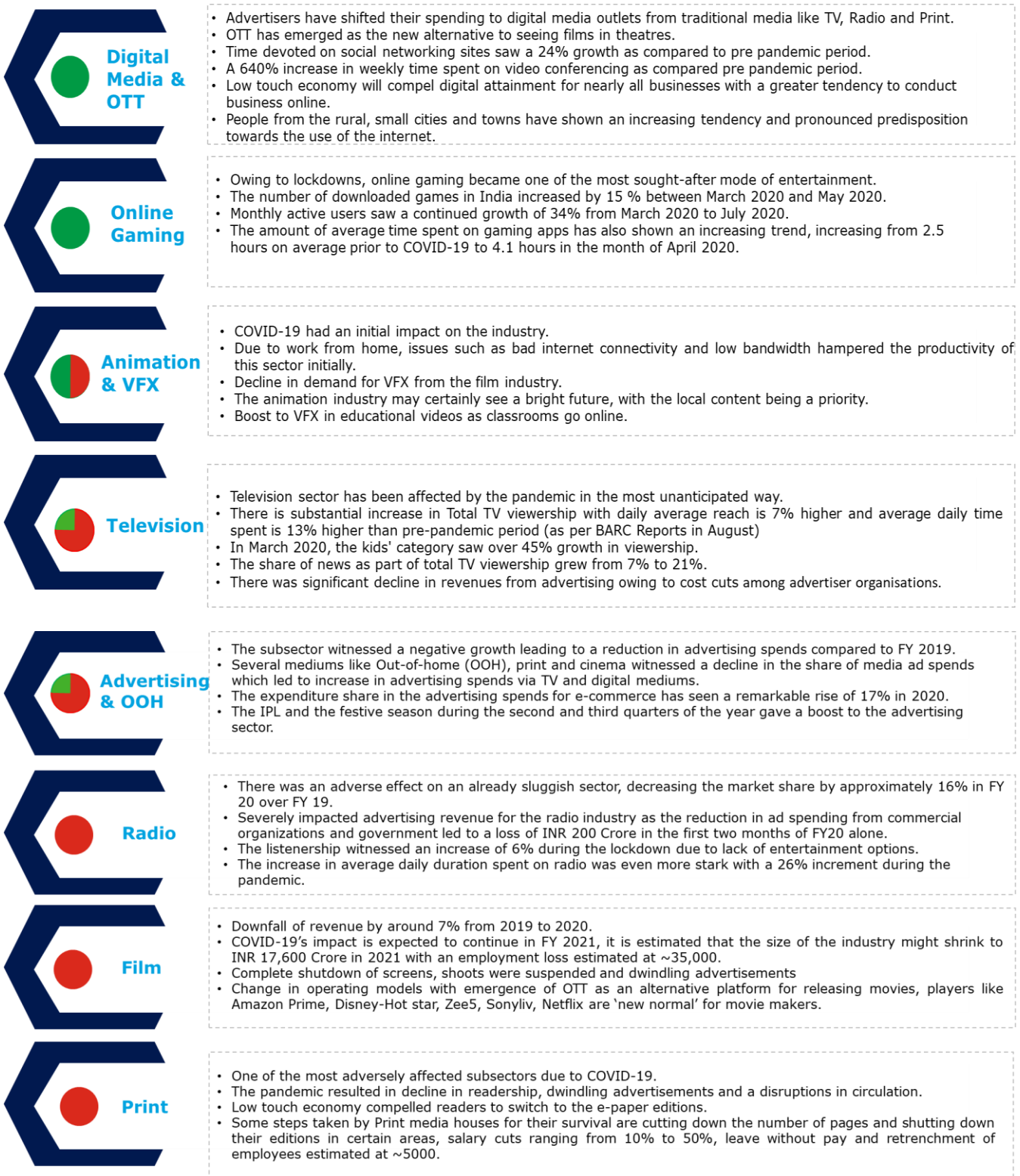
Digital media & OTT and online gaming have been few of those sectors which remained resilient through the pandemic. The pandemic has in fact helped in advancing India's Digital adoption policy. From schools and offices to shops including those selling everyday grocery items - almost everything has gone digital reflecting a change in consumer habits. The gaming subsector has also seen rapid growth in user penetration and engagement levels as modes of entertainment were very limited during the pandemic. Over-the-Top (OTT), streaming services and other digital enabled services have also largely witnessed unprecedented subscriber growth and demand during the pandemic as nearly everyone in the country was confined to their homes. Thus, COVID-19 has had a big effect on how one consumed content both at home and outside and this will also have long term impact for the industry. Going ahead, it is estimated that the digital trend will continue to strengthen, OTT adoption will continue to increase and there will be development of new and improved business models suitable to the 'new normal'.

Thus, for M&E industry to advance its growth, there are some aspects which require more emphasis. Areas like focusing on up-skilling of existing talent pool and development of new-age talent in line with digital skill requirements, investment in upgradation and buying of new technology, creation of more original content and content in regional languages to accommodate diverse viewers, creating content for the global audience etc. are few of the areas which need more attention. Improving and developing these aspects will make sure that the despite of COVID-19 and the resultant stresses, the Media & Entertainment industry will continue advancing its growth into the near future.

Impact of Second COVID-19 Wave

Somewhere at the back of people's minds, as consumers and marketers, there is a feeling that COVID-19 is here to stay. As India faces the second wave of COVID-19 infections, the Media and Entertainment (M&E) industry has been trying to minimize the impact of the lockdown on businesses across the country. In 2020, the industry has suffered massively during the long lockdown period. But now, with India facing the second wave of COVID-19, they are better prepared to handle the crisis both for themselves as businesses and their clients. However, some sectors are still severely affected with Film, TV and streaming projects put on hold, the damage caused by the latest COVID-19 wave is taking a heavy toll. While some shoots, mostly for television shows shifted base to other less affected places, the widespread severity of the second wave has brought things to a standstill across almost all regions. With a low touch economy, Print, Theme Park, Events & Live Performances and Art & Culture subsectors continue to be affected by the ongoing second wave. However, there is continued positive growth in digital business services, like e-commerce websites, OTT platforms etc. Hence, job roles in the digital sphere pertaining to Online Gaming, Animation & VFX, Digital Media & OTT and Digital Advertising will see an upward trend with a continued tech driven demands of skilled manpower in the market.

Figure 4: Impact of COVID-19 on M&E subsectors





- The Indian events and experiential industry is estimated to incur a loss of INR 1000 Crore as almost all big scale events across categories had been postponed or cancelled because of COVID-19.
- Virtual events have gained high traction as a result of COVID-19.
- Players operating in the industry have been strengthening their digital presence.

- Severe impact as market share decreased by almost 20% of its 2019 level, shrinking by almost INR 300 Crore.
- Daily wage musicians and live performers were hit the hardest.
- To curb the effect of pandemic, there was introduction of live streaming for online concerts and shows.
- Increase in paid subscribers, podcast listeners and independent artist music listening.

- Adverse impact as all the parks were entirely shut for majority of 2020.
- Industry has incurred a loss of more than INR 1,000 Crore due to COVID-19.
- Job losses, salary cuts and shutting down of smaller size parks.
- The workforce has been impacted the most with workers in security, housekeeping, landscaping, food courts etc being severely affected as their source of income came to a complete standstill.

- 41% of the creative sector closed temporarily and 53% of the events and entertainment management companies experienced 90% of their business cancelled between March and July 2020.
- 32% of the art organisations have been estimated to lose above 50% of their annual income.
- The cultural tourism based on heritage sites in India has undergone huge losses.
- To invite and engage customers, digital formats such as the online viewing rooms and virtual exhibitions were adopted.

- Key employment generating subsectors at present and subsectors which are likely to come up in the next 5 years (Statewise)

Table 1: Key employment generating subsectors at present and subsectors which are likely to come up in the next 5 years (Statewise)

STATE/SUBSECTOR	Film	Television	Print	Radio	Animation & VFX	Online Gaming	Digital & OTT	OOH & Advertising	Event & Live Performance	Sound & Music	Theme Park
Andhra Pradesh	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Assam	✓	✓									
Bihar	✓						✓		✓		
Chhattisgarh	✓						✓				
Delhi		✓	✓	✓	✓	✓	✓	✓	✓	✓	
Gujarat		✓			✓		✓				
Haryana		✓					✓		✓	✓	✓
Himachal Pradesh											✓
Jharkhand	✓						✓		✓		
Karnataka	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Kerala	✓	✓			✓		✓		✓		
Madhya Pradesh		✓		✓			✓				✓
Maharashtra	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Odisha	✓	✓					✓		✓		
Punjab	✓		✓				✓			✓	
Rajasthan		✓							✓		
Tamil Nadu	✓	✓		✓	✓	✓	✓	✓	✓	✓	
Telangana	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Uttarakhand	✓	✓		✓		✓	✓		✓		
Uttar Pradesh	✓	✓		✓		✓	✓		✓		
West Bengal	✓	✓	✓	✓			✓	✓	✓	✓	✓

Key employment generating subsectors (State wise)

Subsectors which are likely to come up in the next 5 years (State wise)

A.4 Revenue Projections of Media & Entertainment Sector

Basis our analysis of growth and risk factors, it is projected that Media and Entertainment Sector will grow from ~ INR 2,60,035 Crore in FY 2019 to INR 4,41,217 Crore in 2025 at a CAGR of ~9.2%. Television sub-sector is likely to contribute the highest at ~29% of the revenue followed by Advertisement and OOH at ~28% and Print at ~12%. Rest of the 9 sub sectors are likely to contribute ~31% of the total revenue.

Figure 5: Revenue Projection for Media and Entertainment Sector (2019-2025)

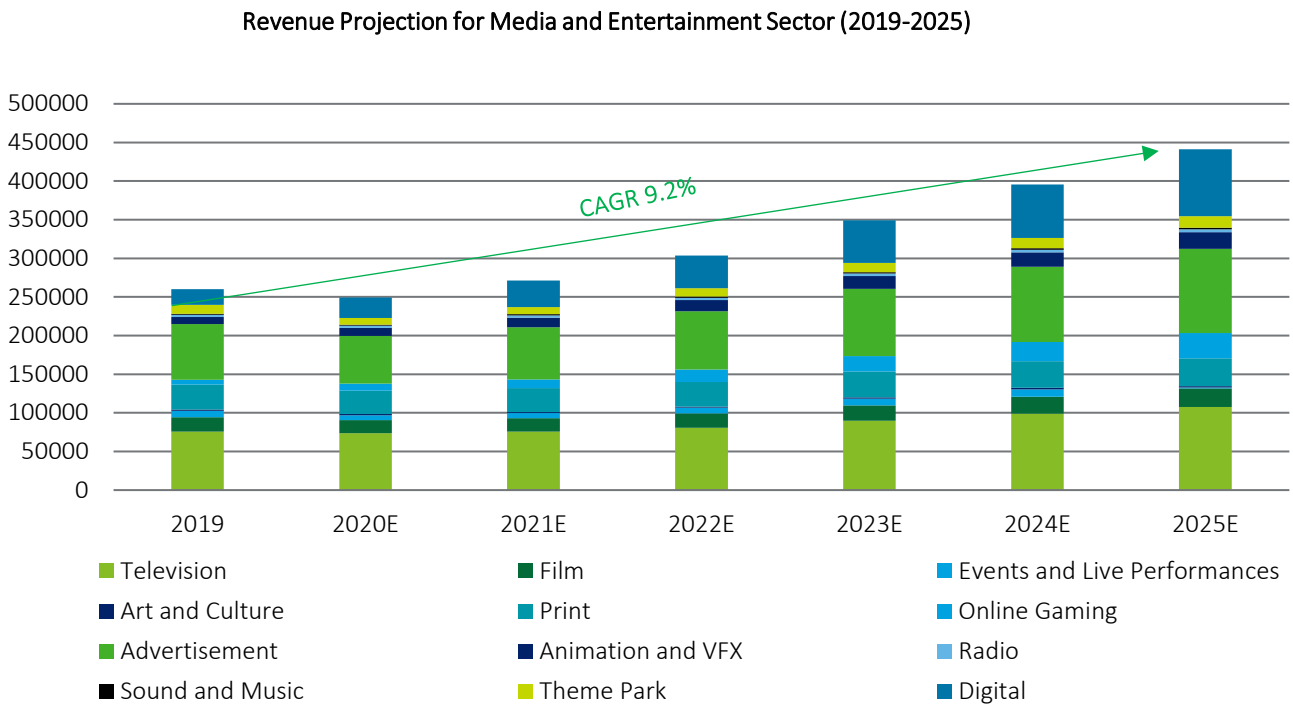


Table 2: Revenue Sub-sector Wise

Revenue Sub-sector wise	2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Television	75,750	73,500	75,500	80,600	89,600	98,700	107,574
Film	18,600	17,300	17,600	18,700	20,200	22,000	24,000
Events and Live Performances	8,300	6,225	6,536	7,321	8,638	9,848	1,226
Art and Culture	1,703	1,362	1,444	1,545	1,669	1,802	1,946
Print	32,300	30,400	31,000	31,900	33,500	34,500	36,000
Online Gaming	6,287	8,977	11,277	16,147	20,000	25,000	32,500
Advertisement & OOH	71,880	61,817	67,380	75,466	86,786	97,200	108,864
Animation and VFX	9,060	10,510	12,558	14,309	16,592	18,676	21,712
Radio	2,922	2,814	2,880	3,034	3,268	3,475	3,696
Sound and Music	1,596	1,293	1,416	1,600	1,840	2,060	2,308
Theme Park	11,475	8,606	9,467	10,603	11,875	13,300	14,896
Digital & OTT	20,162	26,614	34,066	42,582	55,357	69,196	86,495
Total	260,035	249,417	271,124	303,806	349,324	395,758	441,217

Source: Expert Interview and analysis

Section B: Analysis on Skills Gap

B.1 The Human Resource Demand Forecast

Media and Entertainment Industry with INR 260,035 Crore revenue contribution during FY 2019 directly employs ~15,11,611 personnel. Further, this industry is expected to employ ~ 22,90,686 by FY 2025 with further incremental demand of ~7,79,075 people to be employed in the industry with an employment elasticity of 7.2%.

Figure 6: Employment Projection for Media and Entertainment Sector (2019-2025)

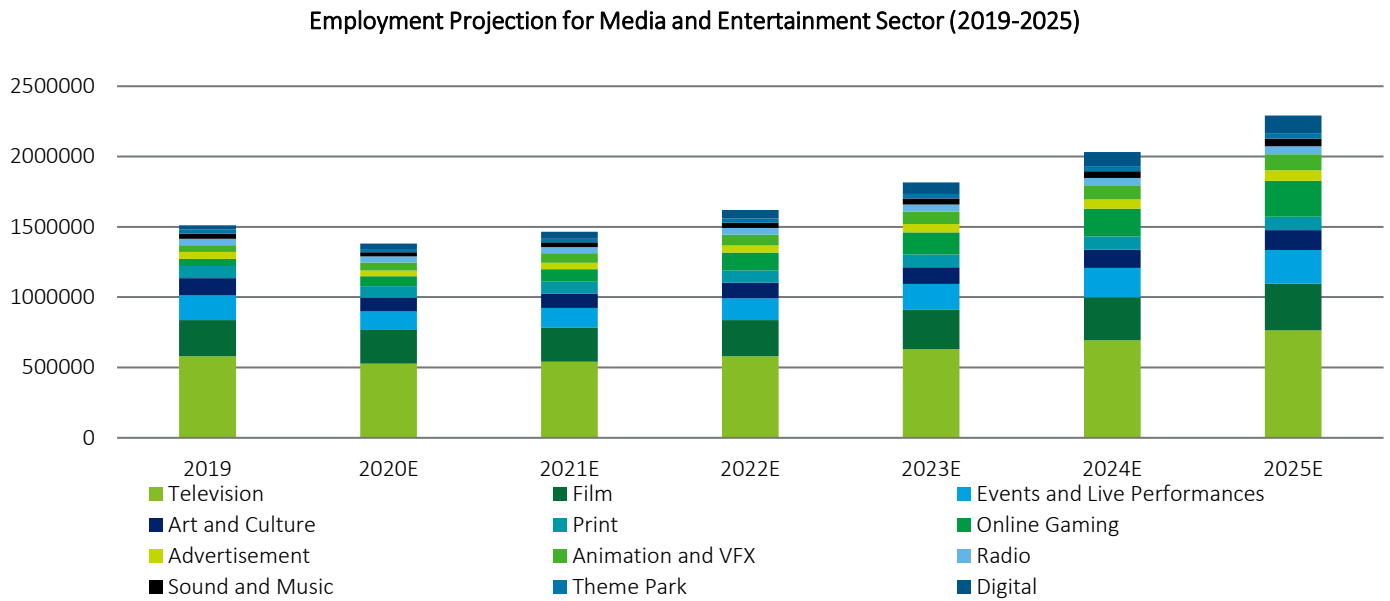


Table 3: Employment Sub-sector Wise

Employment Sub-sector wise	2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Television	580,000	527,510	541,858	578,813	630,906	694,565	764,646
Film	256,000	238,080	242,842	257,412	278,005	303,026	330,298
Events and Live Performances	176,998	132,749	139,386	156,112	184,213	210,003	239,403
Art and Culture	121,450	97,160	102,989	111,229	120,127	129,737	140,116
Print	88,408	82,060	83,579	85,935	90,181	92,796	96,461
Online Gaming	49,844	71,073	89,040	127,380	157,442	196,884	255,044
Advertisement & OOH	48,817	41,983	45,761	51,253	58,940	66,013	73,935
Animation and VFX	48,396	55,394	67,005	77,431	89,324	100,222	114,494
Radio	44,848	43,188	44,203	46,568	50,154	53,339	56,726
Sound and Music	36,800	30,147	32,860	37,247	42,722	48,019	53,782
Theme Park	30,751	23,063	25,369	28,413	32,249	36,119	40,092
Digital & OTT	29,298	38,673	49,502	61,878	80,441	100,551	125,689
Total	1,511,611	1,381,081	1,464,395	1,619,671	1,814,704	2,031,274	2,290,686

Source: Expert Interview and analysis

Table 4: HR Demand projections for M&E Sector - State-wise

S. No	State/Union Territory	Human Resource Demand in M&E sector (2019)	Human Resource Demand projection for M&E sector (2025E)
1	Andhra Pradesh	1,34,860	2,04,366
2	Assam	15,367	23,288
3	Bihar	36,848	55,840
4	Chhattisgarh	7,892	11,960
5	Delhi	1,43,449	2,17,381
6	Gujarat	65,319	98,984
7	Haryana	35,459	53,735
8	Himachal Pradesh	2,411	3,654
9	Jharkhand	13,410	20,322
10	Karnataka	1,46,197	2,21,546
11	Kerala	58,991	89,394
12	Madhya Pradesh	44,881	68,013
13	Maharashtra	2,23,187	3,38,216
14	Odisha	26,424	40,043
15	Punjab	19,015	28,816
16	Rajasthan	43,828	66,417
17	Tamil Nadu	1,37,216	2,07,937
18	Telangana	92,523	1,40,208
19	Uttar Pradesh	1,23,588	1,87,285
20	Uttarakhand	15,105	22,889
21	West Bengal	1,09,049	1,65,252
22	Other States/UTs	16,590	25,140
	Grand Total	15,11,611	22,90,686

Source: Projection and analysis on available data *

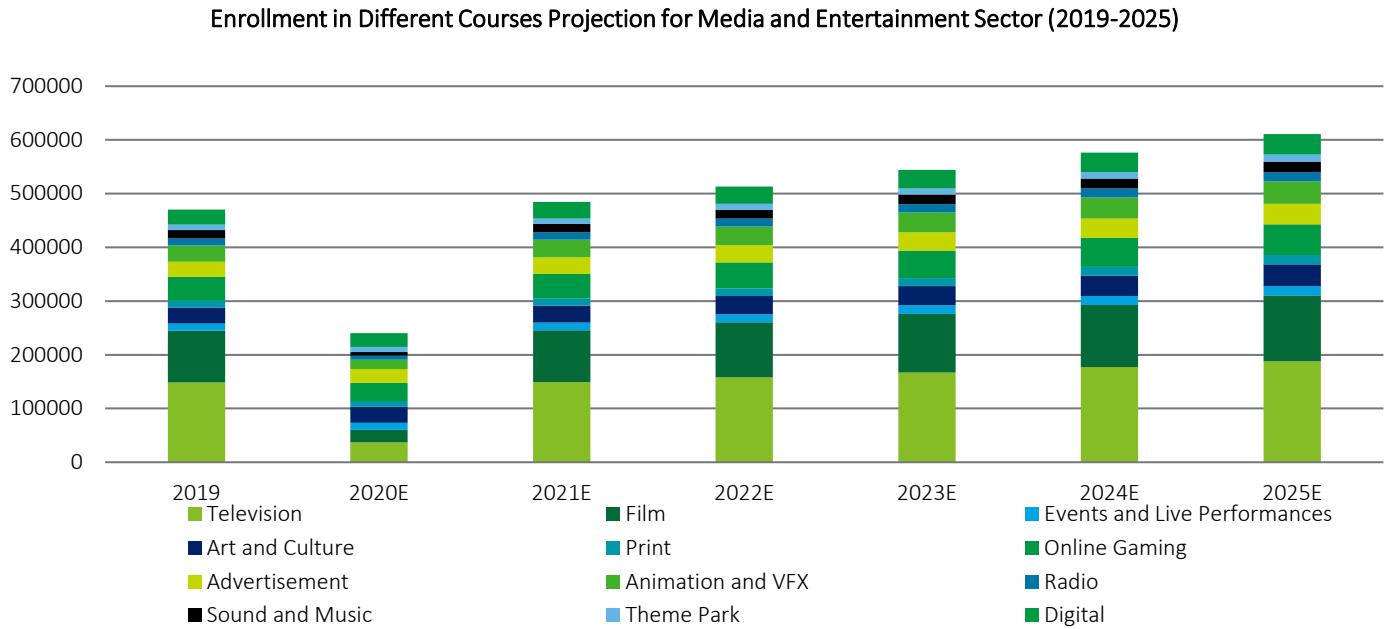
* To arrive at the above estimate, tables of State Wise Net Value add by sector groups that include M&E sub-sectors in RBI Handbook of Statistics on Indian States, 2020-21 were referred. The State wise Human resource distribution was modified using an adjustment factor based on the significant presence of the M&E subsectors in each of the State/ UT. A differential higher talent demand is likely in the States/ UTs that have large number of significantly active sub-sectors at the cost of those which have only a few sub sectors. The adjustment was then incorporated to arrive at the human resource demand for 2019-20. These estimates were collectively in alignment with the data collected through secondary research. The Compound Annual Growth Rate (CAGR) of 7.2 percent was then used to estimate the human resource demand in the M&E sector for the year 2025.

B.2 The Human Resource Supply Forecast

The courses available in Media and Entertainment Sector are very much unorganized. There is certain sub sector viz. Print/Television/Radio/Digital where Journalism and Mass Communication regarded as most preferred course. Film/ Television industry prefer talents with formal education procured from different colleges available in India. Whereas there are subsectors viz. Online Gaming/Animation and VFX which are highly dependent or certificate courses. Further, there are several subsectors viz. Sound and Music/ Art and Culture/ Live Event and Performance in which people learn out of their

passion. Theme Park on boards talents mostly from the Hotel and Tourism Management courses. Enrollment elasticity across different courses available in Media and Entertainment sector will be ~4.45. (Inclusive of regular, distance and vocational courses)

Figure 7: Enrollment in Different Courses Projection for Media and Entertainment Sector (2019-2025)



Details of Employment in M&E sub-sectors:

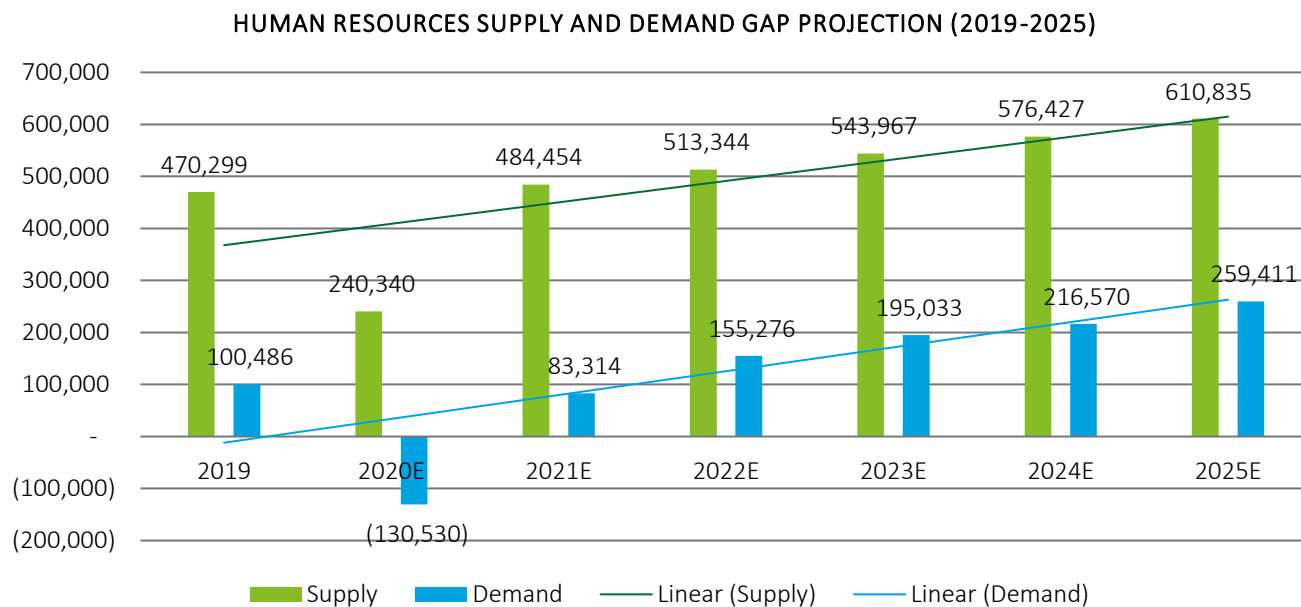
Table 5: Details of Employment in M&E sub-sectors

Sub-sector	2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Television	148,302	37,296	148,875	157,807	167,276	177,312	187,951
Film	96,837	22,832	97,097	102,922	109,098	115,644	122,582
Events and Live Performances	13,120	13,120	13,907	14,742	15,626	16,564	17,558
Art and Culture	30,034	30,034	31,836	33,746	35,770	37,917	40,192
Print	13,026	10,937	13,599	14,415	15,280	16,197	17,168
Online Gaming	43,690	33,827	45,466	48,194	51,086	54,151	57,400
Advertisement	28,191	25,528	30,598	32,345	34,197	36,160	38,241
Animation and VFX	30,285	17,454	32,809	34,778	36,865	39,076	41,421
Radio	13,480	7,384	13,766	14,592	15,467	16,395	17,379
Sound and Music	15,388	6,644	15,562	16,496	17,485	18,534	19,646
Theme Park	9,756	9,756	10,341	10,962	11,619	12,316	13,055
Digital	28,191	25,528	30,598	32,345	34,197	36,160	38,241
Total	470,299	240,340	484,454	513,344	543,967	576,427	610,835

Source: AISHE 2017,2018,2019 and analysis

B.3 Subsector wise Skill Gap Analysis

Figure 8: Human Resources Supply and Demand Gap Projection for Media & Entertainment Sector (2019-2025)



The above bar graph shows that there will be surplus in terms of supply of manpower in comparison to the market demand of the workforce in Media and Entertainment sector. Further, the graph depicts that the gap between supply and demand for manpower is more or less constant. Vocational training needs to focus on job-roles that have high demand.

- Highest Supply and Demand Gap between 2019 to 2025 is ~4.01 Lakh in the year 2021.
- Lowest Supply and Demand Gap between 2019 to 2025 is ~3.49 Lakh in the year 2023.
- Average annual Supply and Demand Gap between 2019 to 2025 is ~3.66Lakh.

B.4 Job Role matrix for existing QP-NOS

Table 6: Job Role matrix for existing QP-NOS

S.No.	Qualification Pack Name	QP ID.	NSQF Level	Job role training duration	Demand for Job role
1	ACCOUNT DIRECTOR (ADVERTISING AGENCY)	MES/Q0207	6	760	●
2	ACCOUNT EXECUTIVE (ADVERTISING AGENCY)	MES/Q0208	5	520	●
3	ACTOR	MES/Q0105	4	465	●
4	ADVERTISING OPERATIONS COORDINATOR (DIGITAL)	MES/Q0206	4	280	● (Print) ● (TV)
5	ANIMATION DIRECTOR	MES/Q1302	6	550	●
6	ANIMATOR	MES/Q0701	4	280	●

S.No.	Qualification Pack Name	QP ID.	NSQF Level	Job role training duration	Demand for Job role
7	ART DIRECTOR (ANIMATION AND GAMING)	MES/Q0501	5	520	
8	ART DIRECTOR	MES/Q3102	6	760	
9	ASSISTANT CAMERAMAN	MES/Q0903	4	280	
10	CAMERA OPERATOR	MES/Q0902	5	520	
11	CHARACTER DESIGNER	MES/Q0502	4	280	
12	CLEAN UP ARTIST	MES/Q0506	3	160	
13	COLOUR KEY ARTIST	MES Q0505	3	160	
14	COLOURIST	MES/Q3502	4	280	
15	COMPOSITOR	MES/Q3505	4	280	 (Film)  (TV)
16	COMMUNITY JOURNALIST	MES/Q1904	4	430	
17	DANCER	MES/Q1201	3	440	
18	DIRECTOR OF PHOTOGRAPHY	MES/Q0901	7	550	
19	DIGITAL MARKETING MANAGER	MES/Q0706	7	345	
20	EDITOR	MES/Q1401	4	280	
21	EXECUTIVE PRODUCER	MES/Q2801	7	550	
22	GRAPHIC DESIGNER	MES/Q0601	4	470	
23	HAIRDRESSER	MES/Q1802	4	280	
24	LAYOUT DESIGNER	MES/Q0503	4	280	
25	LIGHTING ARTIST	MES/Q0504	4	280	
26	LINE PRODUCER	MES/Q2802	6	640	
27	LIVE ACTION DIRECTOR	MES/Q1301	7	550	
28	LOCATION MANAGER	MES/Q2804	6	550	
29	MAKE-UP ARTIST	MES/Q1801	4	280	
30	MODELLER	MES Q2501	4	280	
31	MUSIC PROGRAMMER	MES/Q1503	5	590	 (Film)  (Sound)
32	MUSIC PRODUCER	MES/Q1502	6	640	 (Film)  (Sound)
33	MUSIC COMPOSER / DIRECTOR	MES/Q1501	7	790	 (Film)  (Sound)
34	PRODUCTION ASSISTANT	MES/Q2805	4	280	
35	PROPS MASTER	MES/Q3108	5	520	
36	PROSTHETIC ARTIST	MES/Q1803	4	520	
37	RENDERING ARTIST	MES/Q3503	4	280	
38	RIGGING ARTIST	MES/Q2502	4	280	

S.No.	Qualification Pack Name	QP ID.	NSQF Level	Job role training duration	Demand for Job role
39	ROTO ARTIST	MES/Q3504	4	280	●
40	SALES COORDINATOR (MEDIA ORGANIZATION)	MES/Q0204	4	280	●
41	SALES DIRECTOR (MEDIA ORGANIZATION)	MES/Q0201	7	1480	● (Films) ● (Print)
42	SALES EXECUTIVE (MEDIA ORG)	MES/Q0203	4	280	●
43	SALES MANAGER (MEDIA ORGANIZATION)	MES/Q0202	6	760	● (TV) ● (Print)
44	SCRIPT EDITOR	MES/Q3001	7	550	●
45	SCRIPT WRITER	MES/Q3002	6	500	●
46	SCRIPT RESEARCHER	MES/Q3003	5	520	●
47	SEARCH ENGINE OPTIMIZATION EXECUTIVE	MES/Q0704	44	330	●
48	SEARCH ENGINE MARKETING EXECUTIVE	MES/Q0705	4	365	●
49	SET CARPENTER	MES/Q3103	3	160	●
50	SET DECORATOR	MES/Q3109	5	520	●
51	SET PAINTER	MES/Q3104	3	160	●
52	SET PLASTERER	MES/Q3106	3	160	●
53	SOCIAL MEDIA EXECUTIVE	MES/Q0702	4	340	●
54	SOCIAL MEDIA MANAGER	MES/Q0703	5	365	●
55	SOUND ASSISTANT	MES/Q3403	3	160	●
56	SOUND DESIGNER	MES/Q3401	5	520	●
57	SOUND EDITOR	MES Q3404	4	280	●
58	SOUND ENGINEER	MES/Q3402	4	280	●
59	STORYBOARD ARTIST	MES/Q0507	3	160	●
60	TEXTURING ARTIST	MES/Q2503	4	280	●
61	TRAFFIC COORDINATOR (MEDIA ORG.)	MES/Q0205	4	280	●
62	UNIT PRODUCTION MANAGER	MES/Q2803	6	550	●
63	VFX EDITOR	MES/Q3501	4	280	●
64	VOICE-OVER ARTIST	MES/Q0101	4	280	●

Source: Expert Interview, Survey and analysis

● High ● Medium ● Low

The sectoral demand and relevance of Existing/ QRC/ Draft QP NOS of Media and entertainment sector Skill Council were ascertained from the survey and expert interviews.

B.5 Select Futuristic Job Roles

Table 7: Select Futuristic Job Roles

S.NO	JOB ROLES	SUB-SECTOR	DESCRIPTION
1.	Programmatic Display Advertising Manager	Advertisement & OOH	This role is all about designing programmatic display campaigns and assisting the manager to create marketing materials to support channel adoption, develop advanced advertising strategies and providing those strategies to clients.
2.	Programmatic Coordinator	Advertisement & OOH	The coordinator assists the team with executional aspects of campaign management processes, develops and delivers performance updates and assists with day-to-day management of digital media plans
3.	Digital Advertising Specialist	Advertisement & OOH	The specialist's role is to execute the building, testing, and optimizing of campaigns on major social media platforms and monitor and analyse the performance of digital marketing campaigns.
4.	Insights Manager	Advertisement & OOH	This job role would be to ensure full utilization of solutions and satisfaction of users, research/understanding customer needs, enable actionable insights via platform, drive the end-to-end process for ad measurement solutions.
5.	Design Architect	Animation & VFX	This job entails designing the interior and exterior of the devices used in AR/VR like helmets and goggles.
6.	System Validation Engineer	Animation & VFX	This role requires fixing the bugs/issues that might arise in the software that goes into the applications. Job requires inspection, calibration and testing the equipment/device to ensure smooth functioning and improve workflow efficiency.
7.	3D Artist	Animation & VFX	With the demand for animated content increasing at a rapid rate, 3D artist is one of the main job roles that is already in high demand and expected to remain so in the near future. This involves creating special effects using combination of software and hand drawn techniques.
8.	Technology fabricator	Art & Culture	The technology fabricator is responsible for assisting in the design, fabrication and implementation of electronics hardware and software for better visitor experience.
9.	Patron Information Data Analyst	Art & Culture	The Patron Information Data Analyst (PIDA) will be the museum's technical specialist for visitor, donor and member data and related business processes. Their job role involves supporting the specialized application needs of museum staff members by providing support, reporting, and specifications for enhancements of museum's CRM and ticketing system.
10.	Drama therapist	Art & Culture	They use drama or theatrical processes in order in to achieve therapeutic goals. Drama therapists perform controlled sessions where theatre and drama-based activities are used to observe and explore the behaviour, attitudes and emotions of individuals experiencing physical, psychological, emotional or mental health problems.
11.	Email marketer	Digital Media & OTT	Role is essentially about emails campaigns, developing new and attractive content for emails and acquiring customers via emails.
12.	Pay per click/Search engine marketer	Digital Media & OTT	The role of search engine marketers is to enable a company to get their website on the very first page of search with investment. Pay per click is a

S.NO	JOB ROLES	SUB-SECTOR	DESCRIPTION
			way to get maximum return and reach many people with minimum investment.
13.	Social Media Marketer	Digital Media & OTT	It includes marketing by creating and developing vibrant and engaging content and thereby attracting customers for the social media platform.
14.	Digital Media Specialist	Digital Media & OTT	Role is to develop content that would be used for various digital media platforms. These knowledgeable digital specialists would have the skills to create content, use special effects, animation etc. for different applications from websites to video games and even commercials.
15.	Digital Media Planner	Digital Media & OTT	Digital Media planners' role is key to future's fast-paced digital world. They orchestrate the placement of marketing content into different digital media like social media or display media or podcasts, in order to amplify a campaign's efforts. They are the go-to people for strategizing content, executing campaigns across various outlets and reporting on the return-on-investment (ROI) of the campaign.
16.	Digital Researcher	Digital Media & OTT	The digital Researchers is essentially responsible for organizing, collecting and analyzing opinions and data to solve various digital-related website problems of the company. They specifically work with data related to an organization's digital media, and research information from online advertising, social media, digital marketing and see to it that all function well.
17.	Showrunner	Digital Media & OTT/Film	Essentially, they are the link between the OTT platforms and the team responsible for making a show. They possess the combined qualities of a producer and a director. Their role is to ensure that there is no gap between the content visualised by the team and what is going to be showcased on the platforms.
18.	Domain theme Experts	Digital Media & OTT/Film	With increase in demand for movies related to specialised subjects viz. history, sports, biographies, children, animal etc, domain experts in movie making in several themes would be in high demand in the OTT industry. They would act as a catalyst to keep the audience engaged to the movies.
19.	Sports event manager (Sports manager)	Event & Live Performance	Sports management is an upcoming field in India. The sports managers with knowledge and interests about sports and trained for management of sporting activities manages all aspects of the sports events at all stages-before, during and after the events.
20.	Celebrity managers	Event & Live Performance	Agents and business managers of artists, performers, athletes or other celebrities who represent and promote them with current or prospective procurers of their services. They may also handle contract negotiation and other business matters for their clients.
21.	Event technology manager	Event & Live Performance	A technology manager coordinates an events' technology operations including hardware, software and networking & communication requirements, procurement and operations; technonoly enablement of event, provision or procuring of a customsied tech platform etc. It may also include Social media management for the event.
22.	Audio Visual (AV) production specialists	Film	Responsible for delivering video promos, digital content and video. Further they control the viewership of advertisement.

S.NO	JOB ROLES	SUB-SECTOR	DESCRIPTION
23.	Social media specialists	Film	They play a very important role in today's era of social media marketing by way of designing appropriate strategy to increase the user base and by spreading the word as much as possible through innovative ideas.
24.	Machine Learning Architect	Online Gaming	Their role is to apply machine learning with cross functional teams. They help in designing and developing of machine learning algorithms and models.
25.	Data Scientist	Online Gaming	They use statistical and data mining techniques to solve and model complex problems and identify opportunities. Their responsibilities include designing experiments and testing hypothesis to optimize operations along with solving analytical problems. This helps in creating personalised content by allowing real time interaction. They use performance analytics to identify weakness, track improvements and observe trends.
26.	Machine Learning Engineer	Online Gaming	They help in creating ML products and should possess statistical and programming knowledge. They are responsible for developing data science prototypes, running machine learning tests and experiments and performing statistical analysis using test results. They use the strength of algorithms to make predictive models to predict the actions of a player in a game.
27.	Cloud Developer for Gaming	Online Gaming	Since cloud gaming is still in its infancy in India, this role can create excitement and enthusiasm for cloud services for game developers. Their role will be to help game developers learn how to leverage cloud services successfully.
28.	Gaming and Visualization(G&V) Development and Integration System Engineer	Online Gaming	Their role will include using 3D models, visualization of various gaming scenarios and providing technical expertise to ensure proper integration of G&V products.
29.	Fact Checker	Print	Fact checkers are the professionals who check the authenticity of the news. This job role will be in demand because of the blooming of fake news and diminishing credibility of journalism.
30.	Custom or Theme Packagers	Print	This is going to evolve as one of the demanded job roles because of the paucity of time by the readers. Readers would assign a limited time on contents. So, the custom packagers would devise ways to include as much content on a particular subject for its reader to be satisfied and engaged. This job role would be more for the digital e-newspaper segment.
31.	Domain Journalists	Print	with general reporting getting spread out on digital and social media platforms, Domain expert journalist would be in high demand in the print media. They would act as a catalyst to keep the readers hooked to the print media. Domain journalists could be in the area of business, crime, technology, sports, development etc.
32.	Podcast Producers	Radio	They are responsible for a variety of aspects like the tone of the radio podcast, the content discussed, the audience which would be targeted and for marketing.
33.	Content Curators	Radio	Their role is to make sure that the content of the podcast is finely tuned with the audience it is targeting and that the story/ message of the podcast is disseminated in its right essence. They help in structuring stories with the podcast writers.

S.NO	JOB ROLES	SUB-SECTOR	DESCRIPTION
34.	Bilingual Vocal Coach	Sound & Music	With no boundaries per se in the music world and technology playing a major role in connecting fans all around the world with their favourite artists, bilingual (or even multi-lingual) vocal coach is expected to become a new job title with artists being trained to sing in other languages than their own.
35.	Music Hologram Developer	Sound & Music	In order to keep differentiating themselves from other run of the mill shows, and especially in the wake of the pandemic, hologram of artists is a unique way of connecting with the audience. This also helps in fans being able to connect with artists who are no more with us, for example a concert with a hologram of Michael Jackson is bound to create a full house, given his status and legacy. This is a new specialisation and hologram developers will be in demand in the future.
36.	Playlist Scientist	Sound & Music	Playlist scientists are a major attraction for all streaming services and a new job role is expected to arise in the future whose responsibility will be to cover all major platforms and curate the playlists accordingly.
37.	Crossover ambassador	Sound & Music	With music being loved all over the world, it is very critical for a band/artist to connect with international audience. Their role will be to work in a record label company and make sure that the artist is introduced and recognised by audiences in other countries or regions.
38.	Artificial Intelligence experts	Television	Many jobs which involve the manpower today, might be eliminated through use of artificial intelligence in future. Hence, the resources proficient in the relevant softwares may see the rise in demand in future.
39.	New age Content/ Script writer	Television/Film	Script writers who could write out of box stories for Channels would be in demand. This becomes more important as channels would be in competition with OTT platforms to get more eyeballs.
40.	Technology artists/ personnel	Television/Film	Emphasis should be on including the VFX skills, social media & digital marketing course in the curriculum as the television sector requires these added skills for better employment.
41.	VR Marketing operator	Theme Park	As the use of VR increases, it can be used as a marketing tool for theme park previews. The role would be to help potential visitors to check out rides virtually before going to the theme park. Such immersive options are bound to increase the number of people visiting a theme park.
42.	Projection mapping specialist	Theme Park	Use of AR will require specialist positions like projection mapping specialist which can be used to entertain guests while waiting in queues.
43.	AR app developers	Theme Park	Extending AR interaction by incorporating guests' preferences with theme park's environment will bring a new dimension to theme park experience. The role will require creation of AR apps which the guests will have to download and follow directions enhance their experience.
44.	Creative Producer (AR/VR)	Theme Park	Their job will be to propose creative experiences to partner organisations, which will attract guests through digital distribution and streaming technologies.

Section C: Way forward and initiatives required

C.1 General and Sector-specific Initiatives

Table 8: General and Sector-specific Initiatives

S. No.	Category	Key Initiatives	Subsector
General Recommendations			
1	Sector level leadership	<ol style="list-style-type: none"> 1. Creating a forum that could work as a talent exchange for the sector connecting skilled graduates from the institute and freelancers on one hand and employers or talent aggregators on the other; 2. Building awareness about the training institutes in the sector through listing in sector directories and dissemination through industry forums; 3. Building capacity at the level of institute leadership and institute faculty through workshops and training; 4. Encouraging members of different industry associations to spend a certain minimum hour every year in teaching and training at the institutes; 5. Encouraging the institutes to include a sizable amount of teaching from professionals in each of the courses undertaken by their faculty members; 6. E-learning modules could be created with well-known professionals on key topics and made available to the training institutes on a subscription basis to complement their in-person teaching; 7. Development of model course curriculum on key subjects, which may be updated regularly with the help of industry experts; 8. Certification of faculty members post successful completion of Faculty Development programs and assessment; 9. Rating of training institutes on objective parameters. 	All Subsectors
2	Futuristic Job roles	There are several job roles which will have high demand in future. There is a need to consider developing QP-NOS for these roles and recommend introducing teaching and training modules for them	All Subsectors
3	Placement for Vocational trained students	The placement with regards to the enrollment in vocational courses are low. Special efforts should be made for industry connect and to place the students in respective sub sector.	All Subsectors
4	Potential Enrolments	The enrollment in vocational courses are huge with regards to demand in market. It needs to be aligned to the demand in sector.	All Subsectors
5	Job roles with lesser demands in the market	Job roles which are identified as low in demand may be suitably modified/updated as per industry demand to increase their employability.	All Subsectors
6	Potential Capacity building	International affiliated certification for the trainers could be explored. More focus could be given to on-the-Job training for the trainers and students.	All subsectors
Sector Specific Initiatives			
1.	Focus on trending/emerging Job roles	With more people becoming tech savvy and getting comfortable to witness events online, there is a need to include job roles related to online streaming of events.	Events and Live Performance
2.		Focusing on career development as freelancers could be a viable option for candidates undergoing skill training.	Events and Live Performance

S. No.	Category	Key Initiatives	Subsector
	Special focus on self-employment	<p>With the increase in digital content consumption, demand for job roles such as content writers and creators is high, hence focusing on career development as freelancers could be a viable option for candidates undergoing skill training.</p> <p>As there is a lot of scope in producing many technologies in-house, rather than importing from abroad, focus needs to be on building training capacities for encouraging entrepreneurship and self-employment in the sub-sector.</p>	Digital & OTT Animation & VFX
3	Special focus on learning trending technologies	<p>There is dearth of students who have relevant knowledge in areas like cloud gaming, machine learning and data analytics in India.</p> <p>As the focus shifts to digital, corporates are investing money in digital advertising. More technical job roles related to big data, data analytics and use of AI/ML for targeted advertising are the future of this subsector. There is a need to focus on such job roles.</p> <p>With the pandemic putting more focus on a digital driven economy, there have been change in trends and requirement of the skill sets as per the current needs. Hence, there is need to update the curriculum with courses on latest technologies and adopt technologies from developing countries.</p> <p>There are several job roles which will have demand in future and there is a need for focussing on these roles and for developing training modules in these areas.</p> <p>The Theme Parks in India are majorly lagging behind in terms of the updated technology such as VR and AR. Hence, there is need to update the curriculum for job roles pertaining to these technologies.</p>	Online Gaming, Animation & VFX Advertising & OOH Digital & OTT Theme Park
4	Building Capacity	<p>There is a need for building capacity for training delivery for the sub-sector. The institutes need help in developing training curriculum and assessment criteria, partnering with industry and for training the trainers.</p> <p>Special focus on training ground level staff on technology</p> <p>India needs a large scale offering of standardized Acting learning products</p> <p>There is a requirement for film, TV acting training in India. There are almost no film acting schools in India. There are some theatre schools (broadly focused on 19th century theatre based on projection) but they have little intake. Also, the training in theatre schools is for theatre, although they might have 1-2 acting modules but focus is not on contemporary and 20th century Stanislavski realism based and technique based film acting.</p> <p>Acting schools are required to focus not just on Talkies films but also on OTT films (different skills than talkies movies- more over the shoulder and close ups and where every movement, whisper is picked up) and TV.</p> <p>The little acting training thats available is a wide base potpourri of skills, without short terms specialized courses. Moreover, many of the trainers are from theatre background.</p>	Art & culture Advertising & OOH Film and Television Film and Television
5	Promoting collaborations	Centre of Excellence (COE) should be established in art and craft development space for research and training.	Art & culture

S. No.	Category	Key Initiatives	Subsector
		Institutes need to collaborate with radio partners for imparting knowledge and technical know-how of instruments, thereby providing an up-to-date learning experience.	Radio
		M&E industry talent aggregators/ providers need to be approached by training institutes. Additionally, the institutes need to enhance awareness about them through Associations like CINTAA and with publications like Film India directory	Advertising & OOH
6	Industry aligned Practical Training	More focus needs to be given to on-the-Job training for the trainers and students. it important that they are updated with latest programming languages and key focus areas in the sector.	Online Gaming, Animation & VFX
7	More Focus on Internship and on-the-job training	Most students develop interest/learn new skill sets by working in radio station, therefore it is recommended that the institutes must have compulsory internships every year for their students to be connected to and learn from the industry.	Radio
8	Targeted learning	Introducing courses that align the education and training towards the jobs available in the market and also the future jobs that may come up basis the needs of the industry's growth.	Events and Live Performance

Building a strong Media and entertainment sector through structural Interventions

M&E sector needs to work on structural interventions to address the root cause for skill-gaps in the sector.

End-to-end Entitlement (EeE): Indian M&E sector needs to leverage the full value from the entire value chain of the activity it is strong in. The Indian M&E strength lies in its languages, literature, art forms, talents among other things and that's why M&E sector has a strong base in for example in the music industry. However, while music industry produces great music, it does not leverage economically all aspects of the value chain. Almost the entire requirement of our hardware/ tools/ equipment/ instruments and software is imported. India can't remain just a large consumer and must make a transition to being a producer for it's needs thereby being self-sufficient and eventually being an exporter since the country has an end-to-end entitlement on the industry by virtue of it's strengths, the size of the requirements and extent of the contribution. This approach to being Atma-Nirbhar will give the country the full rightful value to its people. If India fails to realise it's EeE, other economies would continue to get disproportionate outcomes from India's talented workforce and sectoral strengths.

India needs integration and inter-operability among it's languages so that the art and culture treasures of each language become available to the users of the other languages too. A robust translation mechanism will enable this integration. Once made available, this treasure will create its own demand.

Cross-skilling and Skill infusion: Every M&E sector professional could always learn a few adjacent skills based on his/ her current skills with some effort. But, for that to happen, people should be aware about the skill adjacencies and they should be able to find the resources- both human and knowledge/ training easily. Therefore, there is a need to create a comprehensive and category-wise online directory- an almanac of resources and resource persons that is accessible to and searchable for people who would need it. Technology can enable the creation of a large exchange/ public website for experts, resources and discussions. This will enable every professional to cross-skill and therefore upskill themselves thereby helping the industry achieve more. An example of this approach to addressing information asymmetry is alumni forums created by training and teaching institutes where jobseekers and job-givers are able to come at almost no cost for mutual benefit.

Well Being skills (WBS): Most professionals would like to keep apart some time to give back and do social service on a voluntary basis in their chosen area of work. But they would do it only if its easy to do it. A mechanism of recognition and acknowledgement for their contribution would make the giving more satisfying and sustainable. There is a need to create systems where professionals can make these contributions. This is essential for the wellbeing of the service receivers- many of whom may not be able to procure these services commercially and for those who provide them these services since it helps them become better professionals and human beings as their self-actualization needs are met. WBS contributes directly to nation building.

India needs to become a kaizen-nation and this is possible through a focus on Unique Problem Solving skills (UPSS). India is a nation that thrives on some-how managing the situation and getting by- a hustling approach- rather than addressing the root causes through robust problem solving. But long-term value can only be created by building a culture and capability of problem solving. UPSS approach has two complementary components- training for problem solving skills and connectivity. The training needs to begin at schools and needs to include innovation, lateral thinking, systems thinking and cross-function thinking. The skilled nation will also need a system where people in any area/ domain can be brought together to address issues jointly. This could, for example, bring creative musicians together just as it could bring film directors together. UPSS will enable congruity by bringing all the pieces of the puzzle together and address the problem comprehensively.

India is a nation that doesn't manage its knowledge well. It is therefore not surprising that much of it's traditional knowledge and many skills has been lost. A significant part of these died with their experts since knowledge was hoarded or shared only in closed circles. India needs to move towards a Skill & Innovation Encryption approach to knowledge management for it's people. People must consider it their moral duty to write and record their skills, knowledge, ideas and learnings. And it must be widely publicized else even good knowledge remains unutilized. For example, a tremendous repository of knowledge- SWAYAM has little uptake.

In summary, these conceptual approaches – End-to-end Entitlement (EeE), Language Integration, Cross-skilling and Skill Infusion; Well Being Skills (WBS); UPSS; and Skill & Innovation Encryption have the potential to build the human capital for the M&E entertainment sector in particular and would go a long way in addressing our human resource skill-gap in the coming years.

C.2 Potential Ways for overcoming COVID-19 challenges

Figure 9: Potential Ways for overcoming COVID-19 challenges

Digital Media & OTT, Online Gaming, Animation & VFX Subsectors

- Subsectors should seize the opportunity to continue growing their user base that the change in habit formation has brought through bigger digital presence and new, better and improved customer experience.
- Monitor and learn how to answer new consumer engagement and consumption preferences by leveraging data.

Digital Media & OTT, Online Gaming, Animation & VFX Subsectors

- To invest in the areas with the highest potential like OTT, AR/VR, Gaming and VFX, subsectors should develop new partnerships.
- Media companies, including OTT platforms, could consider gaming as an addition to their ecosystem services.

Film, Sound & Music, Live events & performances subsectors

- To overcome the significant revenue decline, subsectors could modernize operational competence of programs and move to cloud storage.
- To improve marketable influence, they could innovate and find new sources of revenue like dynamic ad inserts, gamified sports viewership, interactive digital live music performances etc.
- To avoid further revenue loss, film producers should release more movies on OTT to reach a larger audience and gain more traction.

Television Subsector

- To overcome the challenge of content shortage the subsector should focus on building a stronger content bank which may end in working capital being sealed up across the value chain, leading to higher cash financing requirements.
- Companies should look for innovative ways to produce and repurpose content & rationalize content production using AI/ML.

Art and Culture subsector

- To tackle the issue of reducing art sales, art houses and galleries could have online fundraisers and auctions.
- Since there are restrictions in place for the number of people to attend large gatherings, performing arts institutes could display or have live online performances and shows by various artists on their social media pages and their websites.

Theme Parks subsector

- With out-of-home entertainment and recreation facing challenges in the near-term as social and physical distancing norms and risk aversions are in place, innovative outreach and delivery models should be developed.
- Virtual live events and shows should leverage technology to reach visitors directly.

Advertising & OOH Subsector

- In the face of proliferation of fake news on social media, advertisements have higher reliability of being true.
- For greater monetization opportunities advertisers should capitalize on the growing digital adoption and increase their digital presence which is now more critical.
- To provide a push to the Digital OOH segment, Integration with big advertising platforms and networks should be on the agenda.

Print & Radio Subsector

- For Print subsector to increase the revenues and readership, E-newspapers should be promoted more aggressively, and discounts subscription charges could be given, and to keep the advertiser engaged so they don't pull out- print companies can offer benefits like extra running time for the ad at no extra cost.
- Radio subsector should focus more on promoting their content digitally and employ people to handle their social media handles.

Section D: Subsector-wise Summary

1. Advertising & OOH

The size of India's advertising sub-sector stood at ~INR 71,880 Crore and grew by ~7.8% in 2019. However, the sub-sector contracted by 14% in 2020 and is likely to grow by 9% to reach ~INR 108,864 Crore by 2025 with a CAGR of 7.2%. In 2019, the top three categories that together contribute to more than 40% of the OOH revenues are retail sector, consumer services and real estate. It is found that the highest human resource supply and demand gap between 2019 to 2025 is ~1.35 Lakh in the year 2025 while the lowest supply and demand gap during the 2019 to 2025 period is ~53,000 in the year 2019. Advertising is facing the dawn of a new era: online ads are proliferating and attracting more and more of the advertising budget. With Mumbai being the leading hub of Indian advertising and Delhi making its presence felt with fast growing business size, there's another city that has come up i.e., Bengaluru. Other cities which are generating employment in advertising are Hyderabad, Kolkata, and Chennai. Account Manager, Advertising Manager, Copywriter, Advertisement Operations Specialist, Ad Analyst, Media Planners and Accounts Planner are few of the trending job roles for the subsector in the above-mentioned states/cities. Given the changing nature of the subsector, several new and emerging roles like Creative Staffers, Online Advertising Purchase Manager, Programmatic Display Advertising Manager, Programmatic Coordinator, Digital Advertising Specialist, Ad Tech Manager, Display Advertising Product Strategist, Insights Manager, Digital Campaign Manager and Ad Optimizer are likely to gain greater importance.

2. Animation and VFX

The animation and VFX (Visual Effects, also known as Computer Generated Imagery, CGI) has been one of the fastest growing sub-sectors in recent years, growing at 18% in 2018 and 20% in 2019 to reach INR 9,060 crores. Currently India has more than 300 animation studios and 40+ VFX studios, making it one of the major hubs for animation and VFX services. In 2024, the human resource supply- demand gap will be highest at ~28,179 because of excess training volume especially in vocational courses. In 2020, the supply - demand Gap may be minimal with ~10,456 and the average gap is ~22,744. Further, on an average, ~12,000 students from formal UG/PG courses enter the animation and VFX sub-sector. A Centre for Excellence for animation, visual effects, gaming, comics (AVGC) is being set up in collaboration with the Indian Institute of Technology, Bombay by the government to promote entrepreneurship in the industry. Few prominent studios that are coming up in next five years in the following cities that will attract more demand for animation & VFX services- Mumbai, Chennai, Pune, Bengaluru, and Kochi. Mumbai houses the greatest number of studios in the animation and VFX sector, followed by Hyderabad, Chennai, Bangalore, and Delhi. Number of Animation and VFX studios has a direct correlation with number of people employed in the sub sector in a particular state. The high demand job roles for the subsector as per the existing QP-NOS are Animator, Composer, Roto Artist, Rigging Artist, Character Designer, Clean-up Artist, Colour Key Artist, Modeller and Voice-Over Artist. Given the changing nature of the industry, several new and emerging roles are likely to gain greater importance such as Design Architect, System Validation Engineer, 3D Artist, animator, composers, Roto artists, 3D Modellers, UX-UI designers, VFX artist, Concept Artists, Layout Artists.

3. Art and Culture

India has a very old, rich, and immense history of art and culture. It has one of the largest collections of cultural heritage which includes songs, music, dance, theatre, paintings, performing arts, etc. The visual art industry which encompasses drawings, paintings, ceramics, sculptures, crafts, photography etc. was estimated at 1,703 Crore in 2019. Art galleries are a major part of the visual art industry accounting for almost 2/3rd of the market size. Paintings, music, dance, and theatre are considered the main pillars of this industry. Based on detailed research and analysis, it is found that Highest human resource Supply and Demand Gap between 2019 to 2025 is ~54,000 in the year 2020 because of COVID-19 while lowest Supply and Demand Gap is ~21,000 in the year 2019. With increase in the number of High Net Individuals(HNI), the sale of art in galleries and auctions has increased over the years, along with art also being used as a source of investment with affluent individuals buying art for financial benefit. In recent years, several corporates have been sponsoring art and culture events to build connects with the art enthusiasts. As part of their Corporate Social Responsibility (CSR) initiatives, the organizations have been spending from the CSR budgets to support art and culture and to enhance their own reputation. Some of the new job

roles that may arise in the future are Data analyst for Museum Services team, Technology Fabricator, Patron Information Data Analyst, Drama therapist, Art Administrators.

4. Digital Media and OTT

The size of India's digital media industry in 2019 was INR 20,162 Crore and by 2020 it reached INR 26,614 Crore. Overall, the digital media sub-sector in the country is set for a strong growth of ~27.5% CAGR during 2020-25. The outbreak of the global pandemic in 2019 has had an adverse impact on the economies of the countries across the globe. However, the pandemic has also accelerated several trends which would have otherwise taken longer. The most important one being adoption of digital technology into our day-to-day life. From work to entertainment, education to social events, every activity has been shifted to online medium as the offline alternatives were not available or were severely curtailed. The highest human resource Supply and Demand Gap between 2019 to 2025 is ~24,000 in the year 2019 while the lowest Supply and Demand Gap between 2019 to 2025 is ~13,000 in the year 2025. The cities having larger job opportunities in the sub-sector are Bengaluru (Karnataka), Mumbai and Pune (Maharashtra), Gurgaon (Haryana), New Delhi, Hyderabad (Telangana), Chennai (Tamil Nadu), Noida (Uttar Pradesh), Ahmedabad (Gujarat), Kolkata (West Bengal) and Kochi (Kerala). The cities that may get added to the above list in the next 5 years are likely to be Chandigarh (Punjab and Haryana), Bhubaneswar (Orissa), Raipur (Chhattisgarh), and Indore (Madhya Pradesh). Sales Coordinator(Media Organisation), Sales Executive(Media Organisation), Sales Manager(Media Organisation), Search Engine Optimization Executive, Search Engine Marketing Executive, Social Media Executive and Social Media Manager are some of the high demand job roles as per existing QP-NOS for the subsector including in the above-mentioned states/ cities. Given the changing nature of the industry, several new and emerging roles are likely to gain greater importance such as Analytics Manager, Email Marketer, Content Manager, Pay per click/Search Engine Marketer, Social Media Marketer, Digital Media Specialist, Digital Media Planner, Digital Researcher, Media Operations Manager/Analyst, Showrunner, Domain theme Experts, Written Communications Manager

5. Event & Live Performance

In 2019, the Live-Events market across India was valued at INR 8,300 Crore. It was estimated to reach INR 12,200 Crore by 2022. Additionally, according to the EEMA (Events and Entertainment Management Association) report, the events and activations sub-sector in India was expected to cross INR 10,000 Crore by 2020-2021. The highest human resource Supply and Demand Gap between 2019 to 2025 is ~57,000 in the year 2020 because of COVID-19 while the lowest Supply and Demand Gap between 2019 to 2025 is ~2,000 in the year 2022. New Delhi, Gurugram (Haryana), Noida(Uttar Pradesh), Bengaluru (Karnataka), Hyderabad (Telangana), Mumbai and Pune (Maharashtra), Goa, Chennai (Tamil Nadu), Kolkata(West. Bengal) are the key employment generating cities with several opportunities available in the field of event management and coordination. According to detailed analysis and market research, with people choosing remote areas and off-beat locations for events, there is a shifting trend of the footfall of the states that were most preferred to the stated that are now being preferred for their natural beauty. For instance, people who would opt for Jaipur for a royal wedding have been shifting to Goa, Alwar, Jodhpur, Udaipur, Alibag, Puri etc. Event Planner, Event Space or Venue Managers, Catering Services Manager, Wedding Planner, Staff Coordinator, Event Social Media Coordinator, Sponsorship Coordinator etc. are some of the trending job roles in the subsector including in the above-mentioned cities for which skill trainings need to be developed. Given the changing nature of the industry, several new and emerging roles are likely to gain greater importance such as Sports Event Manager (Sports Manager), Celebrity Manager, Talent Managers, Public Relations Managers, Campaign Managers, Event Technology Manager.

6. Film

Indian film industry is the largest producer of films in the world and the number of movies produced has grown significantly in the last decade, increasing from 1,200+ movies in 2009 to 2,400+ in 2019. With films produced in 20+ languages, one can gauge the diverse nature of the industry in the country. Over the past decade, the number of movies certified in India has grown by 89% from 1,279 in 2009 to 2,412 in 2019. 40% of the total revenue in the Indian film industry is contributed to by

Bollywood, followed by regional languages (50%) and international films (10%). In 2025, the human resource supply- demand gap will be highest ~95,310 because of high training volume especially in vocational courses. Average gap between supply and demand across the years (2019-2025) is ~81,653. Further, on an average ~5,000 students from formal UG/PG courses enter the film industry and except for the year 2020 (COVID-19), ~15,000 persons with vocational skill set are required in film sub-sector each year. Indian films are made in several cities. Each of these filmmaking cities serves as the hub of cinema in one prominent language. Key cities generating employment in Film Industry are Mumbai (Maharashtra), regarded as India's movie capital and is producing most feature films, hosts the Hindi film industry that has a pan-India footprint. Chennai (Tamil Nadu), Kolkata (West Bengal), Hyderabad (Telangana), Thiruvananthapuram (Kerala), Bengaluru (Karnataka), Bhubaneswar (Odisha) and Guwahati (Assam) are the other major Indian cities where films are produced employing large number of people. With India emerging as a one-stop destination for media and entertainment services, film cities are contributing to the sub-sector by attracting filmmakers from across the world. Anticipating future demand, over a dozen film cities are being developed by various State governments and private players in integrated studio model. Hence, in near future, Uttar Pradesh, Punjab, Madhya Pradesh, Chhattisgarh, Odisha, and Bihar will generate large employment under this subsector. Actor, Assistant Cameraman, Camera Operator, Set Carpenter, Set Decorator, Voice-over Artist, Set Painter, Set Plasterer, Live Action Director, Hairdresser, Lighting Artist, Make-up Artist, Dancer, Singer, Production Assistant, Location Manager, Unit Production Manager are the high demand job roles as per the existing QP-NOS for the subsector including in the above-mentioned states/cities. Given the changing nature of the industry, several new and emerging roles are likely to gain greater importance such as Showrunners, Audio Visual (AV) production Specialists, Written Communications Managers, Social Media Specialists, Tagger/Original Creatives Analysts, Domain theme Experts.

7. Online Gaming

The online gaming sub-sector has been growing at a rapid rate for the past few years, reaching a market size of ~INR 6,287 Crore in 2019, witnessing a growth of ~40% as compared to 2018. The growth trends were sustained during COVID-19 in 2020, with the revenue share increasing to ~INR 8,977 Crore in 2020. The major platforms for online games are personal computer (PC), mobile and console. In 2025, the human resource demand may surpass supply because of the rapid growth of the online gaming subsector compared to other sub-sectors in Media and Entertainment sector. Vocational training needs to focus on further skill upgradation/ certification with industry exposure for the UG/PG students to reduce the demand and supply gap. Almost all the major gaming companies are in tier-1 cities. Bangalore (Karnataka) is the leading contributor of people in the online gaming sector, followed by Mumbai/Pune (Maharashtra), Lucknow (Uttar Pradesh), Hyderabad (Telangana) and Delhi. Number of online gaming companies has a direct correlation with number of people employed in the sub-sector in a particular state. Out of top 30 gaming companies in India, Bengaluru with 10 studios makes Karnataka state the highest employer. Maharashtra has 9 (Mumbai – 8, Pune -1), Noida has 5, followed by Delhi (1). With growing penetration of smartphones and high-speed internet in tier 2 and tier 3 cities, the contribution of online gaming in these cities is expected to increase in the near future. Rigging Artist, Modeller, Voice Over Artists are few of the high demand job roles for the subsector as per existing QP-NOS including in the states/cities mentioned above. Game Tester (QP-NOS in draft stage), Game developer and Texturing Artists are also few of the other trending job roles for the subsector including in the above-mentioned states/cities for which specific skill trainings need to be developed. Given the changing nature of the industry, several new and emerging roles are likely to gain greater importance such as Machine Learning Architect, Data Scientist, Machine Learning Engineer, Cloud Developer for Gaming, Gaming and Visualization(G&V) Development and Integration System Engineer, Esports Admin, Esports Influencer, Community Admin.

8. Print

Print Media is one of the oldest medium of public communication in India. The Indian Print Media subsector primarily comprises of newspaper and periodicals publishing, with revenue generated through advertising and circulation. As on 31st March 2018, there were 1.1 Lakh publications registered with Registrar of Newspapers for India which included 17,573 Newspapers and approximately 1 lakh periodicals across the country. The size of print industry in 2019 was approximately INR 32,300 Crores. In 2020, the human resource demand supply Gap will be highest at 17,285 because of COVID-19. In 2023 the

Gap may be minimal with 11,035. Average Gap between Demand and supply across the year (2019-2025) is 13,229. Uttar Pradesh contributes highest number of people in print sub-sector followed by Maharashtra, Madhya Pradesh, Gujarat & Delhi. There is a direct correlation between the number of copies circulated in print media and number of people employed in the sub-sector in any state. Uttar Pradesh is the leading state in terms of circulation with over 3.3 crore copies per publishing day followed by Maharashtra (2.65 crore), Madhya Pradesh (2.48 crore), Gujarat (1.99 crore), Delhi (1.69 crore), Andhra Pradesh (1.59 crore) and Rajasthan (1.33 crore). Also, in coming five years, these states will continue to be prominent in terms of employment. Community Journalist and Graphic Designer are two of the high demand job roles as per existing QP-NOS for the subsector including for the above-mentioned states/ cities. Given the changing nature of the industry, several new and emerging roles are likely to gain greater importance such as Social Media Experts, Fact Checker, Innovative Content Writer, Custom or Theme Packagers, Domain Journalists.

9. Radio

The radio industry in India has seen low to negative growth rate in the past couple of years. The revenue has decreased from INR 2,922 Crore to INR 2,814 Crore during the last two years. Prior to 2019, the industry had seen a CAGR of ~7% during 2015-2019, but the slowdown in the past 2 years has pegged the industry back. In terms of states, Maharashtra with 17% of total ad volume and Gujarat with 16% of ad volumes are the two top-most states, followed by Tamil Nadu (10%), Delhi (9%) and Karnataka (9%). Thus, the top 5 states account for around 60% of the total ad volumes in Radio. The highest human resource Supply and Demand Gap between 2019 to 2025 is approximately 14,000 while the Lowest Supply and Demand Gap between 2019 to 2025 is approximately 9,000. Already operating radio stations like All India Radio, Radio Mirchi, 92.7 BIG FM, RED FM, Radio One, Fever 104 FM etc. have their studios across the country with their major studios being in New Delhi, Noida (Uttar Pradesh), Mumbai (Maharashtra), Chennai (Tamil Nadu), Kolkata (West Bengal). The states with highest operational Community Radio Stations in the country generating employment will be Haryana, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu and Uttar Pradesh. Radio is evolving. The number of community radio stations is doubling, and this growth is due to increasing interest in local information, music and connection. It is observed by the Association of Community Radio Broadcasters (AMARC) members that India will emerge as a training ground for community radio not just in South Asia but also in the Asia Pacific region. Owing to the large number of community radio stations that will come up in the country, there will be a vast opportunity. Given the changing nature of the industry, several new and emerging roles are likely to gain greater importance such as Sound Engineers, Podcast Producers, Content Curators, Videographer and Social Media Content Developer.

10. Sound & Music

Indian Music sub-sector has been growing steadily over the last few years and has reached annual revenue of INR 1,596 Crore in 2019, with a growth rate of 12.4 percent from FY 2018 surpassing the previous year's growth of 11.5 percent. The pandemic had impacted the music industry which led to the shrinking of the industry by almost INR 300 Crore and revenues stood at 1,293 Crore in FY 2020. In 2025, the gap will be highest at ~13,884 because of excess training volume especially in vocational courses. In 2019, the human resource supply & demand gap was minimal with ~11,321 and the average gap is ~12,672. Further, on an average ~5,000 students from formal UG/PG courses enter into the sound and music sub-sector each year. Vocational training needs to focus on improving the quality of training, rather than enhancing student volume, with industry exposure to reduce the supply and demand gap. Many big music companies and labels have their recording studios which employ many technicians and artists in the following cities: Mumbai (Maharashtra), Hyderabad (Telangana), New Delhi, Chennai (Tamil Nadu), and Kolkata (West Bengal). Punjab is emerging as a prominent state in the music sub-sector. The state has a long-standing tradition of music and live performances. The massive Punjabi diaspora overseas, now brought closer by digital distribution, is a big market for online sales and live shows. The forecast for the Music Industry in Haryana is also highly promising. Sound Assistant, Sound Designer, Sound Editor, Sound Engineer and Music Programmer are some of the high demand job roles as per existing QP-NOS for the subsector including in the above-mentioned states/cities. Given the changing nature of the industry, several new and emerging roles are likely to gain greater importance such as Bilingual Vocal Coach, Music Hologram Developer, Playlist Scientist, Social Media Amplifier, Crossover ambassador.

11. Television

Television is the largest sub-sector in India's Media & Entertainment (M&E) landscape and one of the dominant mode of media consumption. The size of Indian television sub-sector reached ~ INR 75,800 crore in 2019 with the average Compounded Annual Growth Rate (CAGR) of ~9.8% for the period 2016-19. The revenue for television industry is largely generated from two major streams - broadcasting/ subscription and advertisement. In 2025, the human resource demand-supply gap will be highest at ~1.17 Lakhs because of training volume especially in vocational courses. In 2020, the Supply & Demand Gap may be minimal with ~70,000. Average gap between demand and supply across the years (2019-2025) is 1.16 Lakhs. Further on an average, around 10,000 students from formal UG/PG courses enter the television sub-sector every year, except 2020 (COVID-19). Key cities generating employment in Television Industry are Mumbai (Maharashtra), Chennai (Tamil Nadu), Kolkata (West Bengal), Hyderabad (Telangana), Thiruvananthapuram (Kerala), Bengaluru (Karnataka), Bhubaneswar (Odisha) and Guwahati (Assam). Television shows are increasingly choosing real locations over sets in Mumbai. Gujarat, Rajasthan, Madhya Pradesh, Uttar Pradesh, Delhi, Jammu & Kashmir, and Haryana have become some of the preferred locations. This emerging trend will also create an employment demand of skilled technicians and workers in these states as, to cut costs, producers would hire people from the city itself rather than bearing the expenses of travel, stay and food to shoot locations in other cities. Also, the proposed Film City project in Uttar Pradesh which will be set up on 1,000-acre land identified in Gautam Buddha Nagar. Assistant Cameraman, Camera Operator, Actor, Set Carpenter, Set Decorator, Voice-over Artist, Set Painter, Set Plasterer, Live Action Director, Hairdresser, Lighting Artist, Make-up Artist, Dancer, Production Assistant, Location Manager, Unit Production Manager and Voice-Over Artists are the high demand job roles as per the existing QP-NOS for the subsector including in the above-mentioned states. Given the changing nature of the industry, several new and emerging roles are likely to gain greater importance such as Analysts to understand audience behaviour, Artificial Intelligence Experts, Mobile Journalist, New age Content/ Script writers, Video Editors, Multi skilled professionals, Sports Journalist and Sports managers, Technology Artists/ Personnel.

12. Theme Park

The Indian theme park and amusement park sub-sector is still in its nascent stage though it started in the 1980's and is at INR 11,475 Crore in FY 2019. Currently, there are more than 150 theme and amusement parks spread all over India across major cities including tier-2 and tier-3 cities. Since large amount of land is required for setting up a park, majority of them are located on outskirts of cities. The highest human resource Supply and Demand Gap between 2019 and 2025 is ~ 17,000 in the year 2020 while lowest Supply and Demand Gap between 2019 to 2025 is ~8,000 in the year 2019. Key cities generating employment in the industry are Hyderabad (Telangana), Bengaluru (Karnataka), Mumbai (Maharashtra), Lonavala (Maharashtra), Kolkata (West Bengal), Kochi (Kerala), Noida (UP) and Gurugram (Haryana). Key cities that may become more prominent in the are likely to be Bhopal & Indore (MP), Lucknow (UP), Surat (Gujarat), Pune (Maharashtra), Chennai (Tamil Nadu), and Shimla (Himachal Pradesh). Sales Executive, Operations Manager, Business Development Executive, Ride operators, Engineer(Facilities), Senior Assistant (Guest Relations) are few of the high demand job roles for the subsector including in the above-mentioned states/cities and specific skill trainings need to be developed for these roles. Given the changing nature of the industry, several new and emerging roles are likely to gain greater importance such as VR Marketing operator, Projection mapping specialist, AR App Developers and Creative Producer (AR/VR).

Section E: Subsector-wise Reports



E.1 Advertising and OOH

Advertising & OOH sub-sector overview

The size of India's advertising industry stood at ~INR 71,880 Crore and has grown by ~7.8% in 2019. However, the industry has contracted by 14% in 2020 but it is estimated that the sub-sector will make a come-back by the end of 2021 and will grow by 9% to reach ~INR 108,864 Crore by 2025 with a CAGR of 7.2%.

Figure 10: Different Media platforms in Advertising Sector



Indian Advertising sector's growth is majorly dependent on the penetration of various media platforms. India with its developing economy presents plenty of openings to advertisers to promote their products and services through the expanding media channels. It is estimated that over the next few years, the Indian advertising sector is expected to be the fastest rising advertising market in Asia after China. This growth can be attributed to many factors like mobile and internet adoption driving digital media advertising growth, government initiatives like the Print Media Advertisement Policy 2020 driving the print advertising growth, rapid infrastructure development by government driving growth in OOH, higher ad spends from the governments as they showcase their schemes and initiatives. In addition, digitization of the OOH media and use of technology like AI/ML in evolution of targeted advertising is also driving advertising growth. Another major growth driver is the political parties which invest heavily on campaigning and advertisements through several media.

The outbreak of COVID-19 had a huge impact on the advertising sector and it witnessed a negative growth leading to a reduction in advertising spends in comparison to the year 2019. Due to the lock-down from mid-March in 2020, several mediums like Out-of-home (OOH), print and cinema witnessed a decline in the share of media ad spends which led to increase in advertising spends via TV and digital mediums.

Expert Opinion...



**A R Sreedhar ,
General Manager,
Indian Outdoor
Advertising Association
(IOAA)**

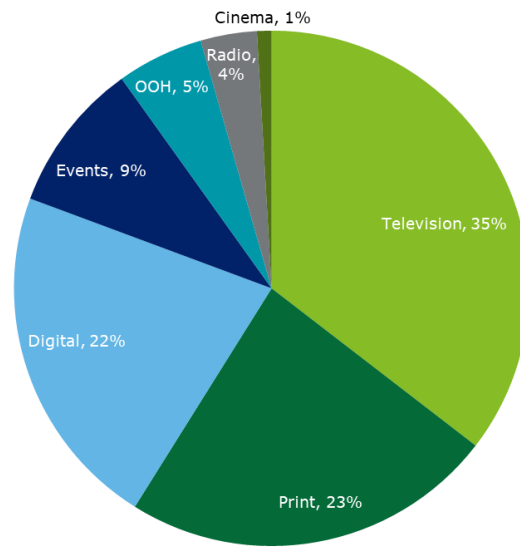
Our Out-Of-Home industry has been seeing radical positive transformation over the years. From the rather primitive static format, it has now become a dynamic audio-visual one, with all kinds of creativity made possible through technology.



Details of revenue streams

Though, Indian advertising industry was on a rise in 2019, it saw some reduction in advertising spends in the following year. Industry segments like Auto, BFSI and Real Estate have begun to look closely at their return on investments and started spending cautiously while having to defer many big launches of their products and services. But the three mega events of the year-Indian Premier League (IPL), World Cup and 2019 General Elections in addition to the Pro-Kabbadi League (PKL) and festive period, boosted the overall ad spends.

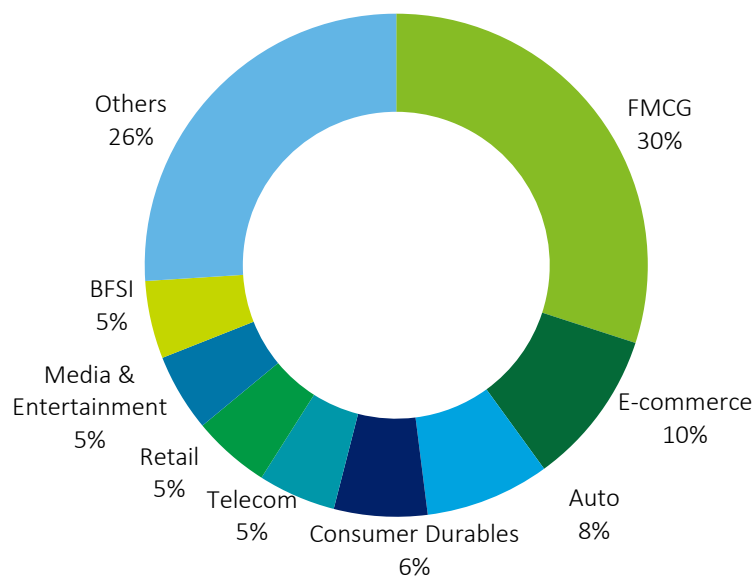
Figure 11: Advertising spends on different media sector (FY 2019)



Source: Expert Interview and Analysis

The largest share of media spends is taken by Television at ~35% and is followed by spends on print at ~23% and digital at ~22%.

Figure 12: Ad Spends by Industry Verticals (by %) FY 2019



Source: Dentsu Digital Advertising Report 2020

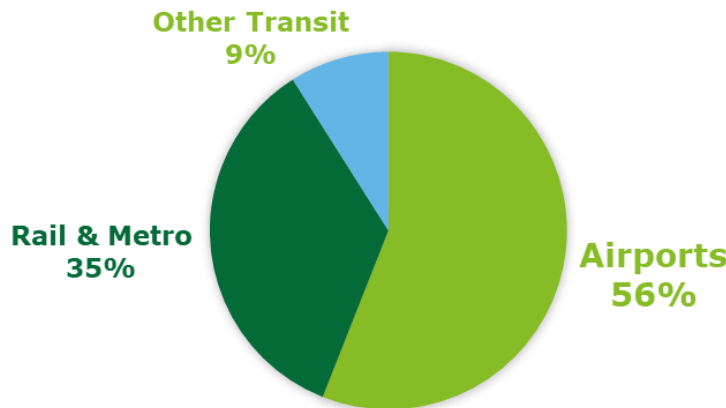
Among sectors, FMCG sector contributes the highest share of 30% on advertisements, contributing INR 20,182 Crore to the industry. It is followed by e-Commerce whose share is 10% (INR 6,915 Crore) and Automotive sector contributes INR 5,797 Crore which is 8%.²

In 2019, **OOH media** grew 5% to reach INR 3,900 Crore, the value of which consists of traditional (54%) , transit (39%) and digital media (2%), but it does not include the untracked OOH media (5%) such as wall paintings, ambient media, proxy advertising etc. which could additionally be around INR 1,000-1,500 Crore.³

Billboards are the lifeline of India's traditional OOH advertising market. Due to increase in infrastructure and construction activities of the government such as building of highways and expressways, more platforms are going to be available for traditional OOH advertising which will further drive the growth of OOH media.

Transit media revenues continue to increase as more inventory becomes available and naming rights continue to be of interest to brands reaching 39% of total revenues. Transit media comprises of airports, rail & metro and other transit methods like bus, cabs, autos. The share of transit has been progressively rising as transport is modernizing across air, rail and road.

Figure 13 : Composition of Transit media revenues (in %)- OOH Media



In 2019, Railways generated around INR 1,000 Crore in revenue, establishing a high growth standard for advertising revenues⁴. Continued growth of airports and air traffic boosted airports' share of OOH revenues. Advancing further, growth in transit media revenues will be propelled by launches of metro lines, railway stations, new airports and air routes and development of smart cities and bus shelters/terminals. The government has planned to open 100 new airports by 2024, including starting 1,000 new air routes connecting all the smaller towns and cities with metros cities.⁵ The government has already made more than 515 km of metro lines operational in India and has also planned for another 664 km of metro rail projects in 15 cities which are currently under different phases of implementation.⁶ The central government has also asked state governments and government of union territories to develop one modern bus port each consisting of modern bus stands equipped with a host of facilities that can serve as a model for which it will provide viability gap funding.

Digital OOH (DOOH), which matured with higher screen volumes and increased interest from advertisers, for the first time in 2019 crossed 2% of total revenues. India is transitioning much more quickly than many other markets in DOOH. Experts estimate that there could be several hundred thousand number of DOOH screens in India, given that digital advertisement screens have proliferated across malls, shopping complexes, hotels & restaurants, car parking complexes, bus stops etc. Integration with big advertising platforms and networks is imminent as it will be able to provide a push to this segment.

² Dentsu Digital Advertising Report 2020

³ FICCI 2020 Report

⁴ Revenue Receipt Expenditure Report 2018-19, Ministry of Railways, Government of India

⁵ <https://economictimes.indiatimes.com/industry/transportation/airlines/-aviation/india-plans-to-open-100-airports-in-five-years/articleshow/71821181.cms?from=mdr>

⁶ <https://economictimes.indiatimes.com/industry/transportation/ railways/15-more-cities-will-soon-have-metro-network-unionminister-puri/articleshow/66419131.cms>

Top Three Categories (in 2019):

Retail sector, consumer services and real estate are the top three categories that together contribute to more than 40% of the OOH revenues. Consumer services became one of the largest categories to spend on OOH as many OTT platforms introduced audio and video streaming services to promote their content. Other categories which attributed to growth were real estate, FMCG, financial services and media. However, it has been observed that there was a steep decline in OOH spends from categories like telecom, automotive and e-commerce which all increased their spends on digital media.

Table 9: Industry wise contribution to OOH Revenue

Category	2018	2019
Retail (Jewelry, Apparel, Showrooms)	16%	15%
Consumer Services (Hospitals, Restaurants, Education, OTT)	14%	15%
Real Estate & Construction	12%	14%
Telecom	7%	6%
FMCG	9%	11%
Financial Services	9%	10%
Automotive	7%	6%
Media (Print, TV, Radio, DTH)	5%	6%
E-commerce	4%	3%
Electronic Durables	2%	3%
Petroleum/Lubricants	1%	1%
Pharmacy	1%	0%
Others	12%	10%
Total	100%	100%

Source: Pitch Madison Advertising Report 2020

Key shifts for the advertising/ OOH industry in India

Growth Drivers

The growth of the Indian Advertising Industry is largely dependent on the penetration of various media platforms. With its developing economy, India offers multiple opportunities to advertisers to endorse their products and services through the expanding media channels. Over the next few years, the Indian advertising market is estimated to be the fastest-growing advertising market in Asia, after China. This growth can be attributed to several factors:

Figure 14 : Growth Drivers for Advertising/ OOH industry



Mobile and internet adoption driving digital media advertising growth

Riding on growing popularity of smartphones, widespread availability of 3G/4G/5G (upcoming) data services and surge in internet penetration in the country, the digital advertisement share is increasing as more brands are moving towards advertising their products on digital platforms as digital ads can be customized as per target audience and can make consumers feel better connected to the ads.

Rapid infrastructure development by Government driving growth in OOH

Due to growing infrastructure and construction activities in the country, more platforms are going to be available for OOH advertising. The government’s focus on building highways, construction and development of airports, smart city projects, malls, metros, bus shelters and public conveniences will further boost the growth of OOH media.

Digitization of the OOH media

In the next few years, Digital out of home (DOOH) advertising market in India is expected to grow rapidly as more sites are transformed to this format and brands are also taking the advantage of the medium’s ingenuity to deliver measurability. DOOH advertising displays enhance the advertisement and catch the attention of the onlookers quicker. It is also observed that the impact of DOOH ads makes is more and it is twice as likely to be noticed and seen as static OOH ads. The number of DOOH screens has grown and industry estimates project that the DOOH advertising market could see exponential growth by 20% to 25% over the next few years.

DOOH content goes dynamic

Dynamic Content is coming up with the OOH industry going through a digital revolution. Dynamic content that changes within a DOOH advertisement content such as latest pricing, real-time product listings and live video is likely to be more widespread.

Use of technology like AI/ML in evolution of targeted advertising

With targeted advertising, the advertisers target ad campaigns at specific group of people, based on for example demographics, location, interests or behaviors. Based on these characteristics, advertisers try to develop and make more personalized ads that resonate with their target audiences and finally lead to higher conversion rates. By showing advertisements that are targeted, advertisers get more assured that only those people who are potential consumers will get to view the advertisements, thus achieving higher efficiency and reduced costs.

Political parties invest heavily on campaigning through various media like television, print, radio, OOH and digital. The advancement of digital specifically is giving political parties more means to connect with the voters. Social media platforms like WhatsApp and Facebook are commonly used by political parties. But OOH & flex boards advertising continues to remain a popular and crucial medium. Outdoor advertising has distinct features which are essentially physical and locational in nature. These advertisements cannot be switched off, skipped or blocked.

Higher spends from the government as they showcase their new initiatives

The government spent near about INR 6,500 Crore on advertising and publicity of its various schemes and campaigns launched from 2014 to 2019, which is approximately INR 1,200-1,300 Crore per annum. The Government's share is estimated to be around 3% to 4% in the industry⁷. Through advertising, several government schemes and campaigns including subsidy details are promoted and endorsed massively to make sure that the benefits spread to each and every corner of the country. The government spending on advertising focuses mainly on creating awareness, making sure the benefits reach the citizens and instilling behavioral changes. The Swachh Bharat Campaign, for example, is all about instilling a behavioral transformation which shall pay dividends in the coming years.

Print media advertisement policy 2020

The primary objective of the government campaigns through print media is to secure the widest possible coverage of the content or message through newspapers and periodicals of current affairs as well as science, art, literature, sports, films, cultural affairs etc. Bureau of Outreach & Communication (BOC) maintains a list of approved publications for release of advertisements by empanelling acceptable publications across the country.

Risk Factors

One of the risk factors in OOH is the large number of regulatory constraints on the sector. Since OOH is essentially placed in public areas, it is subject to multiple regulations in several areas like traffic, aesthetics, licensing and structural safety.

Lack of tracking systems for service provided

There are a few or no monitoring systems in place to check if the advertisements that are paid for are being displayed at locations for the entire allocated duration.

Regulation on Formats

The regulatory landscape in India does not allow digital media at various places due to safety and traffic regulations. While traffic and pedestrian safety is of paramount importance, the adoption to cleaner and uniform formats in a city will be helpful in the long run.

Lack of exclusivity

Since exclusivity is not offered at the city level to a licensee, it makes it difficult from design and aesthetic aspects (such as creative adaption, standardisation of sizes, uniformity in formats etc.). This leaves little scope for improvement.

⁷ <https://www.exchange4media.com/advertising-news/govt-spending-on-publicity-an-investment-for-the-countrys-future-103895.html>

No standardization or benchmarking of rates charged for display sites

There is no standardization or benchmarking of rates charged for display sites, which leads to the rates being potentially open for manipulation and it provides a huge opportunity for collusion between the owner of the space and employees of the agency.

Likely adoptions in the industry in future

1. **Faster, Smarter Digital OOH Advertising:** Client friendly, faster and transparent process of buying OOH ad space
2. **OOH + Mobile Advertising:** Targeting OOH ads to the right location; mobile advertising (OOH plus mobile advertising especially for increasing online activity), Geofencing (targeting consumers based on location-based data which means that those who leave the area after in close proximity of the ad would be able to view the ad on their mobile phones too).
3. **Specialist Digital Signage Networks:** targeting ads in specific parts of a city, reaching the same type of consumers at several places in their daily lives,
4. **Instagrammable Billboards:** a form of OOH that is engaging, creative, visually pleasing and has the potential of being shared and streamed

State Level Industry Shifts

- **Key employment generating States/Cities**

With Mumbai being the leading hub of Indian advertising and Delhi making its presence felt with fast growing business size, there's another city that has come up i.e. Bengaluru. Even though Bengaluru cannot be compared to the business size of the other two cities, one cannot ignore the creative quality coming from the city. Other cities which are generating employment in advertising are Kolkata and Chennai.

- **High Demand Job roles in the subsector & in key states/cities**

Account Manager, Advertising Manager, Copywriter, Advertisement Operations Specialist, Ad Analyst, Media Planners and Accounts Planner are few of the trending job roles for the subsector including in the above-mentioned states/ cities. Thus, there is a need for more skill trainings to manage the demand for these roles.

- **States/Cities which may become prominent in the next 5 years**

Advertising is facing the dawn of a new era: Online ads proliferate and attract more and more of the advertising budget. Cities like Bengaluru and Mysore (Karnataka), Mumbai and Pune (Maharashtra), New Delhi, Gurgaon (Haryana), Hyderabad (Telangana) will emerge as key employment generating areas as more programmatic advertising companies will set up base in these cities.

Impact of COVID-19

Due to the ongoing COVID-19 pandemic the advertising industry has witnessed a negative growth leading to a reduction in advertising spends compared to the year 2019. Most of the sectors like manufacturing, trade, tourism, transportation, real estate and automobile have been impacted.

Complete standstill of operations from mid-March in 2020 resulted in advertisers withdrawing contracts and drop in overall ad spends. Many advertisers also delayed and rescheduled their ad campaigns.

The advertising spends on digital media have increased - India is rapidly moving towards becoming a digitally empowered country. Digital is becoming the catalyst towards digital payments, e-commerce spends and also contributing to overall economic growth. The advertising spend for e-commerce has seen a remarkable rise of 17% in 2020. During the lockdown and the gradual unlock phases when people were confined to their homes, the e-commerce industry saw a large online

demand and a change in consumption patterns. Marketers have identified and adopted the trends to reach out to a bigger customer base with e-commerce advertising merging it effortlessly with other formats in digital advertising.

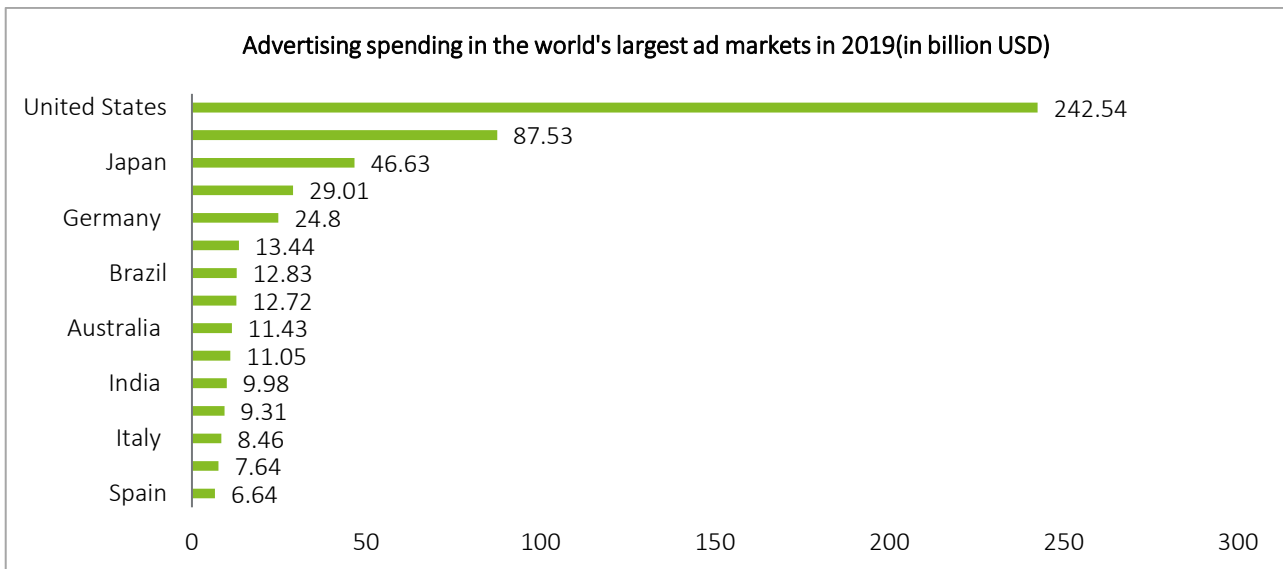
Out-of-home (OOH), print, radio and cinema have also witnessed the media ad spends share decline compared to 2019.

Measures were taken to contain the pandemic and people were confined to their homes during the months between April to June in 2020, a period of complete standstill for the OOH & cinema industry. The people who ventured out were greeted with empty hoardings and billboards, or billboards and radio advertisements that talked about COVID-19 and the precautions one should take to stop it from spreading. There were no audiences in the cinema halls because of lockdown. Low touch economy compelled print readers to consume news online.

Global Trends

- United States is leading the global market in terms of advertising. In 2019, within United States nearly USD 243 billion was invested in promotional and advertising activities. The second leading global market in terms of advertising expenditure in 2019 was China, which in comparison spent USD 87 billion. Japan was third in line, with advertising spending being a little more than USD 46 billion. India ranks 11th in the global ranking on advertisement spends.⁸

Figure 15: Advertising spending in the world’s largest ad markets in 2019



Source: Advertising spending in the world's largest ad markets 2019 Report – Statista

- In the next few years, in Asia, the Indian advertising market is projected to be the fastest-growing advertising market. This growth can be attributed to several favourable factors. One of the primary factors is the rapid penetration of smartphones and internet in the country which facilitates digital advertising. In Europe, UK and Germany are leading in terms of advertising spends and in Latin America, Brazil is the frontrunner.
- Out of the eight biggest ad markets in the world – United States, China, Japan, U.K., Germany, France, South Korea and Canada- it was estimated that seven of these global ad markets (except China) will see declining growth. In the case of India, media landscape is constantly evolving and will continue to witness growth of about 10.7%.⁹
- Programmatic buying now commonplace- The buying of OOH advertising inventory was earlier a complicated procedure between the inventory owner, advertiser and marketing agency. With programmatic buying, real-time tactics now rule the OOH arena and the process is much clearer and more efficient. It is observed that OOH inventory buying around the world is now becoming automatic and accessible in numerous similar interfaces that advertisers use to purchase display or mobile ads. This process permits advertisers and marketers to effortlessly initiate their campaigns across numerous platforms. Realtime automation has also made it convenient to make the most of availability of data sets straight into

⁸ Advertising spending in the world's largest ad markets 2019 Report - Statista

⁹ Group M Marketer Report 2020

campaigns thus enhancing personalization and improving ROI. In India, programmatic buying is still picking up. While a majority of Indian advertisers seek to adopt programmatic buying but possess only basic knowledge about it.

Growth/ Revenue Trends

Basis our analysis of growth and risk factors, it is projected that advertisement and OOH subsector will grow from ~INR 71,880 Crore in FY 2019 to ~INR 108,864 Crore in 2025 at a CAGR of ~7.2%. Further, advertisements contribute ~95% of the revenue whereas OOH contributes ~5%.

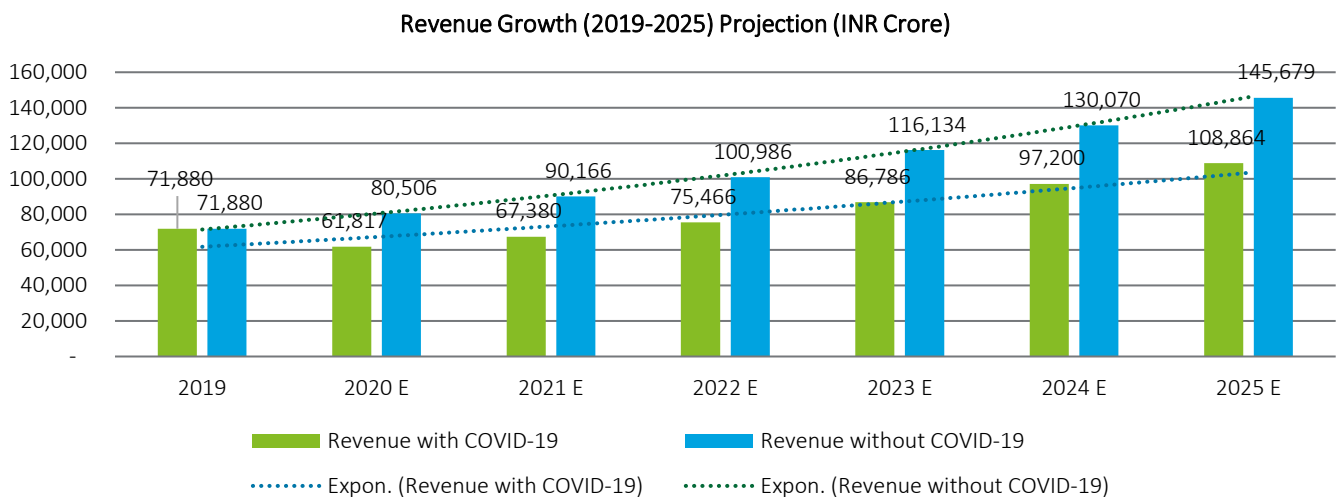
Table 10: Revenue Trends-Advertising and OOH

Revenue Source (INR Crore)	2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Advertisement	68,286	58,726	64,011	71,693	82,447	92,340	103,421
OOH	3,594	3,091	3,369	3,773	4,339	4,860	5,443
Total	71,880	61,817	67,380	75,466	86,786	97,200	108,864

Source: FICCI Report and analysis

1. Technology may have a positive impact throughout the period 2020-2025, especially because of launch of 5G and growth of digital media.
2. Print Media Advertisement Policy 2020 will help the advertisement industry to grow further.
3. General election in 2024 will help the industry to grow at higher rate in 2023.
4. COVID-19 has had a negative impact on the sub-sector in the year 2020 and the effect may continue till 2021.

Figure 16: Revenue Growth Projection (2019-2025)- Advertising and OOH



The above bar chart shows the impact of COVID-19 on the Advertisement and OOH industry. It is projected that the industry would have grown at a CAGR of ~12.5% in normal circumstances till 2025 whereas, now the industry is expected to grow at the CAGR of ~7.2% considering the negative impact of COVID-19. The distance between the trend lines shows the revenue gap of ~ INR 36,815 Crore. This is mainly because corporates held back their advertisement expenditure to ensure survival during uncertainties.

The Human Resource Demand Forecast

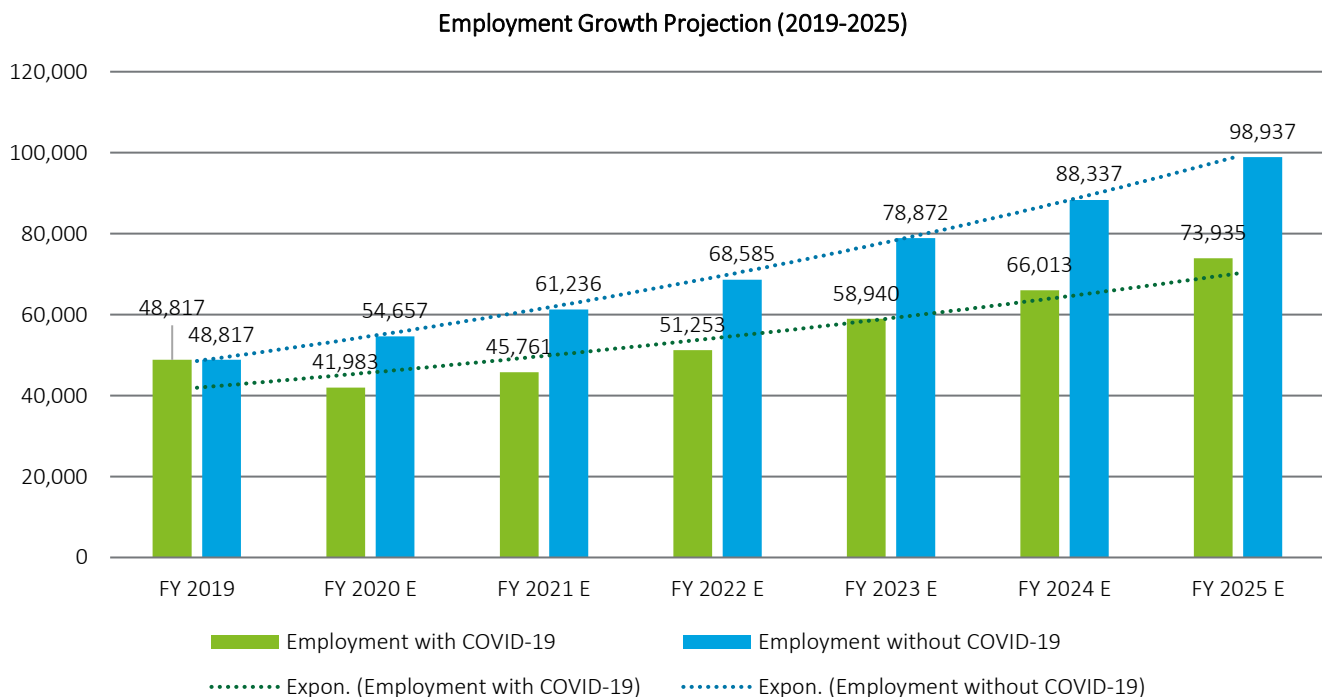
Being one of the important subsectors with around ~INR 71,880 Crore revenue contribution during 2019 in Media and Entertainment Sector, the Advertisement and OOH subsector will generate direct employment of ~73,935 by 2025. It is

expected to witness an incremental demand of ~25,118 people in the industry to be employed till 2025 over ~48,817 people employed in the year 2019.

Table 11: The Human Resource Demand Forecast- Advertising and OOH

Particulars	FY 2019	FY 2020 E	FY 2021 E	FY 2022 E	FY 2023 E	FY 2024 E	FY 2025 E
Estimated numbers of people employed in the industry (A)	46,715	48,817	41,983	45,761	51,253	58,940	66,013
External Factors							
Technological Environment	1,168	1,220	2,309	2,517	3,331	3,831	3,631
Political Factors/ Policy updates	934	976	2,729	2,974	4,356	3,242	4,291
Impact of COVID-19	-	(9,031)	(1,259)	-	-	-	-
Total (B)	2,102	(6,834)	3,778	5,491	7,688	7,073	7,922
Total Estimated Employment (A+B)	48,817	41,983	45,761	51,253	58,940	66,013	73,935
Incremental Demand	3,547	(6,834)	3,778	5,491	7,688	7,073	7,922

Figure 17: Employment Growth Projection (2019-2025)- Advertising and OOH



The bar chart above represents the impact of COVID-19 on the sub sector. It is projected that the industry would have employed about one Lakh people cumulatively till 2025 whereas, now the industry is expected to employ only ~74,000 people by 2025 considering the negative impact of COVID-19 on the sub sector. The distance between the trend lines state the negative employment of ~25,000 people in the sub sector because of COVID-19.

Employment Profile and Survey Insights

Trending Job Roles for which skill trainings need to be conducted:

- 1. Account Manager-** The account managers are the face of the company having a direct contact with clients. They act as a liaison between the ad agency and the client. They manage the accounts, seek to understand the client's needs and present new ideas to increase the client's business.
- 2. Advertising Manager-** The role involves helping the corporate in developing advertising strategy in response to promotional objectives that span different types of media, maintain website content for several brands, implement plans around major brand events, identify advertising objectives and target markets for events and ongoing advertising, managing advertising initiatives and departmental operations. The job role requires the ad manager to develop reporting tools, build relationships, make recommendations and conduct reviews.
- 3. Copywriter-** The copywriters research, write, edit, and proof-read headlines and body copy, for online and offline content for use by publication or broadcast media.
- 4. Advertisement Operations Specialist-** AOS plays a critical role in supporting several functions relating to campaign setup, management, and support.
- 5. Ad Analyst-** This job role assists in setting up & managing client advertising campaigns, performing keyword, audience, & competitor research & monthly reporting.
- 6. Media Planners -** They are responsible for placing ads where they will most effectively reach their target audiences. They guide ad agencies to select the best outlet or medium to reach the customer they want. Media planners plan, schedule, book and purchase space in the different media like Print, OOH (like billboards, kiosks, bus panels etc.), Digital, TV and Radio. The media planners are also involved in conducting targeted research to assess recall and viewership/ readership of an Ad campaigns.
- 7. Accounts Planner-** The accounts planner's role is to strategize and help evolve the budget, helping in selecting the right media and drawing up the communication message after exchanging views with the client and with its own creative team, the media planning department and the market research agency.

The Human Resource Supply Forecast

The courses available in Advertisement and OOH sub-sector are majorly divided into two types

- UG/PG courses
- Vocational Courses

Advertisement and OOH subsector onboards talents from many of other sub sectors in Media and entertainment sector. People trained in courses viz. Film Technology, Mass Communication, Animation Technology, Fine Arts etc. are also found to be suitable for Advertisement and OOH career. Further there are several courses available in India which teach advertising exclusively. Currently there are ~40 institutes across India which provide courses in advertising. The above courses were taken into consideration for computing supply side estimation for Advertisement and OOH industry.

Experts believe that only ~20% of those graduating from the above-mentioned courses opt for careers in Advertisement and OOH. Considering the previous trends of enrollments into sector aligned UG/PG courses, vocational Courses and impact of COVID-19, it is estimated that about ~142,497 students will graduate in 2025 and be ready to be employed in the sub sector.

Details of Enrollment in UG/PG courses

Table 12: Details of Enrollment in UG/PG Courses- Advertising and OOH

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
PhD	860	860	911	966	1,024	1,085	1,151
M. Phil.	269	269	285	302	320	339	359
PG	34,246	36,896	39,109	41,456	43,943	46,580	49,375
UG	45,988	48,638	51,316	54,155	57,165	60,355	63,736
Total	81,362	86,662	91,622	96,879	102,452	108,359	114,621

Source: AISHE 2017,2018,2019, Siksha.com and analysis

Details of enrolment on vocational courses

Table 13: Details of Enrollment on Vocational Courses- Advertising and OOH

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
Vocational Training	473,564	142,069	473,564	501,978	532,097	564,022	597,864

1. Since many of the vocational training centers were shut during 2020, it is assumed that the training at 30% of the capacity in 2019 will be possible in 2020
2. 6% growth in training and teaching enrolments is considered for projection looking at the past performance of the supply side.
3. Only 20% of the graduating student numbers at UG/PG and vocational training institutes were considered for calculating supply side of the Advertisement and OOH subsector.

Analysis of teaching/ training in Advertising & OOH Sector

The advertising industry has been changing due to increasing potential of digital technology. The ongoing effect of the digital technology has been occurring in almost every aspect of the industry. As the speed at which these changes are happening is ever-increasing, the teaching/ training system needs upgradation too. The following are the challenges in the sector related to the teaching/ training of programmes:

Lack of formal advertising training

In the advertising ecosystem, there is lack of sufficient quantum of formal advertising training. Many students enter the industry just after completing their under-graduation and thus their skills are developed on-the-job rather than from having any formal training.

Lack of specialised courses

The number of specialized courses offered in the country is still low. There are not many institutes which offer specialised advertising courses. Many courses which are offered are combined with another associated subject. Another component which is generally missing in these courses is the digital aspect. Nowadays, students are required to be familiar with the common types of applications for a modern digital advertising program. Many companies require jobseekers to have experience with specific tools that would give students a lot of advantage. Thus, content upgradation is the need of the hour.

Minimise gap between course curriculum & industry needs

Typically, advertising program courses have traditional topics. These are useful subjects which provide basic knowledge to understand the advertising industry, but they are not sufficiently contextualized for a fast-moving world of digital advertising.

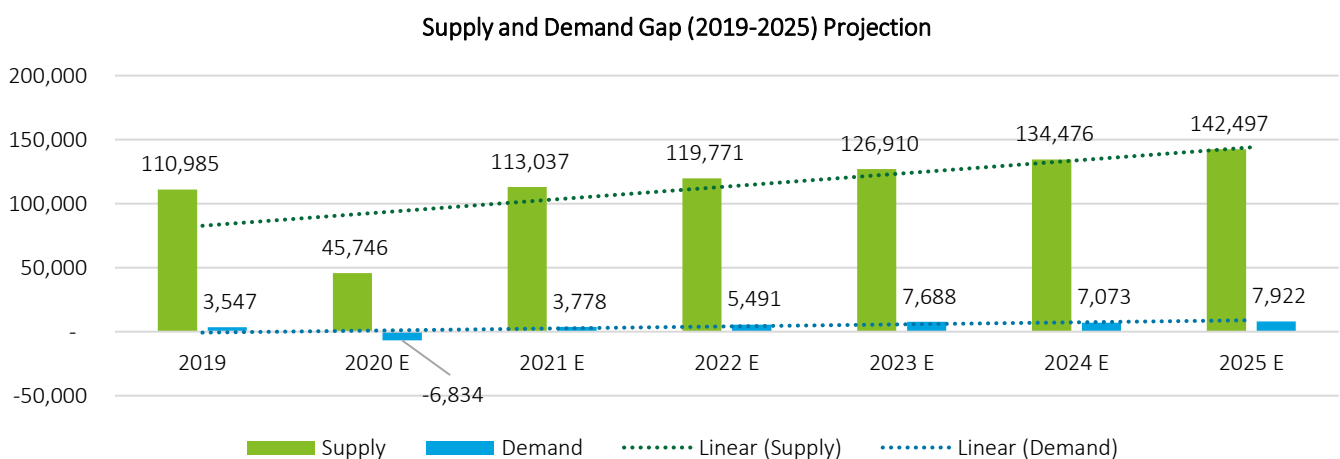
Insights on Future Jobs & Skill

Given the changing nature of the industry, several new and emerging roles are likely to gain greater importance. Thus, specific skill trainings related to the following jobs roles need to be developed:

1. **Creative Staffers-** Creative staffers’ will be one of the important roles in advertising. They would produce slogans, themes and, at times, company logos and branding campaigns. They would be critical part of the behind-the-scenes team.
2. **Online Advertising Purchase Manager-** The duties of an Online Advertising Purchase Manager would be in ensuring cost-effective purchase of services as required by the procurement plan whilst ensuring compliance with the Company’s policies and procedures.
3. **Programmatic Display Advertising Manager-** This role would be all about designing programmatic display campaigns and assisting the manager to create marketing materials to support channel adoption, develop advanced advertising strategies and providing those strategies to clients.
4. **Programmatic Coordinator -** The coordinator assists the team with executional aspects of campaign management processes, develops and delivers performance updates and assists with day-to-day management of digital media plans.
5. **Digital Advertising Specialist-** The specialist’s role is to execute the building, testing, and optimizing of campaigns on major social media platforms and monitor and analyse the performance of digital marketing campaigns.
6. **Ad Tech Manager-** The role of an Ad Tech Manager is to oversee the marketing tech stack and strategies, manage the implementation of new technologies in the ad tech stack, and identify scalable tracking solutions.
7. **Display Advertising Product Strategist-** Display Advertising Product Strategist is responsible for developing effective advertising campaigns efficiently.
8. **Insights Manager-**This job role would be to ensure full utilization of solutions/satisfaction of users, research/understand customer needs, enable actionable insights via platform, drive the end-to-end process for ad measurement solutions.
9. **Digital Campaign Manager -** This role is for implementing online advertising campaigns collaborating with teams on production timelines.
10. **Ad Optimizer-** Ad Optimiser analyses and optimizes ad data for marketing and lead generation.

The Human Resource Demand Supply Gap

Figure 18: Supply and Demand Gap Projection (2019-2025)- Advertising and OOH



Source: analysis

The above bar graph shows that there will be surplus in terms of supply of manpower in comparison to the market demand in Advertisement and OOH sub sector. Further, the graph depicts that the demand for manpower is growing at a lower rate than the supply with the gap between the trendlines increasing year on year basis. Vocational training may focus on upskilling to help reduce the supply and demand gap.

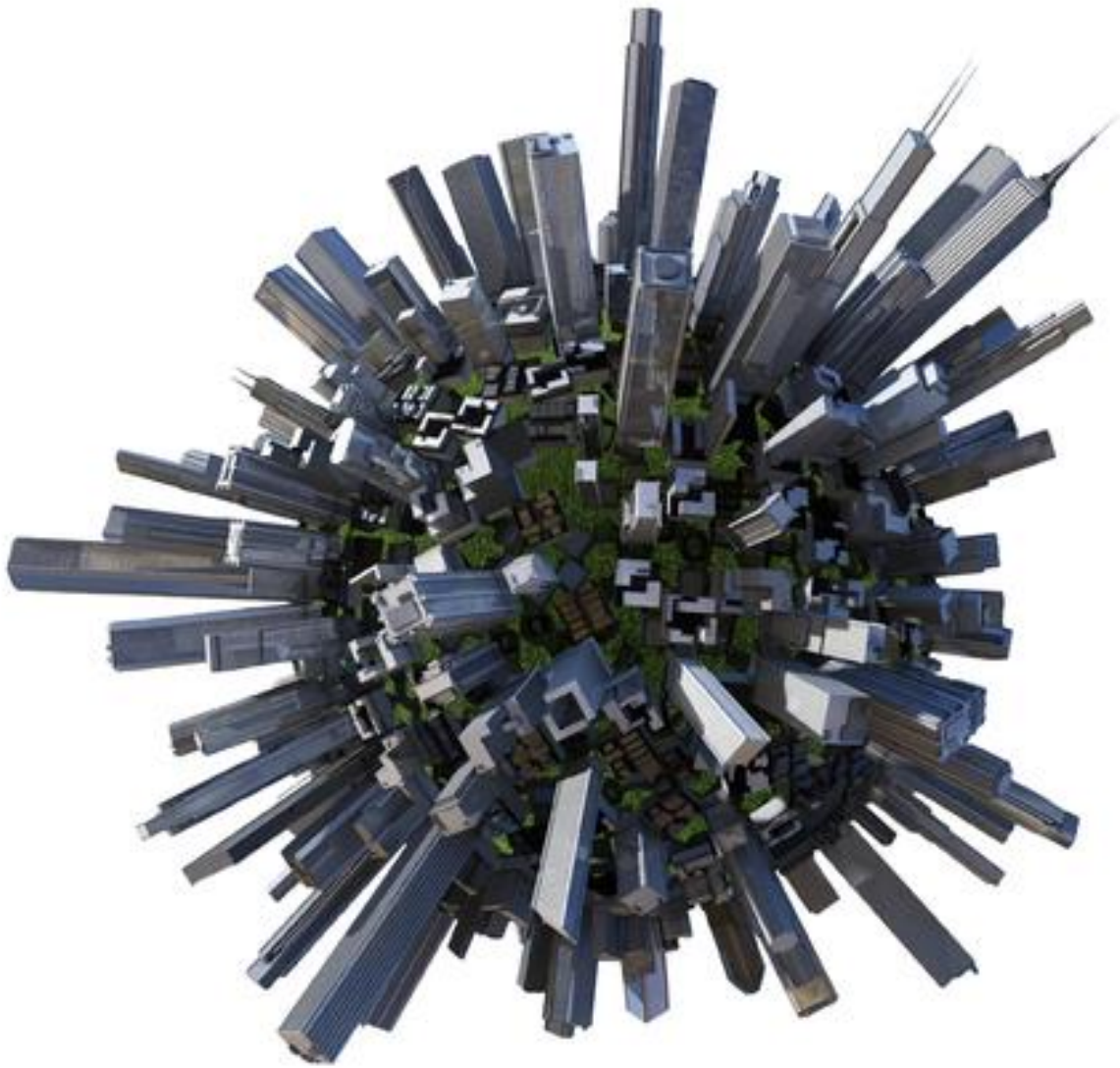
- Highest Supply and Demand Gap between 2019 to 2025 is ~1.35 Lakh in the year 2025.
- Lowest Supply and Demand Gap between 2019 to 2025 is ~53,000 in the year 2019.
- Average Supply and Demand Gap between 2019 to 2025 is ~1.09 Lakh.

Potential ways for the sub-sector to contribute to the 'Atma Nirbhar Bharat' Mission

The Government's Atma Nirbhar Bharat mission has given a shift in perspective towards homegrown goods and services. This has offered an opportunity for Indian brands to grow on the home-grounds and to venture out.

Various sectors are adversely affected with the impact of COVID-19 and advertising is no exception to it. While Print and OOH advertising has seen a slow growth, digital advertising has risen phenomenally. Digital consumption has grown considerably in recent times making way for a robust advertising model for homegrown brands on various digital platforms. Nowadays, a brand cannot afford loss of communications with its consumers even for a few months. Therefore, digital platforms should be considered for advertising for the value proposition that it will add along with the impression and recalls. With the advent of 'work from home' culture people use multiple screens at a time, which in turn has created a bigger opportunity for advertisers to reach consumers.

The sector can shift gradually to source its requirements – both of equipment and software from within the country. This will give a boost to the Atma Nirbhar Bharat mission in India.



E.2 Animation and VFX

Animation and VFX Sub-sector Overview

The animation and VFX (Visual Effects, also known as Computer Generated Imagery, CGI) industry has been one of the fastest growing industries in recent years, at 18% in 2018 and 20% in 2019 to reach INR 9,060 crores.¹⁰ This industry includes 2D and 3D animation. Animation and VFX industry have grown on the back of demand from films, digital platforms, TV and commercials and has been used increasingly all over the world, including India, using green screens to shoot driving, fighting and scenic locations.

The VFX market grew from INR 4,077 crores in 2019 to INR 4,648 crores in 2020, witnessing a growth of 19.3%. This growth can be attributable to a number of factors like increase in original content by domestic broadcasters, increased demand by international companies trying to take advantage of low cost in India, various national and state government policies in the AVGC (Animation, Visual Effects, Gaming and Comics) sector, growth in the education sector, etc.

Currently India has more than 300 animation studios and 40+ VFX studios, making it one of the major hubs for animation and VFX services. The demand for these services has been ever increasing thanks to the technological developments, accessibility to low cost internet, penetration of mobile devices along with the growing popularity of online video streaming. Also, the growth has been bolstered by surge in domestic demand of OTT platforms, where stiff competition is bolstering creation of more and more digital content. Another reason that has led to market expansion is that animation and VFX studios have become content providers and IP owners, instead of only an outsourcing service provider.

Due to success of movies like Bahubali that has garnered interest in VFX by producers- in the VFX budget has almost doubled in last 10 years¹¹.

Even though, animation and VFX production does not necessarily require physical onsite premises, still COVID-19 had an initial adverse impact on the industry. This has been due to closed offices, leading the workforce to shift at home. Issues such as bad internet connectivity and low bandwidth hampered the productivity of this sector. VFX and film industry are closely related, and with complete shutdown of production and theatres all over the world, including India, there has been a slight decline in demand for VFX from the film industry.

However, due to increased OTT demand and new content being created rapidly by various platforms, and also education sector going through major technological reforms, the industry is expected to bounce back stronger in FY 22, growing at an average rate of 15.7% till FY 2025.

Brief History and current trends

The VFX and animation industries have historically been the starting gate of 3D in India. With a decades-old established presence of 2D animation outsourcing studios, during the second half of the '90s studios gradually adopted CG pipelines and started working on international shows. This was not an easy task, as CG training courses were at the time virtually non-existent in India. Studios had to learn and train their teams to adopt these completely new workflows, shifting traditional 2D artists to 3D pipelines

While starting as outsourcing and post-production service companies, they gradually became more proficient in the art of 3D, with a myriad of small and larger companies making up the CG ecosystem in India. Throughout the last decade, the output quality and quantity of these studios has grown steadily. The main shift in the past years has been international studios becoming more and more interested in either opening their own studio in India, or investing in already existing Indian companies, or the joint venture with Indian companies. These international studios have not just brought investments but also added to the creative and technological pool in India.

Another trend has been the growing increase in demand for domestic IP versus services for international projects. Nowadays, Indian animation and VFX studios not only support CG content creation for international movies and TV series for a worldwide broadcast market but also work on domestic projects, which increasingly employ the use of CG. The animation industry has seen steady growth in the past years, but IP work has been growing faster, by 18.4% from 2018 to 2019, versus 8.9% for services, according to a 2019 industry report.

¹⁰ FICCI report 2020

¹¹ Media and entertainment report 2020

Expert Opinion...



Munjal Shroff,
Co-Founder and
Managing Director,
Graphiti Multimedia Pvt
Ltd

There is a need for a multi-stakeholder dashboard for the animation/ VFX/gaming industry. As a tech-enabled platform it will bring the employers from the industry close to the supply side- the training institutes. The platform will enable dynamic demand and supply forecasts and will therefore help the respective players take appropriate business decisions. It will also empower policy makers and government to make informed policy decisions. Once it is successfully implemented for one AVGC vertical it can be adopted by all the verticals of Media and Entertainment Industry.



Details of key revenues streams

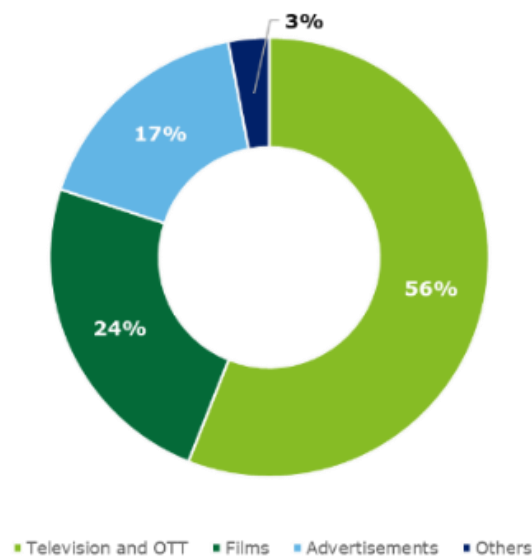
Animation:

Market size of animation industry grew by 15.7 % in FY 2019 to reach INR 2,080 Crores. The revenue reached INR 2,370 Crores in FY 2020, witnessing a Y-o-Y growth of 14%.

Animation industry is broadly categorized into two segments – Animation services and Animation production. Services segment accounts for a majority of revenue share (58%), with production segment accounting for the rest. The two major segments can be further segregated in the following way:

Figure 19: Contribution of Animation Services & IP Production

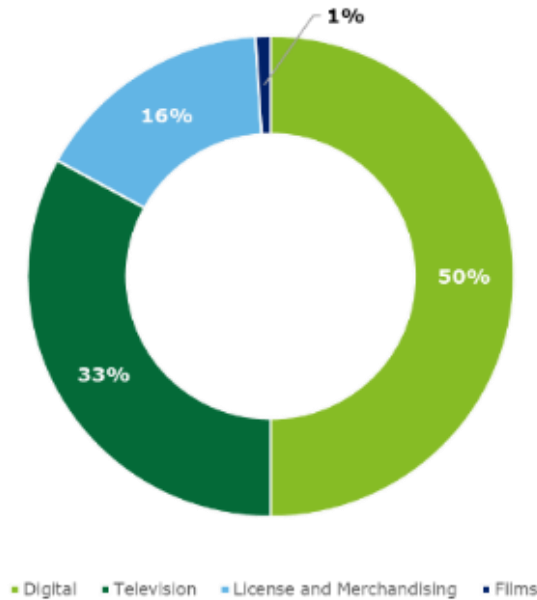
Contribution of Animation Services (Basis Revenue)



Contribution of Animation Services: In services segment, Television and OTT contribute to the lion’s share of revenue with nearly 56% contribution, followed by films (24%) and advertisements (17%)

Animation services include 2D animation, 3D animation, Visual effects services, feature film animation services, TV commercial animation, character animation, stop motion animation services, etc.

Contribution of Animation IP Production (basis Revenue)



Contribution of Animation IP Production: In IP production, Digital sector accounts for half of revenue share, with Television contributing 1/3rd of total revenue. License and Merchandising is responsible for around 15% of the market share of production.

Animation Intellectual Property Production refers to the in-house production of animated content.

Expert Opinion...



Prafull Gade,
COO & MD ,
Deluxe Entertainment
Services India Pvt Ltd

The biggest strengths of Indian animation industry nowadays are its creative capability and cost-effectiveness. That is why global industry leaders are establishing their production houses in India or are working in collaboration with Indian companies. These players are young, well prepared, and have an international focus to explore the field with passion, and they have a strong grip and understanding of the evolving and changing business.



Key shifts for the Animation and VFX industry in India

Growth Drivers

Industry experts felt that while the growth of the animation industry in India had been phenomenal, there was an opportunity for it to grow even more. The low cost of production (one third to one fourth of US cost and 25% lower than cost in Korea or Philippines) has been a huge advantage. For instance, the production cost of a half-hour animated movie in India cost around US\$ 60-70,000 while in the US, it was around US\$ 250,000-300,000, according to NASSCOM's analysis.

There are many other growth drivers for the animation and VFX industry, which have led to a substantial increase in their market size over the past few years.

Animation:

OTT Growth in terms of original content: With platforms like Netflix, Amazon Prime, Hulu, etc. vying for more customers, there has been a major growth in digital content such as movies and shows being created, thus giving opportunity to producers to tap larger market share in both national and international markets. The Indian animation studios have also realized the potential of creating their own content and are moving away from just being engaged as outsourcing hubs by international studios.

Table 14: List of some of the original animated Content launched in 2019

Broadcaster	Show	Launch Month
Star India	Super V	November 2019
Discovery	Fukrey Boyzzz	October 2019
Disney	Oye Golu and Bhagham Bhag	May 2019
Viacom 18	Golmaal Jr.	May 2019
Disney	Inspector Chingam	April 2019

The above table highlights the increase in original animated content in 2019, that has been showcased by different broadcasters¹².

Domestic growth: Although domestic market accounts for about 2/3rd of the quantity of content created in 2019, the realization of revenue from that content is at 1/3rd of the total share. Increase in revenue from the domestic content creation, including e-learning material for education, training, health and other sectors, regional dubbed content videos, professional training session, film and tv series etc., is expected to boost growth in the future.

Increased demand from by younger population: Animated content had always been favoured amongst children the age group 3-15, and COVID-19 has further fuelled the demand for animated shows in this category. For example, YouTube Kids – segment of YouTube that particularly caters to children has become very popular due to variety of content.

International Projects: India continues to be a hotspot for international production houses when it comes to animation services, due to its cost effectiveness. International production houses save significant costs in India, as compared to countries like Korea and Philippines. This is further strengthened by factors like sizeable English-speaking customer base and studio infrastructure.

¹² FICCI Report 2020

Government Initiatives:

1. In 2020, Government proposed to set-up a National Centre of Excellence for Animation, Gaming, Visual Effects and Comics industry to offer courses in these sectors and setting up of Centre of Excellence (CoE) for promoting entrepreneurship and to encourage start-ups.
2. Karnataka was the first state government to announce a separate policy for Animation, Visual effects, Gaming and Comics in 2012 and extended it for another 5 more years from 2017 due to its success.
3. Since Bengaluru is the IT hub of India, Karnataka government is formulating a policy to support the development of creative personnel in the AVGC sub sector, through incentives in patent registration, PF, international marketing, along with production grant for visual effects, etc. The policy aims to focus on skill development through building of more than 100 institutes pertaining to this sub sector, encourage start-ups and promote market & ecosystem development. Digital Art Centre (DAC) colleges and AVGC finishing school were set up (as pilot projects) to bridge the skill gap and introduce industry accepted skills and curriculum to students.
4. In 2016, Maharashtra government announced setting up of 2 AVGC parks in Pune and Lonavala. This will be further bolstered by incentives like entry tax exemptions, electricity duty waiver, etc. These measures will be in addition to exemption from payment of entertainment tax.
5. In 2017, Telangana VFX, Animation and Gaming Association (TVAGA) - a non-profit organisation was set up with the objective of supporting start-ups and IP creation, improving skill level of students and faculties, suggesting updated curriculum in line with the industry standards, etc.

VFX:

- Due to its cost arbitrage related advantages, India is the go-to place for international studios for VFX. Besides activities like rotoscoping, domestic studios are being used for various VFX related jobs.
- Domestic growth has played a major role (with 50% of revenue) towards growth of VFX. Increase in original digital content by OTT platforms is another reason for this growth.
- With the success of movies like Bahubali, there has been significant increase in VFX investments. Movies with heavy visual effects are increasingly being adopted by producers and directors, for example Zero, Thugs of Hindustan, etc.

While the above factors are pushing growth in Animation and VFX industry in the past few years, there has been a consistent increase in demand for personnel with the requisite knowledge and skills in this sector. With more content being created, rise in international demand and IP production, etc, there has been a spurt in demand in sectors like films, cartoons, television, education, healthcare, advertising, E-learning.

However, due to lack of sufficient number of institutes imparting relevant skills related to industry, there is a huge supply gap in the animation industry.

Expert Opinion...



Neha Hooda,
Executive Producer,
Pixstone Images Pvt Ltd

One of the major challenges in terms of employability of new people is their communication skills which often poses a problem in our business operations. We work mostly with international clients and often our people don't comprehend what the clients are communicating.

Pre-COVID, OTT and film segments were both growing. However, after COVID started, the competition has stiffened and there are not enough shoots happening. Price points have dipped as relatively unknown small studios want to enter the market, so the growth has been stagnant.

The pathways that the subsector should follow for future growth include increased participation of women in work force especially in senior roles, English language training for artists, training programs for technical skills and soft skills and mentorship programs focusing on women and on people coming from non-metro cities and rural areas.

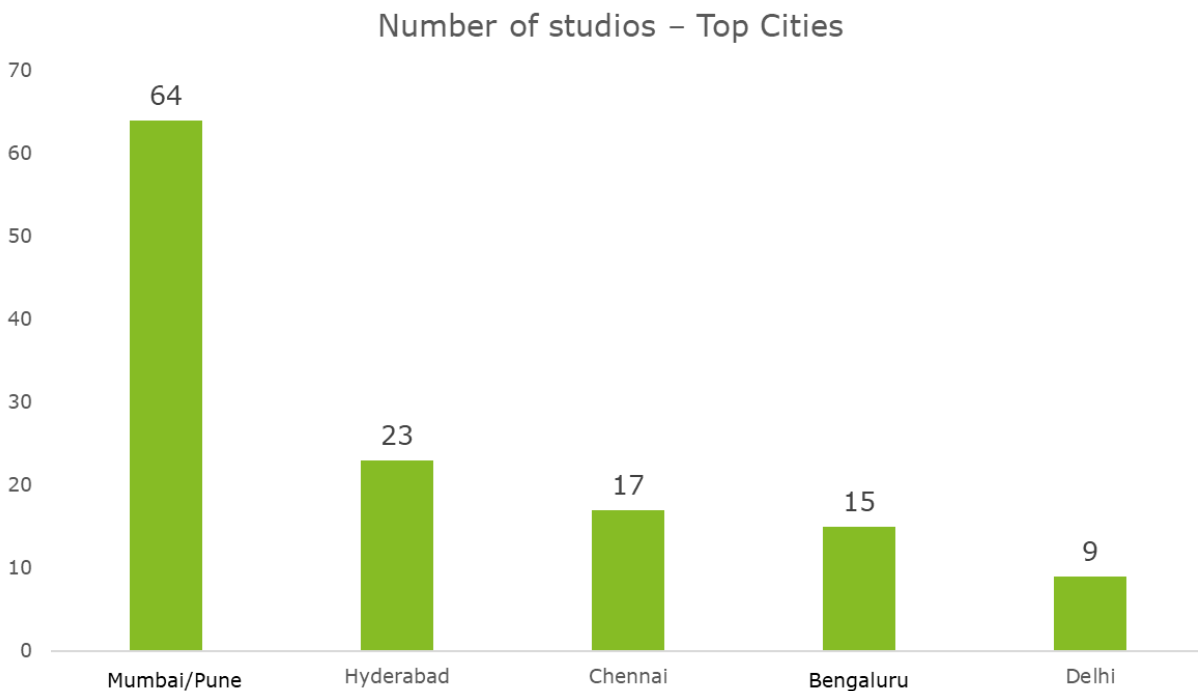


State Level Industry Shifts

- **Key Employment generating States/Cities**

Mumbai, Maharashtra houses the greatest number of studios in the animation and VFX sector, followed by Hyderabad, Chennai, Bangalore, and Delhi. Number of Animation and VFX studios has a direct correlation with number of people employed in the sub sector in a particular state.

Figure 20: Number of Studios – Top Cities



- **High Demand Job roles in the subsector & in the key states/cities**

The high demand job roles for the subsector including in the above mentioned states/ cities as per the existing QP-NOS are Animator, Composer, Roto Artist, Rigging Artist, Character Designer, Clean-up Artist, Colour Key Artist, Modeller and Voice-Over Artist.

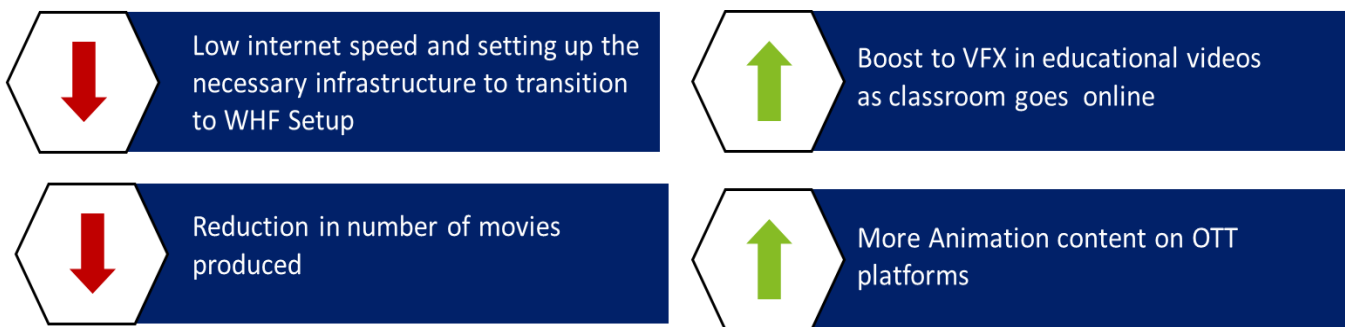
- **States/Cities which may become prominent in the next 5 years**

- A Centre for Excellence for animation, visual effects, gaming, comics (AVGC) is being set up in collaboration with the Indian Institute of Technology, Bombay by the government to promote entrepreneurship in the industry.
- Few prominent studios that are coming up in next five years in the following states that will attract more demand - Mumbai, Maharashtra; Chennai, Tamil Nadu; Pune, Maharashtra; Bengaluru, Karnataka; Kerala.

Impact of COVID-19

With the many challenges faced by all the industry sectors during the lockdown, one that has managed to keep the lights on for the most part is animation! The production is going on properly with many companies following various techniques to keep the work pipeline intact. Most studios are managing to continue work with the help of a co-operative team and proper management leveraging the WFX (Work Flow Extender) pipeline although the artists are used to working in groups which helps them at various levels, may it be technical or creative, and breaking that work culture and working in isolation is a new system for which the artists are learning to adopt. Some people in the industry felt that this is a blessing in disguise and will lead to lower costs, higher productivity and better accountability. Moving forward, the animation industry may definitely see a bright future, with the local content being a priority. However, this may slow down the transition of the industry from its unorganised nature to a more organised sector. It may also affect learning and development for newer employees that takes place by them being physically present in the studio and observing senior and more experienced professionals at work.

Figure 21: Impact of COVID-19-Animation and VFX



Some industry leaders feel that with the growing viewership and hunger for fresh content, this is the right time for all to work on their own IP and pitch it directly to the digital platforms and studios to become IP driven. There is also more interest in animated shows than before.

According to some industry analysts, the pandemic may have provided several opportunities to entertainment industries such as animation and visual effects as they can have employees working remotely on projects unlike live action shoots. The segments will still, however, see a 51% decline in revenues this year as the first few months of the lockdown saw visual designers and creators stuck at home without high-end infrastructure, software or equipment, unable to deliver footage for many shows that had to be postponed since unlike, say, the IT sector, animation companies were not prepared to work from home and it took the industry some time to deploy adequate procedures. Further, for companies which did not own the IPs (intellectual property rights) of the animation projects, there were glitches such as restrictions in accessing client files from home.

As far as the VFX segment goes, while a lot of studios and producers would resort to Chroma shoots and pre-visualizing sequences so as to minimize the actual time spent on sets, there would be a reduced pipeline of projects in the short term with many films indefinitely delayed and visual effects and post-production to begin only after live footage has been shot.

This year's biggest lesson has been to ensure and maintain robust operational processes. Content consumption has been at an all-time high, since it is one of the core drivers helping people through the rigours of staying at home for such extended periods of time. The animation industry is slated to double in the next 5 years.

Expert Opinion...



Jyoti D Rautela,
Chief Marketing Head,
Gyan Era Learning
Solutions Pvt. Ltd.

The existing challenges in terms of employability of the candidates is that it is difficult to hire freshers and train them effectively. The existing skill gap is large and for future growth in the animation subsector, we need better training for new joiners and for other employees on latest industrial knowledge & software and on enhancing professional proficiency.

As an industry, we also need to develop skilled manpower. We need to provide best inputs to our people. We can also conduct practical competitions to build their competence.

Another challenge during COVID is that even though the animation industry is booming, the communication exchange is very poor due to work-from-home model.

In terms of global opportunities available in the foreseeable future, there is a need for support to the industry in several areas including for business networking events, exhibitions, software purchases and in building international business collaborations. This will also help create more jobs.



Growth/ Revenue Trends

Basis our analysis of growth and risk factors, it is projected that Animation and VFX sub-sector will grow from INR 9,060 crores in FY 2019 to INR 21,712 crores in 2025 at a CAGR of 15.7%. VFX is the major contributor for this sub sector with ~47% of the total revenue, followed by ~33% by Animation and ~20% by post-production. COVID-19 worked as one of the growth drivers for the industry especially the education sector witnessed a surge in demand for consumption of 3D animated contents.

Figure 22: Average Revenue Segregation(Projection)-Animation and VFX

Average Revenue Segregation (Projection)

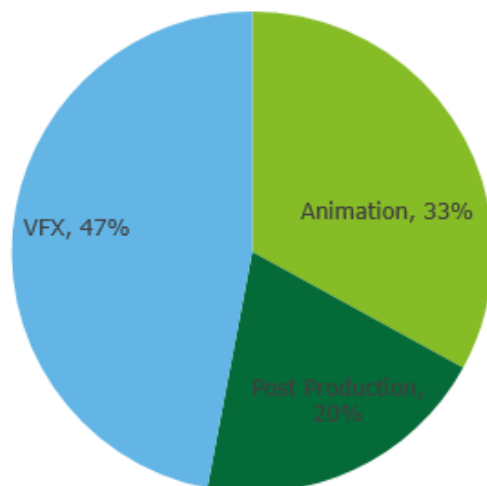


Table 15: Revenue Trends-Animation and VFX

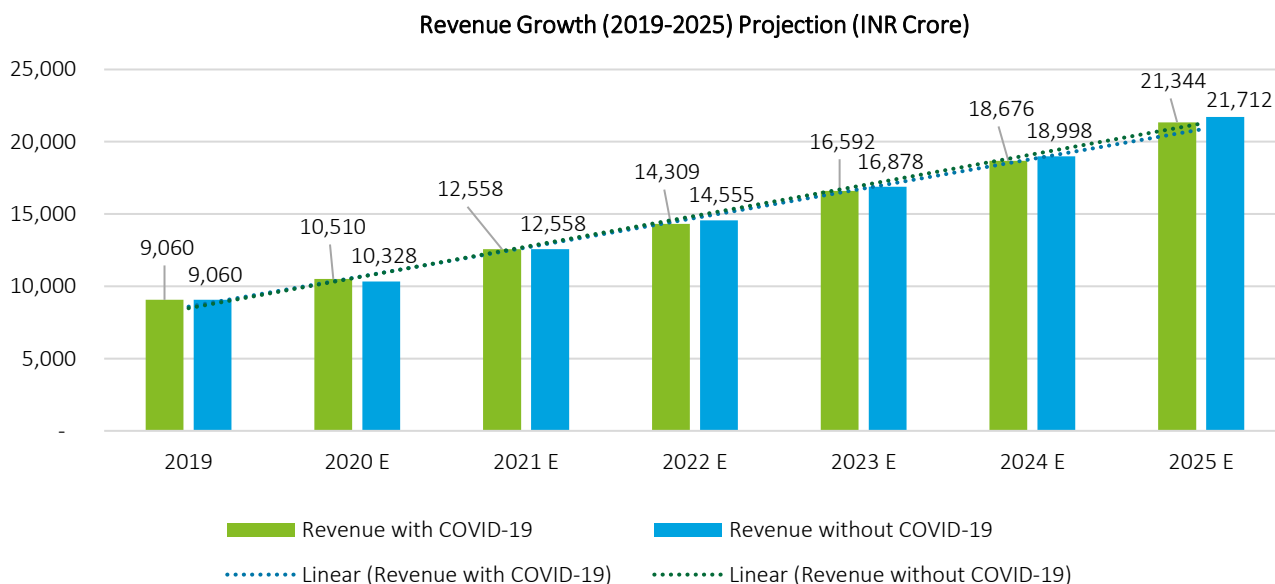
Revenue Source (INR Crore)	FY 2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Animation	3,624	4,131	4,395	4,658	5,063	5,699	6,514
Post-Production	1,359	1,549	2,512	3,202	4,051	4,560	5,211
VFX	4,077	4,648	5,651	6,695	7,764	8,739	9,988
Total Revenue	9,060	10,328	12,558	14,555	16,878	18,998	21,712

Source: FICCI report 2018, 2019, 2020, Expert interview and analysis

Key Assumptions:

1. Technology may have positive impact through the period 2020-2025, especially because of OTT, launch of 5G and restriction on outdoor entertainment.
2. COVID-19 has a positive impact on the sector, especially for animated content in online education.
3. At the initial phase of lock down, the industry witnessed a technological barrier in terms of internet connectivity and availability of workstations as high resolution animation work require advance configured computers.
4. Launch of AVGC policy will work in favor for the industry to grow further.
5. Animation may contribute more during 2019 and 2020 whereas post-production & VFX will contribute relatively less in comparison to other years because of the COVID-19 impact on film production.

Figure 23: Revenue Growth Projection (2019-2025)- Animation and VFX



The above bar chart represents the impact of COVID-19 on the Animation and VFX industry. It is projected that the industry would have grown at a CAGR of ~15.3% in normal circumstances till 2025. With COVID-19 too, the industry is expected to grow at similar rate considering the sector will recover from COVID-19 in long run.

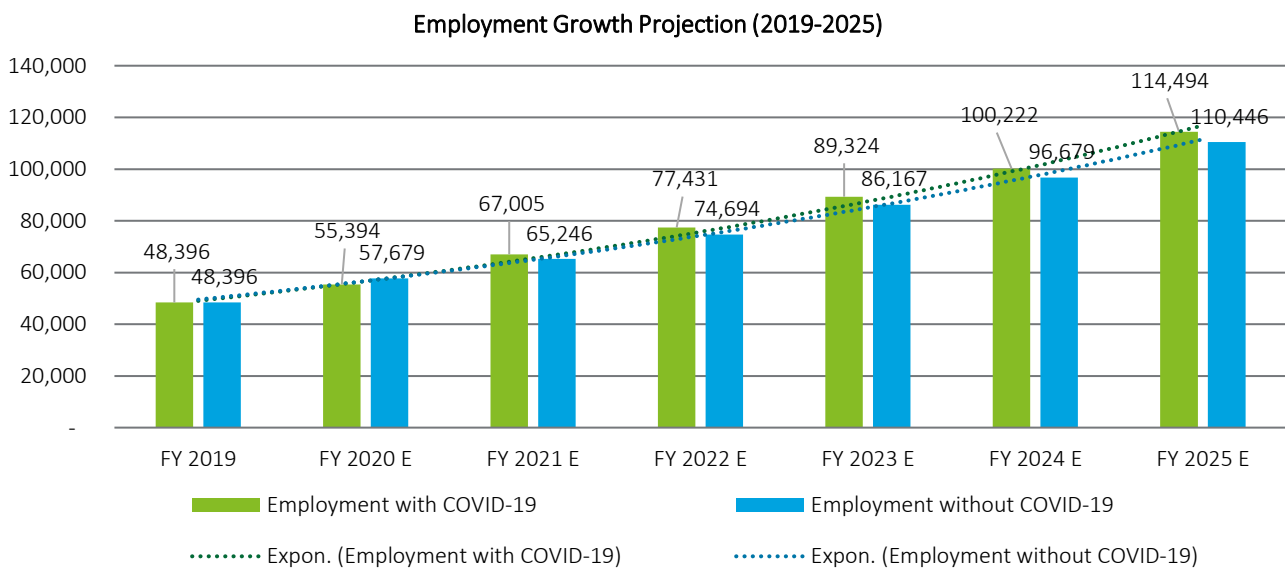
The Human Resource Demand Forecast

Being one of the fastest growing sectors in Media and Entertainment Sector, the Animation and VFX subsector will generate direct employment of ~1.14 Lakh by 2025. It is expected to witness an incremental demand of ~0.66 Lakh people in the industry to be employed till 2025 over ~0.48 Lakh people employed in the year 2019.

Table 16: Human Resource Demand Forecast- Animation and VFX

Particulars	FY 2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Estimated numbers of people employed in the industry (A)	48,396	57,108	62,042	72,365	86,723	98,256	112,250
Technological Environment (B)		(571)		2,895	1,734	983	1,122
Political Factors/ Policy updates (C)		(571)	4,963	2,171	867	983	1,122
Impact of COVID-19 (D)	-	(571)					
Total Estimated Employment (A+B+C+D)	48,396	55,395	67,005	77,431	89,324	100,222	114,494

Figure 24: Employment Growth Projection (2019-2025)- Animation and VFX



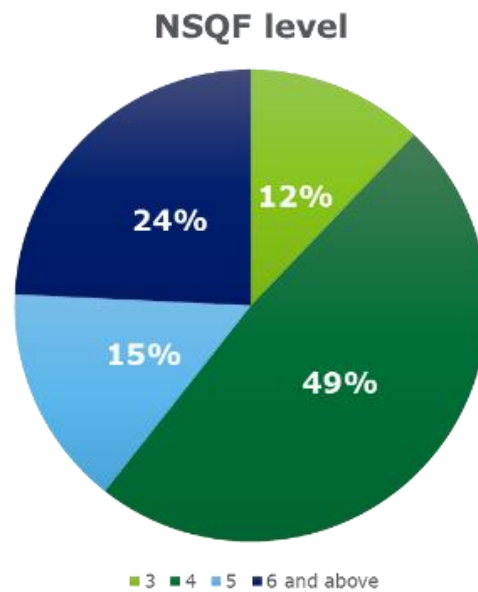
The bar chart above represents the impact of COVID-19 on the Animation and VFX sub sector. It is projected that the industry would have employed ~1.10 lakh people cumulatively till 2025 whereas, now the industry is expected to employ similar number of people.

Employment Profile and Survey Insights

The M&E industry employs approximately 1.5 million people in 2020¹³. The share of revenue of Animation, VFX and Post-Production in 2019 was 5.4% of the total market size and 5.8% in 2020.

¹³ BCG-CII-ME-report-India-Creative-Economy-Dec-2017

Figure 25: Distribution of Courses on the basis of the NSQF level- Animation and VFX



Distribution of Courses on the basis of the NSQF level: From the pie chart above, it can be surmised that more than half (62%) of the Qualification Packs are at NSQF level of 4 and below, and only 22% of the QPs are at 6 and above.

The digital content development is a major sector in Animation and VFX and has 3 key verticals:

1. **Creative:** This vertical includes artists, team leads, creative supervisors, Creative Chief Officers and Creative directors.
2. **Technical:** This vertical has software developers, creative generalist and animation supervisor, Technical executives and technical Directors.
3. **Production Management:** This vertical has Production coordinators, Production Managers, QA managers etc. that work on planning, QA, cost controls, artists engagement, client engagement etc. There are also pre-production and research teams.

Content development companies/ animation studios in India fall in 3 categories:

1. **Large studios:** These studios mainly take up outsourced work on outsourced projects from international feature films (mainly from Hollywood). Under ten in number in India, they employ more than 500 people (some of them several thousands), undertake 10-25 film projects per year and compete with large international studios including those in China. They earn 500-700 crores in revenue annually.
2. **Mid-size studios:** These studios generally focus on domestic work but may also get occasional overseas work. Under 50 in number in India, they employ 50- 500 people. They earn 20- 200 Crores in revenue annually. They may serve as animation training academies also to leverage their infrastructure.
3. **Small studios:** These studios generally focus on advertisements and local films but may also provide services to large studios. Over 200 in number in India, they employ 10-50 people. They earn less than 15 Crores in revenue annually.

Skill Challenges in the Subsector and the Potential Solutions

There is a need for a multi-stakeholder dashboard for the VFX/ animation/ gaming industry. As a tech-enabled platform it will bring the employers from the industry close to the supply side- the training institutes. The dynamic demand and supply forecasts will therefore help the respective players take appropriate business decisions.

The sub-sector dashboard will require a common nomenclature of job roles, experience requirements and skills taxonomy. The QP-NOS framework with ongoing updation could be the building block for such an initiative. Such frameworks will provide the required standardization and reliability on the training programs being imparted through a process of independent and robust certification.

The skill gap in the sub-sector is not only for technical skills but also for behavioral skills like working in teams.

Further, the demand-supply gaps are there at mid (including skills in leading teams & in project management) and senior levels too, whereas the training industry is only targeted at the entry level skills. Therefore, the industry needs to also focus on continuing education. This upskilling effort alongside the mentoring support from people from studios in more mature markets will make it possible for the Indian industry to meet its skill requirements across the hierarchy of roles and levels. This will also provide a career map to people entering the industry.

There is a need to develop and map Continuing Education Units (CEUs) for middle level employees to help them upgrade themselves based on career road maps for various skills in the M&E verticals. This mapping of CEUs required to be taken to upgrade and make people ready for the next role will provide the industry a structured approach for preparing talent at all levels. This model could then be adopted for sectors outside M&E sector.

Since it may be difficult for individual studios in India to develop content for mid-career level development, there might be a need to create common resources for the industry with its own learning management system.

Some studios have made endeavors to start training arms, sometime from the frustration from not finding trained resources. However, it often becomes an administrative stretch for the studios to manage training institutes. A more sustainable solution is an industry- academia partnership among educational institutes and studios.

Skills in demand in the animation industry in India:

1. Stereo conversion (2D to 3D), video editing, colour grading and correction, sound recording and editing, dubbing etc.
2. Animation is also finding new application in non-entertainment sectors like education, healthcare, real estate and training.
3. There is also increasing application of AI/ML in automation in several areas including rendering, character animation, camera tracking, motion capture, image processing, rotoscoping etc.
4. Skills like Conceptual design, storytelling and prototyping skills are in demand as are also expertise with ZBrush, Mari, Substance Painter, Marmory, and Golaem.
5. Cloud processing and 5G are likely to provide further impetus towards better speeds, security and latency.
6. Another emerging area is VR application.
7. 360 degree 3D video technology is also finding early application

Supply Side

There is now a large pool of software professionals with solid 3D knowledge. The industry is always looking for software specialists who can do coding for the 3D field, especially in the R&D area which develops automation tools to facilitate the pipeline, develop proprietary tools for production, etc.

The biggest strengths of Indian animation nowadays are its creative strength and cost-effectiveness. That is why global industry leaders try to deploy their production houses straight away in India or in collaboration with existing pioneers. These production houses are young, well prepared, and have an international focus to explore the field with passion, and they have a strong grip and understanding of the evolving and changing business. One indication of this: animation and VFX have become part of the syllabus in visual art studies, enabling artists and creative talent to be better prepared than ever to help take the Indian animation industry to new heights.

The animation training scenario in India has been using a combination of traditional 2D and 3D techniques within their curriculum. Predominantly the 3D work revolved around Autodesk Maya. But during the last few years, more and more quality live-action/CGI movies started coming to India for the CGI- and VFX-related work, and the demand for specialized software for modelling, texturing and crowd stimulation has increased. A lot of schools have started introducing ZBrush, Mari, Substance Painter, Miarmy, and Golaem in their curriculum. The combination of these software tools is also highly in demand with the gaming industry.

While an important part of industry's focus is to maximize the international opportunities, the growing global entertainment industry brings both traditional TV channels and networks, as well as rising OTT platforms, which are growing enormously. The domestic Indian market is also exciting and an enormous opportunity in itself, experiencing both a rise in traditional TV viewership, as well as an anticipated significant rise in digital users over this coming decade as increased income and more affordable high-speed streaming and internet access pave the way for more Indian users to access and enjoy content more readily. This will create an increase in the demand for digital entertainment. To give an idea, there will be around 300 million new users in India by 2025.

Type of Programme under UG/PG

Table 17: Type of Programme under UG/PG- Animation and VFX

Type of Program	Program
Under-Graduate	Bachelor of Design: Animation and Interactive Media
	Bachelor of Design-Games
	B.F.A in Digital Art and Animation
	B.F.A in Animation
	B.A (Hons.) Computer Animation Arts
	B.Sc. (Hons) Games Technology
	B.A. Computer Animation & Visual Effects
	B.Sc. Computer Animation
	B.Sc. Game Development
	Post-Graduate
M.Sc. Computer Animation and Visual Effects	
M.A in Digital Effects	
M.A. in Games Design and Development	
M.A Concept Art for Games & Animation	
M.A Character Animation and Animated Filmmaking	
M.B.A in Media and Entertainment	

The Human Resource Supply Forecast

The courses available in Animation and VFX subsector are majorly divided into two types- UG/PG courses. There are around ~500 institutes in the country which provide these courses for animation and VFX sub sub-sector.

Details of Enrolment in UG/PG courses in Animation and VFX

Table 18: Details of Enrollment in UG/PG courses in Animation and VFX

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
PG	13,337	15,987	16,946	17,963	19,041	20,183	21,394
UG	13,250	15,900	16,854	17,865	18,937	20,073	21,278
Total	26,587	31,887	33,800	35,828	37,978	40,257	42,672

Source: AISHE 2019, siksha.com and analysis

Details of enrolment on vocational courses

Table 19: Details of Enrollment on Vocational Courses in Animation and VFX

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
Total	104,896	31,469	104,896	111,190	117,861	124,933	132,429

Key Assumptions:

1. Since all the vocational training centers were shut during 2020, it is assumed that the training at 30% of the capacity of 2019 was possible in 2020.
2. 6% growth in training and teaching enrolments is considered for projection looking at the past performance of the supply side.
3. Only 20% of the graduating student numbers at UG/PG and Vocational training institutes were considered for calculating supply side of the animation and VFX subsector.

Analysis of teaching/ training in the Animation and VFX Sector

The Indian Animation Industry encompasses traditional 2D animation, 3D animation and visual effects for feature films. Career in animation industry is relatively new in comparison to other traditional careers. Animation is a combination of art and technologies wherein moving images are created in 2D and 3D to impress, educate, and entertain viewers and users. Animation and VFX involve creation of images from an object as simple as a leaf falling from a tree to a full-fledged online computer game. The application of this form of creation is varied and its scope is unlimited.

After completing animation classes and acquiring a Bachelor's degree, an animator could be absorbed in advertising, web designing, video making, editing, games development, and even in film industry. Special effects, which is now an important aspect of film making is a direct representation of 2D and 3D techniques as taught in animation & VFX courses.

Challenges in existing Education system for Animation & VFX sub sector

Most of the AVGC (Animation, visual effects, gaming and comics) education institutes in India are lacking in the quality of programme inputs (infrastructure, teaching resources, quality faculty etc.) and outputs (quality of students graduating). Focus needs to be shifted towards the design and creative aspects of content, animation education and creation of skilled workforce. Animation is not a quick and easy process; it involves thorough visualisation and adequate process of storytelling. Therefore, the genre needs more time and labour.

Costly equipment, and high operational costs including staff costs and rent, are some of the major hurdles faced by the VFX education industry today.

1. Animation course content:

Students look forward to short term courses provided by institutes and colleges and it is imperative to ensure that the colleges offer quality content that includes all aspects of animation. Animation education is quite different from simply

learning about animation software. Quality animation institutes should teach classical animation principles like storytelling, life drawing, storyboarding and character design on paper, apart from just teaching different software. Colleges should therefore provide a full-fledged animation degree instead of crash courses that last just a few weeks.

2. Placement facilities:

The colleges should work on strengthening their placement cell to lure better companies which not only provide quality experience but also give lucrative offers to skilled students.

3. Quality of faculty:

It is of paramount importance that the faculty is qualified and experienced enough to mentor and train students. In medical education, the best surgeons train the medical students in surgery techniques; the field of animation is no different. Having professional animators as faculty may also play an important role in improving the institute's track record in placing students. A survey of 72,000 respondents conducted by AnimationMentor.com, an online animation school, revealed that 33 percent respondents rated "professional animators as mentors and faculty" as the primary criterion for selecting an animation programme.

4. Need for big projects/ international exposure:

There should be regular training session for the teachers and trainers in animation sector by the industry experts so that the teachers are updated as per the latest industry practices and trends. International exchange programmes can be introduced in the curriculum as various major projects exist in Hollywood, which doesn't outsource its best and most challenging work to Indian studios. Majority of Indian companies work on smaller jobs. The benefit of international exposure is limited to few in India.

5. Need for collaboration:

The college faculty should interact preferably with people who have had industry experience to be updated on the industry trends to students. They should also work in stints with advertising agencies, graphic designing firms, Bollywood directors and participate in workshops with animation studios or film production houses.

6. Poor quality institute infrastructure:

The infrastructure available is not at par with the industry standards and there is the dearth of updated equipment-computer labs, library, classrooms, VFX tools etc.

7. Lack of Originality:

Most of the colleges take Hollywood movies as a base to inspire students which may not lead to lack of creativity and original approach. Lack of opportunities to learn from and create original content creates doubts in the minds of talented students about their original ideas. They also need to be exposed to travails of and troubles with plagiarism.

Insights on Future Jobs & Skills

Future Job roles for which specific skill trainings need to be developed:

Immersive technologies like Augmented Reality (AR) and Virtual Reality (VR) are the next venture of investment from the companies, which will be used in variety other fields too like education, gaming, etc. Below are some careers that might have a bright future:

Design Architect: This job entails designing the interior and exterior of the devices used in AR/VR like helmets and goggles.

System Validation Engineer: This role requires fixing the bugs/issues that might arise in the software that goes into the applications. Job requires inspection, calibration and testing the equipment/device to ensure smooth functioning and improve workflow efficiency.

3D Artist: With the demand for animated content increasing at a rapid rate, 3D artist is one of the main job roles that is already in high demand and expected to be in the near future. This involves creating special effects using combination of software and hand drawn techniques.

Specialised & High Demand Job roles as per existing QP-NOS:

Animator: This is one of the most sought-after job roles in this industry. Animator can be a 2D, 3D or a keyframe animator, and the role involves animating objects.

Compositors: Their role is to create a final image of a shot or a sequence and ensure continuity of a shot. It involves blending of different layers of animation, graphics and visual effects to produce a final picture.

Roto artists: Roto artists manually draw around and cut out objects from movie frames so that the required parts of the image can be used, a process known as rotoscoping. They trace areas within live-action frames where the CGI will be inserted or interact with live images. They create silhouettes known as roto mattes within the frame to allow the scene to be layered by the compositor.

3D Modellers: A 3D modeller is required to create visual characters and backgrounds by interpreting concept art and sketches. They are responsible for determining the physical dimensions of a shot.

In demand Job roles for which skill trainings need to be developed:

UX-UI Designers: UX-UI Designers are generally responsible for collecting, researching, investigating and evaluating user requirements. Their responsibility is to deliver an outstanding user experience providing an exceptional and intuitive application design. Illustrating design ideas using storyboards, process flows and sitemaps, designing graphic user interface elements, like menus, tabs and widgets.

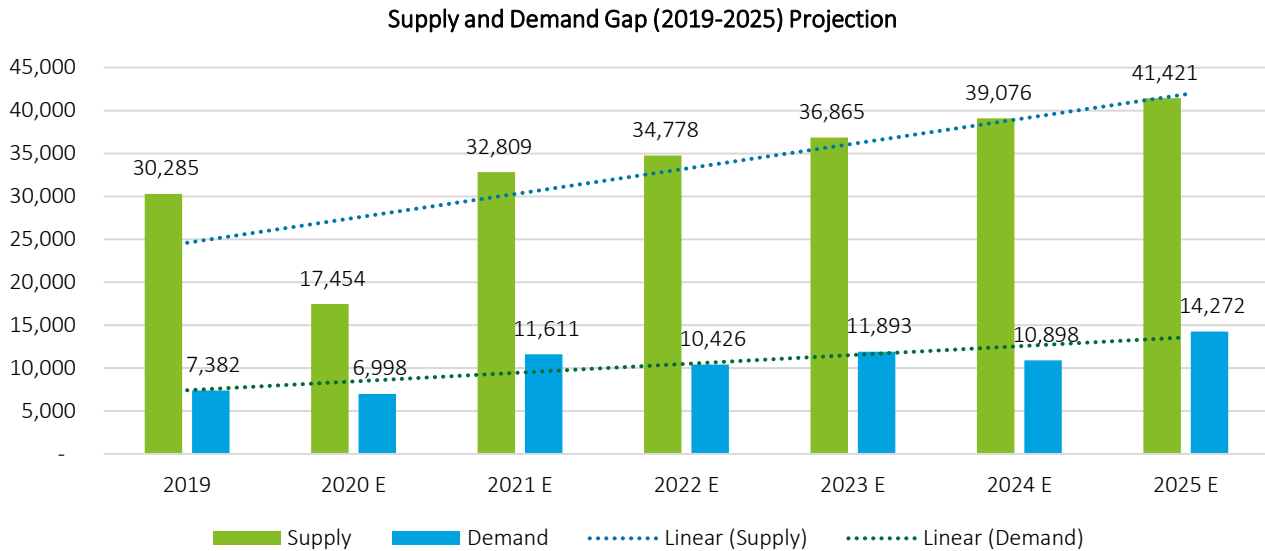
VFX Artist: VFX artists create photoreal, digitally-generated imagery. The role requires the seamless integration of these effects into live action in feature films, television and, increasingly, online and console gaming. VFX artists use the latest technology to produce computer-generated creatures, crowds and stunt doubles

Concept Artists: Their role requires collaborating with the art director and provide a base that is to be used in animation. The job involves drawing of a character or background in different styles, with the final version being edited and used by animators.

Layout Artists: Their role is to modify the templates provided by the graphic designers to provide the final product in terms of design. They are also responsible for the positioning of characters and camera angle.

The Human Resource Demand Supply Gap

Figure 26: Supply and Demand Gap Projection (2019-2025)- Animation and VFX



The above bar graph shows that there will be surplus in terms of supply of manpower in comparison to the market demand for the workforce in animation and VFX sub sector. In 2024, the gap will be highest at ~28,179 because of excess training especially in vocational courses. In 2020, the supply & demand Gap may be minimal with ~10,456 and the average gap is ~22,744. Further, on an average ~12,000 students from formal UG/PG courses enter into the animation and VFX industry. Vocational training should focus on improving the quality of training, rather than enhancing student volume, with industry exposure to diminish the huge supply and demand gap.

Potential ways for Atma Nirbhar Bharat

With the focus of the country on being self-reliant, under Atma Nirbhar Bharat mission, there is immense potential in original content creation as well as job creation in vernacular language production. This sub-sector should focus on both value and volume. Also, great opportunity lies in VFX and animation, where the country already employs brilliant minds and has worked on several big-ticket Hollywood films.

The high-end equipment, software and techniques/technologies used in animation subsector are imported from abroad, hence there is huge potential for the country to focus on building these technologies in-house leveraging Make in India/Startup campaign. Also, there is high potential to set up high-end VFX studios in India and making India more lucrative for the Hollywood Movies thereby generating more employment opportunities within this sector.



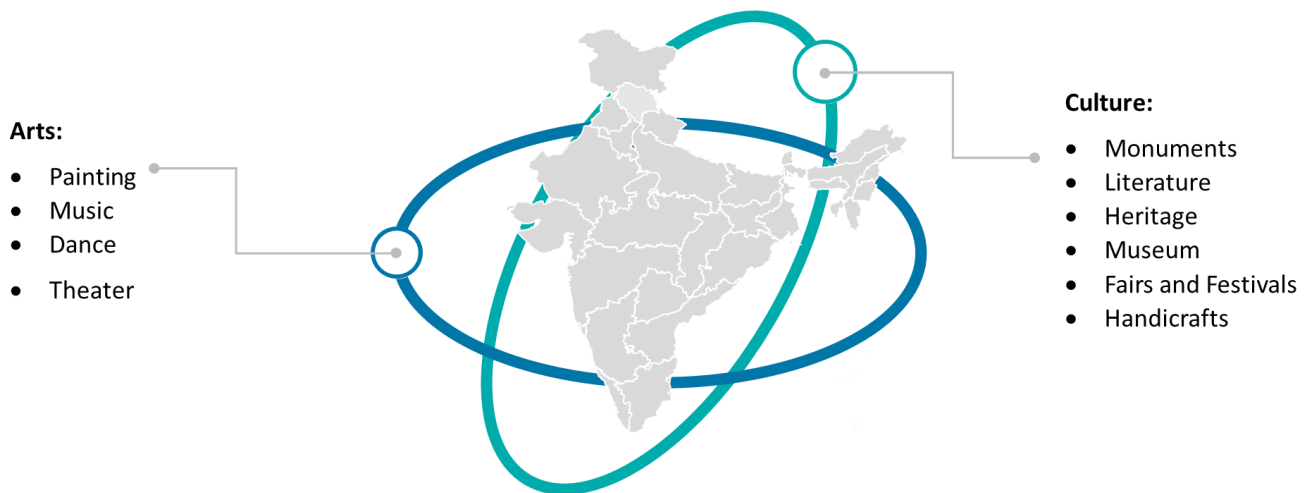
E.3 Art and Culture

Art and Culture Sub-sector Overview

India has a very old, rich and immense history of art and culture. It has one of the largest collections of cultural heritage which includes songs, music, dance, theatre, paintings, performing arts, etc. Each State / Union territory has its own distinct cultural identity which translates into unique style of art and traditions in that part of the country.

The visual art industry which encompasses drawings, paintings, ceramics, sculpture, design, crafts, photography etc. was estimated at 1,703 Crore in 2019. Art galleries are a major part of the visual art industry accounting for almost 2/3rd of the market size.

Figure 27: Sub-categories of Art and Culture



Paintings, music, dance and theatre are considered the main pillars of this industry. Dance in India has a tradition of over 2,000 years. Its themes are derived from mythology, legends and classical literature and the two main divisions being classical and folk. Some of the famous traditional dances are Bharata Natyam, Kathakali, Kathak, Manipuri, Kuchipudi and Odissi. For the growth and development of traditional dance and music, academies like Sangeet Natak Akademi and Lalit Kala Akademi have played an important role. Traditional paintings have distinct designs involving religious and mystical bearings whereas theatres have diverse regional variations across the country.

Culture plays an important role in the development of a nation. For a country as diverse and old as India, there are several facets of culture. From festivals, which are celebrated all across India relating to different occasions to one of the oldest literary traditions in the world with famous works like Vedas, Ramayana, Mahabharat etc., India is brimming with cultural heritage. Several government initiatives, rising sales of art and increased role of corporates have been responsible for boosting the growth in this subsector. There has also been an impetus from Ministry of culture, launching many schemes for the upliftment and development of arts and culture industry.

However, COVID-19 has had a negative impact on the art and culture industry in India. Almost all the segments of industry were affected by the pandemic and the subsequent preventive measures through lockdown. Fairs, festivals, museums, art exhibits, visit to libraries, music and dance performances etc. had all come to standstill. Thus, in order to adapt to conditions created by the pandemic, arts industry came up with some new ways to engage customers. Digital formats such as the online viewing rooms and virtual exhibitions, which were largely alien to the Indian market were adopted. National Gallery of Modern Art digitised its collection and organised virtual exhibitions artists like Raja Ravi Verma and Jamini Roy.

Despite being known for their high quality and exclusiveness, the varied crafts and handicrafts sector of India has some skill gap issues that are hindering its further growth. Issues related to lack of formal training and sub-par training institutions with outdated curriculum need to be addressed by setting up of centres of excellence and by building capacity for training through investment in educational institutes.

Expert Opinion...



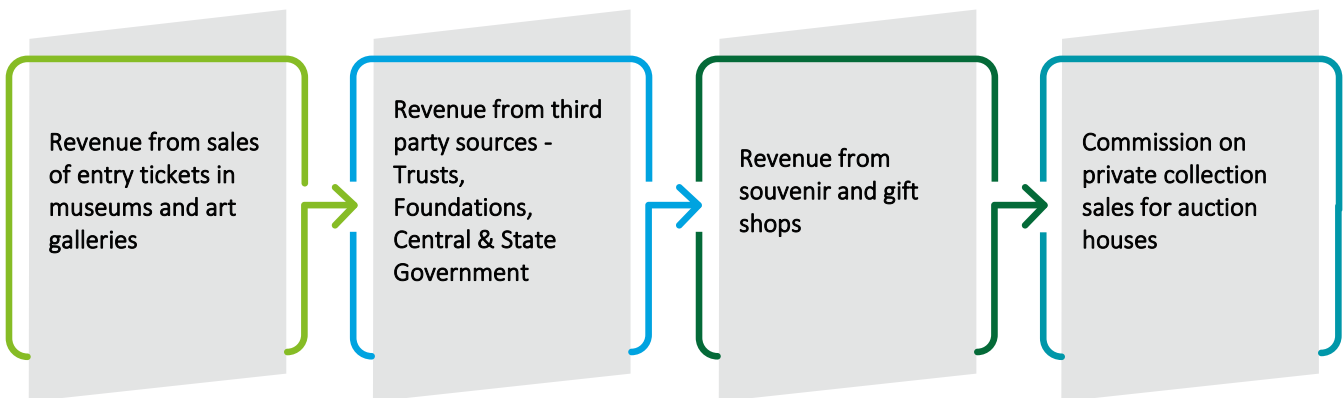
**Sushil Sakhuja,
Sculptor, Artist &
Founder, Sanskriti
Bastar**

Arts is creation while crafts are production and what attracts buyers to the traditional art is the lifestyle and culture of the tribals that is connected to the art. The art lovers' domestic or foreign buyers may be from different segments - art collectors, art galleries, designers, decorators, art sellers, conscious buyers like tourists. As we build awareness about the tribals, and their cultures, rituals, which are directly associated with nature, from this the buyer interest in the art and craft grow. Knowing the way of making art and its history increases the reverence for the art seeker- Art connects people with the heart and naturally.



Details of Revenue Streams in visual arts industry

Figure 28: Different sources of Revenue Streams in Visual Arts Industry



There are different sources of revenue for the visual arts industry:

- Revenue from sale of entry tickets constitutes the majority share in the total market size. The revenue generated by most government supported museums goes to a common fund managed by the Ministry of Culture.
- Private museums rely on several sources for their funding needs – trust, foundations, grants from the state or central government. Some museums come under Public Private Partnership (PPP) model. An example of the PPP model is Kolkata Museum of Modern Art (KMOMA).
- The revenue earned from the souvenir and gift shops, food and beverage cafes inside the museums and galleries account for a minority share of the earnings.

- In auction houses, selling of art products and commissions from private collection sales contributes a sizable share to the total revenue.

Expert Opinion...



Tanmoy Basu
Faculty, Whistling Woods
International, Flute Artist, Music
Composer and sound Designer,
Researcher & Writer, Documentary &
Film Maker

We need to work on several structural approaches so that we are able to leverage End-to-end Entitlement in the sector. We also need to make regional Indian traditional knowledge, literature and art available nationally through Language Integration. For the sector to become more effective we need Cross-skilling and Skill Infusion. We also need to create enablers so that people can volunteer their expertise - this will create overall well-being. Finally, we need to become a problem solving and knowledge- managing nation. These interventions, I believe, have the potential to address our human resource skill-gap in the coming years and strengthen our sector.



Key shifts for the art and culture industry in India

Growth Drivers

There are multiple factors that contribute to the growth of this sector:

Increase in sales of art:

The number of High Net worth Individuals (HNI) in India reached 2.63 Lakh in 2019, increasing from 2.19 Lakh persons in 2016. With increase in such kind of individuals, the sale of art in galleries and auctions has increased over the years, along with art also being used as a source of investment with affluent individuals buying art for financial benefit.

Increased role of Corporates:

In recent years, a number of corporates have been sponsoring art and culture events to build connects with the art enthusiasts. As part of their Corporate Social Responsibility (CSR) initiatives, the organisations have been spending from the CSR budgets on art and culture to support art and culture and to enhance their own reputational benefits.

Government initiatives and schemes:

Boost to Arts and culture industry in Budget 2020:

- An allocation of INR 3,150 Crore was given to the Ministry of Culture in the 2020 budget. The amount allocated is proposed to help in the opening of maritime museum in Lothal, Gujarat among other projects. The budget also proposed establishing an Indian Institute of Heritage and Conservation under the Ministry of Culture.
- Development of 5 archaeological sites has been announced - Rakhigarhi (Haryana), Hastinapur (Uttar Pradesh), Shivsagar (Assam), Dholavira (Gujarat) and Adichanallur (Tamil Nadu).
- Opening up of a new Numismatics and Trade museum, setting up of a tribal museum in Ranchi, and re-curation of 5 museums, including the Indian Museum, which is the oldest in the country are some initiatives taken up by the central government for the growth of the art and culture industry.

In order to promote the growth of art and culture in India, the Ministry of Culture has launched several schemes including:

- Scheme for Financial Assistance under Seva Bhoj Yojna

- Scheme for Financial Assistance for Promotion of Art and Culture
- Scheme for Financial Assistance for Creation of Cultural Infrastructure
- Scheme of Scholarship and Fellowship for Promotion of Art and Culture
- Certificate of Excellence Scheme for Museum Professionals
- Museum Grant Scheme
- Scheme for Pension and Medical Aid to Artistes
- Scheme for Promotion of Culture of Science
- Cultural Heritage Youth Leadership Programme
- Scheme for Safeguarding the Intangible Cultural Heritage
- Scheme for Promoting International Cultural Relation
- Fund for Regeneration of Traditional Industries (SFURTI) by ministry of MSME

Risk Factors

There are a few factors that may cause a downward trend in the sector's growth:

- There is lack of a comprehensive policy which focuses on the entire cultural ecosystem. The focus is more on protection and promotion of cultural heritage and not on development of new cultural assets like libraries, museums and galleries.
- With new city development policies and master plans, there is little space for development of urban arts which leads to its decline. For instance, graffiti can be recognised as an urban cultural practice which otherwise is dying out slowly.
- Budget allocated to improvement of art and culture in India is minimal and constitutes only 1% of the total annual budget.¹⁴ On the contrary, a large part of the designated budget remains unutilised.
- There is a lack of institutional training and development mechanism for artists, thus hindering their growth. A large majority of artists live under economic hardships and only a very small minority make it big in the art subsector.

Impact of COVID-19

The pandemic has had an unprecedented impact on lives and livelihoods. Almost all sectors of the economy including the art and culture industry have been severely impacted. The cultural tourism based on heritage sites in India, has undergone huge losses. The crafts industry is in a severe crisis affecting livelihoods of millions of citizens in rural areas and thousands of craft enterprises. Likewise, the arts industry is also under tremendous pressure being informally organized with artists and professionals working on temporary contracts or having no work at all.

Due to the lockdown, there was a complete shutdown of all major fairs and events relating to art and culture. Sale of art in galleries and through offline auctions came to a standstill.

Even auditoriums have fallen silent as theatre artistes, dancers and organisers have called off their shows.

During the lockdown, 41% of the creative sector closed temporarily and 53% of the events and entertainment management companies experienced 90% of their business cancelled between March and July 2020. 32% of the art organisations have

¹⁴ Transforming urban India: art and culture play a pivotal role

been estimated to lose above 50% of their annual income. Artists and freelancers have been worst hit as there was no work and their source of livelihood came to a complete standstill.¹⁵

Even as the lockdown has been relaxed, the income streams for the creative workforce still remain inconsistent and sporadic, pointing towards an uncertain outlook for India's informal creative economy.

Growth/ Revenue Trends

Basis our analysis of growth and risk factors, it is projected that Art and Culture sub sector will grow from INR 1,703 crore in FY 2019 to INR 1,946 crore in 2025 at a CAGR of ~2.25%. Art Galleries contribute ~57% of the revenue followed by auction house (~31%) and Online sales (~12%). Proportion of online sales is growing year after year at a higher rate in comparison to other revenue sources.

Table 20: Revenue Trends-Art and Culture

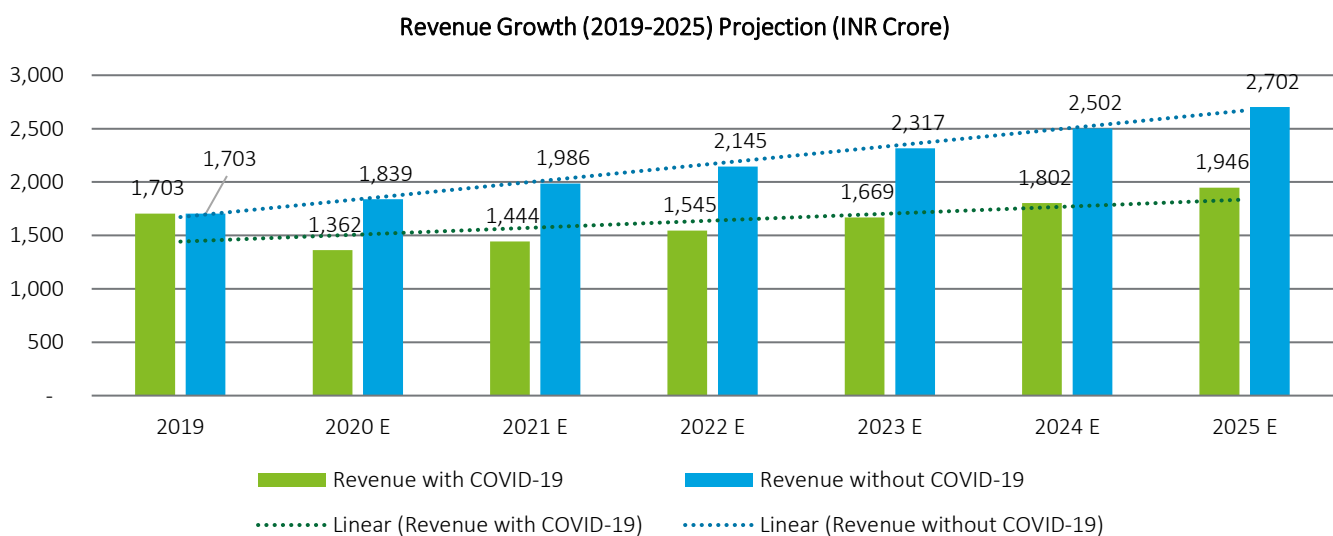
Revenue Source (INR Crore)	2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Art Galleries (Including Admission fees)	991	577	723	781	851	927	1,009
Auction House	558	322	448	479	517	559	603
Online Sales	154	263	273	285	300	316	334
Total	1,703	1,162	1,444	1,545	1,668	1,802	1,946

Source: FICCI Report, mojarto.com, Expert Interview and analysis

Key Assumptions:

1. Technology may have a positive impact throughout the period 2020-2025, especially because of inclination of general public for online shopping.
2. COVID-19 had a negative impact on the physical sales, but it helped to boost online sales.

Figure 29: Revenue Growth Projection (2019-2025)-Art and Culture



¹⁵ MSMEs in creative segment bear COVID-19 brunt, Telegraph, 2020

The above bar chart represents the impact of COVID-19 on the Art and Culture industry. It is projected that the industry would have grown at a CAGR of ~8% in normal circumstances till 2025 whereas, now the industry is expected to grow at the CAGR of ~2.25%. The distance between the trend lines shows the revenue gap of ~ INR 756 Crore.

Global Trends

Global Trends:

- The global independent artists and performing art market is expected to decline from USD 193 billion in 2019 to USD 186.4 billion in 2020 with a drop of 3.5%. The decline is mainly due to economic slowdown across countries owing to the COVID-19 outbreak. The market is then expected to recover and grow at a CAGR of 8% from 2021 and reach USD 231.5 billion in 2023.¹⁶
- The global art industry which consists of paintings, sculpture, art prints and antiques had a total market value of USD 64.1 billion in 2019, down by 5% from 2018. This decline was attributed to trade disputes, conflicts and decrease in masterpieces available for auctions. US, UK, and China were the top 3 markets in this segment. The top auction houses which sold 'lots' for USD 10 million or more decreased from 28% in 2018 to 20% in 2019.¹⁷
- The United States held a 44 % share of the global art market in 2019 followed by United Kingdom (20%), China (18%), France (7%), and Rest of the world combined had 12%.

Current Trends:

- Technology has been used extensively in foreign countries in the art industry, especially in museums. From touch screens that provide historical information to a full audio-visual experience triggered by hand movements and gestures, museums around the world are coming up with new ways to attract customers. For example, Japan has introduced a fully digital museum that engages all 5 senses.
- Augmented and Virtual reality has been used extensively in museums to provide unique full sensory experiences to visitors. It is used in some museums to transport the individuals to different eras and time periods for a more interactive experience.
- Internet of things has allowed curators to tell more immersive stories, along with getting insightful data on visitors and exhibitions.
- AI artist is a new concept that has been explored by the international market. For instance, a painting completed by an AI program Generative Adversarial Network (GAN) sold for USD 5,00,000 in 2018.

The Human Resource Demand Forecast

Experts suggested that only ~1% to 2% percent of the artists are now accessing online platform to sell their products. Further ~20% of the employees working in the sector are permanent or regular. Rest of the artists work majorly on demand getting paid either on hour basis or for a particular art created/ performed by them.

With around ~1,703 crore revenue contribution in the sector during 2019, the Art and Culture subsector will generate direct employment of 140,116 by 2025. It is expected to witness an annual incremental demand of ~18,666 people in the industry to be employed till 2025 with over ~121,450 people employed in the year 2019.

¹⁶ Independent Artists and Performing Arts Companies Global Market Report 2020-30: COVID-19 Impact and Recovery, The Business Research Company

¹⁷ What You Need to Know from the Art Market 2020 Report, Artsynet, 2020

Table 21: Human Resource Demand Forecast- Art and Culture

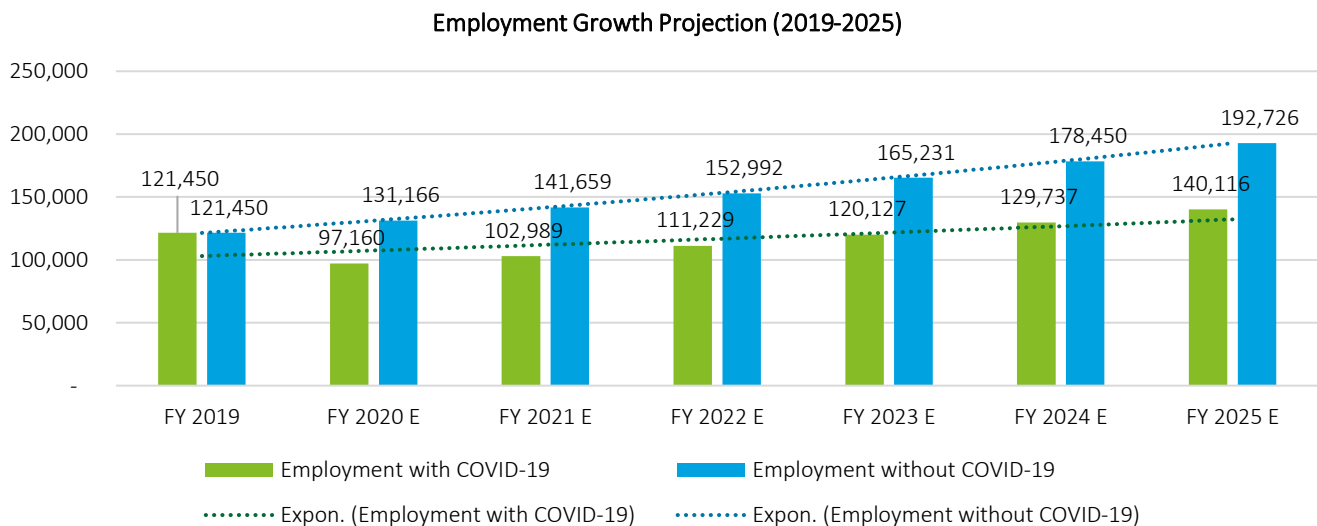
Particulars	FY 2019	FY 2020 E	FY 2021 E	FY 2022 E	FY 2023 E	FY 2024 E	FY 2025 E
Estimated numbers of people employed in the industry (A)	119,655	121,450	97,160	102,989	111,229	120,127	129,737
External Factors							
Technological Environment	1,795	3,643	2,915	3,090	3,337	3,604	3,892
Political Factors/ Policy updates		3,036	4,858	5,149	5,561	6,006	6,487
Impact of COVID-19	-	(30,970)	(1,943)				
Total (B)	1,795	(24,290)	5,830	8,239	8,898	9,610	10,379
Total Estimated Employment (A+B)	121,450	97,160	102,989	111,229	120,127	129,737	140,116
Incremental Demand	8,998	(24,290)	5,830	8,239	8,898	9,610	10,379

Source: mojarito.com, Expert Interview, Survey and analysis

Key Assumptions:

1. Technology may have had positive impact throughout the period 2020-2025, especially because of preference of general public for online shopping which will boost employment.
2. Only 20% employees in this subsector are treated as fulltime employees and other are seasonal employees who get paid on hourly/ daily basis or for a particular art created/ performed by them.
3. Package declaration by Govt. for combating COVID-19 will help the industry to survive thus employing people more in political factors/ policy updates since 2020.
4. COVID-19 has an adverse impact on the sector causing a serious loss of employment, particularly for the seasonal employees.

Figure 30: Employment Growth Projection (2019-2025)- Art and Culture



The bar chart above represents the impact of COVID-19 on the Art and Culture sub sector. It is projected that the industry would have employed ~1.93 lakh people in 2025 whereas, now the industry is expected to employ only ~1.40 lakh people in 2025 considering the negative impact. The distance between the trend lines is ~53,000 people in 2025.

Employment Profile and Survey Insights

Trending job roles for which skill trainings need to be developed:

- **Art Gallery/museum Curator** – They are responsible for selecting and interpreting different art works – paintings, statues, tapestries etc. that are exhibited in an art gallery/museum. In addition, they are also responsible for writing labels, cataloguing and other relevant content for exhibitions.
- **Art valuer/auctioneer** – They are responsible for organising and hosting the auctions and they connect the buyer and seller. They also require knowledge about art types, artists and counterfeits.
- **Conservator** – They are responsible for analysing and assessing the condition of artefacts and pieces of art, plan for the care of art collections and carry out conservation treatments and programs. Conservators can work for private art galleries or work for museums, historical societies, or state institutions.
- **Concept Artists**- Creative individuals help sketch out ideas of how completed projects will look, which include rough drawings and outlines such as storyboards for films or cartoons or may help make pitches to clients. Overall, they create concrete visualizations of ideas that can be built, developed, and improved.
- **Choreographers** - Choreographers design and direct the dance or stylized movement in musical productions or films, working closely with the director/ musical director. A choreographer works with dancers to interpret and develop ideas and transform them into the finished performance.
- **Art Teacher** – They take classes/lectures at school, college and university levels and teach about different forms of art, artists and art history in general, along with improving the students’ skills. In order to give the students a better understanding of art, trips to art gallery and museums are also conducted.
- **Art Therapist** – They use art to conduct therapy to improve the mental, physical and emotional health of a patient. They try to channel the patient’s focus and energy into visual art form to help them understand and solve their problems.
- **Dance/ Music/ Painting Teacher/Instructor**- Art teachers help in teaching the art form to the interested students. Their major tasks include observing students, planning routines and activities, instructing students and assessing their learning.

Supply Side

There are more than 1,500 arts colleges in India that offer full-time, part-time, distance-learning, virtual learning/ online programmes. These colleges provide degree, diploma and certificate courses.

Maharashtra (294), Uttar Pradesh (203), Delhi/NCR (187), Karnataka (122), West Bengal (108) are the top 5 states with large number of arts colleges.

The Human Resource Supply Forecast

A large share of training in Art and Culture sub-sector is informal/unorganized. Many of the people learn arts out of their passion. They generally learn from the teacher’s trainers. Further, there are several courses available in India which are majorly UG/PG/ diploma/certificate courses.

Experts believe that ~50% of the students graduating in fine and performing arts opt for career in the industry. Considering the pervious trends of enrollments into sector aligned UG/PG courses and impact of COVID-19, it is estimated that ~40,000 students will graduate or get trained in 2025 and be ready to be employed in the industry.

Details of Enrollment in several courses:

Table 22: Details of Enrollment in Several Courses -Art and Culture

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
PhD	958	958	1,015	1,076	1,141	1,209	1,282
M. Phil.	252	252	267	283	300	318	337
PG	7,095	7,095	7,521	7,972	8,450	8,957	9,495
UG	51,762	51,762	54,868	58,160	61,649	65,348	69,269
Total	60,067	60,067	63,671	67,491	71,541	75,833	80,383

Source: AISHE 2017, 2018, 2019 reports and analysis

Key Assumptions:

1. Since 2020 has witnessed COVID-19, there may not be any further addition to the enrolments in UG/PG level.
2. 6% growth in training and teaching enrolments is considered for projection looking at the past performance of the supply side in AISHE 2017, 2018 & 2019 reports.
3. ~50% of the graduating student numbers at several courses were considered for calculating supply side to the subsector.
4. No vocational training courses related to art and culture sub-sector are considered for supply side calculation.

Analysis of teaching/ training in the Art and Culture Sector

There is a skill gap issue in the art and crafts sub-sector which is hindering supply of quality manpower. The teaching/ training infrastructure is weak and there is shortage of quality institutes providing teaching/training. Majority of the manpower in the sub-sector is ad-hoc.

- Individuals do not have formal training and diploma/certificates leading to lower wages. Many individuals enter the system informally out of necessity and economic hardship without any significant formal education.
- Short term training courses are run by very few private institutes and there is generally no standard curriculum.
- In the current scenario, the skill learning in the industry happens through on-the-job training. The new joiner is given short term in-house training, where he/she learns various aspects through experience.

Insights on future skills and jobs

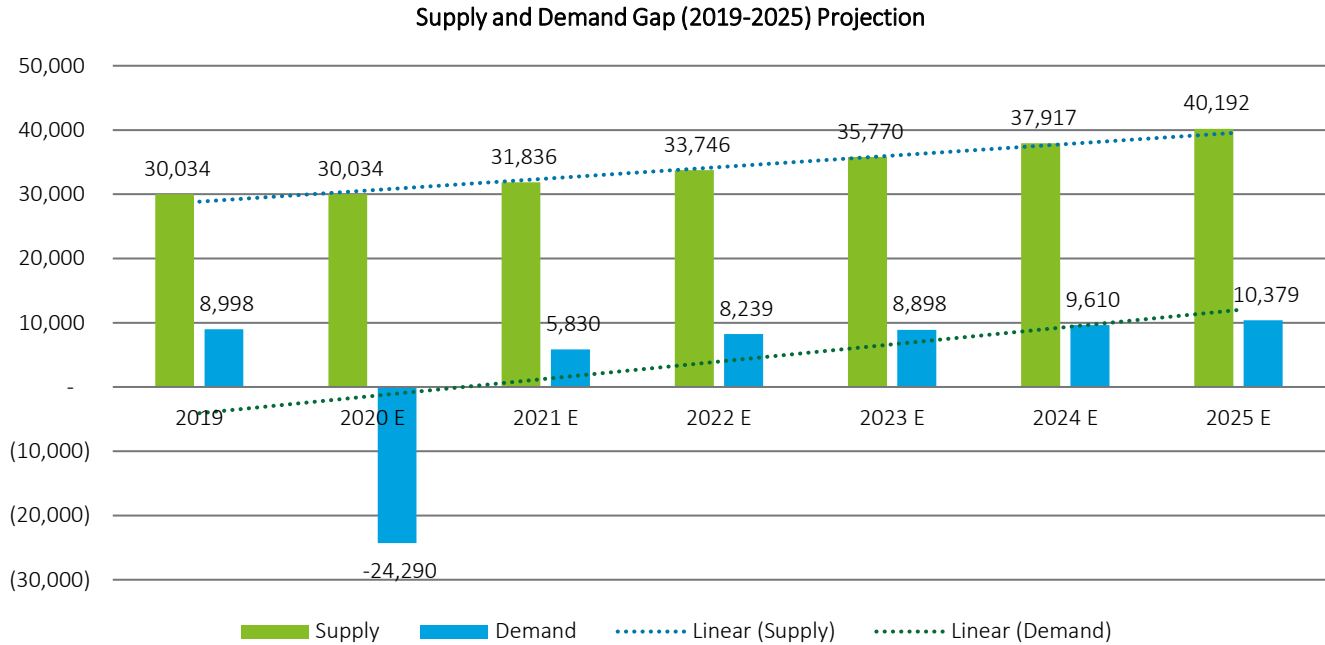
Below are some of the new job roles that may arise in the future. Thus, specific skill trainings related to the following jobs roles need to be developed:

- a) Data analyst for museum services team:** Their responsibility will be to leverage analytics to improve visitor experience.
- b) Technology fabricator:** The technology fabricator is responsible for assisting in the design, fabrication and implementation of electronics hardware and software for better visitor experience.
- c) Patron Information Data Analyst:** The Patron Information Data Analyst (PIDA) will be the museum's technical specialist for visitor, donor and member data and related business processes. Their job role involves supporting the specialized application needs of museum staff members by providing support, reporting, and specifications for enhancements of museum's CRM and ticketing system.
- d) Drama therapist-** They will use drama or theatrical processes in order in to achieve therapeutic goals. Drama therapists would perform controlled sessions where theatre and drama-based activities would be used to observe and explore the behaviour, attitudes and emotions of individuals experiencing physical, psychological, emotional or mental health problems.

e) **Arts administrators**- They would organize arts activities and services. They would work for various organizations such as theatres or museums.

The Human Resource Demand Supply Gap

Figure 31: Supply and Demand Gap Projection (2019-2025)- Art and Culture



The above bar graph shows that there will be surplus in terms of supply of manpower in comparison to the demand in Art and Culture sub-sector. Further, the graph depicts that the gap between supply and demand for manpower is generally constant. Vocational training needs to focus on job-roles that have high demand to reduce the supply and demand gap.

- Highest Supply and Demand Gap between 2019 to 2025 is ~54,000 in the year 2020 because of COVID-19.
- Lowest Supply and Demand Gap between 2019 to 2025 is ~21,000 in the year 2019.
- Average Supply and Demand Gap between 2019 to 2025 is ~30,000.

Potential ways the sub-sector to contribute to Atma Nirbhar Bharat Mission

Indian handicrafts industry is one of the largest employment generators in the country and is very pertinent in the quest for the success of ‘Make in India’ campaign owing to its potential for export and foreign exchange earnings for the country and for replacing imported products that cost India its foreign exchange. These industries are also responsible for a major source of income for rural communities and rural women specifically.

India has a rich history of art and culture spread throughout the country, with each state having its own unique style and identity which is reflected in its different art and dance forms. As part of the Atma Nirbhar mission, an attempt needs to be made to make sure that the Indian art and culture products like dance, music, paintings, literature, theatre, handicrafts, weaving etc. replace their western/ imported substitutes.

To make the arts and culture industry aligned with the self-reliant mission, the pressing need is to extend opportunities and market access to artists and craftsmen across the country. In today’s world of technology and internet, modern market linkages need to be created for India’s arts and crafts products. Thus, few steps that could be taken to further champion the Atma Nirbhar Bharat mission:

- There is a need for availability of quality products online, at modern retail places, malls, super-markets, and airports.
- There is a need for robust marketing campaign to educate customers. Both offline and online marketing, through social media and websites are required in order to advertise this industry's capabilities.



E.4 Digital Media and OTT

Digital Media and OTT sub-sector overview

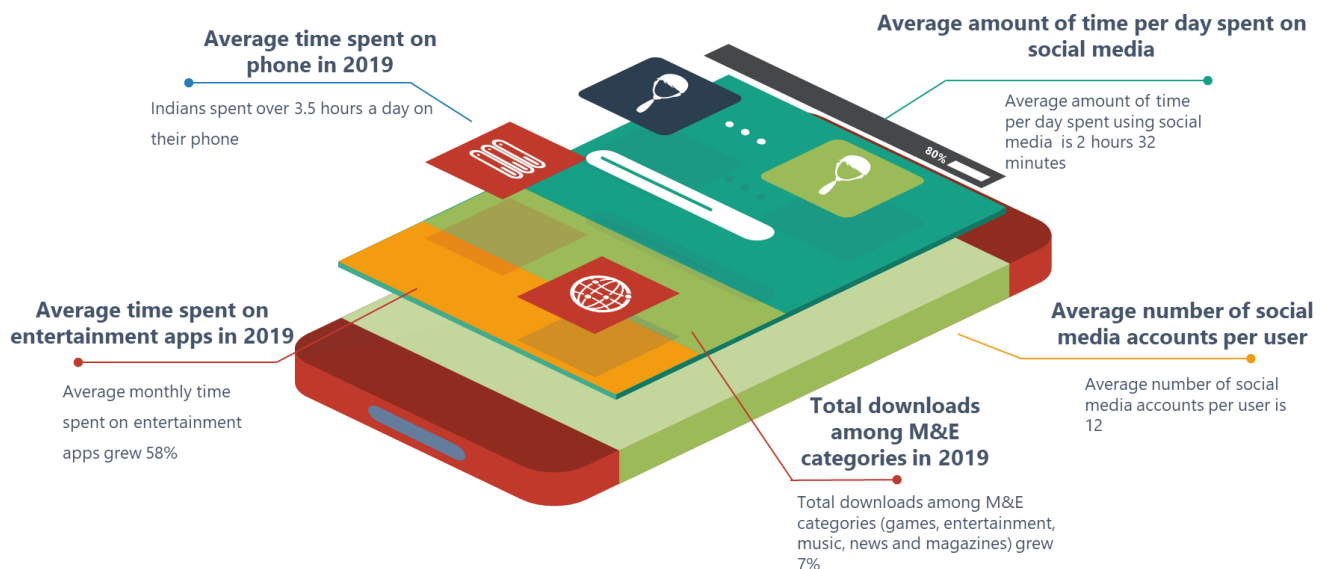
The size of India's digital media industry in 2019 was INR 20,162 Crore and by 2020 it reached INR 26,614 Crore. Overall, the digital media sub-sector in the country is set for a strong growth of ~27.5% CAGR in the stated time period of 2020-25.¹⁸

India has seen a rapid increase in the adoption of digital media as it continues to be the fastest growing medium. This growth may be accredited to various factors like availability of high-speed internet connectivity, affordable data services, influx of 'budget smartphones' in the market, the rise in the number of social networking sites, e-commerce platforms etc. and variety of applications across segments. Specifically, for the OTT segment, growth has been driven by factors such as rise of digital entertainment & OTT platforms providing original and premium content with their flexible monetisation strategies. This has provided consumers with an option to access the media content of their choice at any time and from anywhere. This evolving ecosystem is poised to form a vital indigenous digital services sector to serve not only the Indian customers, but it also has potential to make India a global digital services centre.

The outbreak of the global pandemic in 2019 has had an adverse impact on the economies of the countries across the globe. However, the pandemic has also accelerated several trends which would have otherwise been prolonged. The most important one being adoption of digital into our day-to-day life. From work to entertainment, education to social events, every activity has been shifted to online as the offline alternatives are not available or are severely curtailed. For instance, OTT has become the new alternative to seeing films in theatres and many production houses and entertainment channels are also now increasing their share of investment in OTT. The rise in the use of digital services because of the low touch economy has also compelled digital adoption for nearly all businesses with a greater tendency to conduct business online now.

The pandemic has triggered a shift in the growth and employment opportunities in the digital media sub-sector. With the additional growth factors, it is expected that the digital media industry would grow at faster pace in the coming five year and is projected to reach approximately INR 86,495 Crore by 2025.

Figure 32:Trends in Digital Media and OTT



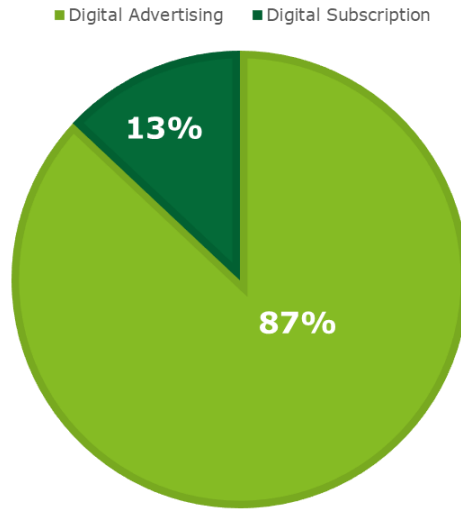
Details of subscription base and advertisement revenues

Digital Media has broadly two revenue streams: **Digital Advertising** and **Digital Subscription** with the former accounting for 87% of the revenue.

¹⁸ FICCI 2020 Report

Figure 33: Share of Revenue Segments (FY 2019)-Digital Media and OTT

SHARE OF REVENUE SEGMENTS(FY 2019)



Source: FICCI Report 2020

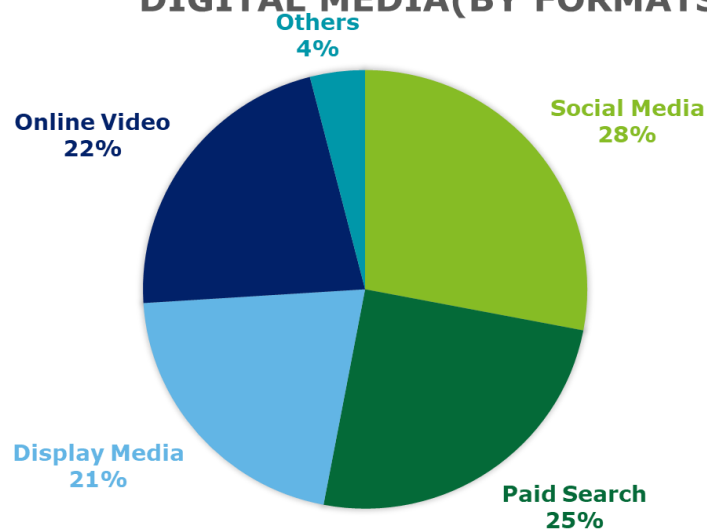
Digital Advertising

The advertising spends on digital media on different formats and platforms is driven by social media which has the biggest share of 28% contributing INR 3,835 Crore. Next is paid search with a 25% share contributing INR 3,471 Crore followed by Online video with a 22% share contributing INR 2,986 Crore and display media with a share of 21% contributing INR 2,793 Crore.

Amongst the industries which spend their advertising budget on digital media, FMCG is the biggest spender with a share of 27% contributing INR 3,745 Crore, followed by e-commerce which contributes 19% i.e. INR 2,579 Crore, consumer durables with 11% share contributing INR 1,539 Crore and BFSI segment with a share of 10% contributing INR 1,354 Crore.

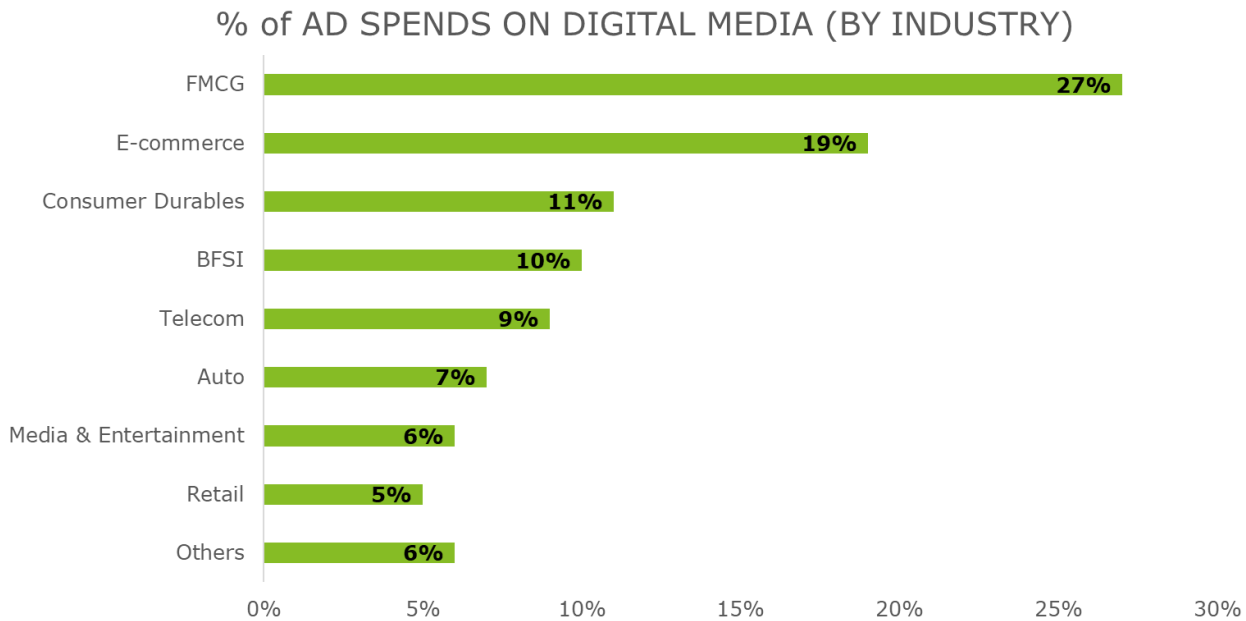
Figure 34: Share of Advertising Spends on Digital Media

SHARE OF ADVERTISING SPENDS ON DIGITAL MEDIA(BY FORMATS)



Source: Dentsu Digital Advertising in India Report 2020

Figure 35: Percentage of Ad Spends on Digital Media (By Industry)



Source: Dentsu Digital Advertising in India Report 2020

Digital Subscriptions

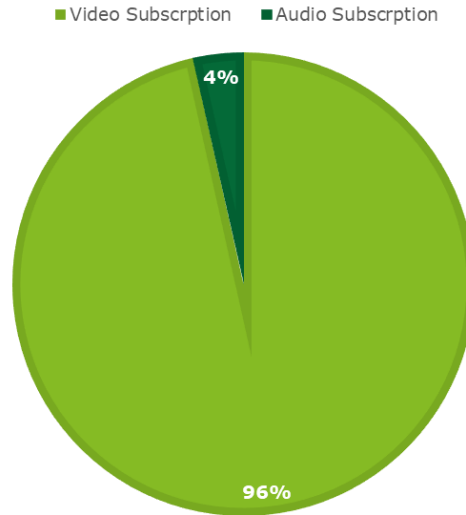
Digital subscription grew 106% in 2019 to reach INR 2,621 Crore. It now makes up 13% of total digital segment revenues. Digital subscription broadly consists of Video & OTT and audio subscription.

In 2019, the **video subscription** revenues increased by 111%. This increase can be attributed to rise in television subscription prices because of the implementation of the NTO in February 2019 which led to a certain section like English content viewers opting to subscribe to relatively more affordable OTT services. Another reason for viewers to shift to paid video subscriptions is free or trial access to leading OTT platforms provided by Telcos. In 2019, to draw viewers, many leading players like Amazon and Netflix introduced smaller value packs or monthly packs in addition to their annual packs, or mobile only or single device packs. The benefits provided by the different players led to over 26 Crore viewers consuming video content through data bundles. The Telcos also offered live streaming of different major events like IPL, general elections, annual budget and other entertainment to viewers, for a modest price of INR 150 per month.

Audio subscription rose to 18% in 2019 to reach INR 100 Crore. It is estimated that there will be 40 Crore people streaming music by 2022 and paying subscribers will increase to cross 50 Lakhs.

Figure 36: Digital Subscription (FY 2019)

DIGITAL SUBSCRIPTION(FY 2019)



Key Players

The key players in digital media based on different platforms / formats of Social media and Online Video, etc. are given below:

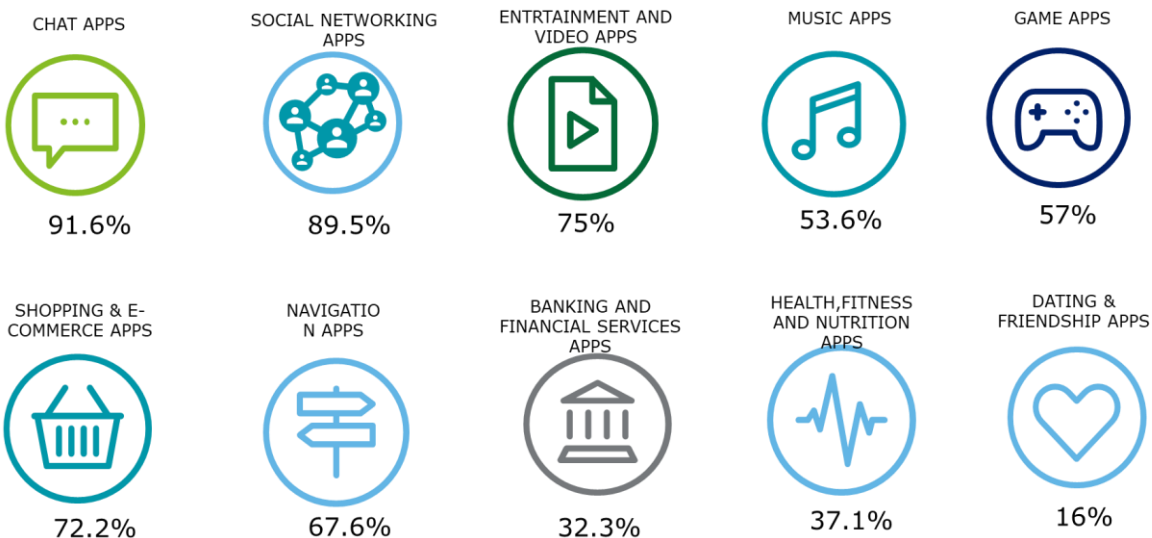
For different **Social Media** platforms in India, some of the leading players in terms of percentage users aged 16 to 64 in January 2020 are Youtube, Facebook, WhatsApp, Instagram and Twitter as per Digital 2020: India, We are Social.

For **online video (including OTT)**, there are close to 60 platforms operating in the market, but some of the leading platforms in 2020 are Netflix, Amazon Prime Video, Disney+ Hotstar, Walt Disney Company, Zee5, Jio cinema.

APPS: Use of Mobile Apps by Category

Figure 37: Percentage of Internet Users Aged 16 to 64 That Uses Each Type of Mobile App each Month-Digital Media

PERCENTAGE OF INTERNET USERS AGED 16 TO 64 THAT USES EACH TYPE OF MOBILE APP EACH MONTH



Source : DIGITAL 2021 Report , We are Social

Key shifts for the Digital Media and OTT industry in India

Growth Drivers

India is already home to one of the world's largest and most rapidly growing base of digital consumers. Its digitising activities are at a faster pace than many other economies. Thus, it is observed that there are several growth drivers driving this sector at a very high pace, as listed below:

Improvement in internet connectivity

In recent years in India, the number of people using internet has increased rapidly. This increased user-base is due to reduced costs and growing accessibility to smartphones and availability of high-speed internet connectivity, driving the digital media consumption. It is now a well-known and reported fact that India has one of the the world's cheapest mobile data. With improved and better networks, coverage, and advanced technologies available like 4G, the digital data consumption in the country is seeing a rapid increase. It is expected that in India, by 2025 there will be 100 Crore internet users. This will result in massive increase in demand for content across short and interactive formats. As of 2020, in India, there are 68.7 Crore internet users. As per industry estimates, at the beginning of 2020, the internet users were 50% of the population in India, in comparison to the year 2015, where internet users were 24.3 Crore which is only 19% of the country's population, showing a spike in internet usage in last 5 years.

Audio & Video drive the digital media consumption

Most of the data growth can be accredited to several digital media outlets available, mainly the entertainment services like video and audio services. It is a known fact, that globally, video and audio services have ruled the internet data usage for a few years now.

Rapid growth in the use of Mobile Devices

Online media consumption has shown incredible progress in the past few years. Amongst the digital devices, mobile devices have taken over as the preferred medium of consuming online media. Internet traffic arising from mobile devices like smartphones and tabs in India has already exceeded the desktop internet traffic. In the last few years, the average data price per MB on mobile networks has also been reducing significantly which has led to increased traffic on mobile devices. Many people are now using internet via mobile devices for work or study from home, people are also availing Over-the-Top services on mobile devices.

Shift of advertising spends towards digital media by Marketers

There is a remarkable change in choices and preferences of people as they are shifting to digital media from traditional forms of media like TV, print, radio. Every day it is observed that, consumers are expending more time on digital media in comparison to traditional forms of media. The growing demand of digital media has shown a marked shift in the advertising spends. Marketers are backing this development and have shown a rise in their budget allocations to digital mediums. Expenditure on digital media as a percentage of total advertising spend has seen a huge growth.

The country with the largest young population in the world

The digitalization of the media industry has been driven by changing consumer behaviour and expectations, especially among younger generations who demand instant access to content, anytime, anywhere. While the internet consumer base in India is growing at a rapid rate, most of these users (75%) belong to the age group of less than 35 years. More than half of the app users in India are aged between 18 and 24 years and 29% between 25 and 35 years of age.¹⁹

Growth Drivers for OTT

- Flexible monetisation strategies and on-demand content driving growth

¹⁹ The Rise of India as an App Superpower, Vserv.mobi, March 28, 2013. See: <http://www.vserv.com/the-rise-of-india-as-an-app-superpower>

With several OTT platforms coming up and competing against each other, new strategies are being used to attract customers. Platforms are coming up with sachet pricing, cash on delivery options, targeted content genre bundles, etc. to appeal to customers. OTT gives the advantage to the users to choose their content on demand where users have a wide range of options based on genres to choose from and hence OTT is much more flexible than the traditional media like television, which have a static choice of films and shows.

- **Production houses impacting growth**

As per industry estimates, to keep up with the growing demand for more content, platforms are planning to invest a huge amount to create content for the Indian Market. At the same time, production houses with immense production experience, knowledge about what content consumers prefer are venturing from linear TV to OTT. Many production houses have already made the collection of their content available for several platforms and have started reaching out to other rising OTT platforms of preference in India.

- **OTT capturing Health and Fitness market**

OTT platforms have started exploring new avenue by venturing into the ever expanding and large health and fitness market to cater to the increased demand and emerging audience segments. For instance, platforms have partnered with fitness, yoga, and nutrition content producers. Some fitness start-ups have brought their workout models on to the video streaming service.

Government initiatives directly impacting the sub-sector growth

1. The government has aided M&E industry's growth by taking several policy initiatives aimed at increasing digitization including development of digital communication infrastructure including digitising the cable distribution sector to attract substantial institutional funding, plans to bring the next generation technology and 5G spectrum auctions.
2. In December 2019, FDI up to 26% has been permitted under the government approval route for uploading/streaming of news and current affairs, through digital media.
3. The government has also introduced the National Digital Communications Policy 2018 for affordable digital communications infrastructure and services.
4. The government has also targeted to have large investment in digital infrastructure over the next few years as part of the recently proposed National Infrastructure Pipeline (NIP) including universal digital services, high-speed and quality broadband services, availability of digital payments and e-governance infrastructure for delivery of banking and public services etc..
5. **Pradhan Mantri Gramin Digital Saksharta Abhiyaan (PMGDISHA):** PMGDISHA is a scheme which aims at making 6 Crore people in rural India, across States/UTs, digitally literate, reaching to around 40% of rural households by covering one member from every eligible household including the marginalised sections of society.
6. **SWAYAM:** SWAYAM aims to reduce the digital gap for students through an indigenously created IT platform that facilitates hosting of all the courses from 9th class till post-graduation.

There are also several other government initiatives that indirectly impact digital growth including **Public Wi-Fi Access Network Interface (PM-WANI)** to provide better and improved wireless connectivity in the country, **Bharat Broadband Network (BBNL)** to create the National Optical Fiber Network (NOFN) and connect Gram Panchayats spread over 6,600 Blocks and 641 Districts; **National Digital Health Mission** to create a national digital health ecosystem, giving affordable and safe healthcare to citizens; and **Knowledge Management System (KMS)** to 'Transform India into a Digitally Empowered Society and Knowledge Economy'.

Risk Factors

There are a few risk factors that may affect the sub-sector:

- Digital audio–visual content including films and web shows on over-the-top (OTT) streaming platforms, as well as news and current affairs on online platforms, have been brought under the Ministry of Information and Broadcasting in November 2020. This move to bring the digital media and OTT platforms under the I&B Ministry has triggered a range of concerns—from regulatory uncertainties to apprehensions regarding monopolies in this sector.
- The amount spent on digital media security is meagre. This may increase fraud, data breaches and privacy issues. There is also a higher cyber insurance costs due to cyberattacks originating in digital media space.
- There may be compliance or IPR violation risks due to employees or partners posting confidential customer content. This can lead to business downtime, increased legal expenditure and fines due to non-compliance with required regulations.
- Television continues to be the backbone of kid’s entertainment segment in India, with broadcasters focusing more on original kids animated shows on television rather than on OTT. Although viewership is increasing across OTT platforms for international content, TV is the preferred source of medium for kids’ genre’s thus hampering OTT’s growth in this segment.
- With multiple OTT options in the market and OTT TV apps being more fragmented than mobile apps, there are challenges in creating separate infrastructure for each option. With every platform having their own niche software requirements, building apps for each platform and continuously updating them with advancement of technology requires a synergized and effective team of technical staff.
- Digital media can be used by communities with harmful intentions to spread propaganda and to mobilize people. Digital media offers opportunities to spread information and organize action for good causes but can also be used to disseminate maleficent content and propaganda, and be used, for example, by extremist groups to recruit and mobilize. Young adults and children are vulnerable, especially if they lack a stable social support network.

State Level Industry Shifts

- **Key States/Cities**

The cities having larger job opportunities in the sub-sector are Bengaluru (Karnataka), Mumbai and Pune (Maharashtra), Gurgaon (Haryana), New Delhi, Hyderabad (Telangana), Chennai (Tamil Nadu), Noida (Uttar Pradesh), Ahmedabad (Gujarat), Kolkata (West Bengal) and Kochi (Kerala).

- **High Demand Job roles in the subsector & in key states/cities**

Sales Coordinator(Media Organisation), Sales Executive(Media Org), Sales Manager(Media Organisation), Search Engine Optimaztion Executive, Search Engine Marketing Executive, Social Media Executive and Social Media Manager are some of the high demand job roles as per existing QP-NOS for the subsector including in the above mentioned states/ cities.

- **States/Cities which may become prominent in the next 5 years**

The states/cities that may get added to the above list are likely to be Chandigarh (Punjab and Haryana), Bhubaneswar (Orissa), Raipur (Chhattisgarh), Indore (Madhya Pradesh).

Impact of COVID-19

The pandemic has had an adverse effect on the Indian economy across many sectors. However, Digital media has been one of the few sectors in M&E industry which remained resilient through the pandemic. The pandemic has in fact helped in advancing the India’s digital adoption. COVID-19 has introduced several trends which would have otherwise not happened soon. The most important one being the adoption of digital services into our everyday routine. From schools, offices to shops including those selling everyday grocery items - almost everything has gone digital. Over-the-Top (OTT) streaming services

and other digital enabled services have also largely witnessed unprecedented subscriber growth and demand during the pandemic as nearly everyone in the country was confined to their homes.

The impact of COVID-19 on Digital Media can be broadly assessed in two ways:

1. IMMEDIATE IMPACT:

- Advertisers have shifted their spending's to digital media outlets now as compared to traditional media like TV, radio and print which has led to digital media advertising revenues being higher than Television advertising revenues for the first time in FY21.²⁰
- Due to the pandemic, OTT has emerged as the new alternative to seeing films in theatres. Many filmmakers and production houses are reconsidering their distribution strategies for releasing films and communicating with a wider audience in a hassle-free way and filmmakers.
- Over-the-Top (OTT) video consumption has been rising due to a greater number of people staying and working from home.
- Time devoted on Video-on-demand apps; data consumption; time devoted on social networking sites; time spent on video conferencing; average use of smartphones; and growth in medical app downloads have all gone up.

2. LONG TERM IMPACT:

- There has been a structural change in the digital preferences of people because of the lockdown and they continue to retain their choice even in the long term. For example:²¹ people in India are expected to shop online; make digital payments and use video conferencing more frequently.
- People from rural India, small cities and towns have also shown an increasing tendency and pronounced predisposition towards the use of the internet.
- Many production houses and entertainment channels are also now increasing their share of investment in OTT. As the pandemic led to the rise in adoption of OTT and number of viewers increased massively, OTT platforms will see services upping their game and budgets to stay ahead of the curve in 2021.

Growth/ Revenue Trends

Basis our analysis of growth and risk factors, it is projected that Digital sector will grow from INR 20,162 Crore in FY 2019 to INR 86,495 Crore in 2025 at a CAGR of ~27.5%. Further, advertisement contributes ~87% and subscription contributes ~13% of total revenue.

Table 23: Revenue Trends-Digital Media and OTT

Revenue Source (INR Crore)	2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Advertisement	17,541	23,154	29,637	37,046	48,160	60,201	75,251
Subscription	2,621	3,460	4,429	5,536	7,196	8,995	11,244
Total	20,162	26,614	34,066	42,582	55,357	69,196	86,495

Source: FICCI Report and detailed analysis

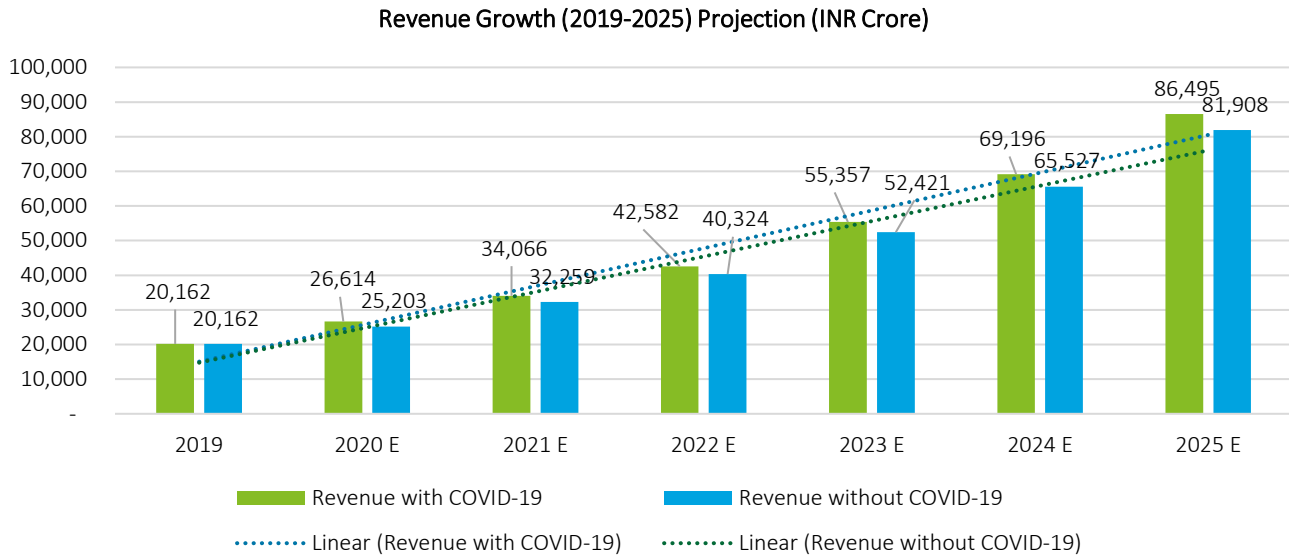
1. Technology has had a positive impact throughout the period 2020-2025, especially because of launch of 5G and growth of digital content consumption.

²⁰ <https://www.ibef.org/industry/media-entertainment-india.aspx>

²¹ Digital 2020 July Global Statshot Report, We are Social

- Owing to various factors mentioned in the report, COVID-19 has had a positive impact on the sector.
- OTT is being considered as an integral part of the digital sub sector.

Figure 38: Revenue Growth Projection (2019-2025)- Digital Media and OTT



The above bar chart represents the impact of COVID-19 on the Digital Media industry. It is projected that the industry would grow at a CAGR of ~26.3% in normal circumstances till 2025 whereas, now the industry is expected to grow at the CAGR of ~27.5% considering the impact of pandemic. The distance between the trend lines informs the revenue increase of ~ INR 4,587 Crore, which is mainly because of the increase in demand for digital contents and shifting behaviours and daily habits towards digital.

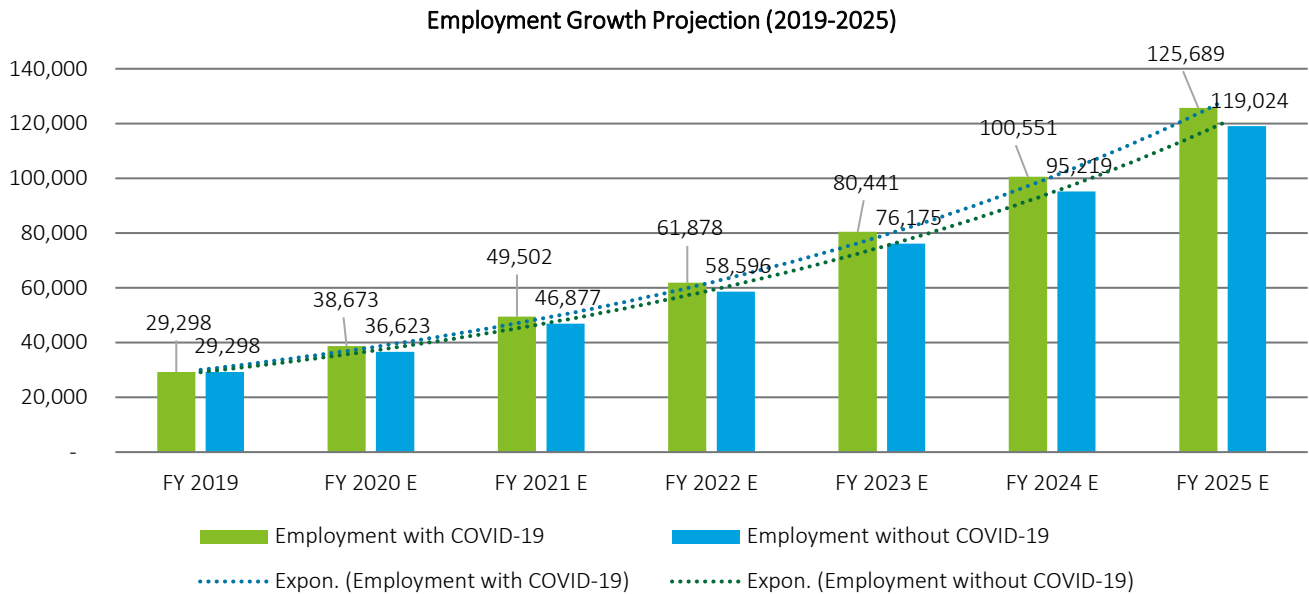
The Human Resource Demand Forecast

Being one of the major subsectors of M&E in recent times, it is expected that the Digital Media subsector will generate direct employment of 125,689 by 2025, with an annual incremental demand of ~96,391 people in the industry over ~29,298 people employed in the year 2019.

Table 24: Human Resource Demand Forecast- Digital Media and OTT

Particulars	FY 2019	FY 2020 E	FY 2021 E	FY 2022 E	FY 2023 E	FY 2024 E	FY 2025 E
Estimated numbers of people employed in the industry (A)	22,537	29,298	38,673	49,502	61,878	80,441	100,551
External Factors							
Technological Environment	5,634	8,789	8,895	9,900	15,160	16,088	19,105
Political Factors/ Policy updates	1,127	1,758	1,934	2,475	3,403	4,022	6,033
Impact of COVID-19	-	(1,172)	-	-	-	-	-
Total (B)	6,761	9,375	10,829	12,376	18,563	20,110	25,138
Total Estimated Employment (A+B)	29,298	38,673	49,502	61,878	80,441	100,551	125,689
Incremental Demand	4,067	9,375	10,829	12,376	18,563	20,110	25,138

Figure 39: Employment Growth Projection (2019-2025)- Digital Media and OTT



The bar chart above represents the impact of COVID-19 on the Digital Media and OTT sub sector. It is projected that the industry would employ ~1.19 lakh people in 2025 whereas, now the industry is expected to employ ~1.26 lakh people by 2025 considering the positive impact of COVID-19 on this sub sector. The distance between the trend lines informs the surplus employment of ~7,000 people in the sub sector owing to the pandemic.

Employment Profile and Survey Insights

Figure 40: On-demand Content Ecosystem- Digital Media and OTT

On-demand Content Ecosystem



The Human Resource Supply Forecast

The courses available in Digital Media sub-sector are majorly divided into two types

- UG/PG/ courses
- Vocational/ Certificate Courses

Digital Media sub-sector onboards talents from many of other sub-sectors in Media and entertainment sector. People trained in courses viz. Film Technology, Game Designing, Animation Technology, Fine Arts etc. are found to be suitable for digital media career. Further, there are several courses available in India which teach Digital Technology Media. Currently, there are ~74 institutes across India which provide PG courses in Digital Marketing Management. The above courses were taken into consideration for computing supply side for Digital Media.

Considering the previous trends of enrollments into sector aligned UG/PG courses, certificate/vocational courses and impact of COVID-19, it is estimated that about ~38,241 students will graduate in 2025 and will be ready to be employed in Digital Media, as experts believe that only ~20% of the graduating people from above mentioned courses opt for career in Digital Media.

Details of Enrolment in UG/PG courses

Table 25: Details of Enrollment in UG/PG Courses- Digital Media and OTT

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
PhD	860	860	911	966	1,024	1,085	1,151
M. Phil.	269	269	285	302	320	339	359
PG	36,146	38,796	41,123	43,591	46,206	48,979	51,917
UG	59,488	62,138	65,422	68,904	72,594	76,506	80,652
Total	96,762	102,062	107,742	113,762	120,144	126,909	134,079

Source: AISHE 2017,2018,2019, Siksha.com and detailed analysis

Details of enrolment on vocational/ Certificate courses

Table 26: Details of Enrollment on Vocational/Certificate Courses- Digital Media and OTT

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
Vocational Training	26,594	7,978	26,594	28,190	29,881	31,674	33,574
Certificate Courses	17,600	17,600	18,656	19,775	20,962	22,220	23,553
Total	44,194	25,578	45,250	47,965	50,843	53,893	57,127

Key Assumptions:

1. Since many of the vocational training centers were shut during 2020, it is assumed that the training was at 30% of the capacity of 2019.
2. 6% growth in training and teaching enrolments is considered for projection, looking at the past performance of the supply side in AISHE 2017, 2018 & 2019 reports.
3. Only ~20% of the graduating student numbers at UG, PG, Certificate Courses and Vocational training institutes were considered for calculating supply side of the Digital subsector.

Analysis of teaching/ training in Digital Media and OTT Sub-sector

There existed a considerable digital-skills gap in the pre pandemic times and now with digital media defining the way people live and work, the digital gap has broadened further. There is a dual issue, first issue is the already existing gap i.e. the greater demand for professionals with the relevant digital skills. The second issue is the requirement of up-skilling because of the changes brought in by COVID-19 in the working trends. Even though India has been consistently developing highly skilled digital workforces but with digital transformation continuously altering the way people work, there has also been a sharp rise in the gap between the demand for professionals with the right digital skills and the availability of professionals with the right digital skill sets. The following are the challenges in the sector related to the teaching/ training programme:

Lack of proper digital training mechanisms

In India, it is reported that 92% of full-time employees feel that there is a gap in digital skill set in the country and a further 76% also feel they are affected by it.²² It is also reported that in India, 87% of companies feel the need for digital skilling of their workforce but at the same time 65% of these companies have no idea or a plan on how to bring in digital skilling for their employees.²³ Thus, lack of digital training by companies results in ineffective strategies being adopted by firms. The way to bridge this skill gap in digital is through comprehensive training that deals with the digital medium with precision and helps companies create highly relevant strategies.

Poor quality infrastructure

Even as many colleges have been coming up to cater to the high demand, the infrastructure is usually below the industry standards. They have obsolete devices and outdated software and the workrooms are not up to the mark.

Need to minimise gap between course curriculum & industry needs

There is a widening gap between the current course content and industry requirements and there is need for revised curriculum. The technology is constantly changing so the laboratories also need to upgrade with the right devices and the updated software needs to be available for the right kind of training to be given.

Costly Technological Upgrades

As the technological upgrades are costly, many institutes and colleges either avoid the upgradation or undertake the upgrade but increase the course fees which makes it difficult for large to afford the courses.

Insights on Future skills and Jobs

Digital Media is an emerging field which has a wide scope and employment opportunities across all facets of the sub-sector. Various job roles are possible in this field as nowadays most processes have gone online, and the employment opportunities have increased. There is a steady rise in jobs that are available in digital content writing & editing, content production, marketing and communications, digital analytics etc.

Some of the futuristic job roles for which specific skill trainings need to be developed are:

1. **Analytics Manager** - Analytics managers would emerge as a futuristic job and their main role would be to track progress with various Analytics software, provide suggestions for growth of business.
2. **Email marketer**- Email marketer role would be essentially be about emails campaigns, developing new and attractive content for emails and acquiring customers via emails.
3. **Content Manager**- It is a very important job role as the content on the website or any other digital media platform essentially decides the success of a business. A company's content must be refreshing, engaging and informative. Content managers will be in charge of the voice, tone and message of the content that a customer will be able to see on the platform as it will help in increasing traffic and ensuring that quality content is being written and displayed.

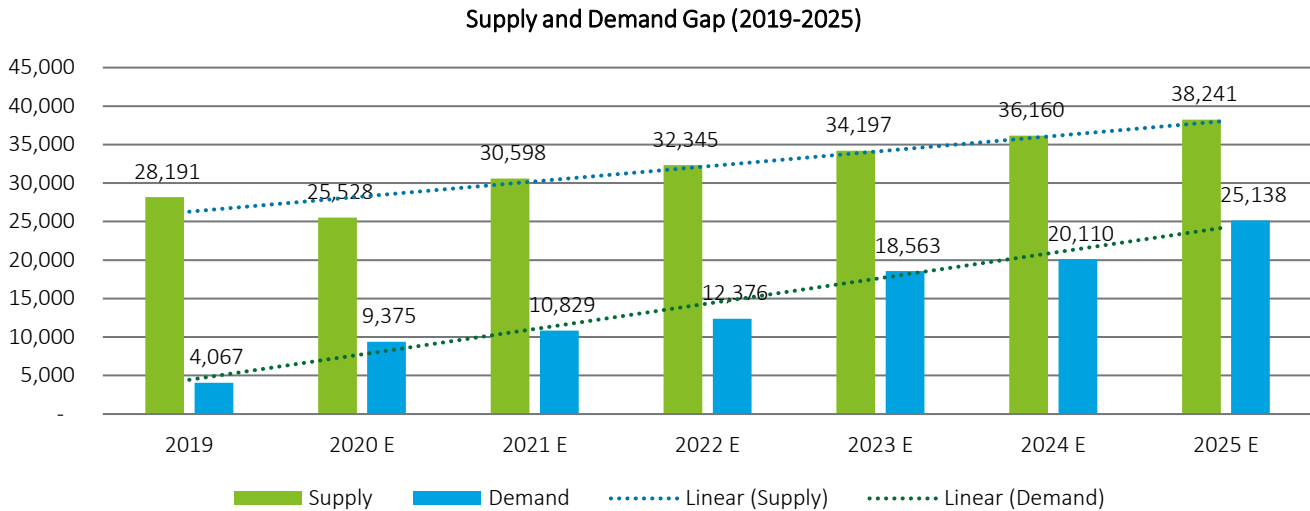
²² Udemy Skill Gap Report 2019-2020

²³ Digital Readiness Report, Simplilearn and People matters

4. **Pay per click/Search engine marketer-** The role of search engine marketers in the future would be to enable a company to get their website on the very first page of search with investment. Pay per click is a way to get maximum return and reach many people with minimum investment.
5. **Social Media Marketer-** It would include marketing by creating and developing vibrant and engaging content and thereby attracting customers for the social media platform.
6. **Digital Media Specialist-** Role will be to develop content that would be used for various digital media platforms. These knowledgeable digital specialists would have the skills to create content, use special effects, animation etc. for different applications from websites to video games and even commercials.
7. **Digital Media Planner-** Digital Media planners' role would be a key to future's fast-paced digital world. They would orchestrate the placement of marketing content into different digital media like social media or display media or podcasts, in order to amplify a campaign's efforts. They would be the go-to people for strategizing content, executing campaigns across various outlets and reporting on the return-on-investment (ROI) of the campaign.
8. **Digital Researcher-**The digital Researchers would essentially be responsible for organizing, collecting and analyzing opinions and data to solve various digital-related website problems of the company. They would specifically work with data related to an organization's digital media, and research information from online advertising, social media, digital marketing and see to it that all function well.
9. **Media Operations Manager/Analyst-** A Media Operation Analyst's role would be to help media companies solve their internal problems and implement various goal-oriented strategies. They would analyze the company's data to evaluate the core problems related to media and its website and provide solutions and operate the department by suggesting better ways to improve the company.
10. **Showrunner –** Essentially, they will be the link between the OTT platforms and the team responsible for making a show. They should possess the combined qualities of a producer and a director. Their role would be to ensure that there is no gap between the content visualised by the team and what is going to be showcased on the platforms.
11. **Domain theme Experts-** With increase in demand for movies related to specialised subjects viz. history, sports, biographies, children, animal etc, domain experts in movie making in several themes would be in high demand in the OTT industry. They would act as a catalyst to keep the audience engaged to the movies.
12. **Written Communications Manager –** They will be responsible for increasing the publicity of the platform by highlighting the content along with other differentiating factors and will help in creating new strategies around the content to be showcased on the platforms.

The Human Resource Demand Supply Gap

Figure 41: Supply and Demand Gap (2019-2025)- Digital Media and OTT



The above bar graph shows that there will be surplus in terms of supply of manpower in comparison to the demand in Digital sub sector. Further, the graph depicts that the demand for manpower is growing at a higher rate than the supply rate of manpower and the gap between the trendlines decreases year on year. Vocational training needs to focus on job-roles that have high demand only to help reduce the huge supply and demand gap.

- Highest Supply and Demand Gap between 2019 to 2025 is ~24,000 in the year 2019.
- Lowest Supply and Demand Gap between 2019 to 2025 is ~13,000 in the year 2025.
- Average Supply and Demand Gap between 2019 to 2025 is ~18,000.

Potential ways for supporting the Atma Nirbhar Bharat mission

There is a large potential for the digital media sub sector to contribute to the Atma Nirbhar Bharat mission.

A large share of software and technologies used in digital media marketing are imported, which shows that there is immense scope for developing and creating these technologies in the country itself. The government is also promoting Startup India in all sectors, thereby enabling many digital media companies to develop social media platforms and apps which are at par with their international counterparts.

The Indian startups are functioning in a market dominated by foreign rivals. With the continued addition of new start-ups, growing adoption and usage of deep tech, 'developed in India' digital ecosystem exhibits a promising future.

In the OTT landscape as well, there has been a surge in original content by domestic production houses and studios. The Indian studios have realized the potential of creating their own content and are moving away from just being used as outsourcing hubs by international studios. Thus, OTT arena has a lot of potential to contribute to the government's Atma Nirbhar Bharat mission.



E.5 Event & Live Performance

Event & Live Performance Subsector Overview

In 2019, the live events market across India was valued at INR 8,300 Crore. It was estimated to reach INR 12,200 Crore by 2022. Additionally, according to the EEMA (Events and Entertainment Management Association) report, the events and activations industry in India was expected to cross INR 10,000 Crore by 2020-2021. Some industry leaders however believe that the industry could rebound quickly in 2022-23 and reach 15,000- 20,000 Crore levels. Events and Live performance is a prominent sub-sector within India's Entertainment landscape.²⁴

The growth drivers that have caused the shift in seamless management and organisation of Event & Live performances include:

Figure 42: Growth Drivers-Event and Live Performance



Further, the progress brought in by the above-mentioned growth drivers are mentioned below:

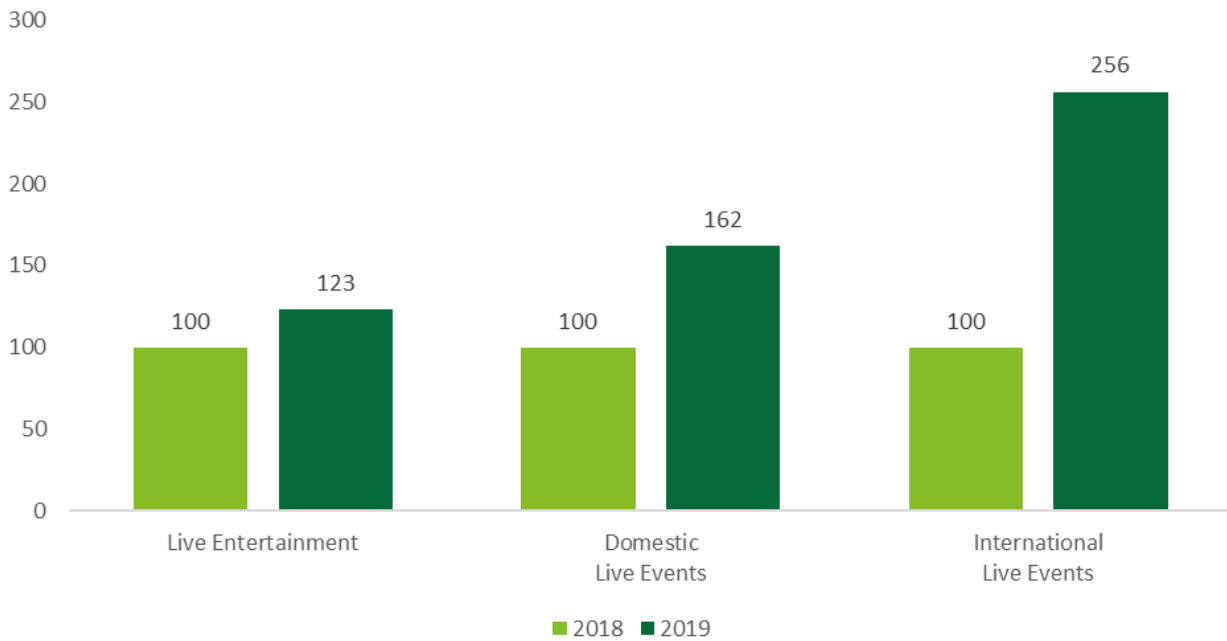
Table 27: Progress brought in by the Growth Drivers- Event and Live Performance

THEME	THEN	NOW
Registration	Prior to the 1990s, event organizers had to use hand-written registration processes and all documents were physically mailed which could take days to reach the proper place.	Documents can be emailed or uploaded to a dropbox instantly and registration forms can be filled out online.
Location	Before the internet age, attendees had to pull out a physical map to find the location of an event, which was difficult and time consuming activity.	Now, one simply needs to type the address in Google Maps to receive directions on smart phone.
Attendees	Earlier attendees had to be personally contacted through telephone or reached out in person.	Using Social media and event organization websites, attendees can be virtually interacted with.
Advertising and Finding Events	Prior to the internet era, flyers, posters, and word-of-mouth were popular ways to advertise events.	People can search for events through online channels/ websites.

In 2019, **BookMyShow** saw a 23 percent growth in live entertainment experiences listed on its platform as compared to 2018 with over 17,500 events. While, PayTm saw a 50 percent growth in business and 25 percent growth in the number of events that the platform ticketed. Additionally, in the same year, the number of international live events listed on BookMyShow grew by 62 percent. Further, tickets for live events which were only sold via BookMyShow, increased by 156 percent in 2019. Of which Cricket was the top-selling category closely followed by music concerts.

²⁴ Economic Times, 11 Sep 2017

Figure 43: Growth in Live Entertainment, Domestic Live Events & International Live Events in 2018 & 2019



However, due to lockdowns and widespread travel restrictions, virtual events have gained high traction in the last year and as a result, players operating in the industry are strengthening their digital presence. The duration of the pandemic remains a key factor in assessing the overall impact of the pandemic, however, the global events' industry is likely to stabilize after 2023. Rate of vaccination, efficacy of vaccines, and vaccination passport is anticipated to play a conspicuous role in the events industry.

The industry is in its second generation and is professionalizing and can even absorb thousands of MBAs each year. There is also technology induction in the sector.

Although, COVID-19 has severely impacted the growth and employment in the Events and Live performance sub-sector in the year 2020 but it is projected to rebound soon. The eventual pick-up in growth in the coming years would be helped by various socio-political factors. Some experts believe that the recovery may follow a sluggish growth trend and may take its time to recover from the impact of the pandemic.²⁵

²⁵ MoneyControl, 02 Jan 2020, IQ, 17 Sep 2019, Allied Market Research

Expert Opinion...



Sabbas Joseph,
Co Founder-
Director ,Wizcraft
International
Entertainment Pvt. Ltd.

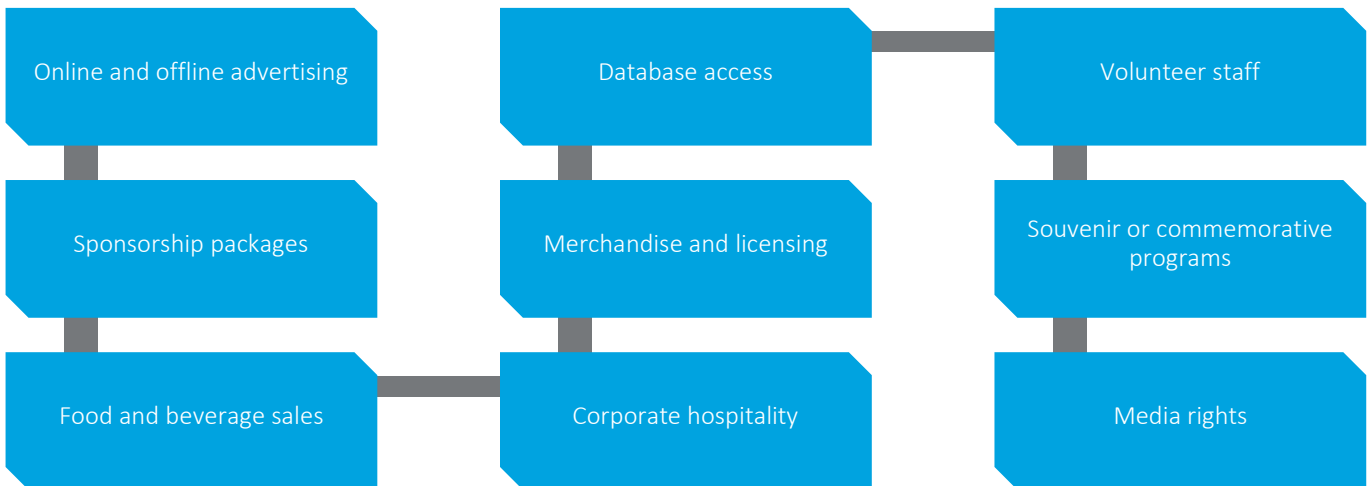
The events and live performance industry is professionalizing and can absorb large number of professionals each year. There is also technology induction in the industry. As if the years 2020 and 2021 did not exist for the industry, but it will rebound in 2022-23.



Details of revenue streams

At a broad level, the various components contributing to revenue streams are mentioned below:

Figure 44: Revenue Streams- Event and Live Performance



Key shifts for the Event & Live Performance Industry in India

Growth Drivers

The events and live performance industry includes events like fashion & celebrity promotions/shows; films or other awards; road shows; musical concerts; Bollywood-shows; television reality shows; organisational/ sectoral trainings, exhibitions, festival events; workshops, celebrations, conferences and seminars; banquets; tourist festivals; sports events; fairs; educational institute annual and alumni events; cultural events; wedding, birthdays, anniversaries & other family celebrations; government scheme launches; theme parties & product launches etc. The continuous rise in the number and the scale of such events has emerged as the main growth drivers in the sector. There are multiple factors that contribute to the growth of this sector:

Digital Platforms and events:

Even before COVID-19 outbreak, a few events had moved digital. However, after the COVID-19 outbreak, a noticeably larger shift has been made by event organisers and by participants. Digital activation has provided a large opportunity to vendors and technology platforms such as Zoom and Teams.

Rural Expansion:

Urbanisation leading to increase in land value and increased awareness in rural areas has led to a rapid growth in the number of events in rural areas.

Product launches:

Expos and Fairs are exciting venues for product launches as the people who come generally look for new experiences and are keen to learn about new technology/products.

Personal Events:

With increase in purchasing power of the people, a lot of personal events are being organised at a larger scale, creating job opportunities and further nudging people to follow suit. For instance, the wealthy are known for throwing extravagant wedding, birthday and anniversary parties.

Government Initiatives:

State and Central government's efforts to put up shows, expos, fairs and conferences enables the industry with opportunities.

Risk Factors

Regulatory Risks:

Before planning an event or a live performance, it is essential to take into consideration the state, federal, or industry regulations, public sensibilities and social aspects related to the events.

Financial Risks:

Understanding implications of a crisis during an event is essential. Event organisers must also focus on cancellation policies for attendees, exhibitors, and sponsors.

Contractual Risks:

In an event, multiple vendors such as venue providers destination management company, audio-visual production company, technology providers, and artists in case of a live performance are involved. Many a times, delays or withdrawals by any one of them may adversely impact the event leading to cancellations or forced changes.

Branding & Public Image:

Perception about an event is significant. Given that human nature is to keep away from anything that's perceived negatively, publicity and image of an event could have long term implications for stakeholders even for aspects unattributed to them.


Payment:

Securing payments and ensuring proper method of collection of payment is essential when it comes to organising events, since the value and volumes of transactions can be large. Ensuring security of transactions and seamlessness in both online payments and payments at venue are critical.

Safety & Security:

There needs to be a plan for major events in which large number of people is expected to participate. Everything from natural disasters possible spread of viruses and protests to terror attacks needs to be prepared for.

Expert Opinion...



**Niloufer Sagar,
Former COO, Terence
Lewis Academy**

In training for a performing art like dance, one of the crucial aspect is breaking down the content of the dance form so that the skill can be communicated to the students. Training institutes need to build this competence.

State Level Industry Shifts

- **Key Employment generating states/Cities:**

New Delhi, Gurugram (Haryana), Noida(Uttar Pradesh), Bengaluru (Karnataka), Hyderabad (Telangana), Mumbai and Pune (Maharashtra), Goa , Chennai (Tamil Nadu), Kolkata(West Bengal) are the key employment generating states with several opportunities available in the field of event management and coordination.

- **High Demand Job roles in the subsector & in the key states/cities**

Event Planner, Event Space or Venue Managers, Catering Services Manager, Wedding Planner, Staff Coordinator, Event Social Media Coordinator, Sponsorship Coordinator etc are some of the trending job roles in the subsector including in the above mentioned states/cities for which skill trainings need to be developed.

- **States/Cities which may become prominent in the next 5 years**

According to detailed analysis and market research, with people choosing remote areas and off-beat locations for events, there is a shifting trend of the footfall of the states that were most preferred to the states that are now being preferred for their aesthetics and natural beauty.

For instance, how earlier people would opt for Jaipur for a royal wedding vs to Goa for a beach-side destination wedding, has started moving to Alwar, Jodhpur, Udaipur in Rajasthan and similarly, Alibag (Maharashtra), Puri (Odisha) and Kerala.

Impact of COVID-19

COVID-19 has impacted the industry due to restrictions on gatherings, lock-downs and travel restrictions. In 2020, EEMA, an NPO in the Events and Experiential Marketing industry pointed out that the Indian events and exhibition sector was expected to incur a loss of INR 1000 Crore in the year as almost all big scale events across categories had been postponed or cancelled because of COVID-19.

The impact of COVID-19 on the events and experiential industry was estimated at INR 3,000 Crore in the first few months itself, based on a survey of 100 MSMEs in the sector. This was a result of cancellations of existing projects and contracts,

conferences, State and Central Government initiatives, international MICE (Meetings, Incentives, Conferences and Exhibitions) events, flights, visas and travel due to COVID-19 scare or worry.²⁶

Global Trends

According to a report published by Allied Market Research, titled, “Events Industry by Type, Revenue Source, Organizer, and Age Group: Opportunity Analysis and Industry Forecast, 2021–2028,” at a global level, the events industry size was valued at USD 1,135 Billion in 2019 and was expected to reach USD 1,553 Billion by 2028.

According to the EEMA report:

- Over 25 Million jobs in the industry have been directly affected at a global level
- The industry at a global level, incurred a loss of approximately USD 666 Million by mid-March 2020 due to the Pandemic
- Exhibitions and trade fairs alone account for up to 60,000 events in 11 leading countries

Events categorized under 22 different categories were cancelled from early February 2020 as the spread of COVID-19 accelerate globally.

The industry is also moving towards personally curated experience for each participant even in a large event using technology.

Growth/ revenue trends

Basis our analysis of growth and risk factors, it is projected that Events and Live Performances sector will grow from INR 8,300 Crore in FY 2019 to INR 11,226 Crore in 2025 at a CAGR of ~5.2 percent. Generally, admission fee contributes ~60 percent of the revenue followed by sponsorship ~30 percent and others including parking fee, food and beverages etc. contribute to ~10 percent of the revenue in sub sector.

Table 28: Revenue Trends- Event and Live Performance

Revenue Source (INR Crore)	2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Admission Fee	4,980	3,735	3,922	4,392	5,183	5,909	6,736
Sponsorship (Govt./ Individual/ Corporate)	2,490	1,868	1,961	2,196	2,591	2,954	3,368
Others (Parking fee, food and beverages etc.)	830	623	654	732	864	985	1,123
Total	8,300	6,225	6,536	7,321	8,638	9,848	11,226

Source: FICCI Report, Expert Interview and analysis

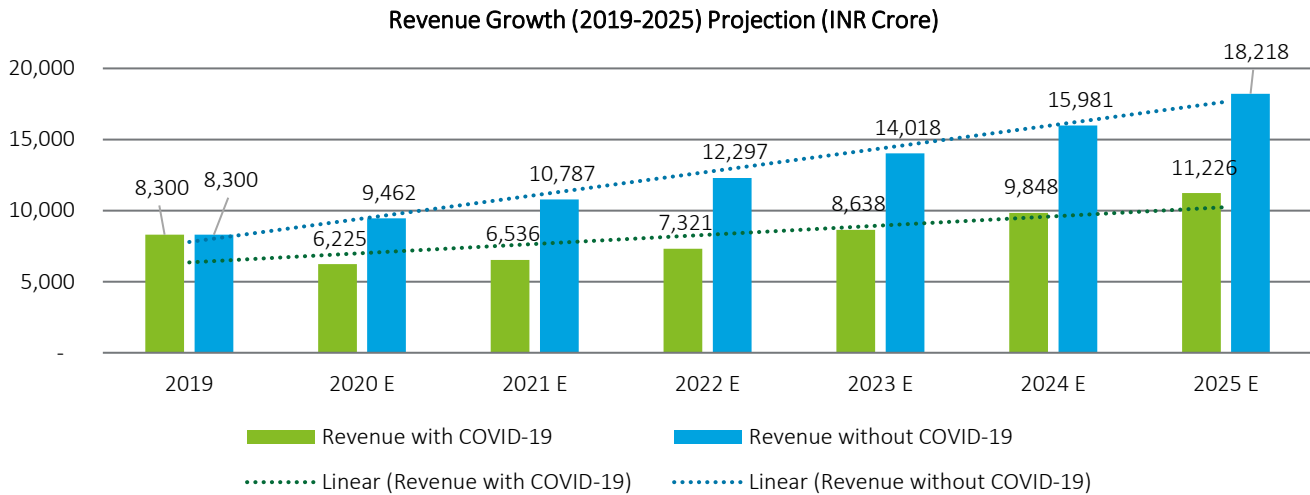
Key Assumptions:

1. Technology may have positive impact throughout the period 2020-2025, especially because launch of 5G will push digital enabling of the events post 2022.
2. Private events viz. marriages/ individual functions revenue have been considered as entirely contributed by sponsorship.
3. Fairs and festivals revenue have been considered as largely sponsored by institutions including government and Corporates.

²⁶ EEMA India Advisory Report

4. Sales of foods/ merchandise by vendors in fairs and festivals are not considered in calculating revenue as these are individual income for which they had paid admission/ business fee to organizer.

Figure 45: Revenue Growth Projection (2019-2025)- Event and Live Performance



The above bar chart represents the impact of COVID-19 on the Live events industry. It is projected that the industry would have grown at a CAGR of ~14 percent in normal circumstances till 2025 whereas, now the industry is expected to grow at the CAGR of ~5.2 percent considering the negative impact of COVID-19. The distance between the trend lines state the revenue gap of ~ INR 6,992 Crore.

The Human Resource Demand Forecast

Experts have suggested that a large majority of the jobs that go into conducting a live performance or an event are seasonal and are done by contractual staff.

The events and live performance subsector will generate direct employment of 239,403 by 2025. It is expected to witness an annual incremental demand of ~62,405 people in the industry till 2025 over ~176,998 people employed in the year 2019.

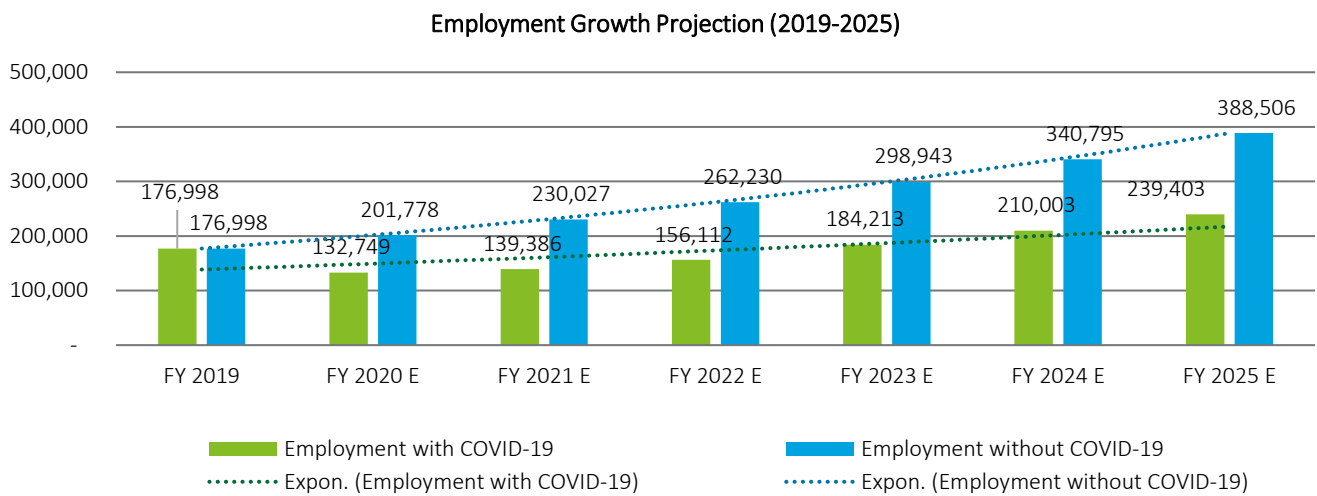
Table 29: Human Resource Demand Forecast- Event and Live Performance

Particulars	FY 2019	FY 2020 E	FY 2021 E	FY 2022 E	FY 2023 E	FY 2024 E	FY 2025 E
Estimated number of people employed in the industry (A)	172,010	176,998	132,749	139,386	156,112	184,213	210,003
External Factors							
Technological Environment	4,988	7,080	8,629	9,060	14,050	14,737	16,800
Political Factors/ Policy updates		5,310	7,301	7,666	14,050	11,053	12,600
Impact of COVID-19	-	(56,639)	(9,292)				
Total (B)	4,988	(44,250)	6,637	16,726	28,100	25,790	29,400
Total Estimated Employment (A+B)	176,998	132,749	139,386	156,112	184,213	210,003	239,403
Incremental Demand	17,068	(44,250)	6,637	16,726	28,100	25,790	29,400

Key Assumptions:

1. Technology may have positive impact throughout the period 2020-2025, especially because launch of 5G will push digital enablement in events post 2022.
2. General election in 2024 will push number of events in 2023.
3. Policy/ Package declaration by Government for COVID-19 will support additional employment post 2020 in Political Factors/ Policy updates category.

Figure 46: Employment Growth Projection (2019-2025)- Event and Live Performance



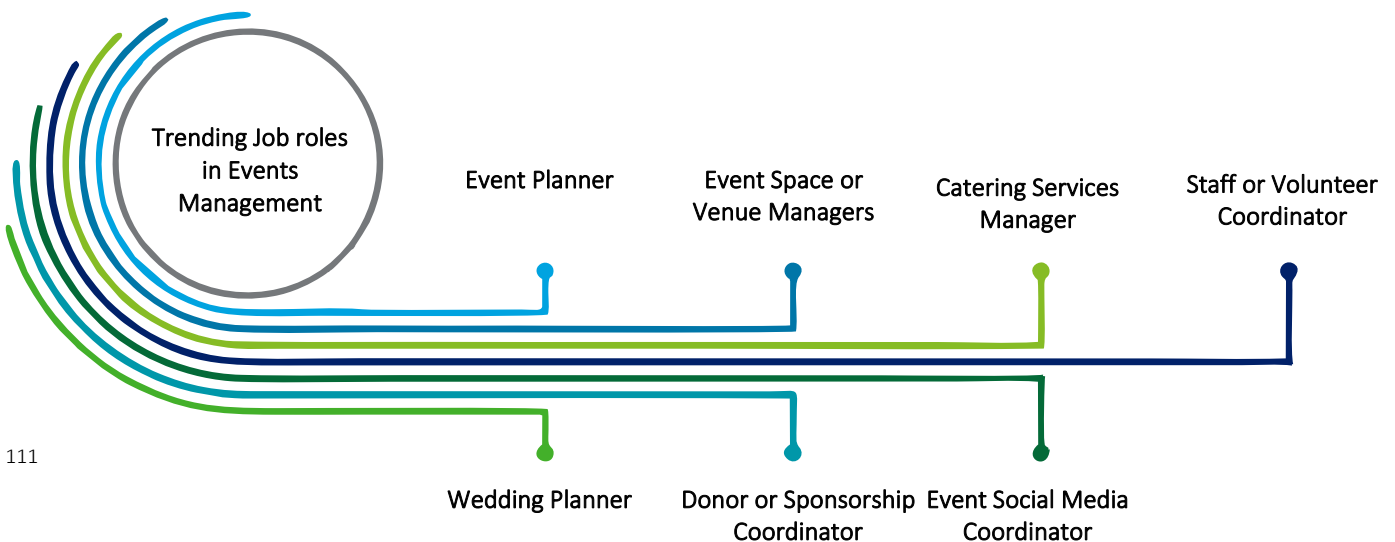
The bar chart above represents the impact of COVID-19 on this sub sector. It is projected that the industry would have employed ~3.89 Lakh people cumulatively till 2025 whereas, now the industry is expected to employ only ~2.39 Lakh people by 2025 considering the negative impact and job loss because of COVID-19 in the Live Events sub sector. The distance between the trend lines states the negative employment of ~1.5 Lakh people.

Employment Profile and Survey Insights

In this industry, an event manager can find a variety of employment opportunities in different kinds of organisations including PR firms, event management companies, fashion shows organisers, weddings management agencies, concert organisers, product launch agencies, television based event organisers, corporate event managers, advertising firms, entertainment companies, integrated marketing agencies and communications & hospitality firms.

Skill Trainings need to be developed for the below mentioned trending Job roles:

Figure 47: Trending Job roles in Events Management- Event and Live Performance



The Human Resource Supply Forecast

The trained manpower available for events and live performance sub-sector is mainly from UG/PG event management courses. Further, the subsector also onboards talents from hotel management courses who are found to be suitable as majority of the tasks in events and live performances are related to guest handling. Apart from these courses, people with large crowd handling skills such as unarmed security guards trained by Security Sector Skill Development Council (SSSDC) are also employed in large events.

Experts believe that only ~80 percent of the candidates graduating from mentioned courses opt for careers in Live Events. Considering the previous trends of enrollments into sector aligned UG/PG courses, Certificate/vocational Courses and impact of COVID-19, it is estimated that about ~17,558 students will graduate in 2025 and be ready to be employed in the sub-sector.

Details of Enrollment in UG/PG courses

Table 30: Details of Enrollment in UG/PG Courses- Event and Live Performance

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
PG	9,020	9,020	9,561	10,135	10,743	11,388	12,071
UG	7,380	7,380	7,823	8,292	8,790	9,317	9,876
Total	16,400	16,400	17,384	18,427	19,533	20,705	21,947

Source: AISHE 2017,2018,2019t, Siksha.com and analysis

Key Assumptions:

1. Since 2020 has witnessed COVID-19, there may not be any further addition to the enrolments in UG/PG level.
2. 6 percent growth in training and teaching enrolments is considered for projection looking at the past performance of the supply side as per AISHE 2017, 2018 & 2019.
3. ~80 percent of the graduating student numbers at UG, PG Courses were considered for calculating supply side of the Live Events subsector.
4. There aren't too many vocational training courses related to events and live performance sub-sector that may contribute significantly to the supply side. However, candidates trained by Security Sector Skill Development Council (SSSDC) are found relevant and are employed in the sub-sector.

Analysis of teaching/ training in event management

Event management includes studying a particular brand, formulating a concept and identifying the target audience to organise an event. Identification of the audience is also a vital part of event management. Event management also includes deciding the theme for the event, planning logistics and sending invites for the event. Event managers not only plan events but also coordinate and execute different other facets of events including budgeting and budget management, event site management, permits, transportation, lodging and on-site staff. They can also extend to hiring third-party service providers, such as musicians, food service providers, security service providers and organising speakers. The role also includes marketing event management services.

People working in event management are also required to conceptualise and implement their plan to organise various events such as award shows, exhibitions, fashion shows, political rallies etc.

In the past decade, event management has emerged as a distinct field of study with a distinct career path with increasing professionalism with the scope of event management field widening steadily.

There is a wide range of career options for students who complete event management courses- event management and live performance management, hospitality, travel and tourism, to name a few.

Challenges and focus areas in event management training/ education system:

Need for minimisation of gap between course curriculum & industry needs and expectations

There is a gap between the industry requirement and the current course content in training/ teaching institutes. There is need for revision of curriculum for event management courses. There is also a need for longer internships and more placement opportunities.

Poor quality infrastructure:

Even though there are a large number training institute and schools, their infrastructure requires upgrades. Many of them have outdated equipment and laboratories that do not simulate real events/working environments.

Need for Vocational or Refresher courses:

It has been felt that short term vocational and refresher courses would help the professionals in upgrading their knowledge and skills. Experts have also suggested that there is a lack of basic knowledge of customer management, technology application and event setup and that working professionals would benefit from such courses.

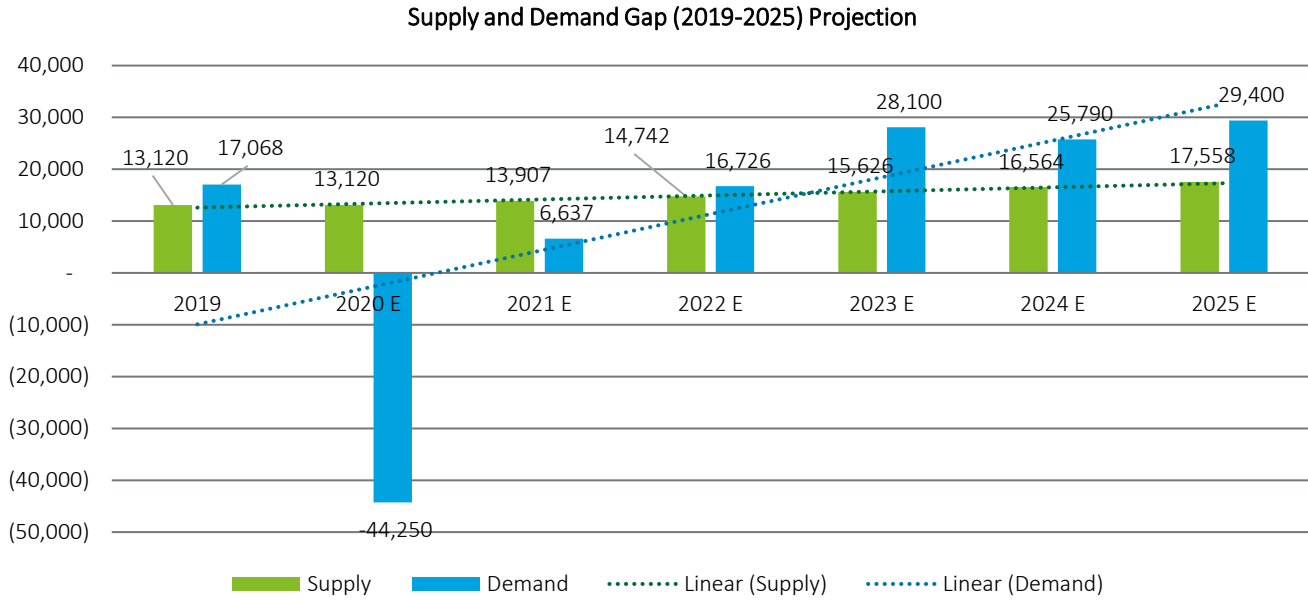
Insights on Future Jobs & Skills

Trainings need to be developed for the following job roles which may emerge in the future:

- a) **Sports event manager (Sports manager):** Sports management is an upcoming field in India. The sports managers with knowledge and interests about sports and trained for management of sporting activities will be in demand. With the rise of various sports leagues in India, there is also a need to introduce more sports management courses. Currently, such courses are pursued by many of the Indian students in foreign universities.
- b) **Celebrity managers:** Agents and Business Managers of Artists, Performers, Athletes or other celebrities who represent and promote them with current or prospective procurers of their services. They may also handle contract negotiation and other business matters for their clients.
- c) **Talent managers:** The industry experts suggest that talent managers are responsible for ensuring that their artists are taken care of. They help hire and manage any staff for a client. Talent managers handle public relations and media exposure, such as appearances on TV shows, interviews with journalists, and social media presence.
- d) **Public relation managers:** They are responsible for handling all aspects of publicity campaigns and create and maintain a favorable public image for their clients by communicating programs, accomplishments and/or points of view.
- e) **Campaign manager:** A campaign manager coordinates an events' or campaigns' operations including fundraising, advertising and other activities supporting the effort. Their activities involve brainstorming and implementing event plans and concepts, handling budgeting and invoicing, liaising and negotiating with vendors, negotiating sponsorship deals, handling logistics, updating senior management, managing branding and communication and developing event feedback surveys and analysing them.
- f) **Event technology manager:** A technology manager coordinates an events' technology operations including hardware, software and networking & communication requirements, procurement and operations; technology enablement of event, provision or procuring of a customised tech platform etc. It may also include Social media management for the event.

The Human Resource Demand-Supply Gap

Figure 48: Supply and Demand Gap Projection (2019-2025)- Event and Live Performance



The above bar graph shows that there will be surplus in terms of supply of manpower in initial years till 2022 because of the COVID-19 effect. Post that once the industry starts recovering, it will be in need of more manpower than the supply available then. Vocational training needs to focus on nurturing talents of seasonal employees in particular to reduce the supply and demand gap.

- Highest Supply and Demand Gap between 2019 to 2025 is ~57,000 in the year 2020 because of COVID-19.
- Lowest Supply and Demand Gap between 2019 to 2025 is ~2,000 in the year 2022.
- Average Supply and Demand Gap between 2019 to 2025 is ~4,000.

Potential ways to contribute to 'Atmanirbhar Bharat' mission

The Indian event and live performance industry has been evolving over the years; however, the industry still lags behind the international market in terms of level of technology use.

The sub-sector could contribute to 'Aatmanirbhar Bharat' mission by deploying Indian event management companies in India for domestic and international events. Further, India could focus on using, to the extent possible, technologies and equipment available in India.



E.6 Film

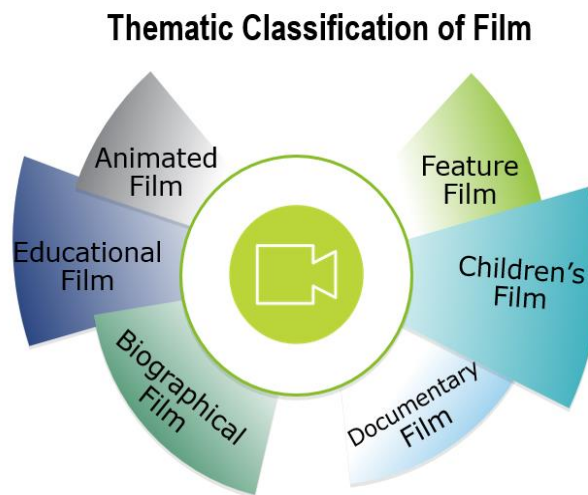
Film Sub-sector Overview

Indian film industry is the largest producer of films across the world and the number of movies produced has grown significantly in last decade, increasing from 1,200+ movies in 2009 to 2,400+ in 2019. With films produced in 20+ languages, one can gauge the diverse nature of the industry in the country. On the downside, however, India fares rather poorly when it comes to the screen density, with 8 screens per million people, which is relatively lower compared to other countries across the world such as US (126/million), UK (60/million), and China(26/million).

The factors such as increasing disposable income, number of screens, average ticket prices, and number of movies released, drive the demand for this sector. However, factors such as increasing competition from foreign films, low occupancy in tier II and tier III cities, high piracy rate has negative impact on the growth of film industry.

Feature films dominate the film landscape with maximum number of movies certified in the digital medium (97%), followed by children's films (2%). The rest of the themes - Documentary, Educational, biographical, Animation - constitute only 1% of the total movies certified in India.

Figure 49: Thematic Classification of Film



Source: Annual Report Ministry of information and Broadcasting

The pandemic has had a severe impact on the film industry in early 2020 with theatres being completely shut across the globe in an effort to control the outbreak. This has resulted in the downfall of the film industry revenue for 2020 significantly from previous years both globally and in India.

Considering the impact of COVID-19, along with various growth factors, it is projected that the revenue will increase to INR 24,000 Crore approximately by 2025 with CAGR of ~4.3%. Moreover, the growth will pick up in the coming years owing to various socio-political factors & increase in screen density, but it will follow a sluggish growth trend and the economy will take its time to recover from the impact of the pandemic. The film sub-sector employs about 2,56,000 people directly as per 2019 data and is expected to employ about 3,32,000 people by 2025.

Expert Opinion...



Santanu Bose,
Dean Academic Affairs
and Associate Professor,
World Drama, National
School of Drama

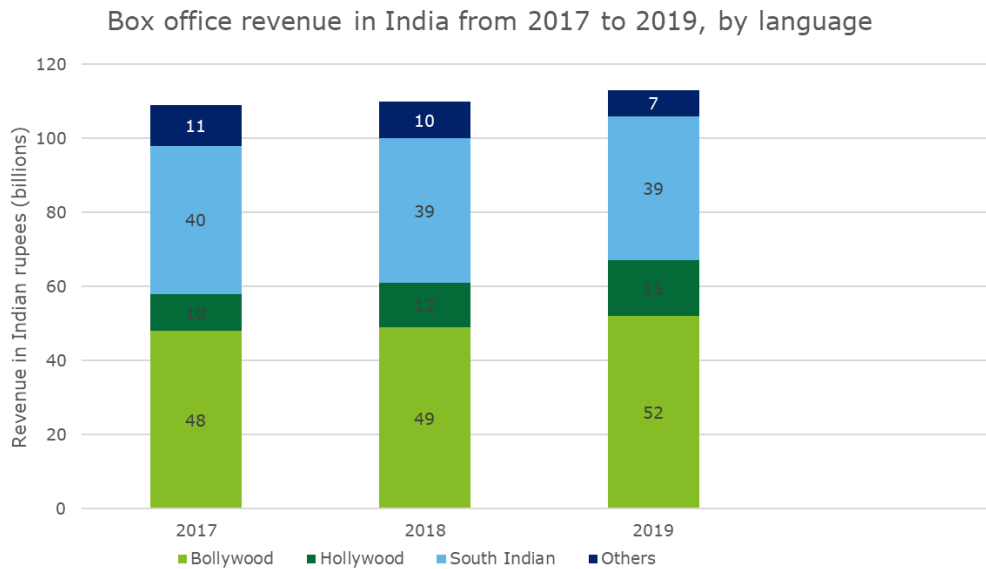
There is a need for chain of training and performing centers. Success stories already exist in Australia and UK for local cinema and American cinema and in US for American cinema. Some of them have extended operations to China where they train on western films. There is a societal need in India for getting into acting and we need to broad base the options to enable that.



Top contributors to the Indian Film industry

Over the past decade, the number of movies certified in India has grown by 89% from 1,279 in 2009 to 2,412 in 2019. 40% of the total revenue in the Indian film industry is contributed to by Bollywood, followed by regional languages (50%) and international films (10%). Further analysis of the regional film industry highlights the dominance of Tamil and Telugu films which accounts for 34% of net box office revenues (Box office collections accounts for significant portion of the industry revenue.)

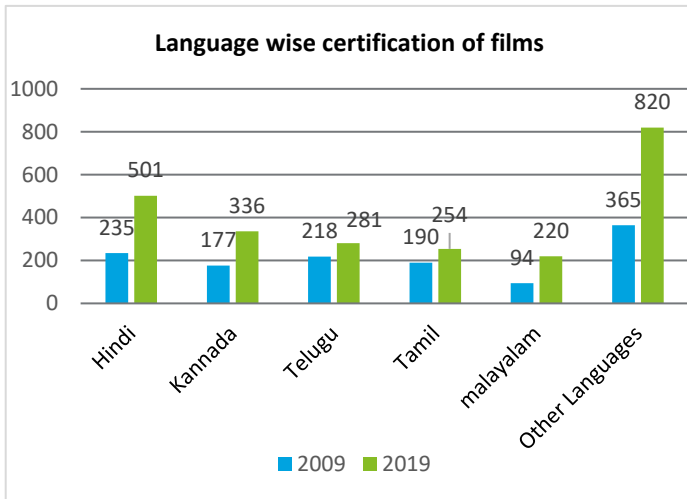
Figure 50: Box office revenue in India (2017-2019)



Source: Detailed analysis and MPA report 2018

Regional film industries have grown tremendously in the past decade and have nurtured some remarkable talents, registering several industry records by their name. Few Guinness World Records are denoted below. Reasons like better content and improved quality of dubbing and multi-language release have made Tamil and Telugu films highly popular in the recent years. Growth of International films is driven by the increase in the number of English speakers, as well as due to a greater number of international movies being dubbed to cater to the population in smaller cities. Malayalam, Kannada, Bengali and Marathi were among the languages that registered the highest growth.

Figure 51: Language wise certification of films



Source : Producers guild of India, detailed analysis and MPA report 2020

Expert Opinion...



Salim Arif,
 Head of Department, Culture Studies,
 Whistling Woods International; Writer,
 Theatre and Film Actor, Director, Film
 Designer

Indian Cinema is changing. It is also facing a challenge from several quarters. For it to emerge stronger, it will need to return to its charm and creativity which made it attractive in the first place while we embrace technology. Our training and teaching institutes need standardized curriculum, upgradation in their facilities, quality delivery and integration with the actual work.



Changing nature and needs of the Indian Cinema

The pandemic will have multiple implications for the film industry.

Pulling people back to the cinemas will be difficult. In addition to the perceived health risk, people have become accustomed to watching movies at home for a small price. Isolated viewership will be difficult to draw people away from since family members have got into the habit of watching different films on different devices, even at the same time in different parts of the home. Subscription services allow it and there is no reason for families to watch films together.

OTT is here it stay. However, Indian OTT films will need to get better. At present, it appears that Indian OTT content is primitive compared to international content. It needs to improve its imaginativeness and finesse. It is, therefore, not surprising that even foreign non-English content with English-sub-title has a large audience in India.

Live entertainment has to get better to face the OTT challenge. It has been done earlier too when in the 1980's, 70 mm emerged to ward off the challenge from the VCRs. Cinema will need to produce better work even if the films reduce in number. It might need to return to old norms on when to release films and when not to so that it has full attention of the public. Today, there is a need to create entertainment for the play-station generation. Digital and Virtual reality has to face up to reality. At an abstract level, the notion of reality is being redefined. The cinema where language mesmerized the audience has given way in several cases to pedestrian communication. Songs that carried wisdom have been replaced by forced numbers. In attempting to copy European realism, gravity and beauty has often been compromised. Cinema will need to find ways to charm the audience again. Creativity needs to be emphasized in every aspect of film making. Writing and content has to become centre stage again. Portrayal, screen play and dialogues have to be thought thru. There is a need for mentors who can nurture the willing talent. Therefore, while theneed to learn the new technologies is observed, there is also a need to revive the creative arts and to prepare the workforce.

There is a need for Indian cinema to internationalize its content for wider audience. The need of the hour is to prepare and equip the talent for international markets where mediocrity doesn't go far.

There is also a need for better and more efficient planning skills. In western markets, activities are planned years in advance and shoots happen together with efficiency for everyone. Similarly. theatre shows are pre-planned. However, this will require necessary facilities and infrastructure.

There has been a major skill gap in the film industry for several years now. There is a need to address aspects related to trainers and teachers, curriculum and certification across the film industry.

The acting schools don't provide inputs for students to become teachers. It will be prudent to run an extra year to train interested students in pedagogy so that they build the necessary capability in imparting learning. Further, there is no significant system for continuing learning to mid-career professionals. They all learn on the job by hit and trial.

The other challenge is around the syllabi and curriculum for different courses. Everyone is doing their own thing. In some of the institutes, the syllabi hasn't changed for decades. There is an immediate need to include digital media, new formats for post production, working with digital mode camera etc. Standardization and nationally recognized syllabi is also required. The same will apply to continuing education programs for working professionals and to K-12 schools when acting courses are introduced there under the National Education Policy 2020. Without standardization, assessments and certification have little use.

The training industry has to self-regulate itself. Several short-term courses simply short-change the students. They do little more than creating appreciation or building awareness but the expectations created among students are different.

Some of the students consider theatre as a stop gap arrangement before they get their film breaks. This may serve neither the students nor the film/ theatre sub-sectors.

Due to lack of professional development courses for people already in the industry, several movements and change of roles are triggered by sudden needs for people in select roles and then people somehow figure out.

More practical skills and exposure in films or theatre is required in our courses.

Today film making is less costly and a large number of regional films are released in the country. Film makers today are no longer confined to mega-cities. Directors from small town may have better sensibilities. Several works from the 'elitist' directors for who understand India from its statistics, have proven to be superficial. Thus, film sector training needs to be accessible in smaller towns too.

The kinds of skills required are changing. Processing jobs have reduced and recording has been replaced by digital mixing. Synthesizer has replaced acoustic recording with loss of several music related jobs. For example, one person is able to create

several rhythms on the Octapad and several traditional musicians are no longer required. Skill development for the sector must cater to the changing needs.

Also, the number of people required for film making has dropped. This may affect employment particularly in the commercial Cinema, which is where large scale work and employment is generated.

Growth Drivers in film Sub Sector

The key growth drivers for film sub-sector in India are the expansion of screens across the country, investments by foreign studios in domestic and regional productions, growing popularity of niche movies, and the emergence of digital and ancillary revenue streams, favourable policy updates and increasing literacy rates.

Increase in number of Multiplex screens:

Number of Multiplex screens have witnessed significant growth across major Indian cities and has continued to penetrate smaller towns. The number of multiplex screens has risen from ~957 in 2009 to ~3,298 in 2019. Moreover, the Investments in multiplexes are mainly driven by rising urbanization and growing disposable incomes.

Investment by foreign studios:

International studios now have shown an encouraging interest in India. Factors like cost efficiency, skilled and inexpensive manpower are some of the advantages that film makers tap into India for. Several renowned international agencies like Walt Disney, Viacom18, Fox Star, Warner Bros, DreamWorks etc. now have notable stake in Indian Film sub sector.

Growing popularity of niche movies:

Over the past few years, there has been a positive trend of emergence of independent cinema co-existing with big production houses. Movies like Peepli Live (2010), Lunchbox (2013), Dhobi Ghat (2010) are prime examples of parallel cinema doing well in the market and creating its own niche.

Ancillary Revenue:

Indian Films generates several ancillary revenues which sometime help the producer enhance their ROI. In most cases, events like musical hit, can save large part of cost incurred in the film making process and the Music right of the movie helps in generating ancillary revenue. Moreover, if any movie promotes local tourism, State Government also announces tax exemptions for the movie.

Favorable policy updates:

Make in India: Film industry was selected as one of the key sectors for the Make in India campaign in 2014. The government has been taking several initiatives to increase growth in the sector as well as promote foreign film shootings locally including setting up of film facilitation offices for quick clearance of foreign films, promoting India as a hotspot destination for shooting in an effort to increase film tourism.

Launch of F-Visa: In 2017, Ministry of External Affairs introduced a Film Visa (F-Visa), for film professionals. Having the provision of multiple entry, this visa allows a person to stay up to one year in India. In 2018, film facilitation office portal was launched as a one stop shop for all the details pertaining to shooting locations, facilities available for animation, online submission of applications. In addition to this, it maintains a database of talent available in the Indian film industry.

Co-Production treaties: India has co-production treaties with several countries viz. Bangladesh, Brazil, Canada, China, France, Germany, Italy, Israel, Korea, New Zealand, Poland, Russia, Spain and UK & Northern Ireland to enable co-creation of content and collaboration.

Increasing Screen density in Tier II and Tier III cities: Tier II and tier III cities have a very poor density of screens, making it difficult for people to enjoy movie experience. To combat this problem, online single window clearance is being provided by many state governments for permission to open theatres and availing tariff reduction to purchase technical equipment.

Tapping into film tourism:

A key untapped area in the Indian film industry is the promotion of film tourism and encouraging global players to shoot and produce films in India's major destinations. Factors like cost efficiency, skilled and inexpensive manpower are some of the advantages that film makers tap into India to shoot their movies.

Increasing Literacy Rate:

The literacy rate (77.7%) in India has been on the rise. With increasing literate population, the inclination towards watching movies of different languages is also increasing. This is evident from rising audience for Hollywood movies. In the last three years, the Hollywood movies witnessed a surge of 5%, encouraging audience to watch such movies.

Figure 52: Growth Drivers-Film



Expert Opinion...



Dilip Chenoy,
Secretary General,
Federation of Indian
Chambers of Commerce
and Industry (FICCI)

Dubbing in foreign languages of Indian films could be an opportunity for Indian film sector. In future, this may also be made possible through technology. India may see increase in global opportunities especially in gaming, game design and animation/ VFX. This has already begun through large organization/studios outsourcing work to India.

State Level Industry Shifts

- **Key Employment generating states/Cities:**

Indian films are made in several cities around the country. Each of these filmmaking cities serves as the hub of cinema in one prominent language. Key states generating employment in Film Industry are Mumbai (Maharashtra), which is regarded as India's movie capital and is producing most feature films, hosts the Hindi film industry that has a pan-India footprint. Chennai (Tamil Nadu), Kolkata (West Bengal), Hyderabad (Telangana), Thiruvananthapuram (Kerala), Bengaluru (Karnataka), Bhubaneswar (Odisha) and Guwahati (Assam) are the other major Indian cities where films are produced and employing highest number of people.

- **High Demand Job roles in the subsector & in the key states/cities**

Actor, Assistant Cameraman, Camera Operator, Set Carpenter, Set Decorator, Voice-over Artist, Set Painter, Set Plasterer, Live Action Director, Hair Dresser, Lighting Artist, Make-up Artist, Dancer, Production Assistant, Location Manager, Unit Production Manager are the high demand job roles as per the existing QP-NOS for the subsector including in the above mentioned states/cities.

- **States/Cities which may become prominent in the next 5 years**

With India emerging one-stop destination for media and entertainment services, film cities are contributing to the sector by attracting filmmakers from across the world. Already, in India there are many film cities which offer a variety of services. Anticipating future demand, over a dozen film cities are being developed by various State governments and private players in integrated studio model. Hence, in coming future Noida, Uttar Pradesh, Punjab, Madhya Pradesh, Chhattisgarh, Odisha and Bihar will generate employment under this subsector.

Global Trends

The Indian film industry is the largest in the world with around 2,400 films produced every year in more than 20 languages. The industry also had the second highest footfall in the world in 2015 (over USD 2.1 billion) behind China (almost USD 2.2 billion). Despite the large number of films and theatre admissions, the industry continues to generate lesser revenues with respect to other countries. In India, the film industry's gross realization stands at INR 18,600 Crore versus gross realization of INR 80,000 Crore in the US and Canada which produces significantly lower number of films (approximately 700 films). This is mainly due to low ticket realization and low occupancy level, lack of quality content, and rampant piracy. Further, there are several factors where India and Global industry share the same trend and may witness a 4.3% and 4.5%²⁷ CAGR in revenues in the next few years respectively.

Figure 53 :Global Trends -Film



Dubbing in regional languages:

Dubbing is a growing phenomenon in the global film industry. To ensure better reach among the crowd, producers are preferring to dub international films in regional languages. The number of foreign films dubbed into Indian languages has doubled over the past 5 years. These films are being dubbed into Hindi, Tamil, Telugu and other languages which has helped in maximising outreach beyond Tier 1 cities.

Shoot at international locations through acquisitions and collaborations:

Several international film studios have not only set up distribution houses in India but have also entered into partnerships with local film production houses through acquisitions and co-production agreements. For example: Walt Disney acquired a 50% stake in UTV and now has a controlling stake in UTV Software Communications. Viacom18, a JV between Viacom and Network 18, was the first studio model-based production house. Additionally, a key example of collaboration has been Fox Star joining hands with Dharma Productions in a deal worth INR 500 Crore. Fox has produced almost 30 Bollywood films, as well as few Tamil and Malayalam language films. Local film production can leverage the experience of these international studios to expand their international reach and incorporate techniques and technology, enhanced project planning and cost controls.

Contents inspired from real life events

In recent times it has become a trend to create movies inspired from real life events. There are various factors that provide boost to this trend, such as, high profit margins. Further, the risk involved with these projects is comparatively low. In India the audience also have shown preference for content inspired from life events in general.

Focus on OTT

Box office collection is regarded as the major source of income for the movies. But with the advent of COVID-19, OTT has emerged as the key substitute for box office collection. Digital revenue which were regarded as ancillary revenue has emerged as major part of returns for large number of movies across the globe.

Prequels, Sequels and Spinoffs

Prequels, Sequels and Spinoffs are the buzz words in global film sub sector. Film makers are preferring to invest on the successful series over fresh projects as these movies / series have existing audience and have a buzz in the market. Moreover, continuing with the same team is easier than teaming again for a fresh project.

²⁷ Markets and Markets

Impact of COVID-19

The pandemic and the resultant lockdown have disrupted the Indian film industry – with cinemas closed for almost a year, production halted, delays in movies production, or movies being released on popular OTT platforms like Netflix, Amazon prime etc. This has led to a downfall of revenue (by around 7%) from 2019 to 2020. Further, COVID-19's impact on the film industry is expected to continue in FY 2021, where it's projected that the size of the industry might shrink to INR 17,600 Crore in 2021 with an employment loss estimated at ~35,000. Apart from the revenue and employment loss, COVID-19 has impacted the industry severely as detailed below:

Figure 54: Impact of COVID-19-Film



Complete shutdown of screens

With the lockdown in the country, people refrained from moving outside. Cinema halls, in specific, were shut for a long period to stop the spread of COVID-19. Box office collection accounts for significant portion of the total collection for any movie. Since the cinema halls were shut during this period, most of big banner movies deferred release of several movies for indefinite period.

Shoots were suspended

Almost all projects were on put on hold during the pandemic. Shoots were suspended because of the restriction of physical movement across and outside the country. Further shoots at several international and domestic locations were packed up earlier because of the advent of COVID-19 during initial phase of the spread. It has resulted into sizeable job loss for the cine workers as generally they get hired for specific projects.

Dwindling Advertisement

Almost all projects witnessed a decrease in the volume of advertisement during COVID-19. The advertisement rates got slashed from the pre-COVID-19 rates. Major sectors which contribute to advertisement viz. FMCG, automobile, retail and telecom, reduced their advertisement expenditure as a cost cutting measure.

Expectation of Support by stakeholders

Many of the sector players have been looking for extended/flexible payment terms from suppliers. Especially Cine workers and Cinema Hall owners are expecting support so as to sustain in the days to come.

Change in operating models

With emergence of OTT as an alternative platform for releasing movies, players like Amazon Prime, Disney-Hot star, Zee5, Sonyliv, Netflix are 'new normal' for movie makers. Further, early television premier for movies is also being considered as a business model for film sub sector.

Film subsector growth/ revenue

With a CAGR of 9% from 2014 to 2019, revenue of the Indian film industry was nearly INR 18,600 Crore with an increase of INR 4,800 Crore during the previous 5-year period. Major contributors to the revenue are domestic theatre releases, followed

by overseas screenings. Without the pandemic, the revenue for this sub sector was projected to reach INR 32,200 Crore by 2025. Whereas with COVID-19, it is projected that the industry will reach INR 24,000 Crore by 2025 with a CAGR of 4.3%.

Table 31: Revenue Trends-Film

Revenue Source (INR Crore)	FY 2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Domestic Box Office Collection	12500	5100	9100	10600	12500	13600	14800
Overseas collection	800	700	700	800	800	900	1000
Broadcast rights	2000	1800	1800	2000	2100	2300	2500
Digital Rights	1200	7700	4000	3200	2500	2700	2900
Ancillary Revenue	2100	1900	1900	2100	2200	2500	2700
Total Revenue	18600	17300	17600	18700	20200	22000	24000

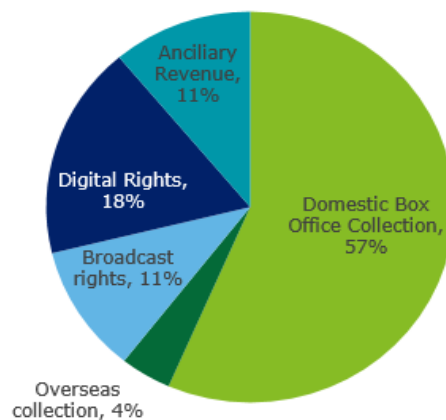
Source: Economic impact on the film, television, and online video services industry in India, 2019 and detailed analysis

Key Assumptions:

1. Technology may have positive impact through the period 2020-2025, especially because of OTT and launch of 5G.
2. COVID-19 has had a serious impact on sector, with negative growth rate (~ -7%) in 2020.
3. There may be an upward push with the policy interventions and long-term package declaration by government in FY 2020, increasing the growth rate in coming years.
4. Sector may reach normal growth (~9%) by 2024.

Figure 55 :Average revenue segregation(Projection)-Film

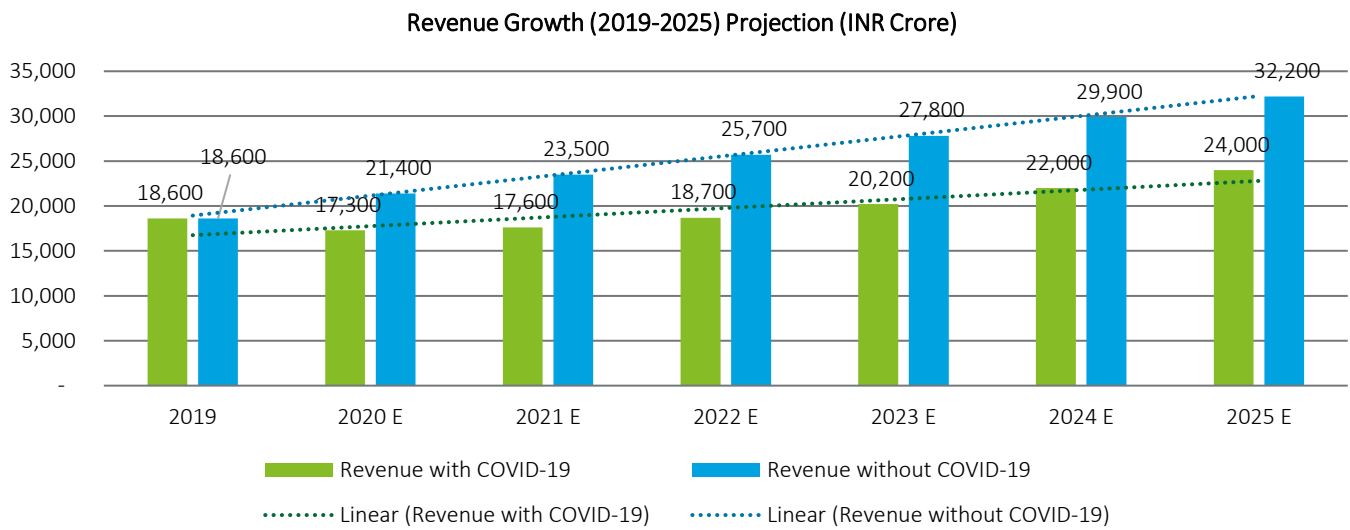
Average revenue segregation (Projection)



5. COVID-19 has a negative impact on the box office collection, hence revenue in the year 2020, 2021 and 2022 are severely affected and may start recovering post 2023 with community vaccination and adaptation by the audience to the new normal.

Domestic box office collection contributes ~57% of the revenue followed by Digital rights ~18% and Broadcast rights & Ancillary revenue both around ~11% each of the total revenue. Overseas collection contribution is mere ~4% of the entire revenue earned in the film sub sector.

Figure 56: Revenue Growth Projection (2019-2025)-Film



The above bar chart represents the impact of COVID-19 on the film industry. It is projected that the industry would have grown at a CAGR of ~9.6% in normal circumstances till 2025 whereas, now the industry is expected to grow at the CAGR of ~4.3% considering the negative impact of COVID-19.

The Human Resource Demand Forecast

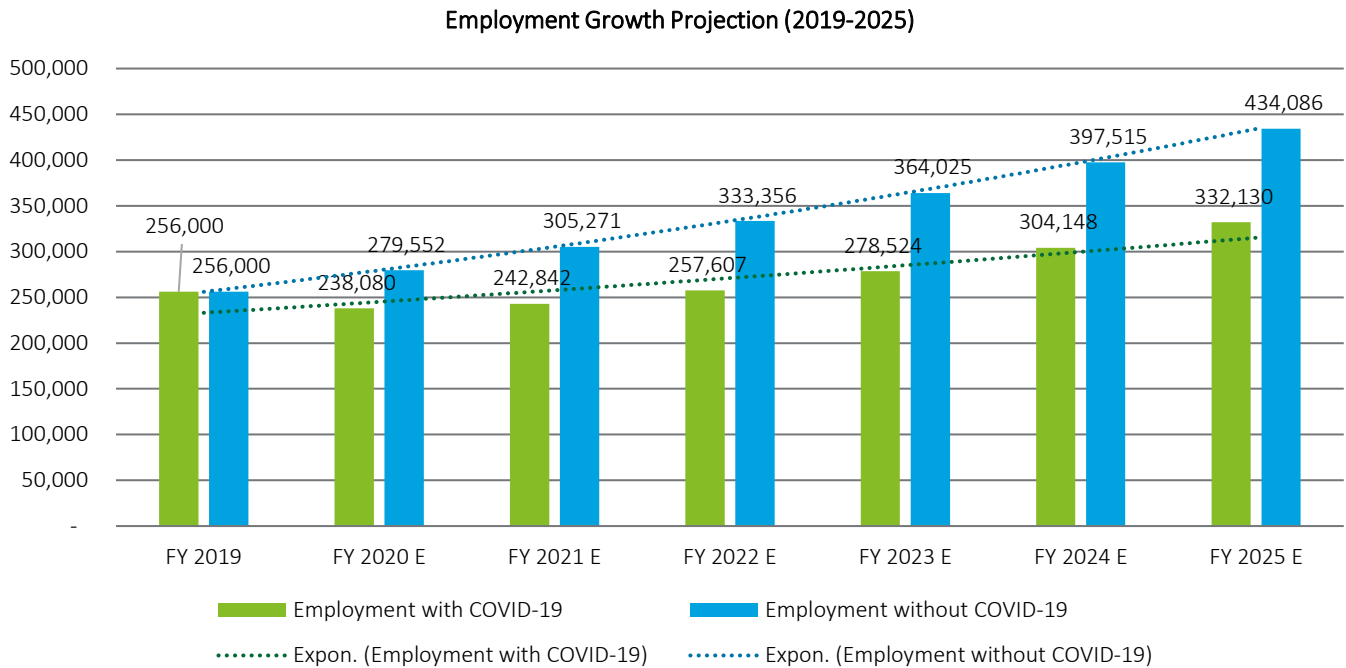
Acknowledging the impact of COVID-19 and external factors, the film sub sector will generate direct employment of ~3.3 lakh people by 2025. It is expected to witness an incremental demand of ~ 0.74 lakh people till 2025 over ~2.56 lakh people employed in the year 2019.

Table 32: Human Resource Demand Forecast-Film

Particulars	FY 2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Estimated numbers of people employed in the industry (A)	246,154	256,000	238,080	242,842	257,412	278,005	303,026
Technological Environment (B)	4,923	7,680	5,952	6,071	9,009	11,120	12,121
Political Factors/ Policy updates (C)	4,923	4,060	8,333	8,499	11,584	13,900	15,151
Impact of COVID-19 (D)	-	(29,660)	(9,523)				
Total Estimated Employment (A+B+C+D)	256,000	238,080	242,842	257,412	278,005	303,026	330,298
Incremental Demand		(17,920)	4,762	14,571	20,593	25,020	27,272

Source: Economic impact on the film, television, and online video services industry in India, 2019 and detailed analysis

Figure 57: Employment Growth Projection (2019-2025)-Film

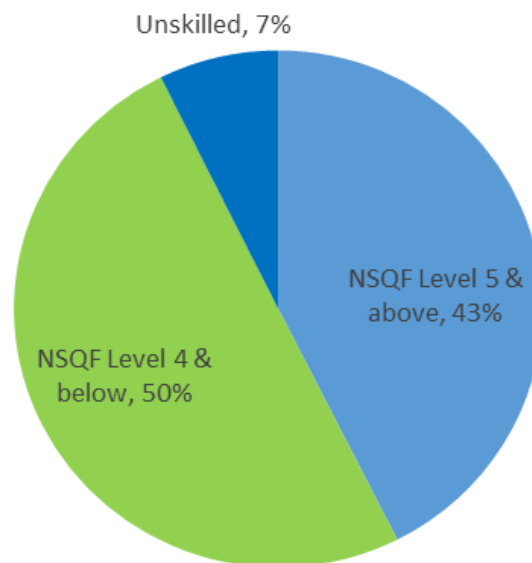


The bar chart above represents the impact of COVID-19 on the Film sub sector. It is projected that the industry would have employed ~4.34 lakh people cumulatively till 2025 whereas, now the industry is expected to employ only ~3.3 lakh people by 2025.

Survey Insights

A primary survey was conducted in the film sub-sector during October- December 2020 covering leading sectoral players having considerable impact at national and regional level, industry associations working in this sub sector, students aspiring to pursue their career in this sub sector and academicians who have experience teaching in the industry.

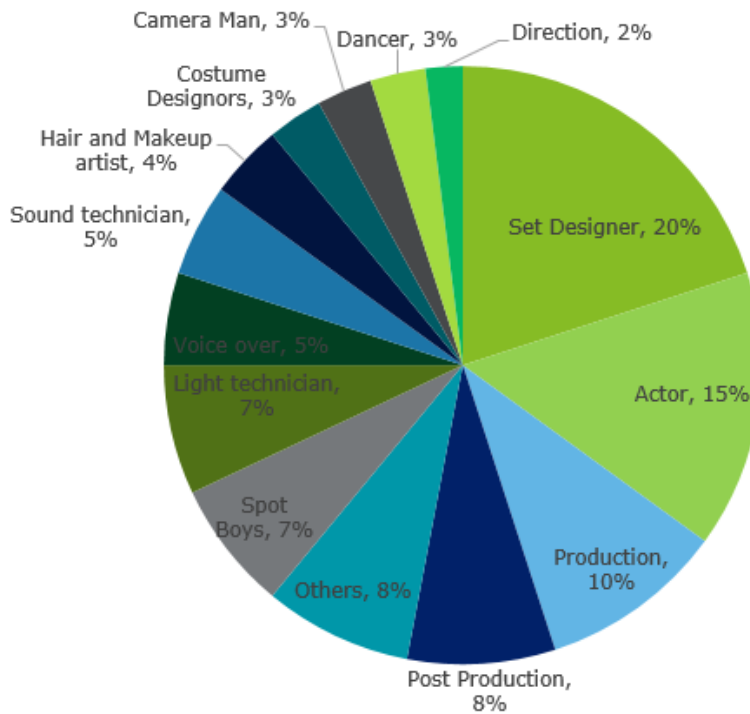
Figure 58: Survey Insights-Film



Source:Expert Interview & detailed Survey Analysis

Division of employees on the basis of Skills

The survey reported that almost 50% of the employees working in film subsector are pertaining to NSQF Level 4 & below followed by 43% at NSQF level 5 and above. Further, the share of unskilled employees working in this sub sector is 7%. Since this is a niche sector, almost 93% employees acquire and have some skill sets to work.



Source: Expert Interview & Survey Analysis

Distribution of Industry Specific Job Role in filmed entertainment

The survey reported that ~20% of the employees working in film subsector are “set designers” followed by ~15% “Actors” and 10% Production. Spot boys, Light & technicians, Voice Over artist, Hair & Makeup artist, Costume designers, Camera Man, Dancers and Directors are the other job roles which contribute to the entire crew for making a film. It is further understood that on an average, a film requires around 100 to 150 crew members depending on its budget.

Employment Profile

Filmmaking is an art of communicating with audience through screens. To develop an emotional connection with audience, it employs people with diversified skill set. Film makers employ people from different segments of the society. Most of the young aspirants who enter the film industry aspire to become actors and directors; however, the reality is very different as witnessed in any other sector.

As per the survey, the film makers seek young talent as Location Managers, Set Decorators, Light & Technicians, Voice Over artists, Hair & Makeup artists, Costume Designers, Camera Men, Dancers, etc. With relevant skills and curiosity to learn and evolve along with appropriate educational qualification, aspirants do have bright chance of getting established in this sub-sector. Few job roles that are witnessing demand in film industry as per existing QP-NOS are described below:

Figure 59: In demand Job Profiles-Film

Industry Specific Roles	Specialized Roles	Generalized Roles
a) Actors b) Directors c) Producers d) Screen Writers e) Music Composers f) Light Technicians g) Editors h) Costume Designers i) Set Decorators	a) Program Researchers b) Cinematographers c) Location Managers d) Cartoonists e) Domain experts f) Movie hall boy	a) Marketing, advertisement and sales professionals b) Admin, finance and HR Staff

Source: Expert Interview, Survey and analysis

The Human Resource Supply Forecast

The courses available in film sub-sector are majorly divided into two types

- UG/PG courses
- Vocational Courses

Employers in film industry prefer degree in Film Technology, Performing Arts, Cinematography, Editing, and Directing. Experts believe that 20% of the students graduating from above mentioned courses opt for career in film industry. Further merely ~10-15% students trained in the vocational courses find placement in the sub sector. Considering the previous trends of enrollments into sector aligned UG/PG courses and vocational Courses and impact of COVID-19, it is estimated that ~1.22 lakh students will graduate or get trained in 2025 and be ready to be employed in film industry.

Details of Enrollment in UG/PG courses related to Film

Table 33: Details of Enrollment in UG/PG courses- Film

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
PhD	144	144	153	162	172	182	193
M. Phil.	30	30	32	34	36	38	40
PG	11,121	11,121	11,788	12,496	13,245	14,040	14,882
UG	10,361	10,361	10,983	11,642	12,340	13,081	13,865
Total	23,675	23,675	22,955	24,333	25,793	27,340	28,981

Source: AISHE 2019, siksha.com and analysis

Details of enrollment on vocational courses

Table 34: Details of Enrollment on Vocational Courses-Film

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
Total	462,528	92,506	462,528	490,280	519,696	550,878	583,931

Key Assumptions:

1. Since 2020 has witnessed COVID-19, there may not be any further addition to the enrolments in UG/PG level.

2. Since all the vocational training centers were shut during 2020, it is assumed that the training is at 30% of the capacity of 2019
3. 6% growth in training and teaching enrolments is considered for projection looking at the past performance of the supply side.
4. Only 20% of the graduating student numbers at UG/PG and Vocational training institutes were considered for calculating supply side of the film subsector.

Analysis of teaching/ training in the Film Sector

Film education in India might have its beginning, way back in 1947 when Sri Jayachamarajendra Polytechnic in Mysore, set up by the Mysore Maharajas, taught cinematography as part of its vocational courses (V.K. Murthy, the legendary cinematographer studied there). However, roots of Film education got established with setting up of the iconic FTII in Pune around 1960 with the aim of formalizing film education, film making and locating it within a global context. Subsequent to FTII, many more film schools funded either by the government or by the private sector have been set-up across the country.

Challenges in existing education system for film sub sector

Film industry is a niche sector. Generally, skilled workforce with prior experience is preferred for employment in this sector, since movies are made on project-basis and the tenure is very short, this results in lower scope of capacity building for any new entrant. Hence, there is a huge demand from the industry to get quality resources graduated from the film schools / colleges with hands-on experience during classroom training. There are over 180 colleges in India offering courses in film technology. The experts unanimously conveyed that there is a huge skill gap between the education provided at the academic institutes and the actual requirement by the industry. The freshers, who join the film industry lack basic knowledge and skills, making it even more necessary to focus on practical training.

It was also mentioned by the industry experts that better known and preferred training institutes are mainly located in large metropolitan cities like Mumbai, Bangalore and Delhi.

The following are some of the characteristics of the sub-sector supply side:

Need for Minimisation of gap between course curriculum & industry needs:

There is a huge gap noted between the industry requirement and the course content in the film institutes. The technology available in the laboratory of the film-technology institutes, are generally outdated in comparison to the ones used in the industry. This gap can be appropriately bridged by regularly updating the relevant technologies, software and hardware. The revision of the curriculum for film technology courses is required and the syllabus need be drafted by the industry experts in coordination with academic experts.

Need for standardization for training and for compiling training content

Great acting teachers will always be in short supply. Moreover, among training institutes, the dependence on teachers/trainers is high. One of the way forwards is to standardize program structure with objectives, duration and content for workshops, certification courses, diploma courses and for degree courses in terms of common minimum input and outcome. This will drive reliability in the trained graduates and will remove subjectivity from assessment of acting and actors beyond 'great', 'didn't like', 'didn't work', 'doesn't have it' to tangible scoring on a scale on standard parameters across categories (like memory, senses etc.). This is a common practice in the western world cinema/ acting.

However, the standardization in training/ teaching content would first require a lexicographical compilation of content complete with experiments, observations/ indicators and inferences. This would need to include over 2000 exercises across 10-12 categories on which observations across 30-40 observations/ indicators could be marked objectively. The compilation could also include views of 20-30 masters from the field.

Lack of economies of scale:

Many of production houses in film industry have in-house training schools but their benefits are limited to students joining these production houses and are generally not at large scale and not as accessible to the rest of the industry, resulting in limited people gaining benefits of live experience.

Talent discovery platforms:

There is a need for new talent discovery platforms to fill the gap by increasing number of independent and content driven movies. Besides big movie stars, emerging new actors are less in numbers owing to the 'closed' culture of the film industry.

Need for Train-the trainer programs:

There is a need for regular training session for the faculty members / trainers by the industry experts so that they are updated with latest industry practices, technologies and trends. Currently there seem to be hardly any exposure for the academicians and trainers to the real working of the Industry.

Poor quality infrastructure:

Even though there are a plethora of training schools that have opened up to meet the high demand, the knowledge imparted and the infrastructure available is leaves much to be desired. Ideally the available infrastructure should be a replica of what is available in the industry.

Need for Vocational or Refresher courses:

It has been realised that the short term vocational and refresher courses would help the professionals in upgrading their knowledge base. This would also act as value-add to the traditional film making skills.

Introduction of courses in specialised subjects:

The students coming out of film Institutes are generalists. Therefore, there is a need to introduce courses in film making related to specialised subject viz. historical, documentary, sports movies, biographies, movies with animals etc. for better understanding of the ecosystem and enhancing their employment opportunities.

Insights on Future Jobs & Skills

With the rise of Over the Top (OTT) platforms in the recent years, there has been a surge in the demand for people in various job roles in film sub-sector. With the subscription and viewership set to increase in this new OTT era, jobs mentioned below will gain demand in the future. Thus, specific skill trainings need to be developed for the following: :

Showrunners – Essentially, they are interface between the OTT platforms and the team responsible for making a show. They possess the combined qualities of a producer and a director. Their role is to ensure that there is no gap between the content visualised by the team and what is presented on the platforms.

Audio Visual (AV) production specialists – Responsible for delivering video promos, digital content and video. Further they control the viewership of advertisement.

Written Communications Managers – Responsible for increasing the publicity of the particular platform and help in creating new strategies around the content to be showcased in the platforms.

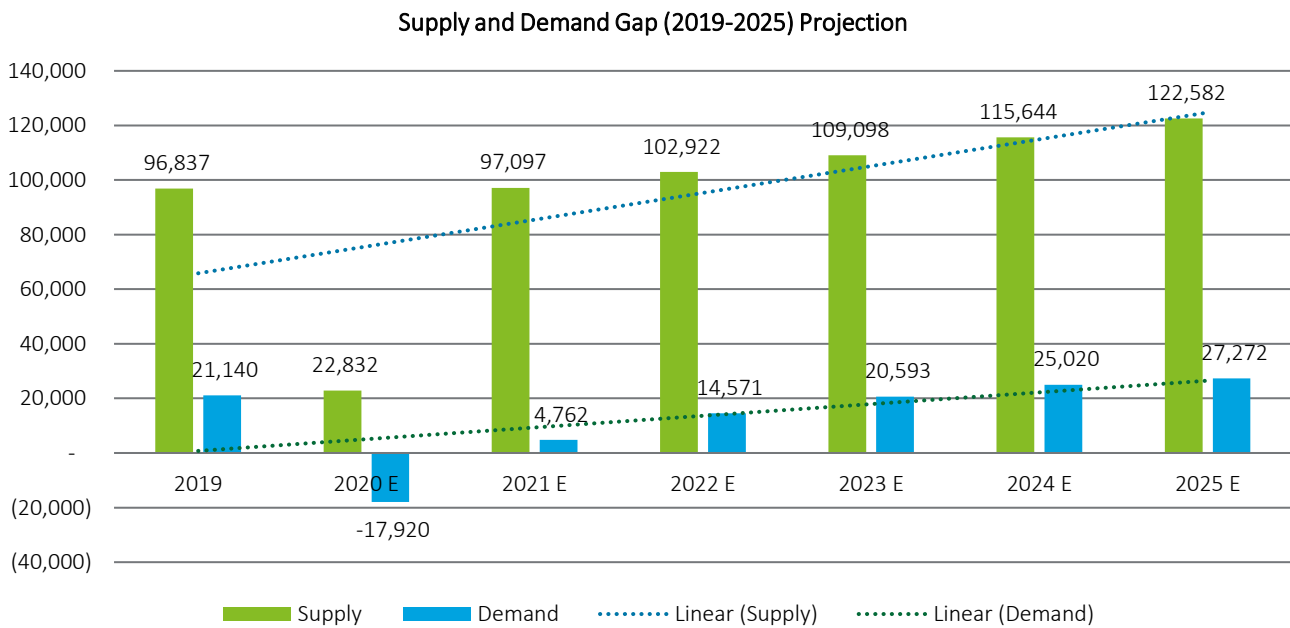
Social media specialists – Play a very important role in today's era of social media marketing by way of designing appropriate strategy to increase the user base and by spreading the word as much as possible through innovative ideas.

Tagger/Original creatives analysts – Their role is to watch the content on a platform and tag film/shows with relevant data like release year, language, director, cast, etc

Domain theme Experts: With increase in demand for movies related to specialised subject matter viz. history, sports, biography of renowned personalities, children, animal etc. Domain experts, in movie based on those themes, would be in high demand in the film industry. They would act as a catalyst to keep the audience hooked to the movies.

The Human Resource Demand-Supply Gap

Figure 60: Supply and Demand Gap Projection (2019-2025)-Film

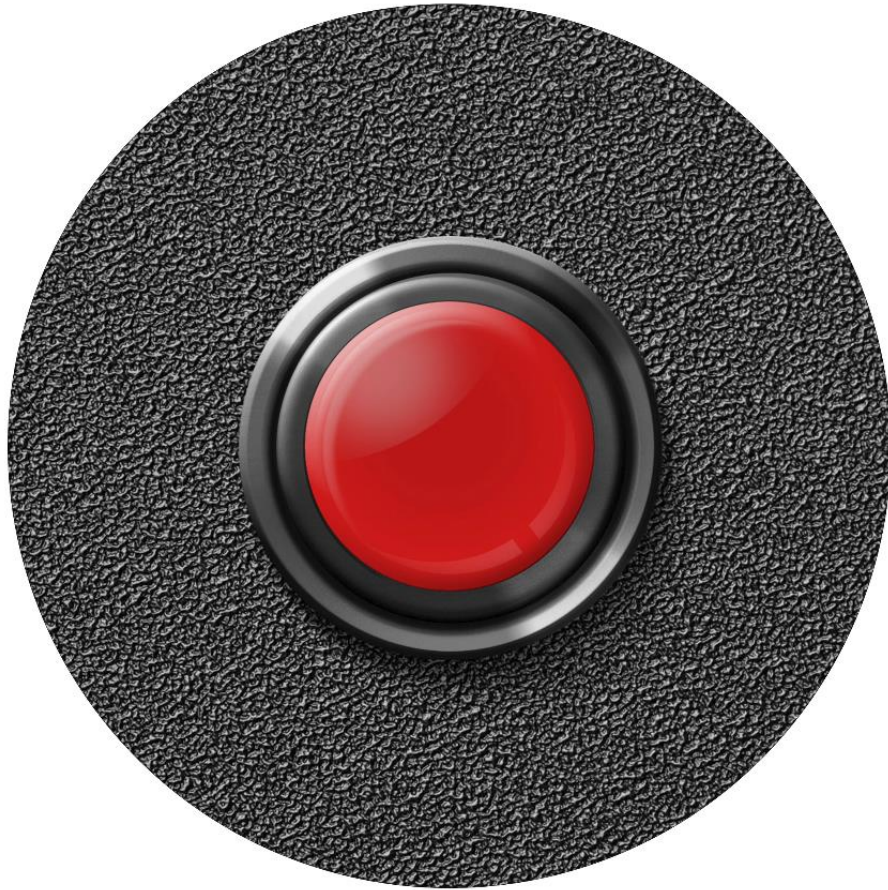


The above bar graph shows that there will be surplus in terms of supply of manpower in comparison to the market demand of the workforce in film sub sector. In 2025, the Gap will be highest ~95,310 because of high training especially in vocational courses. Average gap between demand and supply across the years (2019-2025) is ~81,653. Further, on an average ~5,000 students from formal UG/PG courses enter the film industry and except for the year 2020 (left because of COVID-19 impact), ~15,000 manpower with vocational skill set is required in film sub sector. Vocational training needs to focus on this demand only to diminish the huge supply and demand gap.

Potential ways for the sub-sector to contribute to ‘Atmanirbhar Bharat’ mission

The Government has been championing the cause of Atmanirbhar Bharat in all industries including the film industry. There has been a lot of emphasis for producing and making films entirely in India. With OTT platforms gaining immense popularity in recent years and majority of content on platforms like YouTube being consumed in local languages, there is an opportunity to cash in on ‘Make in India Campaign’.

The key untapped area in the Indian film industry is promotion of tourism and encouraging global players to shoot and produce films in India’s destinations. Factors such as cost efficiency and skilled and inexpensive manpower lure film makers to shoot their films in India. Film Facilitation Office (FFO) has been set-up by Ministry of Information and Broadcasting to facilitate film shootings in India and assist foreign filmmakers in making movies in India.



E.7 Online Gaming

Online Gaming Sub-Sector Overview

The online gaming segment has been growing at a rapid rate for the past few years, reaching a market size of ~INR 6,287 Crore in 2019, witnessing a growth of ~40% as compared to 2018. The growth trends were sustained due to COVID-19 in 2020, with the revenue share increasing to ~INR 8,977 Crore in 2020. The major platforms for online games are personal computer (PC), mobile and console.

In terms of number of gamers in different platforms, mobile gamers contribute to more than 85% of the total user base, while PC gaming and Console gaming are responsible for 15% and 3 % respectively.

The growth in market size is attributed to the rising number of online gamers in India, which reached 40 Crore in July 2020²⁸, increasing by almost 3.5 Crore users in a span of one year. With ever increasing mobile user base and availability of high-speed internet, casual games have contributed more than 1/3rd share of the total revenue of this sub-sector. In 2019, the greatest number of mobile games were downloaded in India, and India is among the top five countries when it comes to the number of mobile game market users. The growth has majorly come from the online fantasy games to take advantage of large-scale sporting events like IPL 2020 and cricket World Cup. Real money based online games have also seen a spike in the number of users, with card games like Rummy, Poker and Teen Patti occupying the lion's share of user base in that segment.

There are variety of growth drivers for this sub sector - increasing user base, behavioral change of gamers, strong IT support and rise of digital platforms, to name a few. On the other hand, factors like lack of transparent regulations regarding online betting and a dearth of infrastructure for PC games push the growth downwards.

The monetization methods in online gaming comprise of advertisement revenue, which accounts for a big share of the revenue market, in app purchases, freemium, paid apps, etc.

Online Gaming is one of the very few sectors which has displayed sound performance during the pandemic. As a consequence of mandatory lockdowns, the online gaming has witnessed an all-time growth with tremendous surge in monthly active users, average time spent on mobile games and in the number of downloaded games. There has been almost doubling of the average transaction size post lockdown. Games like Ludo and card games like Poker and Rummy have witnessed huge increase in the number of users/players during a time when entertainment options were limited.

The already booming sector can further get a shot in the arm in the future with the help of new technology, which will increase player retention. India is yet to incorporate segments like AI, cloud gaming and data analytics into its gaming culture, which are a main stay for a number of developed countries.

Expert Opinion...



Manvendra Shukul,
CEO,
Lakshya Digital

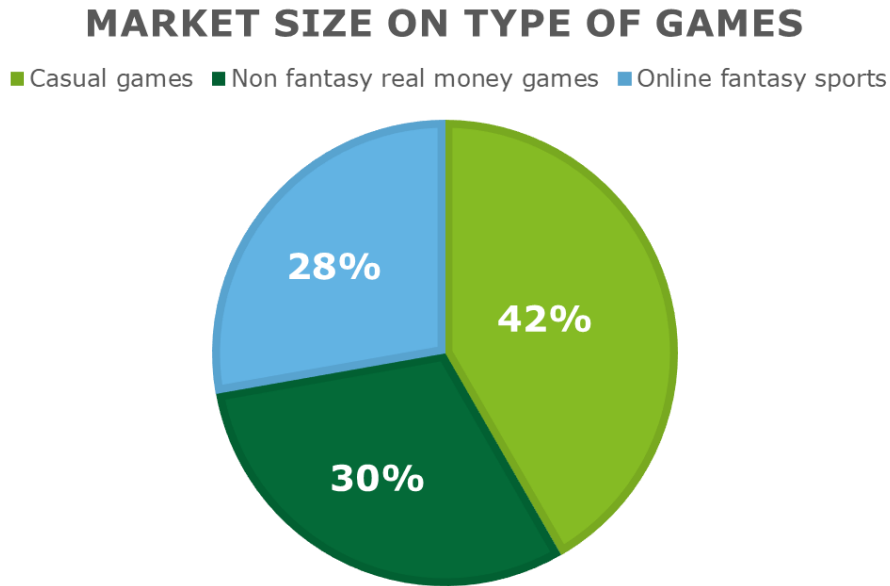
Gaming is all about creativity, analysis, imagination, story-telling, character building, enabled by coding and engineering. India has all of these competencies, but they are not focused towards the video games industry. From being only a service provider to the global video Games Developers and Publishers, India has to move up the ladder and start developing our own IP in the mainstream video games space. To do this, we have to encourage and incentivise veterans from the global industry to come and work with our Indian developers and create a shortcut to the experience that we do not have the luxury of acquiring, by going through the long learning cycle of hit and trial. That's the bridge that the western video games industry has already crossed. Now it is time for us to take advantage of that experience and kickstart the IP creation within the Indian video games eco-system.



²⁸ FICCI 2020 report

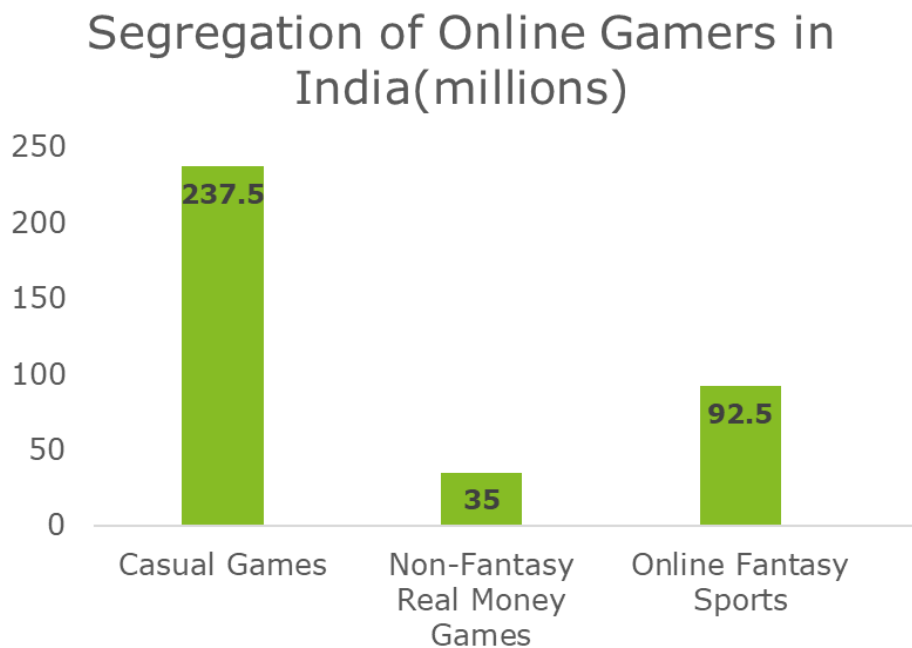
Details of user base and revenue streams

Figure 61: Market Size on Type of Games



The online gaming can be categorized into the following types based on their contribution to the revenue – Casual games, Non-fantasy games, Online fantasy sports. Around 42% of the market share in 2020 is captured by casual games (mobile games, Ludo, etc), followed by non-fantasy real money games like Rummy and Poker which have further strengthened their foothold in the market during the pandemic. Online fantasy sports with revenue share of little less than 30% is the third major segment in online gaming²⁹.

Figure 62: Segregation of Online Gamers in India



Casual gamers account for 65% of total online gamers. While 1/4th of the gamers are represented by online fantasy sports with around 9.2 Crore people playing such games in 2020.

²⁹ FICCI 2020 report

In mobile games, which cover a huge part of the total gaming industry in India, following are the most sought-after ways of making money:

In app purchases/Freemium: This feature allows the user to purchase the app/game without any cost initially but requires a small payment in order to unlock more features of the game at later stages. This model relies on the connection and addiction that a customer has made playing the initial stages of a game and the fact that they will be more willing to spend money on a game which they have developed a liking for.

Advertisements: Advertisements is one of the most important revenue models for mobile gaming, where users are not charged, but companies pay a hefty amount to gaming studios for showing a particular ad in the middle of the games. Advertising can take many forms like Display Ads (banner ads, pop-up ads, etc), interstitial ads (ad between game levels), contextual ads (ads to sell goods in context of the game)

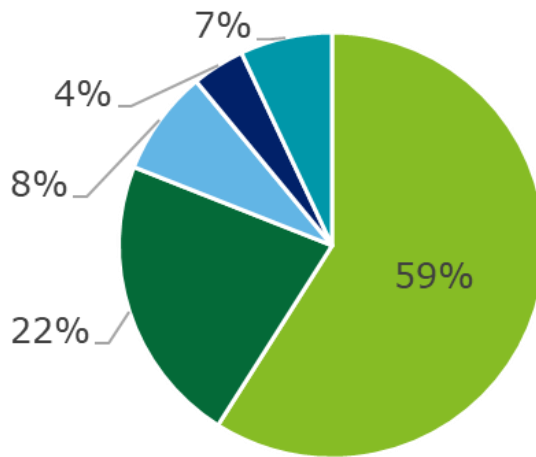
Paid Mobile games: There are two types of paid mobile games:

- a) Up-front payment model- it requires a one-time payment to download a game and can be used indefinitely
- b) Subscription model- It involves a monthly fee on a recurring basis in order to continue using the game

Age group Distribution of online gamers:³⁰

Figure 63: Age Group Wise Distribution of Online Gamers

Age group wise distribution of online gamers



■ Below 24 years ■ 25-30 ■ 31-35 ■ 36-40 ■ 40 and above

Nearly 75% of the user base falls under less than, or equal to 30 years age group, representing the fact that the majority of online gamers belong to a young demographic group. Only 19% of the users are above 30 years of age.

India has a considerably younger population in comparison to other developed economies like US, UK, Germany, etc. and hence is a promising gaming market in future. With majority of users as young population, India is a potential gold mine for online gaming.

³⁰ Google report 2017

Expert Opinion...



Ranbeer Hora,
Managing Director,
GodSpeed Games

It is difficult to get skilled resources especially on the programming and development front.

Gaming has been a booming industry during COVID, and this growth is continuing. A lot of new companies and investments are taking place. So, the impetus COVID provided will be carried on for further growth.

Universities need to focus more on giving the people practical knowledge. For future growth in this subsector, we need to provide our students live projects. Further, assignments will help them to learn and complement their text knowledge.

In terms of global opportunities available in the foreseeable future, since people can work from home, global companies are now hiring resources in India. We have seen increase in demand particularly for AI, Machine Learning, Programming, Full Stack Developer skills. The demand for these skills will continue to grow in the coming years.



Key shifts for the online gaming industry in India

Growth Drivers

There are multiple factors that contribute to the growth of this sector:

Innovation and technology leading to Increase in user base:

With 45+ Crore smartphone users, more than 60 Crore broadband subscribers and a 17-fold increase in the data usage in the past 5 years coupled with one of the cheapest data cost in the world, there has been a high growth in the number of online gamers and the number reaching more than 40 Crore in July 2020. These factors have led to India accounting for about 13% of the globally downloaded gaming apps (~ 560 Crore).

Increase in young population and growing craze for sports:

There has been a spike in the growth in transaction-based games covering fantasy sport games and non-fantasy games. In 2019, transaction gaming grew by 50%, bolstered by a growth of more than 100% in fantasy sports games which is majorly dominated by cricket, bolstered by IPL and the Cricket World Cup. There are more than 140 fantasy sports platforms in India

Non-fantasy games like Rummy and Poker have also continued to grow in 2020 reaching a market share of ~ INR 3,000 Crore and reaching around 4 Crore gamers in this niche segment.

Change in Gaming Behavior:

With the humungous success of multiplayer game like PUBG, which had a monthly active user base of ~ 2.5 Crore with more than 1.2 Crore daily active users, there has been a change in the behavior of the gamers, with more individuals willing to pay for games. This success has made monetization of gaming industry a more viable and lucrative option.

Adoption of Gaming by different businesses:

Gaming has been used by a variety of different sectors to enhance user experience and make it more engaging for the customers thereby increasing their user base. Marketing and advertising industry has been continuously using it as a tool to attract customers, education industry has also started employing gaming elements to supplement traditional teaching methods, with interactive games, puzzles and quizzes being integrated into the curriculum, in regional languages as well as to increase their reach.

Demographic Advantage:

Compared to most countries in the world, India has the comparative advantage of demographic dividend with more than 50% of population below 25 years of age. This is one more reason for the ever-increasing demand for mobile and online games in India. A large majority of young people with access to internet are pushing the growth in this segment.

Growth of esports:

The number of people playing esports has grown almost 300 % from 2017 to reach around 1.7 Crore people in 2020. Owing to a variety of online gaming tournaments/events like ESL India Premiership 2018, COBX Master 2018, UCypher, etc. There has been a significant rise in the esports prize money as well increasing from INR 77 Lakh in 2016 to INR 384 Lakh in 2018.

Booming IT sector:

With India being an IT hub, the number of online game developers has increased more than 10 times between 2010 and 2019³¹. This has flooded the market with large number of new games and with an ever-growing IT sector and engineers coming out every year, India is on the verge of becoming a development centre for gaming companies.

Rise of digital platforms:

With demonetization, the digital payment sector has seen tremendous growth in the past few years, with the number of users in digital platforms expected to increase three times and reach 30 Crore by 2022. This expansion of digital market has helped the gaming sector with rising number of online payments on gaming portals.

Flow of foreign investment:

Foreign investments are flowing in Indian gaming industry and are opening gaming studios in India. For instance, Ubisoft – a French video game company has two development studios in India. US based Rockstar studios had acquired a Bengaluru based video game development company. Various Vietnamese and Chinese companies are also looking to invest in Indian gaming industry.

Risk Factors

There are a few factors that may bring a downward trend in the sector growth:

Lack of a clear regulations: In India, the laws governing online gaming appear to be vague, where online games involving money is neither clearly prohibited nor regarded as a gambling activity. Different states have different gambling rules when it comes to skill and chance-based gaming activities. Madras High court suggested that a necessary regulatory body should be responsible for monitoring any illegal activities pertaining to online gaming. An uncertain regulatory environment is bound to be a hindrance to the full growth of money gaming segment.

Self-conscious behaviour of players: The addiction that the online fantasy and non-fantasy games provide to its users is something that is being presented as a cause for concern with the ever-increasing user base in these sectors. There is a case that the increasing use of AI and behavioural technology in smartphones can take advantage of the kind of games played, patterns of play, amount of money spent on particular games and incentivise gamers to produce more of that behaviour.

Lack of Infrastructure for PC games: Although mobile gaming leads the way in the online gaming sector in India, the PC experience is still lagging in terms of global level. The gaming experience is not as impressive and smooth with problems like delay in boot time and level upgradation.

³¹ www.entrepreneur.com

State Level Industry Shifts

- **Key Employment generating states/Cities**

Almost all the major gaming companies are in tier-1 cities. Bangalore (Karnataka) is the leading contributor of people in the online gaming sector, followed by Mumbai/Pune (Maharashtra), Lucknow (UP), Hyderabad (Telangana) and Delhi. Number of online gaming companies has a direct correlation with number of people employed in the sub sector in a particular state. Out of top 30 gaming companies in India, Bengaluru with 10 studios makes Karnataka state the highest employer. Maharashtra has 9 (Mumbai – 8, Pune -1), Noida has 5, followed by Delhi (1).

- **High Demand Job roles in the subsector & in key states/cities**

Rigging Artist, Modeller, Voice Over Artists are few of the high demand job roles for the subsector as per existing QP-NOS including in the states/cities mentioned above.

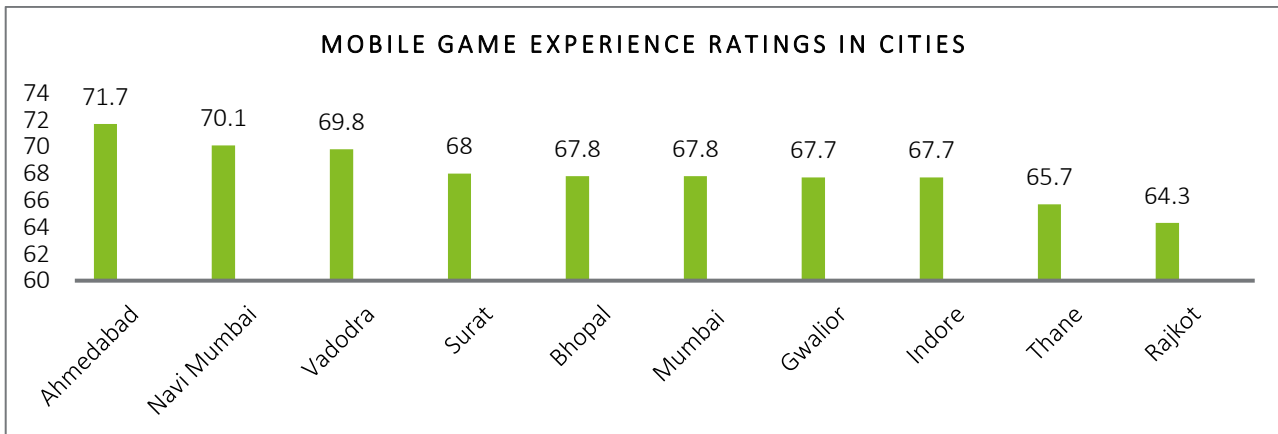
Game Tester (QP-NOS in draft stage), Game developer and Texturing Artists are also few of the other trending job roles for the subsector including in the above mentioned states/cities for which specific skill trainings should be developed.

- **States/Cities which may become prominent in the next 5 years**

With growing penetration of smartphones and high-speed internet in tier 2 and tier 3 cities, the contribution of online gamers in these cities is expected to increase in the near future. Already 30-60% of major company’s gaming segment is contributed to by such cities.

Tier 2 and tier 3 cities has established a strong interest in mobile gaming, with 8 out of 10 cities in mobile games experience being outside tier 1. Out of top 20, only four belong to tier 1 cities, while the rest are tier 2 and tier 3 cities.

Figure 64: Mobile Game Experience Ratings in Cities



Few Cities that will continue to have increased demand in future: Pune (Maharashtra), Hyderabad (Telangana), Chennai (Tamil Nadu), Bengaluru (Karnataka), Mumbai (Maharashtra).

Impact of COVID-19

Gaming industry is one of the few sectors in media and entertainment industry which has been largely shielded by the unprecedented impacts of the pandemic. This has been due to the nature of gaming industry, which is heavily dominated by mobile game users. Due to the nature of the lockdown, with outdoor entertainment options almost negligible, online games has been one of the most sought-after mode of entertainment in India.

Figure 65: Impact of COVID-19-Online Gaming

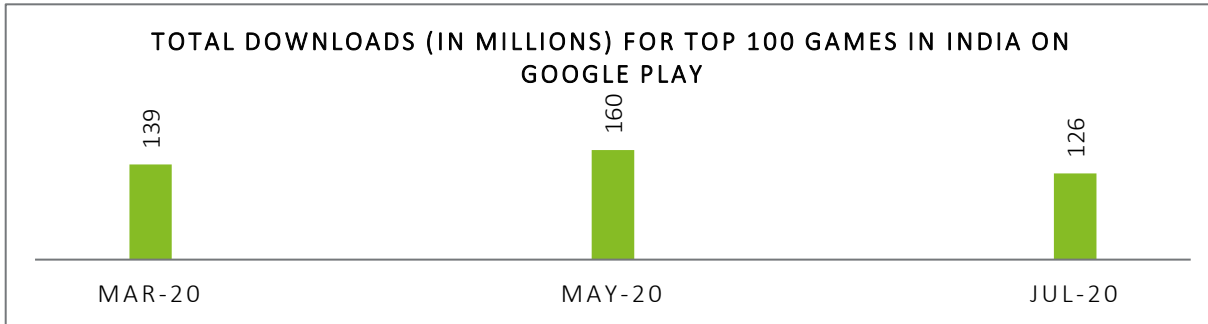
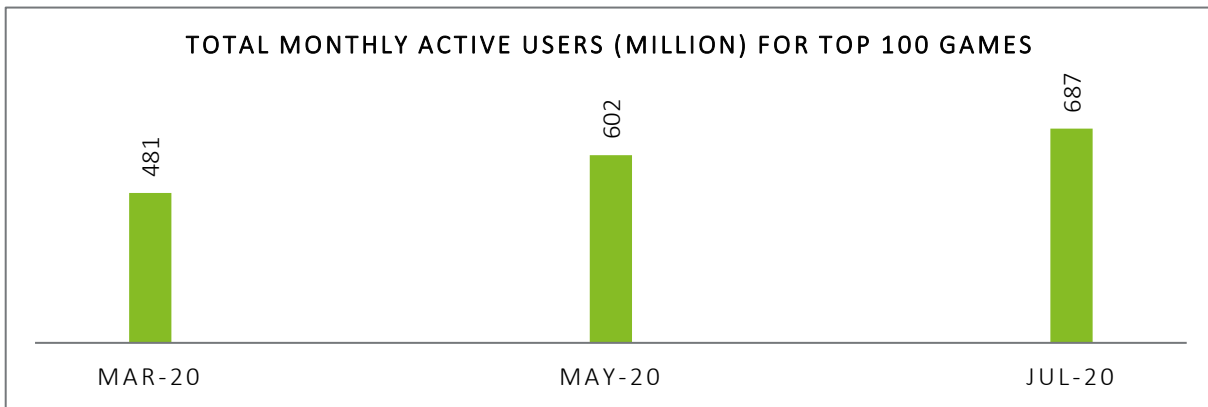


Figure 66: Total Monthly Active Users for Top 100 Games



The graphs above show the number of downloaded games and amount of time spent on online gaming during the pandemic. The number of downloaded games in India increased by 15 % between March 2020 and May 2020. Monthly active users saw a continued growth of ~34% from March 2020 to July 2020, reaching 65+ Crore by July. The amount of average time that has been spent on gaming apps has also shown an increasing trend during the lockdown, increasing from 2.5 hours on average prior to COVID-19 to 4.1 hours in the month of April 2020³².

Growth/ Revenue Trends

Basis the analysis of growth and risk factors, it is projected that Online Gaming sector will grow from INR 6,287 Crore in FY 2019 to INR 32,500 Crore in 2025 at a CAGR of 31.5%. Casual Games are the major contributor for this sub sector as alone contributing ~42% of the total revenue followed by ~30% by Non-fantasy games and ~28% by Online fantasy sports. COVID-19 worked as one of the growth drivers for the industry as sector witnessed a surge in demand for indoor entertainment.

Table 35: Revenue Trends-Online Gaming

Revenue Source (INR Crore)	FY 2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Casual games	2,640	3,770	4,736	6,782	8,400	10,500	13,650
Non-fantasy games	1,886	2,693	3,383	4,844	6,000	7,500	9,750
Online fantasy sports	1,760	2,513	3,157	4,521	5,600	7,000	9,100

³² FICCI 2020 report

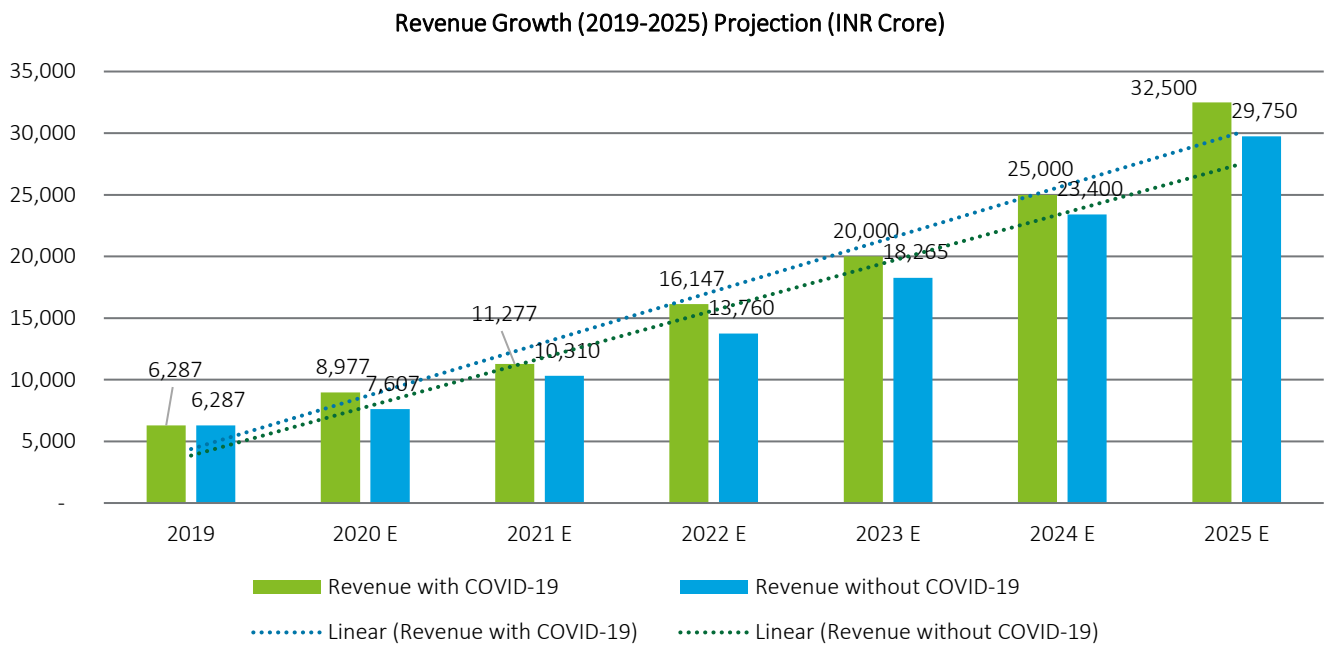
Total Revenue	6,287	8,977	11,277	16,147	20,000	25,000	32,500
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Source: FICCI report 2018, 2019, 2020, Expert interview and analysis

Key Assumptions:

1. Technology may have a positive impact through the period 2020-2025, especially because of launch of 5G and restriction on outdoor entertainments.
2. COVID-19 has had a positive impact on sector.
3. Launch of AVGC policy will work in favor of the industry enabling it to grow further.

Figure 67: Revenue Growth Projection (2019-2025)-Online Gaming



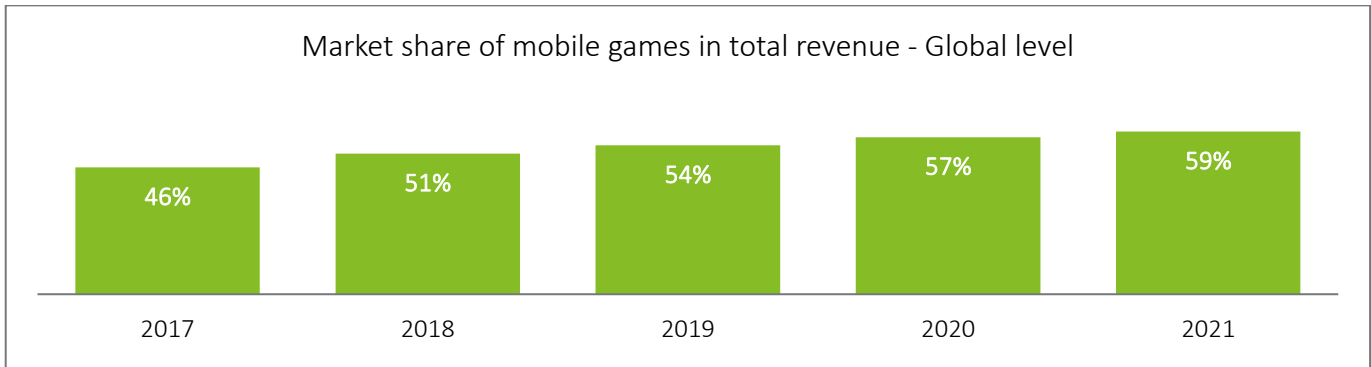
The above bar chart represents the impact of COVID-19 on the Gaming industry. It is projected that the industry would have grown at a CAGR of ~29.6% in normal circumstances till 2025 whereas, now the industry is expected to grow at the CAGR of ~31.5% considering the positive impact of COVID-19. The distance between the trend lines states the revenue gap of ~ INR 2,750 Crore. This is mainly because of the restricted movement for outdoor activities and increased demand for indoor entertainment with very nominal internet charges.

Global Trends

The market share of online gaming industry globally was ~USD 150 billion in 2019 and is expected to grow at a CAGR of over 9% in the next five years to reach a revenue size of USD 257 billion.

Mobile games rule the roost in global market also, with the market share of mobile games increasing over the years. Below is the table highlighting the same trend.

Figure 68: Market Share of Mobile Games in Total Revenue-Global Level

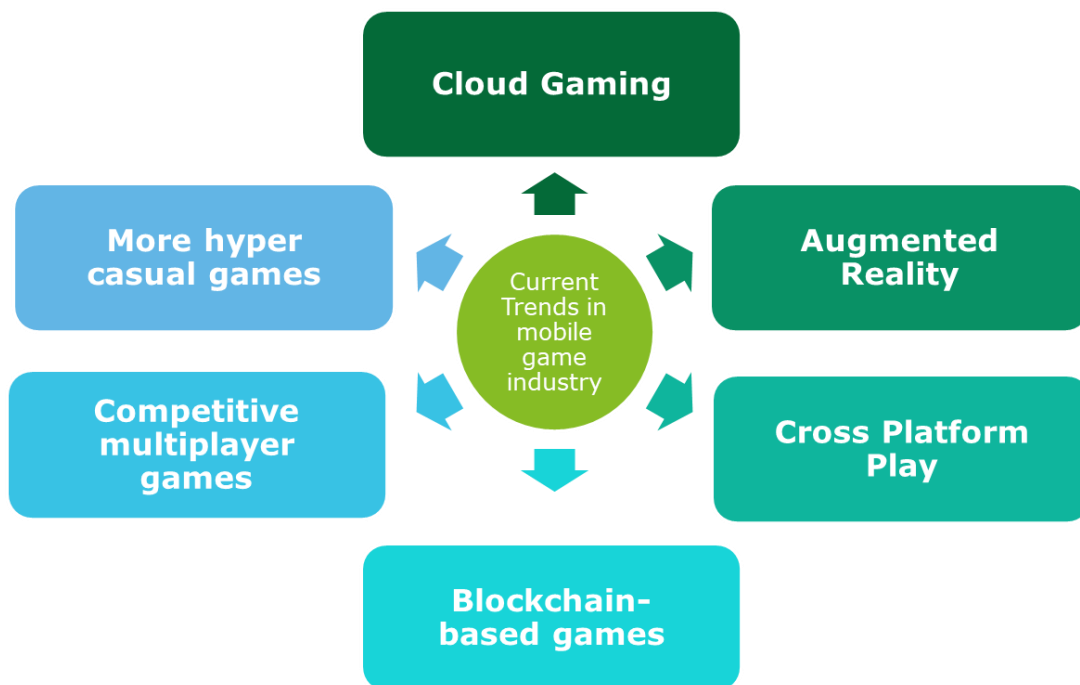


Recent Trends:

Legal sports gambling took a shot in the arm after US decided to do away with its gaming protection act in 2018. A plethora of online gaming start-ups, fantasy sports companies, and various sports leagues came up and took advantage of the lucrative gaming ecosystem.

Cloud gaming has garnered a lot of interest in the past few years with increasing use of technologies and innovative ideas to engage the customers. Cloud gaming isn't restricted by physical hardware devices and can be played on any platform since the games are stored in a main server and the server is responsible for processing, rendering and streaming of videos. With advancement of technology and increasing access to fast internet all around the globe, cloud gaming can penetrate the PC and console market in the near future.

Figure 69: Recent Trends-Online Gaming



In India, cloud gaming is still at a very initial stage, with none of the major services providing cloud gaming in India. There are also performance issues while operating with lags and occasional crashes. Future growth can be achieved by exploring this untapped area.

With plenty of gaming platforms available, different devices support particular genre of games, thus, segregating the market. Gaming companies and publishers are trying to mainstream cross platform gaming to reduce the customer divide based on

the type of device they own. They want to merge different platform owners like Xbox, PlayStation, PC, in order to penetrate a larger share of gaming market not hindered by the type of device.

COVID-19 has had a positive impact on the global gaming market as well, with majority of young people spending more time playing online games. According to a survey in March 2020, 45% more time was spent in US on playing video games compared to the pre-COVID-19 period. This upward trend was similar in other countries as well like France (38% increase), UK (29% rise), Germany (20% increase) etc.

The Human Resource Demand Forecast

The online gaming subsector will generate direct employment of 2.55 Lakh by 2025. It is expected to witness an annual incremental demand of ~2.05 Lakh people in the industry to be employed till 2025 over ~ 0.50 Lakh people employed in the year 2019.

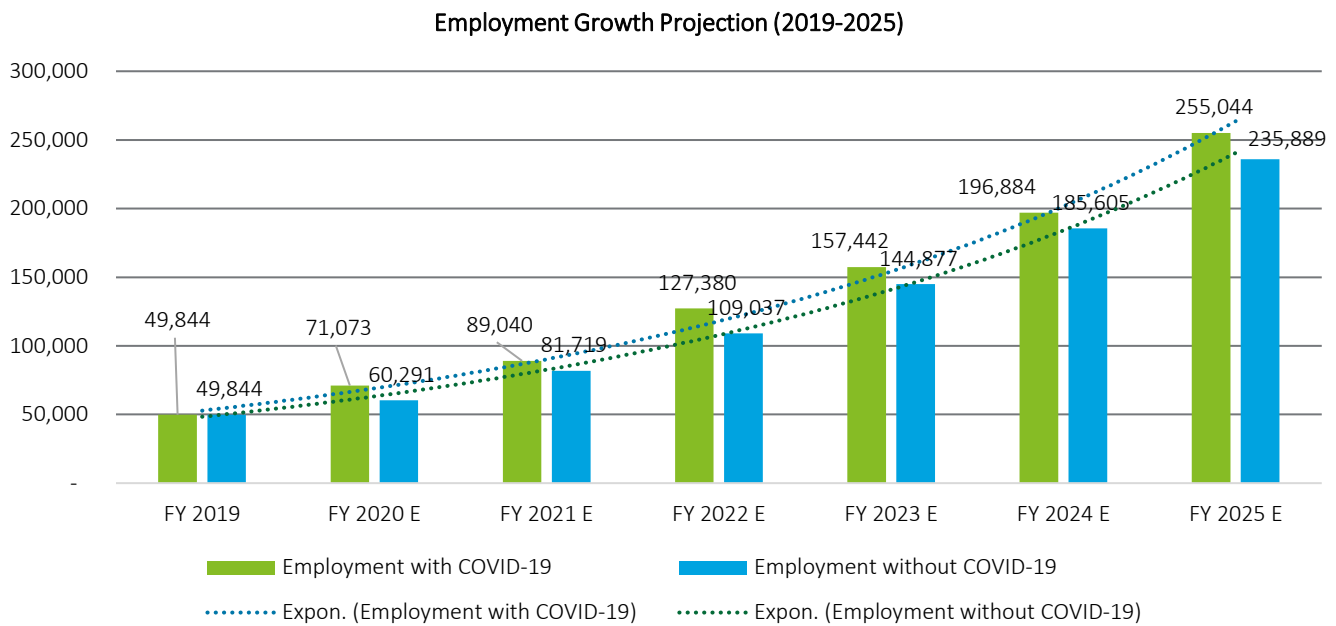
Table 36: Human Resource Demand Forecast-Online Gaming

Particulars	FY 2019	FY 2020 E	FY 2021 E	FY 2022 E	FY 2023 E	FY 2024 E	FY 2025 E
Estimated numbers of people employed in the industry (A)	49,844	73,271	82,445	119,047	152,856	193,024	250,043
Technological Environment		(733)		4,762	3,057	1,930	2,500
Political Factors/ Policy updates		(733)	6,596	3,571	1,529	1,930	2,500
Impact of COVID-19		(733)					
Total (B)	-	(2,198)	6,596	8,333	4,586	3,860	5,001
Total Estimated Employment (A+B)	49,844	71,073	89,040	127,380	157,442	196,884	255,044
Incremental Demand	8,203	21,229	17,967	38,340	30,062	39,442	58,160

Key Assumptions:

1. Technology may have a positive impact through the period 2020-2025, especially in the year of 2022 because of launch of 5G. Further because of network issues 2020, there was some technological barrier.
2. Launch of AVGC policy will work in favor of the industry enabling it to grow further particularly in the year 2021 with the effect tapering off in the subsequent two years. Further, with general election due in 2024 there may be additional political push in that year followed by further policy interventions in 2025.

Figure 70: Employment Growth Projection (2019-2025)-Online Gaming

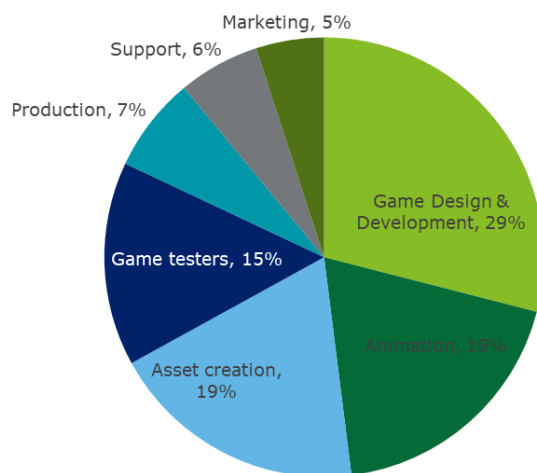


The bar chart above represents the impact of COVID-19 on the Online Gaming sub sector. It is projected that the industry would employ ~2.35 Lakh people cumulatively by 2025 whereas, now the industry is expected to employ ~2.55 Lakh people by 2025 considering the positive impact of COVID-19 in the Online gaming sub sector. The distance between the trend lines state the surplus employment of ~50,000 people in the sub sector because of COVID-19.

Employment Profile and Survey Insights

With continuous rapid growth of the online gaming sector in the past few years, there has been an increased demand in the different kind of personnel required in the online gaming industry. Below is the industry specific segregation of high demand job roles as per existing QP-NOS in online gaming industry :

Figure 71: Segregation of Job Roles in Online Gaming Industry



Rigging Artist: Their role is to design the framework and control the rigs of animated characters in the game. They make sure that the character movements are smooth and believable. They ensure that the animated character is as life like as possible and obeys the laws of physics.

Modelling Artist: Their role is to make 3D models by using a variety of computer software. Bringing characters and objects to life is their key concern. They use programming and coding skills to make new characters or edit existing ones.

Game tester: It's a key job role that requires to check the quality of the final product before it is launched. Game testers make sure that there are no lags/bugs/operational issues in the game. (QP-NOS under Draft Stage)

Trending Job roles for which specific skill trainings need to be developed :

Texturing Artist: They are responsible for creating the textures of a 3D animated object, to give them a life like feel with a layer of colours and surfaces imposed on top of an animated object. They work closely with 3D modellers and lighting artists to create the perfect environment.

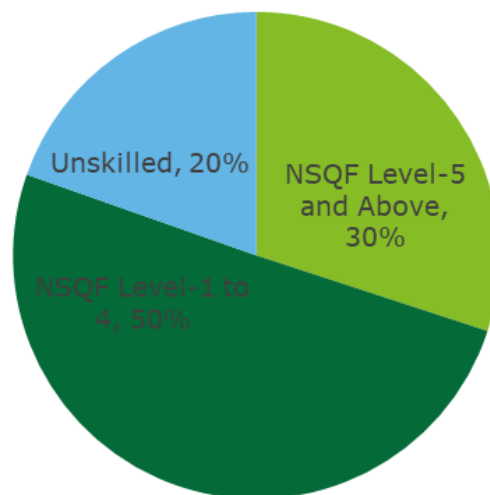
Game Developer: Their role involves planning, designing, story screening and producing games for various platforms. They are responsible for writing codes to implement game's features and functionality. They are responsible for developing the initial sketches of games in line with the games' general style. They also create 2D and 3D animations from the sketches made. They also perform activities like testing and debugging of games.

Asset creation involves rigging, modelling and texturing.

The distribution of work force on the basis of skill set is as follows:

Figure 72: Classification of Employees as per NSQF Level-Online Gaming

Classification of employees as per NSQF Level



Source: Survey Insights, Analysis

Supply Side

Currently there are over 275 private and public institutes in India in 2020 which provide gaming related courses with over 175 certificate courses, over 50 UG Diploma, over 25 B. Sc. courses, over 5 M. Sc and over 10 PG Diploma courses.

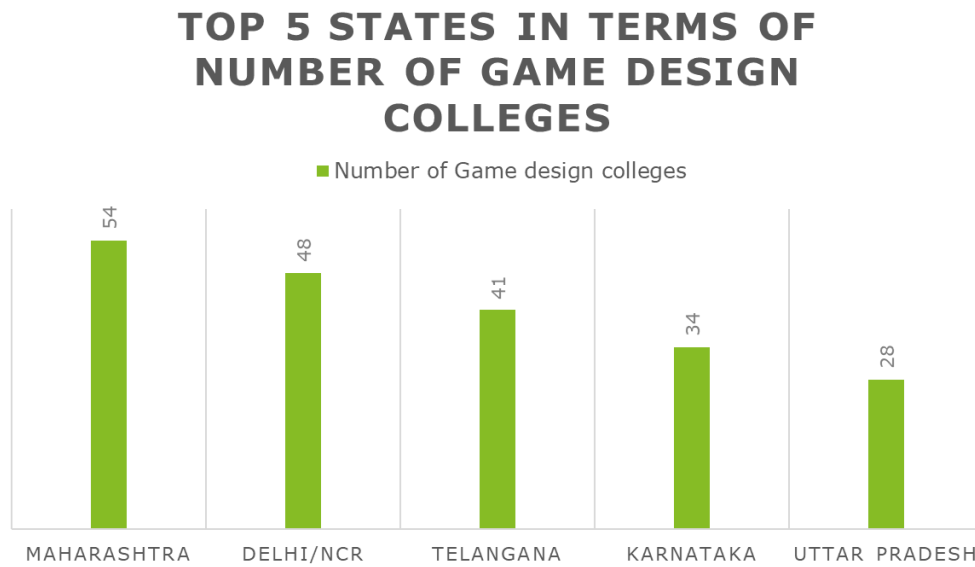
With an average number of 100 seats in the institutes providing gaming related courses, the total enrolment is about 30,000. Despite the increase in number of courses offered in the last few years, there is still a demand-supply gap in the gaming

subsector. There is a need for a one stop Gaming institute like a National Centre for Excellence which will provide relevant courses at par with industry expectations and international standards. Out of the institutes, around 200 are private institutes.

The number of Game design/development institutes in India as of 2020 is more than 10 times the number in 2010. With online gaming on the rise in India, there has been a steady increase in the demand for gaming related courses and hence the consequent increase in supply.

Although there has been a significant rise in number of institutes and number of courses offered, India is in its nascent stage when it comes to education and courses in upcoming sub sectors like cloud gaming, machine learning, data analytics, etc. There is a dearth of personnel who have relevant knowledge in these areas. This contrasts with the global scenario, where countries like US, UK, Japan and Korea have embraced Artificial Intelligence and Augmented Reality in the gaming sector and the sector there employs a large number of people.

Figure 73: Top 5 States in Terms of Number of Game Design Colleges



The Human Resource Supply Forecast

Details of Enrolment in UG/PG courses in Online Gaming

Table 37: Details of Enrollment in UG/PG Courses - Online Gaming

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
PG	1,900	1,900	2,014	2,135	2,263	2,399	2,543
UG	10,100	10,100	10,706	11,348	12,029	12,751	13,516
Certificate Courses	17,600	17,600	18,656	19,775	20,962	22,220	23,553
Total	29,600	29,600	31,376	33,259	35,254	37,369	39,611

Details of enrolment on vocational courses

Table 38: Details of Enrollment on Vocational Courses - Online Gaming

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
Total	28,180	8,454	28,180	29,871	31,663	33,563	35,577

Key Assumptions:

1. Since 2020 has witnessed COVID-19, there may not be any further addition to the enrolments at UG/PG levels compared to 2019.
2. Since all the vocational training centers were shut during 2020, it is assumed that the training was at 30% of the capacity of 2019.
3. 6% growth in training and teaching enrolments is considered for projection looking at the past performance of the supply side and AISHE report.
4. Only 50% of the graduating student numbers at vocational training were considered for calculating supply side of the online gaming subsector.

Analysis of Online Gaming Sub-Sector Careers

One can come from different types of career backgrounds and still get to work in the gaming industry. Even if one has a specialized degree in the fields of music, art, and science, they can make a career in gaming. However, gaming industry is a very challenging one and it demands extensive work hours, meeting tough deadlines, and putting the skills to test continuously. In the foreseeable future, jobs in the gaming sector would be booming in India. And with a boom in jobs, there will be a significant boom in the demand for gaming courses. There are standard positions and specializations in the gaming industry. Some of the best jobs in the gaming industry are Animator, Game Designer, Game Programmer, QA Tester, Game Tester, and Sound Engineer.

A career in Gaming Industry is exciting but strikingly competitive with a combination of creativity, technology, and hardwork. It is always an interesting and unique career for those who are passionate about gaming and commit their lives to creating new and improved games. But, creating a new game is not an easy task, as the competition rate is high, and the game industry is changing on a daily basis even as more and more games are invented.

Challenges in existing Education/ training system for the Gaming Sector

The challenges for the teaching/ training eco system for Gaming are not solely financial, infrastructure or of capabilities but there are also the technical challenges faced by the teachers and instructors implementing and monitoring the gaming : the faculty working with the game will need time to develop, implement, evaluate, guide and analyse what and how the students are learning. This type of evaluation will require the faculty to be trained to understand how the game works, it's alignment with the curriculum and how the game can help them in teaching. Getting everyone "on board" is key to engaging the students and making the teaching/ training successful.

Overlooking personal attributes:

According to sector experts, candidates who wish to make a career in game designing need to be innovative, creative, systematic, dedicated and have a clear understanding of common game mechanics and game play theory. One should possess the art of sketching or drawing and have a sound understanding of anatomy of humans, animals and birds and an in-depth understanding of body movements and lighting effects. Game designing is a field which requires a keen eye for detail, loads of patience, and excellent communication and presentation skills. A game designer must have a good sense of colour, proportion, size, design, visualization, knowledge of background, art and layout. Even the renowned institutes tend to overlook paying attention on these facets, rendering them as not so successful.

Placement support:

The pay scale and growth in this industry depends on how well one can conceptualize and develop the concepts. As a trainee, one is generally paid around Rs 7,000 to 10,000 per month. Lack of proper placement opportunities is one of the major challenges that discourages young talent from joining the industry.

Lack of live projects:

It is supremely important that live projects are included in course curriculum as most of the students are going to work as freelancers—so that they are provided a compete handholding on how a game is developed. This overall learning can be demonstrated only through live projects running in the classrooms.

Need for Big Projects:

There are more freelancers in gaming industry than higher end jobs. There should be regular training session for the teachers of gaming sector by the industry experts so that the teachers are updated as per the latest industry practices and trends. Majority of Indian companies work on small jobs. The institute need to aim to fetch bigger projects for their students.

Lack of foreign exposure:

The college faculty in India is a bit too conventional but there is a dire need to apply modern approaches when it comes to teaching/ training for the gaming industry. Students need foreign exposure to get the bigger picture and understanding of the industry worldwide through compulsory internships and exchange programmes.

Creating a gaming atmosphere that is adapted to the learners' ability:

Undoubtedly, in today's classrooms most students will be digital natives born in the era of Internet, cell phones and easily accessible computers. But this still does not apply to all learners nor does it represent the ability and gaming knowledge of every learner. Adapting the teaching/ training to respond to these differences is difficult.

Learning of Computer Languages from early ages:

Those interested in pursuing a career in gaming industry need to focus on gaining knowledge with computer programming in an object-oriented language such as C++ or Java, from their high school level, so that they can build a bright on it in later years. So, more focus needs to be paid to learning computer languages from high school itself.

Insights on Future Jobs & Skills

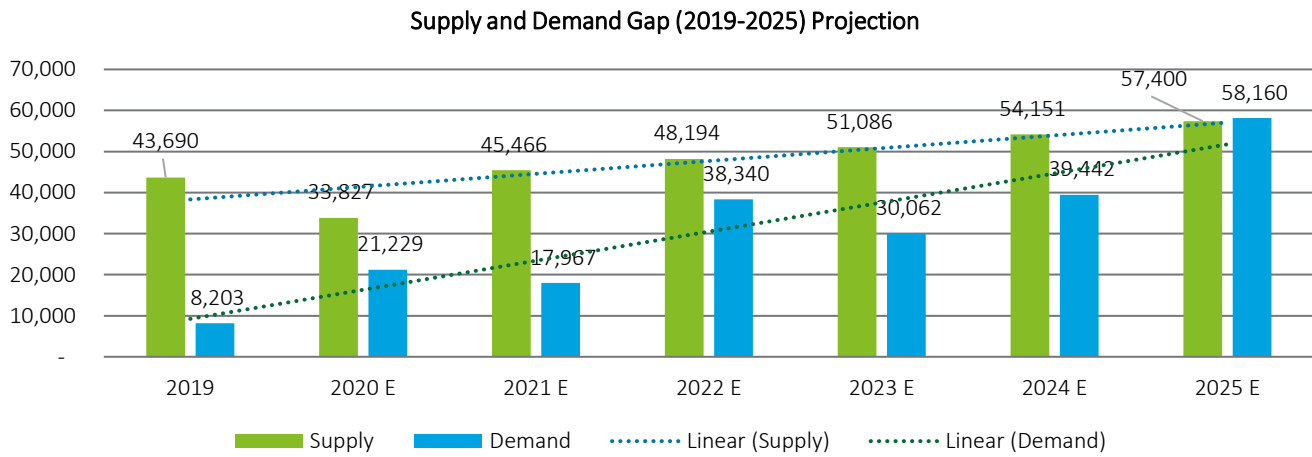
It is believed that new technologies like Artificial Intelligence (AI), Cloud Gaming and Data Science will play a key role in the future of online gaming in India. These areas are relatively untapped and can be a potential source of growth and employment in this sector in future. Thus, specific skill trainings need to be developed for the following emerging futuristic job roles:

- a) **Machine Learning Architect:** Their role is to apply machine learning with cross functional teams. They help in designing and developing of machine learning algorithms and models.
- b) **Data Scientist:** They use statistical and data mining techniques to solve and model complex problems and identify opportunities. Their responsibilities include designing experiments and testing hypothesis to optimize operations along with solving analytical problems. This helps in creating personalised content by allowing real time interaction. They use performance analytics to identify weakness, track improvements and observe trends.
- c) **Machine Learning Engineer:** They help in creating ML products and should possess statistical and programming knowledge. They are responsible for developing data science prototypes, running machine learning tests and experiments and performing statistical analysis using test results. They use the strength of algorithms to make predictive models to predict the actions of a player in a game.
- d) **Cloud Developer for Gaming:** Since cloud gaming is still in its infancy in India, this role can create excitement and enthusiasm for cloud services for game developers. Their role will be to help game developers learn how to leverage cloud services successfully.
- e) **Gaming and Visualization(G&V) Development and Integration System Engineer:** Their role will include using 3D models, visualization of various gaming scenarios and providing technical expertise to ensure proper integration of G&V products.

- f) **Esports Admin:** An eSports tournament referee or admin monitors the tournament and ensures that the team players are adhering to all the rules and settles disputes. He should have good interpersonal skills and vigilant to resolve disputes and come to a suitable decision.
- g) **Esports Influencer:** Those who make a name for themselves in these places can be highly effective influencers – eSports fans would trust their views over anything they saw published in a more traditional location. This loyalty follows through to the brands that influencers promote. Their followers are likely to take a genuine interest in what their influencers support.
- h) **Community Admin:** Community administrators manage the access, review processes, and change management integration for communities. While repository administrators oversee high-level repository maintenance and organization, community administrators manage assets, roles, privileges, and review processes to ensure that users can work with the repository effectively.

The Human Resource Demand Supply Gap

Figure 74: Supply and Demand Gap Projection (2019-2025) - Online Gaming



The above bar graph shows that there will be surplus in terms of supply of manpower in comparison to the incremental market demand for the workforce over last year in Online Gaming sub sector till 2024. In 2025, the demand may surpass supply because of the rapid growth of the online gaming sub sector compared to other sub sectors in Media and entertainment sector. Vocational training should focus on further skill upgradation/ certification with industry exposure for the UG/PG students to diminish the huge supply and demand gap.

Potential ways for Atma Nirbhar Bharat

As a part of the Atma Nirbhar Campaign, there has been a call from the government to develop computer and mobile games that are made and based in India. Post the ban on PUBG, which had a huge user base in India, games like FAU-G have come into the market to serve some of the users playing PUBG.

To further penetrate the villages with internet connectivity, the second phase of BharatNet project is aiming to provide broadband connectivity to 2.5 Lakh gram panchayats³³. The access to net in rural India will pave way for a much larger growth in this sector with gaming development companies and developers launching new mobile game apps that are made and based in India.

Additionally, India needs to move from being a service provider to international gaming products to developing its own IP- this required experienced game designers from developed markets to work for Indian gaming companies.

³³ thebastion.co.in



E.8 Print

Print Sub-sector Overview

Print Media is one of the oldest medium of public communication in India. Bengal Gazette is the first ever print media in India which was started in the year 1780 by James Augustus Hickey under British Raj. Other Newspapers like The India Gazette, The Calcutta Gazette, The Madras Courier, the Bombay Herald also started publishing news under the British rule. The Bombay Samachar, founded in 1822, is the oldest Asian newspaper which is still in print.

The Indian Print Media subsector primarily comprises of newspaper and periodicals publishing, with revenue generated through Advertising and Circulation. As on 31st March 2018, there are 1.1 Lakh publications registered with Registrar of Newspapers for India which include 17,573 Newspapers and approximately 1 lakh periodicals across the country. The size of print industry in 2019 is approximately INR 32,300 Crores.

While the newspaper industry is dwindling worldwide, it continues to grow in India largely on the back of vernacular markets. Very specific drivers that India has, such as cost advantage, home delivery and a deeply entrenched habit of starting a day with reading newspaper, contribute to the overall growth of this sector. However, with the advent of digital media, there has been some dent in the growth curve, but it is unlikely to make Print media obsolete in near future.

The year 2019 has witnessed an unprecedented event of a world-wide pandemic which has deeply affected the economies of the countries across the globe. Many leaders, businesses and corporates are changing their strategies and adopting according to the 'new normal'.

COVID-19 has severely impacted growth and employment in the Print sub-sector in the year 2020 but it is projected to increase to INR 36,000 Crores approximately by 2025 with CAGR of ~1.8%. The eventual pick-up in growth in the coming years would be helped by various socio-political factors, but it will follow a sluggish growth trend and the economy will take its time to recover from the impact of the pandemic. The print sub-sector employs about 88,000 people directly as per 2019 data and is expected to employ about 96,000 people by 2025.

Expert Opinion...



Ujjawal Trivedi,
Senior Journalist

There is a possibility that traditional journalism- both print and electronic may increasingly become predictable. It may remain stuck in time-warp with its burden of the past and past formats, practices, compulsions and affiliations. It may become monotonous too. It may also increasingly lose its objectivity, move away from pursuit of truth and end up becoming populist or 'advertisement' or mouthpiece for some views, people or entities.

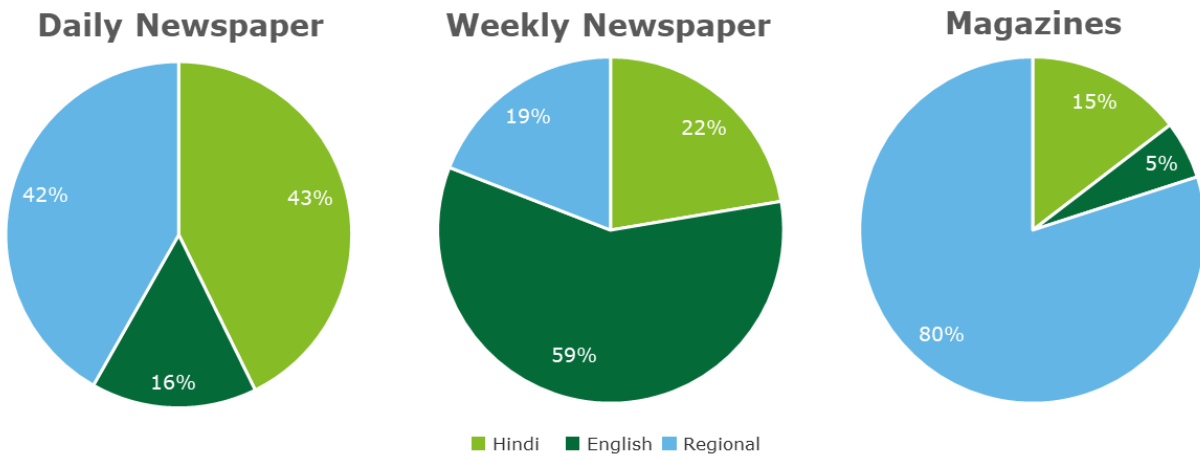
Social media is emerging, albeit slowly, as an alternative with some people willing to get their information from it. While the trend is still small, it may democratize journalism since it allows everyone to share their point of view. But to be able to become an effective alternative, or at least a commentary on the TV and print media, it would need to remain honest to the core. Social Media Journalism will require a different set of skills from traditional media.



Dailies Readership

The following has been the trends as per the readership trends in 10 major dailies across different languages (Hindi, English and Regional). In terms of circulation, Hindi language is the highest among daily newspaper at 43%, nearly half of the circulations in the country. However, among Magazines, Regional languages top at 80% as per the data of Audit Bureau of Circulation, 2019 report.

Figure 75: Dailies Readership-Print



Growth Drivers in Print Sub Sector

There are several major growth drivers in Indian Print Sub Sector. The Indian Print Media industry is very different from the industry in developed markets owing to multiple reasons:

- Cost Advantage:** Price of the Indian Newspaper is very reasonable in comparison to other western economies. Indian newspaper costs around INR 200 (\$3) per month which is equivalent to a single day newspaper cost in USA. Further Indian Newspaper sub sector is more inclined towards advertisement based model. Advertisement contributes around two third of the revenue in printing sub sector. Hence, reader contributes to only one third of the price of any newspaper.
- Home Delivery:** In India newspapers get delivered at the doorstep. People don't have to pick them up from shops like in some western economies. Further, the Newspaper supply chain in India is so strong that they ensure delivery of the paper round the year be it is in metropolitan cities or it is in one of the remotest areas of far flung mountains, deserts or islands.
- Credibility and Habit:** People have developed a deeply entrenched habit to start their day with reading newspaper. Members of family especially those above 35 still prefer a physical copy of the newspaper. Indians have a greater faith on a written word. Hence, the credibility of print media is higher than other media in India.
- Policy Updates:** Government has launched various schemes and updated policies to stimulate growth in the print media. Time to time updates and favorable policies help print media in India to grow. Recent approval of the Print Media Advertisement Policy 2020 of the Government of India will act as a growth driver for the print media in India.
- Political Conditions:** India is the largest democracy in the world and elections are an expensive affair in India since political parties tend to spend a lot in advertisement with Print media during elections. Hence, print media earns a significant amount of revenue during elections across country. During 2018-2019 when there was general election in India, the print media average revenue grew at an additional 2%.

Figure 76: Growth Drivers-Print



- Increasing Literacy Rate:** The literacy rate in India is 77.7%. It is 3% more than the census data released in 2011. With an increase in literacy rate people prefer to continue with the reading habit. Further newspapers covers more local news in comparison other media.

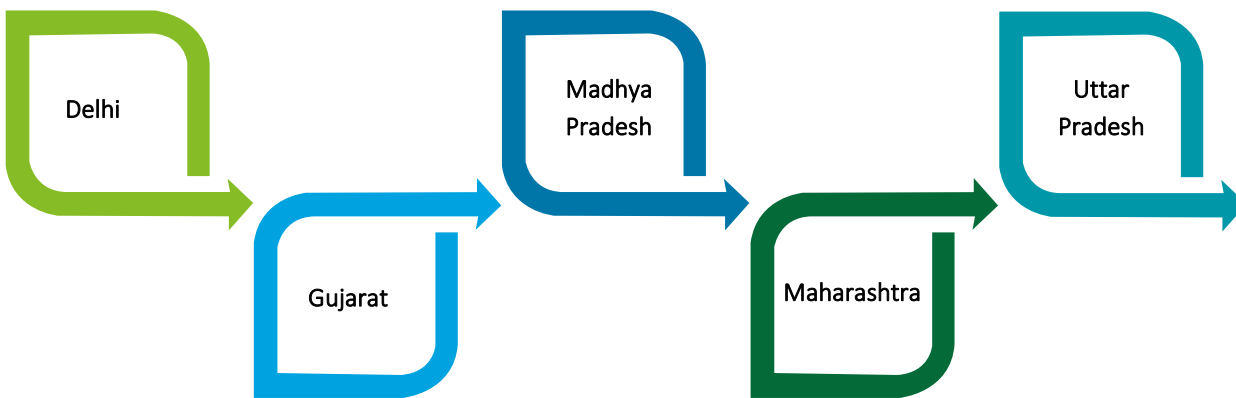
State Level Industry Shifts

Uttar Pradesh contributes highest number of people in print sub-sector followed by Maharashtra, Madhya Pradesh, Gujarat & Delhi. There is a direct correlation between the number of copies circulated in print media and number of people employed in print media in any state. Uttar Pradesh is the leading state in terms of circulation with over 3.3 crore copies per publishing day followed by Maharashtra (2.65 crore), Madhya Pradesh (2.48 crore), Gujarat (1.99 crore), Delhi (1.69 crore), Andhra Pradesh (1.59 crore) and Rajasthan (1.33 crore). Also, in coming five years, these states will continue to be prominent in terms of employment.

High Demand Job roles in the subsector & in key states/ cities:

Community Journalist and Graphic Designer are two of the high demand job roles as per existing QP-NOS for the subsector including for the above mentioned states/ cities.

Figure 77: Top 5 States with Maximum Circulation and Employment-Print



Source: Audit Bureau of Circulation, RNI

Global Trends

Readers and advertising spending drop

Print Media is no more the first option for many corporates for advertising. Both readership and advertising revenue is witnessing a drop globally in recent years because of the emergence of the digital media as an alternative. Moreover, magazines in particular are faced with serious issues in terms of circulation and advertising revenue.

Continuing unique place of print

Print has personal impact on people in that it can be touched and felt. Fine art is created when paper and ink come together in a powerful way. It is the reason why globally people are still admiring print. It may be rightly said that print is witnessing challenges, but it is not dying at all.

Premium Content

Premium advertisement- free print is evolving globally across the print media. Since the majority of the reader are shifting towards digital platform, they prefer not to see any advertisement in their print as well and are willing to pay a premium for such content.

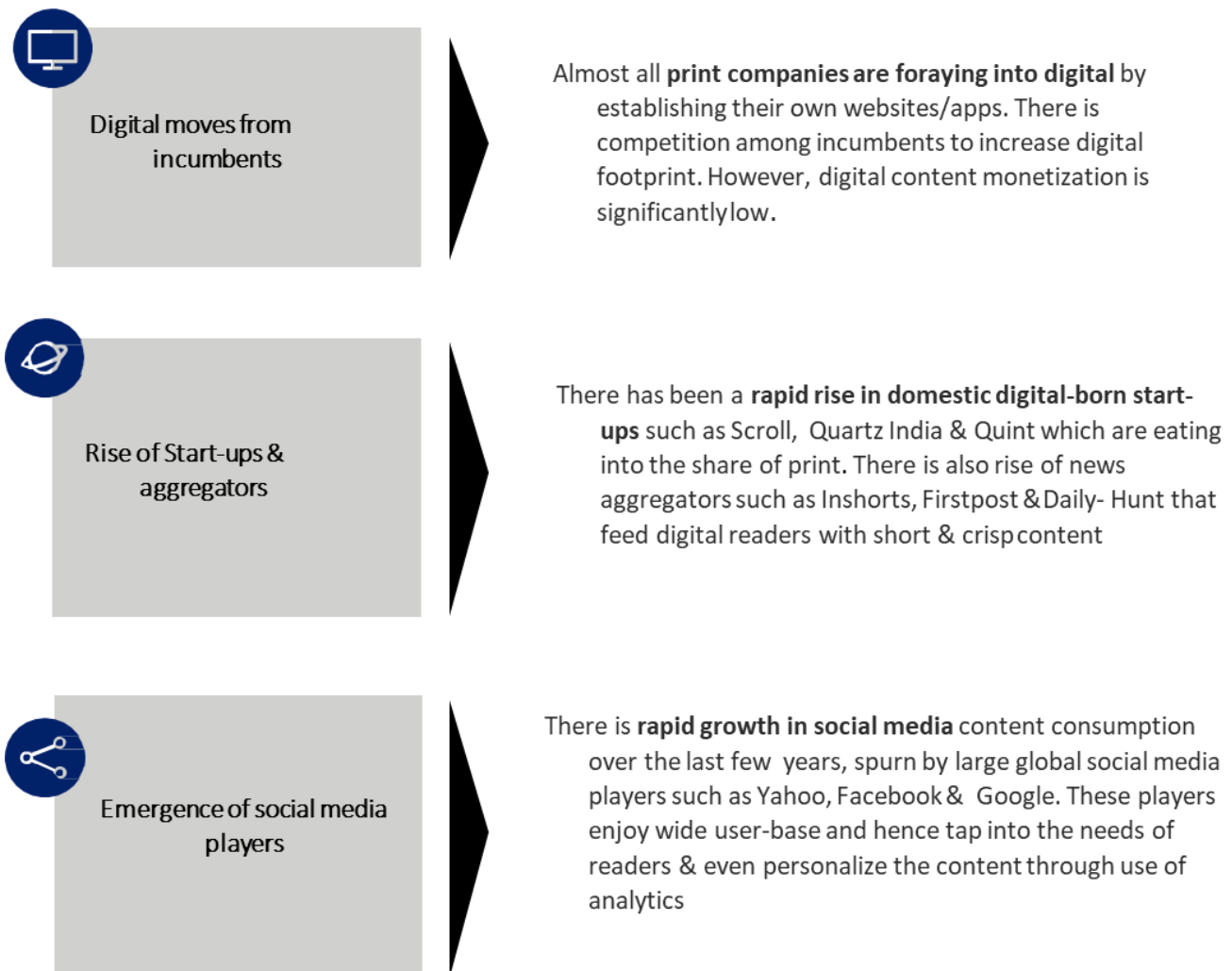
Regarded as more reliable

Print advertising is unlikely to disappear any time soon. Few of the corporates who prefer their advertisement to be seen by the people for a longer duration prefer print as their first option. Further, print is regarded as a busy-person's communication medium globally since they prefer reading newspaper alongside other activities in their busy routine.

Increasing competition

There are several other media available to customers which are regarded as the substitute to print media. These are creating competition for the print media.

Figure 78: Increasing Competition-Print



Impact of COVID-19

The print media has been one of the most adversely affected sectors due to COVID-19 pandemic. There has been an initial decline in readership, dwindling advertisement and a disruption in circulation. As a result, Indian print media houses were initially forced to take some steps for their survival like cutting down the number of pages and shutting down their editions in certain areas, salary cuts, leave without pay and retrenchment of employees.

Decrease in circulation

With the lock down, people refrained from touching newspapers due to fear that they were a carrier of the virus. Instead, they switched over to the e-paper editions. With a significant decline in readership and due to dwindling advertisements and a serious disruption in circulation of newspapers and magazines, different media houses are forced to take extreme steps.

Dwindling Advertisement

Almost all the print media agencies witnessed a decrease in the volume of advertisement during COVID-19. The advertisement rates got slashed to almost 50% of the pre COVID-19 rates. Major sectors which contribute more to the advertisement for print viz. automobile, retail and telecom reduced their advertisement expenditure as a cost cutting measure.

Cost Cutting

More than three-fourths of the print industry executives on a recent study reported cost cuts, with some reducing their staff strengths. The salary deduction ranged from 10% to 50% depending upon how badly the publications were hit. Some of the smaller players resorted to leave without pay system as they were unable to pay the salaries.

Retrenchment of Employee

A lot of employees lost their jobs because of the adverse commercial impact of COVID-19 on the industry. It is widely assumed that about 5000 employee lost their jobs. In case of revival, these employees might be reinstated.

Need for support

More than half the respondents are looking for extended/flexible payment terms from suppliers.

Change in models

Around half the Print sector players state that they will need to change their operating model going forward and will be bringing new products and/or services to market.

Print subsector growth/ revenue

The Print Industry in India grew from INR 24,800 Crores in 2014 to INR Crores 32,300 in 2019.

Table 39: Revenue Trends-Print

INR Crore	2019	2020E	2021E	2022E	2023E	2024E	2025E
Advertisement	23000	21700	22100	22800	23900	24600	25600
Circulation	9300	8700	8900	9100	9600	9900	10300
Total Revenue	32300	30400	31000	31900	33500	34500	35900

INR Crore	2019	2020	2021E	2022E	2023E	2024E	2025E
News Paper	30900	29100	29700	30600	32100	33100	34400
Periodicals	1400	1300	1300	1400	1400	1500	1500
Total Revenue	32300	30400	31000	31900	33500	34500	35900

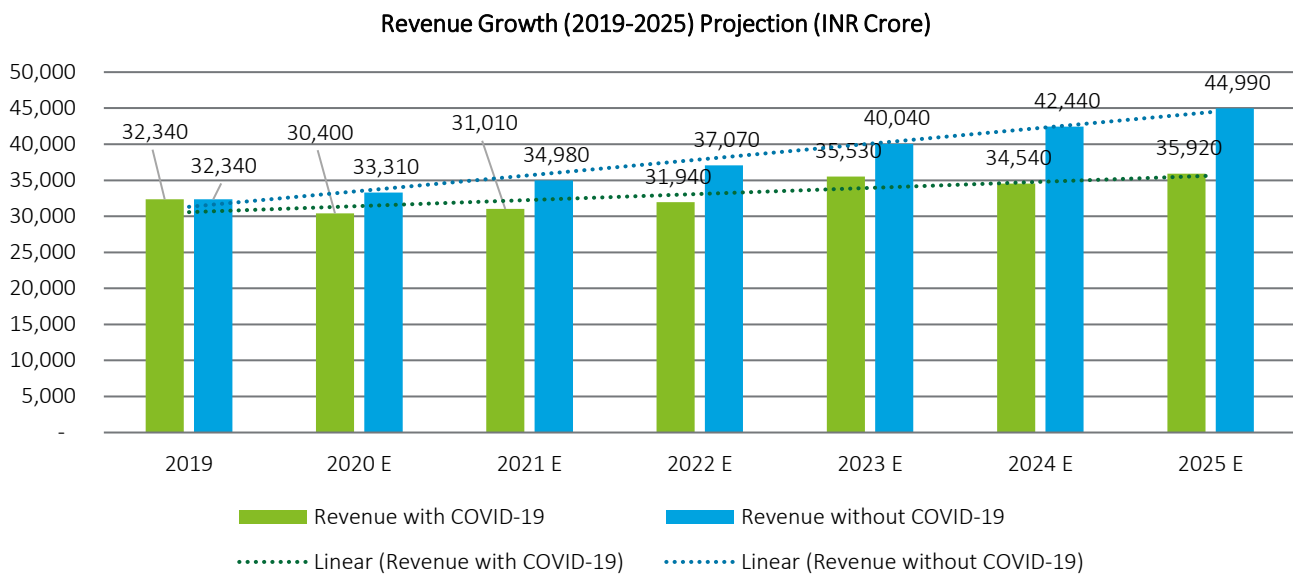
Source: FICCI 2020, other reports and detailed analysis

Key Assumptions:

1. Technology may have negative impact through the period 2021-2025

2. COVID-19 has a serious impact on sector, with negative growth rate (-6%) in 2020
3. There may be a slight upward push with the policy interventions and long term package declaration by government in FY 2020, increasing the growth rate to 1.8% in coming years.
4. The sub-sector may also be affected positively by upcoming general elections (FY 2023-2024)
5. Sector to take time to reach normal growth (~6%) period

Figure 79: Revenue Growth Projection (2019-2025)-Print



It is quite evident from the above projections that on an average advertisement contributes to around 71% of the revenue and the reader contributes to only 29% of the total revenues in case of newsprint. It is further seen from the projection model that Newspapers contribute around 96% to the print media sector revenue whereas periodicals contribute to only 3.5% of the total size. Further, book publishing which is a part of this sector contributes to a very minimal share of 0.5% only.

The bar chart above represents the impact of COVID-19 on the printing media. It is projected that the industry would have grown at a CAGR of ~5.7% in normal circumstances till 2025 whereas, now the industry is expected to grow at the CAGR of ~1.8% considering the negative impact of COVID-19. The distance between the trend lines state the revenue gap of ~3.9% CAGR of the print sub sector.

The Human Resource Demand Forecast

Acknowledging the impact of COVID-19 and external factors, the Print subsector will generate direct employment of 96,000 by 2025. It is expected to witness an incremental demand of ~ 8,000 people in the industry to be employed till 2025 over ~88,000 people employed in the year 2019.

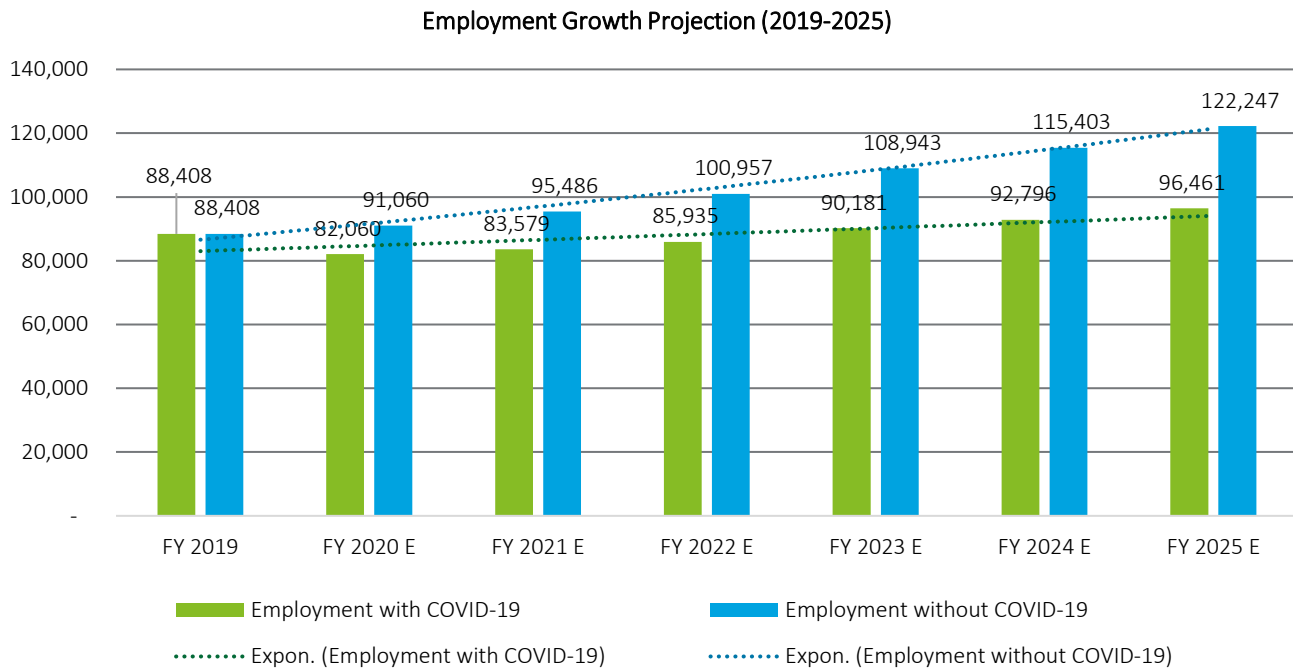
Table 40: Human Resource Demand Forecast-Print

Particulars	FY 2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Estimated numbers of people employed in the industry	90,212	90,176	86,163	88,593	91,092	94,690	97,436
Total (A)	90,212	90,176	86,163	88,593	91,092	94,690	97,436
Technological Environment	(2,706)	(4,509)	(2,585)	(4,430)	(3,644)	(2,841)	(1,949)

Political Factors/ Policy updates	902	1,804	1,723	1,772	2,733	947	974
Impact of COVID-19	-	(5,411)	(1,723)				
Total (B)	(1,804)	(8,116)	(2,585)	(2,658)	(911)	(1,894)	(974)
Total Estimated Employment	88,408	82,060	83,579	85,935	90,181	92,796	96,461

Source: Registrar of Newspaper for India, Expert Interview & detailed survey Analysis

Figure 80: Employment Growth Projection (2019-2025)-Print



The bar chart above represents the impact of COVID-19 on the print media. It is projected that the industry would have employed ~1.22 lakh people cumulatively till 2025 whereas, now the industry is expected to employ only ~0.96 lakh people by 2025 considering the impact of COVID-19 on the print sub sector. The distance between the trend lines state the employment gap of ~28,000 people in print sub sector because of COVID-19.

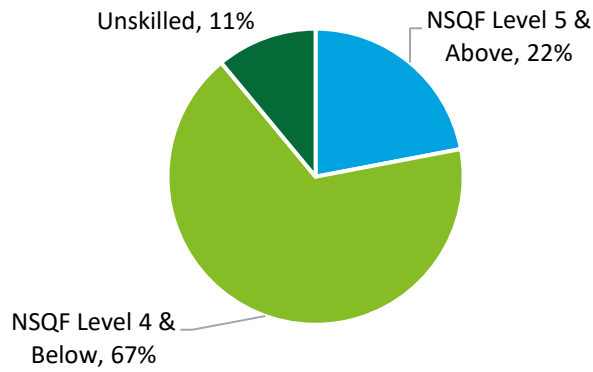
Survey Insights

A Survey during November- December 2020 with regards to print sub-sector covered various leading sectoral players having considerable impact at national and regional level, industry associations working in this sub sector, students aspiring to pursue their career in this sub sector and academicians who have experience in the industry.

Division of employees on the basis of Skills

The survey reported that 67% of the employees working in printing subsector are pertaining to NSQF Level 4 & below followed by 22% at NSQF level 5 and above. Further, the % of unskilled employees working in this sub sector is 11%. There would a need to focus on the 78% employees in the unskilled and semi-skilled categories for skill development.

Figure 81: Division of Employees on the basis of Skills-Print

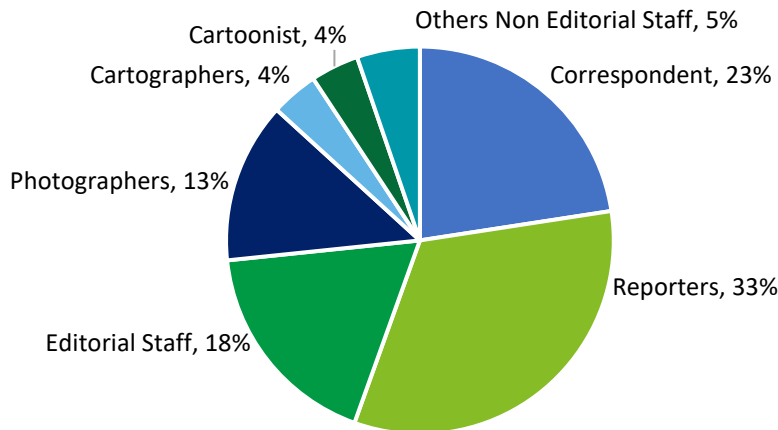


Source: Expert Interview & detailed Survey Analysis

Distribution of Industry Specific Job Role in Printing Agency

The survey reported that ~33% of the employees working in printing subsector are reporters followed by ~23% who work as correspondent staff and 18% as editorial staff. Reporters, correspondents, editorial Staff and photographers are among the leading and demanding job roles in the sub sector.

Figure 82: Distribution of Industry Specific Job Role in Printing Agency



Source: Registrar of Newspaper for India, Expert Interview & detailed Survey Analysis

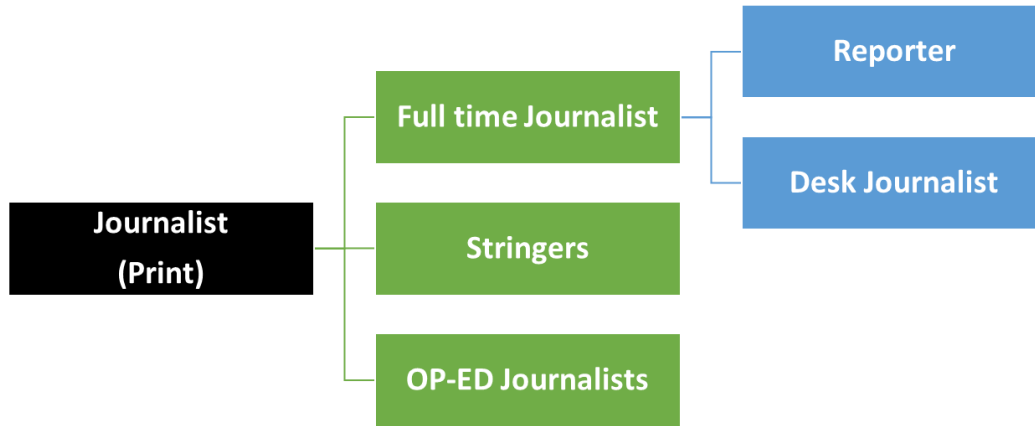
Employment Profile

Print Media is one of the oldest form of media. Most of the young aspirants who enter the print media prefer to work in the reporting function, but newspapers and magazines also seek young talent as photographers, page designing artists, desk editors, computer experts, librarians, and cartoonists. Students with good writing ability, graphics, photography or other relevant skills and curiosity to learn and evolve coupled with appropriate educational qualifications have a better chance of finding employment in the sub-sector.

A. Industry Specific Roles

- a) **Journalist:** Journalist are the backbone for any of the print media agencies. Print journalists are generally differentiated from other journalists as they require specialized knowledge and skills in writing including proficiency in spelling, grammar and punctuation. Journalists can further be categorized as below.

Figure 83: Classification of Journalists-Print



- b) **Photographers:** Printing media agencies also have photographers. They are usually attached to journalists and captures the pictures which are included in the articles.
- c) **Printing, packaging & distribution team members:** These are the people who take care of the back-end operations of the agencies. They are the ones who deliver the newspapers and magazines successfully to the distributors, retailers and customers. Many of them directly interact with the readers.
- d) **Graphic/ layout designers:** The printing media agencies have graphic designers/ layout designers to take care of the presentation aspects of the information.

B. Specialised Roles

- a) **Cartoonist:** They create cartoons which adorn part of a newspaper/ magazine and have a large impact on the readers conveying a message in very few words or through a sketch.
- b) **Domain experts in specific subjects:** They are experts in any of the subject areas. Their opinion is of the highest importance on any active issue relating to the subject i.e. financial expert and economist at the time of budget.
- c) **Cartographer:** These people are engaged in fact checking of the news which are to be published. They are responsible for maintaining credibility of the newspapers by verifying news and screening out fake news.

C. Generalized Roles

- a) **Marketing, advertisement and sales professionals:** They are one of the important professionals for any of the agencies. They take care of the revenue generation aspects of the print media agency.
- b) **Admin, finance and HR Staff:** They are regarded as the enabling function employees for any of the organization.

The Human Resource Supply Forecast

The courses available in print sub-sector are majorly divided into two types

- UG/PG courses
- Vocational Courses

Degree in Journalism & Mass communication and Degree in Print Technology are most sought after qualification by the employer in print sub sector. Experts believe that 20% of the graduating Journalism & Mass Communication and Print Technology students opt for print media careers. Male to female employment ratio in the print sub sector is 80:20. Further only 34% students trained in sector related vocational courses are placed into the Print Sub-sector. Considering the previous trends of enrollments into sector aligned UG/PG courses and vocational Courses and impact of COVID-19, it is estimated that about 85,000 students will graduate out in 2025 and be ready to be employed in print industry.

Details of Enrollment in UG/PG courses in Journalism, Mass Communication and Print Technology Courses

Table 41: Details of Enrollment in UG/PG courses in Journalism, Mass Communication and Print Technology Courses

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
PhD	716	716	759	804	853	904	958
M. Phil.	239	239	253	268	284	301	319
PG	19088	19088	20233	21447	22734	24098	25544
UG	27677	27677	29338	31098	32964	34942	37038
Total	47719	47719	50582	53617	56834	60244	63859

Details of enrollment on vocational courses

Table 42: Details of Enrollment on Vocational Courses-Print

Particular of Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
Account Executive	306	92	306	324	344	364	386
Advertising Operations Coordinator	323	97	323	342	363	385	408
Compositor	135	41	135	143	152	161	170
Graphic Designer	11021	3306	11021	11682	12383	13126	13914
Sales Coordinator	184	55	184	195	207	219	232
Sales Director	144	43	144	153	162	172	182
Sales Executive	5193	1558	5193	5505	5835	6185	6556
Sales Manager	8	2	8	8	9	10	10
Traffic Coordinator	99	30	99	105	111	118	125
Total	17413	5224	17413	18458	19565	20739	21984

Key Assumptions:

1. Since 2020 has witnessed COVID-19, there may not be any further addition to the enrolments in UG/PG level.
2. Since all the vocational training centers were shut during 2020, it is assumed that the training at 30% of the capacity of 2019 will be possible in 2020
3. 6% growth in training and teaching enrolments is considered for projection looking at the past performance of the supply side and CAGR of the Industry.
4. Only 20% of the graduating student numbers at UG/PG and Vocational training institutes were considered for calculating supply side of the print subsector.

Analysis of teaching/ training in the Print Sector

The experts suggest that there is a huge skill gap between the education provided at the academic institutes and the actual requirement in the industry. The freshers who join the organisations are usually graduates in Journalism and Mass

communication and many of them lack basic knowledge and skills in content writing, reporting, Image Management & photography. Further, they suggest that for education in the Print Media sector, greater focus needs to be more on practical training.

It was also mentioned that better known and preferred training institutes are based in large metropolitan cities like Mumbai, Bangalore and Delhi. Tier-II cities need to be focused on in order to develop competencies infrastructures and to nurture talents in smaller cities and towns.

Challenges in existing Education system for Print Media

Need for Minimisation of gap between course curriculum & industry needs:

There is a huge gap between the industry requirement and the current course content. The types of technology which are available in the news centre replicas of the top ranked institutes are outdated in comparison to what is being used by the industry. Hence this gap can be appropriately bridged by upgradation and updating of relevant technologies and hardware at regular intervals. The government may form a policy for the revision of the curriculum for media and mass communication courses. It was also mentioned that the syllabus shall be drafted by the industry experts in coordination with academic experts for the students to stay relevant in the market.

Need for Train the trainer programs:

There should be regular training session for the teachers of media and mass communication by the industry experts so that the teachers are updated as per the latest industry practices and trends. Currently there is hardly any exposure for the academicians to the real working environment in Industry.

Need for Vocational or Refresher courses:

It has been felt that short term vocational and refresher courses would help the professionals in upgrading their knowledge base. This would also act as value-add to the traditional journalism skills. Experts have also suggested that working professionals should be given a study break so that they can upgrade their skills.

Need for Synergy Courses:

Some of the experts believe that since print is gradually evolving itself digitally, the print journalism courses should also include courses in digital print journalism. This would help the journalists coming out of the Journalism and mass communication institutes to be better prepared for the future.

Introduction of courses in domain journalism:

The students coming out of the Journalism and mass communication Institutes are generalists. A need is being felt that courses related to subject or domain should be introduced for better understanding and employment including areas such as business, Crime, politics, Courts, sports journalism etc. Due to rise in various sports leagues in India, it is being felt that sports journalism courses would also help in better employment.

Insights on Future Jobs & Skills

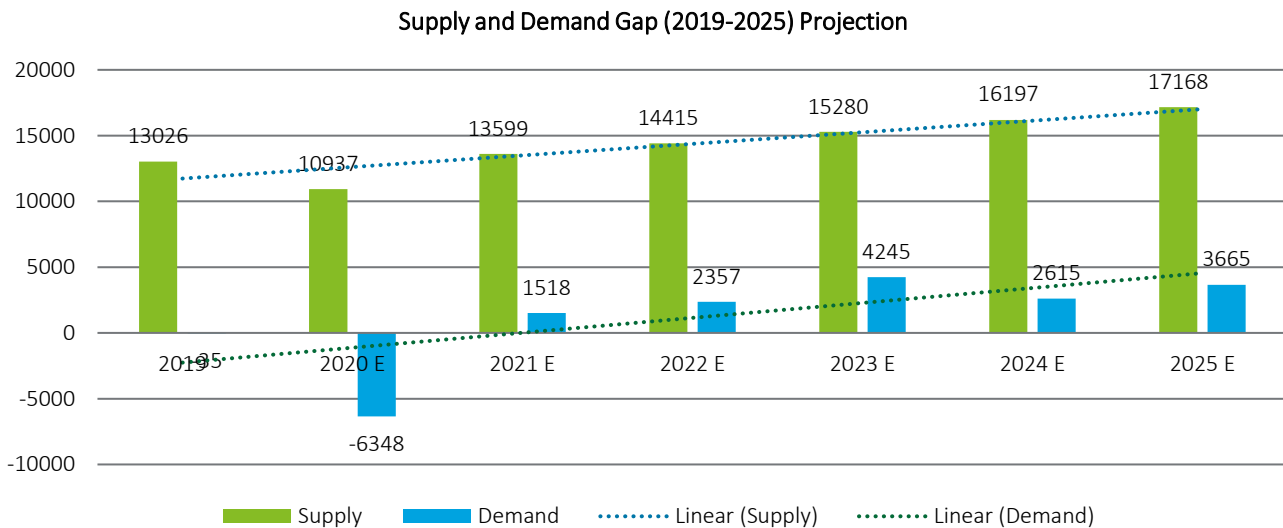
Given the changing nature of the industry, several new and emerging roles are likely to gain greater importance. Thus, specific trainings need to be developed for the following roles:

- a) **Social Media Experts:** Social media has evolved as a strong medium of communication across the globe. Hence, print journalists with social media expertise would emerge as a futuristic job role in print media. These professionals would be well versed with social media tools and would know how to market their reports and articles.
- b) **Fact Checker:** Fact checkers are the professionals who check the authenticity of the news. This job role will be in demand because of the blooming of fake news and diminishing credibility of journalism.

- c) **Innovative content writer:** with flourishing digital media content, the print media has to reinvent itself to keep itself relevant. Innovative content writers/ journalists would have to devise and design their content to keep themselves relevant in competition to their digital rivals and engage their loyal readers.
- d) **Custom or Theme Packagers:** This is going to evolve as one of the demanded job role because of the paucity of time by the readers. Readers would assign a limited time on contents. So the custom packagers would devise ways to include as much content on a particular subject for its reader to be satisfied and engaged too. This job role would be more for the digital e-newspaper segment.
- e) **Domain Journalists:** with general reporting getting spread out on digital and social media platforms, Domain expert journalist would be in high demand in the print media. They would act as a catalyst to keep the readers hooked to the print media. Domain journalists would be in the area of business, crime, technology, sports, development etc.

The Human Resource Demand-Supply Gap

Figure 84: Supply and Demand Gap Projection (2019-2025)-Print



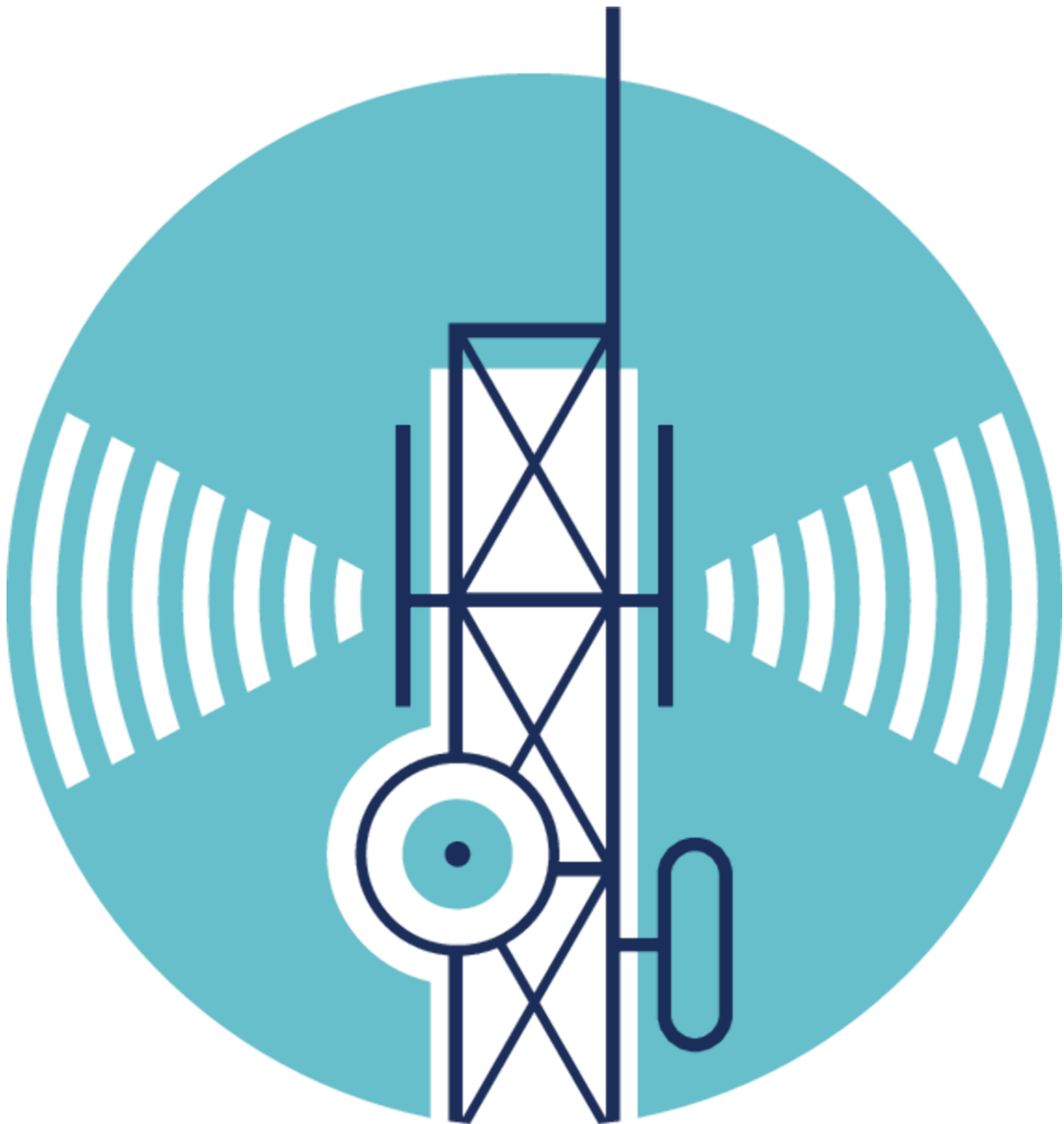
The 2019 demand figure is missing. The above bar graph shows that there will be surplus in terms of supply of manpower in comparison to the market demand of the work force in print sub sector. In 2020, the Gap will be highest at 17,285 because of COVID-19. In 2023 the Demand & Supply Gap may be minimal with 11,035. Average Gap between Demand and supply across the year (2019-2025) is 13,229. Also, there is likelihood of a dip in manpower supply numbers during 2023-24 because of reduce intake at institutes in 2020-21.

Further, it was understood through expert interview and survey that there is a considerable demographic gap in female employment. Females are finding fewer employment opportunities in the print subsector as compared to male.

Potential ways for the sub-sector contributing to 'Atmanirbhar Bharat' mission

The experts opined that most of the software and printing consumables are imported. Nearly 80% of the newsprint paper, ink, printing machinery and software used in the print industry are imported. Specifically, GNP and LWC paper required for printing media are imported at a huge volume. Keeping the volume in mind and the demand for such products, there is a scope for 'Make in India' and 'Atmanirbhar Bharat', if these products are manufactured in India.

The government should encourage development and production of printing related products within India. In 'Make in India' campaign, foreign players should be encouraged to set up manufacturing units in India. This would drastically cut down the cost of running a print media operation. This would further provide local employment and the products could well be exported.



E.9 Radio

Radio Sub-Sector Overview

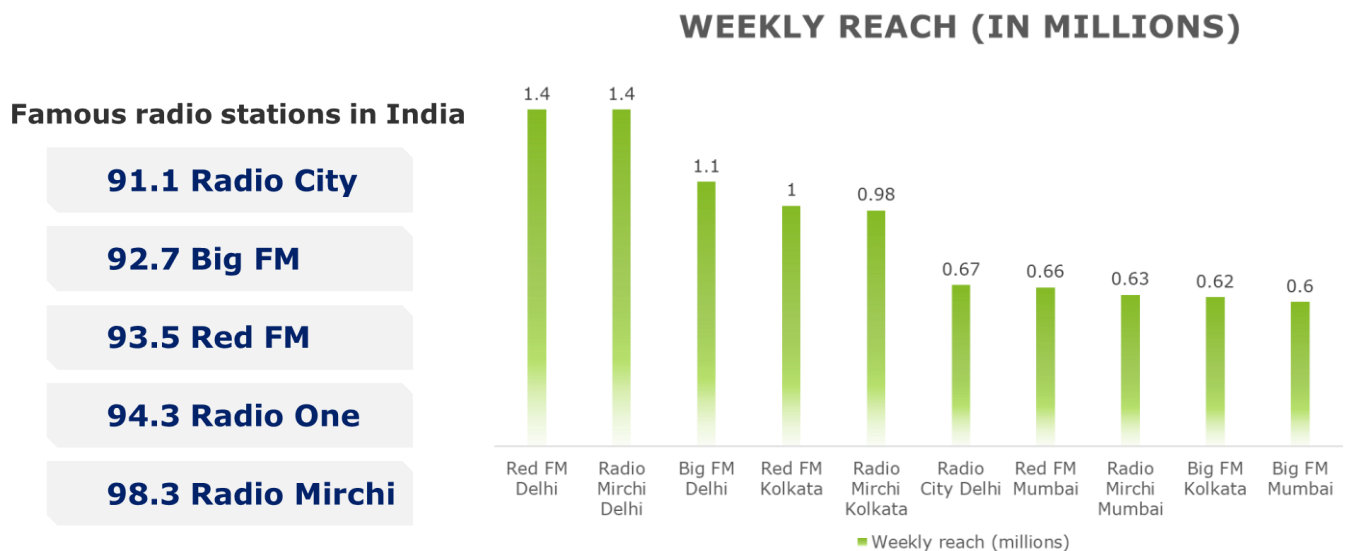
Radio is one of the earliest forms of electronic medium used to disseminate information and news through Short Waves (SW), Medium Waves (MW) and through Frequency Modulation (FM) channels. In India, early radio broadcasting began in 1923 during the British Raj with programs by the Bombay Presidency Radio Club. In 1956, All India Radio (AIR) was set-up as the National Broadcaster for India and is now one of the largest radio networks in the world, owing to the number of languages which are broadcast under the network. As of 2020, AIR has 470 broadcasting centres, available in 23 languages and covering almost whole of the country (92%) and almost the entire population (99%)³⁴.

FM broadcasting commenced in 1977, but its steep rise came in 2001 when the privatization of FM broadcasting began. According to Ministry of Information and Broadcasting, as on 30th November 2019, there are 382 operational FM radio stations in 108 cities spread across 26 states and 4 union territories. Before technology advanced in the 21st century, Radio and Television were major media for broadcasting and entertainment. With Televisions being not affordable by many in the country, it was the radio which had become almost a household asset then.

The radio industry in India has seen low to negative growth rate in the past couple of years. The revenue has decreased from INR 2,922 Crore to INR 2,814 Crore during the last two years. Prior to 2019, the industry had seen a CAGR of ~7% from 2015-2019, but the slowdown in the past 2 years has pegged the industry back.

The sluggish growth has been due to reasons like decrease in advertising revenue by government, which is a major part of the total revenue in the industry, overshadowing of radio by digital platforms, regulatory hindrances, etc.

Figure 85: Famous Radio Stations in India and their Weekly Reach(in Millions)



As expected, because of having higher proportion of population and being major hubs, Top tier cities like Delhi, Mumbai and Kolkata account for the FM channels with most listenership.

The Pandemic had an adverse effect on an already sluggish radio sector, decreasing the market share by approximately 16 % in FY 20 over FY 19³⁵. Due to the country-wide lockdown in March 2020, a number of private sector advertisers either pulled back the campaigns or reduced the spending on advertisement, resulting in a steep fall in advertisement revenue between March and May 2020³⁶, on top of reduced government ads. The effect of pandemic was also significant on segments like MSME, retail, real estate, which are the main advertising sectors in the radio industry.

³⁴ india.mom-rsf.org

³⁵ FICCI 2020 report

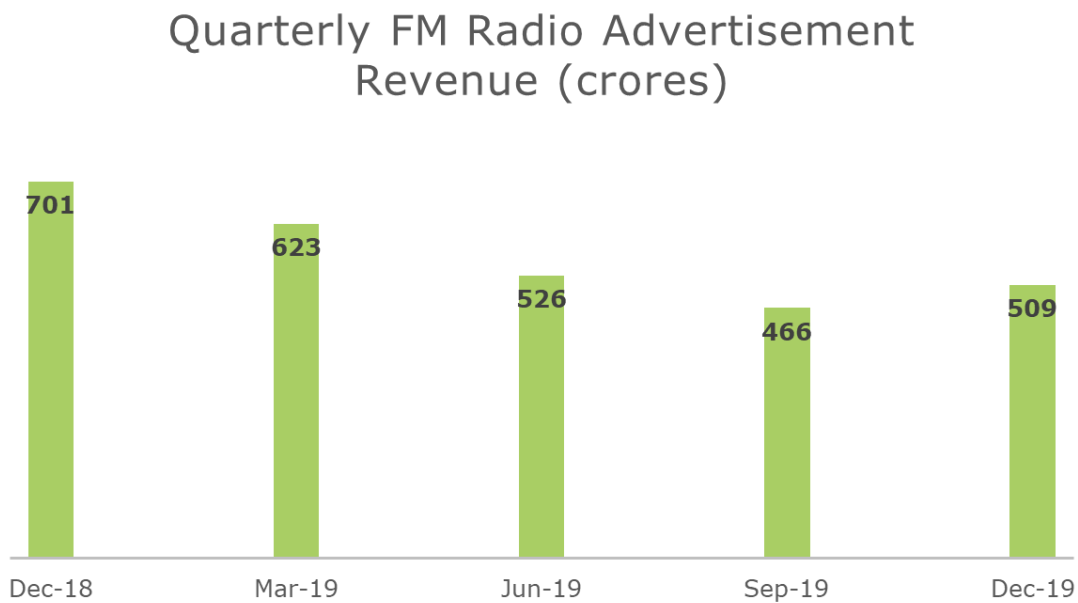
³⁶ bestmediainfo.com

Details of user base and revenue streams

‘Revenue through advertising’ is the major monetization model in the radio industry with radio stations selling time slots to various companies to advertise in order to reach the masses leveraging the vast reach of radio. Stations use radio jingles, radio jockey mentions and sponsorships among advertisement schemes. The prices of slots depend on factors such as length of the ad, time of the day, etc. Furthermore, Stations provide advertisements on streaming services and social media profiles.

FM radio advertisement revenue for December 2019 quarter was INR 509 Crore. Below is a table highlighting the quarterly ad revenue from December 2018 to December 2019.³⁷

Figure 86: Quarterly FM Radio Advertisement Revenue

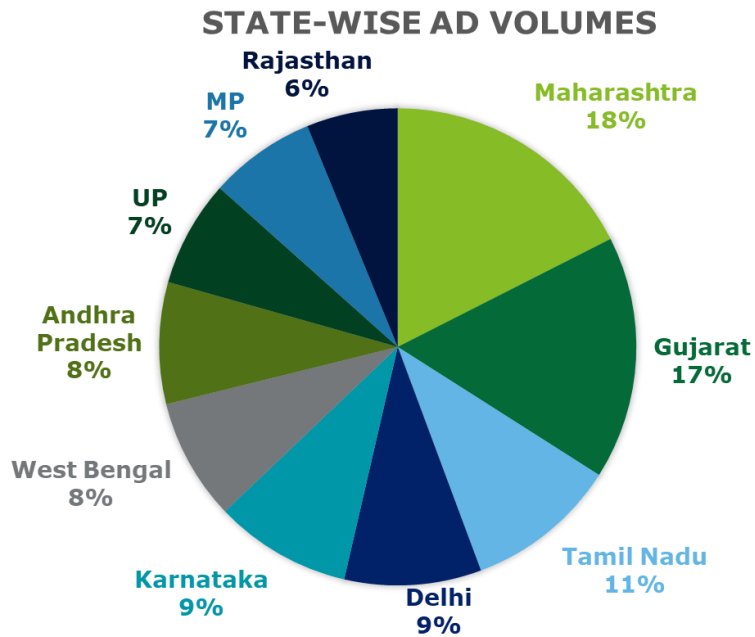


Plethora of companies advertise their products through radio stations, but the top 5 sectors by advertisement volume are – Real Estate, Retail, Automobile, Food & Beverages, and Banking. These sectors generally contributed to about **66% of the total ad volumes**. Real Estate (9%) and Automobile (7%) are the top ad categories accounting for 16 % of the share³⁸.

³⁷ www.trai.gov.in

³⁸ FICCI 2019 report

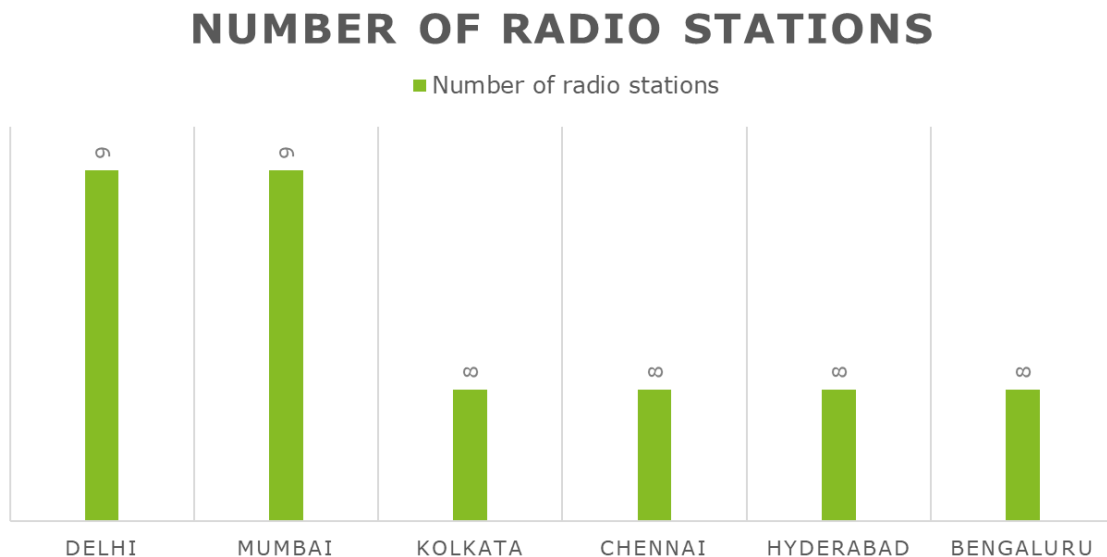
Figure 87: State-Wise Ad Volumes-Radio



Top cities with most number of operational private FM radio stations as on June 2019³⁹:

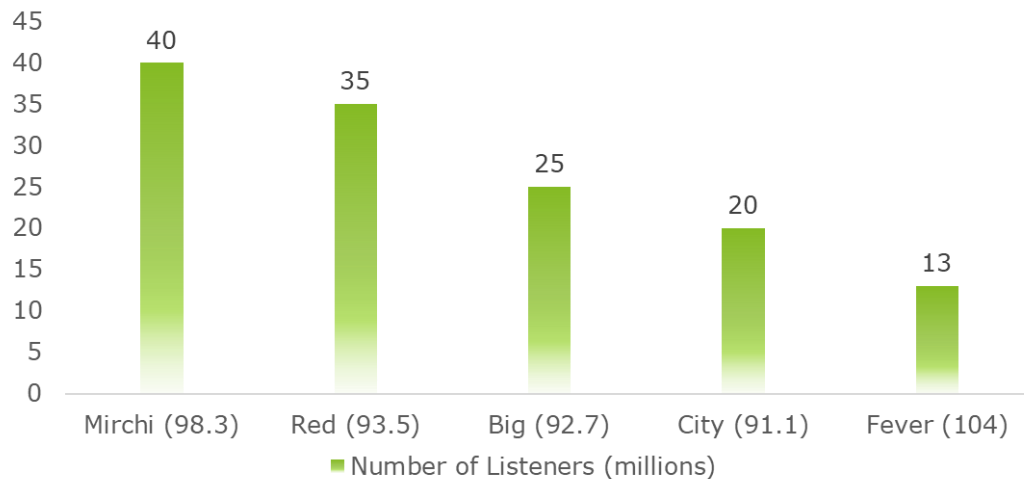
In terms of states, Maharashtra with 17% of total ad volume and Gujarat with 16% of ad volumes are the two top-most states, followed by Tamil Nadu (10%), Delhi (9%) and Karnataka (9%). Thus, the top 5 states account for around 60% of the total ad volumes in Radio.

Figure 88: Number of Radio Stations and Listeners(Millions)



³⁹ Ministry of Information and Broadcasting, official website

NUMBER OF LISTENERS (MILLIONS)



In Radio stations, Radio Mirchi is one of the leaders in terms of number of listeners with 4 Crore listeners in 2019. It is one of the leading radio stations in over 25 cities, including top 6 major cities:

Table 43: Number of Radio Listeners in Top 6 Major Cities

City	Number of Listeners (Lakh)
Delhi	42.9
Mumbai	34.6
Pune	16.3
Kolkata	9.6
Hyderabad	7.6
Ahmedabad	7.6

Key shifts for the Radio industry in India

Growth Drivers

Government Initiatives:

- Ministry of Information & Broadcasting announced in 2019 the setting up of 118 new **Community Radio Stations (CRS)** in Left Wing Extremism affected districts, Jammu and Kashmir, North East, etc. Additionally, workshops were announced to be conducted in backward districts to spread awareness about the benefits of CRS in remote parts of the country.
- Two new additional frequency spots – 89.6 and 90.0 have been allocated to CRS to overcome the problem of rejection of applications.
- National Community Radio Sammelan was organised in 2019 by the Ministry of Information and Broadcasting, to nurture, promote and empower the community radio sector so that it realises its full potential in the country's development journey.
- A state-of-the-art new broadcast auditorium was inaugurated for All India Radio with facilities including Multipurpose hall, editing studios, multimedia facility, etc.

Risk Factors

During the past couple of years, the radio industry has seen a downward trend owing to factors like:

Economic slowdown: Prior to the advent of the pandemic in March 2020, the Indian economy suffered from a slowdown which affected the industry. Due to the sluggishness of the economy, sectors like real estate, e-commerce and retail decreased their advertisement spend, thus affecting the radio industry.

This was further exacerbated by contraction of government spending on advertisements during the 2019 election time due to code of conduct.

Rise of Digital Media: With over 50 Crore smartphone users in India, ever increasing broadband connectivity, cheap data and plethora of content to choose from, India has been on the rise in terms of digital media. Social media apps like Facebook, Instagram, twitter etc. have become the preferred choice of the masses. These kinds of social media platforms are the new target for advertisers because of their penetration in the customer base. This has redirected the ad spends from traditional media like radio to digital media.

Regulatory Challenges: There is also a concern regarding freedom of news content allowed in radio stations. Currently the FM broadcasters can only carry the news showcased by AIR without any modification, thus restricting content creation. Private radio channels would like to present the news in their own form and style which may help them garner more listeners.

Hindrance to Consolidation: Delay in approval of acquisitions from various private entities in the FM business by the Ministry of Information Broadcasting has led to disruptions in successful mergers.

State level Industry Shifts

- **Key employment generating States/Cities**

Already operating radio stations like All India Radio, Radio Mirchi, 92.7 BIG FM, RED FM, Radio One, Fever 104 FM etc to a name a few have their studios across the country with their major studios being in New Delhi, Noida (Uttar Pradesh), Mumbai (Maharashtra), Chennai (Tamil Nadu), Kolkata (West Bengal).

- **States/Cities which may become prominent in the next 5 years**

Radio is evolving. The number of community radio stations is doubling, and this growth is due to increasing interest in local information, music and connection. It is observed by the Association of Community Radio Broadcasters (AMARC) members from diverse regions that India will emerge as a training ground for community radio not just in South Asia but also in the Asia Pacific region. Owing to the large number of community radio stations that will come up in the country, there will be a vast playing field.

The states with highest operational Community Radio Stations in the country (State/UT wise), generating employment will be: Haryana, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu and Uttar Pradesh.

Impact of COVID-19

COVID-19 seriously impacted the advertising revenue for the radio industry, resulting in a major decline between March and May 2020. This was a result of a multiple sectors cancelling their campaigns or cutting down on their ad spends during lockdown, with no certainty about the near future. As a result, the radio sector is estimated to have declined in revenue from INR 2,922 Crore in FY 19 to INR 2,814 Crore FY 20.

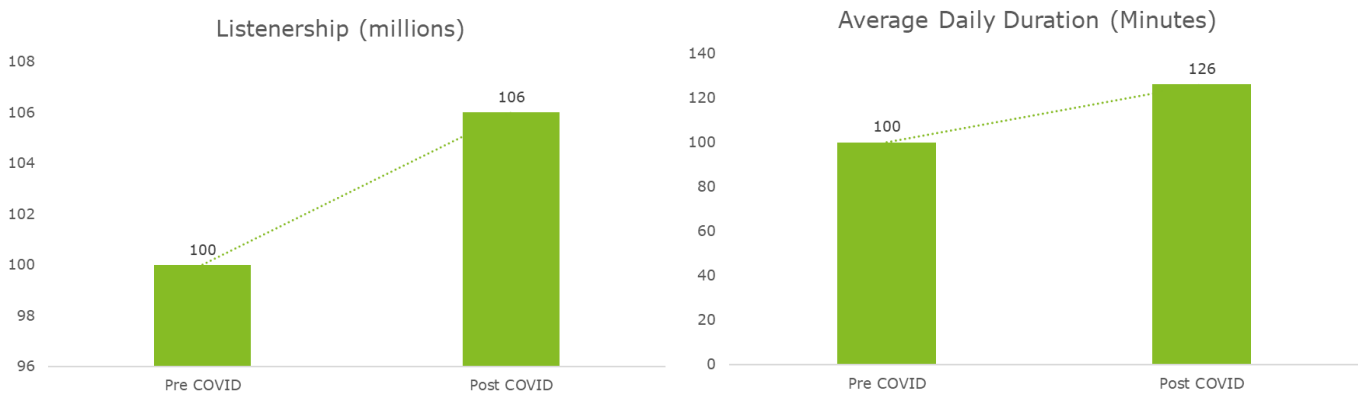
Since advertising revenue is the sole revenue stream in this sector, the reduction in ad spending from commercial organisations and government has led to a loss of INR 200 Crore in the first two months of FY21⁴⁰ alone.

⁴⁰ livemint.com

In the midst of this chaos, Association of Radio Operators of India (AROI) has requested the government for a one-year waiver of license fee and for one-year free spectrum among other things to help the radio industry recover from the slump.

Despite the decrease in revenue in this sector, the listenership witnessed an increase during the lockdown due to lack of entertainment options.

Figure 89: Radio Listenership(in Millions) and Average Daily Duration spent on Radio Listening(Minutes)



The comparison in the data for pre COVID-19 and post COVID-19 situation in the country shows that the listenership witnessed an increase of 6% in post COVID-19 period. The increase in average duration spent on radio was even more stark with a 26% increment during the pandemic.

It was also noted that the operational efficiency of the radio industry was not disrupted, with content remaining updated during lockdown. There was a smooth transition to work from home and hence radio channels were working throughout the lockdown, giving important updates about the situation and entertaining the country during this time.

Growth/ Revenue Trends

Basis our analysis of growth and risk factors, it is projected that Radio sector will grow from INR 2,922 Crore in FY 2019 to INR 3,696 Crore in 2025 with a CAGR of ~4%.

Table 44: Revenue Trends-Radio

INR Crore	2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Revenue	2,922	2,814	2,880	3,034	3,268	3,475	3,696

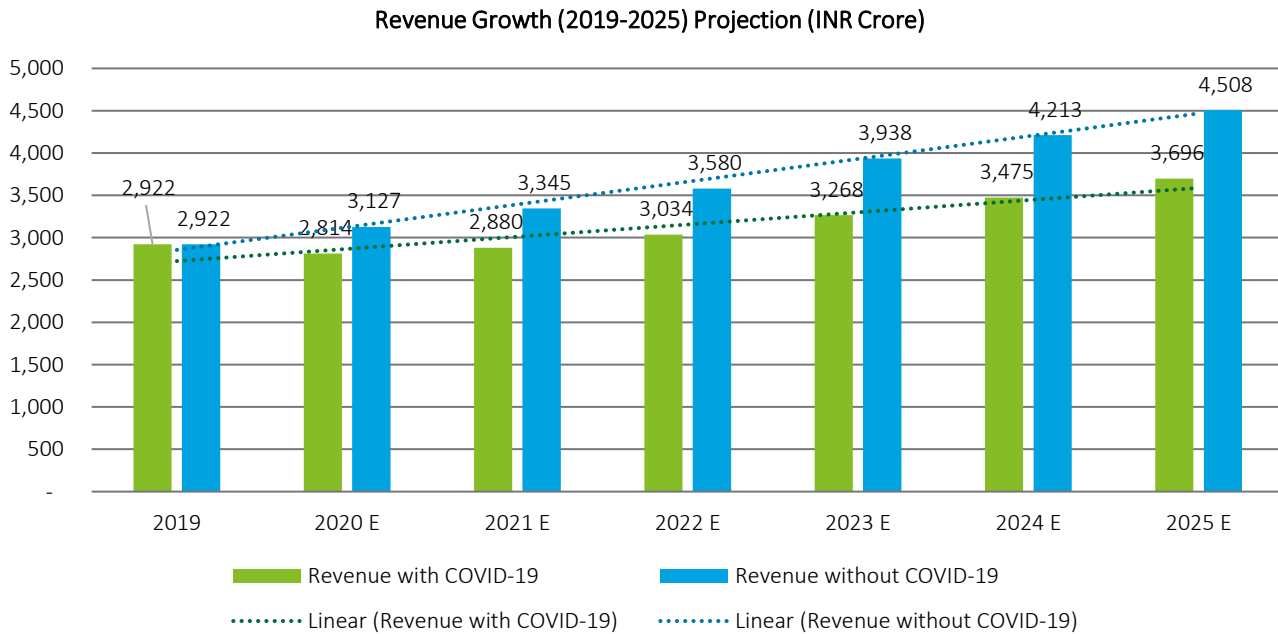
Source: FICCI Report and analysis

1. Technology may have negative impact throughout the period 2020-2025, especially because of launch of 5G and growth of digital content consumption.
2. COVID-19 has had an impact on advertisement revenue of the sector, with negative growth rate (approximately -3.70%) in 2020.
3. There may be an upward push with the policy interventions by government in FY 2020, increasing the growth rate to ~2.35% in following years.
4. Sector may reach normal growth (~7.5%) by 2023 with advertisement inflows because of general election in 2024 & may further provide a boost of 2% to the sector.

Advertisement is the major source of revenue for radio industry. Additionally, a few leading radio stations often hold special concerts at various destinations to attract new listeners, generating revenue through tickets sales. Further, leading radio

station sell news cast to other radio stations and generate revenue, but these sources add up to a little, ~2% of the total revenue generated by radio stations.⁴¹

Figure 90: Revenue Growth Projection (2019-2025)-Radio



The bar chart above depicts the projections for revenue for COVID-19 and Non-COVID-19 scenario. Besides the increase in the listenership, the advertisements were lower due to pandemic and hence, the revenue is expected to grow at a CAGR of ~4%, which is a reduction from a CAGR of ~7.5% in the non-COVID-19 Scenario.

Global Trends

The global radio broadcasting market was pegged at \$100 billion in 2020 and is expected to grow at a rate of 13.6% to reach ~\$113 billion in 2021. In the next five years, after the pandemic, the global radio industry is expected to reach approximately \$137 billion by 2025, growing at a CAGR of 5%.

Western Europe accounts for 50% of the global radio broadcasting market in 2020, followed by North America is 28% of the market. Africa is the smallest contributor by region.

Internet Radio: Internet radio has become widely popular in the global market owing to its multi-pronged benefits like personalised radio channels, better sound quality, songs based on an individual’s preference etc.

Advertising using Digital audio: Digital audio is coming up to be a lucrative medium for radio advertisers because of their target specific benefits which allow marketers to curate and make ads as per the consumers and demographic areas they are trying to capture. FM radio stations play a role in this by providing local and national customers with a digital menu.

Increase in time spent on Radio: The time spent on radio has been increasing, despite the decline in advertising revenue. This has also been possible due to automatic software being used by companies to allow 24/7 quality service. The automation takes care of operational effectiveness, thus giving more time to focus on quality content creation.

Collaboration with other industries: In order to reduce the cost of production, radio industry has been converging with other industries from media. Merger and acquisitions have been on the rise between radio companies and media companies in order to have a stronghold in the market amid growing competition.

⁴¹ Expert interview.

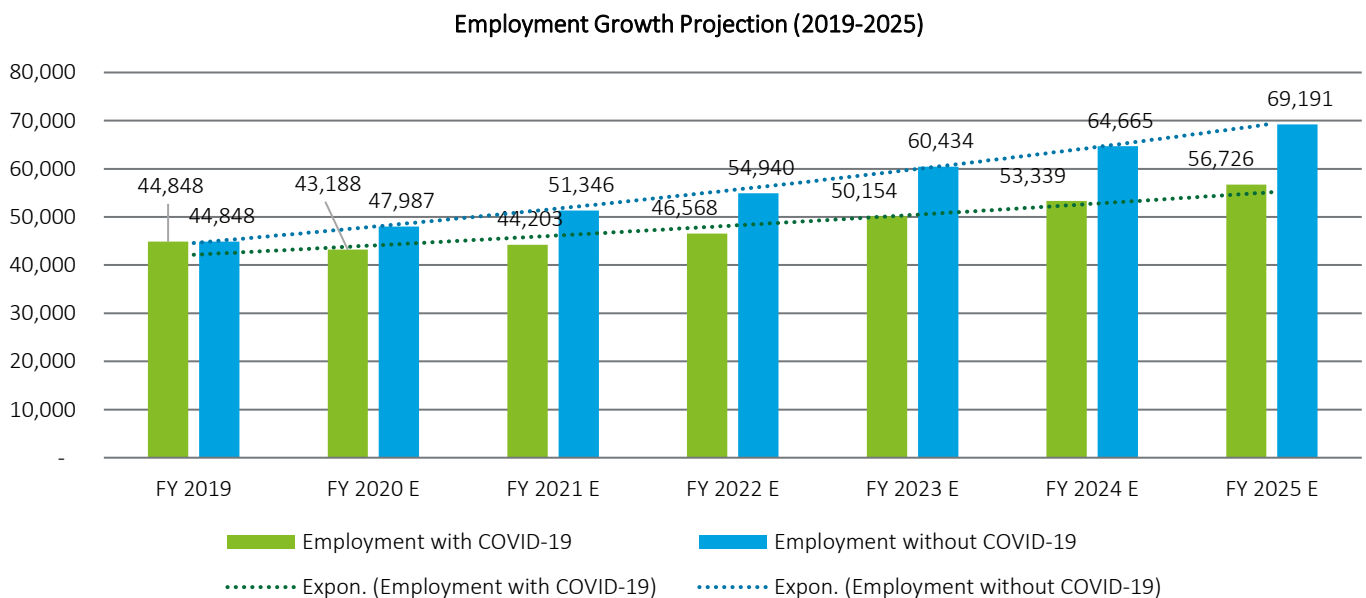
The Human Resource Demand Forecast

With around ~2,922 Crore revenue contribution during 2019, the radio subsector will generate direct employment for over 56,000 people by 2025. It is expected to witness an incremental demand of about 12,000 people in the industry till 2025 over number of people employed in the year 2019.

Table 45: Human Resource Demand Forecast-Radio

Particulars	FY 2019	FY 2020 E	FY 2021 E	FY 2022 E	FY 2023 E	FY 2024 E	FY 2025 E
Estimated numbers of people employed in the industry (A)	44,848	44,848	43,188	44,203	46,568	50,154	53,339
External Factors							
Technological Environment				(442)	(466)	(502)	(533)
Political Factors/ Policy updates		(448)	1,447	2,807	4,051	3,686	3,920
Impact of COVID-19	-	(1,211)	(432)				
Total (B)		(1,659)	1,015	2,365	3,586	3,185	3,387
Total Estimated Employment (A+B)	44,848	43,188	44,203	46,568	50,154	53,339	56,726
Incremental Demand		(1,659)	1,015	2,365	3,586	3,185	3,387

Figure 91: Employment Growth Projection-Radio

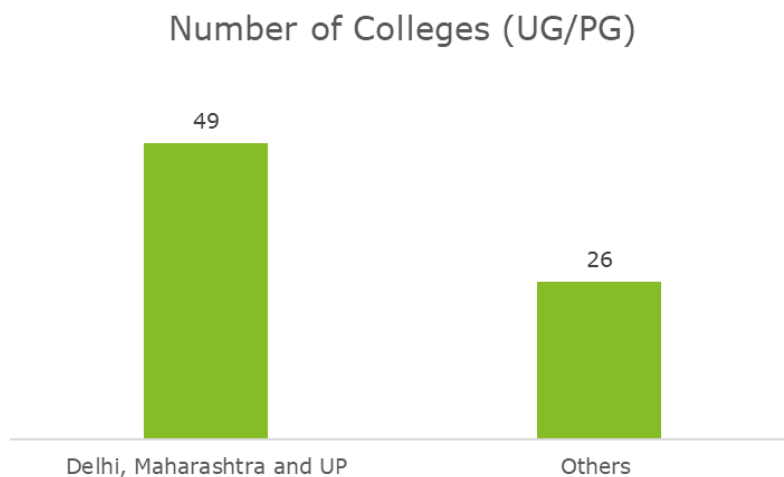


The bar chart above represents the impact of COVID-19 on the employment in this subsector. It is projected that the industry would have employed about 69,000 people cumulatively till 2025 whereas, now the industry is expected to employ only about 57,000 people by 2025 considering the impact of COVID-19 on the Radio sub sector. The distance between the trend lines states that the employment gap will be of about 12,000 in Radio sub sector owing to the pandemic.

Supply Side

In India, there are over 75 colleges providing radio related courses like Radio Jockeying, Radio Production, Anchoring and Reporting, Electronic Media, etc. Delhi has the greatest number of colleges (21), with Maharashtra and Uttar Pradesh each having 14 institutes, implying these 3 states account for almost 2/3rd of the total number of colleges:

Figure 92: Number of Colleges (UG/PG)



UG/PG Courses: Colleges in India provide a variety of UG/PG diploma courses along with certificate courses:

UG Diploma Courses:

Table 46: UG Diploma Courses-Radio

Course Offered	Duration (Months)
Diploma in Electronic Media (RJ/VJ)	12
Diploma in TV News reading and Radio Broadcasting	12
Diploma in Radio Station Operations and Management	12
Professional Radio Jockeying	3

PG Diploma Courses:

Table 47: PG Diploma Courses-Radio

Course Offered	Duration (Months)
Post Graduate Diploma in Radio Programme Production	12
Post Graduate Diploma in Audio Programme Production	12
NCVTE Diploma in Radio Jockey	6
PG Diploma in Broadcast Journalism and Production	12

A variety of Mass communication institutes provide Radio Jockey courses.

The Human Resource Supply Forecast

The courses available in Radio sub-sector are majorly divided into two types

- UG/PG courses
- Vocational Courses

A degree in Journalism & Mass communication and a degree in Radio are regarded as the most suitable qualifications by the employer in the Radio industry. Experts believe that only ~10% of the students graduating in Journalism & Mass Communication, radio broadcasting & vocational courses opt for career in Radio. Considering the previous trends of enrollments into sector aligned UG/PG courses and vocational Courses and impact of COVID-19, it is estimated that ~17,379 students will graduate in 2025 and be ready to be employed in Radio industry.

Details of Enrollment in UG/PG courses in Journalism, Mass Communication and Radio Broadcasting

Table 48: Details of Enrollment in UG/PG Courses in Journalism, Mass Communication and Radio Broadcasting

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
PhD	716	716	759	804	853	904	958
M. Phil.	239	239	253	268	284	301	319
PG	19,088	19,088	20,233	21,447	22,734	24,098	25,544
UG	27,677	27,677	29,338	31,098	32,964	34,942	37,038
Total	47,719	47,719	50,582	53,617	56,834	60,244	63,859

Source: AISHE 2017,2018,2019 and analysis

Details of enrolment on vocational courses

Table 49: Details of Enrollment on Vocational Courses-Radio

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
Total	8,708	2,612	8,708	9,230	9,784	10,371	10,993

Key Assumptions:

1. Since 2020 has witnessed COVID-19, there may not be any further addition to the enrolments in UG/PG level.
2. Since all the vocational training centers were shut during 2020, it is assumed that the training at 30% of the capacity of 2019 will be possible in 2020.
3. 6% growth in training and teaching enrolments is considered for projection here, looking at the past performance of the supply side as per AISHE 2017, 2018 & 2019 reports.
4. Only ~10% of the graduating student numbers at UG/PG and Vocational training institutes were considered for calculating supply side of the Radio subsector.

Analysis of teaching/training in the Radio Sub-sector

Radio announcers, broadcast technicians and sales assistants may find work in radio industry without any post-secondary training. Sales managers typically need a bachelor's degree in a business-related field, while station managers are required to have a bachelor's degree in communications or broadcasting. One of the common ways to get into radio broadcasting is to get a degree in the subject, attend a broadcasting school and earn an Associate of Applied Science (AAS) degree that demonstrates one's abilities in radio and television broadcasting. But a lot of institutes that impart radio education are falling short in many ways. India's radio industry, which was already going through a turbulent phase, has been further affected in terms of revenue by the COVID-19 pandemic and the resultant lockdown.

1. Lack of campus radio stations:

Campus radio (also known as college radio, university radio or student radio) is a type of radio station that is run by the students of a college, university or other educational institution. Programming may be exclusively by students or may include programmers from the wider community in which the radio station is based. Many college stations play important roles with touring groups, promotions and larger marketing plans. But many of the colleges lack such facilities.

2. Lack of quality placements:

The job placement facilities of a college can directly reflect on the quality of the education it imparts. The colleges need to work on strengthening their placement cells to attract better companies which not only provide quality experience but also give lucrative offers to skilled students.

3. Lack of internships:

Interning at a radio station helps the students to learn various jobs and to also know about the career opportunities from the industry experts. However, a lot of training institutes do not offer internships/on-job-training which can help students develop skill sets as per current industry trends.

4. Networking:

The institutes need to network with large radio firms, which will not only benefit them with the placements but also help in rendering live workshops and internships to their students. Station visits and even volunteer work to find out about entry-level openings should also be included.

5. Courses for faculty:

There is a need to develop training courses for teachers to increase their knowledge and understanding of the radio and train them in appropriate teaching methods.

6. Less focus on skills:

The whole purpose of radio institutes is to develop the knowledge, skills and attitudes which will encourage the growth of critical awareness and, consequently, of greater competence among students. Ideally, such programs should include the analysis of tools used in radio industry & the use of media as a means of creative expression, and effective use of and participation in available media channels.

Insights on Future Jobs & Skills

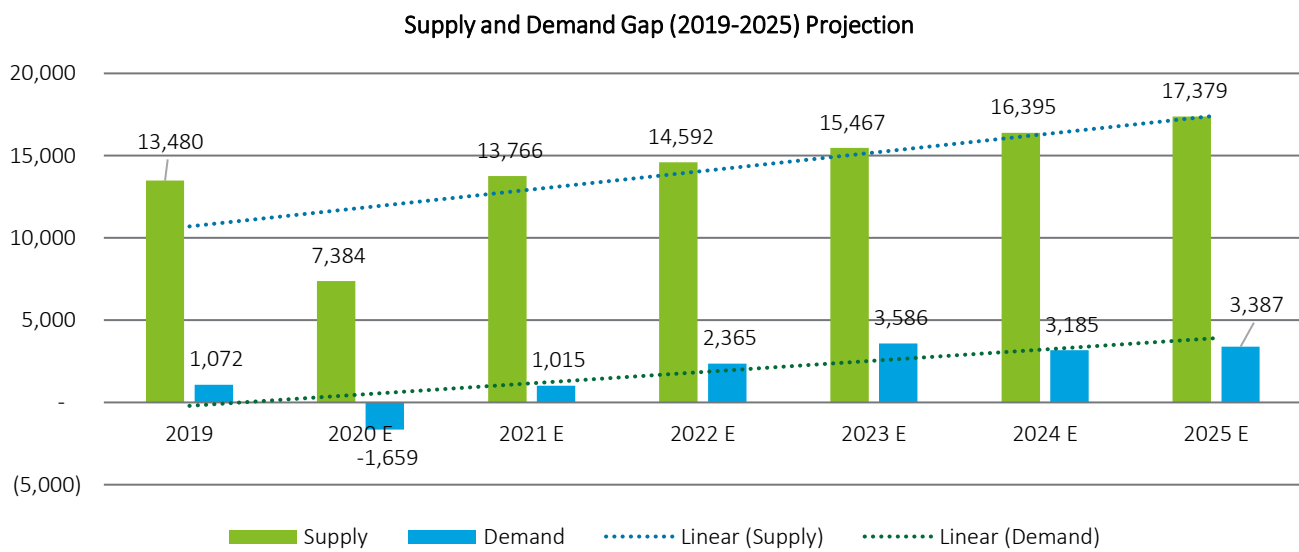
Future Jobs for which specific skill trainings need to be developed are:

- Podcasts are on the verge of becoming the future of radio in India, with the medium getting popular with time especially for younger audiences. Podcast culture is still in its infancy in India, and the following job roles could be in high demand in the next few years:
 - **Sound Engineers:** Their job is to eliminate background noise and to ensure that the sound quality is as clear as possible. Since podcasts rely entirely on sound, a seamless sound editing is required.
 - **Podcast Producers:** They are responsible for a variety of aspects like the tone of the radio podcast, the content discussed, the audience which would be targeted and marketing.
 - **Content Curators:** Their role is to make sure that the content of the podcast is finely tuned with the audience it is targeting and that the story/ message of the podcast is disseminated in its right essence. They help in structuring stories with the podcast writers.

- **Videographer:** Experts believe that webcams and digital video recorders are now common gear for radio broadcasters as they launch additional multimedia channels. Some radio stations are now training personnel as videographers and purchasing programs like Sony Vegas Pro, Final Cut Pro, MediaShout, Logic Pro and ProPresenter to edit video.
- **Social Media Content Developer:** With user moving to more digital platform, and Radio stations promoting their content through social media platforms to attract more listeners, there is a need for social media content developers and this job role has become even more relevant in recent times.

The Human Resource Demand Supply Gap

Figure 93: Supply and Demand Gap Projection (2019-2025)-Radio



The above bar graph shows that there will be surplus in terms of supply of manpower in comparison to the market demand of the workforce in Radio sub sector. Vocational training needs to focus on job-roles that have high demand to help reduce the supply and demand gap.

- Highest Supply and Demand Gap between 2019 to 2025 is approximately 14,000.
- Lowest Supply and Demand Gap between 2019 to 2025 is approximately 9,000.
- Average Supply and Demand Gap between 2019 to 2025 is approximately 12,000.

Potential ways for strengthening Atma Nirbhar Bharat

Like in other sectors in media and entertainment, government has been championing the Atma Nirbhar mission in radio sector as well. Government is promoting Community Radio Stations (CRS) which play a vital role in the discussion of relevant issues pertaining to local communities. CRS are low powered radio stations which are set up, operated and owned by the community itself. With initiatives like simplification of application procedure, increased pace of approval, and improved transparency in processing of applications, there has been a spurt in growth of number of CRS in India, reaching more than 275 in 2019.

India is also quite self-reliant in terms of supply of radio broadcasting equipment, with a large number of domestic manufacturers in the market. Countries like USA, Afghanistan are importers of broadcasting equipment from India, showcasing the 'Make in India' prowess of this sector.



E.10 Sound & Music

Sound and Music Sub-sector Overview

Indian Music industry has been growing steadily over last few years and has reached annual revenue of INR 1,596 Crore in 2019, with a growth rate of 12.4 percent from FY 2018 surpassing the previous year's growth of 11.5 percent. The pandemic had impacted the music industry which led to the shrinking of the industry by almost INR 300 Crore and revenues stood at 1,293 Crore in FY 2020.

The Indian Music Industry can be divided into 3 components:

- **Live Music Industry:** Live industry majorly comprises of live musical performances through various concerts and shows. For the live industry, the revenue sources are mainly ticket sales, brand sponsorships, private events fee, merchandise sales etc.
- **Music Recording Industry:** Recording industry is a major part of the Indian music industry with streaming services accounting for the lions share in revenue. Its growth is mostly dependent on Film industry and nearly 8000 songs are recorded in a year with over 2,000 films produced and each film having 3-4 songs.
- **Music Publishing Industry** Publishing industry is still a niche market in India, which gets its revenue from royalties such as writer/publisher mechanical royalties, recording artist mechanical royalties, and synchronisation rights and royalties.

Music industry is highly connected with other sub-sectors like Television, Films, Live performance, Radio, Audio OTT streaming. When it comes to different genres, Bollywood music accounts for almost half of the total music composed (45%) followed by Tamil and Telugu songs (19.5%) and Punjabi songs (14%).

YouTube has been one of the most sought-after streaming alternatives in India due to its free, easy and accessible nature, with almost 80% of online users having direct access and around 25 Crore monthly users⁴². There are multiple devices used by Indians to listen to music, but smartphone is the most preferred device with 97% of people consuming music on their smartphones. Also, 3/4th of the listeners prefers to enjoy music at home, with 2/3rd of them listen to music in their cars while driving.

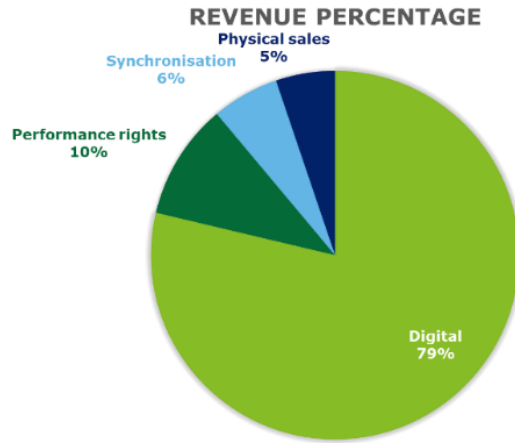
The ongoing pandemic has had an adverse impact on this sector, reducing the revenue significantly⁴³. Nation-wise lockdown for over 3 months, and the subsequent closure of places/venues for large gatherings, had impacted severely live performances and events in the country, that resulted in economic losses for this sector. The loss of the performance rights in the very initial part of the pandemic contributed to about 10% of the industry revenue loss.

⁴² soundcharts.com

⁴³ FICCI 2020 report

Details of user base and revenue streams

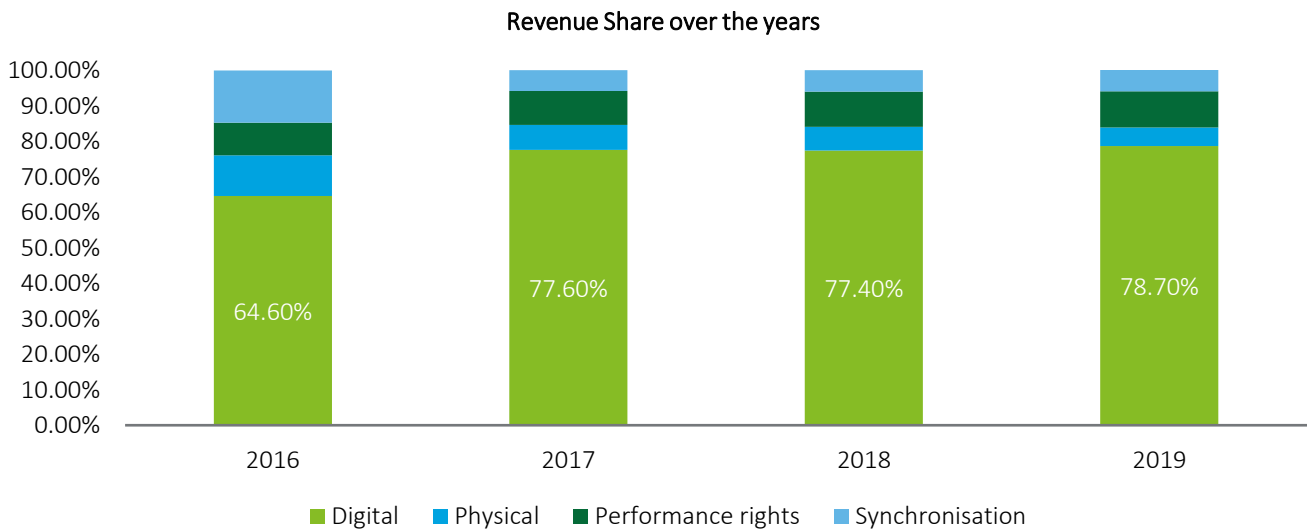
Figure 94: Revenue Percentage-Sound and Music



The revenue from Indian music industry is majorly from digital, performance rights, synchronisation (licensing of music used in different areas like games, shows, etc) and physical sales. Digital contributes significantly to the revenue of the industry.

Digital music comprises of online streaming platforms like Gaana, Spotify and YouTube, which are the largest and the most used platforms for online streaming in India. New and old Bollywood are the most preferred genres in digital platforms and some of the top players in streaming services being YouTube, Jio Music and Google play.

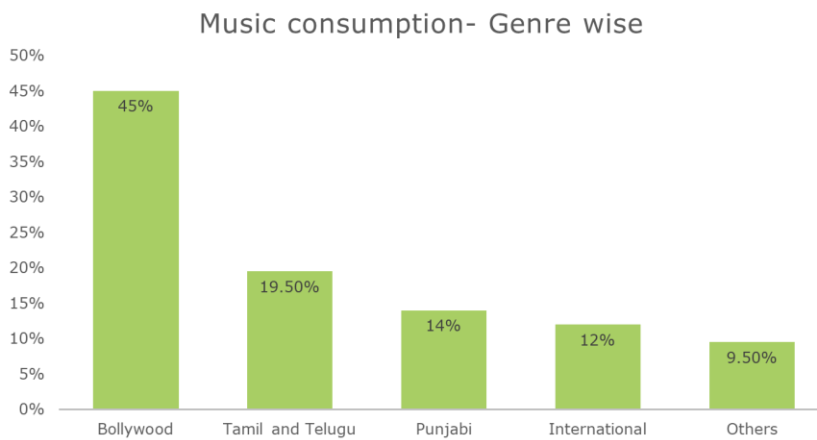
Figure 95: Revenue Share Over the Years-Sound and Music



Digital streaming is the major contributor of revenue in this sub-sector accounting for 78.7% of the revenue share. Indian consumers spends 1.1 hours/week on average more listening to music on digital platforms as compared to the rest of the world (19.1 hours vs 18 hours). Performance rights which include public performances like concerts and live shows are responsible for around 10% of the revenue. Synchronisation business and physical sales account for around 11% combined revenue share. Over the years, the revenue share of digital segment has increased significantly, with the emergence of new streaming platforms and high internet connectivity. However, physical sales have been on a decline during the same period owing to the popularity of digital mediums⁴⁴.

⁴⁴ IFPI Global Music Report 2020

Figure 96: Music Consumption – Genre Wise



Bollywood accounts for majority of music consumption in India (45%) followed by regional music having Tamil and Telugu as the major languages, followed by Punjabi songs.

Key shifts for the sound and music industry in India

Growth Drivers

There are multiple factors that contribute to the growth of this sector:

Growth in streaming services:

The increasing smartphone user base in India with more than 50 Crore smartphones and high-speed broadband internet connectivity in the form of 4G in recent years have increased the streaming services by more than 1/3rd in 2019. With the internet penetration expected to increase further in the next few years, the streaming service will grow even more. There has also been a growth in video streaming (37%)⁴⁵ owing to the success of Bollywood and regional cinemas.

Live Performances:

Music concerts and live shows have been increasing over the years at the back of high demand, especially from the young population in India. There were more than 8,000 music concerts in 2018 and around 17,500 live shows in 2019, with concerts being the second largest contributor⁴⁶ to the revenue of this sector.

User Engagement Applications:

There has been a surge in user engagement application in India, with the option of using video and/or audio in the background while using other apps. Exercising and working out apps like Cultfit and NIKE training app, among others, have incorporated this application, with users able to enjoy songs of their choices while working out. Apps like TikTok, before the ban, had a high monthly active user base of around 12 Crore and licensed music played a big part in its success and has led to increased revenues for music industry as well.

⁴⁵ FICCI 2019 report

⁴⁶ bookmyshow

Diversification from Bollywood music to other Genres:

In recent years, shift has been witnessed in listeners moving from Bollywood music to other genres like regional, international, rap, etc. Although Bollywood music still accounts for majority of music consumption, its share has been decreasing in the past few years, from 65-70% in 2016 to 45% in 2020.

Government initiatives:

The state and national level government have been taking measures to curtail piracy, the biggest risk factor for the Indian music industry. The Cell for IPR Promotion and Management (CIPAM) has taken multiple steps to increase awareness about copyright laws.

Also, initiatives like work on National E-commerce policy and intermediary guidelines have allowed digital platforms to recognise their legal liability in a better way to prevent the use of infringed content on their platforms.

Risk Factors

There are a few factors that bring a downward trend in the sector's growth:

Piracy: It is the biggest issue plaguing the Indian music industry. Although the piracy issues are reducing gradually, the rates are still high. Legal actions are not able to curb the situation completely, as the pirate sites always come up with new domain names, as an alternative, making this a perennial challenge to the sector.

Low Monetisation problem: With digital streaming rapidly growing, the low monetisation rates on various digital platforms are a challenge in the sector. In India, people are used to free music services and are reluctant to opt for paid subscriptions, therefore, these paid subscriptions are still uncommon in the country, with only 1% of the music listeners being paid subscribers⁴⁷. With the availability of YouTube and other various freemium platforms, the price sensitivity of Indian consumers is high, resulting in lesser return on investment for digital platforms that involve high cost of video production and recording.

There is also a lack of clarity on statutory licensing. This leads to lack of revenue that could have been generated through copyright measures.

State Level Industry Shifts

- **Key employment generating States/Cities**

Many big music companies and labels have their recording studios which employ many technicians and artists in the following cities: Mumbai (Maharashtra), Hyderabad (Telangana), New Delhi, Chennai (Tamil Nadu), Kolkata (West Bengal).

- **High Demand Job roles in the subsector & in key states/cities**

Sound Assistant, Sound Designer, Sound Editor, Sound Engineer and Music Programmer are some of the high demand job roles as per existing QP-NOS for the subsector including in the above mentioned states/cities.

- **States/Cities which may become prominent in the next 5 years**

Punjab is emerging as a prominent state in the music industry. The state has a long-standing tradition of music and live performance. The massive Punjabi diaspora overseas, now brought closer by digital distribution, is a big market for online sales and live shows. The forecast for the Music Industry in Haryana is also highly promising.

⁴⁷ FICCI 2020 report

Impact of COVID-19

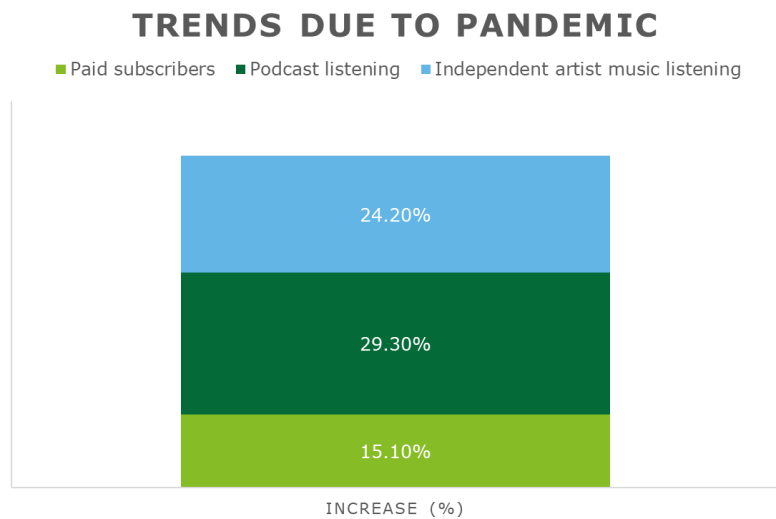
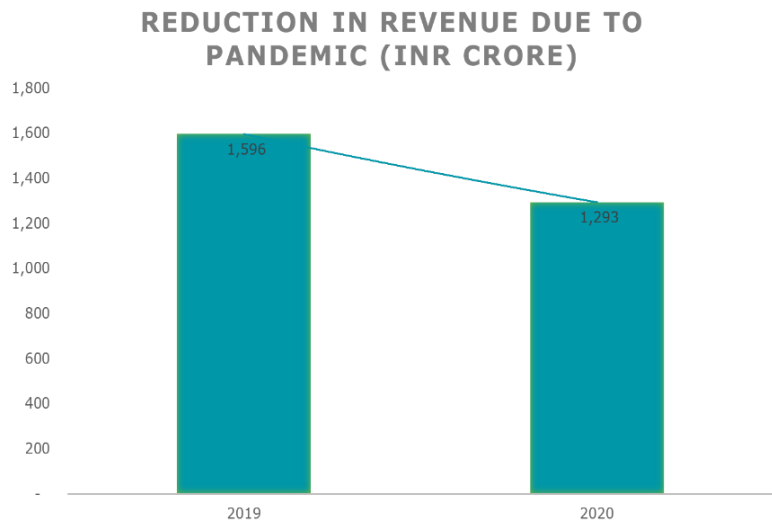
The pandemic and the resultant lockdown situation in the country had a severe impact on the entire music industry, with its market share losing almost 20% of its 2019 level and shrinking by almost INR 300 Crore. This was owing to many factors including no-live performance events like concerts and music shows and limited new music and songs produced for TV and films, which accounts for about 80% of the music industry's revenue. Although the audio OTT sector has been doing relatively well during the pandemic with new shows and movies being streamed on different platforms, but this was not enough to negate the downward trend of other segments in this sector.

Daily wage musicians and live performers, who rely on solo events were hit the hardest during the lockdown leading to recordings being cancelled or postponed. A lot of artists and music technicians were forced into unemployment with closing down of film production and live events.

One innovative way, with which the music industry tried to curb the effect of pandemic, was the introduction of live streaming for online concerts and shows. The production quality was not initially as high due to lack of proper equipment and the technical knowhow to conduct an online concert on a big scale.

As per the survey in FICCI 2020 report, there was an increase in paid subscribers, podcast listeners and independent artist music listening, post COVID-19. This was because of lack of options for recreational outing and due to implementation of social distancing norms.

Figure 97: Impact of COVID-19-Sound and Music



Sound and Music Sub-sector Growth/ Revenue Trends

With a CAGR of 11.5% from 2014 to 2019, revenue of the sound and music industry was nearly ~INR 1,596 crore with an increase of ~INR 750 crore during the previous 5-year period. Major contributors to the revenue are digital music followed by performance rights. Without the pandemic, the revenue for this sub sector was projected to reach INR 3,064 crore by 2025. Whereas with COVID-19, it is projected that the industry will reach INR 2,308 crore by 2025 with a CAGR of ~6.3%.

Table 50: Revenue Trends-Sound and Music

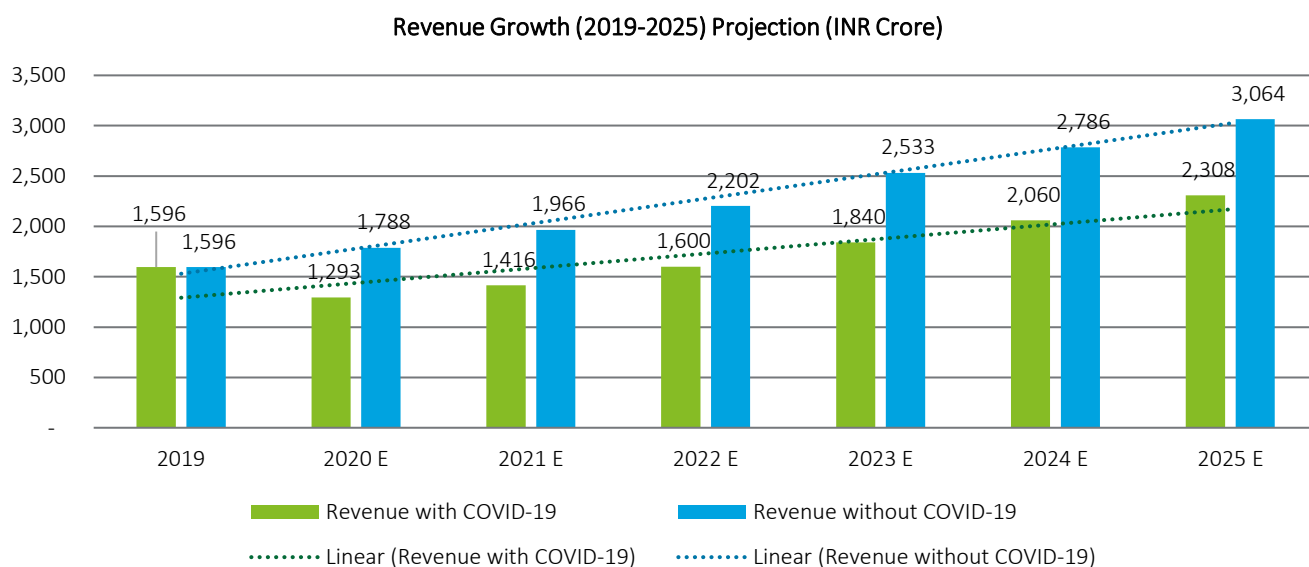
Revenue Source (INR Crore)	FY 2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Digital Music	1,261	1,021	1,118	1,264	1,453	1,628	1,823
Performance Rights	160	129	142	160	184	206	231
Synchronisation	96	78	85	96	110	124	138
Physical Sales	80	65	71	80	92	103	115
Total Revenue	1,596	1,293	1,416	1,600	1,840	2,060	2,308

Source: FICCI report and analysis

Key Assumptions:

1. Technology may have positive impact through the period 2020-2025, especially because of launch of 5G.
2. COVID-19 has had a serious impact on sector, with negative growth rate (about -20%) in 2020.
3. There may be an upward push with the policy interventions and the long-term package declaration by government in FY 2020, increasing the growth rate in coming years.
4. The growth will be highest in 2023 because of the increased demand for political jingles, songs and music to be recorded for general election in 2024. Hence, during 2023 the sector may reach normal growth (~11.5%).
5. COVID-19 has a negative impact on the movie production, live concerts and recording of music in studios hence revenue in the year 2020 & 2021 are severely affected and may start recovering post 2022 with community vaccination and adaptation by the audience to the new normal.

Figure 98: Revenue Growth Projection (2019-2025)-Sound and Music



The above bar chart represents the impact of COVID-19 on the sound and music industry. It is projected that the industry would have grown at a CAGR of ~11.5% in normal circumstances till 2025 whereas, now the industry is expected to grow at the CAGR of ~6.3% considering the negative impact of COVID-19.

Global Trends

Global Trends:

The global music industry has a market size of around USD 50 billion. This industry comprises of two major revenue streams – live music and recorded music.

Live music is responsible for more than half of the total revenue and mainly includes sale of tickets for concerts and shows.

Recorded music consists of streaming, digital downloads, physical sales, and synchronisation (music licensing for movies, TV shows, advertisements, etc.)

The global recorded music market has grown by 8.2 % in 2019 to reach USD 20.2 billion. There has been a high growth (of about 23%) in streaming revenue with the popularity of variety of digital music platforms, the key player being Spotify. The market size of streaming reached USD 11.4 billion, thus accounting for more than half of the recorded revenue. Although the physical sales of music have been declining, as the smartphone is the preferred mode of consuming music, the decline in revenue was offset by the high performance of streaming platform.

Highlights of global streaming market:⁴⁸

- There has almost been 1/5th increase in paid subscription streaming, with several countries reporting growth in this area.
- More than 33% increase in number of users using paid streaming services taking the number to \$341 million in 2019.
- Subscription services accounted for 42% of the total recorded music revenue.

At the back of strong growth in Brazil, Mexico and Argentina, Latin America was the fastest growing region in the world, at around 19% in this industry. Europe was the second fastest growing region (7.2%), with Spain accounting for a major part in that growth (16.3%). Furthermore, besides Japan, which witnessed a slow growth in physical sales, China, India, and other major markets like South Korea have been doing quite well.

Future outlook due to COVID-19:

Music driven by Artificial Intelligence is expected to increase. With greater use of technology and behavioural data being gathered, the artists and songs liked by people is expected to make the time spent on surfing much lesser.

As the touring scenario changes in the wake of social distancing and sanitisation requirements, artists are expected to gravitate towards artist friendly platforms to connect with their fans.

Concerts and live shows are expected to become more exclusive due to the limited seating capacity. Price per ticket is expected to increase to meet the cost. The concert experience is also expected to change with drive-in concerts being already used in some countries like Denmark. Selling of food, beverages and merchandise, which are a major part of any concert are expected to take a back seat.

The Human Resource Demand Forecast

To gauge the employment in the music industry, it is pertinent to include the employment generated by the partners sub-sectors as well, that use the necessary skill sets of music personnel. The partners of music industry are TV, films, Radio, audio OTT, and live events.

The following table provides the breakup of revenue and employment generated by the music industry along with the contribution of partners sectors:

⁴⁸ IFPI report 2019

Economic impact of formal partners: ⁴⁹

Table 51: Economic Impact of Formal Partners-Sound and Music

Sector	Employment generated
Recorded music industry	1,460
TV broadcasting	20,160
FM radio	4,230
Live Events	6,010
Films	5,590
Audio streaming OTT	810
Total Impact	36,800

The sound and music subsector will generate direct employment of 53,782 by 2025. It is expected to witness an annual incremental demand of ~17,000 people in the industry to be employed till 2025 over ~36,800 people employed in the year 2019.

Table 52: Human Resource Demand Forecast- Sound and Music

Particulars	FY 2019	FY 2020 E	FY 2021 E	FY 2022 E	FY 2023 E	FY 2024 E	FY 2025 E
Estimated number of people employed in the industry (A)	35,763	36,800	30,147	32,860	37,247	42,722	48,019
Technological Environment	1,037	1,075	1,507	1,643	2,235	2,350	2,641
Political Factors/ Policy updates	-	-	2,713	2,744	3,240	2,948	3,121
Impact of COVID-19	-	(7,728)	(1,507)	-	-	-	-
Total (B)	1,037	(6,653)	2,713	4,387	5,475	5,298	5,762
	-	-	-	-	-	-	-
Total Estimated Employment (A+B)	36,800	30,147	32,860	37,247	42,722	48,019	53,782
Incremental Demand	-	(6,653)	2,713	4,387	5,475	5,298	5,762

Source: IMI report 2019 & analysis

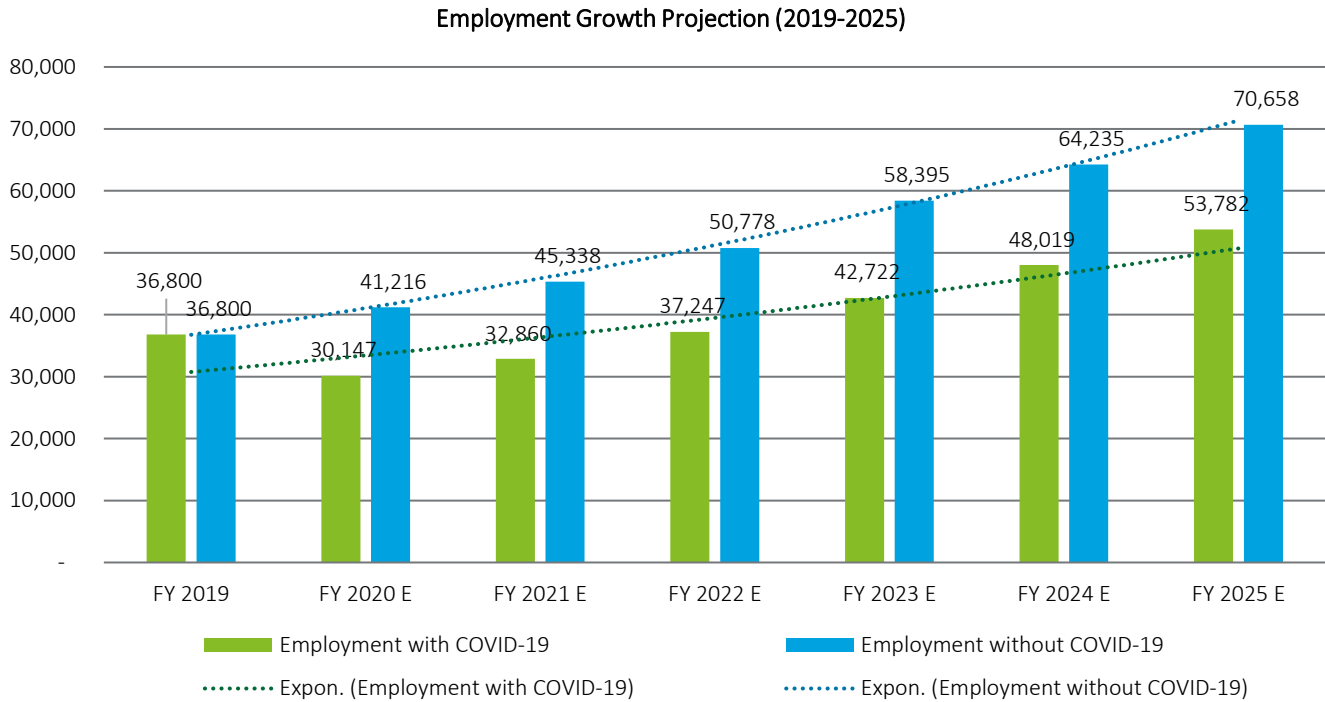
Key Assumptions:

1. Technology may have positive impact through the period 2020-2025, especially because of launch of 5G and free consumption of music through YouTube.
2. COVID-19 has had a serious impact on the sector, with negative employment rate (-20%) in 2020.
3. There may be an upward push with the policy interventions and long-term package declaration by government in FY 2020, increasing the growth rate in coming years.
4. There may be additional demand for manpower in 2023 because of the increased demand of political jingles, songs and music to be recorded for general election in 2024. Post-election the demand growth may return to its normal rate.

⁴⁹ IMI report 2019

- COVID-19 has had a negative impact on the movie production, live concerts and recording of music in studios hence there is a negative effect on employment in the industry during year 2020 & 2021 and may start recovering post 2022 with community vaccination and adaptation by the audience to the new normal.

Figure 99: Employment Growth Projection (2019-2025)- Sound and Music



The bar chart above represents the impact of COVID-19 on the sound and music sub sector. It is projected that the industry would have employed ~71,000 people cumulatively till 2025 whereas, now the industry is expected to employ only ~54,000 people by 2025.

Employment Profile and Survey Insights

Wage Employment options for which trainings need to be developed are:

Music Teacher: Music teacher is one of the most stable and sought-after full-time jobs for musicians/singers. Teaching music at schools or providing tuitions are two options available. Their responsibilities include providing teaching material and resources, curriculum planning, preparing lessons for individual needs, training/ teaching etc.

Music Analyst: Developers and publishers of video games require the skills of a music analyst to get the perfect mix of the sound/music used in video games. The responsibilities include identifying functional harmony within a variety of musical context and creating arrangements with attention to detail.

Music Artist Manager: Variety of media and entertainment companies employ music artist managers who have a prior music background and are responsible for dealing with music artists and.

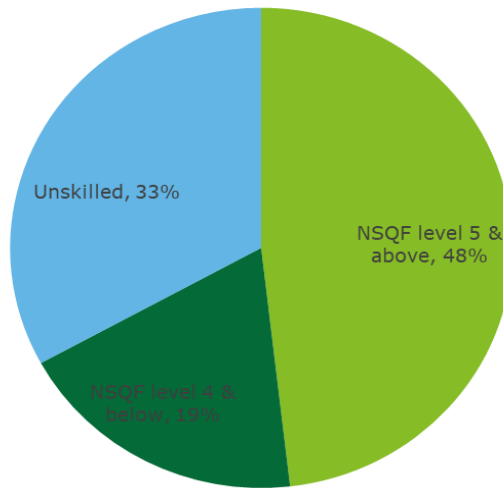
Music Critics: Newspapers and magazines employ people with music background to work as music critics for various columns.

The distribution of work force on the basis of skill set is as follows:

The survey reported that almost 48% of the personnel working in sound and music subsector are pertaining to NSQF level 5 and above followed by unskilled personnel at 33%. Further, the share of NSQF Level 4 & below is 19%.

Figure 100: Division of Employees on the basis of Skills- Sound and Music

Division of employees on the basis of skills



Source: Survey Insights, Analysis

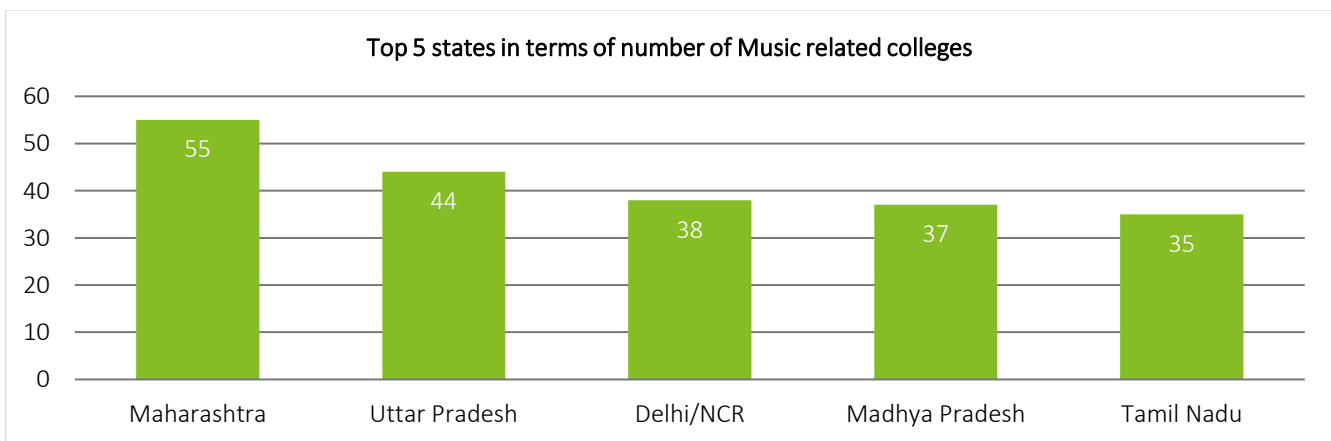
Supply Side

Currently there are around 472 private and public institutes in India which provide music related courses with 234 B.A. courses, 124 UG Diploma, 112 M.A. courses, and 11 PG Diploma courses⁵⁰.

Among these institutes, majority are public/government colleges (over 150), followed by private colleges (around 130) and others are public-private colleges (around 80).

As per the data on shiksha.com, Maharashtra (55), Uttar Pradesh (44), Delhi/NCR (38), Madhya Pradesh (37), and Tamil Nadu (35) are the top 5 states with the greatest number of music related colleges.

Figure 101: Top 5 States in Terms of Number of Music Related Colleges



⁵⁰ Shiksha.com

The Human Resource Supply Forecast

Many of the courses available in sound and music sub-sector are very much unorganized. People learn music out of their passion and generally from the teachers in their neighborhoods.

In the formal sector, courses available in India are majorly divided into two types

- UG/PG courses
- Certificate/ Vocational Courses

Experts believe that 70% of the graduating students opt for career in sound and music industry. Considering the previous trends of enrollments into sector aligned UG/PG courses and vocational Courses and impact of COVID-19, it is estimated that ~20,000 students will graduate or get trained in 2025 and be ready to be employed in sound and music industry.

Details of Enrolment in UG/PG courses

Table 53: Details of Enrollment in UG/PG Courses- Sound and Music

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
PhD	233	233	247	262	278	294	312
M. Phil.	12	12	13	13	14	15	16
PG	1,206	1,206	1,278	1,355	1,436	1,523	1,614
UG	2,686	2,686	2,847	3,018	3,199	3,391	3,594
Total	4,137	4,137	4,385	4,648	4,927	5,223	5,536

Source: AISHE 2016-2017, 2017-2018, 2018-2019 and analysis

Details of enrolment on vocational/ certificate courses

Table 54: Details of Enrollment on Vocational/Certificate Courses

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
Total	17,846	5,354	17,846	18,917	20,052	21,255	22,530

Key Assumptions:

1. Due to COVID-19, enrolments at UG/PG level for 2020 stagnated.
2. Since all the vocational training centers were shut during 2020, it is assumed that the training is at 30% of the capacity of 2019 in 2020.
3. 6% growth in training and teaching enrolments is considered for projection looking at the past performance of the supply side.
4. Only 70% of the graduating student numbers at UG/PG and vocational training institutes were considered for calculating supply side of the sound and music subsector.

Analysis of teaching/ training in the Sound and Music Sector

Music industry has multiple partners such as TV, films, radio, OTT, live events, there is an overlap of music and sound personnel required in these sectors.

There are some key issues in the music industry which impact its growth:

- Although there are a number of institutes, both private and government, providing variety of courses related to music at UG and PG levels, the quality of curriculum is not at par with industry standards, with not enough focus on building their technical knowledge and making them employable. Hence a large number of graduates from these colleges are either unemployed or have to start with part-time work as freelancers.
- The music industry is a close-knit community, with established singers/composers/technicians getting preference over newcomers. Getting a reference is pivotal in getting employed by a big record company and talent alone is not enough. Thousands of singers/instrumentalists try to make it big in the music industry, but due to lack of connections, they are forced to work as teachers. Although some new singers do break ground, they are few and reality shows succeed in springing just a few of them on to the big stage.
- There is a value gap in the industry due to piracy, implying that there is a mismatch between the value extracted by uploading services like YouTube and the revenue generated and returned to the music community. Statutory licensing is considered the biggest obstacle in recognising fair value to the stakeholders.
- Public performance rights, which allow the record labels to generate revenue from the songs being used at concerts and live shows is under regulated and only about 5% of the revenue is collected from the music played.

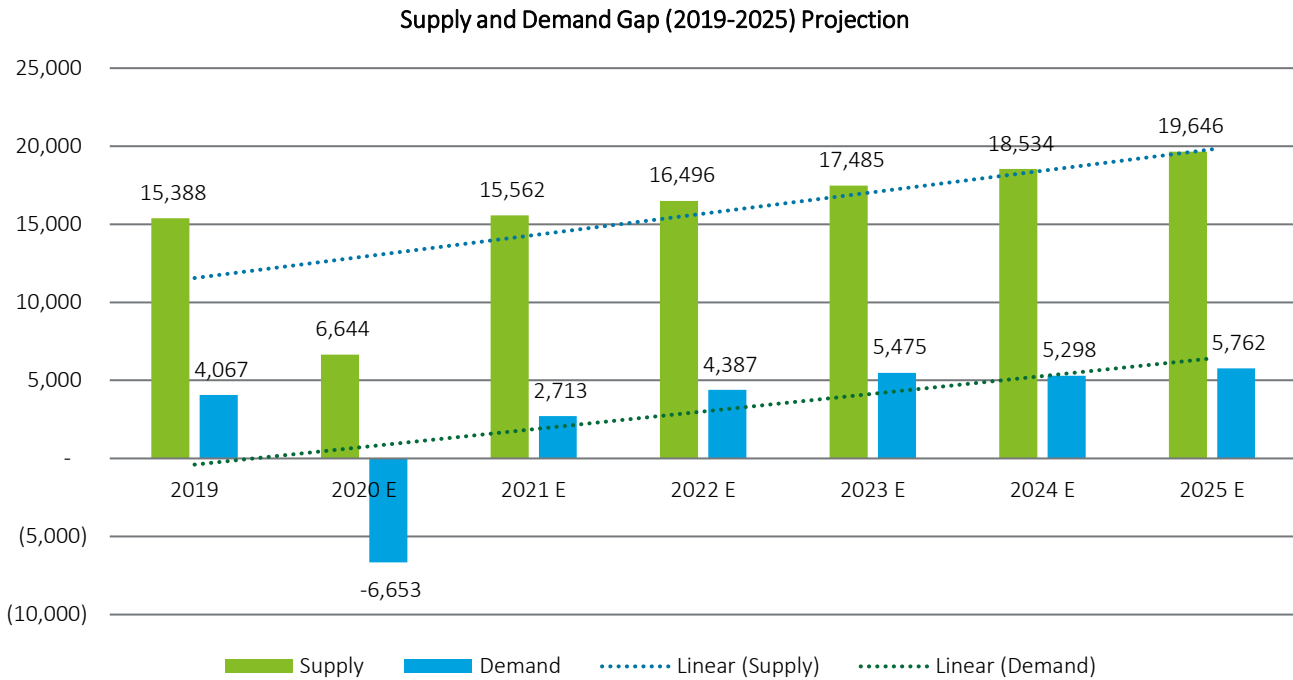
Insights on Future Jobs & Skills

Listed below are some of the new job roles that may arise in the industry. Thus, specific trainings need be developed for the following:

- Bilingual Vocal Coach:** With no boundaries per se in the music world and technology playing a major role in connecting fans all around the world with their favourite artists, bilingual (or even multi-lingual) vocal coach is expected to become a new job title with artists being trained to sing in other languages than their own.
- Music Hologram Developer:** In order to keep differentiating themselves from other run of the mill shows, and especially in the wake of the pandemic, hologram of artists is a unique way of connecting with the audience. This also helps in fans being able to connect with artists who are no more with us, for example a concert with a hologram of Michael Jackson is bound to create a full house, given his status and legacy. This is a new specialisation and hologram developers will be in demand in the future.
- Playlist Scientist:** Playlist scientists are a major attraction for all streaming services and a new job role is expected to arise in the future whose responsibility will be to cover all major platforms and curate the playlists accordingly.
- Social Media Amplifier:** With social media being the biggest influencer these days, especially among millennials, the role of social media will become even more important in the coming years. Role of amplifiers will be to monitor trends in different countries and play songs of particular artists on playlists and increase their visibility.
- Crossover ambassador:** With music being loved all over the world, it is very critical for a band/artist to connect with international audience. Their role will be to work in a record label company and make sure that the artist is introduced and recognised by audiences in other countries or regions.

The Human Resource Demand & Supply Gap

Figure 102: Supply and Demand Gap Projection (2016-2025)- Sound and Music



The above bar graph shows that there will be surplus in terms of supply of manpower in comparison to the market demand for the workforce in sound and music sub sector. In 2025, the gap will be highest at ~13,884 because of excess training especially in vocational courses. In 2019, the supply & demand Gap was minimal with ~11,321 and the average gap is ~12,672. Further, on an average ~5,000 students from formal UG/PG courses enter into the sound and music industry each year. Vocational training should focus on improving the quality of training, rather than enhancing student volume, with industry exposure to diminish the supply and demand gap.

Potential ways for the sector to contribute to Atma Nirbhar Bharat Mission

In its quest to become self-reliant and self-sufficient, the music industry in India can start by employing more Indian artists and bands in big concerts and live shows. Although individual artists and small bands perform all over India in festivals and clubs, large concerts often target international singers or a bands.

There are many Government owned institutes and academies like Sangeet Natak Academy and Lalit Kala Academy that impart knowledge and courses on traditional instruments like Tabla, Mridangam, Dhol etc. but these instruments and their artists are often not in popular demand. Enhancing their inclusion would give a fillip to the traditional art forms.

Further, a large share of the Music and sound industry equipment are still imported. Their indigenisation could give a fillip to the local industry.



E.11 Television

Television Sub-sector Overview

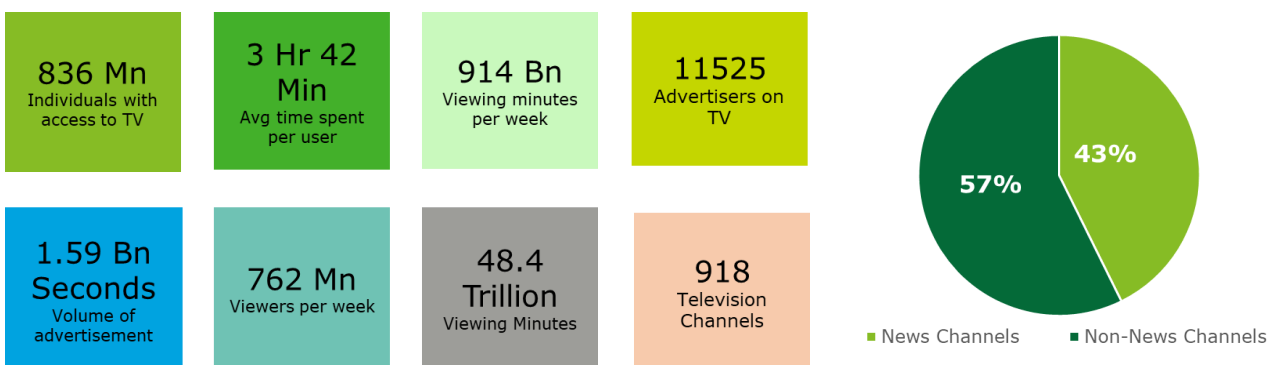
Television is the largest sub-sector within India’s broader Media & Entertainment (M&E) landscape and one of the dominant mode of media consumption. The size of Indian television industry reached ~ INR 75,800 crore in 2019 with the average Compounded Annual Growth Rate (CAGR) of ~9.8% for the period 2016-19. The revenue for television industry is largely generated from two major streams - Broadcasting/ Subscription and Advertisement.

Over the years, with evolution and growth of the television industry, the revenue from Advertisement has increased at a faster pace, than the subscription. This owing to the recent developments and updations in government policies such as the implementation of NTO and various other factors. ‘Aaj Tak’ was the first private satellite TV channel that was permitted in the year 2000. Before the year 2000, private TV channels were uplinks from international shores. Since then, many private TV channels have been expanding at a very fast pace⁵¹.

During FY 2019, despite of an overall decline in the growth of entire M&E sector owing to the tightening of spend by corporates in the sluggish economy, Television sector grew at a constant rate. The presence of big-ticket events, including Cricket, and the advertising revenue from news channels broadcasting real time updates regarding general elections were the factors contributing to this growth. Also, in the recent times, the Ministry of Information and Broadcasting have taken several new initiatives to further provide boost to this sector.

Television remains a popular medium for the film makers to promote their films in order to reach the masses through reality shows, TV advertisements etc. As per Ministry of Information and Broadcasting, there are total 918 television channels registered at the end of FY 2019. Out of these, 392 channels belong to news channel category and 526 are categorized as non-news channels. There were 350 broadcasters and ~60,000 cable operators and 5 DTH operators⁵² by 2019.

Figure 103: Trends in Television Sub-sector in FY 2019



TV sector has been affected by the ongoing pandemic in the most unanticipated way. Owing to the lockdown situation and Work-From-Home culture in the country, greater number of people have been watching TV as a source of entertainment and information during these hard times, but when the Broadcast Audience Research Council (BARC) declared these massive growth numbers, it did not enthuse the industry as it normally would have - the Television viewership saw an unprecedented growth of 37% during the lockdown, but there were little revenues from advertising owing to cost cuts, pay reduction and layoffs in the industry.

Considering the factors contributing to these growth trends and the impact of the pandemic on this sector, the TV industry is expected to grow from INR 75,750 crore in FY 2019 to INR 107,574 crore in 2025 at a CAGR of 6.02%. The growth will eventually pick-up in the forthcoming years because of various factors – New set of TRAI regulations, Dubbed NTO 2.0 that have the potential to alter industry’s growth dynamics, but it is expected to follow a sluggish growth trend and the economy will take its time to recover from the impact of the pandemic. The Television sub-sector employs about 5.8 Lakhs people

⁵¹ Ministry of Information and Broadcasting, GoI, Annual Report 2019-2020

⁵² BARC Report 2019

directly as per 2019 data and is expected to employ about 7.6 Lakhs people by 2025, generating the largest employment among all the MESC subsectors.

Expert Opinion...



Amit Behl,
Actor, Trainer, Creative
Producer, Senior Joint
Secretary CINTAA

A major challenge about employability of graduates from training institutes is that apart from top tier institutes, students do not find work even in the production houses associated with the training institutes. The institutes need to enhance awareness about themselves through associations, publications and industry directories. There is a need, on part of the industry, to hire local artists also. Also, professionals need to be encouraged to give back to the training eco-system.

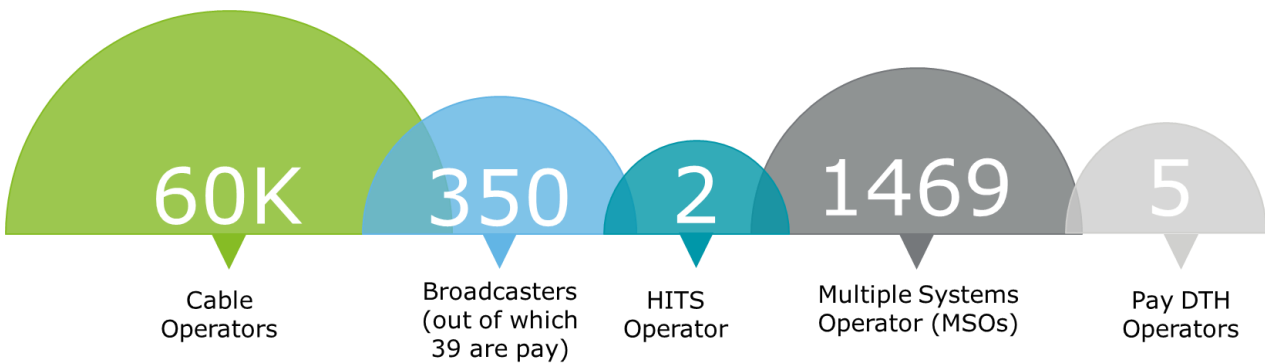


Details of subscription base and advertisement revenues

In the recent times, there has been a surge in the active subscriber base with the advent of various Multi System Operators. India is the second-largest pay TV market in the world in terms of subscriber base next to China. The country has 350 broadcasters, of which 39 offers pay channels. The government owned Doordarshan TV network provides free TV coverage to about 92 percent of India’s population through a web of terrestrial transmitters and an FTA DTH service.

Another significant development has been the digitization of the Cable TV sector in India few years back. Direct-to-home (DTH) subscriptions are growing rapidly, driven by the growth factors such as increased usage of 3G and 4G services along with new content creation methods.

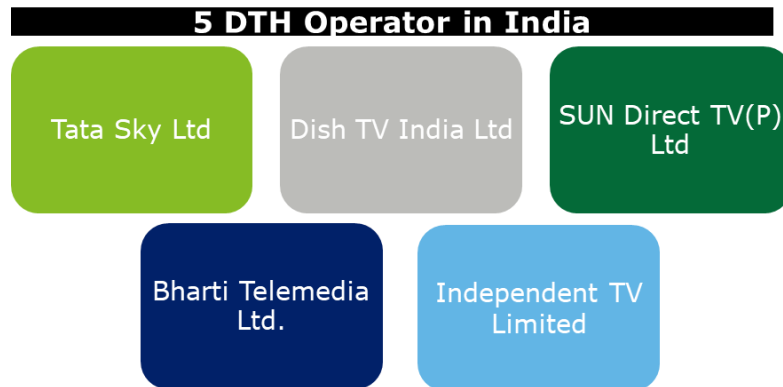
Figure 104: Details of Subscription Base and Advertisement Revenues



Source: TRAI annual report 2018–19

India broadcasting and cable TV market is segmented as **terrestrial television, cable tv and satellite** with Cable tv & satellite dominating the market. Advertisement volumes have grown by 21% from 2016 to 2019. Increasing share of advertisement across most languages is another indicator of the growth on regional television.

Figure 105: Top 5 DTH Operators in India



DTH Services

Since 2003, Indian DTH service has displayed an extraordinary growth. DTH has attained a net active subscriber base of around **72.44 million**⁵³. At the end of FY 2019, there are several pay DTH service providers catering to this subscriber base. This is in addition to the viewership of the free DTH services of Doordarshan.

Cable TV

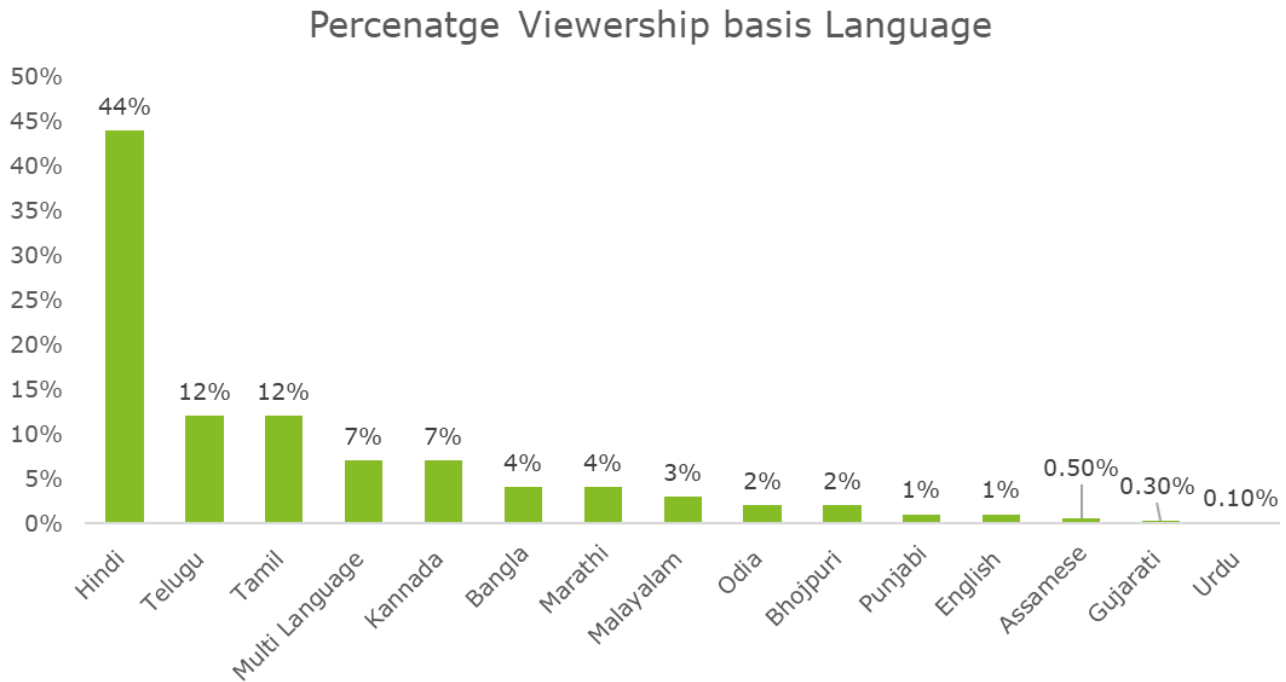
The Cable TV segment is the largest of the TV service sector with an estimated subscriber base of around **103 million subscribers** owing to the growth with increasing per capita disposable income in the country of the pay cable TV sector in terms of yearly subscriber numbers, over the last ten years.

Distribution of viewership by language

In India, Hindi TV programmes continue to dominate the landscape. However, there has been an affinity for local language content and the share of viewership of channels other than Hindi and 4 South Indian languages have risen steadily. There has been a decline in Viewership of English Channels, major reason being the sports content now being available in Hindi and other languages.

⁵³ TRAI Report 2019

Figure 106: Percentage Viewership Basis Language-Television

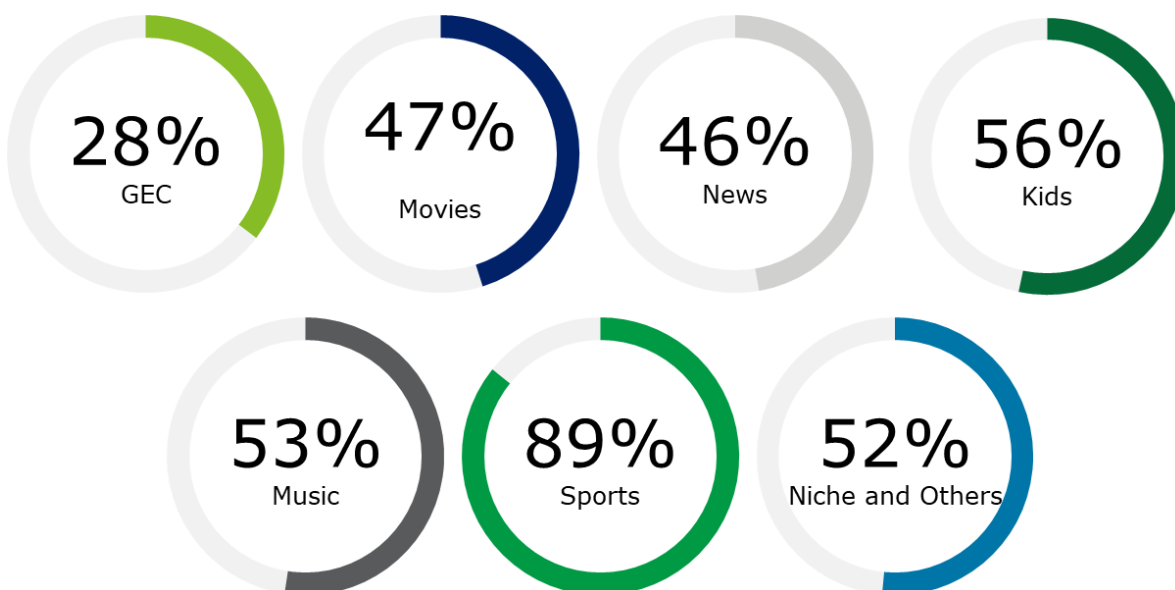


Source: BARC Report 2019

Distribution of Viewership as per the Channels Genre

The GEC (General Entertainment Channels) and movies continue to account for three-fourth of the TV viewership, followed by news, kids, music and sports. Lately, the Sports Genre has witnessed the maximum growth of ~89% from 2016-2019. Music, News, Kids and Movies have a steady growth of ~52% average growth with GEC having the least growth of 28% during this period.

Figure 107: Distribution of Viewership as per the Channels Genre-Television



Channels with less than 1% viewership have been grouped under Niche and Other sectors

Source: BARC Report 2019

Key shifts for the television industry in India

Growth Drivers

There are multiple factors that contribute to the growth of this sector:

FDI Limit of Digital Media:

The FDI limit was imposed by Information and Broadcasting Ministry at 26% for Digital media on 16th November 2019. As per the latest notification from I&B Ministry, the digital platforms will have to comply with the prescribed norms by 15th October 2021. Since FDI caps already existed for television news platforms, this new move is creating a level-playing field for both mediums - broadcast and digital media. The imposition of a 26 per cent limit on foreign direct investment in the digital media sector can hamper its growth potential, which could have a potential boost the television sector.

Policy Updates⁵⁴:

1. **New Tariff Order (NTO) 2.0:** TRAI announced amendments to existing NTO. This was to address the teething issues faced by the consumers. After implementation of NTO 1.0, despite of the options being available of selecting each channel and pay only for those channels, 80-85% customers opted for boutique packs only. This was due to huge discount given by the distributors on the bouquet of channels.

After the implementation of NTO 2.0:

- a) Bouquet channels can be offered at maximum 33% discount
 - b) 200 Channels are offered at the base NCF (Network Capacity Fee) price of Rs. 130 while NCF rates for Multi TV connections were slashed
2. **DD Free Dish Set Top Boxes distribution in Jammu & Kashmir (J&K)** was launched on 22nd June 2019. Doordarshan has provided 30,000 DD Free Dish Receiver Sets free of cost for distribution to families in the border areas of J&K.
 3. The implementation of **Accessibility Standard for TV Programmes** for persons with hearing impairment was announced by the Ministry of I&B on 11th September 2019.
 4. **For Ease of Doing Business initiatives** have been taken in respect of the guidelines for up-linking and downlinking of TV channels.
 5. **The Ministry has developed a portal viz. BroadcastSeva**, for broadcast services efficiency and transparency for the growth and management of the Broadcasting sector. BroadcastSeva, vide its following modules provides a comprehensive service to the applicants:
 - a) Payment of Annual permission fee by existing broadcasters.
 - b) Applications for Temporary Up-linking Permissions.
 - c) Permission to set up a teleport.
 - d) Application for Foreign Exchange Remittance (FOREX).
 - e) Application for various changes in the channel i.e. change of name and logo, change of satellite, change of teleport and teleport location, change of category/language of channel, mode of transmission.

⁵⁴ MIB Annual Report 2018-19

6. **DD Free dish Policy Guidelines** Policy guidelines for allotment of slots of DD Free Dish Direct-to-Home Platform to satellite TV channels have been further amended with effect from 01.11.2019 to enable wider participation and content diversity on this platform.

New channels/Programs in 2020

1. In Jan 2020, Star India stated that it will launch four new channels Vijay Music, Star Movies Select, Star Sports 3 HD, and Disney Channel HD. It will also rebrand Movies OK as Star Gold 2.
2. In March 2020, return of the old classic serials such as 'Ramayana' on DD National and 'Mahabharat' on Star Plus garnered huge traction and broke all viewership records, as it found a captive audience due to nationwide lockdown.
3. In October 2020, Zee Entertainment Enterprises Limited launched its first lifestyle channel, Zee Zest, featuring diverse lifestyle content such as food, travel, lifestyle, home improvement, wellness, and culture
4. In September 2020, Zee Entertainment Enterprises Ltd., launched pay-per-view movie service, Zee Plex, a new film distribution service, to display new films on DTH and OTT platforms. This move aims at meeting the growing demand for watching movies among consumers amid coronavirus pandemic

Regulation of content on digital media:

Earlier television and print media were the only sources of news and entertainment. With the emergence of various digital platforms, it has made it easier for people to use this content. The platforms had brought along various obscene and unregulated contents.

Currently, the content posted by the online news portals and the OTT platforms in India are not regulated to the extent they should be as there was no provision to regulate them. In contrast, other forms of media- print, radio, television and film are regulated by its respective boards. The lack of a dedicated regulatory law or regulatory authority had opened the gates for the content creators in the form of creative freedom to generate content as per the taste of a wider audience and to publish content without any clearances from the censor board.

On 9th November 2020, Government of India has brought an amendment to include "Online/ Digital Media" under Ministry of Information and Broadcasting. The I&B ministry might come up with the frame of guidelines to regulate such content.

Risk Factors

In addition to the above mentioned, there are several factors that may affect the sector:

Digital Media: Various OTT platforms offer variety of contents and that too according to the preferred schedule of the individuals. Further, people do not want to restrict themselves to the television. Due to tremendous rise in the usage of internet in our country, people want to enjoy their favourite shows and movies on their mobile phones, laptops, tablets and other personal devices.

5G: With advent of 5G's superfast download speeds and low latency, video-on-demand viewers will be able to say goodbye to buffering videos and stop-start streaming. Along with quality of the content itself, the standard of video streaming is the main criteria influencing customer satisfaction on OTT platforms. As 5G networks promise to bring faster speeds and a more reliable connection, viewers will no longer have to deal with the common frustrations of sluggish load times and midstream stops and stutters.

Young Population: The increased usage of 5G services coupled with a very teeming young population and portable devices has augmented demand that further provides the desired boost to OTT sector impacting the television sector.

Convenience of watching online: The growing trend of watching television media through other devices is taking a toll on television sector. With most cable and broadcast networks offering internet streaming & providing the piously pirated versions of most television shows and movies, a computer can do almost everything that a television can do.

Rise in Laptops/Computers: Attempts to make huge flat screen HDTVs cooler haven't had the effect they needed to in order to compete with laptops and tablets; a big television is now somewhat seen as a mark of suburban lameness, especially without the extra devices to stream online video to it.

Stigma of television: Growing concerns about violence, sexism, racism, etc. on television, especially with regard to young viewers, mean that households that include children have concerns about making video media so readily available for their households. There is a trend among new parents toward severely limiting intake of this kind of media; therefore, many families have resorted to not having a television. Furthermore, the television, once the ultimate cool appliance, is now considered by some to be clunky and unfashionable.

Too many ads on television: People find it annoying to watch a movie when it is interrupted by commercials multiple times. With the Internet at home, they have the option of skipping ads when they are too many and can watch a movie or TV show without being interrupted constantly.

State-Level Industry Shifts

- **Key Employment generating States/Cities:**

TV shows are produced in many cities in the country. Key states generating employment in Television Industry are Mumbai (Maharashtra), Chennai (Tamil Nadu), Kolkata (West Bengal), Hyderabad (Telangana), Thiruvananthapuram (Kerala), Bengaluru (Karnataka), Bhubaneswar (Odisha) and Guwahati (Assam).

- **High Demand Job roles in the subsector & in key states/cities**

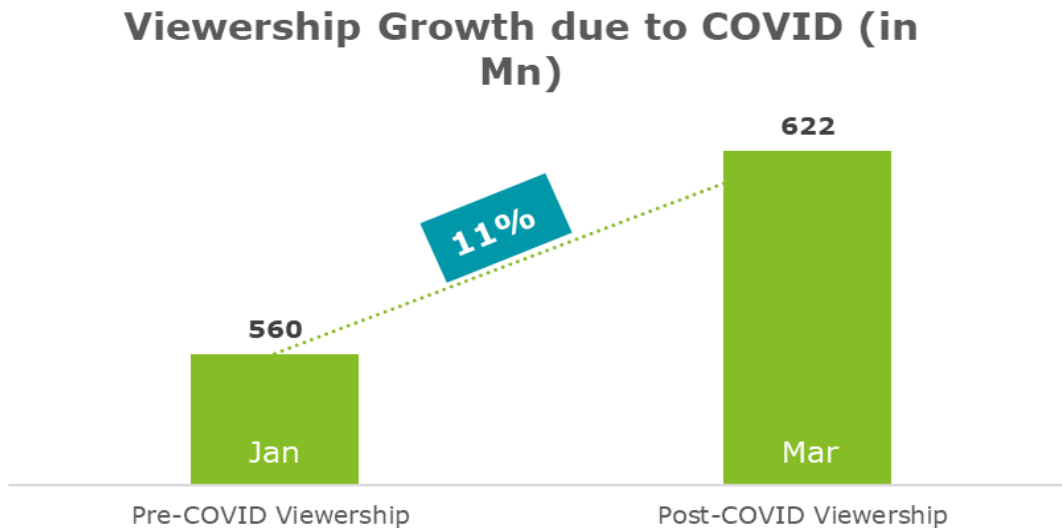
Assistant Cameraman, Camera Operator, Actor, Set Carpenter, Set Decorator, Voice-over Artist, Set Painter, Set Plasterer, Live Action Director, Hair Dresser, Lighting Artist, Make-up Artist, Dancer, Production Assistant, Location Manager, Unit Production Manager and Voice-Over Artists are the high demand job roles as per the existing QP-NOS for the subsector including in the above mentioned states.

- **States/Cities which may become prominent in the next 5 years**

Television shows are increasingly choosing real locations over erecting a set in Mumbai. **Gujarat, Rajasthan, Madhya Pradesh, Uttar Pradesh, Delhi, Jammu & Kashmir and Haryana** have become some of the preferred locations. This emerging trend will also create an employment demand of skilled technicians and workers in these states as in order to cut costs producers would hire people from the state itself rather than bearing the expenses of travel, stay and food. Also, specifically the proposed Film City project in **Uttar Pradesh** which will be set up on 1,000-acre land identified in Gautam Buddha Nagar.

Impact of COVID-19

Figure 108: Television Viewership Growth Due to COVID-19 (in Millions)



Source: BARC Report

The TV market in India is the world's largest, after China. Broadcasting and Cable TV services have exhibited growth in the past years, and this has led to the increase in number of platforms & service providers. TV consumption continued to spike as reported by television viewership measurement agency BARC India.

In the subsequent weeks during the pandemic, the average daily viewership grew from 62 million from January 2020 to March 2020 i.e. from 560 million to 622 million, resulting in 11% surge. The weekly viewing minutes (total number of minutes spent watching TV) breached the 1 trillion mark in March. The number of people watching TV all seven days a week also saw a jump from 32 per cent to 44 per cent., while the average time spent per viewer also increased 23 per cent from 3 hours 46 minutes to 4 hours 39 minutes. Consequently, the total number of channels consumed per viewer in the week also increased from 16 to 22.

With the ongoing trends, the general news genre saw a massive bump in terms of viewership, owing to massing consumption of news by general public. It led the charts with a staggering 298 per cent increase, followed by business news at 180 per cent. The share of news as part of total TV viewership grew from 7 to 21 per cent. Other gainers included infotainment (63 per cent), movies (56 per cent). General entertainment channels showed the most sluggish growth at 3 per cent. GECs' share of total viewership reduced from 52 per cent in the pre-COVID-19 time to 39 per cent in week 12. Also, the re-run of Ramayana on Doordarshan attracted viewership in large numbers according to BARC, with the Sunday evening broadcast getting 51 million viewers. Furthermore, In March 2020, kids category saw over 45% growth in viewership. Due to shutdown of schools, Children invested more time in watching their favorite cartoons on television.

However, even with startling increase in the viewership across various channels, the revenue has not increased enough owing to the lesser investment by the companies in the COVID-19 times. The following challenges were observed in the TV sector due to the pandemic:

- a) **Increase in TV viewership but decline in advertisement revenue:** Total TV viewership has shown consistent growth in the last 12 weeks – Current week Daily Average Reach is 7% higher and Average, Daily Time Spent is 13% higher than pre-COVID-19 period (as per BARC Reports in August)
- b) **Reduction in budget for advertisement:** Due to COVID-19, many industries have declined and their revenue as well as the profit margins has dropped significantly. Hence, the focus shifted to essential survival expenses and cutting the cost of selling and operational expenses. Hence, many companies cut down on their advertisement budget. Post unlock down, the advertisements have shown an increase of roughly 12 % of the Pre COVID-19 period. (as per BARC)

- c) **Change in the preferred genre:** Due to the emerging OTT platforms, which have launched new content during the lockdown period and are continuing to do so. Such content is gradually being preferred by the Indian audience, especially in the metropolitan cities.
- d) **Rise of digital news platforms and Youtube Channels:** Digital news channels on Social media platforms like YouTube have seen a visible growth in the COVID-19 Period. Some of the professionals who had lost jobs have switched over to the digital platforms like YouTube which is free.

One of the positive impacts of the pandemic has been that the sector has learnt to work remotely on most of the tasks (other than the shoots). This has meant better efficiency, better creativity in some cases as people reflected deeper from the confines of their homes, less travel, more time with their families, lower costs, opportunities to people who couldn't have contributed because they were 'away' or 'elsewhere'.

Growth/ Revenue Trends

Basis our analysis of growth and risk factors, it is projected that Television sector will grow from INR 75,750 crore in FY 2019 to INR 107,574 crore in 2025 at a CAGR of 6.02%.

Table 55: Revenue Trends-Television

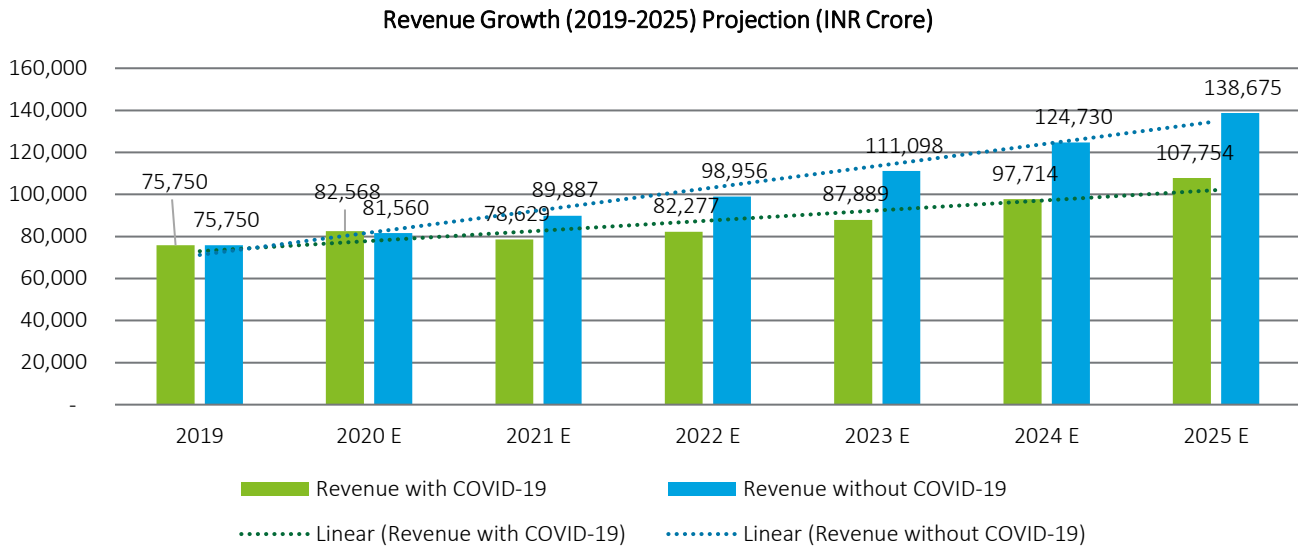
INR Crore	2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Advertising	28875	33027	31451	32911	35155	39085	43029
Subscription	46875	49541	47178	49366	52734	58629	64545
Total	75750	82568	78629	82277	87889	97714	107574

Source: Economic impact of the film, television, and online video services industry in India, 2019 and analysis

1. Technology may have negative impact throughout the period 2020-2025, especially because of OTT and launch of 5G.
2. COVID-19 has had an impact on advertisement revenue of the sector, with negative growth rate (~ -6%) in 2020
3. There may be an upward push with the policy interventions by government in FY 2020, increasing the growth rate to ~3% in coming years
4. Sector may reach normal growth (~6%) by 2025
5. The TV news will again witness a surge in the viewership with upcoming general elections in 2023 and will further provide a boost of 2% to the sector

It is quite evident from the above projections that on an average advertisement contributes to around 60% of the revenue and the subscription contributes to only 40% of the total revenues.

Figure 109: Revenue Growth Projection (2019-2025)-Television



The bar chart above depicts the projections for revenue for COVID-19 and Non-COVID-19 scenario. It is observed that besides the increase in viewership, the lower advertisements due to pandemic, there has been a downfall in revenue. The revenue is expected to grow at a CAGR of ~6%, which is a reduction from a CAGR of ~10% in the non-COVID-19 Scenario.

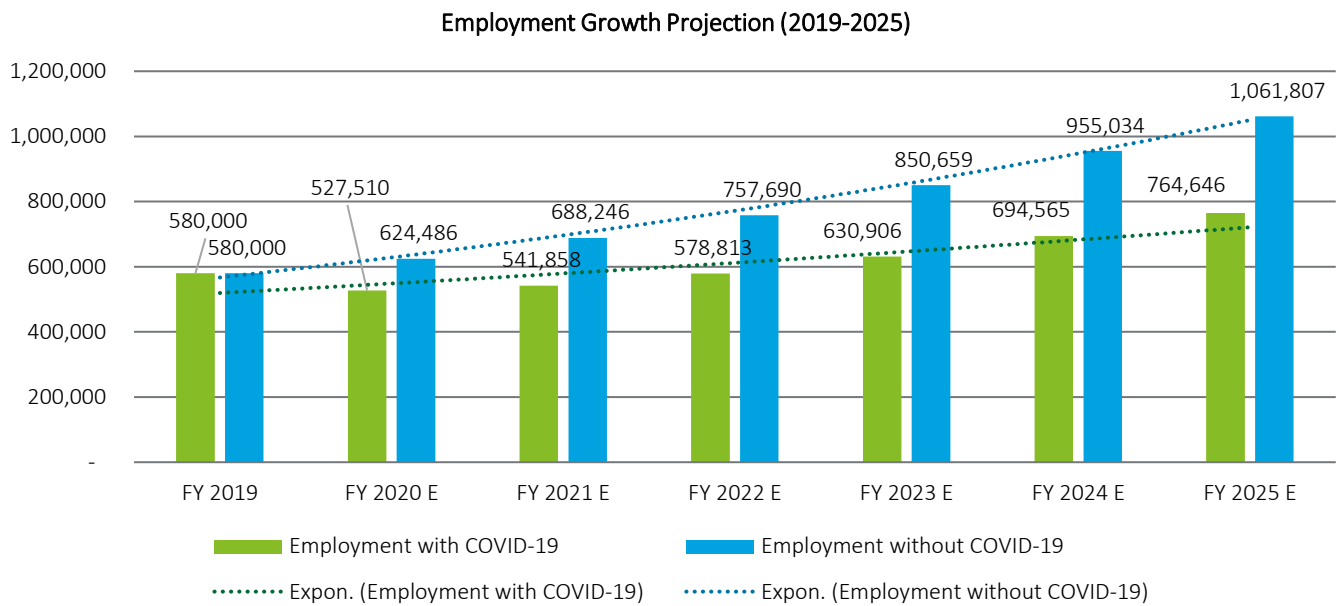
The Human Resource Demand Forecast

Being the largest subsector with maximum revenue contribution in Media and Entertainment Sector, the Television subsector will generate direct employment of 7,65,000 by 2025. It is expected to witness an annual incremental demand of ~70,000 people in the industry to be employed till 2025 over ~5,80,000 people employed in the year 2019.

Table 56: Human Resource Demand Forecast-Television

Particulars	FY 2019	FY 2020 E	FY 2021 E	FY 2022 E	FY 2023 E	FY 2024 E	FY 2025 E
Estimated numbers of people employed in the industry (A)	5,85,536	6,20,600	5,64,436	5,90,626	6,30,906	6,87,688	7,57,075
External Factors							
Technological Environment	(46,843)	(24,824)	(22,577)	(35,438)	(37,854)	(27,508)	(22,712)
Political Factors/ Policy updates		(18,618)	33,866	35,438	37,854	34,384	30,283
Impact of COVID-19	-	(49,648)	(33,866)	(11,813)			
Total (B)	(46,843)	(93,090)	(22,577)	(11,813)	-	6,877	7,571
Total Estimated Employment (A+B)	5,80,000	5,27,510	5,41,858	5,78,813	6,30,906	6,94,565	7,64,646
Incremental Demand		(52,490)	14,348	36,955	52,093	63,658	70,082

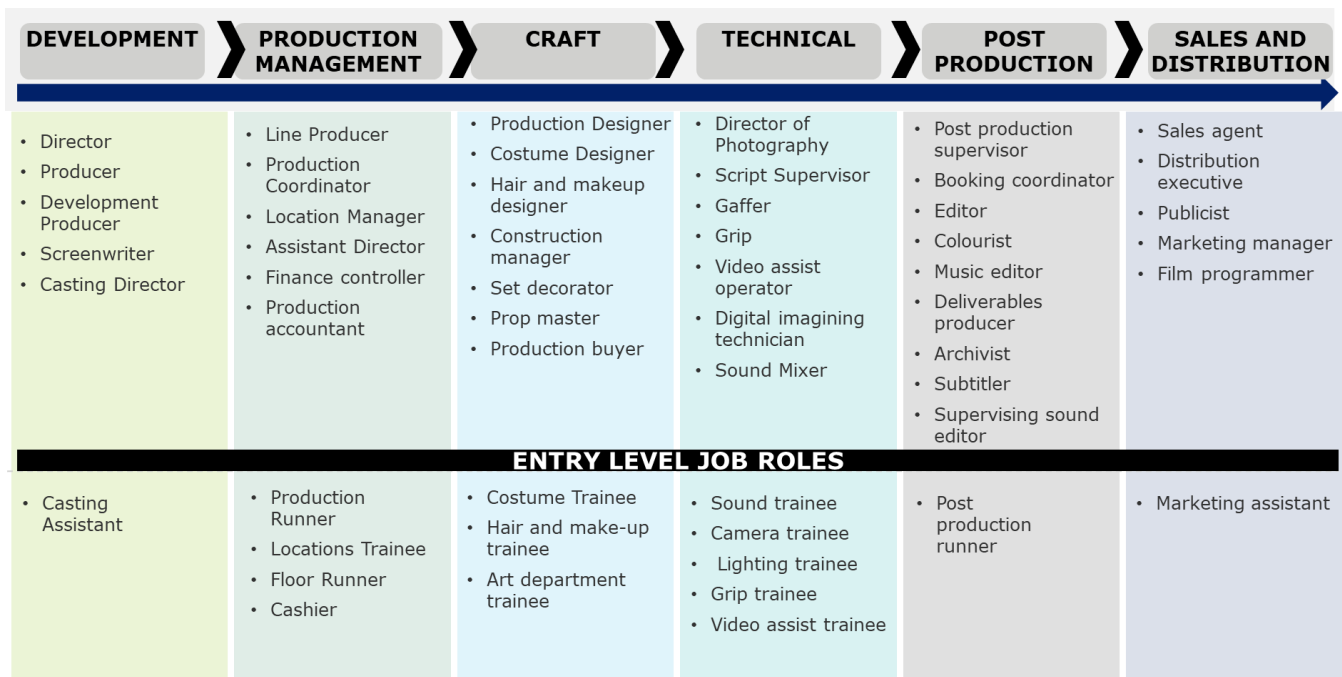
Figure 110: Employment Growth Projection (2019-2025)-Television



Employment Profile and Survey Insights

There is an increased demand for skills in the industry than ever before, with the upcoming wide range of films or programmes can be seen - in cinemas, on TV, or through streaming platforms like Netflix or Amazon Prime. Production companies of TV dramas are looking for carpenters to build the sets, accountants to keep the books, people who know the law to negotiate the selling of rights and much more. The exhaustive list of job roles across all the value chain of production of a TV programme is given below:

Figure 111: Exhaustive list of job roles across all the value chain of production of a TV programme



Distribution based on the skill levels of employees: The professionals in the industry are classified on the basis of skills based on National Skill Qualification Framework (1 to 7), 7 being the highly skilled and 1 being the preliminary skill set.

Figure 112: Employment Composition-Television

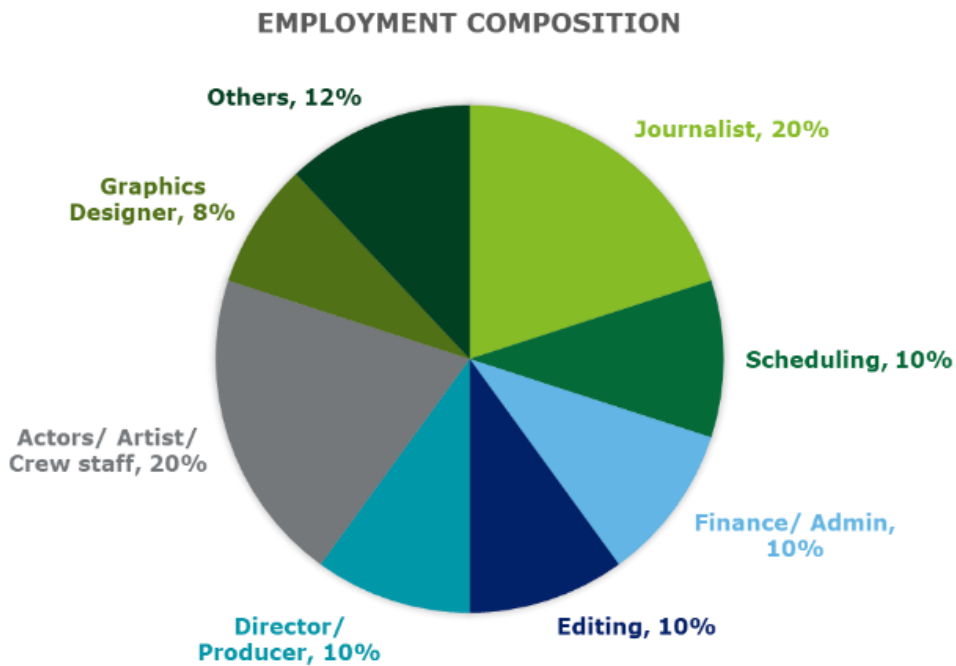
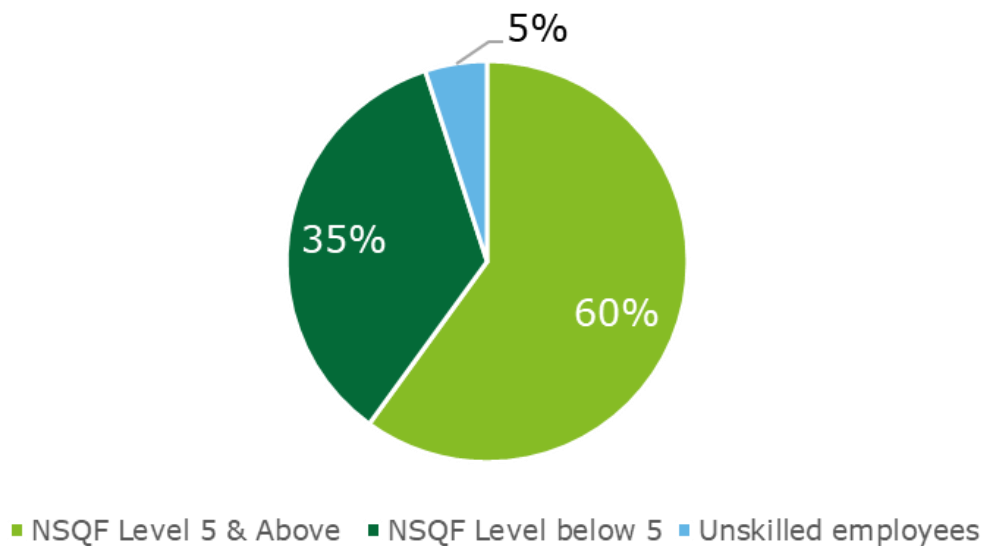


Figure 113: Distribution of Workforce on the Basis of Skills-Television

Distribution of workforce on the basis of Skills



Source: Survey Insights, Analysis

The distribution of work force on the basis of skill set: the workforce is divided as per the NSQF level, with ~60% of the employees being NSQF Level 5 and above, while the unskilled employees are only 5%.

Supply Side

The experts suggest that there is a huge skill gap between the education provided at the educational institutes and the actual demands and needs of the industry. Further, they suggest that during the education in the television sector related institutes, the focus should be on more of practical training, rather than the theory. A large number of the freshers that join the organisation are graduates in Journalism and Mass communication.

Below are the illustrative list of institutes and courses in India:

Table 57: List of Institutes and Courses in India-Television

Name of the Institute	Courses offered	Location
Film and Television Institute of India	<p>1 Year Courses:</p> <ul style="list-style-type: none"> • Feature film Screenplay writing • Certificate Course in Video Editing • Certificate Course in TV Direction • Sound Recording and TV Engineering • Certificate Course in Electronic Cinematography <p>2 Year Courses:</p> <ul style="list-style-type: none"> • Diploma in Acting <p>3 Year Courses:</p> <ul style="list-style-type: none"> • PGD in Editing • Diploma in Art Direction and Production Design • Diploma in Sound Recording and Sound Design • Diploma in Direction & Screenplay Writing • Diploma in Cinematography 	Pune
Satyajit Ray Film and Television Institute (SRFTI)	<p>3 Year Courses:</p> <ul style="list-style-type: none"> • Producing for Film & Television • Sound Recording & Design • Direction & Screenplay Writing • Animation Cinema • Cinematography • Editing <p>2 Year Courses:</p> <ul style="list-style-type: none"> • Writing for Electronic & Digital Media • Direction & Producing for Electronic & Digital Media • Sound for Electronic & Digital Media • Editing for Electronic & Digital Media • Cinematography for Electronic & Digital Media • Electronic & Digital Media Management 	Kolkata
Whistling Woods International	<ul style="list-style-type: none"> • Certificate Programme in Screenwriting for Web & TV Series • Advanced Diploma in Acting • Advanced Diploma in Filmmaking with Cinematography • P.G.D. in Media & Entertainment • B. Sc. in Filmmaking with Direction • B. Sc. in Filmmaking with Cinematography 	Mumbai

	<ul style="list-style-type: none"> • B.A in Acting 	
Asian Academy of Film and Television	<ul style="list-style-type: none"> • M. Sc. Cinema + PGD in Cinema (2 Years) • B. Sc. Cinema + Diploma in Cinema (3 Years) 	Noida
Center for Research in Art of Film And Television (CRAFT)	<ul style="list-style-type: none"> • Cinematography • Sound Recording and Editing • Acting and Modeling • Editing • Documentary Film Making • PGD in Youtube Film Making • Film Direction 	Delhi

The Human Resource Supply Forecast

The courses available in Television subsector are majorly divided into two types

- UG/PG courses
- Vocational Courses

Courses that train the students in Content writing, editing, Community Journalism have gained popularity as they are in demand. Experts believe that ~30% of the students graduating from above mentioned courses opt for career in television industry. Considering the pervious trends of enrollments into sector aligned UG/PG courses and vocational Courses and impact of COVID-19, it is estimated that about ~2.4 lakh students will graduate out in 2025 and be ready to be employed in television industry

Details of Enrolment in UG/PG courses in Journalism, Mass Communication, Fashion and Fine Arts

Table 58: Details of Enrolment in UG/PG courses in Journalism, Mass Communication, Fashion and Fine Arts

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
PhD	716	716	759	804	853	904	958
M. Phil.	239	239	253	268	284	301	319
PG	19088	19088	20233	21447	22734	24098	25544
UG	27677	27677	29338	31098	32964	34942	37038
Total	47719	47719	50582	53617	56834	60244	63859

Details of enrolment on vocational courses

Table 59: Details of Enrollment on Vocational Courses-Television

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
Total	462,528	92,506	462,528	490,280	519,696	550,878	583,931

Key Assumptions:

1. Since 2020 has witnessed COVID-19, there has been reduced enrolments in UG/PG level for 2020.
2. Since most of the vocational training centers were shut during 2020, it is assumed that the training at 30% of the capacity of 2019 was delivered in 2020

3. 6% growth in training and teaching enrolments is considered for projection looking at the past performance of the supply side.
4. Only 30% of the graduating student numbers at UG/PG and Vocational training institutes were considered for calculating supply side of the film subsector.

Analysis of teaching/ training in the Television sub-sector

Courses in television studies generally examine aspects of TV broadcasting ranging from on-air talent to behind-the-scenes production. It may also include an in-depth analysis of TV, its viewership and its impact on culture. Students may explore subjects related to the history of broadcasting, technology, script writing, production, directing and announcing. The most common concepts covered in these courses are performance, computer animation, improvisation, interactive media and location recording. The courses may also offer a hands-on learning module where students create a TV shows.

There is a wide range of career paths for students who complete courses in television studies. In general, individuals with more advanced training and knowledge have a competitive edge in the marketplace. A few of the more common job roles include recording engineers, camera operators, broadcast producers, program directors, editors and teachers. These professionals often work for cable networks, TV networks, local TV stations and production companies. The following are the challenges in the sector pertaining to the teaching programme.

Minimise gap between course curriculum & industry needs:

There is a huge gap between the industry requirement and the current course content. The technology which is available in the laboratory of the top ranked institutes is outdated in comparison to what is being used by the industry. Hence, in order to bridge this gap, the relevant technologies can be upgraded at regular intervals. There is need for a policy that enforces revision of the curriculum for television courses. The need for collaboration of Industry and academia for curriculum development and course structure was highlighted by the industry experts.

Need for Train the trainer programs:

There should be regular training session for the teachers of television sector by the industry experts so that the teachers are updated as per the latest industry practices and trends. Currently there is hardly any exposure for the academicians to the real working environment in Industry.

Poor quality infrastructure:

Even though there are a plethora of media schools that have opened up to meet the high demand, the infrastructure is not at par with the industry standards. They have outdated equipment and the laboratories do not simulate real television industry.

Insights on Future Jobs & Skills

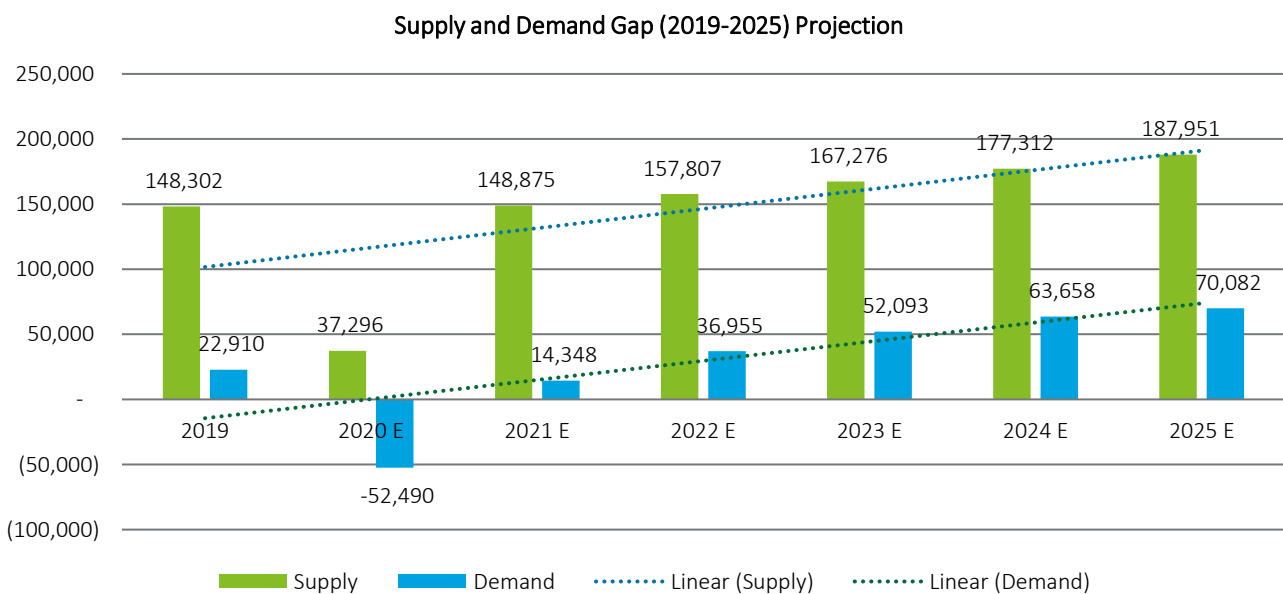
Given the changing nature of the industry, several new and emerging roles are likely to gain greater importance. Thus, specific trainings need to be developed for the following roles:

1. **Analytics to understand audience behaviour:** The industry experts suggest that analytics and use of big data, is one of the indispensable skills set in the television segment to form the content strategy and analyse the audience sentiment.
2. **Artificial Intelligence experts:** Many petty jobs which involve the manpower today, might be eliminated through use of artificial intelligence in future. Hence, the resources proficient in the relevant software may see the rise in demand in future.
3. **Mobile Journalist:** Due to ever changing and advancing technology, everything from professional shooting to editing can take place on mobile phones these days with relatively lesser investment. The people with multiple skills who are proficient with the latest mobile applications for editing, graphics etc. will be the future of the industry

4. **New age Content/ Script writers:** Script writers who could write out of box stories for GE Channels would be in demand. This becomes all the more important as GE channels would be in competition with OTT platforms to get more eyeballs.
5. **Video Editors:** Video editors would be in much demand who are well versed with new editing software.
6. **Multi skilled professionals:** The industry experts have suggested that in future, the existing departments such as camera, reporting etc. may gradually decline. The people who are multi-skilled and are capable of performing various tasks such as recording, editing and transmitting will be sought after. These multi-skilled professionals would have to be proficient in television as well on digital platforms.
7. **Sports Journalism and sports management:** The journalist with appropriate knowledge and interest about varied sports and who will be trained for reporting on sports which shall not be limited to cricket will be in demand. Relevant courses will enable students to be employable internationally in this area. With the rise of various Sports Leagues in Indian market, there is also a need to introduce more sports media and management courses. Currently, such courses are pursued by many of the Indian students in foreign universities. Sports management is an upcoming field in India as well as remain relevant across the world.
8. **Technology artists/ personnel:** Emphasis should be on including the VFX skills, social media & digital marketing course in the curriculum as the television sector requires these added skills for better employment.

The Human Resource Demand Supply Gap

Figure 114: Supply and Demand Gap Projection (2019-2025)-Television



The above bar graph shows that there will be surplus in terms of supply of manpower in comparison to the market demand of the workforce in television sub sector. In 2025, the Gap will be highest at ~1.17 Lakhs because of training especially in vocational courses. In 2020, the Supply & Demand Gap may be minimal with ~70,000. Average gap between demand and supply across the year (2019-2025) is 1.16 Lakhs. Further on an average around 10,000 students from formal UG/PG courses enters into the television industry, except 2020 (left because of COVID-19 impact). Vocational training needs to focus on job-roles that have high demand only to help reduce the huge supply and demand gap.

Potential ways for supporting the Atma Nirbhar Bharat mission

The industry experts suggest that most of the hardware devices and software are imported due to their unavailability in India. It would be helpful if Directorate General of Foreign Trade may form policies to give rebate in taxes and Government should

form policies that would attract such companies to set up the manufacturing units in India, so that the taxes & duties on imports can be reduced.

Further, it might be challenging for companies to survive and remain profitable only on domestic demand for equipment, it will also help to focus on the exports.



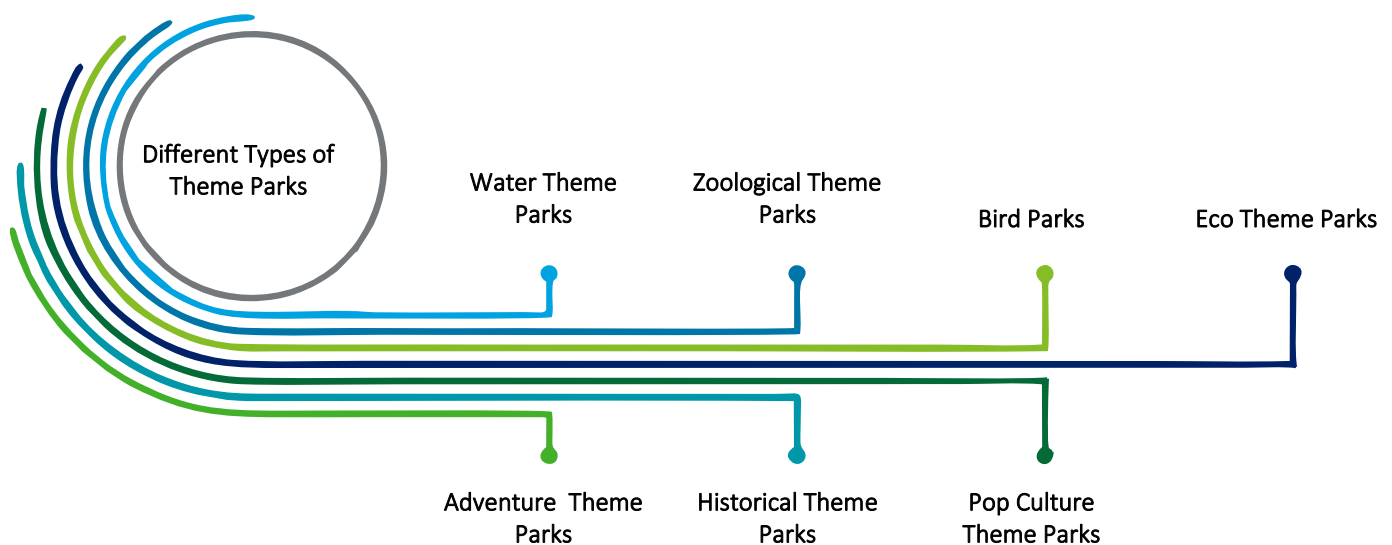
E.12 Theme Park

Theme Park Sub-Sector Overview

The Indian theme park and amusement park industry is still in its nascent though it started in the 1980's and is at INR 11,475 Crore in FY 2019. The Indian industry is smaller in comparison to US and Europe. In India, Appu Ghar was the first amusement park to open, in New Delhi in 1984 and it was named after 'appu' - the mascot of the Asian games, which were held in 1982. Appu Ghar became one of the most famous amusement parks in India during the 1980s and 1990s. This was followed by opening up of Essel World in Mumbai and Nicco Park in Kolkata. These two parks play a major role in promoting state tourism with a sizable part of visitors being from other states.

Currently, there are more than 150 theme and amusement parks spread all over India across all major cities including tier-2 and tier-3 cities. Since, large amount of land is required for setting up a park, majority of them are located on outskirts of cities.

Figure 115: Different Types of Theme Parks



Every year more than 3 Crore tourists visit amusement and theme parks in India and this sub sector is responsible for almost 40% of the leisure industry revenue.⁵⁵ Children and youth account for half the visitors in these parks accompanied by their family or as part of school groups.

The variety of entertainment options, easy accessibility, indoor attractions and a large variety of food and drink choices are few of the factors which drive growth in this sub sector. The advantage of theme and amusement parks over other modes of entertainment is that they allow the entire family to have fun with an activity-filled day. Also, in the recent years, the rides and attractions have become bigger and more adventurous giving more adrenaline rush to the visitors. The owners and organisers are taking a cue from their foreign counterparts and coming up with their own adventures.

The pandemic has, however, had an adverse impact on the amusement and theme park industry with complete lockdown in the country which meant that all the parks were entirely shut for majority of FY 2020. This led to losses in jobs, salary cuts and shutting down of smaller size parks. It is estimated that the loss to theme and amusement park industry will be around INR 1,100 Crore⁵⁶. Basis the on-going trends and the impact of COVID-19, Indian amusement and theme park industry will grow at a CAGR of 4.5 % from the of INR 11,475 Crore in 2019 to INR 14,896 Crore in 2025.

⁵⁵ CII

⁵⁶ Indian amusement industry feels doomed in lockdown, National herald India, 2020

Expert Opinion...



Manmohan Shetty
(President, Imagicaa World)

"The pandemic has impacted the theme parks severely including the direct and indirect employment it supports. It is feared that visitors may not return to entertainment centers like theme parks for several months since these are not essentials and require people to be in a mind space of safety and celebration. Over the long term, however, as visitors return and new parks are set-up, the sector has the potential to provide significant employment to people."



Details of revenue streams

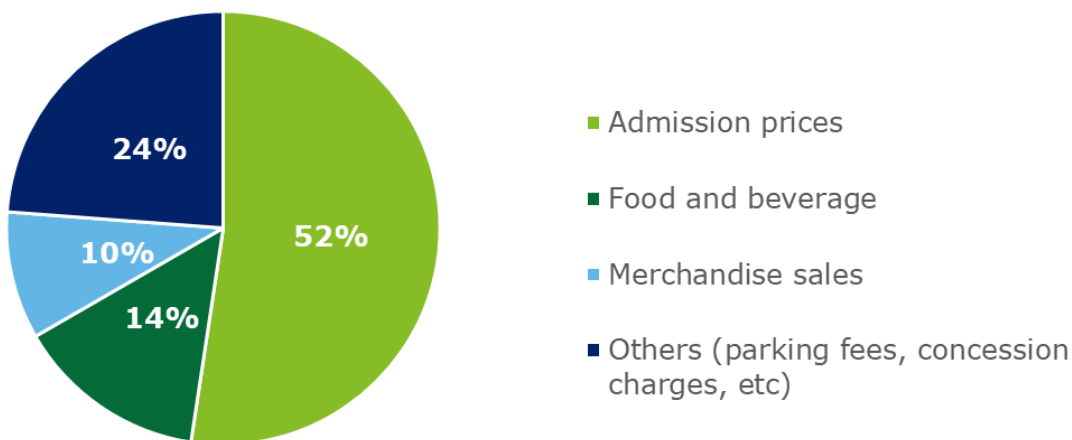
Admission/ticket prices are the primary source of revenue for a theme park industry, but there are other revenue sources as well.

Some of the points regarding key revenue streams are highlighted below:

- **Admission price** accounts for more than 50% of the total revenue of theme parks.
- With many people coming to theme parks for an entire day, **spend on food and beverage** also accounts for revenue- at approximately 15% of the total revenue.
- **Sale of merchandises** like souvenirs and gifts from the gift shops also attracts a lot of visitors and patrons whenever they visit the theme parks. This source accounts for 6%-10% of the total revenue.
- **Parking fees, concession charges and sponsorship funds** also account for revenue.

Figure 116: Revenue Streams-Theme Park

Revenue Streams

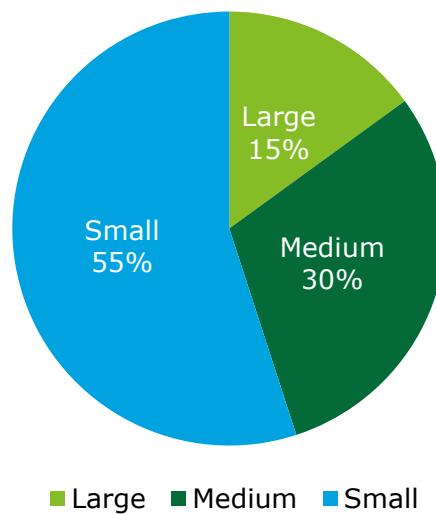


Source: Growing and booming business of amusement parks in India

- Ticket prices have started to increase more in line with international prices. Initially, the prices were set low to attract more visitors. But, now the prices of leading parks range between INR 600 and 1000 per adult.
- Majority of parks in India have a concept of single pay tickets, which covers all the rides for the entire day. Some parks offer to pay 'as-you-go' tickets as well, with visitors paying for individual rides and attractions.
- India differs from the international theme park industry in the revenue mix, with admission tickets accounting for nearly half of the total industry revenue, while it is 3 /4th in the global markets.

Figure 117: Distribution by Size of Theme Parks in India

Distribution by Size of Parks in India



According to the expert opinion and survey, out of ~150 theme parks 15% are considered as large parks with ~INR 200 Crore revenue followed by 30% of them being in medium parks category with ~INR 100 Crore revenue and the remaining 55% being small parks with ~INR 30 Crore of revenue.

Growth drivers and risk factors for the theme park industry in India

Growth drivers

Much preferred Entertainment Option:

Theme and amusement parks are one of the major entertainment options for a family outing together. Exciting rides like roller coasters and water slides provide the excitement quotient and variety of food outlets allows people to enjoy food in between various fun options. Families spend entire days in these parks, and it is great way to unwind and spend quality time. Theme parks are a favourite destination choice for school trips as well.

Ease of Access:

One major reason for the growth of theme parks has been the ease of accessibility. Since, theme parks require a large area of land, they are usually set up in the outskirts of the city. Due to this, the parks are not just a viable option for people from the big cities but also for families from the nearby towns / villages, who can enjoy the entire day with family just a short ride away. With plenty of theme parks springing up throughout the country, there has been a large influx of visitors from tier 2 and tier 3 cities as well.

Diverse food and beverage options:

Besides fun filled rides that attract a majority of adrenaline seeking youths, theme and amusement parks have plenty of food and beverage outlets spread throughout the park. Since people spend an entire day in theme park, food and snack outlets are a major attraction.

GDP and Income growth:

With growing size of Indian economy, the average disposable income of Indian families has been increasing. This has translated to more income available for leisure activities like theme and amusement parks.

Increase in number of nuclear families:

With an increase in number of nuclear families, there has been an increase in per capita spending by an average household which has led to increase in discretionary spending like spending on entertainment activities like visiting theme parks.

Infrastructure development

The Government has taken several initiatives to improve infrastructure and connectivity to different areas, promoting development and tourism.

More innovative attractions within parks

In order to attract the attention of customers, owners have been coming up with creative ideas to get more footfall into their theme parks.

Theme parks in India- likely scenario in the short and long term

Large format theme parks have been a success internationally including in the US, China, Japan, Singapore Hong Kong, France, Germany etc. However, it is the small format (25- 30 acres) which has done comparatively better in India. It has been observed that Theme parks haven't been developing as a destination for people from all over the country. It may continue to remain a localized attraction within a major city from people from the host state and possibly from the neighboring states. This is different from what has been seen in the case of international theme parks which have become attractions for tourists not just for the country but even for international tourists. As a result of this, footfalls in India may not support large format theme parks while small formats may gradually come up in several major cities in all states in the country in coming years.

Large theme parks need consistent high footfalls. Repeat visitors is an important source for revenue to the theme parks internationally. However, this remains low in India. The parks also require visitors all-round the year to be successful. However, it appears the Indian tourist is sensitive to the weather conditions.

Govt needs to play an active role in development of the theme parks. It may need to do more than just providing the land for the parks. It will need to ensure, at the very minimum that it provides quality access roads to the venues along with other support that's needed for any large-scale project. The sector is about 10,000 crores strong and needs government assistance to develop.

The pandemic has impacted the theme parks severely including the direct and indirect employment it supports. It is feared that visitors may not return to entertainment centers like theme parks for several months since these are not essentials and require people to be in a mind space of safety and celebration. Over the long term, however as visitors return and new parks are set-up, the sector has the potential to provide significant employment to people.

Risk Factors

Peripheral Infrastructure:

Theme and amusement parks in India are still at a nascent stage as compared to US and Europe. Majority of the parks in India are small sized and only about 15% of the parks are considered large. In US and Europe, a lot of revenue is also generated from the hotels surrounding the parks, as visiting a park is considered a weekend getaway. This is not the case in India, as visiting a park is considered a day affair and hence there is not a culture of hotels blooming up nearby parks.

Limited Season:

Usually the March-June period is the peak season for theme parks in India, thus implying that people do not go to theme parks all-round the year. Opening of parks which are unhindered by season and weather changes can be considered to make the park visits less seasonal.

Less repeat business:

For many people visiting a specific type of theme park is a one-time event and they tend to not visit the same park again.

State Level Industry Shifts

- **Key Employment generating cities/states:**

Key cities/states generating employment in the industry are Hyderabad (Telangana), Bengaluru (Karnataka), Mumbai (Maharashtra), Lonavala (Maharashtra), Kolkata (West Bengal), Kochi (Kerala), Noida (UP) and Gurugram (Haryana).

- **High Demand Job roles in the subsector & in the key states/cities**

Sales Executive, Operations Manager, Business Development Executive, Ride operators, Engineer(Facilities), Senior Assistant (Guest Relations) are few of the high demand job roles for the subsector including in the above mentioned states/cities and specific skill trainings need to be developed for these roles.

- **Cities/States which may become prominent in the next 5 years**

Key cities/states that may become more prominent in the sub-sector are likely to be Bhopal & Indore (MP), Lucknow (UP), Surat (Gujarat), Pune (Maharashtra), Chennai (Tamil Nadu), and Shimla (Himachal Pradesh)

Impact of COVID-19

Like many of the other sub-sectors in media and entertainment, COVID-19 had an adverse impact on this subsector as well. It is that the amusement and theme park industry might have incurred a loss of around INR 11,000 Crore due to COVID-19.

- The industry employs ~30,000 people directly and 5,000 people seasonally while supporting thousands of food and beverage establishments indirectly.⁵⁷ The pandemic has jeopardized the employment of a majority of people in this sub-sector in addition to permanent shutting down of small sized parks which could not bear the losses. The main season from March – June that attracts crowds was completely lost during the year 2020 and even post lockdown, there are very few people willing to take the risk of going to crowded places. For instance, an aquatic theme park in Kolkata which had opened in October 2020 was witnessing only 30 visitors per day.
- With no revenue being earned through sale of tickets, there were huge losses as fixed costs, wage costs and taxes kept piling up, resulting in loss of jobs and salary cuts in order to stay afloat during such uncertain times. For Instance, two of the biggest amusement parks in India, witnessed over 90% loss in revenue between the years ending in December 2019 and December 2020.
- Several requests have been made by the industry to the government to make sure that this sub sector does not collapse completely. Some of the requests made are:
 - GST break for one year, delay in deadline for payment of direct-indirect taxes, advance taxes, provident funds
 - Waiver of custom duties on import of spare parts used in rides
 - Reducing the interest rate on loans from financial institutions

⁵⁷ Indian Association of Amusement Parks and Industries November II newsletter

- Moratorium on instalment of principal and interest payments on loans and working capitals in addition to increasing of working capital limits on interest free terms
- Provision of support funds like MNREGA to provide basic salaries to employees
- Concessional pricing for water and electricity, lower rate of income tax and early settlement of IT refunds
- Post lockdown, the parks that have opened have to go through a rigorous exercise of protocols like disinfecting surfaces and seats before every ride, following social distancing norms, providing sanitisers, soaps to public, etc which is putting extra financial burden.⁵⁸
- To be as safe as possible and attract visitors, some parks have worked on safe certifications while the others have introduced virtual shows to attract customers, but the visitors turn-out has still been low.
- The workforce has been impacted the most with workers in security, housekeeping, landscaping, food courts etc., being severely affected.

Global Trends

Globally the size of theme park and amusement park is estimated to be USD 49.1 billion in 2020 and is expected to grow at a CAGR of 4.7%, to reach a market size of USD 67.7 billion by 2027⁵⁹. Specifically, the mechanical rides segment is expected to grow at 5.2% CAGR to reach USD 32 billion, while water rides segment will grow at a rate of 4.3%.

- US alone is responsible for majority of the total theme parks in the world, followed by Europe.
- North America is the largest region in the global market accounting for 1/3rd of the revenue in 2020. Asia-Pacific is the second largest market with a 30% market share, while Africa is the smallest region.⁶⁰
- While theme park industry in US and Europe is developed, Asia is still developing in this sector and has witnessed rapid growth in the past few years.
- China will be one of the fastest growing regional markets in the world and Asia-Pacific market is expected to reach USD 9 billion by 2027 at the back of strong performance from India, Australia and South Korea.

Some of the largest parks in the world in countries like the US, Japan and France are spread over large areas (25-200 Ha) and have average ticket price in USD 60-100 range.

Rapid urbanization, along with significant growth in the travel and tourism industry is one of the key factors creating a positive outlook for the market. Also, the availability of innovative and adventurous rides, accommodation facilities inside and near the parks, and official merchandise in the amusement parks is also providing a boost to the market growth.

- Amusement parks are ingenious and increasingly use virtual and augmented reality technology to enhance customer experience. Virtual reality is a 3D environment which can interact with a person, whereas augmented reality turns an environment into a digital interface by placing virtual objects in the real world. Amusement parks are implementing this technology in rides and theatre-based attractions. India lags considerably when it comes to adopting advance technology in its theme and amusement parks. India needs to ensure adoption of technically advanced solutions like Virtual Reality (VR) and Augmented Reality (AR), which play a significant role in theme parks outside India, especially in US and Europe.
- COVID-19 affected the global theme park industry adversely as expected due to the worldwide lockdown. Both the financial impact and loss to employment were severe. Additionally, major players saw a decline in revenue by as much as 20- 30%.⁶¹

⁵⁸ A Roller Coaster Ride and the New Normal for India's Theme Parks, The wire, 2020

⁵⁹ Amusement and Theme Parks - Global Market Trajectory & Analytics, Research and markets Report 2020

⁶⁰ Global Amusement and Theme Parks Industry- Globe newswire,2021

⁶¹ How much are theme parks losing during the COVID-19 pandemic?, Blooploop ,2020

Theme Park subsector growth/ revenue

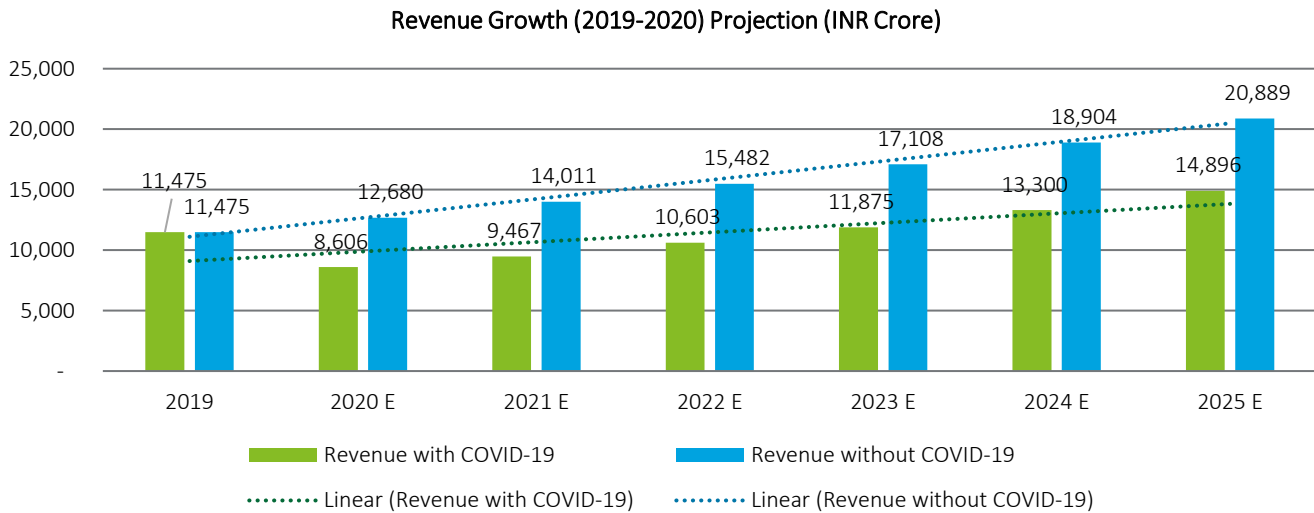
Basis our analysis of growth and risk factors, it is projected that the theme park industry will grow from INR 11,475 Crore in FY 2019 to INR 14,896 Crore in 2025 at a CAGR of ~4.5%. Admission prices contribute the highest to the revenue in this industry, followed by other income such as parking, sponsorship etc.

Table 60: Revenue Trend-Theme Park

Revenue Source (INR Crore)	2019	FY 2020E	FY 2021E	FY 2022E	FY 2023E	FY 2024E	FY 2025E
Admission Prices	5,967	3,475	4,923	5,514	6,175	6,916	7,746
Food and Beverage	1,607	1,205	1,325	1,484	1,663	1,862	2,085
Merchandise sale	1,148	861	947	1,060	1,188	1,330	1,490
Other (inclusive of parking, Sponsorship etc.)	2,754	2,066	2,272	2,545	2,850	3,192	3,575
Total	11,475	7,606	9,467	10,603	11,875	13,300	14,896

Source: Expert Interview, entrepreneurindia.com and detailed analysis

Figure 118: Revenue Growth Projection (2019-2025)- Theme Park



The above bar chart represents the impact of COVID-19 on the theme park industry. It is projected that the industry would have grown at a CAGR of ~10.5% in normal circumstances till 2025 whereas, now the industry is expected to grow at the CAGR of ~4.5% considering the impact of COVID-19.

The Human Resource Demand Forecast

The theme park, with around INR ~14,896 Crore revenue contribution during 2025 in Media and Entertainment Sector, will generate direct employment of ~40,092 by 2025. It is expected to witness an annual incremental demand of ~9,342 people in the industry to be employed till 2025 over ~30,751 people employed in the year 2019.

Table 61: Human Resource Demand Forecast- Theme Park

Particulars	FY 2019	FY 2020 E	FY 2021 E	FY 2022 E	FY 2023 E	FY 2024 E	FY 2025 E
Estimated numbers of people employed in the industry (A)	27,955	30,751	23,063	25,369	28,413	32,249	36,119

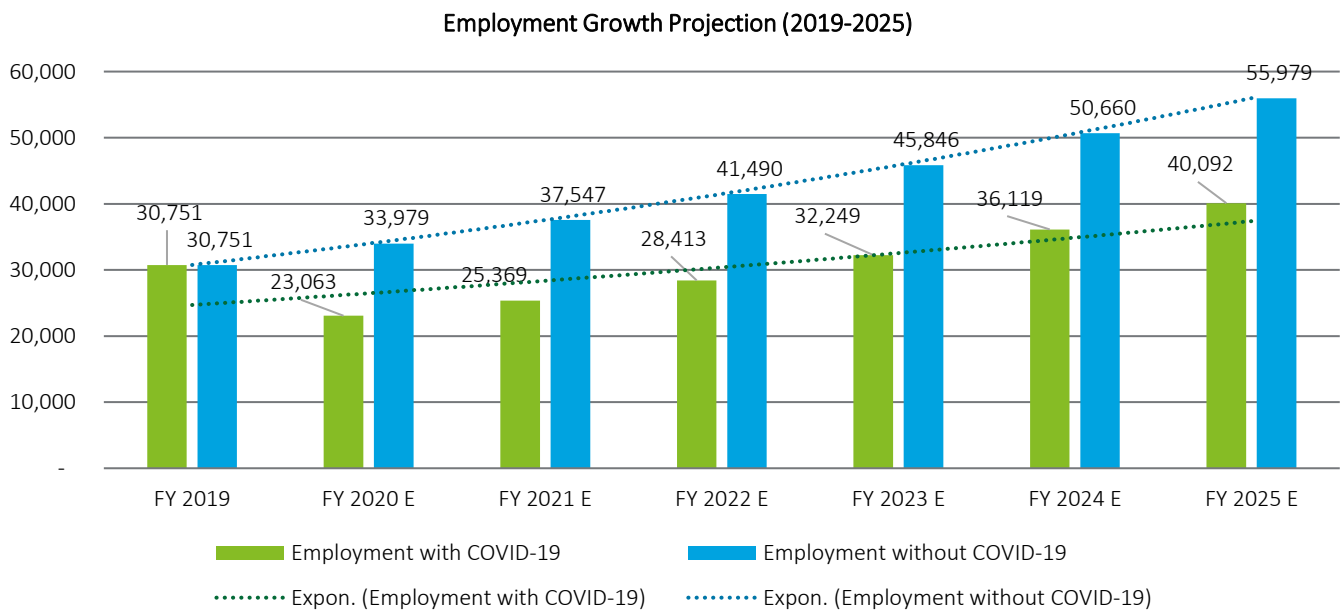
External Factors							
Technological Environment	1,398	1,538	1,153	1,268	1,279	1,290	1,336
Political Factors/ Policy updates	1,398	1,538	2,306	2,537	2,557	2,580	2,637
Impact of COVID-19	-	(10,763)	(1,153)	(761)			
Total (B)	2,796	(7,688)	2,306	3,044	3,836	3,870	3,973
Total Estimated Employment (A+B)	30,751	23,063	25,369	28,413	32,249	36,119	40,092
Incremental Demand	2,067	(7,688)	2,306	3,044	3,836	3,870	3,973

Source: Expert Interview, entrepreneurindia.com and detailed analysis

Key Assumptions:

1. COVID-19 has had a negative impact on the sector.
2. Based on expert opinion and surveys, out of ~150 theme parks, 15% are being considered as large parks with ~ 600 people employed followed by 30% being medium parks with ~200 people employed and 55% being small parks with ~100 people employed.
3. Package declaration in 2020 by government for COVID-19 will boost the employment in the sub sector and will have a positive long-term impact because of political factors/ policy updates.

Figure 119: Employment Growth Projection (2019-2025)- Theme Park



The bar chart above represents the impact of COVID-19 on the theme park sub-sector. It is projected that the industry would employ ~56,000 people cumulatively by 2025 whereas, now the industry is expected to employ ~40,000 people by 2025 considering the negative impact of COVID-19. The distance between the trend lines states that the negative employment of ~16,000 people in this sub-sector owing to the pandemic situation in the country between 2019 to 2025.

Employment Profile and Survey Insights

There are variety of jobs in theme parks in India. Some are employed to construct, maintain, and operate the parks; others are assigned to the front gate and for issuing tickets or passes; some manage park restaurants, security, parking and gift shops. There are also numerous behind-the-scenes departments such as accounts, marketing, or personnel. Required skillsets for amusement park are from the hospitality curriculum, which is in short supply in the Indian theme park ecosystem. Having these skill sets in sufficient quantity would enable the industry to get skilled manpower.

Trending Job Roles for which specific trainings need to be developed:

Following are some of the job roles that are trending in theme and amusement park industry:

1. **Sales Executive**— They are responsible for maintaining and developing accounts in assigned territory in order to meet revenue targets. Their job role includes ability to create and nurture a pipeline of leads and opportunities while continuously looking for new accounts.
2. **Operations Manager** -They are directly responsible for ticketing, F&B, retail shop, operation of rides, customer care and maintenance of the park and its emergency management.
3. **Engineer (Facilities)** - Their job role includes maintaining and repairing of rides and attractions and taking care of the technical and maintenance issues in order to have a smooth and uninterrupted operation.
4. **Business Development Executive** - Their role is to design and implement strategic business plans that expand company's customer base along with building long-term customer relationships by partnering with customers and understanding their needs.
5. **Senior Assistant (Guest Relations)** -They are responsible for welcoming guests during check-in, facilitating checkout and handling their concerns during their stay.
6. **Food and beverage employees** - They include servers, chefs, and other employees in food and snack joints in theme parks.
7. **Ride operators** - These employees are responsible for operating specific rides. They need expertise in the electronics and mechanics of specific rides.

Number of people employed in major theme parks and amusement parks in India generally vary from 250 to 750 while some of them may have as many as 2000 employees 2000.

The Human Resource Supply Forecast

The manpower available for theme park sub-sector is majorly from hotel, hospitality and tourism management courses.

Hotel and tourism management courses are found to be suitable for theme park as majority of the task is related to guest handling and ensuring time well spent in theme park. Security courses provide personnel from the unarmed Guards courses.

Experts believe that only ~10% of the people from below mentioned courses opt for career in theme parks. Considering the previous trends of enrollments into sector aligned UG/PG, certificate/vocational courses and impact of COVID-19, it is estimated that about ~13,055 students will graduate in 2025 and be ready to be employed in theme parks.

Details of Enrollment in UG/PG courses

Table 62: Details of Enrollment in UG/PG Courses- Theme Park

Courses	2019	2020E	2021E	2022E	2023E	2024E	2025E
PhD	70	70	74	79	83	88	94
M. Phil.	4	4	4	4	5	5	5

PG	42,804	42,804	45,372	48,095	50,980	54,039	57,281
UG	54,680	54,680	57,961	61,438	65,125	69,032	73,174
Total	97,558	97,558	103,411	109,616	116,193	123,165	130,555

Source: AISHE 2017,2018, 2019 and detailed analysis

Key Assumptions:

1. Since 2020 has witnessed COVID-19, there may not be any further addition to the enrolments at UG/PG level.
2. 6% growth in training and teaching enrolments is considered for projections looking at the past performance of the supply side as per AISHE 2017, 2018 & 2019 reports.
3. Only ~10% of the graduating student numbers at UG, PG Courses were considered for calculating supply side of the subsector.
4. There aren't significant number of vocational courses related to theme park industry whereas candidates trained by Security Sector Skill Development Council (SSSDC) are relevant for being employed in theme park industry because of their crowd handling skill training.

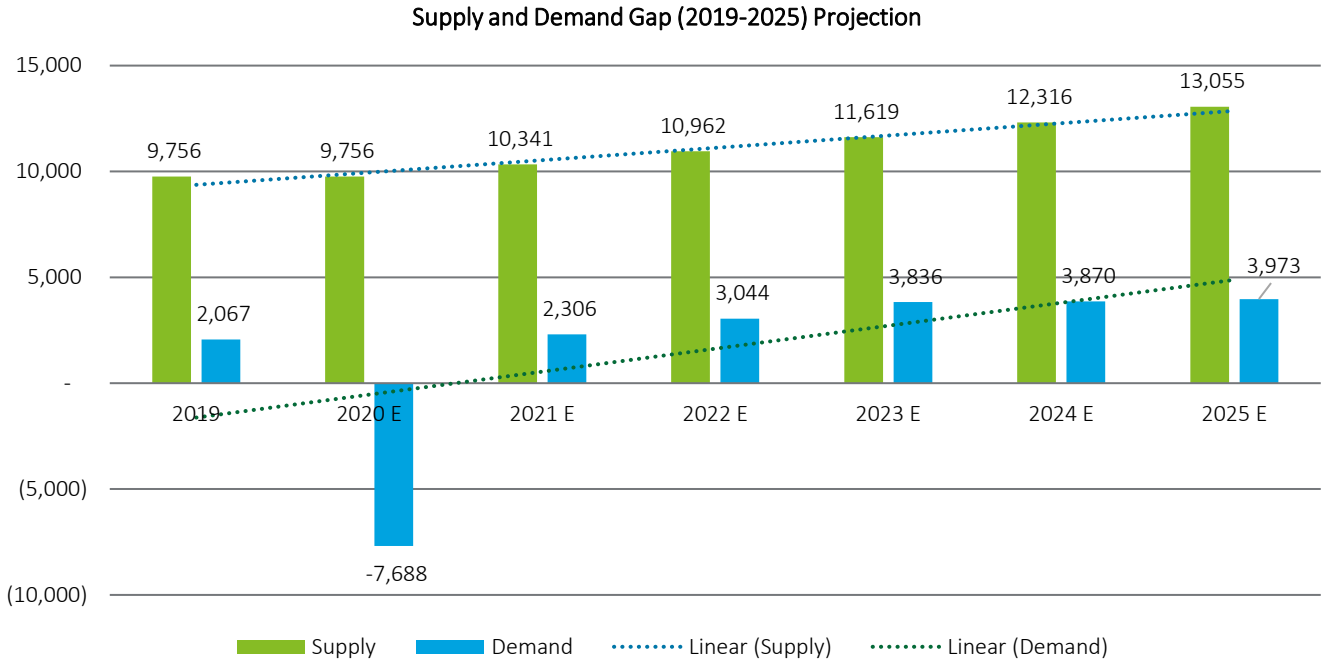
Insights on future jobs & skills

Use of technologies like AR and VR will become more prevalent in future in the theme park industry. Following jobs may also be relevant in the future. Thus, specific trainings need to be developed for the following roles:

- **VR Marketing operator:** As the use of VR increases, it can be used as a marketing tool for theme park previews. The role would be to help potential visitors to check out rides virtually before going to the theme park. Such immersive options are bound to increase the number of people visiting a theme park.
- **Projection mapping specialist:** Use of AR will require specialist positions like projection mapping specialist which can be used to entertain guests while waiting in queues.
- **AR app developers:** Extending AR interaction by incorporating guests' preferences with theme park's environment will bring a new dimension to theme park experience. The role will require creation of AR apps which the guests will have to download and follow directions enhance their experience.
- **Creative Producer (AR/VR):** Their job will be to propose creative experiences to partner organisations, which will attract guests through digital distribution and streaming technologies.

The Human Resource Demand-Supply Gap

Figure 120: Supply and Demand Gap Projection (2019-2025)- Theme Park



The above bar graph shows that there will be surplus in terms of supply of manpower in comparison to the market demand of the workforce in theme park sub sector. Further, the graph depicts that the demand for manpower is growing at a higher rate than the supply. The gap between the lines has a decreasing trend on a year on year basis. Vocational training needs to focus on job-roles that have high demand specifically with crowd handling skills training to help reduce the supply and demand gap.

- Highest Supply and Demand Gap between 2019 to 2025 is ~ 17,000 in the year 2020.
- Lowest Supply and Demand Gap between 2019 to 2025 is ~8,000 in the year 2019.
- Average Supply and Demand Gap between 2019 to 2025 is ~9,000.

Potential ways to contribute to 'Atma Nirbhar Bharat' mission

The Indian theme park industry has been evolving over the years; however, the industry still lags behind the international market in terms of use of technology used in the theme parks. As part of the Atma Nirbhar Bharat mission, India should ensure adoption of indigenously developed technically advanced solutions like pneumatics, animatronics and internet of things (IOT). Use of Virtual Reality (VR) and Augmented Reality (AR) is a major part of theme parks outside India, especially in US, Europe, Korea, Japan and Singapore. The interactive nature of these technologies acts as an added growth factor with visitors getting a new experience. Few big theme parks in India have started to use AR and VR technology but it is still at a very nascent stage so if more theme parks use such technologies it will act as a catalyst in the growth of such indigenous applications while the visitors will get a new experience.

The other area for contributing the mission is in use of indigenous machinery and equipment, a large part of which is currently imported.

