Jammu and Kashmir: Looking ahead

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The recent constitutional changes in Jammu and Kashmir have led to discussions about the economic and business opportunities the region holds. While opportunities have always existed in the state, the possibility of easier access for investment does present several scenarios.

In order to assess the potential that exists or that can be created in the region we have examined the socio-economic profile of the region as well as evaluated the various sectors and segments that hold potential. The exposition and analysis is based on ceteris paribus assumptions where *the economic potential is examined keeping the political and social environment constant.* Hence the perspective can be looked as a futuristic scenario where other factors settle down and do not come in the way of such investment decisions.

Further, in order to provide a finer perspective, included here is the region's position at the national level in terms of the various economic, business, infrastructure and social parameters. Comparisons have also been drawn with Himachal Pradesh that has a similar size of GSDP and geographical similarities with Jammu and Kashmir and for the purpose for this analysis have been considered to be a peer.

Overview of Jammu and Kashmir, including Ladakh

On various socio-economic parameters the region is quite different from the national average as well as its peer (Himachal Pradesh).

A. Demographics, Infrastructure, Income and Consumption

- **Large area and low population**: The region accounts for 7% of India's total area but only for 1% of the country's population. The region has low population density at 15% of the national average (33% of national average in case of Himachal Pradesh)
- **Lower literacy rates**: The literacy rate of the region is lower than the national average (by 5.8%) as well as that of Himachal Pradesh (by 15.6%). Female illiteracy is higher than that of males.
- **Predominantly rural:** Nearly 73% of the population of the region resides in rural areas. The rate of urbanization of the region is around 4% lower than the national average. It is however more urban than Himachal Pradesh where 90% of the population resides in rural areas.
- **Low per capita income levels**: The per-capita income (as of FY17) of the residents of the region was 21% lower than the national average and 54% less than that of Himachal Pradesh.

- **Deficiencies in social infrastructure:** The education and health infrastructure in the region is limited. The total number of educational institutions in J&K accounts for only 2% of total educational institutions in the country, while the government hospitals in J&K accounts for less than 1% (0.5%) of the total number of government hospitals in the country.
- **Shortfalls in Physical/Industrial infrastructure:**
    - **Irrigation:** Less than half (42.3%) of the gross area sown in irrigated (FY17). It is lower than national average (48.63%).
    - **Low road and rail density**: The road density of the region at 28.5 (per 100 sq. kms) is much lower than that of national average (152 per 100 sq. kms) and Himachal Pradesh (112.8 per 100 sq. kms). Similarly, the rail density of the region at 1.3 (per 1000 sq. kms) is lower than national average (20.5 per 1000 sq. kms and Himachal Pradesh (5.3 per 1000 sq. kms).
    - **Airports:** The region has only 3 airports.
    - **High power deficit:** The region had a power deficit of 20% during FY18, much higher than that in Himachal Pradesh (0.6%) and national average (0.7%).
- **Tele density:** The tele density of the region at 89.4% is at the same level as the national average of 90% and Himachal Pradesh (146%).
- **Low rank in 'ease of doing business':** The region ranks 22 in the ease of doing business ranking in 2017-18.
- **Higher expenditure incurred on consumption (per capita):** The monthly per capita expenditure incurred, especially in the rural areas of J&K is higher than the national average (by 21%), as per the National Sample Survey (2011-12). It is however lower than the consumption expenditure of Himachal Pradesh (by avg 20%). The rural consumption expenditure is mainly towards food, which accounts for a 55% share of the monthly expenditure, while non-food expenditure accounts for the larger share of expenditure (52%) in urban areas.

Table 1: Snapshot

Parameters	Year	Units	J&K	National	Himachal Pradesh
Area	FY17	('000 Hectares)	22,224	3,28,726	5,567
Population	FY11	Nos.(million)	12.5	1,211	6.9
Literacy rate	FY11	%	67	73	83
Male	FY11	%	77	81	90
Female	FY11	%	56	65	76
Per capita	FY17	Rs.	92,955	1,18,263	1,73,321
Social Infrastructure					
Educational Institutes	FY12	Nos.	27,428	14,05,471	17,509
*Hospitals**	FY16,FY17	Nos.	576	54,479	2,006
Physical infrastructure					
Gross area irrigated	FY17	% of gross area sown	43	49	19^
Road density	FY17	Kms/100 Sq. Kms	28.5	152	112.8
Rail Density	FY17	Kms per '000 Sq. Kms	1.3	20.5	5.3
Airports		Nos.	3	137	3
Telecom	FY19	%	89.4	90.1	146.4
Ease of Doing Business Rank	FY18	Rank	22	-	16
Per capita consumption	FY12	Rs	4228	4059	5293
Food	FY12	Rs	2152	1877	2345
Non-Food	FY12	Rs	2076	2182	2948

Source: CMIE, DIPP, NSSO (68th round), AAI; *Includes government, Ayush hospitals and dispensaries; *as per 2011

B. Economy, Price Levels, Investment, Industries, Banking and Public Finance

- **Service led economy:** The service sector drives the economy of the region, contributing 56% to the economic activity of the region. The industrial and agriculture sector accounts for 28% and 16% respectively of the economic output. Within services, the highest contribution towards output is by public administration and defence (15.4% of GVA), real estate and professional services (11%) and trade and hotels (9%). Manufacturing has a low share in economic output of the region. It contributes around 10% to the local economy, less than the national average of 18%. On the other hand, the contribution of the electricity sector at 9.8% is higher than the country's average (2.2%) and that of Himachal Pradesh (7.4%).
- **Low contribution to the national economy:** The GSDP of Jammu & Kashmir (FY19) accounted for less than 1% (0.8%) of India's GDP.
- **Fluctuations in annual economic growth:** The GSDP growth of Jammu & Kashmir has seen significant fluctuations in recent years with annual growth moving from a contraction of 3.3% (FY15) to a growth as high as 18.3% (FY16). The economic growth of the region has not followed the growth path of the country's GDP growth.
- **High price levels:** Since FY16, retail inflation in the region has been higher that the national average as well as that of Himachal Pradesh. Inflation in J&K during FY19 was 1.9% higher than that of India while it was 4.8% higher than that in Himachal Pradesh.
- **Unable to attract investments:** The region has had an indifferent track record in terms of industrial entrepreneur memorandum (IEMs) intentions being filed and implemented. Over the years, the IEMs filed have declined considerably from 23 in FY10 to 5 in FY19 and the investment implemented has been nil in most years. In FY19, there were 5 investment projects being implemented in sectors such as chemicals, hotel and textiles. The foreign investments into the region by way of FDI have been negligible. It was less than $1 mn during FY19 ($0.06 mn) when the inflows into the country was around $ 44.3 bn.
- **Low levels of industrialization:** The factories in Jammu and Kashmir accounts for only 0.4% of the total factories in the country, as per the Annual Survey of Industries. The numbers of factories have grown at a CAGR of 4% during FY08-17. As of 2016-17, Jammu &Kashmir had a total of 1,016 factories of which only 938 were operational. Factories here were mainly involved in the manufacture of food products (15% share), chemical (12%), rubber & plastics products (12%), basic metals (10%) and electrical equipment (8%). Industrial activity is mainly concentrated in small scale units. As per the economic survey (2017), a total of 32,226 small scale units were registered till Oct 2017, employing 1.58 lakh people.
- **Greater access to banking:** The banking infrastructure and coverage in the region is better than the national average. As of 2017-18, there were 142 banking offices per million of population in Jammu and Kashmir, which is more than the national average of 109.3 bank offices per million population and the number of ATMs were 198.3 per million population, higher than the 159.5 ATMs per million population at the national level. The bank branch network in the region has expanded over the years. As of FY19, there were 1,863 bank branches in Jammu and Kashmir compared with 1,109 bank branches in FY10. Regional rural banks account for 54% of the branch network followed by other public sector bank branches (19%), nationalized banks (16%) and SBI and associates (11% share). Private sector banks had 8 branches in FY19.
- **Low bank credit:** The outstanding bank deposits (Rs. 1.04 lakh crs in FY18) far surpass the outstanding bank credit (Rs. 0.44 lakh crs) in the region. In FY18, the credit to deposit ratio was at 43.6% much lower than the ratio of 76.7% at national level. Bank deposits have grown at a CAGR of 15% during FY09 – FY18 while the bank credit off take has grown at a CAGR of 14% per annum.

- **Public Finance - Dependence on Central government**: The region is mainly dependent on the central government for its revenues with nearly 74% of the state's revenues coming from the centre by way of grants and share in central taxes. As such, the region has low self-reliance.

Table 2: Snapshot of Economy, Price Levels, Investment, Industries, Banking

	Year	Units	J&K	India	Himachal Pradesh
GDP growth*	FY19	%	6.9	6.81	7.34
Sectoral composition					
Agriculture	FY19	% share	16.2	14.4	12.6
Industry	FY19	% share	27.9	31.3	46.7
Services	FY19	% share	55.9	54.3	40.7
Inflation	FY19	%	5.3	3.4	0.5
Investments					
IEMs filed	2018	Nos.	5	2,173	17
IEMs implementation	2018	Nos.	5	1,005	5
Foreign Direct Investments (FDI)^	FY19	US $ mn	0.06	44,366	-
Banking					
Branch network	FY19	Nos.	1,863	1,52,446	1,662
Credit growth	FY18	%	19.9	10.7	13.3
Deposit growth	FY18	%	11.5	6.6	8.2

Source: CMIE, DIPP, RBI, Economic Survey of J&K; *GDP at constant prices; ^FDI equity flows, FDI data is not separately provided for Himachal Pradesh.

Industry Analysis

Prospects for apple market

For the year 2017-18, apple production in India stood at 23.2 lakh tonnes. Of this, majority share of 77.7% came from J&K followed by Himachal Pradesh and Uttarakhand with a share of 19.2% and 2.5%, respectively.

Table 3: Region-wise production of apple in India during 2017-18

Region	in '000 MT	% share
Arunachal Pradesh	7.4	0.3
Himachal Pradesh	446.6	19.2
Jammu & Kashmir	**1,808.3**	**77.7**
Kerala	4.0	0.2
Nagaland	2.0	0.1
Uttarakhand	58.7	2.5
Total	2,326.9	

Source: Department of Agriculture, Cooperation & Farmers Welfare

Apple production has a special prominence in J&K with the industry acting as a source of livelihood for many people in the region on account of its backward and forward linkages. Despite the apple market having a significant position in the region, it faces harvest and post-harvest losses that act as a barrier for apple industry's growth.

Table 4: Harvest and post-harvest losses of apple

Crop	% Average Loss (CIPHET 2012)	% Average Loss (CIPHET 2015)
Apple	12.3	10.4

Source: Department of Agriculture, Cooperation & Farmers Welfare

CIPHET: Central Institute of Post-Harvest Engineering & Technology

From the above table it can be seen that the harvest and post-harvest losses for apple have declined from 12.3% as per 2012 study to 10.4% as per 2015 study. According to Ministry of Food Processing Industries (MoFPI), the loss in farm operations was due to harvesting, sorting/grading and transportation operations. In J&K, the farmers harvest the fruits, pile them in temporary structure made in the orchards and call the vehicle for transport. In the meantime sorting and packaging of fruits is carried out. Long duration placing of apples in fields caused higher loss in sorting operations as per a 2015 report on assessment of quantitative harvest and post-harvest losses of major crops and commodities in India by MoFPI.

Even if the loss percentage has declined, it accounts for about 10% of industry production which if put to use (or if damage is reduced) will create an opportunity for industries like warehousing, transportation and food processing. To minimize the harvest and post-harvest losses, the process of storing, sorting/grading and transportation can be improved. With the withdrawal of Article 370 and Article 35A, the private players or corporates that were facing entry barriers in the state now stand a chance to explore the J&K apple market. They now can set up various upgraded facilities and introduce practices that can reduce the damage which in turn can enhance apple revenues from the region.

Providing cool temperature to apples is the top priority in the post-harvest handling processes. The primary reasons for post-harvest losses and poor quality fruit are bruising and other mechanical injury, water loss, under or over maturity at harvest, and chilling injury. These losses can be avoided or reduced with support of some of the better facilities that can be set up by private players.

Setting up of upgraded storage technologies that would control storage atmosphere, calculate refrigeration load, calculate air flow requirements and would look after other storage technologies. In addition to this, adhering to better handling and transport activities like stacking and palletizing, strapping of pallets, stacking patterns for pallets, bracing the load and using transport trucks that are best suitable for apples.

Scenario of food processing units in J&K

As per MoFPI’s latest annual report 2018-19, the number of registered and unincorporated food processing units in J&K stand at 176 and 28,089, respectively.

Table 5: Number of registered and unincorporated food processing units in J&K

Region	Number of registered units as per Annual Survey of Industries 2016-17	Number of unincorporated enterprises manufacturing food and beverages as per 73rd round Survey of NSSO, 2015-16
Jammu & Kashmir	176	28,089

Source: Department of Agriculture, Cooperation & Farmers Welfare

Apart from these units, 1 Mega Food Park Project is under implementation, 4 cold chain projects stand completed and 2 cold chain projects are under implementation and 2 abattoirs are under setting up mode as on 31st March 2019. In addition to this, projects on 1 food testing laboratory and 12 food processing units were completed till 31st March 2019. Also, grant in aid was released by MoFPI for R&D projects on one topic of research in J&K during the period 1st January 2018 to 31st March 2019.

The opening up of J&K region for investments in food processing industry is expected to augur well for FMCG products like apple jam, apple juice, apple cider etc.

Scenario of cold storages in J&K

The cold storage capacity in India stood at 34.95 million tonnes as on 31st March 2017 with the total number of cold storages at 7,645. Of this, cold storages in J&K were 38 in number with a total capacity of 0.11 million tonnes.

Table 6: Cold storage capacity and number as on March 31, 2017

Region	Total number	Total capacity (MT)
Jammu & Kashmir	38	1,12,516
All-India	7,645	3,49,56,991

Source: Ministry of Food Processing Industries

It is to be noted that as per a journal released by Ministry of Statistics and Programme Implementation (MoSPI) in March 2017, the shortfall in cold chain capacity exceeded the existing installed capacity by 100 percent in region like J&K. As per the 2014-15 data, installed cold chain capacity as percentage of required capacity was only 7% compared to 91% at all India level. **The shortfall in cold chain capacity in J&K again provides an opportunity to private players to invest in the region and earn the benefits of upgraded storage facilities.** The harvest and post-harvest losses of apple when reduced with these upgraded facilities will also provide an opportunity to food processing industry in J&K as it will allow processing of apples that otherwise would be vulnerable to damage.

Yield of apples in India

Along with provision of various facilities mentioned above, the private players can also encourage or help apple growers to improve the productivity of apples in the J&K region by considering the practices of using quality fertilizers and insecticides, training the apple growers on cultivation, harvesting and post- harvest processes and providing insights on tree density, orchard orientation, spacing, careful soil preparation before planting and optimum preservation of pH, pruning and crop thinning to ensure best quantum of evenly sized apple.

Table 7: Production and yield of apples in 2016

Country	Production (Mn tonnes)	% share	Yield (T/Ha)
China	44.45	49.8	18.6
USA	4.65	5.2	35.6
Poland	3.60	4.0	20.3
Turkey	2.93	3.3	16.9
India	**2.87**	**3.2**	**9.1**
World	89.33		16.9

Source: Department of Agriculture, Cooperation & Farmers Welfare

From the above table it can be seen that India was the fifth largest producer of apple in the world and accounted for only 3.2% of the total world production. Also in terms of yield, India is far behind than the top four producers of apple China, USA, Poland and Turkey that had yields of 18.6 T/Ha, 35.6 T/Ha, 20.3 T/Ha and 16.9 T/Ha, respectively, in 2016. Moreover, India's yield of 9.1 T/Ha is also lower than the average world yield of 16.9 T/Ha.

Textiles

In India, woollen textiles and clothing industry is relatively small compared to the cotton and man-made fibre based textiles and clothing industry. However, the woollen sector plays an important role in linking the rural economy with the manufacturing industry, represented by small, medium and large scale units. The product portfolio is equally divergent from textile intermediaries to finished textiles, garments, knitwears, blankets, carpets and an incipient presence in technical textiles. Wool industry is a rural based export oriented industry and caters to civil and defence requirements for warmer clothing.

India has the 3rd largest sheep population country in the world. There are 65.1 million sheep producing 43.5 million kg of raw wool as of FY18. Out of this about 85% is carpet grade wool, 5% apparel grade and remaining 10% coarse grade wool for making rough Kambals etc. Average annual yield per sheep in India is 0.9 Kg. against the world average of 2.4 Kg. A small quantity of specialty fibre is obtained from Pashmina goats and Angora rabbits. The domestic produce of wool is not adequate; therefore, the industry is dependent on imported raw material as wool is the only natural fibre in which the country is deficient.

The woollen industry in the country is of the size of Rs 11,485 crores and broadly divided & scattered between the organized and decentralized sectors. The organized sector consists of: Composite mills, Combing units, Worsted and Non Worsted spinning units, Knitwears and Woven Garments units and Machine Made Carpets manufacturing units. The Decentralized Sector includes Hosiery and knitting, Power-looms, Hand knotted carpets, Druggets, Namadahs and Independent dyeing, Process houses and Woollen Handloom Sector.

There are several woollen units in the country, most of which are in the small scale sector. The industry has the potential to generate employment in far-flung and diverse regions and at present provides employment in the organised wool sector to about 12 lakh persons, with an additional 20 lakh persons associated in the sheep rearing and farming sector. Further, there are 3.2 lakh weavers in the carpet sector.

Wool Production & Consumption

The total wool production in India is not enough to meet the total requirement of raw wool for woollen industry. The bulk of Indian wool is of coarse quality and is used mostly in the hand-made carpet industry. Since indigenous production of fine quality wool required by the organized mills and decentralized hosiery sector is very limited, India depends almost exclusively on imports.

Table 8: Production of indigenous wool

Year	Production Quantity (in million kg.)
FY11	44.0
FY12	44.4
FY13	46.1
FY14	47.9
FY15	48.1
FY16	43.6
FY17	43.5
FY18	41.5
FY19 (Provisional)	40.4

Source: Department of Animal Husbandry & Dairying

Table 9: Major wool producing States in India

States	Wool Production FY18 (Qty. in '000 kg.)	% share in total production
Rajasthan	13,924	34.5
Jammu & Kashmir	**7,411**	**18.1**
Karnataka	4,392	10.9
Telengana	4,800	10.4
Gujarat	2,267	5.5
Himachal Pradesh	1,500	3.6
Maharashtra	1,418	3.5
Uttarakhand	558	1.4
Uttar Pradesh	1,404	3.1
Andhra Pradesh	793	1.9

Source: Department of Animal Husbandry & Dairying

Automobiles

Table 10: Automobile Sales – India V/s J&K

FY19	India (Numbers)	Vehicle/100,000 population	% share of J&K in sales	Jammu & Kashmir (Numbers)	Vehicle/100,000 population
Population (Lakh Nos.) **(Estimated)**	**13,320**			**147**	
CV	1,107,250	83	1.2	13,304	91
PV	4,058,656	305	2.0	80,385	547
2&3W	25,730,931	1,932	0.4	92,738	631
Total	30,896,837	2,320	0.6	186,427	1,269

Note: CVs - Commercial vehicles, PVs – Passenger vehicles, 2&3Ws – Two & Three wheelers

Source: CMIE, CARE Ratings

In FY19, total auto sales in India stood at 30.9 million vehicles (including CVs, PVs and 2 & 3 wheelers), while the share of Jammu & Kashmir stood at 0.6% of the total sales, i.e., 0.2 million vehicles. Commercial vehicles and passenger vehicles for J&K per lakh population stand at 91 and 547 vehicles respectively in comparison to 83 and 305 vehicles per lakh population on a pan India level. However, for two & three wheelers, J&K accounts for a share of only 0.4% in the total 2&3W sales in the country.

With large military base and tourist hub, commercial activities in J&K have historically been high. Share of foreign tourist arrivals (FTAs) have been largely stable at about 0.4% (of the total FTAs in the country) and that of domestic tourists have been higher at about 1.5% (of the total domestic tourists in the country) over the past 2 decades. While commercial and passenger vehicles are well placed, two & three wheeler segment has some potential as against the country's per capita vehicle consumption and we can expect more showrooms and distribution channels to boost sales in the region. Also, with revoked provisions of Article 370 more infrastructure, construction and industrial activities, increased employment opportunities are expected going forward, leading to higher demand of CVs and PVs in the region.

Hospitality & Tourism

Table 11: Foreign & Domestic Tourist Arrivals (numbers)

	Domestic tourists - India	% share of J&K	DTA in J&K	Foreign tourists - India	% share of J&K	FTA in J&K
1999	190,671,034	2.6%	4,984,773	5,832,015	0.5%	26,799
2000	220,106,911	2.5%	5,393,463	5,893,542	0.3%	19,400
2005	392,014,270	1.8%	7,239,481	9,947,524	0.4%	44,345
2010	747,703,380	1.3%	9,973,189	17,910,178	0.3%	48,099
2011	864,532,718	1.5%	13,071,531	19,497,126	0.4%	71,593
2012	1,045,047,536	1.2%	12,427,122	18,263,074	0.4%	78,802
2013	1,145,280,443	1.2%	13,642,402	19,951,026	0.3%	60,845
2014	1,290,117,432	0.7%	9,438,544	22,567,650	0.4%	86,477
2015	1,431,973,794	0.6%	9,145,016	23,326,163	0.3%	58,568
2016	1,615,388,619	0.6%	9,414,579	24,714,503	0.3%	63,207
2017	1,652,485,357	0.9%	14,235,473	26,886,638	0.3%	79,765

Source: Ministry of Tourism, CMIE

Total tourists (domestic and foreign) in India stood at 1,679 million during 2017 of which J&K accounted for 0.9% and Himachal Pradesh 1.2% of the total. In terms of area, J&K stands at about 22 million hectares while Himachal Pradesh accounts for only 5.5 million hectares. In terms of hotel rooms in the regions, J&K has roughly about 950 keys and Himachal Pradesh has approximately 800 keys, i.e., 0.7 room per 10,000 tourists in J&K and 0.4 room per 10,000 tourists in Himachal Pradesh. Apart from the organised players in the hotel industry in the region, J&K has roughly about 700 house boats in Dal Lake (Srinagar) having approximately 2,750 rooms.

Table 12: State-wise arrivals in India (Million Nos.)

2017	India	J&K	Himachal Pradesh	Maharashtra	Tamil Nadu	Uttar Pradesh	Karnataka	Andhra Pradesh
Domestic Tourists	1,653	14	19	119	345	234	180	165
Foreign Tourists	27	0	1	5	5	4	1	0
Total Tourists	**1,679**	**14**	**20**	**124**	**350**	**238**	**181**	**166**

Source: CMIE

Retail

The consumer goods related industries are expected to get a boost with various industries entering the region. Currently, as per market sources, J&K region has about 14-17 retail malls and shopping centres of different sizes, compared with about 10-12 retail malls and shopping centres in Himachal Pradesh (Area – 5.5 million hectares). However, Uttar Pradesh (with an area of about 24 million hectares), has about 20-25 retail malls and shopping centres of different sizes, thus demonstrating J&K region's potential to increase the number of malls and shopping centres to about 25 going forward. Now with the withdrawal of Article 370 and Article 35A, the government has allowed buying of land or property by citizens of other states thereby providing opportunities for growth of retail industry in the region. This can be an opportunity for potential investors which will also be useful for the real estate industry.

Hospitals in J&K

Healthcare is one of the growing industries in the country and from the table below it can be seen that people in J&K region are mainly dependent on public hospitals for treatment rather than private hospitals whether it be rural or urban areas.

Table 13: Per thousand Distribution of hospitalisation cases (EC) during the last 365 days by type of hospital

Area	Region	Per 1000 no. of hospitalized cases in						
		Public hospital			Private hospital			
		Male	Female	Person	Male	Female	Person	All
Rural	Jammu & Kashmir	458	481	939	23	38	61	1000
	All-India	201	218	419	303	278	581	1000
Urban	Jammu & Kashmir	365	489	854	68	78	146	1000
	All-India	165	156	320	332	348	680	1000

Source: National Sample Survey 71st Round

As per the data, the dependency on public hospitals in J&K rural areas is as high as 93.9% compared to the dependency rate of 41.9% at all-India level. In case of private hospitals, the dependency is as low as 6.1% for people in rural areas in J&K compared to the dependency rate of 58.1% at all-India level.

The case is similar for J&K urban areas. In these areas, 85.4% of the population is dependent on public hospitals compared to 32% dependency at all-India level. The dependency on private hospitals in urban areas is higher at 14.6% compared to 6.1% dependency on rural areas. However, this is lower than the all-India dependency rate of 68% in urban areas.

The lack of private hospital infrastructure in J&K is the prime reason for this higher dependency on public hospitals for people in this region. Article 370 and Article 35A so far had prevented buying of land or property by citizens of other states. **The withdrawal of these articles now opens up doors for private investors outside the state and thus would allow investments from them to set up healthcare delivery systems at primary, secondary and tertiary level.** The investments at tertiary level imply infrastructure creation by corporate hospitals that would include single and multi-speciality corporate hospitals. The setting up of private hospitals will also provide better health facilities and infrastructure to people in the J&K region.

Other services

Two service areas which hold a high level of potential are education and IT. These services are more likely to develop at the secondary stage after the economy picks up and stability reins in the political and social spheres. Given the climatic advantages and the topography, education at both the school and college levels would be effective starting points before development of professional colleges. The government could give an impetus here by opening new institutes.

Outsourcing and BPO activities too could be industries with potential which can harness local talent besides attracting the same from outside.

Infrastructure

Construction and development of new infrastructure and upgrading existing infrastructure is among the key investment avenues in the J&K region which includes Ladakh. The region also requires upgrade of facilities and construction of infrastructure projects namely railway lines, airports and roads as it looks to usher in more business and tourism activity.

Railways:

Terrain and security are the two major factors which have been limiting the expansion of railway network in the region.

Ease of land acquisition is expected to streamline some of the terrain related issues where alternative routes with better terrain could be considered over difficult terrain.

There are ~36 railway stations in Jammu and Kashmir region. There are no railway lines connecting Ladakh region. Rail density for the J&K region is 1.3km/1000 sq km vs national average of 20.5 km. This highlights the lack of railway infrastructure and connectivity In the region.

- A 498 km line connecting Bilaspur to Leh is proposed and the project is in early stages of clearances and survey. The project is expected to be completed at an estimated cost of ₹ 80,000-85,000 crore. This would not only give impetus to tourism along Bilaspur-Manali-Leh route and this would be among the highest elevated railway lines in the world. Apart from aiding tourism, the railway line is expected to connect Ladakh region to the main railway line providing pan-India connectivity and would act as a strategic asset to the country.

Additionally, two more lines-

- Jammu-Udhampur-Srinagar- Baramulla link which is at an advanced stage and is nearing completion. As per latest estimates, the project would be completed at a total cost of ~₹ 28,000 crore. Out of which, almost 66% of the cost have been already incurred.
- Jammu to Poonch line with 235km length at an estimated investment of ~₹ 8,000 crore.

These railway lines are expected to be major arterial routes for the state which would improve all-weather connectivity and movement of goods and services round the year. We can expect progressively higher investment being allocated by the railways in this region as other activities pick up.

Aviation:

There are three airports in Jammu and Kashmir- Jammu Airport, Srinagar Airport and Leh Airport. Srinagar Airport is the only international airport in the J&K region and handles passenger traffic which includes haj pilgrims from the region, tourists and inbound pilgrims.

Table 14: Total Passenger Traffic across airports in J&K and Ladakh

	2017-18	2018-19	Growth %
Srinagar	24,24,748	27,24,651	12.4%
Jammu	14,43,965	13,34,313	-7.6%
Leh	6,92,010	8,21,689	18.7%
Total (in millions)	45.6	48.8	7%

Source: AAI

Capacity of Srinagar Airport needs to be augmented to 15 million passengers in order to handle the entry of tourists and pilgrims. Additionally, capacity of Jammu and Leh airport could be upgraded to handle an additional 2-5 million passengers per annum and could be vital regional connectivity airports.

The three airports currently handle around 3.5 million passengers annually. The upgradation of airport would be vital for improving and developing air-connectivity. As economic activity picks up and the number of business travellers increases, the demand for such facilities would tend to increase.

Overall outlay of Rs 25-30 billion would be required in order to meet the costs of developing and upgrading these facilities. Incentivizing airlines to operate to Jammu and Leh Airport in addition to Srinagar Airport under the UDAN Scheme could be an additional measure.

Roadways:

Total length of National highways across J&K totals 2601kms which includes National Highway across Ladakh Region.

As per data from NHAI, J&K's(including Ladakh Region) National highway density stood 2.25% of the total road length in the state. This is in line with the percentage for states with similar terrain, climate and population like Himachal Pradesh (2.3%). But in terms of Length of NH length per 1000 sq km, J&K's 11.7 km /1000 sq km lag the national average of 35km. Even with moderate build-up, the same could be increased to 22 km over the next decade, which would entail roughly ₹ 30,000 cr of investments in the road sector. The higher cost can be attributed to rough and difficult terrain, which would require construction of tunnels, bridges and other structures. Improving national highway infrastructure would be essential not only with a logistics point of view, but also the national security.

Table 15: Key data on National Highways in Jammu and Kashmir Region

	Total NH Length	% of NH	NH in km/1000 sq km	NH in km per capita
J & K (with Ladakh)	2,601	2.25	11.7	20.7
All India	115,435	-	35.1	9.6

Source: NHAI

Ropeways: Ropeways could be a major connectivity and last mile connectivity transport medium and is very suitable for the region. The same could be implemented across the high ranges and hilly terrains thereby improving accessibility for tourism and connectivity for people living in remote-hilly areas.

Gulmarg-Gondola is among the early-operational projects apart from Jammu Ropeway project which is expected to be operational. The progress on these projects has been slow owing to implementation difficulty.

Other Public Infrastructure:

Power:

The total power consumption in J&K reported an increase of 10.7% to 16.5 billion units in FY19. Power consumption in India grew by 3.6 % during the same period to 1249 BU (excl. Renewable Power). Per capita consumption is ~1300 units vs ~1050 unit All India per capita consumption.

But the state reported a power deficit of 20% during the year which indicates requirement for more power generation in the state. J&K reported highest AT&C loss of 50% as per UDAY website.

- J&K region requires a major revamp of power generation and related infrastructure. The state is among the lower performers in terms of AT&C losses (~50%) and has an installed capacity of 3.4GW of power plants.
- J&K recorded ~3.78 lakh remaining households getting electrified under the "Saubhagya" Scheme, thus achieving 100% electrification.
- The state has ~199 MW of renewable energy capacity and provides a scalable opportunity of setting up solar and rooftop capacity of upto 2 GW by 2022 which in turn would need an investment of ~₹ 11,000 crore. J&K is among the very few regions which continue to witness power deficit with 20% deficit in power supplied in May 2019. Setting up renewable energy would help bridge a part of its power requirement.
- In order to address the issue of AT&C losses, state needs to achieve its smart-metering targets.

Apart from renewable energy capacity, additional investment could be made in setting up small hydro power projects as the state has over a dozen major rivers passing through it. The region already has ~2.3 GW of installed capacity of hydropower. An additional 1 GW of hydropower projects can be set up over the next decade.

Total investments of ~₹ 20,000 crore would be required to improve and augment the power infrastructure in the region which should make it self-sufficient.

Oil and Gas

Over the years, Jammu and Kashmir has had access to only petrol, diesel and LPG for transport and cooking fuel. J&K has also been a beneficiary under the Pradhan Mantri Ujjwala Yojana (PMUY) and has received 10.8 lakh connections till date.

The government aims to convert India into a gas based economy and has been proactive by introducing policies for encouraging investments in the sector. One of the key projects undertaken by the government is the development of National Gas Grid to ensure availability of gas throughout the country. Given the land acquisition issues, Jammu and Kashmir is one of the few territories which do not have a gas pipeline.

In 2011, GSPL had proposed to set up a 725 km gas pipeline starting from Gujarat which would pass through Punjab and finally end at Srinagar. The project was divided in 2 phases and work on first phase connecting Gujarat and Punjab has been progressing. The second phase covering Jammu and Kashmir was deferred given special provisions which had to be taken.

Now with the revocation of Article 370, the Rs 1,560 crore pipeline project will get a much needed boost and the setup will happen at a much faster pace. Once completed, several districts namely Kathua, Jammu, Samba, Udhampur, Ramban, Islamabad (Anantnag) and Srinagar would get connected.

Probable Benefits

- Having a gas pipeline in the state will encourage more investments in the downstream gas sector and enable gas companies to set up the much absent CGD infrastructure in J&K which will provide CNG to automobiles and PNG to domestic, commercial and industrial set ups. J&K can now be a part of the CGD bidding rounds which is conducted by the PNRGB.
- Apart from Jammu there are industrial estates in Udhampur and Kathua region with businesses in glass, plastics and building materials which can benefit from cheaper fuel.
- Downstream gas companies can also consider setting up L-CNG pumps in terrains where the remaining pipeline infrastructure will not be accessible.

Note: A typical CNG pump receives natural gas through pipelines which is compressed and stored as CNG. An L-CNG pump, on the other hand, gets liquefied natural gas (LNG) in tankers/trucks, which is stored underground, and turns to gas at the time of dispensing. L-CNG is beneficial to users in hilly areas and eco-sensitive zones, where it is challenging for city gas firms to reach. Given laying of pipelines requires multiple clearances and approvals, an L-CNG station is a faster way to make automotive gas available in areas lacking pipelines.

Concluding remarks

There is plethora of opportunity for private enterprise in J & K given that there were restrictions in the business environment earlier. The inherent strengths in primary products like fruits and textile related products could be leveraged to provide accelerated growth to the economy as it will automatically mean an increase in spread of technology as well as create more employment. Infrastructure growth would probably require joint effort of the public and private sectors as economic activity heightens and increases the demand for the same. Consumer oriented industries like automobiles and allied activities, retail and tourism are likely to benefit progressively as this process builds up. In the services area, while healthcare looks promising, education and IT could grow in importance as conditions evolve. Overall, the next five years can see some traction depending on how conditions evolve.

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