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Growth with Employment

In this issue

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Editorial

The Rajiv Gandhi Institute for Contemporary Studies (RGICS) works on five themes:

1. Constitutional Values and Democratic Institutions
2. Growth with Employment
3. Governance and Development
4. Environment, Natural Resources and Sustainability
5. India's Place in the World.

This issue of Policy Watch cuts across several of the above themes and deals with the theme Growth with Employment.

The first article is by Vijay Mahajan, Director, Rajiv Gandhi Institute for Contemporary Studies titled, A Strategy for Job Creation in the 2021-30 Decade. He states that the challenge of this decade is to not just grow the GDP but to create 12 crore "decent" jobs – which offer better than living wages, social security and safe working conditions. He identifies five avenues for the creation of a large number of jobs, which include (a) regenerating *jal, jangal, jameen* (b) diversified agriculture and localized value added (c) manufacturing at the level of micro and small enterprises (d) construction of housing and infrastructure, and (e) digital and green services. He goes on to describe how the investment for this job growth can be mustered.

The second article is by RGICS Sr Research Associate, Heena Zuni Pandit. It describes the major government scheme called Production Linked Incentive (PLI), under which over Rs 240,000 crore (2.4 trillion) has been earmarked to enable domestic manufacturing units in designated sectors to upgrade their technology and undertake export quality production. It is thus supposed to help with the GDP growth, improve balance of trade and generate higher end skilled employment. The article examines the features of the scheme as applied to various sectors and then gives an overview of the progress so far and the possible way forward.

The third article is by Yuvraj Kalia, Fellow of the RGICS. He has studied the Sports Goods MSME cluster in Jalandhar, Punjab. He describes the structure of the sector using the Michael Porter Framework of competitive advantage and shows that many of the earlier units have been stagnating as they did not upgrade themselves. Others who managed to adapt to changing demand patterns and adopt suitable technology and marketing channels, have not just survived but also thrived. He also describes the role of the supportive eco system for the sector and cluster, in the form of regulatory and promotional institutions, credit providers and industry associations.

We hope you enjoy reading these articles. We look forward to your feedback.

Vijay Mahajan
Director,
Rajiv Gandhi Institute for Contemporary Studies

A Strategy for Job Creation in the 2021-30 Decade

Vijay Mahajan, Director, RGICS

Sustainable Growth with Decent Employment – The Challenge for This Decade

Growth Has Not Been Sustainable in the Previous Decade

Compared to the high growth in the first decade 2001-2010, when growth rates of the real GDP were close to 10 percent per annum, during the decade starting 2011, India experienced a decline in its GDP growth rate, to 7.99 per cent in 2015 and further to 4.18 per cent in 2019. Then due to the COVID-19 pandemic and the resulting economic downturn, the GDP actually fell in 2020-21. This was the result of the COVID pandemic and its adverse impact on the economy. Table 1 below summarizes the GDP growth and the employment growth rate trends:

Table 1: India's GDP, Employment and Emissions Growth since 2000

Year	GDP (in billion US$ PPP)	GDP per capita (in US$ PPP)	Real GDP growth % over the previous year	Employment (in million persons)	Green House Gas (GHG) Emissions (Million Tons CO_2) Total and Per capita	
2000	▲2,077.9	▲2,018	▲ 4.0%	350[1]	NA	NA
2005	▲3,238.3	▲2,901	▲ 9.3%	▲ 458[2]	1673 (for 2008)	1.25 (for 2008)
2010	▲5,160.8	▲4,181.2	▲ 10.3%	• 463[3]	1761	1.43
2015	▲7,159.7	▲5,464.8	• 8.0%	• 443[4]	2293	1.75
2020	▼8,681.3	▼6,283.5	▼ (-) 7.3%	▼ 425	2597 (for 2019)	1.90 (for 2019)

Sources: IMF DataMapper https://www.imf.org/external/datamapper/PPPSH@WEO/IND, MOSPI (2019) PLFS and CMIE for Employment. https://www.climatescorecard.org/ for GHG emissions data

The compounded average growth rate (CAGR) of GDP in purchasing power parity (PPP) adjusted US$$ was 7.4 percent pa while the CAGR of employment was just 0.98 percent pa. The CAGR of GHG emissions was 4.08 percent pa. In addition to the slowdown in the GDP growth and almost no additional employment, the slowing growth was at an increasing cost to the environment, as evidenced by higher GHG emissions, the steady depletion of basic natural resources – jal, jangal, jameen (water, forest and land) and increasing levels of air and water pollution. Thus the environmental sustainability of even the reduced GDP growth was also questionable.

How Many Jobs and of What Kind Do We Need in India in this Decade?

The Planning Commission had said in 2012 that, "employment elasticity has come down from 0.44 in the first half of the decade, 1999–2000 to 2004–05, to as low as 0.01 during the second half of the decade 2004–05 to 2009–10." In the period since 2012, India's employment growth rate fell further. Employment in the Indian economy shrank by 0.2 per cent in FY 2014-15 and by 0.1 per cent in FY 2015-16, according to the India KLEMS database of the RBI. This trend was severely exacerbated in 2020 due to the COVID pandemic's effects. Using CMIE data for 2020, we estimate the CAGR of employment over the two decades 2000-2020, to be just about 1 per cent pa, despite the GDP CAGR of around 7.4 per cent over the two decades. Thus, we will have to work for the growth of employment, not just of the GDP, in 2021-30.

Five-yearly Employment and Unemployment Surveys (EUS) were conducted by the National Sample Survey Organization (NSSO) and the last EUS was for 2011-12. The Government of India (GoI) discontinued the EUS from 2015 onwards and launched the Periodic Labour Force Survey (PLFS) from 2017. The first Annual Report of the PLFS for the period June 2017- June 2021 was officially released in June 2019. The second report based on the survey from July 2021 to June 2019, was released on 4th June 2020.

Using these and other sources, particularly the unemployment reports from the Centre for the Monitoring of the Indian Economy (CMIE), we are able to put together a picture as on December 2020. Applying the Labour Force Participation Rate (LFPR) of 37.5 per cent for age 15 and above, from the PLFS 2021-19, to the estimated Indian population of age 15 years and above at the beginning of 2021, of 1095 million, we can infer that the total labour force was 520 million at the beginning of 2021. Of these, as per CMIE's moving average, 8.3 percent or 47.3 million were unemployed at the end of Dec 2020.

How many jobs does India need to generate in the decade 2021-2030 to ensure decent jobs for nearly everyone?[1] This depends a lot on what number is assumed for the growth rate in labour force participation rate. We believe with the enhanced economic stress due to the COVID pandemic, the declining trend in the LFPR may be reversed as more women and youth enter the workforce to supplement household incomes. At the same time, the increment in the labour force will be lower than in the previous decade, since the population growth rate fell in 2001-2011 decade to 17.64 percent from 21.15 percent in the decade of 1991-2001. Children born in the 2001-2011 decade will be entering the labour force in 2021-2030.

Reconciling these two contradictory trends, we assume the labour force growth will reflect the population growth rate two decades ago. Thus, we project the labour force will go up from 519.7 million in 2021 to 611.4 million in 2030, a net increase of 91.7 million persons. If we instead make the assumption that the labour force will grow at the same CAGR as the 2000-2020 period, which was 1.17 percent per annum, then the labour force will grow to 583.9 million by 2030, still a net increase of 64.1 million.

The CMIE estimated number of unemployed as of 31 Dec 2020 was 47.3 million. Thus, the workforce at the beginning of 2021 was 471.4 million. Now let us compute the work force in

1 The term "decent work" was first used by the International Labour Organisation (ILO) https://www.ilo.org/global/topics/decent-work/lang--en/index.htm and adopted by the UN in 2015.

2030. There is bound to be some unemployment at any time in an economy. Assuming a base rate of unemployment of 3 percent of the 611.4 million labour force in 2030, it means 18.33 million unemployed in 2030. Thus, we project the workforce in 2030 to be 593.1 million if we assume the population based CAGR of 1.64 percent or 566.4 million if we go by the 2000-2020 CAGR of 1.17 percent. We are inclined to believe that the LFPR will go up, as the pressure to earn goes up among the youth and women. Therefore, we believe the number of incremental jobs needed in 2021-2030 is 121.7 million. Simply put, India needs to add 12 crore new "decent" jobs (with social security and dignity) in the 2021-30 decade.

We note four facets of the job crisis – not enough jobs overall - within that not enough jobs for youth and women, not enough decent" wage/salaried jobs, not enough jobs in rural areas and small towns and not enough low-skilled and semi-skilled jobs for people emerging from the agricultural and the informal sectors, or those joining the labour force anew.

a. Demographically - these jobs are mainly needed for younger workers (15 to 29 years), whose labour force participation rate (LFPR) was 38.2 per cent, much lower than the LFPR of 49.8 per cent for the overall (15-59 years) population. Also, jobs should be more than proportionately for female workers since their LFPR was also much lower at 16.1% during the July-September 2020 quarter, the lowest among the major economies.

b. Occupational status wise, the vast majority of these jobs will need to be either in the form of entrepreneurial self-employment or regular/contract wage/salaried jobs with social security benefits. Working conditions must be improved for those in casual and contract jobs and in involuntary self-employment, to make these into "decent" jobs.

c. Geographically, more jobs need to be in rural areas and in small towns, at best up to district headquarters. Larger cities and metros must be toned down as growth magnets.

d. There are five avenues with a major job creation potential (a) regenerating jal, jangal, jameen (b) diversified agriculture and localized value added (c) manufacturing at the level of micro and small enterprises (d) construction of housing and infrastructure, and (e) services of all kinds, from trade, transport and storage to health, education and business services.

Of the projected 12 crore new "decent" jobs, 11 crore will have to come from these ten sectors:

Table 2: Targeted increase in number of workers in 2021-30 in various sectors in million

	National Industrial Classification (NIC) sub-sectors	Targeted increase in number of workers in 2021-30 in this NIC in million
1	Manufacturing	21.64
2	Construction	20.79
3	Crop Cultivation (see comment below)	19.34
4	Whole Sale and Retail Trade, Motor Vehicle Repairs	17.34
5	Animal Husbandry	8.14
6	Transportation and Storage	8.02
7	Education	6.05
8	Accommodation and Food Services	3.65
9	Other Services (digital and green)	3.20
10	Health and Social Work	1.99

A question would arise that as the crop cultivation sector is already saturated, how can it absorb another 1.9 crore workers? The details are given later, but the highlight is that the enhanced productivity of Jal Jangal, Jameen will be able to support these additional workers.

Targeted Growth in Jobs by Various Categories to Ensure "Full" Employment

More Jobs for Youth

We not only have to worry about generating 12 crore new "decent" jobs in total, but also have to ensure that the growth of jobs for younger workers (15-29 years of age) grow faster than those for workers in the prime age of 30 to 64 years. We also have to ensure that numbers of those who below 15, child labour, and those above 64, working for survival, must come down.

Accordingly, we have put certain aspirational targets (see Table 3 below) for higher growth of 83.3 million in employment for the young age workers and actually a decline in employment of 47.4 million non-working age persons.

Table 3: Targeted Employment Growth by Age Groups

Particulars	2017-18 PLFS % applied to 2020			Targets and Projections for 2030-31		
	Rural	Urban	Total	Rural	Urban	Total
Young workers (15 to 29 years)	21.6%	34.1%	26.6%	28.6%	45.6%	34.0%
Prime age workers (30-64 years)	70.2%	57.7%	67.2%	73.2%	55.2%	67.5%
Workers below 15 and above 64 years	8.2%	8.2%	6.2%	-1.8%	-0.8%	-1.5%
Total number of workers in million	339.0	132.4	471.4	404.6	188.5	593.1
Young workers (15 to 29 years)	73.2	45.1	125.4	115.7	86.0	201.7
Prime age workers (30-64 years)	238.0	76.4	316.8	296.2	104.1	400.2
Workers below 15 and above 64 years	27.8	10.9	29.2	-7.3	-1.5	-8.8
Additional young workers to be employed by 2030 in			million	42.5	40.8	83.3
Addl prime age workers to be employed by 2030 in			million	58.2	27.7	85.9
Non-working age workers dis-employed by 2030 in			million	-35.1	-12.4	-47.4

Source: Author's computations based on aspirational targets for 2030, using PLFS 2017-18

Many More Jobs for Women

Likewise, the growth of jobs for women workers needs to be more than for men. We have given an aspirational target here of the share of women in the workforce going up from 20 to 30 percent in this decade. This will increase the number of female workers by 84 million in the decade. (See Table 4 below). This will require a number of gender specific strategies.

One of the ways to enable more women to work is to make public investments in more opportunities for school and college education for girls, in commuter transportation from rural areas to small towns as they become job growth centres, in working women's hostels in cities, and in establishing mandates childcare facilities at or near work places

Table 4: Targeted Employment Growth by Gender for 2021-30

Particulars	World Bank Data Bank, 2020		Projections for the year 2030-31		Increase in 2020-31
	In %	In Million	2030-31	In Million	In Million
Female Workers	19.9%	93.8	30.0%	177.9	84.1
Male Workers	80.1%	377.6	70.0%	415.2	37.6
Total number of workers	100.0%	471.4	100.0%	593.1	121.7

Source: Author's computations based on aspirational targets for 2030, based on PLFS 2017-18

More Jobs for Semi-Skilled and Higher Skill Levels

The National Skill Qualification Framework defines multiple skill levels from 1 (workers who only have manual and routine skills to 4 professional workers). The growth of jobs for skill level 2 and 3 workers and for level 4 will be higher as the economy makes the transition to a middle-income status in the coming decade.

Accordingly we have suggested targets for these three levels higher than 2020 levels. In contrast we are planning for a decline in the share of level 1 workers, particularly as these jobs are most likely going to get eliminated by automation and artificial intelligence. The skill level 1 workers are proposed to graduate to skill level 2, whose numbers need to increase by 91.9 million by 2030.

In addition, the workers at skill level 3 and 4 also need to increase by 66.8 and 21.4 million respectively. Thus increasing the number of skilled workers by 180 million is the national skilling target for this decade.

Table 6: Targeted Employment Growth by Skill Level

Particulars	2017-18 PLFS % applied to 2020	Targets and Projections for 2030-31	Additions in 2021-30 in million
Percent of Workers of Skill Level 1	30.0%	14.0%	
Percent of Workers of Skill Level 2	56.0%	60.0%	
Percent of Workers of Skill Level 3	11.0%	20.0%	
Percent of Workers of Skill Level 4	3.0%	6.0%	
Total number of workers in million	471.4	593.1	
Workers of Skill Level 1	141.4	83.0	-58.4
Workers of Skill Level 2	264.0	355.9	91.9
Workers of Skill Level 3	51.9	118.6	66.8
Workers of Skill Level 4	14.1	35.6	21.4

Source: Author's computations based on aspirational targets for 2030, using PLFS 2017-18

Focus on Entrepreneurial Self-Employment and Regular Wage/Salaried Jobs

The growth of jobs should be first and foremost through entrepreneurial self-employment. Here we draw a distinction between "voluntary" self-employment versus "involuntary" self-employment. This exigencies of choice of occupational status has been discussed in detail in the literature, most recently by Karaivanov and Yindok (2022), to classify entrepreneurs as involuntary and voluntary. Involuntary self-employment is a last resort for those who are not even able to get casual wage work.

Thus the strategy for India in this decade should be to promote a large number of enterprises, at a scale slightly larger that "own account enterprises", a lot of which are actually involuntary enterprises. Interestingly, there exists a large body of theoretical and practical work which shows that individuals with a high achievement motivation can be identified and trained to become voluntary entrepreneurs. (Miron and McLelland, 1979). Once a large number of entrepreneurial individuals establish voluntary enterprises, they will grow and create jobs for regular wage and salaried workers. This will then lead to a decline in the share of casual workers, though their absolute number will grow marginally. (See Table 5).

Table 5: Targeted Employment Growth by Status – Self-Employed, Regular or Casual Worker

Particulars	Status as in 2020			Targets for 2030-31		
	Rural	Urban	Total	Rural	Urban	Total
Self-employed	57.8%	38.3%	26.6%	60.0%	40.0%	53.6%
Regular wage/ salaried employees	13.3%	47.0%	67.2%	15.0%	48.0%	25.5%
Casual labour	28.9%	14.7%	6.2%	25.0%	12.0%	20.9%
Total number of workers in million	339.02	132.37	471.4	404.6	188.5	593.1
Self-employed workers in million	195.95	50.70	125.4	242.8	75.4	318.2
Wage/salary employees in million	45.09	62.21	316.8	60.7	90.5	151.2
Casual labour in million	97.98	19.46	29.2	101.2	22.6	123.8
Additional to be self-employed by 2030 in million				46.8	24.7	71.5
Additional to be regular-employed by 2030 in million				15.6	28.3	43.9
Additional to be casual-employed by 2030 in million				3.2	3.2	6.3

Source: Author's computations based on aspirational targets for 2030, using PLFS 2017-18

More Jobs in Rural Areas and Small Towns

As the rural population is still about two-thirds, we not only have to plan for generating 12 crore more jobs in total, but also have to ensure that the growth of jobs for urban (small town and district HQs) is higher than for metros and also for rural areas. We recommend an aspirational target that by 2030, as much as 25 percent of the workforce being in small towns and district headquarters, as against a mere 14.8 percent now. The workforce in small towns and district headquarters needs to rise by 79 million. We need a policy to improve spatial distribution of jobs. Till that happens, metro and large cities will remain growth magnets and led to a lot of involuntary migration.

Table 7: Targeted Employment Growth by Location on Rural –Urban Continuum

Particulars	2017-18 PLFS % applied to 2020		Projections for the year 2030-31		Increase in 2020-31
	In %	In Million	2030-31	In Million	In Million
Rural Workers	71.9%	339.0	60%	355.9	16.8
Workers in small towns and district headquarters	14.8%	69.5	25%	148.3	78.7
Workers in metros and big cities	13.3%	62.8	15%	89.0	26.1
Total number of workers in million	100.0%	471.4	100%	593.11	121.7

Source: Author's computations based on aspirational targets for 2030, using PLFS 2017-18

Five Avenues with Major Employment Potential Over 2021-2030

The question is whether such a large amount of decent employment can be created, given the dismal history of this decade so far? It is not enough to merely say a resolute yes. We need to answer in what sectors of the economy can these jobs be created? And with what level of investment? And where will all that capital come from? And recognizing that capital is not enough, policies and institutions will also have to be reshaped to ensure that the investments yield the desired number of jobs and with decent wages. Before we attempt to answer the questions about capital, policies and institutions, let us list the sectors which have the maximum potential for generating productive, decent jobs in this decade.

Generating near full employment in any economy with a high annual increment to the labour force, is a proposition that will require a massive political will to redirect public and private investments towards sectors that generate employment. All this requires deep thinking and this paper merely makes a beginning. All sectors are not the same as far as employment creation is concerned. Some sectors create much more employment, with a given level of investment, than others. The sectors of employment opportunity are:

- Regeneration of degraded natural resources – jal, jangal, Jameen - water, forests and land.
- Diversified agriculture and local value addition in sorting, grading, washing/drying, and packing of agricultural output, including vegetables, fruits, milk, poultry, fish and meat.
- Manufacturing in micro and small enterprises in clusters and small towns
- Construction sector, particularly lower income housing and lower-end infrastructure
- Services – digital such as telecom, entertainment and financial services; and "green" services such as solid waste management, operation and maintenance of renewable energy, eco-tourism, health promotion and continuing education.

Regeneration of Degraded Natural Resources

Let us look at the various economic sectors first. Agriculture is the biggest employer but millions of workers and farmers are getting out of it due to low and uncertain earnings. Yet it is possible to stem this tide if investments are made in regenerating the degraded natural resource base for agriculture – water, forests and land – or Jal, Jangal, Jameen. Degraded natural resources include streams, rivers, water bodies, and groundwater aquifers; forests which have been thinned down due to felling and grazing; and cultivated lands whose soils have deteriorated due to excessive chemical fertilizers, over-irrigation or soil erosion.

According to an estimate by TERI, land degradation through various processes in India cost around 2.5 per cent of the country's GDP in 2014-15. (TERI, 2018) The study estimated total investment required for reclamation of land degraded by five major processes namely water erosion, wind erosion, forest degradation, water logging and salinity. The study found that India requires Rs. 2948 billion or nearly Rs 3 trillion (2014-15 prices) to reclaim 94.53 million hectare degraded land as per latest survey by SAC, Ahmadabad. Assuming an increase in costs

since then, India needs to spend Rs 4 trillion, or about 2 percent of the GDP to address the regeneration of degraded land resources. There are millions of jobs possible in regeneration of degraded natural resources, and thereby creating the potential for long-term employment through their sustainable use. This will generate 100 days of work for about 5 crore people each year for three years. As a result of improvements in land and water availability, about one crore people would additionally be engaged in agriculture, dairy, forestry, fishery, etc. more sustainably.

What is notable is that a large number of these jobs are in rural and forested tribal areas, and on the peripheries of urban areas, precisely the locations where jobs are needed. Moreover, 90 per cent of these jobs are unskilled or semi-skilled, which enables the large number of persons in the labour force in those skill categories to get some work in the next few years. Further, there is scope for more than proportionate participation by women in these jobs.

Diversified Agriculture and Local Value Addition

Diversification of agriculture is needed, away from rice, wheat and sugarcane. The demand patterns from consumers are also changing beyond the staple of wheat and rice. Agricultural output needs to be increased in nutrition cereals, oilseeds, pulses, vegetables, fruits, milk, poultry, fish and meat. Most of these generate more employment per hectare as compared to wheat and rice.

Further, it is not enough to merely produce a diverse set of agricultural commodities. As long as farmers merely sell these raw, they will never get an adequate share of the value that these commodities – vegetables, fruits, milk, poultry, meat, etc. create. To capture an additional share of the value added, agricultural workers, particularly women must be engaged in local, pre-dispatch sorting, grading, washing/drying, and packing of the diverse agricultural produce. This will improve the prices received by farmers as well as generate local jobs.

Construction Sector for Lower Income Housing and Infrastructure

In the construction sector, there are large number of jobs possible in the housing as well infrastructure. With a significant shortage of over 20 million dwelling units and the need to upgrade existing housing stock, coupled with the availability of housing finance from banks and housing finance companies, this sector needs a policy and not a fiscal boost. Further, with a need to create and improve the infrastructure in the next 1000 cities, after the current top 100 cities, there will be heavy demand for labour for the creation of infrastructure such as roads, bridges, and public buildings such as schools, health care centres, police thanas, and hospitals.

Nearly 90 per cent of the workforce employed in the real estate and construction sector are engaged in construction of buildings, while the rest 10 per cent workforce is involved in building completion, finishing, electrical, plumbing, other installation services, demolition and site preparation. Over 80 per cent of the employment in real estate and construction constitutes minimally skilled workforce, while skilled workforce account 10 per cent. This matches well with the low skill levels available in the labour force till they get skilled in the next few years.

Manufacturing in Micro and Small Enterprises (MSEs) in Small Town Clusters

In the non-agricultural sectors, employment has not grown anywhere in proportion to the demand for jobs. Employment growth in the manufacturing sector has remained low, and indeed there are prospects of further slowdown as automation takes off even more broadly. Still, in manufacturing, new jobs will get created in agro-processing around agriculturally productive regions (such as the Doaba region of Punjab, Malwa region of Madhya Pradesh and the coastal belt of Andhra Pradesh; and in niche micro-enterprises in rural areas (such as handloom and handicrafts).

As per Cluster Observatory, a project of the Foundation for MSME Clusters, more than 5600 clusters are operating in India across different product/service categories ranging from automobiles to rural tourism. Manufacturing jobs can grow in these cluster towns (like Moradabad for brass work and Tirupur for hosiery) if the SMEs here are made more productive and export-oriented. New jobs can also be created by establishing new medium and even large industry clusters based on localization of imported products (such as has already happened for mobile phone manufacturing around Chennai and NOIDA).

Small Scale Services – Digital and Green

In services, much of the high-end employment growth was driven in the previous decade by the Information Technology (IT) and IT-enabled services sector. Thus, once again, in services, we will have to look for job growth in digital service sectors like call centres, data centres, telecom, entertainment and finance.

Examples of green services include soil and water conservation, solid waste management, operation and maintenance of renewable energy and eco-tourism. There are many jobs possible in tourism which is a composite services sector. New jobs can be created by developing newer destinations for rural and small-town tourism to religious places as well as eco-tourism to locations with natural beauty or historical significance. Other green services include physical training, personal grooming, and health promotion.

Of course, the older physical services such as retail and wholesale trade, storage and warehousing, transport and hotels and restaurants and business, real estate and personal services will continue to be major employment sources.

Most of these services are offered in the private sector and the state only has to make facilitative policies under the rubric of "ease of doing business", but ensure that these benefit the large number of micro and small enterprises too. For example, the application of GST, including the requirement of filing returns on-line, is onerous to millions of micro-enterprises and should be applied with a gradual approach, so that the revenue goals are met from the larger enterprises.

Financing Job Growth Using a Multiplicity of Sources

How Much Invest is needed?

The total investment is estimated to be Rs 120 lakh crore (trillion), or about 60 percent of India's GDP in 2021. This investment would have to be concentrated in the first six years of the decade, to show results by the end of the ten year period. Thus the investment in jobs for all needs only about 10 percent of GDP per annum or about a third of the current annual investment in the economy, for the first six years. All these are summarized below in Table 8:

Table 8: Estimated Need and Possible Sources of Funds for Jobs for all by 2030

Source of Funds	Investment reqd in Rs crore during 2021-26	Indivi-dual House-holds	Commu-nity Collec-tives	Corpo-rate CSR	Govt Budget	Banks and fin instns	Corpo-rate invest-ments
Regeneration of Jal, Jangal, Jameen	12,00,000	Minor	Minor	Minor	Major	Minor	Minor
Agricultural diver-sification and value chains /collectives	8,00,000	Minor	Medium	Minor	Minor	Medium	Medium
Infrastructure in small towns	20,00,000	Minor	Minor	Minor	Major	Minor	Medium
Education and Skill Development	20,00,000	Medium	Medium	Minor	Major	Minor	Medium
Micro and small enterprises	50,00,000	Medium	Medium	Minor	Minor	Major	Medium
Digital sand green services	10,00,000	Medium	Medium	Minor	Minor	Major	Medium
Total investment in Rs crore in 2021-26	120,00,000	Only a small part of this investment is expected from the government. Rest will come from other sources listed above.					

Source: Author's computations based on aspirational targets for 12 crore new "decent" jobs by 2030

Sources of Finance Other than the Government

We argue that these sectors should be prioritized for overall investment – both public and private. Private investment will follow the logic of maximizing expected returns, and can only nudged by incentives to sectors that generate high employment. Public investment can, however, be prioritized in those sectors that generate high employment and also create public goods or positive externalities. This needs to be supplemented by private investment, which can be channelized into these areas by suitable incentives and creation of institutional frameworks which provide an assurance of returns to the investment.

This was done five decades earlier for attracting private investment in the industrial sector and two decades ago for attracting private investment in the infrastructure sector. That process will have now to be repeated for the natural resources sector and for the social services sector as well. Some beginnings have already been made in this direction and process needs to accelerated, with safeguards of public interest.

The financing of agricultural diversification will have to be done by farmer households, and through bank loans. Financing of farmer owned agricultural value chains will have to be done by farmer households, community collectives like FPOs, bank loans as well as and corporate finance. Financing of the creation of small infrastructure in small towns and district headquarters will have to be done by the government budget resources and possibly agencies like NABARD RIDF. The financing of non-farm micro enterprises for self-employment will largely have to be done from personal and community resources and through bank loans of the PM Mudra Yojana and Microfinance. So far many of the MUDRA and microfinance loans have gone to "involuntary" entrepreneurs, who are not best users of this.

As Bahety and Ngoma (2022) suggest "microfinance may not be a panacea and that relaxation of both labor market frictions and credit market constraints are necessary to reduce allocative inefficiencies of resources…Public works programs, adult education, skills or vocational training…are some of the key labor market policies to help individuals choose their preferred occupation and increase entrepreneurial productivity and returns." Public works, adult suction and skill training are needed but cannot be financed by bank loans or microcredit. The financing of regeneration of natural resources will have to be done by the government budget resources and possibly agencies like NABARD, as discussed above.

Conclusion

In summary, to generate 12 crore new "decent" jobs for India in the 2021-30, we are proposing significant investment in major employment generating sectors, and within those, initially on sectors which will generate the demand for a large number of unskilled and semiskilled jobs.

In terms of target segments of the population, the growth in jobs should be higher for women and youth. In terms of spatial allocation, we are suggesting a significant investment in building the infrastructure and economic attractiveness of about 1000 district and cluster small towns, as the next rung of growth magnets, as a countermagnet to the 100 so-called Smart Cities.

As can be seen, the largest number of jobs are for the unskilled but the growth of semi-skilled and skilled jobs has been significantly enhanced, which will also improve wages for workers. For investments in growth to fructify into a large number of jobs with decent wages and working conditions, policies will have to be made more favourable to labour while ensuring institutions work effectively.

The challenge looks daunting, but we have no choice but to modify our policies so that we get not just GDP growth, on which everybody agrees, but that growth be equitable, generating a large number of decent jobs. Further, neither the growth not the employment imperative should make us encourage production of crops, goods and services which are destructive to the environment. Sustainability, along with Jobful growth, has to be triple mantra for this decade.

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Production Linked Incentives (PLI) Scheme - A Review of the First Two Years

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Production Linked Incentives (PLI) Scheme - An Introduction

The Production-Linked Incentive scheme was introduced by the central government in March 2020. The scheme provides an incentive of 4-6% to eligible companies on sales of goods manufactured in India for a period of five years.

Objectives of the Scheme

Apart from inviting foreign companies to set shop in India, the scheme also aims to encourage local companies to set up or expand existing manufacturing units. Apart from cutting down on imports, the PLI scheme also looks to capture the growing demand in the domestic market. Therefore, 10 more sectors were included under the scheme along with three initially announced. The sectors and the outlays are listed in the table on the next page.

The PLI scheme across various sectors aims at "making Indian manufacturers globally competitive, attract investment in the areas of core competency and cutting-edge technology, ensure efficiencies, create economies of scale, enhance exports, and make India an integral part of the global supply chain." In order to reduce India's dependence on China, the government announced this scheme that aims to give companies incentives on incremental sales from products manufactured in domestic units.

The government estimated that about 223 applicants invested Rs 23,991 crore under the Modified Special Incentive Package Scheme (MSIPS), which was revised in 2015. These investments were led by companies including Samsung, Bosch, Sterlite and Chinese mobile phone manufacturers such as Vivo and Oppo. The scheme provided a major boost to electronics manufacturing in the country. After this scheme closed last year, the government followed it up with three mega incentives totaling about Rs 50,000 crore, with a significant chunk reserved for the PLI scheme.

The idea of PLI is important as the government cannot continue making investments in these capital intensive sectors as they need longer times for start giving the returns. Instead, what it can do is to invite global companies with adequate capital to set up capacities in India. The

PLI scheme is designed to be effective in implementation and predictable in results. It should help India create a significant chunk of the jobs it needs.

Additional Investment, Output and Employment

With sectors included like mobile and allied equipment as well as pharmaceutical ingredients and medical devices manufacturing, these sectors are labour intensive and are likely, and the hope is that they would create new jobs for the ballooning employable workforce of India. The government expects the following from the PLI scheme -

- Additional sales of INR 409,501 crore including MSME revenue of INR 248,200 crore
- Additional investment of INR 102,722crore
- Additional GST collections of INR 12,686 crore
- Additional direct tax collections of INR 16,525 crore
- Additional employment of 58.84 lakh, including 24 lakh in MSME

Sector wise Scheme Outlay and Products supported under the scheme

	Sectors	Implementing Ministry/Department	Approved outlay for five yrs Rs. Cr
1	Mobile Phones, Specified Electronic Components	Ministry of Electronics and Information Technology	40,951
2	Critical key starting materials, APIs	Department of Pharmaceuticals	6,964
3	Medical Devices	Ministry of Electronics and Information Technology	3,420
4	Advance Chemistry Cell (ACC) Battery	NITI Aayog and Department of Heavy Industries	18100
5	Electronic/Technology Products	Ministry of Electronics and Information Technology	5000
6	Automobiles & Auto Components	Department of Heavy Industries	57042
7	Pharmaceuticals drugs	Department of Pharmaceuticals	15000
8	Telecom & Networking Products	Department of Telecom	12195
9	Textile Products: MMF segment and technical textiles	Ministry of Textiles	10683
10	Food Products	Ministry of Food Processing Industries	10900
11	High Efficiency Solar PV Modules[2]	Ministry of New and Renewable Energy	4500 + 19500
12	White Goods (ACs & LED)	Department for Promotion of Industry and Internal Trade	6238
13	Specialty Steel	Ministry of Steel	6322
	Total		197315 + 19500
			= 216,815

2 https://www.business-standard.com/article/economy-policy/pli-funding-for-solar-manufacturing-to-be-raised-to-rs-24-000-cr-minister-121111400203_1.html

Eligibility criteria of the PLI scheme

- Companies that are registered in India and are involved in the manufacturing of goods covered under the target segments of the scheme can apply.
- Eligibility under the Scheme shall be subject to thresholds of Incremental Investment (covered under Target Segments) over the base year as defined.
- An applicant must meet threshold criteria that is a minimum of INR 10 crore (MSME) or INR 100 crore (Others) and a maximum of INR 1000 crore to be eligible for disbursement of incentive for the year under consideration. To meet the threshold criteria of Incremental Investment for any year, the cumulative value of investment done till such year (including the year under consideration) over the Base Year (2019-20) shall be considered.
- The applicant can operate existing or new manufacturing unit at one or more locations in the country.
- Any additional expenditure incurred by companies on plant, machinery, equipment, research and development and transfer of technology for manufacture in the target segments will be eligible for the incentive scheme.

Basis of calculation of incentive under the PLI Scheme

The scheme shall extend an incentive of 4% to 6% on incremental sales (over base year i.e. 2019-20) of goods manufactured in India and covered under target segments, to eligible companies, for a period of five years subsequent to the base year.

Applying for benefits under the PLI Scheme

Application can be made by any company registered in India. The application process is set out below:

- The number of applications allowed per applicant for support under the Scheme shall be restricted to one.
- Project Management Agency (PMA) / MeitY to receive the application (through an Online Portal) for prima facie examination and issue acknowledgement within 15 days post completion of examination.
- Each application shall be reviewed and details shall be entered in the detailed checklist by the PMA upon receipt of the application.
- The PMA will accordingly make appropriate recommendations to the Technical Committee (TC) for approvals under the Scheme.
- The final recommendations of the PMA and the Technical Committee shall be placed before Empowered Committee (EC) for its approval.
- All the applications shall be finalized within 60 days from the date of issuance of acknowledgement of receipt of the application.

- An approval letter to applicant will be sent within 5 working days of receiving approval from the Competent Authority.

It can be concluded that all these were categorically designed to focus on those who were planning to move out of certain domains for other countries, as part of the global reset post pandemic, to keep their value chain intact without having to depend on one source.

The PLI Scheme's very nature benefits those with scale and helps both domestic market and shipping the surplus to global market, boosting both manufacturing and exports.

Sector-wise Status of Production-Linked Incentive Schemes

In the notified PLI Schemes, the update on their implementation is as below:[3]

Mobile Manufacturing and Specified Electronic Components

The scheme extends an incentive of 4% to 6% on incremental sales for a period of five years subsequent to the base year. The scheme was notified on 01.04.2020; last date for application was 31.07.2020 and the scheme commenced on 01.08.2020. The scheme has received a very encouraging response. Sixteen applications worth Rs. 35,541 crore under this scheme have been approved under the first round of the scheme (5 companies under Global Champions Category, 5 companies under Domestic Champions Category and 6 companies under the Electronic Components category) with an incentive outlay of INR 36,440 crore.

As per the Quarterly Review Reports for the quarter ending December 2020, in the first 5 months of scheme operation and despite challenging times, the applicant companies have produced goods worth ~INR 35,000 crore and invested ~INR 1,300 crore under the scheme. Additional employment generation during this period stands at around 22,000 jobs.

3 https://www.pib.gov.in/PressReleasePage.aspx?PRID=1710134

After the success of the First Round of PLI Scheme, the Second Round of PLI Scheme has been launched on 11.03.2021, which focuses on building a vibrant and robust electronic component manufacturing ecosystem. The last date for application was 31.03.2021. Under the Second Round, incentive of 5% to 3% shall be extended on incremental sales (over base year, i.e., 2019-20) of goods manufactured in India and covered under the target segment, to eligible companies, for a period of four years. Applications received under the Second Round of PLI Scheme for Large Scale Electronics Manufacturing are in the process of appraisal.

Response of major industry leaders: The approved companies under the PLI Scheme for Large Scale Electronics Manufacturing include Samsung, Foxconn Hon Hai, Rising Star, Wistron and Pegatron. Out of these, three companies namely Foxconn Hon Hai, Wistron and Pegatron are contract manufacturers for Apple iPhones. Apple (37%) and Samsung (22%) together account for nearly 60% of global sales revenue of mobile phones and this scheme is expected to increase their manufacturing base manifold in the country.

Indian companies including Lava, Bhagwati (Micromax), Padget Electronics, UTL Neolyncs and Optiemus Electronics were approved under the scheme. These companies are expected to expand their manufacturing operations in a significant manner and grow into national champion companies in mobile phone production.

Value addition- new types of industries, encouragement to MSMEs/ ancillarisation, etc: The PLI Scheme for Large Scale Electronics Manufacturing also focuses on building a vibrant and robust electronic components manufacturing ecosystem. This step will further strengthen product manufacturing in India for multiple sectors such as IT Hardware, LED Products, Automotive, Medical Devices, Solar Cells, Energy Storage, etc. for which other PLI Schemes are going to be implemented.

Expected outcomes are in terms of increase in investment, production, exports and employment. Over the next five years, the Scheme is expected to lead to a total production of about INR 10.5 lakh crore. More than 60% of production is expected to be exported. The scheme is also expected to bring in additional investment of INR 11,000 crore. Value addition is expected to go up from 20-25% presently to 35-40% by 2025. The scheme will generate approximately 2 lakh direct employment opportunities in next 5 years along with creation of additional indirect employment of nearly 3 times the direct employment.

Pharmaceuticals: Critical KSMs / Drug Intermediates and APIs

With an objective to attain self-reliance and reduce import dependence in these critical Bulk Drugs - Key Starting Materials (KSMs)/ Drug Intermediates and Active Pharmaceutical Ingredients (APIs)in the country, the Department of Pharmaceuticals had launched a Production Linked Incentive (PLI) Scheme for promotion of their domestic manufacturing by setting up greenfield plants with minimum domestic value addition in four different Target Segments (In Two Fermentation based - at least 90% and in the Two Chemical Synthesis based – at least 70%) totaling 41 products with a total outlay of Rs. 6,940 cr. for the period 2020-21 to 2029-30.

Response of Industry Leaders- In the PLI Scheme for Bulk Drugs, the major successful players/ participants include M/s. Aurbindo Pharma Group, M/s. Hetero Group, M/s. Karnataka Antibiotics and Pharmaceuticals Limited, M/s. Kinvan Pvt. Ltd, M/s. Natural Biogenex Private Limited, etc. These include global players with strong presence in advanced markets.

Approvals: In total 215 applications have been received for the 36 products spread across the four Target Segments for the PLI schemes for Bulk Drugs from all over the country. Out of these, 47 applications have been approved by the Government, with a total Committed Investment of Rs. 5,366.35; Maximum Incentive proposed for disbursement: Rs. 6,000 crore and Expected Employment Generation of about 12140.

Medical Devices

With an objective to boost domestic manufacturing, attract large investment in Medical Device Sector, the Department of Pharmaceuticals had launched a Production Linked Incentive (PLI) Scheme for Promotion of Domestic Manufacturing of Medical Devices to ensure a level playing field for the domestic manufacturers of medical devices with a total financial outlay of Rs.3,420 cr. for the period 2020-21 to 2027-28.

Response of Industry Leaders- In the PLI Scheme for Medical Devices, the major successful players/ participants include M/s. Siemens Healthcare Private Limited, M/s. Wipro GE healthcare Private Limited, M/s BPL Medical Technologies Private limited, M/s Nipro India Corporation Private Limited, M/s. Sahajanand Medical Technologies Private Limited, M/s. Integris Health Private Limited, M/s. Poly Medicure Limited, etc.

Approvals - In total 28 applications have been received spread across the four Target Segments for the PLI schemes for Medical Devices from all over the country. Out of these, 14 applications have been approved by the Government, with a total Committed Investment of Rs.873.93 crore; Maximum Incentive proposed for disbursement: Rs.1,694 crore and Expected Employment Generation of about 4212.

White Goods (ACs & LED)

The PLI Scheme for White Goods shall extend an incentive of 4% to 6% on incremental sales of goods manufactured in India for a period of five years to companies engaged in manufacturing of Air Conditioners and LED Lights.

PLI Scheme is designed to create complete component ecosystem in India and make India an integral part of the global supply chains. The scheme will be instrumental in making manufacturing in India globally competitive by removing sectoral disabilities, creating economies of scale and ensuring efficiencies. The scheme is expected to attract global investments, generate large scale employment opportunities and enhance exports substantially.

It will also lead to investments in innovation and research and development and up gradation of technology. The Scheme is expected to be instrumental in achieving growth rates that are much higher than existing ones for AC and LED industries, develop complete component eco-systems in India and create global champions manufacturing in India. A number of global and domestic companies, including a number of MSMEs are likely to benefit from the Scheme.

Response of the major Industry leaders- The Scheme has been prepared in consultation with relevant stakeholders such as manufacturers of Air Conditioners and LED Lights Manufacturers and related Industry Associations and they are looking forward to the scheme being launched.

Promotion of the scheme overseas specifically targeted at identified global majors in relevant fields by Project Development Cell (PDC) of DPIIT, in coordination with Invest India. This would also include disseminating mailers to the Embassies of India in home countries of identified global majors in ACs and LED Lights industry. This would be followed by Workshops/ Webinars by CII, FICCI, ASSOCHAM, RAMA, CEAMA and ELCOMA for raising awareness about the scheme.

Value addition- As per the Industry, the Value addition for AC Industry will increase from current level of 20-25% to 75% and for LED Lights Industry from 40% to 70-75%; This would also result in starting manufacturing of components or sub-assemblies which are not manufactured in India presently

Outcome of the Scheme- It is estimated that over the period of five years, the PLI Scheme will lead to incremental investment of Rs. 7,920 crore; incremental Production worth Rs. 1,68,000 crore; exports worth Rs 64,400 crore ;earn direct and indirect revenues of Rs 49,300 crore and create additional four lakh direct and indirect employment opportunities.

High Efficiency Solar PV Modules

Presently, solar capacity addition in the country depends largely upon imported solar PV cells and modules as the domestic manufacturing industry has limited operational capacities of solar PV cells and modules. Major achievement of this PLI Scheme for High Efficiency Solar PV Modules is the likely reduction of import dependence in a strategic sector like electricity.

Response of major industry leaders- Industry stakeholders, consulted at the preparation stage of this Scheme, have shown overwhelming response, and are willing to set-up large, vertically integrated manufacturing capacities which will help to achieve economies of scale, thereby becoming globally competitive. In order to undertake global reach of this Scheme, MNRE will again interact with global industry leaders, write to various solar manufacturer's associations, as well as requesting the various Indian embassies abroad to inform the potential investors in their respective countries.

Value addition - New types of industries, encouragement to MSMEs/ancillarisation etc. Manufacturers will be incentivized for higher efficiencies of solar PV modules and also for sourcing their material from the domestic market. Thus, the PLI Scheme will help not only in setting up of domestic manufacturing capacities in upstream stages of solar PV manufacturing, like poly silicon and wafers which are presently absent in the country, but is likely to augment the entire solar PV manufacturing ecosystem, including boost to ancillary units and MSMEs.

The outcomes/ benefits expected from the scheme are - Additional 10,000 MW capacity of integrated solar PV manufacturing plants. Direct investment of around 17,200 crore in setting up solar PV manufacturing projects; Direct employment of about 30,000 and Indirect

employment of about 1,20,000 persons; Import substitution of around 17,500 crore every year; Demand of 17,500 crore over 5 years for 'Balance of Materials' such as, Solar Glass, EVA, Backsheet, Junction Box, Ribbon etc. will lead to development of new types of industries where MSMEs will play a major role; Provide impetus to Research & Development to achieve higher efficiency in solar PV modules.

Food Products

Production Linked Incentive Scheme for Food Processing Industry was approved by the Cabinet on 31.3.2021 for implementation during 2021-22 to 2026-27 with an outlay of Rs 10,900 crore. The scheme is essentially meant for Indian companies and subsidiaries of MNCs operating in India with minimum sales of food products manufactured in India. The scheme will encourage investment in four food segments viz. Ready to Cook/ Ready to Eat (RTC/RTE) including millet based foods, Processed Fruits & Vegetables, Marine Products, Mozzarella Cheese.

The objective of the scheme is to support creation of global food manufacturing champions; support Indian brands of value-added food products in the international markets; increase employment opportunities for off-farm jobs and ensuring remunerative prices of farm produce and higher income to farmers.

Response of major industry leaders- The scheme has been well received by the Industry including Nestle, ITC, Britannia, KeventerAgro, andAmul. Companies would be reached out through Indian Missions abroad. Industry Associations would be supporting to organise Webinar to attract potential investors to avail opportunities under PLIS. As the incentive is based on sales, subject to minimum investment, higher value addition is inbuilt in the scheme. Further, product specific incentive is extended for value added Marine products viz. Canned, Battered & breaded, Pickles, Sausages etc.

Role of contract Manufacturing has been recognized under the scheme and the scheme provides for Investment criteria to be met by the food majors and their contract manufacturers jointly. These products are extended 10% incentives for all the six years of scheme duration. Small and medium enterprises (SME), in the four segments will also be supported for manufacture innovative and organic products. This segment has been earmarked an outlay of Rs. 250 crore. The scheme envisages for holistic development of the sector.

The outcomes/ benefits expected from the scheme are - Expansion of food processing capacity: Rs 33,494 crore; Exports: Rs 27,816 crore; Generation of employment: 2.5 lakh persons.

Telecom and Networking Products

Department of Telecommunications has notified the PLI Scheme for Telecom and Networking products on 24th February 2021 with financial outlay of Rs. 12,195 Crores, over five years for Telecom and Networking Products.

PLI Scheme in Telecom and Networking Products will make India a global hub of manufacturing telecom equipment including Core Transmission Equipment, 4G/5GNext 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.

The investor will be incentivized for incremental sales up to 20 times the committed investment enabling them to reach global scales and utilize their unused capacity and ramp up production.

The core component of this Scheme is to offset the huge import of telecom equipment worth more than Rs. 50 thousand crores and reinforce it with "Made in India" products both for domestic markets and exports. The target is to Make India a preferred global manufacturing destination for telecom products and making India a net exporter of telecom and networking products.

Response of major industry leaders- Most of the world telecom industry leaders are keen to expand or set up manufacturing base in India and are positive with the kind of incentives proposed in the Scheme. The companies like Ericsson Sweden and Nokia Finland are keen to expand their existing operation in India for global supply chain.

Global telecom companies like Samsung South Korea, Cisco USA, Ciena USA, and Engineering Manufacturing Services (EMS) companies like Jabil USA, Foxconn Taiwan, Sanmina USA& Flex USA have shown interest to set up manufacturing in India for Telecom & Networking Products for domestic as well as export markets. Indian manufacturers like VVDN Technologies Gurugram, Dixon Noida, HFCL, Coral Telecom& Sterlite have also shown interest in the Scheme.

How to undertake global reach- An extensive outreach program with the support of Invest India team for the Scheme is being planned, covering - One to one meeting with potential investors; Participation in global outreach events organized by industry associations; Webinars with Consultants& Embassy officials, Law firms/ banks// research organisations/ industry associations; Creation of collaterals/flyers for the scheme in different languages; Microsite for the scheme on Invest India website.

Separate interactive website for Applications as well as selected vendors for the entire Scheme interface; Support translation of scheme into multiple languages.

Value addition- The Scheme is investment linked which will enable the vendors to invest in backward integration thereby increasing the value addition in country. Global vendors will bring in their component suppliers and develop ancillaries.

The scheme has a special category for MSME recognizing the fact that MSMEs play an important role in the telecom manufacturing eco system. For MSMEs, one percent (1%) higher incentive is proposed in initial 3 years. Minimum Investment threshold for MSME has been kept at Rs. 10 crore.

Expected outcomes - It is estimated that full utilisation of the Scheme funds is likely to lead to incremental production of around 2.4 Lakh crore with exports of around 2 Lakh crore over 5 years. It is also expected that Scheme will bring investment of around 3,000 crore and generate huge direct and indirect employment.

IT Hardware

Major achievements- The PLI Scheme for IT Hardware was notified on 03.03.2021. The last date for application is 30.04.2021. The scheme shall extend an incentive of 4% to 2% / 1% on net incremental sales (over base year) of goods manufactured in India and covered under the target segment (Laptop, Tablets, All in one PCs, Servers) to eligible companies, for a period of four years.

The scheme is likely to benefit major global as well as domestic manufacturers of IT hardware products, namely, Laptops, Tablets, All-in-One PCs, and Servers. This is an important segment to promote manufacturing as there is huge import reliance for these items at present.

Undertaking Global Reach- The Global outreach plan mainly includes a two pronged approach. I) Identification and focused approach to Global Champion companies - The decision makers of global champion companies are identified and reach out is done through various channels, e.g., Indian Embassies abroad, Foreign Embassies in India, Electronics Industry Associations, Bank networks, Consultants, Supply chain companies, etc.

One-to-one physical or VC meetings are conducted at various levels involving Minister, Secretary and Joint Secretary MeitY. The relevant materials, viz., Scheme Notification and Guidelines are translated into foreign languages (Korean, French, German, Mandarin, Japanese, Hebrew, etc.) and are shared with relevant stakeholders for wider dissemination. II) Promotion of the schemes through relevant stakeholders to reach a greater audience - Various Webinars,

Round table and Panel discussions are organised through various stakeholders, like Indian Embassies abroad, Foreign Embassies in India, Electronics Industry Associations, OEMs and their Supply chain partners, Banks and consultant networks, etc. where details of the schemes are explained through Presentation and Q&A sessions. This approach helps in reaching out to new companies.

Value addition- The scheme is likely to benefit major global as well as domestic manufacturers of IT hardware products, namely, Laptops, Tablets, All-in-One PCs, and Servers. This is an important segment to promote manufacturing as there is huge import reliance for these items at present.

Expected outcomes - Over the next 4 years, the PLI Scheme for IT Hardware is expected to lead to total incremental production of up to INR 3,26,000 crore, out of which more than 75% is expected to be exported. Also, it is expected that Domestic Value Addition for IT Hardware will rise to 20% - 25% by 2025 from the current 5% - 10%, due to the impetus provided by the scheme. The scheme will generate approximately 1.8 lakh employment opportunities in next four years.

Automobiles & Auto Components

With an outlay of INR 57,042 crore, the scheme is expected to spur manufacturing and growth of the sector and enhance its global presence.

The automotive sector is an extensive contributor to the Indian economy. India is expected to be the world's third-largest automotive market in terms of volume by 2026. The country also holds a strong position in the international heavy vehicle arena being the largest tractor manufacturer, second-largest bus manufacturer and third-largest heavy trucks manufacturer in the world.

With 7.1% share in India's GDP, 40% share in global research and development and 4.3% in export, the sector holds significant importance in building a self-reliant India.

Questions industry seeks clarity on[4]

While the scheme still awaits approval from the Cabinet, the Department of Heavy Industry should come up with draft guidelines in public domain after deep diving into the following issues raised by the industry:

- Whether joint venture would be an eligible applicant for applying for incentive under the scheme?
- Whether the manufacturing of a component that is currently being imported would be considered for computing incremental investment and consequently incremental sale?
- What is the indicative list of eligible and ineligible expenditure for computation of committed investment?
- Whether there would be separate PLI norms for new companies planning to engage in auto manufacturing?

4 https://www.grantthornton.in/insights/articles/pli-scheme-for-the-automotive-sector-towards-an-atmanirbhar-bharat/

- Whether brown field investment would be considered as an eligible investment under the scheme?

- What are the expected components/products that would be eligible to receive incentives under the scheme?

If the government can find a way to work out the challenges highlighted above, it will herald a new path for the Indian automotive and auto components sector.

Govt includes CNG, LNG, 98 other advanced tech under auto PLI scheme[5]

The Union government has added more than 100 advanced technologies, including alternate fuel systems such as compressed natural gas (CNG), under the production-linked incentive (PLI) scheme for the automobiles. Bharat Stage VI compliant flex fuel engines, electronic control units (ECU) for safety, advanced driver assist system, e-quadricyle, among others will also be covered under the scheme. Till now, the government has included only two-wheelers and four-wheelers under the scheme.

The scheme aims to boost manufacturing capability of the automobile sector, including the electric and hydrogen fuel cell vehicles. The scheme aims to incentivise high-value advanced automotive technology vehicles and products such as sunroofs, adaptive front lighting, automatic braking, tyre pressure monitoring system, and collision warning systems, among others for the auto industry.

The Society of Indian Automobile Manufacturers said it is thankful and compliments the Ministry of Heavy Industries for coming out with a structured list of PLI parts and procedural details in a very short time."Our preliminary observation is that the list of AAT parts is broad-based and well — structured across themes," said Rahul Bharti, chief engagement officer, Siam.

The inclusion of e-quadricyle is another highlight of the notification and set to benefit firms including Bajaj Auto, M&M. While Bajaj Auto sells the internal combustion engine powered Qute in the export markets, M&M showed the battery operated quadri at the last auto expo but has yet to launch it commercially.

COVID-19 impact and scope of the PLI scheme for the auto sector

The auto sector has been one of the adversely affected sectors during the pandemic. While the sales have been lowest in the last 20 years, there has also been a dip in the volume of both the new-vehicles and used-vehicles industries. However, despite a sluggish market environment in the financial year2020-21, overall automobile exports grew 56.55% in March 20213 and the scheme would be instrumental in reviving the growth potential of the sector.

The PLI scheme for the auto sector is interlinked with the scheme for Advance Chemistry Cell (ACC) battery storage. With the cabinet approving the scheme for ACC battery storage production in May 2021, the government has set its sight on making India more environment-friendly and slowly phase out petrol and diesel-based vehicles.

5 https://www.business-standard.com/article/economy-policy/govt-includes-cng-lng-98-other-advanced-tech-under-auto-pli-scheme-121111101875_1.html

Incentives under the ACC battery accompanied with the scheme on auto sector will reduce the cost of manufacturing electric vehicles and thus, make it affordable for a large segment of the population. India's EV market is estimated to be an INR 50,000 crore (USD 7.09 billion) opportunity by2025, with two-wheelers and three-wheelers expected to drive higher electrification of the vehicles. The scheme for the sector is likely to comprise of the following sub-schemes and companies will be eligible to apply for a maximum of three of these schemes:

Sourcing incentive scheme with probable outlay of around INR 7,210 crore is expected to incentivise international purchase offices for component sourcing. Champion OEM incentive scheme with probable outlay of INR 18,075 crore would provide incentives based on sales value for all auto original equipment manufacturers (OEMs).

Logistics cost incentive scheme is anticipated to have the biggest outlay with INR 23,628 crore and provide sales-based incentives to offset logistics costs. Component champion incentive scheme would focus on giving out incentives on the auto component sales based on incremental sales achieved by the manufacturers. This sub-scheme is likely to get INR 8,129 crore out of the total budget allocated to the sector.

Maximum incentive per applicant is expected to be capped at INR 8,556crore and incentive rates may range from 2-12% of the incremental sales/revenue depending on the product category and the sub scheme. Reports suggest that under the Automotive Champion scheme, a company would qualify for the PLI only if it has a revenue of INR 1000 crore (INR 100 crore for component makers) from overseas operations, INR 10,000 crore overall revenue (INR 500 crore for component makers) and global investment of INR 3000 crore (INR 150 crore for component makers). All the three criteria will be required for a company to qualify for automotive champions that will offer them maximum incentives in the form of cash backs on incremental sales.

Conclusion

Is it really fulfilling the purpose?

As stated in the beginning, the government expects the following from the PLI scheme -

- Additional sales of INR 409,501 crore including MSME revenue of INR 248,200 crore
- Additional investment of INR 102,722crore
- Additional GST collections of INR 12,686 crore
- Additional direct tax collections of INR 16,525 crore
- Additional employment of 58.84 lakh, including 24 lakh in MSME

The PLI framework enables India to take definitive steps, in the near term, to expand the manufacturing potential of the economy. The pillars of the policy are:

Creation of large-scale manufacturing capacity

Since the incentives are directly proportional to production capacity/ incremental turnover, it is expected that investors will be compelled to create large-scale manufacturing facilities. Further, it is also expected to bring improvements in industrial infrastructure, benefiting the overall supply chain ecosystem.

Import substitution and increase in exports

PLI schemes intend to plug the gap between the highly skewed Indian import- export basket, which is mainly characterized by heavy imports of raw materials and finished goods. The PLI schemes are intended to enable domestic manufacture of goods, thereby causing a reduction in reliance on imports in the short term and expanding quantum of exports from India over long term.

Employment generation

As large-scale manufacturing requires large labor force, it is expected that the PLI schemes will utilize India's abundant human capital and enable up-skilling and technical education. As it is expected that the industries will invest at least five times as much so the total investment could be Rs 9 trillion. This will add more manufacturing jobs in the globally competitive sectors. As the investment per job in these sectors is Rs 20-30 million, about 300,000 jobs could come up.

Implementation of the scheme

The PLI schemes provide eligible manufacturing companies incentives ranging from four to six percent on incremental sales over the base year of 2019-20 for a four to six-year period. It is like a subsidy being provided by direct payment – as budgeted – for domestically manufactured goods by the chosen beneficiaries.

The incentive amount offered varies across sectors and the savings generated from PLI of one sector can be appropriated towards other sectors in order to maximize returns. The PLI schemes are intended to incentivize large domestic and global players to participate in production and lead to more inclusive growth across the country.

The purpose of widening the PLI Scheme to cover more products was:

- To protect identified product areas.
- To introduce non-tariff measures that makes imports more expensive.
- To acknowledge the relevance of exports in overall growth strategy but focus more on the domestic market
- To promote manufacturing at home by offering production incentives and encourage investments both from within and outside.

Response from various industries

PLI schemes evoke mixed response where IT, mobile steal a march on other sectors. The government had to, for instance, re-open applications for its PLI scheme for medical devices due to certain issues faced in filling up the 28 slots the first time around.

The PLI schemes for these three sectors have already crossed the expression of interest, invitation of applications and selection of participating companies stages. The schemes for mobile phone and electronic components manufacturing, information technology (IT) hardware manufacturing as well as communications networking products have shown initial promise. The schemes for these three sectors have already crossed the expression of interest, invitation of applications and selection of participating companies.

But sectors such as medical devices, textiles as well as automobile and automobile component manufacturing are struggling to find enough participants. The reasons for low interest is that most companies either do not meet the qualification norms for the scheme, or feel that the return on investment is low compared to the incentives announced.

For instance, the government had to re-open applications for its PLI scheme for medical devices due to certain issues faced in filling up the 28 slots the first time around. It was learned that while 28 applications were received the last time, as many as 15 of them were "not eligible" as they did not meet specific criteria for the categories of devices for which they had applied.[6]

As a result, the government was only able to fill 13 slots for the scheme's four target segments Though, the government is also looking to receive applications for additional devices like oxygen concentrators. One of the challenges is that, at the moment, there aren't many domestic manufacturers and whatever few are there they also do not want to invest is that low tariffs make it more convenient to rely on importing these devices. They would probably feel more confident if they felt that, with the incentives, they would be able to compete with imports.

However, the government would have to ensure availability of these devices domestically in order to be able to increase tariffs. The Department of Pharmaceuticals has been in discussions with some domestic medical device makers individually to gauge their interest. It has also been utilising Invest India platform to identify potential investors.

In the case of PLI for automobile and automobile component manufacturing, most Indian companies do not meet the qualification norms and have, therefore, avoided even applying

6 https://indianexpress.com/article/business/pli-schemes-evoke-mixed-response-it-mobile-steal-a-march-on-other-sectors-7399904/

for the scheme. This scheme was aiming at the introduction of state of the art technology in the sector. For the same, it also covers drones and drone components aiming to address the strategic, tactical and operational uses of this technology.

For textile sector, the government is now considering adding more products in the list of eligible products to attract applicants[7]. Similarly, the players in specialty steel sector are not very keen on applying under the scheme as they feel that the period of 5 years is too less to set up new units and start production from them or even expand old units.

The companies concern is that since the sector is extremely capital intensive, at least 10 years would be needed to see off the initial gestation period and then obtain the return on investments.

Application Flow from Various Sectors

Food, mobile and specified electronic component manufacturing, IT hardware, as well as telecom equipment manufacturing are amongst the sectors that have received the maximum number of applications under the scheme. The mobile phone and specified electronics component manufacturing, notified on April 1, 2020, had received and approved applications from 16 companies, including Apple's contract manufacturers *Foxconn Hon Hai, Wistron* and *Pegatron*. Of the three, *Wistron* has so far invested more than Rs 1,200 crore in its Indian factories. For the PLI scheme in IT hardware products, the IT Ministry received and approved applications from global leaders such as *Dell, Wistron, Flextronics, Foxconn*, and 10 other leading domestic players.

While the nodal ministry for the implementation of mobile phone as well as IT hardware PLI is the IT Ministry, the Ministry of Communications is overseeing the PLI for telecom and networking products. Similarly, under the PLI scheme for food manufacturing, which has an outlay of Rs 10,900 crore, the government had received more than 250 applications.

There is also a high degree of interest in the Rs 15,000-crore PLI scheme for Pharmaceuticals. 95 applicants had registered for this scheme, which has 55 slots in total. The PLI scheme for critical bulk drugs too received as many as 215 applications. Of these, the government had selected 47 applicants spread across the four target segments in focus for the scheme. However, this scheme too requires additional applicants to fill around 10 slots for a few bulk drugs for which there were fewer applications than was needed.

As per Indian Pharmaceutical Alliance secretary general, Sudarshan Jain: "The industry is very excited about this PLI scheme. Significant and very strong stakeholder consultations are taking place (with the Department of Pharmaceuticals) and the industry is looking forward to participating very actively. The DoP has been "deeply" involved in providing clarifications regarding the submission process for this scheme, according to him.

Originally intended for the manufacture of finished goods such as air conditioners (ACs) and LED lights, this scheme for White Goods was restructured and announced for component manufacturers of ACs and LED lights. The investment and incremental sales thresholds outlined here have posed a challenge to several manufacturers as they are considered higher

7 https://economictimes.indiatimes.com/small-biz/sme-sector/a-stitch-in-time-why-the-govt-needs-to-iron-out-the-issues-in-pli-scheme-for-textiles/articleshow/82474956.cms?from=mdr

than the industry norms. This scheme is open for applications until 15 September 2021.

Currently, the nation largely relies on imports of solar PV modules and cells. Designed to combat this issue, the scheme for Solar PV module has drawn considerable attention from potential investors. The success of this scheme would reduce import dependence in a strategy sector like electricity, thereby, increasing its significance.

The scheme also promotes local procurement, thus triggering a cascading impact of the incentives. This is expected to boost creation of ancillary units and augment the entire solar PV manufacturing ecosystem. The investment arising from the scheme is expected to create an additional 10,000 MW capacity of integrated solar PV manufacturing plants.

Renewable energy continues to be a niche space, despite its undeniable significance. Presently, there is nominal investment in this space in India, despite the varied applications. Under the scheme for The Advanced chemistry cells (ACC), investments will be approved through a bidding mechanism for creation of cumulative 50 GWh of ACC (with additional 5 GWh for niche ACC) manufacturing facilities in India. This will support the battery requirements towards electronics, EVs, renewable energy power grids and the like.

Sector wise stage of applications

Sector and budget outlay	Closed	Open	To be announced	Announced	Evaluation stage
Mobile manufacturing and specified electronic components ***(~US$ 4.9 billion)***	✓				
Critical key starting materials/drug intermediaries and active pharmaceutical ingredients ***(~US$ 0.9 billion)****	✓				
Manufacturing of medical devices ***(~US$ 0.5 billion)****	✓				
Electronic/technology products (IT hardware) ***(~US$ 1 billion)***	✓				
Pharmaceutical drugs ***(~US$ 2 billion)***	✓				
White goods ***(~US$ 0.8 billion)***		✓			
High efficiency solar PV modules ***(~US$ 0.6 billion)***		✓			
Specialty steel ***(~US$ 0.8 billion)***		✓			
Telecom and networking products ***(~US$ 1.6 billion)***					✓
Food products ***(~US$ 1.5 billion)***					✓
Advanced chemistry cell (ACC) battery ***(~US$ 2.4 billion)***			✓		
Automobiles and auto components ***(~US$ 7.6 billion)***				✓	
Textile products: MMF segment and technical textiles ***(~US$ 1.4 billion)***				✓	

Source: https://www.ey.com/en_in/tax/india-tax-insights/production-linked-incentive-schemes-in-india-the-journey-so-far

Progress up to the Evaluation stage

In the food processing segment, this scheme was met with an encouraging response from investors of all sizes. A key differentiator here was the inclusion of contract manufacturers, who play a key role in the sector. Currently, approximately 275 expressions of interest received under this scheme are being evaluated and the results are awaited.[8]

In the telecom sector, this scheme intends to take the nation closer to becoming a manufacturing hub of telecom and networking equipment. This development will automatically offset the heavy reliance on imports in this niche space. While the 36 applications received are currently being evaluated, major global players have expressed an interest to expand in India based on these incentives. These incentives also go hand in hand with other initiatives for the manufacturing industry such as state incentives, 'Manufacturing and Other Operations in Warehouse Regulations (MOOWR), and the 17% corporate tax rate. Viewed together, these offer composite financial support to manufacturers and should be assessed cohesively.

Road ahead

The industry has huge expectations from the PLI scheme. The companies, with an investment plan in hand, must approach the Ministry to make representation for inclusion of their product under the scheme. Further, it is imperative to prepare the sales and growth projections, which lie at the heart of the scheme, beforehand to avoid any last-minute delays in filing applications.

The basic preliminary information requirement list under the scheme would be similar to those provided in the other PLI schemes such as basic company details (memorandum of association, article of association, incorporation certificate, shareholding pattern etc.) and financial details (annual reports, audited financial statements, sources of fund and projections). If the documents are in place at the outset, the applicant could then focus on finalizing their projections in line with the guidelines of the scheme.

8 https://www.ey.com/en_in/tax/india-tax-insights/production-linked-incentive-schemes-in-india-the-journey-so-far

The Sports Goods in the Jalandhar Cluster in Punjab – A Case of Adaptive Growth in the MSME

Yuvraj Kalia, Fellow, RGICS

Sports Goods Sector in India

The sports goods industry in India is nearly a century old and has flourished due to the skills of its workforce. Being labour-intensive in nature, the industry provides employment to more than 500,000 people. The nucleus of this industry in India is in and around the states of Punjab and Uttar Pradesh. The industry exports nearly 60 per cent of its total output to sports-loving people the world over.

"Jalandhar in the state of Punjab and Meerut in the state of Uttar Pradesh account for nearly 81.8 per cent of total production. Together, the two towns house more than 3,000 manufacturing units and 130 exporters. About 60 per cent of the sports goods manufactured in Jalandhar consist of different kinds of inflatable balls. The Indian sports goods industry also has a presence in the cities of Mumbai, Kolkata and Chennai, albeit at a lower scale."[9]

Highlights

- "Total toys, games, and sports requisites (HS - 95) export stood at US$ 417.43 million in FY19 and reached US$ 404.13 million in FY20.
- The total toys, games, and sports export was US$ 365.01 million in April 2020 to February 2021.
- The total sports goods export accounted for US$ 121.15 million from April 2021 to July 2021 and for the month of July 2021 it was US$ 41.88 million.
- In FY21, the total sports goods export accounted for US$ 268.52 million and for the month of March 2021 it was US$ 24.03 million.
- Top destinations for export of sports goods in FY21 were US, China, UK, Australia, and Germany.
- Top ten destinations for export of sports goods in FY19 were US, UAE, UK, Australia, Germany, Netherlands, France, South Africa, Sweden, and Canada.
- Major exported items were inflatable balls and accessories, nets, general exercise equipment, boxing equipment, toys and games, protective equipment, cricket equipment, sportswear, carrom boards and hammock.

9 https://www.ibef.org/pages/34747

- Indian sports products have been exported for global events.
- India has emerged as the leading international sourcing destination for inflatable balls and other sports goods for international brands such as Mitre, Lotto, Umbro and Wilson."[10]

In global market, major competitors for Indian sports goods industry at large are world leader China, and traditional rival Pakistan. In the year 2020, while India and Pakistan exported sports goods worth USD 142 million and USD 178 million respectively; China exported around USD 16 billion worth of sports goods (HS 9506). In terms of growth, from 2006-2020, CAGR for exports for Pakistan, India and China were -4%, 2%, and 9% respectively (Calculations done on UN COMTRADE data).

Jalandhar Cluster

One of the two major sports goods producing clusters, Jalandhar sports goods cluster came into existence post-independence with immigration of skilled workforce from Pakistan. In 1947, after partition, the entrepreneur belonging to one community decided to shift from Sialkot. The workers belonging to that community also migrated along with the entrepreneurs. As per the resettlement plan of Government of India, initially these migrants settled in Batala but later on shifted from Batala to Jalandhar.[11]

Majority of the enterprises in the cluster are micro and small having annual turnover of upto INR 10 crore. As per business owners interviewed, some enterprises are in the 10 – 100 cr range, and a very few turning over above 100 cr. Almost all of these enterprises share the challenges faced by the larger MSME sector in Punjab in general. Some of these are systemic and external, while others are firm specific and internal. Please refer to Policy Watch 10.12 for some of these studied earlier. Over recent decades, there has been a shift from core sporting equipment to such as bats, racquets, inflatable balls, etc. to include peripherals such as sportswear and performance footwear.

While there are thousands of manufacturers in the Jalandhar cluster area, the cluster may be understood in a pyramid structure. An overwhelmingly large proportion of manufacturers are producing unbranded products for the mass market, with practically no product differentiation. This base-of-the-pyramid enterprises apparently have very little focus on quality. Right above are the ones offering some differentiation either in the product or in the order fulfilment service. Still higher are the ones which are exporting the unbranded low differentiation products to the market. A handful of enterprises in this segment have invested into newer production technology, such as composites, to offer quality products.

From mid and above within the pyramid are the ones with better focus and control over quality. Few of these also manufacture for mass or premium international brands. However, the product range in this segment is limited. At the top of the pyramid are manufacturers that have taken the less travelled brand route. These manufacturers have successfully established their brands at least domestically by offering quality products utilising supply chains that ensure quality raw materials, and may well be on their way to become international brands.

10 https://www.ibef.org/exports/sports-industry-india.aspx
11 http://www.pbr.co.in/2016/2016_month/February/15_A1_PriyaJhamb.pdf

There are traditional networks within the Jalandhar cluster which are more often than not overbearing for professionalisation of the enterprises and expansion of the cluster at large. Clan based groupings seem to have given rise to intense rivalry among enterprises in the cluster. There is very little knowledge sharing outside closed groups, pretty much no cooperation among competitors in developing products for the export market, or in development of vendors, etc. As the absolute export numbers and growth rates suggest, manufacturers in India seem to be fighting for crumbs while the Chinese take away the whole cake.

Total exports (20-21) 9506: 147.56 mill

Punjab + UP (20-21) 9506: 101.18 mill

Punjab (20-21) 9506: 54.89 mill

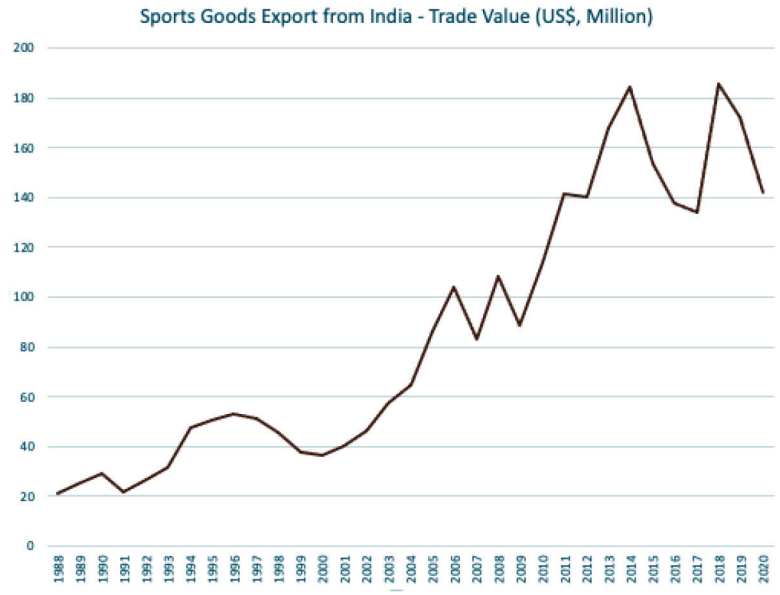

Chart 1: Sports goods exports from India, Value (Million USD); Source: COMTRADE

Factor Conditions

Human resources

The Jalandhar sports goods cluster is a labor-intensive manufacturing cluster with high quality of major products, such as inflatable balls, being hand made. About 60 per cent of the sports goods manufactured in Jalandhar are different kinds of inflatable balls and provide direct employment to thousands of workers.[12] As per DIC Jalandhar, there are around 5000 highly skilled workers in the cluster, with overall workers numbering greater than 10000. "It is found that the firms in cluster employ less than 10 workers. The main reason behind it is to avoid the provisions of The Factories Act, 1947. Further, due to the seasonal demand of sports goods, the firms do not employ permanent workers rather workers are appointed as per the demand. When the demand increases, job workers are appointed to fulfill that demand. Further, the presence of subcontractors in the cluster assures the availability of products as soon as demand arises."[13]

12 http://sgmea.org/sports_goods_industry_of_india
13 http://www.pbr.co.in/2016/2016_month/February/15_A1_PriyaJhamb.pdf

As to inflatable ball manufacturing, which is the main sports item from Jalandhar cluster, subcontractors act as an important link between firms and ball stitchers with lower number of formal stitching centres and large proportion of work being done in home-based locations. Most ball stitchers are women largely from a lower-caste background, who are paid on per-piece basis.

Raw Material

The raw material availability was one of the key determinants in establishment of sports goods cluster at Jalandhar, among other factors. "..Due to its location near the foothills of Himalayas which assured regular supply of wood and further the presence of leather cluster" in the city, Jalandhar sports goods cluster has enjoyed easy availability and price advantage with regard to these two materials.[14] However, over recent years, introduction of new technologies, diversification of product portfolio to include peripherals, and production of equipment for global brands has shifted the raw material demand. The Jalandhar cluster now depends on other states in India, e.g. feathers from Andhra Pradesh, and countries like China as well for fulfilling its raw material needs.[15]

Capital/ Credit

Most players in the cluster appear to use own capital for working capital and expansion requirements. Generally, there is very little reliance on credit for fulfilling capital needs. "It can be due to the high rate of interest on loan but the main factor contributing to lesser problem of finance is low fixed capital base of the majority of firms. As most of the operations of the firms are skill based, the requirement of fixed capital is low and the firms generally go for their own sources."[16]

Knowledge Resources

By and large, there is very little knowledge development and assimilation in the cluster. Despite the presence of very old and reputed associations in the cluster, knowledge about level of technology, information about product or process specific vendors, or even price discovery, is at pretty much non-existent. As to capability of workers and firm, studies suggest a lack of training within or without firms. "Most of the firms do not give training to their workers as they think that the workers borne the skills from their forefathers and there is no need to give training to them. There is absence of any training institute in the cluster."[10]

Demand Conditions

Domestic

Overall, "the Indian sports and fitness goods market attained a value of USD 3,944.8 million in 2020. The market is further estimated to witness a CAGR of 8.9% during the forecast period of 2022-2027 to reach USD 6,579.5 million by 2026."[17] Cluster has had a robust domestic institutional demand, such as schools, higher educational institutions and sports institutions, which has been impacted by the pandemic.[18] Import data from UN COMTRADE suggests a large domestic market for sports goods in India (Chart 2), with total value of imports being higher than total exports in the HS9506 category. In the calendar year 2020, Indian imports were around USD 200 million.[19]

14 http://www.pbr.co.in/2016/2016_month/February/15_A1_PriyaJhamb.pdf
15 https://indianexpress.com/article/cities/chandigarh/jalandhars-rs-1700-crore-sports-goods-industry-bleeds-6422169/
16 http://www.pbr.co.in/2016/2016_month/February/15_A1_PriyaJhamb.pdf
17 https://www.expertmarketresearch.com/reports/indian-sports-and-fitness-goods-market
18 https://theprint.in/sport/jalandhars-rs-2000-cr-sports-goods-industry-says-covid-shut-40-units-govt-says-no-distress/777379/
19 https://comtrade.un.org/data/

Exports

Exports of sports goods from India have been on the rise in recent decades (Chart 1). As per Directorate General of Commercial Intelligence and Statistics or DGCIS, out of USD 148 million total exports of sports goods (HS9506) from India in the year 2020-21, Uttar Pradesh and Punjab accounted for USD 101 million, or roughly 70%. Punjab alone accounted for 38% or around USD 55 million.[20] As per Sports Goods Manufacturers and Exporters Association or SGMEA based in Jalandhar, around 90% of sports goods produced in Punjab are produced in the Jalandhar cluster.[21] Therefore, an estimated export of sports goods from Jalandhar cluster was around USD 50 million in the year 2020-21. As per Sports Goods Export Promotion Council, "[t]he main customers for the international market are foreign customers, Government department, firms and institutions of various countries like UK, Australia, USA, South Africa, France, Germany etc."

Chart 2: Sports goods imports in India, Value (USD, Million); Source: COMTRADE

Firm Strategy, Structure and Rivalry

Traditionally, the sports goods cluster in Jalandhar has been dominated by two clans, viz. Kohlis and Mahajans. There are multiple manufacturers and export houses bearing these names in Jalandhar, and in Meerut sports goods cluster as well. As per Jhamb (2016), there has been entry of other communities into the industry which apparently has been a source of new ideas leading to a dynamic sports goods cluster. Majority of enterprises in the cluster are micro and small having annual turnover of upto INR 10 crore. As per business owners interviewed, some enterprises are in the 10 – 100 cr range, and a very few turning over above 100 cr.

The rivalry in the cluster is intense, to say the least, especially in the sub-INR 10 crore range that seems to depend on custom/ mixed orders in the non-branded product segment. There is very little information sharing on vendors, prices, specifications or technology employed. The firms are sensitive in terms of employees getting work at rival firms, with most workers or staff spending whole career at one firm. It appears to be one of the challenges that hinders dynamic growth of the firms as well as the cluster at large.

20 http://www.dgciskol.gov.in
21 http://sgmea.org/sports_goods_industry_of_india

Ecosystem of Support Institutions

Policy Making and Regulatory Institutions

Overarching policy framework that covers the Jalandhar cluster is same as that of the larger MSME sector, with its own merits and demerits. Please refer to PW 10.12 for further information. There is an absence of an institution or a government agency engaged in policymaking specific to sports goods manufacturing. However, policy decisions taken or schemes implemented at the national level (such as TOPS, Khelo India, etc.) and even in other states (Hockey hub in Odisha) with regard to promotion of sports directly impact business for Jalandhar cluster.

Sports Goods Foundation of India (SGFI)

In the Jalandhar cluster, specific to the domain labour, it has largely been self-regulation post interventions by UN agencies. "UNIDO has worked with the Jalandhar Sports Goods Cluster between the years 2002 and 2005 under its Cluster Development Programme and from May 2005 to Dec 2008 under in its new global research project of 'Cluster Development Programme and Corporate Social Responsibility (CSR)."[22] The program was aimed at regulating high incidence of child labour in the cluster under the overarching framework of the Altlanta Agreement with Sports Goods Foundation of India acting as nodal agency.[23]

Sports Goods Foundation of India or SGFI is Jalandhar based non-governmental membership-based body, consisting of 30 major manufacturers and exporters of inflatable balls, focused on the issue of child labour prevention and rehabilitation of children saved from labour. In partnership with government and international bodies, SGFI conducts awareness programs and monitors the situation of labour among more than 3300 families involved in manufacturing sports goods, with over 15000 ball stitchers.[24]

Promotional Institutions

Sports Goods Exports Promotion Council (SGEPC)

Established in 1958, SGEPC is GoI sponsored organisation with an aim of promoting exports of sporting goods from India. Over years, with reclassification of commodities in international trade, SGEPC has included toys under its purview as well (HS 95 commodities). "SGEPC provides important information to the members on market intelligence, standards & specifications, quality & design, and on any other issue which may directly or indirectly affect the industry. SGEPC, also acts as a link between the industry and the Government whereby it provides feedback on industry's requirements to the Indian Government and also informs Government directives to the industry. It collects export data from its members, maintains a statistical record of exports of sports goods and toys and evaluates its performance on an annual basis."[25] Perhaps the most recognised activity that SGEPC organises is the annual awards to top exporters with the HS9506 category goods. As to the contribution to the Jalandhar cluster, the distance, both in location as well as the majority of the enterprises in the cluster that are micro and small, acts as a barrier.

22 http://sgmea.org/sports_goods_industry_of_india
23 https://open.unido.org/api/documents/4849206/download/Global%20Value%20Chains,%20Local%20Clusters% 20and%20Corporate%20Social%20Responsibility%20-%20A%20Comparative%20Assessment%20of%20the%20Sports%20Goods%20Clusters%20in%20Sialkot,%20Pakistan%20and%20Jalandhar,%20India
24 https://www.sgfi.org//uploads/pages_file/1505299436.pdf
25 http://sportsgoodsindia.org/AboutUs.aspx

Process cum Product Development Centre

Process cum Product Development Centre (PPDC) for Sports Goods based in Meerut that has an Extension Centre housed within Central Institute for Hand Tools (CHTI) at Jalandhar.[26]The PPDC Extension Centre could not be reached for understanding its contribution to the cluster, and most respondents interviewed were not aware of the same. The Centre at Meerut offers services in developing and testing products in wood, leather, rubber and plastic, etc., apart from offering skill development courses. The services offered at the Extension Centre at Jalandhar could not be verified.

Sports Goods Manufacturers and Exporters Association (SGMEA)

SGMEA (http://sgmea.org/), established in 1973, is biggest of the many industry associations of sports goods manufacturers in the Jalandhar Cluster. In theory, SGMEA is also open to manufacturers and exporters in the Meerut cluster, but the membership from other states is severely missing. Nonetheless, the members from Jalandhar cluster itself represent a high proportion of manufacturers and exporters in the country. The activities by the association have been limited, perhaps due to the lack of a secretariat that reduces the continuity. There is great potential in the association to act as a knowledge generation and dissemination platform, and also actively make inputs for better policies at the state and national level.

26 http://www.ppdcmeerut.com/?_ga=2.31018424.644624596.1647492915-1341071072.1647492912

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