

LABOUR UNIONS

Labour unions are considered an essential feature of industry in every country. Labour unions emerged as a reaction against capitalism and the factory system. In the initial stage of industrialization, workers were puppets in the hands of employers, because there were no legal rules for their protection. Therefore the workers joined hands among themselves to protect their interests. Labour union is a continuous and long-term employee organization, which is formed to achieve a specific objective, to protect the interests of its members and to improve labor relations.

It works to ensure fair wages to the workers as per the cost of living and to improve working conditions, reduce working hours, make arrangements for holidays, ensure social security, make arrangements for education and housing facilities etc. Out of 55,000 associations established in India, about 20% send their reports.

Assessing Achievements and Future Trajectory of India's PLI Scheme

RAJESH KUMAR SINGH



If there is a lingering challenge in India's remarkable growth story, it undoubtedly lies within the manufacturing sector whose share in India's GVA continues to languish at about 17.4% which is less even than the share of agriculture. The government's persistent efforts to invigorate this crucial segment have led to the introduction of various initiatives, and at the forefront is the Production Linked Incentives (PLI) scheme under the flagship Atmanirbhar Bharat Abhiyaan.

The PLI scheme, conceived with the aim of overhauling domestic manufacturing, seeks to amplify capacity and competence and create global champions. Its broader goals include job creation, attracting substantial investments, enhancing exports, and positioning India as a global manufacturing hub. Its multiplier effects can lead to a potential surge in the manufacturing sector's contribution to the GDP, and to a seamless integration of domestic firms into regional and global production networks.

Since its inception, the PLI scheme has notched up significant achievements. With 746 applications approved, it has garnered investments totalling ₹1.07 lakh crore. The impact on job creation has been substantial, with approximately 7 lakh jobs, both direct and indirect, generated. Furthermore, production and sales have soared to ₹8.70 lakh crore, accompanied by an impressive 14,415 crore in incentives disbursed. Direct beneficiaries include 176 MSMEs, spreading over 8 PLI sectors.

Spanning a seven-year period from FY 2021-22 to FY 2028-29, the PLI scheme has already attracted a staggering Rs 3 lakh crore in investment commitments across 14 key sectors, showcasing active participation from both domestic and international industry leaders including leading Indian and International companies such as Foxconn, Samsung, Wipro, Tata, Reliance, ITC, JSW, Dabur etc.

Notably, the PLI scheme has proven particularly effective in Smartphone manufacturing, contributing to a remarkable boost in mobile exports from almost nothing to \$11 billion in 2022-23. Far reaching impact on the remaining 14 sectors is also anticipated over the next 2-3 years. Frequently expressed apprehensions in some quarters about the lack of adequate local value addition in sectors like mobile manufacturing (currently at 20%) are somewhat misplaced when we see the steadily increasing trend of localisation in this sector as well as in sectors like e-vehicles where domestic value addition (DVA) is mandated at a minimum of 50% or white goods where DVA is already at 45% and is targeted to reach as high as 75% by 2028-29.

Moreover, the PLI scheme design ensures that it triggers additional investments upfront with sales, (including exports) preceding the release of incentives. This means that in Net Present Value (NPV) terms the scheme is self sustaining and more than pays for itself once the revenue streams (in the form of GST and Direct tax collection) are accounted for against the incentives to be disbursed. This also ensures that there is little or no chance of units setting up shop and closing after obtaining the subsidy payments as is often the case that is made out against other subsidy linked government scheme.

The government has supplemented the PLI scheme with additional measures, including quality control, to fortify local manufacturing. This strategic approach has propelled the toy sector for example, with exports surging from \$96 million to \$326 million in 2022-23. Similarly, the defence sector, buoyed by policies like local procurement and the opening up of defence corridors has witnessed a substantial jump in exports from Rs 700 crore in 2014-15 to Rs 16,000 crore in 2022-23.

These successes signal the gradual development of a robust and self-sustaining ecosystem. The PLI scheme's focus on advanced technologies is poised to upgrade the skills of the existing labour force, replace technologically obsolete machinery, and make the manufacturing sector globally competitive. Enhanced production volumes are meeting increasing consumer demand, particularly in telecom and networking products, where the scheme's timely intervention facilitates faster adoption of 4G and 5G products across India.

Additionally, the PLI in green technologies like e-vehicle, solar panels etc. combined with measures on the demand side like the FAME scheme and mandates on increasing use of renewable energy, has helped India to exceed its NDC targets on renewable energy. The increased sales under PLI will necessitate improved logistical connectivity, a need addressed by the huge investments in our infrastructure using the PM Gati Shakti Master plan for providing multimodal connectivity to manufacturing zones across India. Cluster parks with plug-and-play infrastructure further support manufacturing in different regions.

An inclusive approach, achieved through close cooperation with states, is empowering industries and artisans in the hinterland of Bharat to be integral to India's growth story. Initiatives like the one-district-one-product and SFURTI, a cluster-based scheme to enhance traditional industries, are turning perceived competitive disadvantages into short-term and long-term advantages for India and its industries.

The challenges posed by the pandemic and resultant global socioeconomic upheavals have affirmed the well-considered objectives of the PLI scheme. Its associated ecosystem ensures that India is strategically positioned to integrate with Global Value Chains (GVCs), contributing to supply chain diversification and enhanced national security in a turbulent global scenario. Indian manufacturers are now emboldened to transcend their comfort zones, aligning with the nation's vision to emerge as global champions on the path to becoming a developed nation.

In conclusion, the PLI scheme stands as a pivotal force reshaping India's manufacturing landscape. Its achievements underscore the transformative power of strategic initiatives and their potential to position India as a global economic powerhouse. As the scheme propels India into a future marked by innovation, sustainability, and inclusive growth, the nation stands poised at the cusp of a new era in manufacturing excellence.

(The writer is Secretary, Department for Promotion of Industry and Internal Trade, Government of India).

Boosting Soil Health by Organic Farming

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Presently organic farming as a cultivation process is gaining popularity among the people. Organically grown crops are becoming one of the best choices of the farmers and consumers. Consumers quest for safe and healthy food that is produced through ecologically and authentically by the local systems. The term organic farming was firstly coined by Northbourne in his book entitled as "Look to the Land". He defined organic farming as 'an ecological production management system that promotes and enhances biodiversity, biological cycles and soil biological activity'. Organic food is not grown with synthetic pesticides, antibiotics, growth hormones, application of genetic modification techniques, sewage, sludge or chemical fertilizers. In conventional farming, synthetic pesticides and chemicals fertilizers are used to get more yields and profits. In order to be organic, crops should be cultivated in lands without any synthetic pesticides, chemical fertilizers and herbicides for three years with enough buffer zone to lower the contamination from the adjacent fields. It has been observed that organic cereals contain high quality proteins with better amino acids scores. It has also been observed that lysine content in organic wheat is 25-30 per cent more than the conventional wheat. Organic plants contain more magnesium, iron, phosphorous, calcium, sodium and potassium. Organic products contain more organic matter, minerals, vitamins and antioxidants as compared to the traditional farming. The secondary metabolites found in organic fruits and vegetables have substantial regulatory effects at cellular levels and hence found to be protective against the cancers, chronic inflammations and other diseases. It has been observed by some studies that organic foods such as corn and strawberries contain more than 30 per cent of cancer-fighting anti-oxidants. The phenols and polyphenolic antioxidants are higher in organic fruits and vegetables as compared to conventional ones.

Studies show that organically grown tomatoes contain more salicylic acid than conventional tomatoes. Salicylic acid is a naturally occurring phytochemical having anti-stress and anti-inflammatory effects and prevents hardening of arteries and bowel cancer. Organic farming protects the environment as the chemical fertilizers, pesticides and weedicides are avoided in it. Organic farms sustains the biodiversity. Organic soils have great quality with more water retention capacity and can give better results even in droughts. Organic food has longer shelf life than the conventional foods because of lesser nitrates and great anti-oxidants. Organic farming can generate more income and employment among the rural people as the organic food has higher prices than the conventional ones. In organic farming we can use local resources without depending on the outer resources. Cow dung, cow urine, Panchgavya, jeevamrit etc. are useful in organic farming and are readily available at farmers field. The cow dung contains 300-500 crores of beneficial micro-organisms per one gram of cow dung decomposes the dried biomass on the soil and convert it into ready-to-use nutrients for plants. India ranked 8th in terms of organic agriculture and a significant growth has been observed recently in this sector.

According to Food and Agriculture Organisation (FAO) of the United Nations, "Organic agriculture is a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles and soil biological activity." Organic farming is a system of farming in which we continuously enrich the soil health. Organic farming relies on a number of objectives, principles and common practices which help in minimizing the impact on environment. It has been observed that the agricultural sector is responsible for 20 per cent of the global anthropogenic Green House Gas (GHG) emissions. According to studies about 70 per cent of global N2O emission is from artificial fertil-

izers. 5 per cent of global carbon dioxide comes from the emissions from fossil fuel consumption and biomass burning. About 50 per cent of global methane emission is from enteric fermentation and paddy cultivation. The conventional agricultural practices are unsustainable for mainly three reasons: (i) Disturb the complex ecosystem that is responsible for maintaining the balance of the nutrients in the soil. It not only leads to soil leaching or erosion but such practices also cause removal of nitrogenfixing bacteria. (ii) Excessive use of agrochemicals deteriorates the soil health. It adversely affects the water retention capacity of the soil and also leads to groundwater contamination. (iii) Deforestation and over-grazing and increase Green House Gas (GHG) emissions and affect vegetation, resulting into reduction of soil's ability to sequester CO2.

According to the International Federation for Organic Agriculture Movement (IFOAM), "Organic Agriculture is a production system that sustains the health of soils, eco-systems and people, is based on the principles of health, ecology, fairness and care." Organic farming mainly depends on the healthy soils. The two major parameters of soil health are: (i) Organic matter present in the soil which is measured by Soil Organic Carbon (SOC) (ii) Soil microbial life-presence of beneficial micro-organisms in the soil. Soil is said to be the skin of the earth and provider of food for all of us. Plants need a healthy soil to grow. Healthy soil has the presence of bacteria, fungus and micro-organisms. Organic farming introduces combination of sustainable practices which includes region specific crop rotation, organic inputs application etc. All these measures help in building up of Soil Organic Carbon (SOC) levels by an average of 10 times compared to the conventional farming. By sequestering carbon, the soil is acting as a carbon sink. Organic manures enriched with biofertilizers increase the availability of nutrients in the soil. Use of on-farm resources, such as FYM, vermicompost

etc., help in maintaining the content and texture of the soil. In organic farming, compost, a natural input, is used which adds organic matter and SOC. Chemical pesticides, fertilizers and weedicides disturb the symbiotic relationship between plants and micro-organisms present in the soil. In Reasi district of J&K there are many potential organic farmers are applying organic practices in their fields to produce the organic food. KVK, Reasi has imparted training to them in preparing Panchgavya, Beejamruth, Jeevamruth, fermented butter milk etc. These organic inputs are made by cow dung, curd, cow milk, ghee jaggery etc. After the completion of the training, the farmers have started to prepare these inputs and use in their fields. Organic farming helped to gain water retention capacity in their fields and soil health also improved. KVK, Reasi has also provided them off-farm inputs such as bio-fertilizers, neem oil, neem cake, pheromone traps etc. Biological mulching is also applied in their fields. It helps in the conservation of soil moisture, improves the fertility of the soil and reduces weed growth. In organic farming soil health can be maintained by the green manuring and cover crops. Growing of green manure crops like sesbania, dhaincha and other leguminous crops and cover crops can protect the soil from soil erosion and moisture loss. This can be ploughed into soil for the maintenance of soil fertility as it provides nutrients in the soil. Presently organic farming has become an integral part of the agricultural sector. Organic farming increases the disease resistance in plants and farmers can fetch money by growing organic crops. Excessive use of chemicals enter into our food chain and cause health hazards. Thus, organic farming is need of the hour. Organic farming can build a nutritionally, ecologically and economically healthy nation.

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Big diplomatic victory for India

OMKAR DATTATRAY

It is the effect of sound foreign policy and sustained diplomatic efforts that Qatar has freed eight ex army personnel of India who were facing death sentence in that country for alleged espionage. They were in jail from the last eighteen months and were sentenced to death on 26th September 2023 but now stand released. It is the big diplomatic victory for India and Modi government that the Qatar government has ordered release of all the eight former army personnel and seven of them have since returned India and they have said that it is because of Modi that we have been saved and are here at home. Qatar frees eight ex-Navy veterans jailed on espionage charges. The decision to release the senior officers was welcomed by the union government which issued an official statement stating, "The government of India welcomes the release of eight Indian citizens who were held in Qatar while working for the Dahra Global Corporation. Of the eight, seven have gone back to India. We are grateful that Amir of the state of Qatar made the decision to allow these citizens release and return home." In a significant diplomatic breakthrough for India, eight former Indian Navy Personnel, who were initially sentenced to death in Qatar, have been released marking a crucial turn in a case that garnered

international attention. The Indian governments diplomatic efforts led to the commutation of the capital punishment to extended prison terms for the eight veterans, who had been facing severe charges in Qatar. This decision came after sustained diplomatic intervention by New Delhi, showcasing the effectiveness of bilateral engagements in resolving complex legal matters. Amidst heartfelt appeals from the families of the Navy veterans for their safe return, the Ministry of External Affairs (MEA) reassured its commitment to utilize all diplomatic channels and provide necessary legal assistance. The MEA's proactive approach ensured that seven of the eight ex-Navy officers have already returned to India. The union government released an official statement welcoming the decision to set the veteran officers free saying, "The government of India welcomes the release of eight Indian nationals working for Dahra Global Corporation who were detained in Qatar. Seven out of eight of them have returned to India. We appreciate the decision by Amir of the state of Qatar to enable the release and home coming of these nationals." Expressing gratitude for the release of the Indian nationals, the Indian government welcomed the decision made by the Amir of the state of Qatar to facilitate their return. The swift res-

olution of this sensitive issue underscores the significance of diplomatic dialogue and cooperation between nations in addressing challenges faced by their citizens abroad. The eight Indian nationals were detained in Qatar since October 2022 on allegations of espionage related to a submarine program. Despite the severity of the charges, the precise details were not disclosed publicly. Initially sentenced to death by a Qatar court, the veterans fate took a positive turn with the commutation of their sentence to imprisonment, offering hopes for their eventual return to India. The MEA reiterated its commitment to provide continued support to the affected individuals, emphasizing its coordination with the legal team in Qatar. As the detailed judgment in the case is awaited, the ministry remains steadfast in extending consular and legal assistance, promising to pursue the matter with Qatar authorities to ensure a just resolution. Describing the judgment, the MEA has said, "We have noted the verdict today of the court of Appeal of Qatar in the Dahra Global case, in which sentences have been reduced." The MEA also said that detailed judgment in the case is awaited and are in close touch with the legal team in Qatar. MEA added, "The detailed judgment is awaited. We are in close touch with the legal team as well as the family members to decide

on the next steps. Our Ambassador to Qatar and other officials were present in the court of Appeal today, along with the family members. We have stood by them since the beginning of the matter and we will continue to extend all consular and legal assistance. We will also continue to take up the matter with the Qatari authorities." Prime minister Narendra Modi's meeting with Qatar's Emir Sheikh Tamim bin Hamad Al Thani during the COP 28 summit in Dubai further underscored the importance of bilateral relations and the welfare of Indian community in Qatar. The positive discussions held during the meeting reflect the shared commitment of both nations to strengthen ties and address mutual concerns. With the legal proceedings ongoing and diplomatic engagements persisting, the release of eight Navy veterans marks a significant milestone in India-Qatar relations and it will further give boost to the bilateral relations. Prime minister of India Narendra Modi will now also pay a visit to Qatar from his tour of UAE and it will cement the diplomatic and bilateral ties between India and Qatar. In fact the release of eight Navy officers who faced death sentence is really a big diplomatic success for India.

(The author is a columnist, social and KP activist).

Close the care gap for pediatric cancer patient

DR LUCKY GUPTA

Cancer is a genetic disease which is caused by mutations or alterations in the genetic code of the cell by various agents like carcinogenic chemicals, radiation, viruses or may be heredity (5%). International Childhood Cancer Day is celebrated on 15th February each year. In children, injuries are the first cause of mortality and cancer is the second most common cause of death. In India, the incidence of childhood cancer is approximately between 1.5-4.8%.

Clinical Presentation

In children, the clinical presentation of the cancer can be seen either in the form of classical signs and symptoms, which directly help in diagnosis, like in childhood leukemia, or atypical presentation, where the diagnosis is difficult and a sense of suspicion has a great role. The nonspecific symptoms are seen in the form of irritability, lethargy, weight loss, anemia, feeding difficulties etc. The common tumors seen in childhood are leukemias, neuroblastoma, wilm's tumor, liver tumors, rhabdomyosarcoma and germ cell tumors. Sign and symptomatology also vary depending upon the primary or metastatic site involvement. If there is spine involvement there may be weakness or paralysis of the area supplied, if extensive bone marrow involvement, then petechial hemorrhages, if lung metastasis, then respiratory symptoms will be seen. Sometimes, other congenital anomalies like Down's syndrome, common cloaca, limb hypoplasia, spina bifida, etc., are also seen in these patients.

Diagnostic investigations

Investigations mainly depend upon the affected anatomic site and suspected pathology. With the development and improvement of the imaging modalities like prenatal ultrasonography (US) and magnetic resonance imaging (MRI), a sig-



nificant improvement in diagnosis and management is seen in the form of fetal outcome. Similarly, contrast-enhanced computed tomography (CECT) is helpful in providing excellent images in most neoplasms except if there is intraspinal involvement where MRI has led. The use of innovations in the image-guided percutaneous biopsy techniques or diagnostic tumor core biopsies has really helped in improvement in making diagnosis in contrary to open biopsy techniques. Also, positron emission tomography (PET) is also used in the management of selected children with malignancy. The role of Cytogenetics like N-myc amplification, which is a specific molecular marker, cannot be ignored in the diagnosis and risk stratification of neuroblastomas patients.

Treatment

Treatment of affected children especially

infants is extremely challenging due to age, the immature immune system, the biological behavior or sometimes the unpredictable course of the tumor, like spontaneously involution as seen in congenital neuroblastoma or progression to a fatal outcome as seen in sacrococcygeal teratoma as if untreated in infancy can become malignant. Generally, the patient requires multimodal treatment especially if in advanced stage of cancer.

Surgical Treatment

Surgery is a mainstay treatment in most of the children having solid tumors. For effectiveness of the treatment, the physiologic and metabolic needs of the children especially neonate, the timing of the surgical procedure and the surgical strategies should be considered. As the children are in growing phase, so the surgical procedures will definitely affect the subsequent growth

and development especially when extensive surgeries or resection of unaffected tissues integral for normal structure and function will be performed. So, here the important principles the adaptation of the multimodal strategies in order to preserve the function and structure and this can be gained by adjuvant chemotherapy for the tumor which is initially unresectable or involves important structures.

Radiotherapy

Malignant tumors in childhood are mostly radiosensitive and especially the advanced-stage tumors. There is direct relationship with the radiation dose of radiation therapy and its adverse effects and inverse relationship between the sensitivity and detrimental effects and the child's age. The involvement of various body systems and organs will affect the growth of the child accordingly and these effects can be seen in the form of delay in cognitive development, renal and hepatic insufficiency, scoliosis, learning disabilities along with the second malignancies like leukemias, breast carcinomas etc.

Chemotherapy. Various drug interactions, metabolism, clearance, and toxicity all are important while considering chemotherapy. Complications like neurotoxicity, hepatic toxicity, ototoxicity with vincristine, actinomycin D, and cisplatin are known. Drug dosage adjustments along with the innovations in drug delivery and monitoring has made significant improvement in reducing their side effects.

Also, the use of novel therapeutics like targeted agents (antibodies, cellular therapies, kinase inhibitors) and stem cell transplantation has significantly led to the improvement of childhood cancer management along with the programs for cancer predisposition, testing and genetic counseling both for patients with cancer and their family members.

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