Strengthening the Discourse on Good and Better Jobs in India

Food Processing Sector

CUTS International

#2105

Message from the Research Team

At the outset, we pay our deepest condolences to all the people who have lost their lives or loved ones in the wake of this pandemic. Our heart goes out to the people who are suffering in these times. This pandemic has inflicted physical and emotional pain to humankind beyond imagination and we, at CUTS, convey our deepest sympathies to all the people who have been adversely affected. We sincerely hope that we not only return to normalcy but the new normal is also marked with improved welfare of the people forming the basic rubric of our society.

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Consumer Unity & Trust Society
D-217, Bhaskar Marg, Bani Park, Jaipur 302016, India
Tel: +91.141.2282821, Fax: +91.141.2282485
Email: cuts@cuts.org, Web site: www.cuts-international.org

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Authors: Sarthak Shukla, Assistant Policy Analyst, Prashant Tak, Assistant Policy Analyst and Trinayani Sen, Senior Research Associate, CUTS International.

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Abbreviations

APFPS:	Andhra Pradesh Food Processing Society
EPF:	Employees Provident Fund
FGDs:	Focus Group Discussions
FICCI:	Federation of Indian Chambers of Commerce & Industry
GVA:	Gross Value Added
IIFPT:	Indian Institute of Food Processing Technology
ILO:	International Labour Organisation
KIIs:	Key Informant Interviews
MIE:	Meghalaya Institute of Entrepreneurship
MoFPI:	Ministry of Food Processing Industries
MSMEs:	Micro, Small and Medium-sized Enterprises
NIFTEM:	National Institute of Food Technology, Entrepreneurship and Management
NSDC:	National Skill Development Council
PAC:	Project Advisory Committee
PHDCCI:	PHD Chamber of Commerce and Industry
PLI:	Production Linked Incentives
PMKSY:	Pradhan Mantri Kisan Sampada Yojana
QPs:	Qualification Packs
T&C:	Textiles and Clothing

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Finally, any error that may have remained is solely ours.

CUTS Centre for Competition, Investment & Economic Regulation

Executive Summary

As we finalise this report on prospects of jobs in the food processing sector in India, the country is amidst a severe pandemic. The novel coronavirus is no longer novel, and the multiple mutants of the virus are wreaking havoc in society. When people are gasping for medical support and even oxygen, the time calls for us to take a step back and diagnose where we went wrong in our discourse. A prominent social activist recently said, "Covid-19 is not just a pandemic caused by a virus, it is also an X-ray of the kind of society we represent".

During the first wave of the pandemic in 2020, a complete lockdown was imposed across the country, which had dire consequences for people already living under vulnerable circumstances with poor access to housing, food, healthcare, social security and basic amenities of life. Industrial workers, mainly migrant workers, were disproportionately hit and were left at the mercy of the pandemic to survive. However, learning from the large-scale public stir caused by the lockdown, industrial activities have been exempted from being completely shut down, with varying levels of exemptions allowed in different states. This report prepared based on a qualitative assessment of field research conducted before the second wave of COVID, highlights the core issues in the societal ecosystem of such workers involved in India's food processing sector.

The ecosystem under scanner for this particular project is the industrial ecosystem, in which enterprises and workers engage in producing an output that drives economic activity. Workers, treated as an input factor of production, are compensated by wages, which becomes their source of income. Other than the wages, enterprises also invest in land, capital, technology, raw material, utilities like power, water and fuel, and logistics.

While this enterprise-level ecosystem is crucial for manufacturing the sector, there is something invariably wrong in treating workers at par with other factors of production. Workers can learn, un-learn and re-learn to apply themselves towards enhancing not just the quantity but the quality of production. In this sense, they are the only appreciating asset of any enterprise, alas treated as a mere cost head across various industries. The food processing sector in India is no different but offers some critical insights for the country's economic development and growth agenda.

Poised as one of the sunrise sectors of the Indian economy, constituting 8.98 per cent and 11.11 per cent of GVA in the Manufacturing and Agriculture sector respectively while providing employment to almost 07 million people, the sector is a prominent one far as

economic growth is considered.[1] The food processing sector in India is receiving a renewed push, with the Government recently approving an INR 10,900 crore Production Linked Incentive Scheme. This move is expected to create 250,000 jobs and attract global investments over the next six years.[2]

A closer investigation of such numbers, supplemented with detailed field inquiries across Punjab, Andhra Pradesh, Assam, Meghalaya and West Bengal, offers some insightful takeaways from the perspective of the nature of jobs.

First, the argument of the sector being an employment generator needs scrutiny. While the Ministry of Food Processing provides a benchmark of employment generation per crore of fixed investment, this benchmark provides no insights into the nature of the jobs so created. The landscape of the type of jobs in the food processing sector varies from product to product and across the different production scales, but the broad trend remains the same. This is because most of the core employment generated by any enterprise involved in processing food items is for performing the ancillary functions and not the core processing operations.[3]

Thus, the employment generation footprint of a typical food processing plant is heavily skewed in operations like sorting, grading, washing of raw material or packaging and logistic services of the manufactured product. And these operations have little to do with skills or expertise related to the food processing sector and largely caters to such operations in more than one enterprises. For this reason, none of the enterprises appear to engage them as regular employees. Such functions are performed by contractual workers paid on a daily-wage basis. This forms the first level of vulnerability of such workers involved in this sector.

Second, for the factory floor workers, the scale of operations and dependence on technology for manufacturing has consequences for the nature of jobs in this sector. Most of the micro, small, medium and large enterprises across various states rely on mechanised manufacturing tools for their production. The human interface, in such cases, is limited to monitoring the machines and correcting any rare machine errors themselves. This requires people with no sector-oriented expertise or skills to be employed largely on the factory floor. Designated as 'machine operators', these workers perform functions that have reduced them to mere 'machine observers'. Thus, skill is limited to other operations, including laboratory testing, quality check, technicians and other jobs that require knowledge in food processing or allied fields. This number is not just minuscule compared to the factory floor workers and ancillary workers but is also dominated by graduates and diploma-holders. This makes a plethora of

1 Annual Report 2019-20, Ministry of Food Processing Industries, Government of India
2 https://pib.gov.in/PressReleasePage.aspx?PRID=1708691
3 See table 1 for details

workers having poor access to basic education unfit for such jobs. This redundancy of manual skills poses the next level of vulnerability in most of the mechanised food processing enterprises across the country.

Third, the infrastructural challenges in the enterprise-level ecosystem, including issues related to the financial and operational efficiency of raw material procurement, connectivity infrastructure, power and utility services etc, and regulatory requirements, leads to constrained functioning of most enterprises. This results in cut-throat competition amongst various enterprises to reduce their costs and enhance profit margins. Cutting on labour costs, which constitute around 15-30 per cent of total revenue expenditures,[4] is the most obvious way enterprises resort to. This has multiple manifestations for the sector's landscape. One, technology starts replacing humans for want of better mechanical productivity and reduced per unit expenditures.

Fourthly, enterprises that fail to survive such cost-cutting competition resort to working at compromised rates for other larger enterprises through the mechanism of outsourced job work. It is not a surprise that the end product consumed by the people is only packaged by the manufacturer but is produced in some other manufacturing facility working on a job-work basis for the bigger player. With such undercurrents, the end results pertaining to higher financial pressure on enterprises that operates at a smaller scale because of disproportionate cost burdens and insufficient revenue stream. Thus, the quality of employment suffers throughout for workers engaged in smaller enterprises. However, as data suggests, even this difference is minuscule and it tends to ignore the larger concerns.

Finally, the larger concerns faced by the sector in terms of quality of employment pertains to the dangerous vicious cycle into which the sector seems to be transcending into. At the core, the sector remains one that produces food of different tastes, qualities, medical and health benefits, indigenous produce of various regions, and varying recipes. This attribute, by common sense, should result in manual skills being valued the most in the food processing sector. However, due to factors mentioned previously and other external factors like stringent quality checks for exports and food regulation standards, the sector has come to be one dominated by mechanised processing with negligible human interface. Although a manufacturing facility operating at a larger scale is better equipped to provide marginally better wages, social security, occupational safety and health benefits, it does nothing to enhance the skills of people engaged in the food processing sector. Instead, it harnesses technology at the cost of humans. This implies that most of larger enterprises, having mechanised factory floor, rely on machines and technology for their operations with humans

[4] Analysis of data collated from field inquiries for this research report by authors

being the replaceable factor of production, seemingly employed only to ensure smooth running of machines.

This, when read with the various schemes and policies aimed at fostering the sector, presents a grim reality. Schemes like the PLI scheme, Mega Food Park Scheme, are primarily aimed at attracting investments for developing the sector. This growth, just like in the case of the overall economy, is focused on enhancing the production, revenues, value-addition, contribution to Gross Domestic Production (GDP) and also employment. But employment has merely become a static number to imply many people and does not speak about the quality of jobs.

The qualitative aspects of employment are nowhere accounted for in policy or practice. Even if wages are also accounted for, the economic argument that with scale, the wages and other benefits also increase is the dominant one. However, this also ignores the core issues of the workers in this sector, which renders this argument hollow. This is the fact that with time, scale, technology adoption and capital investments into any food processing enterprise, the enterprise grows without concomitant gains in human skills.

Thus, the marginally better quality of jobs in larger, mechanised enterprises is only better in a static sense. With time, these jobs turn into stagnant, saturated avenues of employment with outdated skillsets of workers to adapt to changing nature of manufacturing as the sector adopts newer and advanced technologies.. Such a reality is all the more disservice to the growth prospects of a sector which logically should be premised on skills of its workers in terms of both mechanical and intellectual skills.

However, all is not so bad with the sector. Case studies of niche products and indigenous products from states like Assam, Meghalaya and certain districts of West Bengal also highlight the significant potential of this sector in creating job creators (entrepreneurs) and not merely jobs for employees. However, it seems that there are significantly strong structural issues which obstruct domestic-scale enterprises or entrepreneurs from growing in an inclusive manner, i.e. ensuring enterprise's growth as well as worker's welfare. There is a need to address such issues in order to ensure that the vast potential of entrepreneurship in this sector is realised by keeping people and humans at the centre of policy and practice. This implies balancing enterprise's dependence on technology and machines for profits and manual skills of workers owing to the fact that better skills can help enhance profits and aid in the sector's inclusive and holistic growth.

One way of doing this is through dedicated, planned and strategic institutional support for infusing the elements of entrepreneurship, human-centricity and inclusive growth in the industrial ecosystem of this sector. This is pertinent for the holistic and inclusive development of many household enterprises which have human-centricity at the core of

their operations. It is also crucial that such institutional support delivers on the dynamic realities of the sector's future and not merely applying band aid to the static challenges.

This report provides certain examples and case studies to drive home the recommendations for addressing these challenges obstructing the prospects of good and better jobs from being actualised in this sector. These recommendations entail conceptual corrections around metrics of employment intensity, sectoral growth and productivity of manufacturing. It also includes innovative regulatory tools for addressing the concerns of quality of jobs by linking incentives of enterprises to their performance on measures related to the quality of jobs.

Finally, it lays out a futuristic vision where behavioural changes in the people forming the industrial ecosystem become the central tool for transforming the sector into one which values skills and humans in an enlightened manner. It stresses portfolio expansion with skills and decent work remaining at the centre of manufacturing to reap inclusive benefits from economies of scope and not necessarily economies of scale.

Introduction

India, over the years, has witnessed a fast-tracking of growth opportunities and simultaneous socio-economic inequalities, making it the land of a strange paradox. Inequalities centred around livelihoods seem to be at the epicentre of this phenomenon, with the wealth of Indian billionaires witnessing a 90 percent rise between 2009 and 2020, while the poor have struggled to earn a minimum wage and make ends meet.[5] It has been estimated that in 2017, 73 percent of the country's national wealth is concentrated in the hands of the top 10 percent of India's population, while those at the bottom of the pyramid have only witnessed a 1 percent rise in their wealth.[6]

The stark inequalities have been further exacerbated by the COVID-19 pandemic, which has befallen the world since the last quarter of 2019. The widening gaps have been effectively captured by the United Nations Secretary-General through his remark, "The COVID-19 pandemic has played an important role in highlighting growing inequalities. It exposed the myth that everyone is in the same boat. While we are all floating on the same sea, it's clear that some are in super yachts, while others are clinging to the drifting debris."

The Indian government, in its response to the pandemic, imposed one of the most stringent lockdowns. This, in turn, has led to a socio-economic massacre and exposed inequalities related to incomes, gender, health and education, which have been prevalent in the country since time immemorial. As per an ILO report, 400 million informal workers are at the risk of falling into deeper poverty due to the pandemic and ensuing nationwide lockdown, which has caused reverse migration and skyrocketing unemployment rates.[7] However, at the same time, the pandemic has provided ample opportunity to the wealthy in India for multiplying their wealth. The wealth of billionaires rose by 35 percent during this period.[8]

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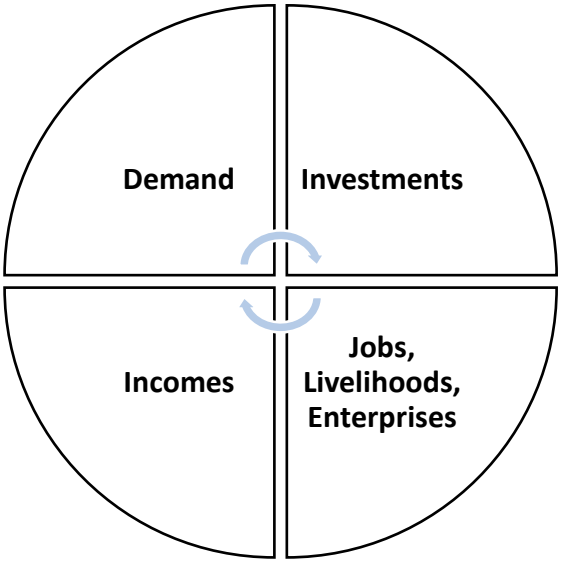
5 https://d1ns4ht6ytuzzo.cloudfront.net/oxfamdata/oxfamdatapublic/2021-01/The%20Inequality%20Virus%20-%20India%20Supplement%20%28Designed%29.pdf?RrFsF8iTfT.g_PfT0H7HLpMvSTrb.M

6 https://www.oxfam.org/en/india-extreme-inequality-numbers

7 https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_740877.pdf

8 https://d1ns4ht6ytuzzo.cloudfront.net/oxfamdata/oxfamdatapublic/2021-01/The%20Inequality%20Virus%20%20India%20Supplement%20%28Designed%29.pdf?RrFsF8iTfT.g_PfT0H7HLpMvSTrb.M

For a country that was already experiencing an economic slowdown, the pandemic has further contracted consumption expenditure and investment demand. This becomes a critical red flag for the economy, as it threatens the engine of growth. The engine of growth is driven by demand, which feeds into investments. Investments create enterprises and boost livelihoods, hence increasing incomes.[9] Rising incomes create more demand and complete this virtuous cycle of growth. Inequality, when factored into this cycle, makes it a vicious one.



This premise necessitates the need for jobs that safeguard the livelihoods and interests of the workforce. In other words, 'Good' and 'Better' become the need of the hour, if the engine of growth is to be salvaged.

But what are 'Good and Better' Jobs?

The International Labour Organisation (ILO), in its attempt to mainstream 'labour welfare' came up with the concept of 'decent work', which it launched and declared as an institutional priority in 1999. The ILO defines 'decent work' as productive livelihood opportunities, provide a fair income and prospects for personal development, social protection and workplace security, freedom for engaging in collective action and participatory decision-making, equal opportunities and treatment for all genders.10

Over the years, several indicators have emerged for measuring decent work. However, the lack of standardisation and comparability across regions, sectors, and measurement units has proven to be a challenge. For this purpose, this study considers a basket of indicators, with wages or income at its centre, as indicators for 'Good and Better' jobs. This is because the concept of wages, as explained by renowned economist, Nitin Desai in his paper: 'Work and Welfare', essentially includes return that the worker gets for the application of physical and mental capacities and the acquired skills that he or she offers for the production of goods and services of value to consumers.11 However, other indicators such as social security,

9 *A New Industrial Policy for India*, CUTS International & Arun Maira
10 https://www.ilo.org/global/topics/decent-work/lang--en/index.htm
11 https://www.academia.edu/38801818/Work_and_Welfare

capacity-building opportunities, voice/agency, and working conditions are responsible for the worker's overall development, as highlighted by ILO's concept of decent work. Table 1 provides a brief overview of the benchmarks for 'Good and Better' jobs that have been used for this study.

Table 1: Framework for Good and Better Jobs[12]

	Domain	Explanation	Existing benchmark(s) in India (formal)	Indicators (formal and informal)
Good				
1	Income	• The job should provide an adequate real income for the worker and her dependents • Incomes should increase with gains in productivity	Poverty line; minimum wage; the cost of living; government pay scale (aspirational)	• Wages/earnings • Income from other sources • Assets • Number of dependents • Access to credit (for self-employed workers)
Better				
2	Security and social protection	The risk of a job loss should be low, and there should be some social protection available in case of job loss	Labour laws; Employees Provident Fund (EPF), pension schemes, etc.	• No. of days employed in a year • Written contract • Social protection (PF, pension, paid leaves) • Ownership of land/assets (for self-employed workers)
3	Working conditions	The working environment should be safe and healthy; working relations should be good (in the case of self-employed workers, this would include relations with buyers and sellers)	Labour laws; laws against harassment at the workplace	• Provisions for health and safety (formal or informal) • Peer support • Relations with manager
4	Capability enhancement	The worker should have opportunities to enhance her capabilities	Minimum Wages regulations	• Training/skilling programmes • Learning on the job • Prospects of promotion
5	Voice/agency	The worker should have a platform to voice her interests and concerns	Labour laws on unions	• Presence of trade union • Presence of informal associations

[12] This framework has been adapted from a literature review of various definitions of 'good' jobs or quality employment. In particular, it draws from the following studies: Azim Premji University (2018), '*State of Working India*' (https://cse.azimpremjiuniversity.edu.in/state-ofworking-India/); Carnegie UK Trust (2018), '*Measuring Good Work*' (https://d1ssu070pg2v9i.cloudfront.net/pex/carnegie_uk_trust/2018/09/03132405/Measuring-Good-Work-FINAL-03-09-18.pdf); Unni et al (2006), '*Decent Work Deficits in Informal Economy: Case of Surat*' (https://www.epw.in/journal/2006/21/review-labour-review-issues-specials/decent-work-deficits-informal-economy.html)

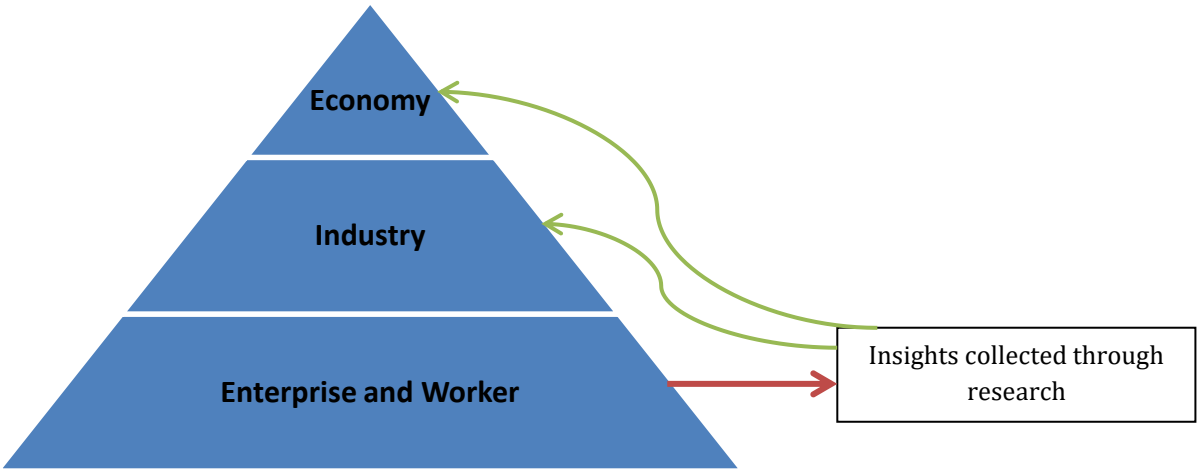
	Domain	Explanation	Existing benchmark(s) in India (formal)	Indicators (formal and informal)
6	Job satisfaction (subjective)	The worker should feel reasonably satisfied with the job	N/A	• Comparison with the previous job • Perception about prospects • Other things the worker values (peer network, nature of work)

Objective

This study attempts to develop and strengthen a narrative around worker welfare by focussing on the indicators of 'Good and Better' jobs. The overarching aim is to deep dive into labour-intensive sectors to understand the indicators' current status and provide necessary recommendations for improving them. In this regard, the first inquiry and analysis was made for the Textiles and Clothing (T&C) sector and a report was published based on the findings. In a follow-up to that, this report presents findings from the Food Processing sector.

Methodology

The study has adopted a bottom-up approach for understanding the relationship between an enterprise and its workers to determine what factors can be enhanced for improving outcomes simultaneously for workers and enterprises. This narrative's driving force has been the quest for 'Listening to narratives from the ground and informing the systems in the upstream, i.e., industry and economy.'



To this end, a review of existing policies and literature in this domain has been conducted, followed by in-depth field visits and interviews with key stakeholders from the sector. The information so collected has also been triangulated using secondary literature and discussion with the Project Advisory Committee (PAC) members. Following this, innovative methods have been used for analysing the data and presenting the current status of each of the indicators for 'Good and Better' jobs, i.e., wages, social security, collective voice, working conditions and opportunities for capability enhancement, along with case studies and recommendations for the selected sector. The research activities have been carried out for one year and have been curtailed due to the COVID-19 pandemic and ensuing lockdowns.

The following sections sequentially detail the methodology and approach for each of the research components, including selection of the sector and locations, sampling, data collection, and analysis. It may be noted that the broad methodology has been finalised collectively by the PAC at the inception of the study (see Annexure 1 for details of the PAC).

Selection of Sector and Locations

The selection of Food Processing as a labour-intensive sector has been made based on the following criteria:

- The existing levels of employment, as well as the potential for employment generation, to capture labour intensity
- Clusters in the supply chain spanning different geographies to provide a comprehensive perspective
- Clusters that subscribe to industries where demand growth is high or likely to be high to capture the larger picture of jobs and demand creation, leading to higher economic growth
- Industries that cater to domestic demand as well as exports to look at quality job creation across enterprises catering to diverse markets

Within the Food Processing sector, Punjab, Andhra Pradesh, Assam, Meghalaya and the northern districts of West Bengal have been selected for the study to capture an overall picture of the sector and its nuances. The rationale behind selecting these locations for the study is as follows:

- To ensure comprehensive coverage in terms of geography and agro-climatic zones to broaden the base of products and processes being considered. A wider geographical coverage has allowed the team to explore different raw materials and their processing, including niche products.
- To provide a comparative picture of different institutional arrangements and policy landscapes

Table 2: Overview of the Selected Locations

Locations for Study (States)	Punjab	Andhra Pradesh	Assam	Meghalaya	West Bengal
No. of Registered Food Processing Units	2,906	5,861	1,409	26	1,960
No. of Unincorporated Food Processing Units	63,626	1,54,330	65,997	3,268	3,22,590
State Nodal Agency	Punjab Agro Industries Corporation Limited	Andhra Pradesh Food Processing Society (APFPS)	Directorate of Horticulture and Food Processing (Department of Agriculture)	Directorate of Food Processing (Department of Agriculture)	Department of Food Processing Industries and Horticulture & West Bengal State Food Processing & Horticulture Development Corporation Limited

Locations for Study (States)	Punjab	Andhra Pradesh	Assam	Meghalaya	West Bengal
Sector Highlights	The State is the largest producer of wheat and rice in India and a leading producer of horticulture crops. Has a robust infrastructure network for food processing, including 162 warehouses, 600+ cold storages facilities and 3 mega food parks.[13]	More than 3000 Food Processing units and INR 5 lakh crore worth investment in food processing sector under APFPS schemes.	75% of the State's population is dependent on agriculture based livelihoods.[14] However, food processing is at a nascent stage with agro based MSMEs amounting to only 20% of those in the State.[15]	With a cultivable area greater than 15 percent the State has an array of agricultural produce including major crops and niche products most of which are amenable for processing. However, due to hilly landscape, landholdings are small and enterprises are mainly MSMEs.	A state of strategic international importance and one of the major producers of fisheries, poultry and meat, vegetables and tea.
Policy Highlights	According to the Industrial and Business Development Policy of Punjab, 2017, Food Processing is a thrust sector for employment generation.[16] The State provides enterprises with an employment generation subsidy of up to INR 48,000 per employee for 5 years.[17]	Has a specific Andhra Pradesh Food Processing Policy (2015-2020). However, no specific scheme for employment generation in the sector.	Industrial and Investment Policy of Assam, 2019 covers its Food Processing Sector. However, there is no particular intervention for employment generation.	Primary focus on implementation of central schemes such as PMFME and PM Kisan SAMPADA Yojana for encouraging MSME driven growth. Along with that focus on various state level missions such as Mission Lakadong and Mission Jackfruit for providing skill training and business development opportunities	Reimbursement of expenditures on PF and ESI to enterprises operating withing the State, for firsts two years of operation. Additionally, special subsidies for women-owned MSMEs.

13 http://investpunjab.gov.in/assets/docs/Agro_and_food_processing_sector.pdf
14 https://foodprocessingindia.gov.in/state/assam
15 https://dirhorti.assam.gov.in/information-services/food-processing
16 https://pbindustries.gov.in/static/assets/docs/Industrial_Policy_2017.pdf
17 https://foodprocessingindia.gov.in/state/punjab

Literature Review

A thorough review of relevant national and international literature has been conducted to understand international experiences regarding decent jobs or 'Good and Better' Jobs and adapt them in the context of the Indian labour-force. An extensive review of the sector, including existing and potential prospects of employment, state-level policies related to the food processing sector, employment and skill development, has been conducted to inform the stakeholder mapping and data analysis.

Stakeholder Mapping and Sampling

Based on the secondary literature's insights, an extensive map of stakeholders in the Food Processing ecosystem for every study location was created. The rationale behind creating this map was to identify the key stakeholders whose perspectives would need to be represented in the research. Table 3 provides an overview of the five broad categories of stakeholders identified and interviewed. Along with that, it also provides an insight into the key queries for each category of stakeholders.

Table 3: An Overview of the Five Broad Categories of Stakeholders Identified and Interviewed

Category	Details	Key Queries
Workers	Non-managerial, non-supervisory, Manual Workers, Machine Operators, Migrant Workers, Local workers, Contractors	• Existing Status on Parameters of Quality of Jobs • Challenges in ease of living (incl. cost of living and savings) • Perception of Government and Enterprises • Journey and Aspirations
Worker Unions	Affiliated to Political Parties, Unaffiliated, Regional Groups, Factory-specific Unions	• Issues in Raising Voice of Workers • Perception of Enterprises • Historical Evolution of Worker-related issues • Region/location-specific issues • Demands of Worker Unions
Enterprises and	Households-level[18], Micro[19], Small[20] Medium[21] Large Enterprises[22], Industrial	• Perception on Workers

[18] Household Enterprises are unincorporated, nonfarm businesses owned by households. This category includes self-employed people running incorporated businesses (which may or may not employ family or other workers) and family members working in those businesses. (Retrieved from https://www.imf.org/external/pubs/ft/wp/2015/wp15185.pdf)

[19] Micro Enterprises are those where the investment in plant and machinery or equipment does not exceed one crore rupees and turnover does not exceed five crore rupees (Retrieved from https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11934&Mode=0)

Category	Details	Key Queries
Associations	Zones (Mega Food Parks), Entrepreneurs, Federation of Indian Chambers of Commerce & Industry (FICCI), PHD Chamber of Commerce and Industry (PHDCCI)	• Perception on Remuneration for workers • Challenges for starting and operating enterprises • Overall state-specific or region-specific challenges to the growth of enterprises
Government Authorities	Relevant State Departments, Societies, District-level Authorities of Industrial and Labour Departments, Skill Development Organisations, Training Research Institutions	• Perspectives on the overall ecosystem of industrial growth and worker welfare • State-wide policies and schemes • Implementation-level issues
Civil Society Organisations	Working on livelihood, labour rights and related issues, Research and Development Organisations	• Perspectives on Worker-issues • R&D Ecosystem and its efficiency • Ground-level realities and issues

To capture a comprehensive overview of the sector, its enterprises and workers engaged in them, keeping in mind the constraints of the COVID-19 pandemic and other location-specific challenges, non-probabilistic sampling was chosen for carving out the sample. A list of initial stakeholders and facilitators were identified through virtual interactions. Following that, purposive sampling[23] and snowballing techniques were used, based on the interactions with the initial stakeholders identified.

Tools and Methods of Data Collection: KIIs and Field Inquiries

Data collection from primary sources was envisioned through a multi-pronged process comprising initial virtual interactions and detailed field inquiries. The chosen data collection tools were Key Informant Interviews (KIIs) and Focused Group Discussions (FGDs). However, due to the COVID-19 pandemic, the data collection process's field component had to be modified accordingly to accommodate both virtual and physical interactions. Along with KIIs and FGDs, visits were made to field sites such as primary processing centres, food processing factories, etc. to internalise and validate findings as well as capture visual data.

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20 Small Enterprises are those where the investment in plant and machinery or equipment does not exceed ten crore rupees and turnover does not exceed fifty crore rupees (Retrieved from https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11934&Mode=0)

21 Medium Enterprises are those where the investment in plant and machinery or equipment does not exceed fifty crore rupees and turnover does not exceed two hundred and fifty crore rupees (Retrieved from https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11934&Mode=0)

22 Large Enterprises are those where the investment in plant and machinery or equipment exceeds fifty crore rupees and turnover exceeds two hundred and fifty crore rupees

23 The main goal of purposive sampling is to focus on particular characteristics of a population that are of interest, suitable to answer research questions. The sample being studied is not representative of the population, but it is a choice, depending upon the need for the research.

Table 4: A Detailed Break-up of the Sample Studied

State	Districts	Products	Enterprises	Workers
Andhra Pradesh	Chittoor, Guntur, Srikakulam, Visakhapatnam	Jaggery, Edible oil, Fisheries, Fruits and Vegetables (pickles, jams, juices, squashes and sauces), Spices	Household – 02 Micro – 07 Small – 02 Medium – 03 Large – 02	120
Punjab	Amritsar, Ludhiana	Grains, Milk and Milk Products, Roasted Snacks, Bakery Products, Fruits and Vegetables (pickles, jams, juices, squashes and sauces), Edible oil, Sugar, Beverages	Household – 03 Micro – 04 Small – 02 Medium – 03 Large -02	74
West Bengal	Jalpaiguri, Darjeeling & Kalimpong	Tea, Mushroom, Ready to Eat products, Phing, Noodles, Fruits and Vegetables (pickles, jams, juices, squashes and sauces), Honey, Beverages	Household – 5 Micro – 4 Small – 2 Large – 2	65
Meghalaya	East Khasi Hills, West Khasi Hills, South West Khasi Hills, West Jaiantia Hills, Ri-Bhoi	Honey, Lakadong turmeric, wine, Spices, Fruits and Vegetables (pickles, jams, juices, squashes and sauces), Meat, Bakery	Household – 5 Micro – 6 Small – 2	32
Assam	Guwahati, Tezpur, Jorhat, Morigaon	Ready to Eat, Bakery, Fruits and Vegetables (pickles, jams, juices, squashes and sauces), Spices, Meat	Household – 08 Micro – 03 Small – 02 Medium – 02	90

Tools and Methods of Data Analysis

This study's data analysis component can be divided into two broad qualitative categories based on the objective that each has aimed to achieve. The first is a snapshot analysis of the current status of the indicators of 'Good and Better' jobs. This aims to provide an objective and holistic evaluation of the different indicators and bring out the nuances across various value chain processes, different scales of enterprises, diverse geographies, and various infrastructural or regulatory set-ups. This aspect of analysis tries to gather the workers' perception, focussing on feedback from workers across various nodes of the value chain in the food processing sector on key parameters of good and better jobs.

The second category of data analysis involves a case study approach, wherein crucial insights from the field have been detailed out in cases to highlight best practices and challenges. The overarching objective of using case studies as a method of analysis is to provide in-depth and nuanced insights from the field.

Finally, based on these two broad streams of analysis, linkages have been developed between enterprise and worker well-being using a systems approach. The systems thinking approach views society as a collection of individual interlinked systems. It aims to decode the

nuances of each of these linkages in order to solve larger problems plaguing the society by addressing the micro-level deviations.[24]

Ethical Considerations

Ethical considerations are critical for conducting social research as this involves interaction with human respondents, including those from vulnerable groups. For this purpose, at all stages during the research, ethical codes have been maintained. The ethical codes that have been followed for this study are as follows:

- **Participation:** The research methodology has considered the importance of participation of different stakeholders in the Food Processing ecosystem and has ensured the same. Further, there has been no discrimination based on gender, class, and any other social construct throughout the research activities.
- **Consent:** The research team has ensured informed consent of all participants to eliminate information asymmetry and ensure responsible participation.
- **Confidentiality and Anonymity:** Due to the sensitive nature of the quantitative and qualitative data, care has been taken to maintain the respondents' confidentiality and anonymity.

Limitations of the Study

While the research has aimed to provide a comprehensive picture, COVID-19 has been a significant operational challenge for the research proceedings as it curtailed and the field visit component and distorted the study's organic process. Further, the research scope is limited by the time and resources available for this purpose.

[24] https://www.sciencedirect.com/science/article/pii/S1877050915002860

The Food Processing Sector: A Snapshot

The Food Processing sector forms the crucial linkage between the agricultural sector, industry and markets by converting the agricultural output into processed products ready for human consumption. The sector assumes greater significance in the Indian context, given the country's agrarian backdrop and has thus been taken up by the Central Government as a 'Sunrise Sector'[25] for the Indian economy. Though only 10 percent of the country's agricultural produce is processed, the numbers are set to rise with the growing demand for reduced agricultural wastage and value-added agricultural/food products.[26]

Food processing has the potential to create multipronged benefits for the economy by improving agricultural practices and outputs. It creates a demand for crop diversification and circular economy by boosting the economy and consumption through increased employment opportunities, amplified exports and remunerative prices to farmers. Food processing also addresses some key socio-economic challenges faced by India through enhanced food security.

On the employment front, the highly labour-intensive sector has a multiplier effect on employment generation in the manufacturing sector in the country. According to the latest report by the Ministry of Food Processing Industries (MoFPI), it currently employs 19.33 lakh people across registered enterprises and a whopping 51.11 lakh people in unincorporated enterprises. Out of that, 12.55 percent and 24.69% are women, respectively.[27] Further, as it grows, the sector currently has a manufacturing employment share of 11.4%[28] is set to generate employment for 90 lakh[29] people by 2024. Given the 'sunrise' status of the sector, the Central and State governments are being taken to enhance investments, infrastructure, and employment in the sector through an array of schemes and policies. The sector has been accorded a priority status under the Make in India scheme and has also received a sanction of 10,900 crores under the Production Linked Incentives (PLI) Scheme aimed at boosting '*Atmanirbharta*' in key manufacturing sectors.

25 https://mofpi.nic.in/sites/default/files/databank.pdf
26 https://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs/02AR_110320207BF5BBAA459047E49DADA63E3E25BD95.PDF
27 https://mofpi.nic.in/sites/default/files/english_2019-20_1.pdf
28 https://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs/02AR_110320207BF5BBAA459047E49DADA63E3E25BD95.PDF
29 https://www.investindia.gov.in/sector/food-processing

There are various schemes in place for the promotion of food processing enterprises in India. At the Central level, schemes like the Pradhan Mantri Kisan Sampada Yojana (PMKSY) aim at fostering all-round growth in the sector's ecosystem by focusing on crucial links like cold chain and preservation infrastructure, infrastructure for agro-processing, creating forward and backward linkages, food safety and quality assurance infrastructure, human resources and skill development, amongst others. Of these, the element on human resources and skills focuses on imparting training to all kinds of workers engaged in the sector by developing employment-oriented training modules and Qualification Packs (QPs), which are to be validated by the National Skill Development Council (NSDC) along with implementation agencies including the Indian Institute of Food Processing Technology (IIFPT) and National Institute of Food Technology, Entrepreneurship and Management (NIFTEM).[30]

Another dedicated centrally sponsored scheme, particularly for micro-enterprises in the food processing sector is the recently launched PM Formalisation of Micro Food Processing Enterprises Scheme, which seeks to provide financial, technical and business support for upgradation of existing micro food processing enterprises.[31]

Various states, too, from time to time, have come out with a state-level food processing policy. These are primarily the states having a significant potential of food processing in select product categories, including Andhra Pradesh, Odisha. These policies provide

30 https://mofpi.nic.in/Schemes/pradhan-mantri-kisan-sampada-yojana
31 https://mofpi.nic.in/pmfme/docs/SchemeBrochurel.pdf

additional avenues of availing various types of assistance for enterprises registered under the respective states and broadly work on the nature of incentives or subsidies announced in the Centrally Sponsored Schemes. The unique features of these state policies pertain to any product-specific priorities for state-specific products and incentives for setting up state-level infrastructure in terms of cold storage, common facilitation centres and food parks. Additionally, such schemes often provide for financial benefits to be accrued to institutions like skill training institutes and enterprises for giving locals employment. [32,33]

Table 5: A Snapshot of Some Key Statistics of the Food Processing Sector in India

Food Processing Sector at a Glance[34,35,36]	
Share in Gross Value Added (GVA) of Manufacturing Sector	7.9%
Global Rank in Food Production	2nd
Global Rank of India's Food and Grocery market	6th
Key Subsectors	Dairy, Fisheries, Poultry and meat Processing, Fruits and Vegetables
Share in Total Employment in India (Registered)	11.4%
Share in Total Employment in India (Unincorporated)	14.2%
Share in India's Export	10.7%
Government sanctioned projects in 2020 (across India)	134
Mega Food Parks	37 (sanctioned) out of which 21 are operational
Cold Chain Facilities	192 operational
Production Linked Incentive (PLI) Scheme in Food Products	10,900 Cr

The Food Processing Value Chain

The MoFPI defines food processing industries or enterprises as those pertaining to

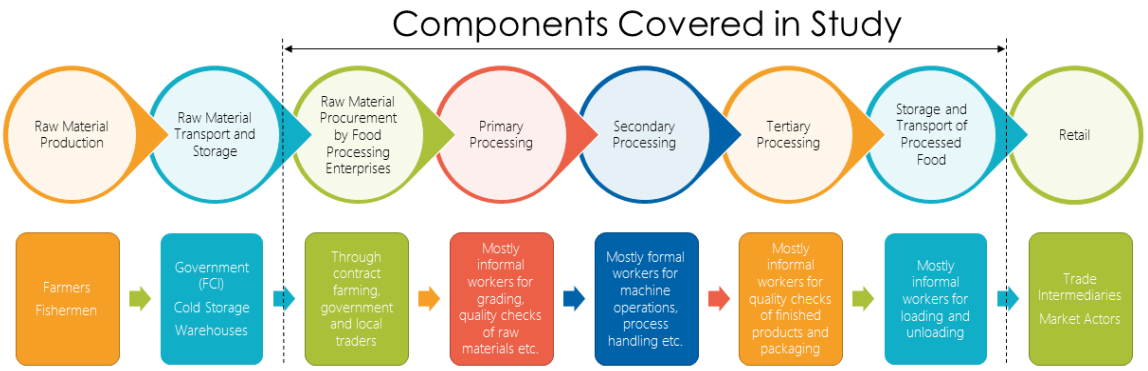
"(a) Manufactured Processes: If any raw product of agriculture, animal husbandry or fisheries is transformed through a process [involving employees, power, machines or money] in such a way that its original physical properties undergo a change and if the transformed product is edible and has commercial value

32 http://www.msmeodisha.gov.in/PDF/Final%20by%20DI(O)-OFPP-2016.pdf
33 https://mofpi.nic.in/sites/default/files/EOIAPFPI.pdf.pdf
34 https://static.investindia.gov.in/s3fs-public/2020-06/Food%20Processing_V11%20%28May%2028th%29.pdf
35 https://www.investindia.gov.in/sector/food-processing
36 https://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs/02AR_110320207BF5BBAA459047E49DADA63E3E25BD95.PDF

(b) Other Value-Added Processes: If there is significant value addition (increased shelf life, shelled and ready for consumption etc.) even if it does not undergo manufacturing processes."[37]

The Food Processing value chain has backward linkages with the agricultural sector and forward linkages with the retail sector. However, the key components of the value chain include primary and secondary levels of processing. Primary processing is concerned with converting raw agricultural/dairy/fisheries/poultry output into a suitable commodity for human consumption using processes such as sorting, cleaning, grading, etc. Secondary processing refers to higher levels of value addition to such processed commodities or creating new products out of primary processing outputs.[38] Figure 1 provides an overview of the Food Processing value chain and its components covered under the scope of this study.

Figure 1: Food Processing Value Chain



Peculiar Features of the Value Chain

- High dependence on raw material for quality and productivity of finished goods
- Presence of diverse institutional arrangements in linkages between raw material and its processing
- High dependence on informal workers in primary and tertiary processing but low dependence in core processes (secondary processing)
- Significance of support infrastructures such as cold storage facilities and warehouses

37 https://mofpi.nic.in/sites/default/files/databank.pdf
38 https://mofpi.nic.in/sites/default/files/english_2019-20_1.pdf

- Criticality of quality assurance throughout the value chain and dependence on manual labour for implementing it.

The unique characteristics of the food processing value chain highlight how labour intensity in the food processing sector is limited to primary processing or allied services. This contradiction assumes significance in the context of jobs in the sector. As more and more employment generation occur in these roles, which may be overlapping with other manufacturing sectors, there arise questions regarding the implications of that on the indicators of 'Good and Better' jobs as in such cases grey areas may be created and there may be ambiguity in the applicability of sector specific policies and safeguards. The next section tries to explore this facet of jobs in the food processing sector through an analysis of workers perspectives on the indicators of 'Good and Better' jobs.

A Bird's Eye View of Good and Better Jobs Parameters in Food Processing Enterprises in India

Voices from the ground

This section provides a snapshot of the insights collated from various stakeholders regarding different good and better jobs in the food processing sector across Punjab, Andhra Pradesh, Assam, Meghalaya West Bengal. The parameters used for assessing the quality of jobs include income, skill enhancement opportunities, working conditions, social security, and workers' collective voice.

From an overall perspective, although the food processing sector has immense potential to create various jobs and attract investments in the future, there is a need to focus on the types of jobs so created and the skills required for this sector's growth. The following state-wise tables present these first-hand findings for enterprises of varying size, scale and type of products being manufactured.

Table 6: Punjab - Findings for Enterprises of Varying Size, Scale and Type of Products Being Manufactured

Sl No.	Product-category of Enterprise	Classification of Enterprise based on Scale	Number and Wages of different types of workers			Key Attributes of Other Parameters of Good and Better Jobs (Social Security, Working Conditions, Scope of Skill enhancement and Opportunity for Collectivism)
			Type	Number	Average Wage (INR/month)	
1	Ice-cream	Small	Core Processing	6	9100	Social Security: For informal workers in transportation and packaging, no social security as they are not registered Occupational Hazards: Exposure to extremely low temperatures in storage operations Skill Enhancement: Poor scope except for quality check, which requires scientific knowledge regarding food quality Collectivism: Nil
			Packaging	4	7800	
			Transportation	13	7800	
			Quality Check	2	13300	

Sl No.	Product-category of Enterprise	Classification of Enterprise based on Scale	Number and Wages of different types of workers			Key Attributes of Other Parameters of Good and Better Jobs (Social Security, Working Conditions, Scope of Skill enhancement and Opportunity for Collectivism)
			Type	Number	Average Wage (INR/month)	
2	Snacks	Micro (Unorganised)	Sorting	3	6500	Social Security: None for informal workers engaged in sorting Scope of skill enhancement: Negligible Occupational Hazards: Work involves operations on fuel (LPG) and fire (gas stoves) Collectivism: Nil
			Core Processing	2	9100	
3	Amla and Apple Candy	Micro (Unorganised)	Sorting	2	7280	Same as above
			Core Processing	3	8320	
			Packaging	3	6500	
4	Bakery	Large	Helper	12	5200	Social Security coverage to all registered workers but not workers employed through contractors Occupational Hazards: High voltage machinery, sharp machines Scope of skill enhancement: only in areas that require technical qualifications, none otherwise Collectivism: Nil
			Sorting	25	6500	
			Machine Operator	28	9100	
			Supervisor	28	15000	
			Packaging	70	9000	
			Logistics	150	9100	
5	Bakery, Sauce	Medium	Helper	7	6110	Same as above
			Sorting	15	6500	
			Machine Operator	25	9100	
			Supervisor	25	13500	
			Packaging	50	7800	
			Logistics	100	7800	
6	Sauce, Ketchup	Medium	Helper	5	5720	Same as above
			Sorting	10	6500	
			Machine Operator	13	8320	
			Supervisor	13	14500	
			Packaging	20	9100	
			Logistics	50	6500	
7	Dairy Milk Processing	Micro	Helper	6	6500	Same as above
			Machine Operator	10	7800	
			Packaging	10	6500	

Sl No.	Product-category of Enterprise	Classification of Enterprise based on Scale	Number and Wages of different types of workers			Key Attributes of Other Parameters of Good and Better Jobs (Social Security, Working Conditions, Scope of Skill enhancement and Opportunity for Collectivism)
			Type	Number	Average Wage (INR/month)	
			Quality Check	2	12000	
			Loading-unloading	8	6500	
			Logistics	6	6500	
8	Ketchup	Micro	Helper	1	5200	Social Security: Nil for informal workers like helpers and loading-unloading workers Scope of Skill Enhancement: Limited for non-technical skills Occupational Hazards: Low Collectivism: Nil
			Machine Operator	4	9100	
			Packaging	4	9100	
			Loading-unloading	6	6500	
9	Rice Shelling	Micro	Helper	1	6500	Same as above
			Machine Operator	3	7800	
			Packaging	4	6500	
10	Sugar Factory	Large	Helper	6	7540	Social Security coverage to all registered workers but not workers employed through contractors Occupational Hazards: High voltage machinery, sharp machines, exposure to chemicals Scope of skill enhancement: only in areas that require technical qualifications, none otherwise Collectivism: Nil
			Machine Operator	30	10300	
			Packaging	36	7800	
			Loading-unloading	30	7280	
11	Distellery	Large	Helper	2	7540	Same as above
			Machine Operator	10	10300	
			Bottling	50	7280	
			Packaging	30	7280	
			Loading-unloading	8	7800	
12	Gluten-free Wheat	Micro	Sorting and grading	3	13000	Scope of Skill Enhancement: High for technical. Although in the non-technical segment, the importance of existing skills is significant, but efforts to ensure newer skills are largely absent. Social Security: Not for unregistered workers Occupational Hazards: High Voltage
			Machine operator	3	10400	
			Packaging	2	7800	
			Logistics	2	7800	

Sl No.	Product-category of Enterprise	Classification of Enterprise based on Scale	Number and Wages of different types of workers			Key Attributes of Other Parameters of Good and Better Jobs (Social Security, Working Conditions, Scope of Skill enhancement and Opportunity for Collectivism)
			Type	Number	Average Wage (INR/month)	
						Machinery Collectivism: Nil
13	Edible Oil (Rice Bran to Oil)	Small	Helper	3	5200	Social Security: Nil for informal workers like helpers and loading-unloading workers Scope of Skill Enhancement: Limited for non-technical skills Occupational Hazards: Low Collectivism: Nil
			Machine Operator	5	9100	
			Packaging	7	7280	
			Loading-unloading	7	7280	

From Table 6, it is clear that in Punjab, in capital-intensive food processing enterprises like sugar, bakery products and distillery, most of the jobs are either in ancillary operations like packaging, bottling, loading and unloading, or are in the primary processing stage involving sorting, grading and washing of raw materials. Social security coverage is only for organised workforce and is almost absent for informal and contractual workers performing the tasks of ancillary works or tasks that do not require any food processing-specific skill. The wages in medium or large enterprises are compliant with minimum wage regulations. Still, only for the directly employed workers, whereas for contractual labour, the wages are often below the statutory limits.

At times, the working conditions are hazardous and lack basic safety requirements. Multiple incidents of accidents due to mishandling of high-voltage or sharp machinery have been reported in the past in these enterprises. Additionally, even with higher risks, the wages of workers engaged in these operations are not necessarily a determinant of higher risks but

instead a combination of various other factors, including nature of jobs (technical or non-technical), size of enterprises, type of workers (local or migrant), amongst others. There are no sector-specific or enterprise-specific labour unions, while the influence of other registered labour unions, either affiliated to national parties or otherwise, over this sector is negligible.

Furthermore, the skill enhancement scope, leading to higher incomes eventually, is mainly limited to technical skills across the different categories of enterprises. In the non-technical segment, the manual skills required are not as significant for the production process as the relevant machine operations in that segment. Thus, such skills are also not crucial enough, which is reflected by the stagnant wages. Even in cases where such manual skills are irreplaceable, there seems to be a lack of enterprises and relevant government authorities to foster an enabling environment of skill enhancement of such workers beyond enhancing mechanical productivity. This implies that for crucial manual skills in manufacturing, prospects of better skills (and therefore better incomes) seem to be determined by the ability to produce more output in less possible time, rather than the ability to shift horizontally or vertically across the functional value-chain.

Table 7: Andhra Pradesh - Findings for Enterprises of Varying Size, Scale and Type of Products Being Manufactured

Sl.No.	Product-category of Enterprise (NIC Code)	Classification of Enterprise based on Scale	Number and Wages of different types of workers			Key Attributes of Other Parameters of Good and Better Jobs (Social Security, Working Conditions, Scope of Skill enhancement and Opportunity for Collectivism)
			Type	Number	Wage (INR/month)	
1	Aqua Processing	Large	Non-technical - Women	2400	10000	Social Security: For all registered employees but nil for informal workers and floating workers Occupational Hazards: Excessively low ambient temperatures within the factories, high voltage refrigeration machines Collectivism: Nil Scope of Skill Enhancement: High for technical. Although in the non-technical segment, the importance of existing skills is significant, efforts to ensure newer skills are largely absent.
			Non-technical - Men	600	10000	
			Floating Workers	375	9000	
2	Shrimp Processing	Medium	Non-technical (Sorting, Peeling, Machine Operator, Packing, Storing)	60	11200	Same as Above

			Technical (Quality Check, Supervisory, Accounts)	10	16800	
3	Chilly Processing	Small	Tip Cutting	200	7000	Social Security: Nil for a large number of informal workers engaged in tip-cutting Occupational Hazards: Respiratory problems, skin disorders, eye-related issues, high voltage and sharp machinery Scope for Skill Development: Poor for non-technical workers Collectivism: Nil
			Machine Operators	24	9800	
			Stitching of sacks, loading-unloading	30	7700	
4	Mango/ Tomato Pulping	Medium	Grading- Women	9	5600	Social Security: Nil for informal workers Occupational Hazards: High voltage, sharp machinery Scope of Skill Enhancement: Poor for non-technical skills Collectivism: Nil
			Grading - Men	3	7000	
			Tip Cutting	15	5600	
			Machine Operators	6	14000	
			Loading-unloading	9	8400	
5	Cashew Processing	Micro	Grading	12	5600	Social Security: Not for unregistered/informal workers Occupational Hazards: Sharp cutting tools Collectivism: Regional Labour Union for the entire Cluster Scope of Skill Enhancement: For manual workers, the importance of existing skills is significant, but efforts to ensure uptake of newer skills are largely absent
			Machine Operators	3	9000	
			Cutting & Peeling	24	10290	
			Packaging	4	7000	
6	Coconut Oil	Micro (Unorganised)	Helper	2	5600	Social Security: Not for informal workers like helpers and packaging workers Occupational Hazards: Exposure to high temperatures and fuel Collectivism: Nil Scope for Skill Enhancement: Nil
			Machine Operators	2	8000	
			Packaging	4	5600	

7	Virgin coconut Oil	Small	Helper	6	5600	Social Security: Not for informal workers like helpers and packaging workers Occupational Hazards: Exposure to high voltage and sharp machinery Collectivism: Nil Scope for Skill Enhancement: Not in non-technical jobs
			Machine Operators	9	8000	

The ground-level situation in Andhra Pradesh is quite similar to Punjab in terms of the wages, social safety nets, working conditions and activism of labour unions in this sector. The informal and contractual workforce employed in these enterprises is significantly more precarious than the formal ones. Additional insights pertain to wage differences between male and female workers doing similar jobs in such enterprises. Evidence suggests that amongstinformal workers, women are employed as a deliberate strategy by enterprises to optimise labour costs and enhance work quality, citing higher diligence and discipline levels. Furthermore, evidence from aqua-processing enterprises suggests that export-oriented and high-margin sectors can better undertake worker welfare measures for workers with critical manual skills. Thus, the value for such enterprises' skills is realised to a greater extent in sectors having better growth prospects.

Table 8: Assam - Findings for Enterprises of Varying Size, Scale and Type of Products Being Manufactured

Sl.No.	Product-category of Enterprise (NIC Code)	Classification of Enterprise on the basis of Scale	Number and Wages of different types of workers			Key Attributes of Other Parameters of Good and Better Jobs (Social Security, Working Conditions, Scope of Skill enhancement and Opportunity for Collectivism)
			Type	Number	Wage (INR/month)	
1	Bakery Products	Medium	Machine Operators	15	12000	Social Security: Partial. Not for informal workers engaged for tasks like cleaning works, loading-unloading, etc. Occupational Hazards: Exposure to high voltage and sharp machinery Scope of Skill Enhancement: Poor in non-technical jobs Collectivism: Factory-level worker union and informal community-level collectivism of locals
			Floor Workers	285	9000	
			Supervisors	15	12000	

Sl.No.	Product-category of Enterprise (NIC Code)	Classification of Enterprise on the basis of Scale	Number and Wages of different types of workers			Key Attributes of Other Parameters of Good and Better Jobs (Social Security, Working Conditions, Scope of Skill enhancement and Opportunity for Collectivism)
			Type	Number	Wage (INR/month)	
2	Potato Chips and Snacks	Medium	Defect Identification	20	8800	Same as above
			Inspection and trimming	11	9000	
			Secondary Processing	13	13300	
			Distribution and Packaging	4	9000	
3	Pig Processing	Micro	Processing Workers	5	7500	Social Security: Negligible for informal workers Occupational Hazards: Sharp tools, exposure to electrocution machinery, hygiene-related concerns Scope of skill enhancement: Not for non-technical skills Collectivism: Informal collectivism amongst locals
			Packaging	10	7500	
			Distribution	5	7500	
4	King Chilly (Pickle, Paste, Powder, Sauce, Salts)	Small	Machine Operators	4	5600	Social Security: Nil for connected farmers and informal workers Occupational Hazards: High voltage machinery Scope of skill enhancement: Poor for non-technical works Collectivism: Nil
			Packaging Workers	6	7000	
			Linked Farmers	50	5600	
5	Tea Processing	Micro	Plucking	25	4676	Social Security: Mandated through dedicated legislation and relevant executive orders but not implemented. Poor and unhygienic living conditions Occupational Hazards: Man-animal conflicts, exposure to high voltage and sharp machinery Scope of Skill Enhancement: Negligible for non-technical works Collectivism: Active Unions at Regional Levels
			Helper	3	5600	
			Processing	6	5600	
			Packaging	6	5600	

Sl.No.	Product-category of Enterprise (NIC Code)	Classification of Enterprise on the basis of Scale	Number and Wages of different types of workers			Key Attributes of Other Parameters of Good and Better Jobs (Social Security, Working Conditions, Scope of Skill enhancement and Opportunity for Collectivism)
			Type	Number	Wage (INR/month)	
6	Rice Milling	Small	Helper	3	5600	Social Security: Partial. Not for informal workers engaged for tasks like cleaning works, loading-unloading, etc. Occupational Hazards: Exposure to high voltage and sharp machinery Scope of Skill Enhancement: Poor in non-technical jobs Collectivism: Factory-level worker union and informal community-level collectivism of locals
			Machine Operators	9	11000	
			Packaging	20	9000	
			Loading, unloading	20	9000	
7	Pickle	Household	Family Labour	1	15000	Social Security: N/A Scope of Skill Enhancement: Immense Occupational Hazards: Minimal Collectivism: NA

The State of Assam presents another insightful picture in terms of diversity of products, prospects of indigenous food processing, and entrepreneurship's role in developing the niche category of products in the food processing sector. However, workers employed in the existing enterprises present a grim picture, with comparable results to Punjab and Andhra Pradesh.

Table 9: Meghalaya & West Bengal - Findings for Enterprises of Varying Size, Scale and Type of Products Being Manufactured

Sl.No.	Product-category of Enterprise (NIC Code)	Classification of Enterprise based on Scale	Number and Wages of different types of workers			Key Attributes of Other Parameters of Good and Better Jobs (Social Security, Working Conditions, Scope of Skill enhancement and Opportunity for Collectivism)
			Type	Number	Wage (INR/month)	
Meghalaya						
1	Pickle, Sauce, Jams, Honey, Spices, Fruit & Vegetable Preservation	Micro	Helper	3	9100	Social Security: Partial and limited to skilled roles Occupational Hazards: Limited. Mainly related to boilers used for fruit/vegetable preservation Scope of Skill Enhancement: Presence of skill building opportunities and vertical movement from primary processors to executives to secondary processors and finally managers. Not applicable for helpers/packaging workers/loading and unloading workers. Regular skill training programmes conducted Collectivism: Nil
			Processing	5	10500	
			Packaging	10	9100	
			Loading-unloading	8	9100	
2	Bakery and Fruit Preservation	Micro (Unorganised)	Helper	3	6890	Social Security: Nil Scope of Skill Enhancement: High scope of vertical movement and skill-building due to knowledge spillover Occupational Hazards: Minimal. Limited to use of the high-temperature oven Collectivism: Nil
			Skilled	2	13000	
3	Meat Processing	Micro (Start-up in Incubation Centre)	Processing and Packaging	3	9000	Social Security: Nil Scope of Skill Enhancement: High scope of vertical movement and skill-building due to knowledge spillover Occupational Hazards: Minimal Collectivism: Nil
4	Fruit and Vegetable Preservation	Micro	Unskilled (Cleaning, sorting)	3	6000	Social Security: Nil Scope of Skill Enhancement: High scope of vertical movement and skill building due to knowledge spillover. Regular skill training sessions. Occupational Hazards: Limited to use of boilers for fruit/vegetable preservation.
			Processing	2	9000	

Sl.No.	Product-category of Enterprise (NIC Code)	Classification of Enterprise based on Scale	Number and Wages of different types of workers			Key Attributes of Other Parameters of Good and Better Jobs (Social Security, Working Conditions, Scope of Skill enhancement and Opportunity for Collectivism)
			Type	Number	Wage (INR/month)	
			Sales	2	12000	However all workers, except highly skilled ones, live on processing unit premises and provisions are meagre and unhygienic Collectivism: Nil
5	Wine Making	Micro	Primary processing (Sorting, cleaning, grading)	10	5200	Social Security: Nil Scope of Skill Enhancement: High scope of vertical movement and skill building due to knowledge spillover Occupational Hazards: Minimal. Limited to handling of heavy vessels during brewing process Collectivism: Nil
			Secondary Processing	5	6500	
			Bottling and Packaging	5	5200	
6	Spice and Honey Processing	Small	Helper	2	7800	Social Security: Nil Scope of Skill Enhancement: High scope of vertical movement and skill building due to knowledge spillover Occupational Hazards: Minimal Collectivism: Nil
			Processing	7	15000	
			Packaging	6	7800	
7	Seeds, Grains, Tea and Spice Processing	Micro	Processing	3	10000	Same as above
			Packaging, Loading-unloading	4	7150	
8	Pickle making & Spice Processing	Micro	Processing	2	8450	Same as above
			Packaging	2	7150	
West Bengal						
1	Bought Leaf Tea Factory	Small	Processing	30	6370	Social Security: Nil Occupational Hazards: Exposure to high voltage and sharp machinery Scope of Skill Enhancement: Limited scope of skill enhancement Collectivism: Active Unions and regular bipartite/tripartite negotiations for wages etc.

Sl.No.	Product-category of Enterprise (NIC Code)	Classification of Enterprise based on Scale	Number and Wages of different types of workers			Key Attributes of Other Parameters of Good and Better Jobs (Social Security, Working Conditions, Scope of Skill enhancement and Opportunity for Collectivism)
			Type	Number	Wage (INR/month)	
2	Tea Estate/Garden	Large	Processing	60	4576	Social Security: Mandated by regulations but not applicable to casual labour. Condition of housing, health, drinking water very poor inside plantations/estates. Occupational Hazards: Exposure to high voltage and sharp machinery Scope of Skill Enhancement: Upgradation based on bipartite negotiations but only after 10 years of service. Collectivism: Active Unions and regular bipartite/tripartite negotiations for wages etc.
3	Bakery Products	Large	Helpers	1500	8400	Social Security: Provision for PF and ESI exists but is applicable only after 6 months of continuous service. Occupational Hazards: Extreme temperature conditions inside factory. Exposure to high voltage and high temperature machinery Scope of Skill Enhancement: Limited due to mechanised processes Collectivism: Nil
			Packaging	1000	12300	
4	Tea Blending & Packaging	Micro	Helpers	2	6000	Social Security: Nil Scope of Skill Enhancement: High scope of vertical movement and skill building due to knowledge spillover Occupational Hazards: Minimal Collectivism: Nil
			Processing	8	10000	
			Packaging	8	8000	
			Loading-unloading	4	8000	
5	Noodles	Micro	Processing & Packaging	3	13000	Social Security: Nil Scope of Skill Enhancement: Limited due to mechanised process Occupational Hazards: Minimal Collectivism: Nil

Sl.No.	Product-category of Enterprise (NIC Code)	Classification of Enterprise based on Scale	Number and Wages of different types of workers			Key Attributes of Other Parameters of Good and Better Jobs (Social Security, Working Conditions, Scope of Skill enhancement and Opportunity for Collectivism)
			Type	Number	Wage (INR/month)	
6	Phing	Micro	Processing	3	11500	Social Security: Nil Scope of Skill Enhancement: High scope of skill building due to knowledge spillover across processes Occupational Hazards: Exposure to high temperature materials without appropriate safety equipment Collectivism: Nil
7	Dairy Products	Micro	Processing	3	8000	Social Security: Nil Scope of Skill Enhancement: High scope of vertical movement and skill building due to knowledge spillover Occupational Hazards: Minimal. Limited to use of boilers for making paneer. Collectivism: Nil

In particular, the North-Eastern states, including Assam and Meghalaya covered under this study, seem to be portraying the food processing sector in a better light. This perception is also true for the hill districts of West Bengal. This geographical region has immense potential for the food processing sector due to various varieties of horticulture, agro-produce, and region-specific niche products. Additionally, there seems to be an interesting paradigm with respect to the contours of skill development and entrepreneurship opportunities due to the small size of enterprises, allowing for knowledge sharing across processes. Knowledge spillover, as a phenomenon, derives its attributes from the theories around entrepreneurship. According to the knowledge spillover theory of entrepreneurship, the context in which decision-making is derived can influence one's determination to become an entrepreneur. In particular, a context that is rich in knowledge generates entrepreneurial opportunities from those ideas. By commercialising ideas that evolved from an incumbent organization via the creation of a new firm, the entrepreneur (human capital) serves as a conduit for the spillover of knowledge and the following innovative activity and enhances economic performance through resource allocation.[39]

[39] Acs, Z.J., Audretsch, D.B. & Lehmann, E.E. The knowledge spillover theory of entrepreneurship. *Small Bus Econ* **41,** 757–774 (2013). https://doi.org/10.1007/s11187-013-9505-9

However, size poses a challenge in the case of the provision of social security benefits and working conditions. The small number of workers in such kinds of enterprises also dissuades collective voice.

The following sections discuss the implications of these perceptions from across the five studies on 'Good and Better' jobs in the sector.

Facets of Job Intensity: Decoding the Employment Numbers

According to government stances and industry reflections, the food processing sector in India is primed to be a promising sector for employment generation. According to the Annual Report of the Ministry of Food Processing for the year 2019-20, the average employment intensity calculated as the employment generated by a food processing enterprise per crore of fixed capital investment was 8.[40] Such a metric holds crucial importance in the context of good and better jobs, as policies can be framed by keeping in mind the potential types of activities in which attracting investment would ideally yield in better quality jobs. However, there are various contours to explore the concept of employment intensity of this sector.

Firstly, the employment intensity varies from product to product, as the same annual report shows. For certain product categories like processed fisheries, prepared meals and ready-to-eat products, this figure can go up to 22 per crore of fixed investment, while for enterprises like sugar, noodles and beverages, the employment intensity can be as low as 5 per crore of fixed investment. Thus, from a mere quantum of job creation point of view, certain product categories are better suited for pursuing the employment agenda.

However, this data should be perceived cautiously. Firstly, this is an aggregate level, average data for many diverse enterprises of different size, scale, geographical presence, and other factors. Thus, it is difficult to draw conclusive arguments from such macro-level data. Secondly, many unincorporated and unregistered enterprises that significantly contribute to the sector's landscape are excluded from this employment intensity data as this is only captured for registered enterprises by the Ministry of Food Processing through the Annual Survey of Industry's datasets. Thirdly, any employment-related data of a sector runs the risk of a multiplicity of counting. For instance, a transportation worker for a particular type of food processing enterprise might also be engaged in the transportation of other goods like textiles. Thus, it might be accounted for in the textile sector's overall employment.

[40] https://mofpi.nic.in/sites/default/files/english_2019-20_1.pdf

Furthermore, caution needs to be exercised to distribute average employment across the value chain of processing operations within any enterprise. Evidence from field inquiry suggests that there is a pattern in which jobs are distributed within any enterprise. The majority of the jobs are often in the primary processing stages of sorting, grading and washing or in the ancillary stages of packaging, logistics and transportation. There are a few exceptions to this hypothesis, especially in enterprises that deploy manual methods of core processing or are based on assembly-line production technologies of processing. Table 10 highlights the distribution of jobs in different types of food processing enterprises, as witnessed during the field inquiry in four states.

Table 10: Highlights the Distribution of Jobs in Different Types of Food Processing Enterprises in Four States

	Raw Material Procurement	Primary Processing	Secondary Processing	Tertiary Processing	Logistics
	Loading/Unloading Workers Local Drivers (Truck/Tempo)	Workers in Sorting Washing Grading	Manual Workers or; Machine-based Processing (Mostly)	Workers engaged in Packaging, Bottling	Loading/Unloading Workers Local Drivers (Truck/Tempo)
Employment Intensity (Average) Across Processes (Model Enterprise n=50)					
F&V	15-20%	08-16%	04-08%	14-18%	14-18%
Spices	05-10%	24-32%	05-10%	28-34%	05-10%
Agro-based	10-14%	18-26%	07-12%	20-24%	10-14%
Poultry, Dairy and Meat	08-16%	14-22%	12-18%	10-16%	08-16%
Fisheries	10-14%	12-16%	28-34%	10-14%	10-14%
Plantation	10-16%	06-10%	10-15%	30-40%	10-16%

Thus, the direct implication of investments on job creation in the food processing sector needs to be systematically and categorically explored at an enterprise level.

Nature of Jobs in Mechanised Food Processing

To comment on the quality of existing jobs and assess the potential future jobs, there is a need to understand the system in which enterprises and workers interact. For this, certain key narratives that determine the trajectory of this system need to be deciphered. This section deals explicitly with the narratives shaping the discourse around mechanised food

processing enterprises,[41] which account for a significant share of India's total food processing activity.

Firstly, the primary motives driving both the food processing enterprises and workers engaged in these enterprises are enhancing their incomes and additional reasons like an affinity towards skills or job location. This essentially implies profits for the former and wages for the latter. In a functional and growing scenario of sector's development, more investments in the sector should result in more enterprises flourishing by making increased profits which in turn should entail better wages for the workers. Thus, the economy-wide engine of growth framework also applies in principle to the enterprise-level ecosystem.

However, as data regarding profits and wages suggests, this re-distribution has not happened effectively over the past decades in the economy. Evidence from the field complements this view and suggests that most enterprises invest profits in the the dividends of shareholders or expansion of operations. While the former will contribute to shareholder welfare, the latter will result in an enterprise scaling up its operations. This is one of the predominant narratives shaping the contours of the quality of jobs in this sector and the economy.

Also, given that enterprises pay the workers from their own revenues, there may be a conflict of interest between enterprises and their workers. This conflict is of profits and wages, which has translated into making inclusive growth an oxymoron at the behavioural level.

Secondly, the issue of the cost competitiveness of enterprises becomes vital in this debate. Across the states covered in this study, the enterprises have flagged higher costs being an obstacle for enterprises' growth. These include the cost of starting the enterprise, including the cost of capital, operational costs like raw material, interest payments, fuel and utility charges, labour charges, working capital, warehousing charges, transportation and logistics expenses. Another burden on such enterprises is the compliance cost incurred due to various regulations and laws that they need to comply with.

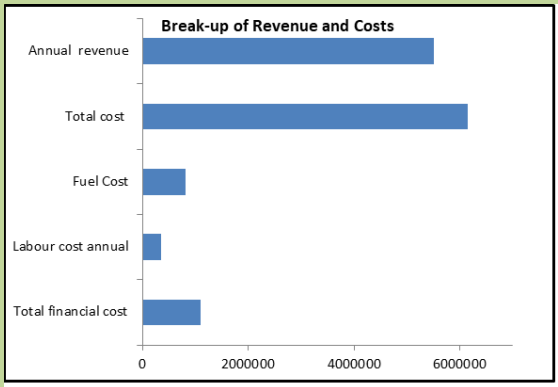
Thirdly, the sub-optimal performance of relevant authorities in correcting the factor costs and other related costs of running an enterprise has resulted in a strategic move by many enterprises to curtail labour costs as a means of cost savings. Therefore, it has become

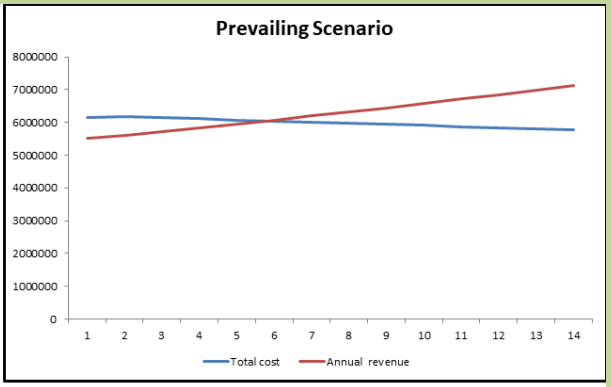
[41] For the purpose of this study, mechanised food processing is defined as the type of processing in which enterprises rely mostly upon machines for the quantity and quality of output and manual skill requirement for core processing is minimal. On the other hand, non-mechanised food processing includes processing enterprises which depend upon manual skills (beyond just machine operators) for the quantity or quality of their output. Examples include household-level enterprises involved in pickle, jam, sauce making or enterprises like gluten-free flour making, where the main determinant skill is of manual sorting of gluten-free grains from the others.

common for enterprises to pay only the amount they are legally obligated to pay to the workers as minimum wages. This criterion may not even be met in unorganised and informal enterprises where the payment of wages is designed so that enterprises tend to reward higher mechanical productivity without providing for necessary worker welfare measures that directly impact the ease of living, and therefore productivity of the worker. Furthermore, the letter of regulations and laws also provides for significant loopholes that allow for such grave omissions in payment of mandated wages or providing for social security and other worker welfare practices.

Box 1: Break-Even Point Assessment and Opportunity Savings for a Model Amla Processing Unit

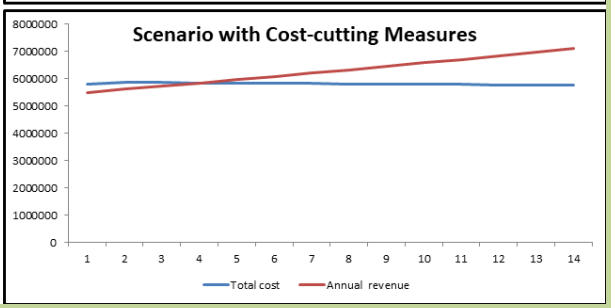
A typical amla processing plant processing 65 tins a day (19 kg per tin of murabba), requires around 1 crore of initial capital investment, including land, plant and machinery and civil works' costs. Under prevailing market conditions, the fluctuating raw material prices of seasonal fruit of amla cause widespread distortions and uncertainties in such processing enterprises' profit margins. The following graphs represent unit costs of operating an amla processing plant of a given size, the time required to break-even under existing price conditions, the avenues of potential cost savings and time to break even under savings' scenario.





Opportunity Savings

Interest Subsidy: 1.75 lakhs per year
Capital Subsidy: 2.5 lakhs per year
Fuel Cost: 1.25 lakhs per year
Total: 5.5 lakhs per year
Total number of workers: 9
Fixed Investment: 1 cr



In conclusion, barring a few exceptions and outliers, three prominent narratives are instrumental in determining the nature of the growth of food processing enterprises and their jobs. These are:

1. Perceived conflict in motives of enterprises and workers
2. Inefficient cost of running a business forcing economies of scale as the only option
3. Compromised worker welfare owing to systemic bottlenecks

A combined effect of these narratives has resulted in a vicious cycle of growth, a contrasting departure from the virtuous engine of growth described in the introduction section. In this vicious cycle, enterprises resort to adopting the scaling-up part to deal with the cut-throat competition to produce their products at the lowest possible cost. Even though enterprises claim that scaling up would result in more jobs and in some cases, even better jobs, evidence from the ground suggests otherwise. The nature of jobs across enterprises of various sizes seems to be a function of structural and systemic realities rather than a function of that enterprise's individual growth. This is evident from the fact that the core issues of lack of income and skill enhancement avenues and compromised working and living conditions are prevalent across all sizes and scale, irrespective of whether such enterprise has gradually scaled-up not.

This race to the bottom gets further intensified by the skewed impact of infrastructure bottlenecks, including hard infrastructure and soft infrastructure. This implies that the disproportionate burden of regulations and approvals, difficulty in availing financial and other incentives, and day-to-day challenges arising from interaction with inspection authorities constitute the soft infrastructural obstacles that incentivise enterprises to resort to cost-cutting strategies. Similarly, challenges faced through means of poor State of affairs of transport, power, fuel, supply chain and other crucial infrastructures constitute the hard infrastructure issues. The combined effect of these issues results in a situation whereby enterprises, to offset the undue cost and time implications of such obstacles, resort to downsizing cost, which directly impacts worker welfare practices by such enterprises.

There is a significant impact on the nature of jobs because of this transition. Firstly, although small, medium and large enterprises provide comparatively better wages to their workers, these wages are only for the few salaried and formal employees. Most of the unskilled work is primarily done by informal workers, often outside the enterprise's premise, through job work arrangements. In such cases, the wages are worse. In both these cases, the average wages paid to food processing workers fall short of those areas' living costs. At the national level, most trade unions' demanded monthly wages are around Rs 18,000, while for most workers in the unskilled and semi-skilled category, the average wages in the food processing sector are around Rs7000-Rs8000 per month. Even for skilled workers, the wages can go up to around Rs 15000 only, which cuts down after payment of social security contributions.[42]

[42] Range of average wages is on the basis of region-wide variations in the wages of different types of products and enterprises

Although patterns and correlations can be drawn between comparatively higher wages in larger enterprises than in smaller ones, the dimensions of informal workers, migrant workers, and ancillary workers (which make up most of the workforce in larger enterprises) need to be accounted. There are no significant differences between the poor conditions of work amongst these categories across different enterprises' scales. However, the potential for income enhancement and other decent jobs parameters presents an insightful story, which is discussed in other sections.

Additionally, 'economies of scale' as a business strategy widens the inequality gap. While the number of jobs may increase substantially, the gap between the incomes of top managers or salaried employees and the semi-skilled or unskilled workers is far more than in the smaller enterprises or household food processing industries. Furthermore, policies and market incentives to promote sectoral and overall economic growth also favour indicators like exports, bottom line, profits, and capacity expansion, rather than promoting more sustainable and inclusive indicators like worker welfare and socio-economic equity.[43]

Given that scaling-up in mechanised enterprises primarily involves more capital, better technology, more land, enhanced plant and machinery, and enhanced production capacity, the type of jobs created through scaling-up operations remains machine-oriented with minimal human elements. In such cases, the scope of skill enhancement remains sub-optimal and therefore, the probability of wages increasing over the years due to enhanced skill uptake by workers remains low. Most of the jobs created due to scaling up operations or enhancing production capacity are easily replaceable skills like machine operators, loading-unloading workers, and other informal workers available in plenty in the current scenario. Because of the cumulative effect of replaceable skills and the problem of plenty, these jobs are ideally not suited for becoming a good and better job. However, there are certain exceptions to this hypothesis, as explained in the case of aqua processing.

[43] https://indianexpress.com/article/opinion/columns/india-unemployment-crisis-economic-growth-covid-pandemic-7249627/?utm_source=newzmate

Box 2: Case of Aqua Processing in Andhra Pradesh

With a long coastline of around 1000 km, the State of Andhra Pradesh has leveraged this endowment by establishing an aqua-processing enterprise for value-addition to the fisheries sector. These capital-intensive, mechanised enterprises offer specific, insightful evidence as far as jobs' nature are considered. Although the risk of working around cold storage and low-temperature refrigerators is significant, another element enhances the prospects of many jobs in such factories. The core factor for this is the irreplaceability of manual skills in performing extremely relevant operations like dethroning, de-skinning and peeling. Given the varying sizes of fish and shrimps, any standardised machine for cutting is not yet in the market, and therefore the criticality of such workers remains high.

In other words, enterprises choose from humans and machines based on failure rates. The source whose failure rate is likely to be lower is likely to be chosen. Machinery is likely to have lower failure rates in the case of standardised and pre-specified products. However, humans may be preferred whenever there is no certainty or predictability (and customisation is prefffered).

Furthermore, with higher scales of operations, there are newer forms of working hazards for the food processing sector workers. Although better technologies do yield ease of working in some instances, the added risks with bigger machines, high voltages, and hazardous machinery also add up in reduced physical labour. Even though human-induced errors are minimised significantly, which also results in easier compliance with export standards, working hazards need to be addressed.

This issue is further aggravated in micro-enterprises operating majorly on machines, as the relatively lower profit margins may act as strong disincentives to invest in safety equipment, hygiene practices and safe conditions for working. Facilities like washrooms are more often than not of low quality and very few. In some instances, like chilly processing, the product itself poses a significant risk and needs careful mitigation. The following case study highlights how unsafe working conditions are better rewarded, owning to the enhanced risk that a worker is willing to undertake.

Box 3: Chilly Processing in Guntoor, Andhra Pradesh

Working Conditions in Chilly Processing, Guntur (AP)

The Job: Tip Cutting, Loading and Unloading & Operation of machine

Good?

Incomes:
Rs 250/day (Tip Cutting)
Rs 500-600/day (stitching of sack +loading, unloading)

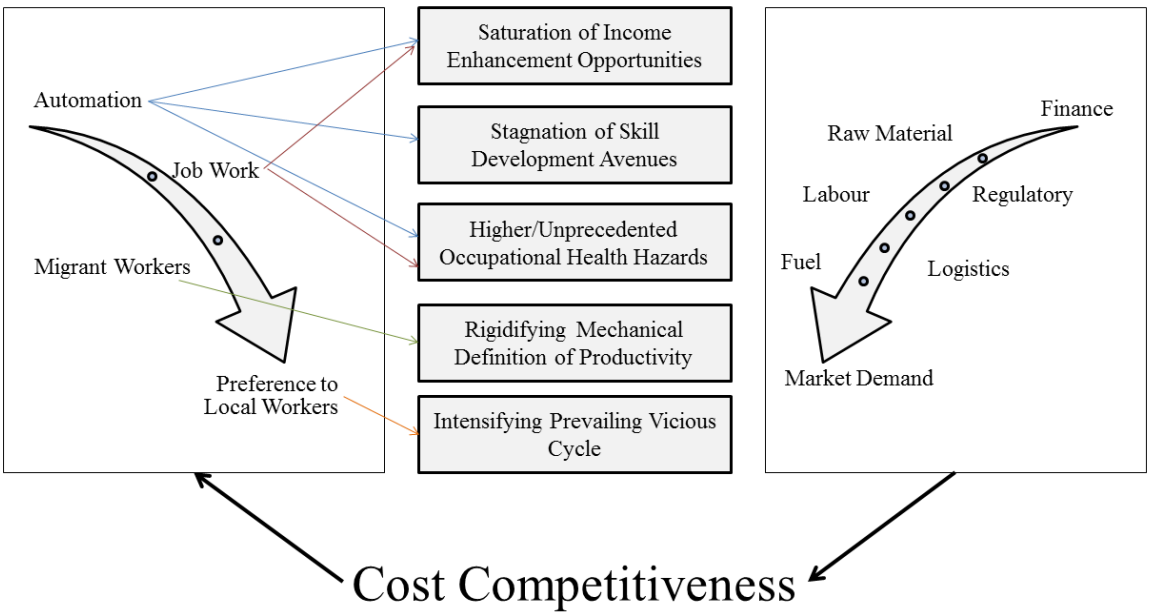
The Job: Seasonal

Tip cutting is done as a separate function outside the factory floor in *haats* or mandis and then the product is sent to mechanised factories for making chilly powder

Social Security:	Skill Opportunities:	Occupational Hazards:	Migration:
Informal Contractors supply the workers. Plus Seasonality.	No core skill enhancement opportunity as only machine-related operations at the factory floor. Tip cutting, although valuable activity, but skill enhancement limited. Also, is largely informal	Eye and skin complications, breathing problem are common in workers engaged in chilly processing. More so in case of informal workers performing tip-cutting functions without any safety equipment	From U.P,Bihar & Assam. Also, in the mandis, there are separate tents for workers from different states with a contractor/supervisor present at the respective tents

These imperatives of increased automation and other factors like policies and infrastructural issues dictate the scaling-up strategies of enterprises adversely impact the prospects of sustainable jobs, which havethe attributes of better wages and the scope of skill enhancement, social security, and safer working conditions. All of such parameters result in a better job and an enhanced condition of living, which may spur the purchasing power of the workerforce and, therefore, the demand in the economy. This is represented in Figure 2.

Figure 2: Cost Competitiveness



Such a system strengthens and rewards a mechanical definition of labour productivity. In this definition, unskilled workers and semi-skilled workers like machine operators are incentivised

to plough in more hours for running the machines to produce more output. Such a mechanical definition fails to account for the worker's skills, the intellectual capital of workers, social security, safe working conditions and better living conditions as enablers for higher motivation to work.

These narratives have also resulted in a scenario where skewed importance is being given to enhancing enterprises' competitiveness but not necessarily holding them accountable for the nature of livelihoods they are providing Inclusivity, rather than being transformed into an actionable business strategy, has remained a superficial concept in economic growth discourse. On the other hand, household food processing enterprises and manual food processing units have significant potential to counter these narratives, as discussed in the next section. There are several ways to ensure inclusivity can be practiced as a business and governance strategy. However, the genesis of such a development is hinged upon infusing behavioural changes in the stakeholders of the economic ecosystem. A conscious strategy of using innovative regulatory mechanisms that rely on effective and intelligent monitoring can be deployed in the short term and an action plan to gradually dilute these regulations for moving towards a self-regulatory scenario. These, along with other mechanisms, are highlighted in the recommendation section of this report.

Household-level and Manual Food Processing Enterprises

In contrast to the economies of scale, which implies jacking up the production capacity of any enterprise, the food processing sector in India is a fit-for-purpose case for economies of scope. This approach implies consciously focusing on diversifying the product portfolios within different enterprises instead of focusing on enhancing the capacity of production of a singular product. Thus, with the diverse variety of agricultural produce prevailing in the Indian context and various niche products of specific geographies, there is a great potential to capitalise on the prospects of manufacturing a wider variety of processed food products, including different variants of a similar product. Therefore, the case of food processing in India offers significant potential to take forward the growth and decent jobs agenda simultaneously through the imperatives of economies of scope.

In particular, micro and household-based enterprises have various attributes that further foster inclusive growth in the food processing sector. These attributes include:

a. **Manual Skills being the Drivers:** At the scale of production of a micro or household-based enterprise, the levels of mechanisation of core processing operations are minimal. Neither being a correlation nor causality, this attribute of such enterprises puts the manual skills at the centre of the processing operations. These could be intellectual skills to identify suitable ingredients, preservatives or raw

materials, and physical skills of using the appropriate proportion of various ingredients of any processed food product. Despite this, the scenario in which such enterprises opt for scaling-up cannot be ruled out, as it is very prevalent in the existing scenarios.

b. **Knowledge Spillover:** It has been observed during the field inquiry that organic clusters of various micro and household-level processing units in the food processing sector have a thriving intra-enterprise, inter-enterprise and inter-cluster knowledge ecosystem. According to one of the pickle maker households of the Mangaldoi region of Assam, the households in such developing areas are constructively competitive and more collaborative when preparing products of the famous Bhut Jolokia (Ghost Pepper), which is grown in abundance in that region. While intellectual knowledge remains a matter of secrecy for most of these entrepreneurs, there is a strong sense of collective development of the product or the region. This also results in sharing practices that enhance the efficiency of such entrepreneurs' production, sharing tips to conserve resources and manage time, amongst others. This also enhances the scope of innovation, smart technology deployment and entrepreneurship.

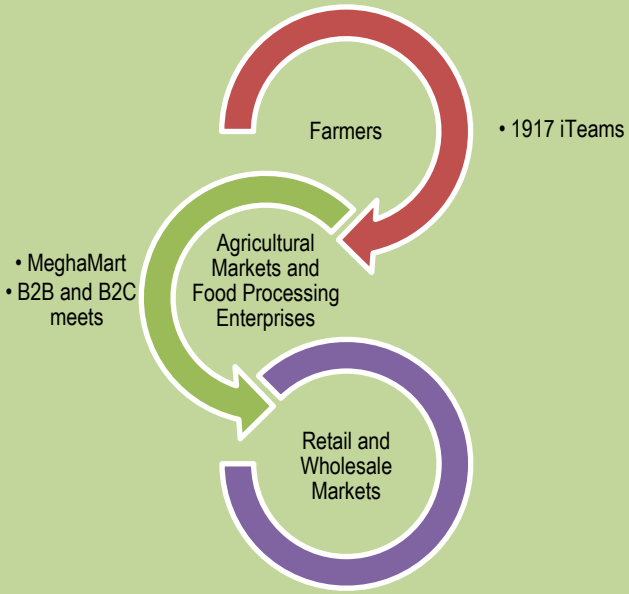
c. **Entrepreneurs as Workers:** During the inception stages of micro and household-based food processing enterprise, manual labour determinants that go into the manufacturing processes are manual skills, physical or intellectual. Often, these enterprises engage family persons as workers to optimise production costs and share the earnings accordingly. Such a set-up represents an optimal structure of required number of people with specific skillset; the per capita earnings are also substantial and analogous to larger enterprises' revenues. Thus, instead of a trickle-down payment system, such a model represents a revenue-sharing model of workers. This causes better prospects of per capita earnings and opens up other avenues of work, including business development, portfolio diversification, and managerial. Therefore, theoretically, household-based enterprises offer better prospects of sustainable and better jobs for their constituents.

d. **Institutional Support:** There are dedicated channels to provide institutional support for research and development, handholding support for availing various certifications and permits, credit-based support and knowledge support for household-based enterprises and MSMEs. However, such support for prospective entrepreneurs who are stepping into the business domain is mainly missing in remote geographies, particularly for socially and economically vulnerable groups. Additionally, although the sector boasts of having the potential to employ women entrepreneurs, there seems to be a lack of concrete policy support that delivers on this promise. One exception would be the Meghalaya Institute of Entrepreneurship which is actively

involved in the training and facilitation of micro and household-based entrepreneurs. Nevertheless, micro and household-level enterprises' potential for accessing the institutional support ecosystems and leveraging their enterprises and knowledge base is significant in the Indian context.

Box 4: Meghalaya Institute of Entrepreneurship as the Ideal Facilitator

The food processing sector in Meghalaya has found a guide in Meghalaya Institute of Entrepreneurship (MIE) which is one of the nodal agencies for bridging the gaps between farmers, entrepreneurs, infrastructure and markets. MIE operates through a multi-pronged approach to build these linkages. This involves a platform for agri-management (1917 iTeams), an online retail marketplace (MeghaMart), physical retail stores (Meg Store), buyer-seller meets and international food shows. They are also actively involved in trainings and workshops for ensuring their cadre of entrepreneurs are equipped with the necessary technical and procedural know-how.



The Road Ahead: Economies of Scale vs. Economies of Scope

For most of the micro and household enterprises that this study covered across the select geographical regions, the motive for enterprise development happens to be personal economic growth of self and the enterprise, and growth of the product (if local variety or niche product) or the region (if under-developed locality). This intrinsically includes the aspects of inclusivity of growth being the driving factors for most entrepreneurs. Thus, such household-based enterprises' objectives for starting their food processing business seem to be inclined towards furthering the narratives of good and better jobs.

However, for many entrepreneurs, the means to achieve this is essentially scaling up in terms of the capacity of manufacturing and not necessarily the scope of products being manufactured. Notable exceptions exist, especially in the cases of niche, indigenous, and

local varieties of products like shrimp in Andhra Pradesh, fruit wines, and Lackadong turmeric in Meghalaya, Bhut Jolokia in regions of Assam, amongst others.

This divergence in the means to achieve enterprise-level growth has significant implications on the quality of jobs so generated during this course. In the case of scaling-up of manufacturing capacity through automation, and hence standardisation of products, the jobs so created are predominantly of the type that was discussed in the previous section on mechanised food processing. This implies that most job creation is in ancillary and informal segments like loading-unloading and primary processing operations, which are low-paying, not covered under social security, highly precarious in terms of job security and a high degree of saturation of skill enhancement opportunities.

Furthermore, such an automation-driven strategy of growth has serious consequences for the financial viability of the enterprise and the sector itself. In the long run, investing heavily in plant and machinery that produces a similar type of product can result in a supply-glut and thus, reinvigorate the demand-slowdown cycle already ailing the Indian economy before the pandemic.

Secondly, for a household-level enterprise to scale-up to the levels of micro, small, medium or large scale, requires significant capital investment and a competitive and supportive ecosystem of enterprise development. As discussed in the previous sections, the impact of the lack of soft and hard infrastructural facilities for running a business in India is proportionally high for smaller-scale enterprises. Therefore, for the initial phases of gradual expansion, the adverse impact of such bottlenecks on enterprises acts as a barrier to achieving a cost-competitive ecosystem while adversely impacting the nature of the jobs and the future potential of fostering the quality of the jobs involved.

Finally, the jobs so created do little to enhance the purchasing power of its takers because of the nature of these jobs. Thus, instead of enabling the virtuous cycle of an engine of growth, such a strategy hampers the prospects of inclusive growth by putting into motion a vicious cycle of creating bad and worse jobs.

On the other hand, evidence from field inquiry suggests that investing into economies of scope, by focusing on niche products, applying intellectual and manual skills for diversification of product portfolio and growing in an organic and cluster-based manner, can generate good and better jobs. The core attribute of economies of scope remains the skill capital that goes into the business strategy for delivering on the promises of economies of scope.

Box 5: Diversification in Fruits and Vegetables Processing – An example from Meghalaya

For a state with different varieties of fruits and vegetables for every season, these become a rich source of raw material for the food processing sector and an excellent opportunity for locals to set up MSMEs using readily available low-cost inputs. An example would be that of Silda Thabah, an energetic entrepreneur with training from CFTRI, who has set up her fruit and vegetable preservation centre in the heart of Shillong. The seasonal nature of her raw material helps her preserve them and provide a wide variety of end products ranging from jams, sauces, pickles and even wine. Thus, building on her product portfolio helps her overcome the challenge of economies of scale and supply products based on immediate market needs.

There can be cases of fostering niche products' development through heavy machineries, as virgin coconut oil witnessed in Andhra Pradesh. Even such a strategy can only provide good quality jobs in segments where skill is the determining factor. The following comparative box story of this coconut oil processing and gluten-free flour making reiterates this narrative.

Box 6: A Tale of Two Enterprises (Mechanised, yet producing premium products)

Case Study 1: Virgin Coconut Oil

- Imported Machinery → Capital Intensive
- Employment Avenue for Locals → Machine Operators
- Niche Market → Health Premium

Case Study 2: Gluten-free Flour

- Niche Market → Health Premium
- Manual Skill → Irreplaceable by Machines
- Less Capital Intensive

Conclusion and Recommendations

One of the key conclusions of this report is that although the potential of growth of enterprises and workers in the food processing sector in India is significant, the current scenario is skewed towards the former only. Although such an investment-led, financial capital-driven approach can aid in the sector realising its potential as a "sunrise" sector, it will not be an inclusive and equitable growth model.

Furthermore, suppose this sector's growth is only envisaged through investments in mechanisation and automation. In that case, there will be a huge gap between the demand of skills required for jobs created through this and the workforce's current status in India. As mechanisation is bound to create more technical jobs like technicians of machines, repair and maintenance workers, amongst others, it requires skills that most of the workers seeking jobs don't possess as of yet.

Therefore, as an immediate strategy, it is the need of the hour to shift the focus from physical capital to human capital while planning for sector's future. This implies that manual skills, both physical and intellectual, need to be placed at the centre of this discourse.

With this dogma in mind, the obvious trajectory for growth becomes one which rewards, facilitates and enables a model of enterprise growth in which human skills are indispensable to food processing. Therefore, a product-diversification strategy which translates to economies-of-scope holds better potential of enabling good and better jobs in this sector, than an automation-focused approach of economies of scale.

If analogy from the textile and clothing sector is invoked, the garment manufacturing sector, where skills remain the core determinant of enterprise well-being as well as worker well-being, the condition and scope of good and better jobs is significantly higher. Similarly, the need of the hour for food processing sector is to strengthen the push for creating jobs that reward human skills in the immediate term and wisely choose the route of mechanisation on the basis of not just financial viability but human-centricity of jobs so created.

Additionally, given that in the existing scenario, the distribution of employment intensity is such that the ancillary operations employ significantly more number of workers than the core processing operations, there has been a lack of agency for the workers of this sector. However, in cases where unions were present, the conditions of workers seem to be

marginally better but sustainability of such arrangements owing to rigid power dynamics against the workers remains questionable. Hence, there is a need to reform the way collectivism has continued to happen in the Indian context and move towards a narrative-driven, evidence-based, human-centric mode from a mere political mode.

This also links to the macro-economic objectives of fostering the virtuous cycle of growth, rather than converting it into a vicious cycle that promotes and widens inequality, creates unsustainable and undignified jobs and thrusts upon financial capital being the growth determinant instead of human capital.

Recommendations

Data: There is a significant gap in the data available at the central as well as state level regarding food processing enterprises ad workers engaged in them. Hence, there is a need to ramp-up the quality and coverage of data currently captured for enterprises and workers in the food processing sector, just like in many other sectors. The ideal way to undertake this is by adopting a decentralised and bottom-up approach with having industrial zones, sub-districts or districts as the unit of collection of such data.

Additionally, there is also a need to expand the horizon of labour-related data from mere numbers to other parameters including incomes, living conditions, working conditions, social security coverage, scope of skill enhancement, scope of income enhancement, amongst others. This would require the state machinery to jack up its own capacity and also take on board civil society organisations working at the grassroots. The databank, so created, may also be used for analysing and developing region/product/process specific interventions for improving the wellbeing of enterprises and workers engaged with them.

Further to this, the policy schemes and regulations should be reviewed to assess whether they reward only enterprise expansion or worker welfare as well. Enterprises which might not be growing in the conventional sense of production and capacity, might be providing better prospects of worker welfare as well as enterprise welfare through higher profits. Such enterprises should be explored as case studies to formulate plans for governance of manufacturing sectors.

Financing and Credit: One of the major challenges faced by food processing enterprises is inadequate formal credit options and lack of access to financing. This may be due lack of awareness amongst beneficiaries or a trust deficit between providers of credit and beneficiaries. To address the challenges of rent-seeking behaviour in the existing ecosystem of credit facilitation as well as information asymmetry amongst the stakeholders, there is a need to ensure smooth facilitation of availing of credit by prospective entrepreneurs.

Wages and Social Security: The food processing sector is characterised by informality, low incomes and negligible social security for workers, especially in non-technical type of jobs within enterprises across India. One of the many reasons for such characterisation is a large presence of informal, micro and small enterprises increased automation and relatively lesser value addition by the workers.

For informal, micro and small enterprises, the modus–operandi of evading minimum wage requirements and social security obligation is by not expanding to more than 9 employees. For medium and big enterprises, it is via abolishing direct relation between the enterprise and worker. These enterprises prefer to hire workers through a contractor and most of the time sub-let their work to other smaller enterprises to evade legal compliances.

Even though India has a new law, Code of Wages, which is meant to reach out to all 50 crore workers, as opposed to the previous disaggregated legal regimes, which not only suffered from sub-optimal coverage but also poor compliance, it is yet to be seen how effective it will be given that universal coverage is still only partially proposed with limiting thresholds still in place.

Additionally, wages need to be looked at in a dynamic manner and not just a static-snapshot of incomes earned by the workers on a particular day. This implies exploring the ladders of professional growth for different types of workers beforehand and institutionalising a focused on-the-job skill training regime. For smaller enterprises like household and micro units, active state-support should be provided in order to bring them to level playing field in terms of skilling their existing workforce.

Occupational Health and Safety: The State and relevant departments must ensure the implementation of existing rules and regulations related to occupational health and safety. For this purpose, effective and continuous monitoring of enterprises by leveraging technology is imperative. This may be facilitated with the help of advanced remote monitoring systems such as drones. Additionally, the State must ensure to bring about innovative business models in collaboration with private sector and philanthropy to ensure that disproportionate burden of compliance with such OHS standards do not fall on the smaller enterprises in the sector.

This implies that the priority should remain safer working environment at all places, but the system disadvantages faced by smaller enterprises should be addressed as a priority as well. This can be achieved by attracting finances through philanthropy, civil society interventions, community-based funding mechanism like bonds (Good and Better Jobs Bonds), etc.

Skill Development: Skill development initiatives need to be introduced across the spectrum of jobs through a concerted effort of the government and the enterprises. While the relevant government departments should focus on overall skill development through free

certification courses, the enterprises must also introduce training modules or courses on on-the-job skills. The existing ecosystem of skill development through Qualification Packs (QPs) and training modules being designed by sector skill councils needs a careful review. This should ensure that the process followed for preparing and implementing training modules is an informed one and focuses on skills that can enhance the probability of the skilled worker availing good quality jobs.

One of the major drawbacks of various skill development programmes in place in food processing sector is the underfunded status of such missions and the gap between skill imparted and skill required for jobs. Therefore, focused efforts on enhancing the fund allocation for skill development missions and at the same time also ensuring effective and sustained placements are required.

Source Analysis: The food processing sector is also dominated by migrant workers coming from other states. There is a need to carry out a source analysis, i.e. analysis of those regions from where such workers are coming. The purpose of doing such an analysis would be to assess the feasibility to take similar jobs near the source of labour. This can create a greater spread of industrial activity and increased political agency for the workers.

Innovative Models for Worker Well-being: In the food processing sector, there is a need to institutionalise innovative models of ensuring worker welfare in various kinds of enterprises. Creating performance-indexes for various types of food processing enterprises and modifying policies to ensure that higher performance on ensuring worker welfare are better rewarded may be a way forward. Alternatively, a proportional model (higher degree of regulation on enterprises of higher scale) of incentivising enterprises to value workers can be adopted in a phased manner, starting from a pilot exercise maybe. This implies that subsidies and incentives can be directed to enterprises in a conditional manner upon checking and certification by independent evaluators regarding the nature of jobs and implementation of worker welfare models.[44]

Policy Support: As the food processing sector falls in the overlap of agriculture and industry, there are grey areas regarding policy/scheme formulation and implementation at the ground level. This may also lead to lower coverage of or access to the relevant policies/schemes. Thus, the policies/schemes developed for the food processing sector should be done in a harmonised and comprehensive manner, ensuring coverage for the different categories of enterprises and workers in the sector. Further, the policies governing food processing sector should ensure that there is a level playing field for all types of enterprises irrespective of their size or scale.

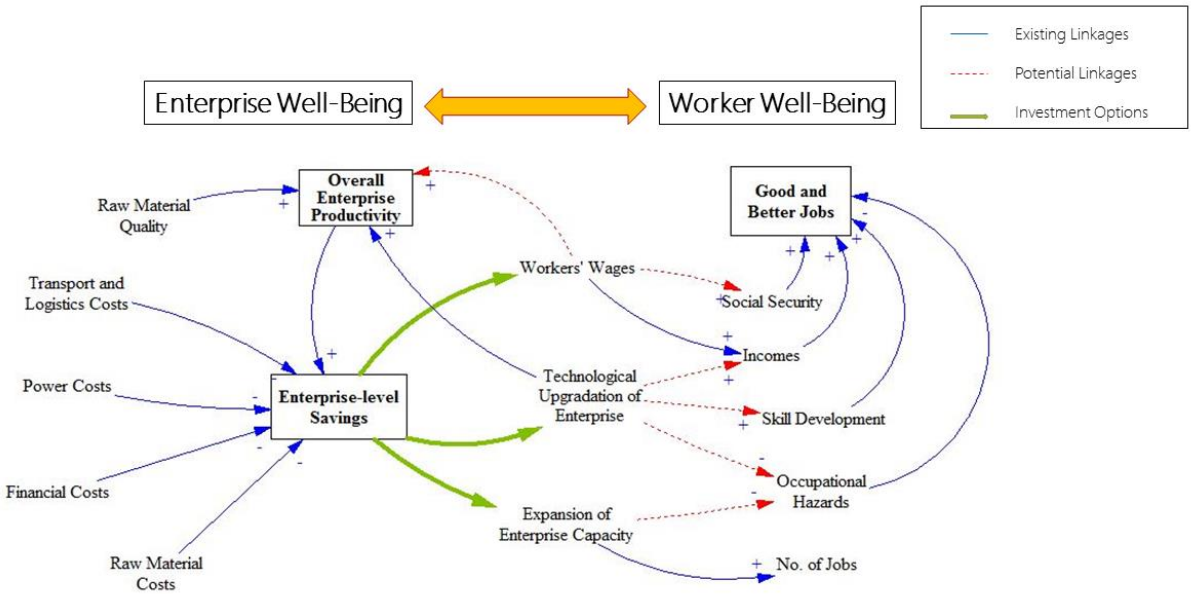
[44] More details on such models can be viewed here: https://cuts-ccier.org/pdf/a-note-on-models-for-facilitating-worker-welfare-in-india.pdf

Additionally, initiatives such as 'One District One Product' or product-specific 'Missions' initiated by the relevant nodal ministries should be promoted, in order to provide additional support to enterprises involved in processing of niche/indigenous products and in turn improve worker wellbeing and capacities. Finally, these should be created in an informed and consultative manner by keeping in mind the larger issues of market reforms and competition.

Cluster Development: Insights from the field have highlighted the presence of a large number of household level enterprises and MSMEs in the food processing sector. While, small sized enterprises provide opportunities for capacity building and knowledge sharing but they often face difficulties of accessing infrastructure or policy support. Thus, there is a need for developing clusters of food processing across the regions to ensure that bottlenecks of hard and soft infrastructure can be addressed by providing common or aggregated facilities

The Compact between the State, the Industry and the Community: There is a need for greater collaboration between the State, businesses and the worker community. They need to enter into a compact where the State essentially focuses on correcting supply-side distortions and the industry passes substantial efficiency gains to the labour and also creates processes where the skill of labour is valued. Also, there is a need for constructive contribution from the worker community through a voice or agency to ensure holistic growth. This will bring about the best guarantee against consumption slowdown and fostering a truly resilient post-pandemic recovery at an aggregate level.

Figure 3: A Snapshot of Well-Being of Enterprises and Workers



It is imperative that for profit-making enterprises, the goal will be an optimal reduction of costs. However, given the critical role of labour in the entire production process, it becomes the need of the hour to look beyond costs when considering the labour-force and its well-being. The following figure highlights the existing linkages between different systems, which are ensuring enterprise productivity and well-being. It showcases the potential linkages that need to be institutionalised to attain simultaneous worker and enterprise well-being. The potential linkages highlight the crucial linkage between the well-being of the labour-force and an enterprise's productivity.

Annexure 1

Details of the Project Advisory Committee

S.No.	Name	Profile
1	Arun Maira	Former Member, Planning Commission of India
2	Sudipto Mundle	Emeritus Professor & Board Member, NIPFP
3	Amit Kapoor	President, Institute for Competitiveness
4	Gautam Mody	Secretary, New Trade Union Initiative
5	Himanshu	Associate Professor, Jawaharlal Nehru University
6	R. Nagaraj	Professor, Indira Gandhi Institute of Development Research
7	Sabina Dewan	President and Executive Director, Just Jobs Network
8	Rituparna Chakraborty	Co-Founder and Executive Vice President, TeamLease Services Ltd.
9	Samar Verma	Programme Officer, Ford Foundation
10	Radhicka Kapoor	Fellow, ICRIER
11	Anu Gupta	Head, Skills, Foreign, Commonwealth and Development Office
12	Abhishek Kumar	Partner, INDICC

CUTS International

Established in 1983, CUTS International (Consumer Unity & Trust Society) is a non-governmental organisation, engaged in consumer sovereignty in the framework of social justice and economic equality and environmental balance, within and across borders. More information about the organisation and its centres can be accessed here: http://www.cuts-international.org.

CUTS International

D-217, Bhaskar Marg, Bani Park, Jaipur 302 016, India
Ph: 91.141.228 2821, Fax: 91.141.228 2485
Email: cuts@cuts.org, Website: www.cuts-international.org

Also at Delhi, Kolkata and Chittorgarh (India); Lusaka (Zambia); Nairobi (Kenya); Accra (Ghana); Hanoi (Vietnam); Geneva (Switzerland) and Washington DC (USA).