

Labour Standards, COVID-19 and India's Export Performance

Sony Agrawal¹, Nalin Bharti²

¹PhD Scholar, Department of Humanities and Social Sciences, Indian Institute of Technology, Patna, Patna, India

² Professor of Economics and DPIIT IPR Chair Professor, Department of Humanities and Social Sciences, Block 6, Indian Institute of Technology, Patna, Patna, India

ABSTRACT

The COVID-19 pandemic significantly disrupted labour markets globally, with particularly adverse effects in economies characterised by intense informality and labour-intensive production frameworks. In India, where more than 90 percent of employment is informal, the crisis led to a substantial deterioration in labour standards, reflected in rising unemployment and informality, especially among women, declining real wages for workers, widening gender differences, significant working-hour losses, and limited social protection benefits. This study examines how the decline in labour standards during the COVID-19 pandemic affected India's labour-intensive exports during and after the crisis. Using secondary data from the Periodic Labour Force Survey (PLFS) and the International Labour Organization (ILO), as well as wage databases, the descriptive analysis integrates labour standard indicators with India's trade performance. The findings show that labour-intensive export sectors such as textiles, apparel, gems and jewellery, leather, handicrafts, and marine products faced acute supply-side constraints due to reverse migration, workforce instability, and low wages, while gendered employment losses constrained the robustness of high-skill service exports. Moreover, labour-intensive exports perform worse than aggregate merchandise exports even after the pandemic recovery, indicating persistent structural vulnerabilities rooted in weakened labour standards. The study demonstrates that labour standards are critical determinants of trade competitiveness and that aligning labour-market reforms with trade policy is necessary for ensuring inclusive, resilient, and sustainable integration of India into global markets.

KEYWORDS: Labour Standards; International Trade; Informal Employment; COVID-19; India; Global Value Chains

INTRODUCTION

Labour standards comprise a critical foundation for the functioning of modern economies, influencing not only employment arrangements but also overall measures of productivity, competitiveness, and participation in global trade. The output produced by firms that comply with internationally recognised labour standards, as suggested by the International Labour Organisation (ILO), is more strongly demanded in global markets, especially by developed countries. For developing countries such as India where informal employment constitutes a major share of the workforce, maintaining such labour standards becomes challenging. The COVID-19 pandemic led to unprecedented disruptions in Indian labour markets by creating structural vulnerabilities in employment conditions and generating supply-side shocks in

labour-dependent export sectors. In addition, India's economic growth was negative in 2020 (Reserve Bank of India, 2020).

Over the past two decades, labour standards in India have been rising and informality has been gradually decreasing with a steady improvement in labour laws based on agreements with the ILO.

However, the ILO claims that outbreak of COVID-19 reversed this trend with the implementation of a nationwide lockdown in order to prevent the spread of the virus. These measures had devastating impacts on most workers, especially informal workers. Many of these workers are inter- and intra-state migrant workers who lost their livelihoods in urban areas during the lockdown. This resulted in the reverse migration of workers from industrial centres to their villages. Thus, disturbances in labour supply chains due to the sudden halt in economic activity disrupted India's goods export base, including textiles, handicrafts, apparel, footwear, construction-related activities, transportation services, and other small-scale manufacturing sectors.

The outcomes of labor-market instability extend far beyond employment levels. In a global economy where adherence to labour standards is incorporated into trade agreements, and production is increasingly organized through fragmented global supply chains, any decline in labor standards directly affects a country's export market. The developed economies of Europe, North America, and East Asia increasingly require firms to comply with basic workers' rights, safe working conditions, non-discriminatory employment policies, and other conditions related to job security. The weakening of these labour standards during COVID-19 affected India's ability to maintain and expand its global trade position.

Given this context, the present study examines the relationship between labour-market deterioration and India's trade outcomes during and after the COVID-19 crisis. It aims to demonstrate that labour standards are an essential factor in a country's global economic integration, rather than merely a domestic employment concern. The study provides a comprehensive insight into how COVID-19 reshaped India's labour-trade linkage by conducting a graphical analysis of labour-market dynamics within its trade-oriented conceptual frameworks.

LITERATURE REVIEW

Research aimed at comprehending the relationship between labour standards and international trade has expanded significantly in recent decades. Traditional trade theories, such as Ricardian comparative advantage and the Heckscher-Ohlin model, consider labour as an important determinant of factor endowments and productivity, thereby influencing trade performance. However, these theories abstract from labour standards and labour-market institutions as explicit factors shaping a country's trade outcomes. While modern trade theories like institution-augmented Heckscher-Ohlin models, New Trade Theory introduced by Krugman with labour-market frictions, and Melitz-type firm-heterogeneity frameworks, place considerable attention on labour-market institutions in shaping trade among countries. Moreover, with the expansion of global value chains (GVCs) and the disintegration of production processes across borders, academicians increasingly acknowledge labour standards as essential determinants of supply-chain stability and export competitiveness.

Gereffi and Fernandez-Stark (2016) highlight that as production expands globally; demand-driven supply chains establish new standards where firms ensure non-discrimination, wage equity, and workplace safety for workers. Firms in developing economies that fail to meet these standards remain confined to low-value segments in global markets. Empirical evidence suggests that labour standards enhance productivity, innovation, and long-term industrial growth. Stiglitz (2007) identifies that improving working conditions

strengthens human capital and lowers employee turnover, thus improving labour productivity. On the other hand, weak labour laws, informal employment, wage discrimination, and low wages may offer short-term cost advantages of firms but hinder long-run structural transformation. Kucera & Sarna (2006) find that informality reduces firm productivity, constrains global markets integration, and undermines firms' ability to comply with stringent labour provisions outlined in trade agreements across South and Southeast Asia. The COVID-19 pandemic further reinforced interest in studying the relationship between labour standards and trade. Baldwin and Evenett (2020) illustrate that the pandemic caused major disruptions to labour-dependent supply chains, emphasizing that export interruptions occurred not merely from a reduction in buyer demand but also from mobility restrictions and employment losses. The International Labour Organization (ILO, 2021) estimates that the crisis has affected the employment and households of 1.6 billion informal workers, representing 76 percent of the global informal workforce, with the greatest impact in developing countries.

In the Indian context, an extensive body of literature has examined the effects of the pandemic on labour markets. Previous studies by Walter (2020), Sharma et al. (2021), and Ghose and Kumar (2021), among others, assessed workforce displacement, loss of working hours, low wages, and substantial job losses among migrant workers, especially women. These studies highlight the weaknesses in India's labour laws, which increase the vulnerability of informal workers during economic crises. Research by Ramakumar and Kanitkar (2021) shows that India's merchandise exports fell due to shutdowns in labour-intensive industries, which compelled labourers to leave their workplaces and reverse-migrate to their hometowns. Despite these contributions, the literature lacks an integrated linkage between India's labour-market deterioration during COVID-19 and its trade performance.

From the prevailing literature, we find a dearth of research analysing the association between pandemic-induced labour-market disruptions in India and its trade outcomes. Most studies treat the labour and trade determinants separately. Few papers address how labour standards affect export stability, labour-related enforcement in trade agreements across countries, or long-term penetration in global value chains. This paper aims to fill this gap by integrating labour standards data with trade-oriented analysis, therefore treating labour standards as an important variable influencing India's trade position in global markets.

METHODOLOGY

The study employs a descriptive and analytical research design using secondary data to examine the relationship between labour standards, COVID-19 disruptions, and India's trade performance. The methodology connects labour standard indicators with trade-related conceptual reasoning to assess how pandemic-induced shocks to informal employment, the gender wage gap, and the working conditions of workers affected India's export markets and its integration into global labour supply chains.

The analysis relies on secondary data sources derived from the Periodic Labour Force Survey (PLFS), published by the National Statistical Office, Government of India, for analysing labour standard indicators such as the unemployment rate, labour-force participation rate, inactivity rate, working hours lost, wage discrimination, and gender differences in labour market participation in India. Real wage data for both males and females in rural non-agricultural occupations, including masonry, carpentry, bidi work, weaving, non-agricultural labour, and construction work, are accessed from the Wage Rates in Rural India database available on the EPWRFITS platform. These datasets provide consistent time-series information that facilitates relative comparisons of pre-COVID, COVID-period, and post-COVID labour standards in India.

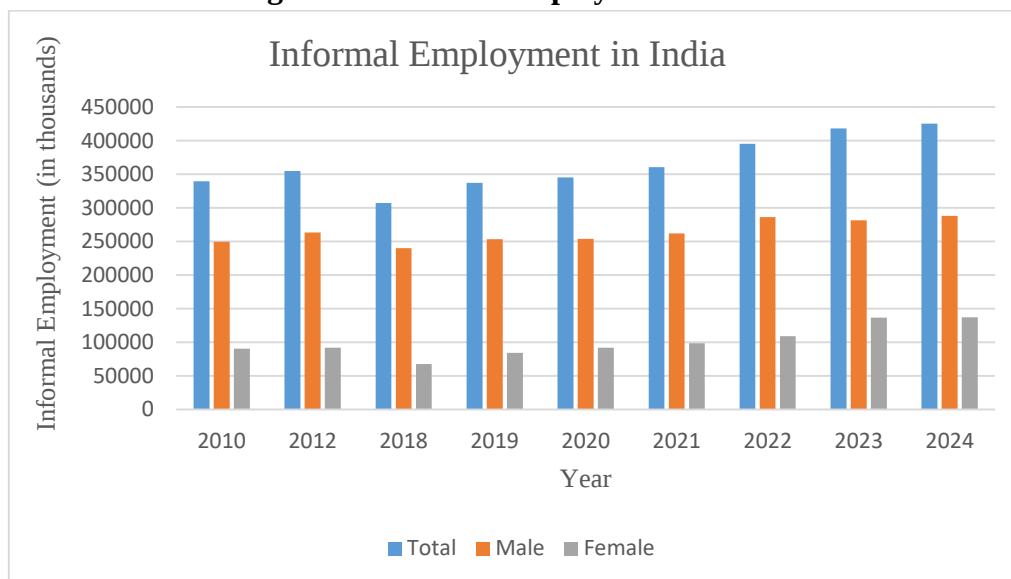
Additionally, the study was conducted using data on the percentage of the population receiving social protection benefits, the gender wage gap, working-hour losses, and informal employment in India sourced from the ILO statistical databases. These data sources provide a clear picture of where India's labour standards lie and how they affect international trade. Trade performance particularly exports from labour-intensive sectors and aggregate merchandise exports is analysed using data from the Export–Import Data Bank of the Ministry of Commerce and Industry, Government of India.

Although the study does not utilize econometric modelling due to data limitations in the sectoral trade-labour linkage, a descriptive analysis has been conducted, which proceeds in two stages. First, labour standard indicators are examined to identify structural shifts caused by the pandemic. These include changes in employment, informality, real wages, gender wage and participation gaps, and social-security coverage. Second, these indicators are interpreted through graphical analysis to understand how labour standards affected India's labour-intensive export sectors during the pandemic and after the pandemic. The resulting insights contribute to understanding the structural vulnerabilities that restrain India's trade resilience and highlight the importance of labour-standard improvements in post-pandemic economic strategy.

DESCRIPTIVE ANALYSIS OF LABOUR STANDARDS AND THEIR IMPLICATIONS FOR TRADE COMPETITIVENESS

1. Unemployment Dynamics and Rising Informality during COVID-19

Figure 1: Informal Employment in India



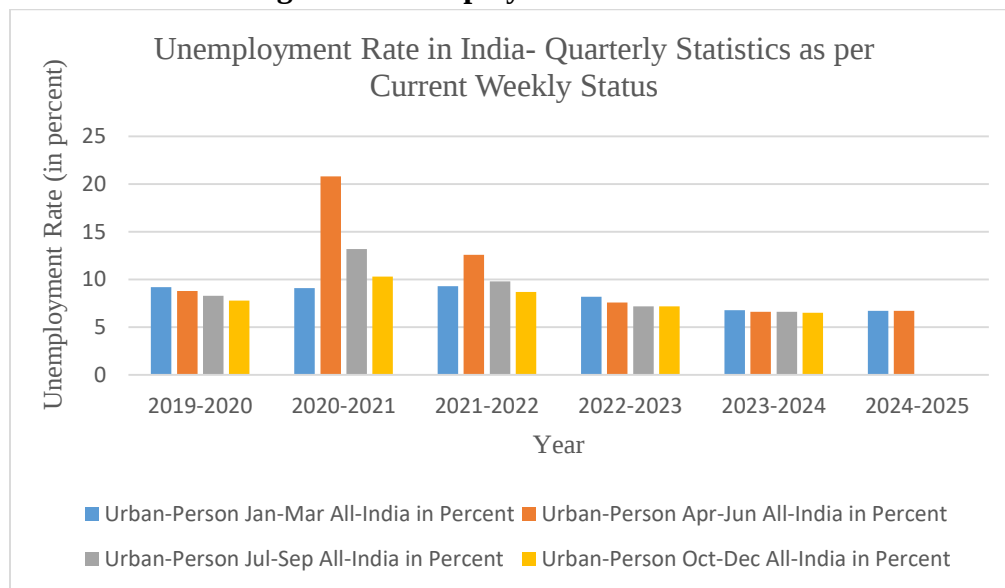
Source: Statistics and Databases, International Labour of Organisation, <https://www.ilo.org/global>

The figure shows significant growth in informal employment in India between 2010 and 2024, increasing from about 340 million to 425 million workers, despite a short-term reduction in 2018. The expansion of informality after 2021 suggests that the labour force increasingly shifted towards informal work due to the limited availability of formal jobs during the post-pandemic period. Male workers constitute the majority of informal employment with a relatively steady growth pattern, whereas female informal employment is more fluctuating. It declined considerably in 2018 but increased sharply after 2020. The rise in female

informal employment in recent years shows that women are increasingly relying on informal work due to limited formal employment opportunities. This trend highlights the instability of India's labour market. The rise in informality affects India's trade performance. Labour-intensive export sectors such as textiles, footwear, leather products, handicrafts, and gems and jewellery depend extensively on migrant and informal workers. Reverse migration during the pandemic led to the disruption in established production networks, resulting in supply-chains breakdowns, shipment delays and the cancellation of export orders. With the expansion of informal employment, a growing share of workers in export-oriented industries remained outside the coverage of labour regulations, limiting their access to workplace safety, fair wages, and employment security. This weakened labour productivity, heightened labour compliance risks, and constrained India's export supply capacity in global markets.

India's trade negotiations with partners such as the European Union, the United Kingdom, and Canada require the inclusion of core labour standards and transparent supply-chain networks in trade agreements (FTAs). However, the substantial presence of informality limits India's ability to effectively implement these labour-related provisions.

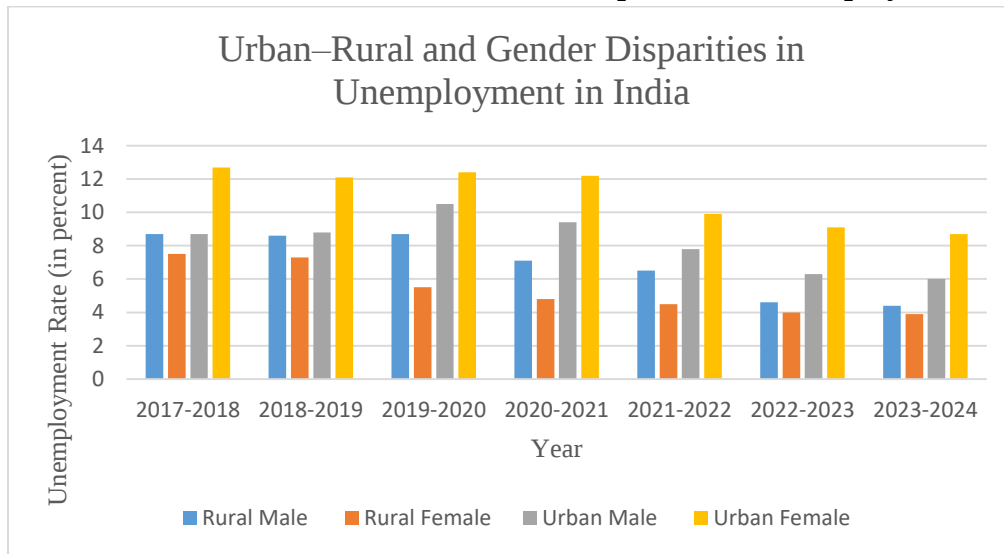
Figure 2: Unemployment Rate in India



Source: NSO (MoSPI), Periodic Labour Force Survey: Quarterly Bulletin

The above graph shows that there is a substantial increase in the urban unemployment rate during the COVID-19 pandemic. During the April to June quarter of 2020–21, the urban unemployment rate peaked at 20.8 percent due to nationwide lockdowns. After that, unemployment declined steadily to around 7 percent by 2022–23 and less than 7 percent in subsequent years. This reduction does not indicate improvement in formal employment. Instead, it largely reflects labour absorption into informal, self-employment, and casual work amidst limited formal job opportunities, as shown in Figure 1.

Figure 3: Trends in Rural–Urban and Gender Disparities in Unemployment in India

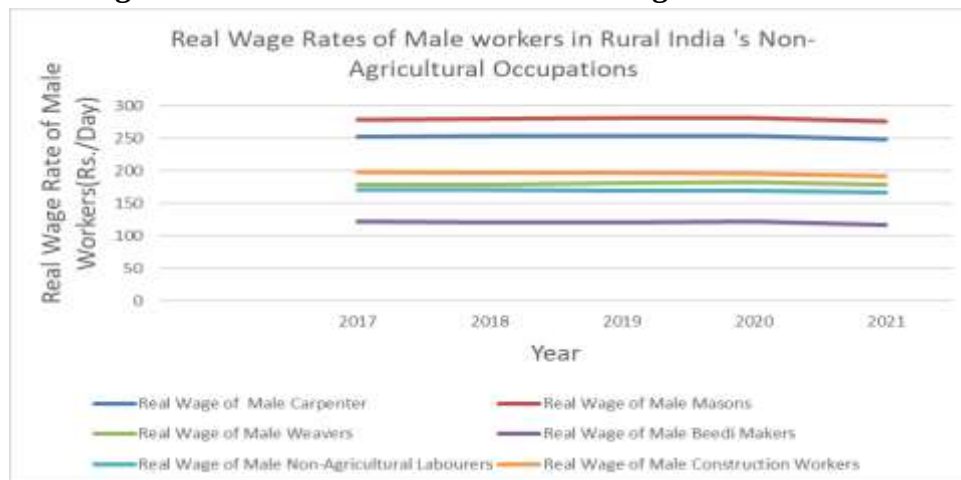


Source: NSO (MoSPI), Periodic Labour Force Survey: Quarterly Bulletin

The figure depicts unemployment trends in India by gender across rural-urban areas from 2017–18 to 2023–24. Unemployment declines slowly across all groups, reflecting better labour-market conditions, particularly after the COVID crisis. Urban unemployment is greater than rural unemployment, with urban females showing the highest rates and facing significantly higher unemployment than rural females throughout the period, reflecting vulnerabilities conditions faced by who searching jobs in urban areas. A gender gap exists in both regions but is considerably larger in urban areas. While rural female unemployment remains lower than that of rural males due to greater labour absorption in informal and self-employment. Therefore, despite post-pandemic recovery, persistent gender disparities exist in urban areas, especially the disadvantage faced by urban women. This emphasising the need for targeted employment and skill-development policies to improve the conditions of women workers.

2. Decline in Real Wages and Deterioration in Working Conditions

Figure 4: Real Wages of Male Workers in Selected Non-Agricultural Jobs in Rural India



Source: Wage Rates in Rural India, <https://epwrfits.in>

COVID-19 led to a notable decline in real wages across rural non-agricultural occupations in India. The graph indicates a reduction in real wages of male workers across various occupations. The real wage rate for male workers in rural India's Non-Agricultural Occupations, including Carpenters, Masons, Weavers, Beedi Makers, Non-Agricultural Labourers, and Construction Workers, declined from 253.99 to 248.84, 281.08 to 275.3, 181.98 to 179.18, 122.18 to 116.71, 169.51 to 167.27, and 195.33 to 191.95 rupees per day, respectively, from the year 2020 to 2021.

Figure 5: Real Wages of Female Workers in Selected Non-Agricultural Jobs in Rural India



Source: Wage Rates in Rural India, <https://epwrfits.in>

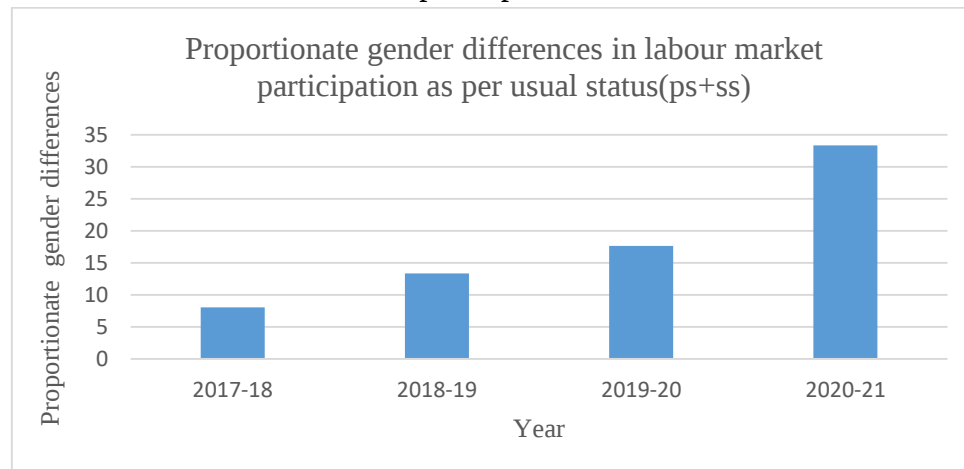
Similar downward trends were also observed for female workers, who already earned substantially lower wages compared to males. The graph shows that the real wage for female workers in rural India's Non-Agricultural Occupations, including Masons, Weavers, Beedi Makers, Construction Workers, and Non-Agricultural Labourers, declined from 200.12 to 189.88, 148.1 to 138.34, 90.7 to 87.22, 142.22 to 141.2, and 126.17 to 122.14 rupees per day, respectively, between 2019 and 2021. There has always been a wage gap between male and female workers, and since the COVID-19 outbreak, the real wage rate gap for female rural workers has further widened.

This downward trend in the earnings of rural workers has multiple trade-related consequences. First, continuous wage decline undermines worker productivity, as lower incomes restrict access to adequate nutrition and healthcare. This reduces production efficiency in export-oriented firms, weakening India's competitiveness in the global market. Second, wage instability contributes to higher labour turnover, making it difficult for firms to consistently supplying goods as per demand in international markets during the pandemic period. Third, global buyers, particularly from developed nations, demand fair-wage standards when selecting suppliers. Indian Industries, such as apparel and footwear face increasing inspection regarding wage fairness, occupational safety, and other labour standard indicators.

Moreover, the wage decline of workers working in rural areas of India affected micro, small, and medium enterprises (MSMEs). These enterprises form the backbone of India's labour-intensive exports and suffered severe contraction during the pandemic. Post-COVID, these MSMEs faced difficulties in rebuilding productive capacity due to labour shortages, debt constraints, and disruptions in raw-material supply.

3. Gendered Employment Losses and Implications for Services Trade

Figure 6: Gender differences in labour market participation in India



Source: Periodic Labour Force Survey, Employment Statistics, <https://epwrfits.in>

The COVID-19 pandemic disproportionately affected women in the Indian labour market. PLFS data show that female unemployment rose more sharply than male unemployment during the lockdown periods, and women were slower to return to the labour force in the post-pandemic recovery. Many women who previously participated in paid work experienced job losses due to the closure of small enterprises, reduced opportunities in domestic work, suspension of part-time service roles, and increased household responsibilities. The gender gap in labour-force participation widened substantially, with the annual usual status measure rising from 8.06 per cent in 2018–2019 to 33.3 per cent in 2020–2021.

These shifts have significant implications for India's trade performance, particularly in the services sector. India's comparative advantage in global services especially information technology (IT), business-process outsourcing (BPO), education services, healthcare, and professional consultancy is linked to its skilled labour pool, a substantial share of which comprises women. Reduced participation by women restricts the availability of skilled labour, thereby constraining the expansion of high-value service exports. In outsourcing industries where global clients increasingly assess diversity, equity, and workplace inclusion, widening gender disparities may weaken India's attractiveness as a service-delivery destination.

Furthermore, female-intensive export industries such as textiles, garments, handicrafts, and food processing experienced severe production disruptions due to workplace closures and mobility restrictions. Many women employed in these industries were engaged in home-based production or informal work arrangements, which lacked social protection and income security. Their exclusion from institutional safety nets deepened vulnerability and contributed to supply-chain instability. As India seeks to strengthen its export base in labour-intensive sectors, improving gender inclusion and formalising women's employment will be essential for achieving stable productivity and compliance with global labour norms.

Figure 7: Wage Discrimination in India



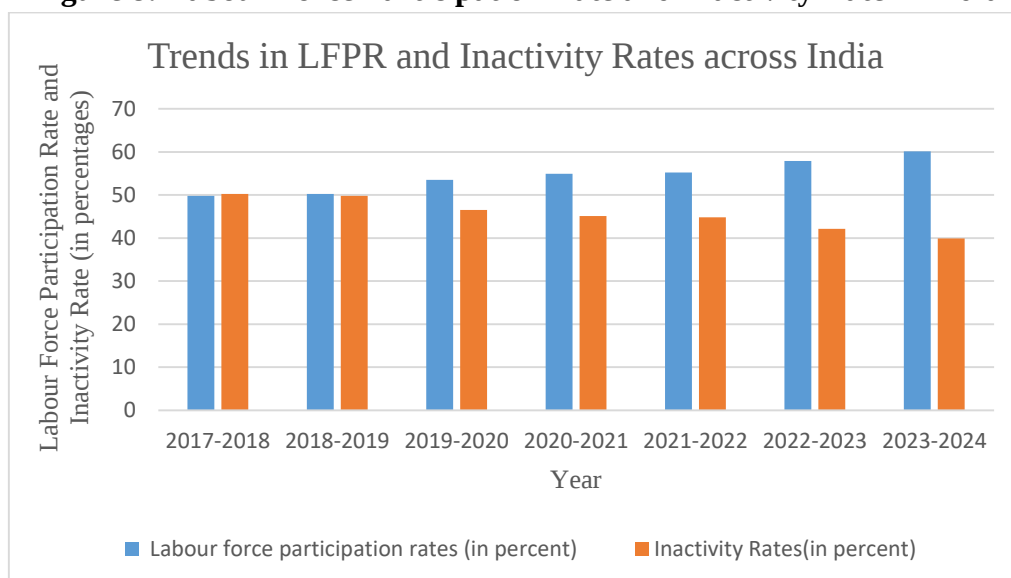
Source: Statistics and Databases, International Labour of Organisation, <https://www.ilo.org/global>

The figure shows that the proportionate wage gap between male and female workers in India remained high from 2018 to 2024. After a slight decline in 2019, the gap widened in 2020 and stayed almost the same in 2021, reflecting the adverse effects of the COVID-19 crisis. Even during the post-pandemic period, this wage discrimination between males and females persisted. Overall, the pattern indicates a failure to address gender wage inequality till now.

The decline in labour market participation rate for women (Figure 6), along with the existing wage discrimination (Figure 7), meant that India's women faced a dual disadvantage compared to men, experiencing lower wages and disproportionate job losses.

4. Rising Inactivity Rates and Reduced Labour Supply

Figure 8: Labour Force Participation Rate and Inactivity Rate in India



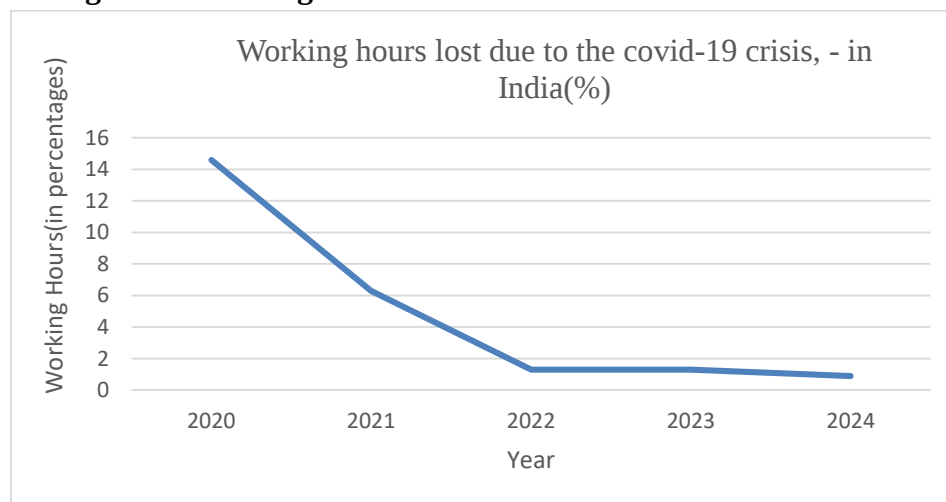
Source: MoSPI, Government of India, Periodic Labour Force Survey (PLFS)

There is a persistent increase in the labour force participation rates (LFPR) in India from 2017–18 to 2023–24, followed by a steady decline in inactivity rates, according to the PLFS data. LFPR increased from 49.8 per cent in 2017–18 to 60.1 per cent in 2023–24, while inactivity declined from 50.2 per cent to 39.9 per cent over the same period. LFPR increased due to the number of people in the working age population who are actively looking for work has been increased as the more educated the person is, the more likely it is that they will remain jobless rather than taking up low-paying informal job. The International Labour Organization (ILO, 2020) reports that the increase in inactivity during the pandemic was greater than the increase in unemployment. Moreover, younger and older people were hit hard by the COVID-19 crisis. The absence of a rise in inactivity during the pandemic reflects THE necessity of labour participation, as displaced workers became involved in informal employment, self-employment, and other low-productivity activities in response to income shocks and limited social protection. The continued decline in inactivity in the post-pandemic period indicates higher labour market participation, but there is no improvement in labour market quality. This trend shows the dominance of informal employment, as shown in Fig. 1.

From a trade perspective, these labour-market changes impact India's export performance. The expansion of informal and low-skill employment constrained optimal productivity in labour-intensive sectors. Therefore, limiting firms' capacity to scale production and meet global quality and delivery standards.

5. Working Hours Lost and Disruptions to Supply Chains

Figure 9: Working hours lost in India due to the covid-19 crisis



Source: Statistics and Databases, International Labour of Organisation, <https://www.ilo.org/global>

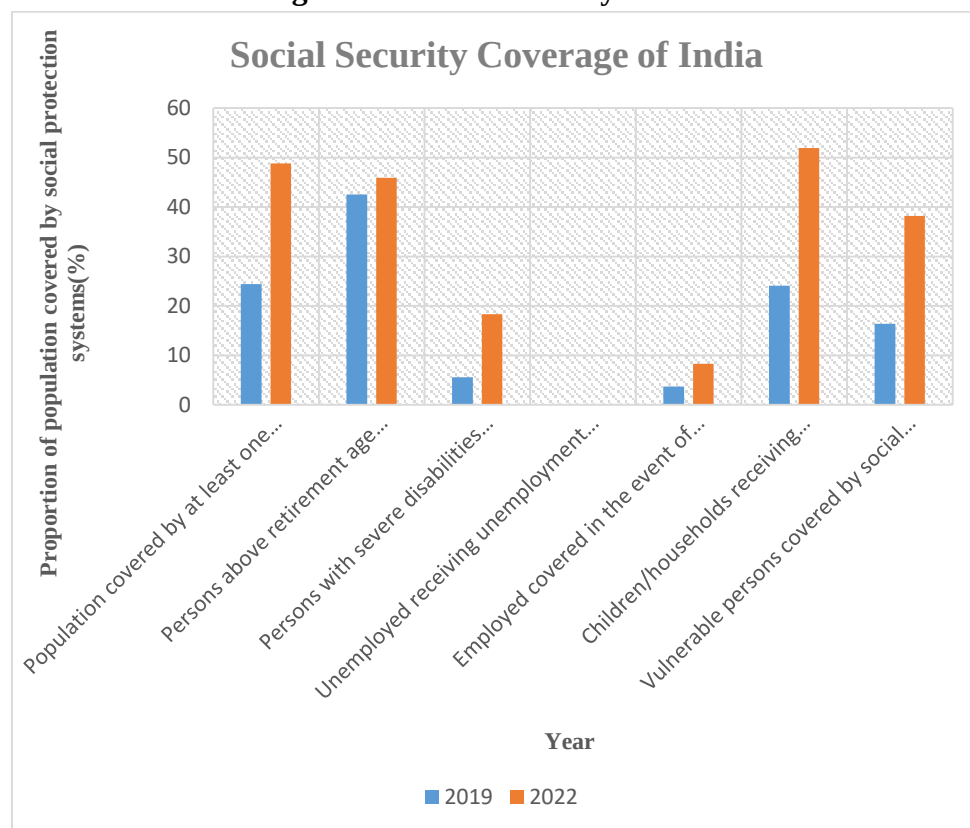
The above figure shows that India lost approximately 14.6 per cent of total working hours in 2020, according to the reports of the International Labour Organization (ILO). This high reduction in working hours was due to the lockdown measures taken by the government. During this period, the factories were closed, business operations were scaled down, and the production of many items was restricted. This led to a decline in total output, especially in MSMEs, which are the backbone of India's labour-intensive exports.

Supply-chain disruptions occurred in many industries during this period. Industries like textiles, garments, handicrafts, leather goods, and automotive components rely on ongoing production processes, where even short-term operational interruptions can cause negative spillover effects across the production chain. This

situation compelled many firms to operate below potential output, delay shipments, and revise their production schedules. International buyers from India are switched to purchasing from other countries because Indian markets, especially labour-intensive industries, were incapable of fulfilling their demands. The loss of working hours was also caused by the reverse migration of workers from their workplace to their respective hometowns. This created labour shortages after the pandemic period, which firms found challenging to overcome because they had lost experienced and trained workers. Firms reported difficulty in re-establishing production as it required time to train and recruit workers again. These supply-side constraints led to suboptimal production after the lockdown phase.

6. Limited Social Protection and Global Labour-Compliance Challenges

Figure 10: Social Security in India



Source: Statistics and Databases, International Labour of Organisation, <https://www.ilo.org/global>

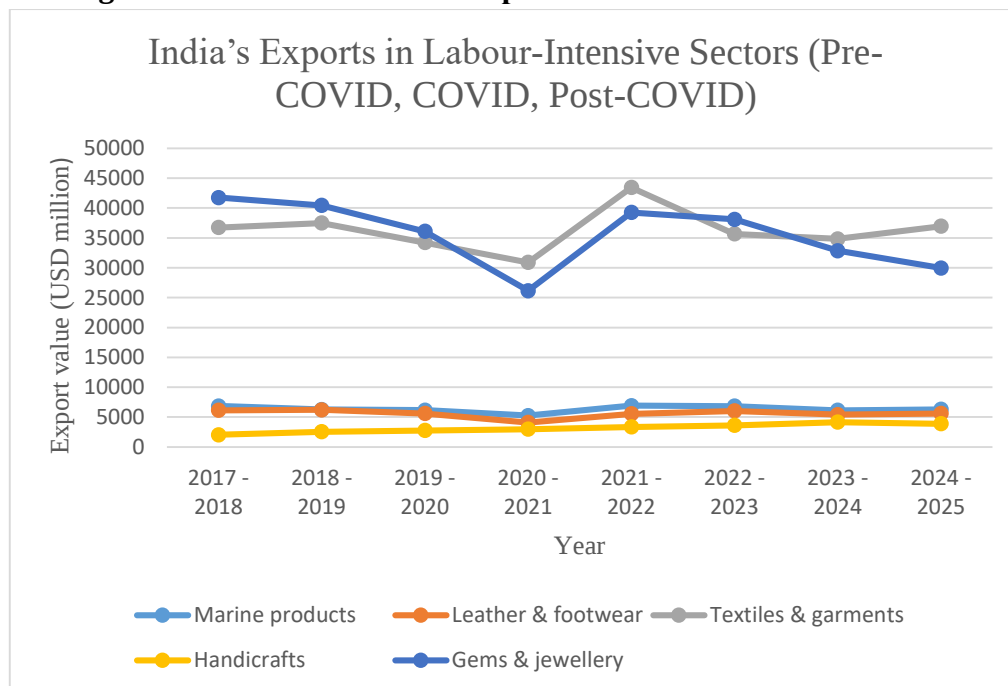
The figure shows the proportion of the population covered by social security benefits in India, comparing 2022 with 2019. The population covered by at least one social protection benefit almost doubled, rising from 24.4% to 48.8%. The largest gains are observed in children or families receiving cash benefits, increasing from 24.1% to 51.9%, and social assistance for vulnerable persons rose from 16.4% to 38.2%. This indicates a stronger emphasis on redistributive and needs-based support provided by the government. The significant increase in social protection benefits for persons with severe disabilities from 5.6% to 18.3%, while pension coverage for persons above retirement age experienced only a slight increase from 42.5% to 45.9%. Employment-related protection in case of work injury improved but remained limited (3.7% to 8.3%), and unemployment benefits were not provided to the labour force in either year. Overall, the comparison reflects a significant widening of social assistance inclusion but there are still prolonged gaps in labour-market social protection.

Weak social protection coverage of India's labour market, as shown in the figure, can adversely affect export competitiveness. The absence of unemployment insurance and the minimal improvement in work-injury protection indicate that a large share of workers remains vulnerable to income shocks during economic disruptions. This employment insecurity forced labour to migrate back to their villages during the pandemic period, which hampered labour-dependent production activities. As a result, labour-intensive exports declined due to weakened firms' capacity to respond to external demand.

Additionally, these weak coverage levels in contributory and employment-based social security add complexity to compliance with increasingly strict labour standards in major export markets such as the European Union, the United States, and Canada. Trade related regulatory frameworks, like the EU's Corporate Sustainability Due Diligence Directive and enforcement mechanisms under U.S. trade policy require exporters to demonstrate adherence to minimum labour and social protection standards across supply chains. Under these conditions, India's dependence on narrowly targeted labour-related social assistance increases compliance costs for small and medium enterprise exporters due to regulatory risks. Therefore, strengthening broad-based social protection is essential not only for worker welfare but also for sustaining India's optimal growth in export markets.

7. Labour-Market Disruptions and Structural Weakness of Labour-Intensive Exports in India

Figure 11: Trends in India's Exports of Labour-Intensive Sectors



Source: Ministry of Commerce & Industry (MoCI), Government of India, Export-Import Data Bank

Figure 11 illustrates India's export performance in labour-intensive sectors over the study period and captures the severe disruption in these exports caused by the COVID-19 pandemic. The figure shows a noticeable contraction in exports during the pandemic years due to lockdowns measures, labour shortages, supply-chain interruptions, and the reverse migration of workers from industrial sites to their hometowns. Sectors such as textiles, apparel, gems and jewelry, leather, and handicrafts highly dependent on migrant and informal labour that experienced the sharpest declines in productivity, highlighting their vulnerability to labour-market shocks.

Additionally, the slow recovery of labour-intensive exports during the post-pandemic period suggests that these sectors were unable to meet global demand at the same level as in the pre-COVID level. This reflects continued supply-side bottlenecks embedded in weakened labour standards. Sectors like gems and jewellery and leather & footwear have underperformed in the post-COVID period compared to the pre-COVID period. This may be due to challenges in reassembling skilled workforces, restoring production continuity, and complying with international labour standards. Thus, the above figure adds further evidence to the discussion that labour-market instability is directly associated with a reduction in export competitiveness, particularly in sectors where production is highly labour dependent.

Figure 12: Comparative Trends in India's Labour-Intensive and Total Merchandise Exports



Source: Ministry of Commerce & Industry (MoCI), Government of India, Export-Import Data Bank

Figure 12 compares the trend of India's labour-intensive export value with total merchandise exports. The divergence between them increased in the post-COVID period. While total merchandise exports showed a relatively faster recovery than labour-intensive exports. This improvement in aggregate merchandise exports is largely due to the higher productivity of capital-intensive sectors such as pharmaceuticals, chemicals, petroleum products, and engineering goods.

This divergence emphasizes the disproportionate impact of labour-market disruptions across sectors and highlights that labour-intensive industries were more severely affected from the pandemic. The fragile recovery of labour-intensive exports reflects ongoing difficulties such as informal employment, declining real wages, labour force participation, social security, and complying with evolving international labour standards. Therefore, it provides empirical support for the study's core claim that labour standards are critical factors in sectoral export resilience, and that improvements in aggregate exports performance may lead to the hiding of fundamental vulnerabilities rooted in labour-intensive industries.

8. Synthesis: Labour Standards as Determinants of Trade Competitiveness

The descriptive presented across labour-market indicators and export trends demonstrates that labour standards played an important role in shaping India's trade outcomes during and after the COVID-19 crisis. Figures 11 and 12, read alongside trends in unemployment, informality, wages, gendered wage-gap

differences, and social protection, collectively indicate that deterioration in labour standards translated into persistent supply-side constraints and weakened export competitiveness.

Figures 11 and 12 provide direct empirical support for this linkage. Figure 11 shows that labour-intensive export sectors such as textiles, apparel, leather, gems and jewellery, and handicrafts experienced a sharp contraction during the pandemic and failed to exhibit a sustained recovery thereafter. Surprisingly, exports in these sectors remain weak despite the easing of global demand constraints. This shows that fragile labour market conditions are responsible rather than external demand constraint. There was a reduction in production continuity due to reverse migration, workforce dislocation, skill loss, and informalization. Thus, firms face challenges even in scaling up export supply to pre-COVID levels.

Figure 12 further supports this conclusion by demonstrating a persistent divergence between labour-intensive exports and India's total merchandise exports. The aggregate exports recovered after COVID-19, which was mainly driven by capital-intensive sectors, whereas labour-intensive exports continued to decline. This divergence highlights the asymmetric impact of labour-market disruptions across sectors, which continues to adversely affect labour-intensive industries.

Labour standards function as an important determinant of trade competitiveness rather than a peripheral social concern. Figures 11 and 12 demonstrate that without improvements in employment security, wages, gender inclusion, and social protection, labour-intensive export sectors remain structurally weak even when aggregate trade indicators improve. Therefore, the upgrading of labour standards is essential for restoring export resilience, meeting global labour-compliance requirements, and securing India's long-term position in international trade.

CONCLUSION

This paper conducts a graphical analysis to explore the relationship between labour standards and India's trade performance during the COVID-19 period. The analysis reveals that the pandemic disrupted labour supply chains, which resulted in a decline in India's labour-intensive exports in international markets. There was significant deterioration of labour standard across multiple dimensions, including rising unemployment and informality, declining real wages, widening gender disparities, losses in working hours, and limited social protection coverage. This weakening of labour conditions impacted India's capability to sustain export production, fulfil international orders, and compete in global value chains.

The findings demonstrate that labour standards are not only labour market concerns but also important factors for trade competitiveness. Labour-intensive export sectors faced supply-side constraints during pandemic because of reverse migration, job instability of worker, and productivity losses. The comparative evidence from labour-intensive and aggregate merchandise exports indicates that sectors like textiles, apparel, gems and jewelry, leather, and handicrafts are mostly dependent on migrant and informal labour. Moreover, high-value service exports, particularly IT, business-process outsourcing, and professional services were also affected by gendered inequality in terms of real wage rates and reduced female participation in the workforce.

In conclusion, India's trade strategy cannot be separated from its labour-market. Thus, policymakers should strengthen labour standards through reforms in formalisation, wage security, gender inclusion, workplace safety, and other social protection schemes. The improvement in labour laws must be treated as a core area of export policy. Furthermore, integrating labour-market institutions with trade objectives will accelerate the recovery of India's post-pandemic labour-intensive exports sectors. These measures are

essential for building resilient supply chains and sustaining export growth in a globally competitive market.

Acknowledgments

The authors gratefully acknowledge the valuable feedback and constructive comments received during the 63rd Labour Economics Conference, organized by the Indian Society of Labour Economics on 2nd March 2023. The present paper is an extended version of the work originally presented at the conference. It incorporates insights and suggestions shared by the participants and chairpersons of the session. The first author gratefully acknowledges the Doctoral Fellowship offered by the Ministry of Education, Government of India.

REFERENCES

7. Baldwin, R., & Evenett, S. J. (2020). *COVID-19 and Trade Policy: Why Turning Inward Won't Work*. CEPR Press.
8. Byard, R. W., & Kaur, N. (2021). Prevalence and potential consequences of child labour in India and the possible impact of COVID-19—a contemporary overview. *Forensic Science, Medicine and Pathology*, 17, 208–214.
9. Gereffi, G., & Fernandez-Stark, K. (2016). *Global Value Chain Analysis: A Primer* (2nd ed.). Duke University Global Value Chains Center.
10. Ghose, A. K., & Kumar, A. (2021). India's deepening employment crisis in the time of rapid economic growth. *The Indian Journal of Labour Economics*, 64(2), 247–279.
11. International Labour Organization. (2020). *ILO Monitor: COVID-19 and the World of Work* (6th ed.). Geneva: ILO.
12. International Labour Organization. (2020). *ILO Monitor: COVID-19 and the world of work. Sixth edition: Updated estimates and analysis*. International Labour Organization. <https://www.ilo.org>
13. International Labour Organization. (2021). *Situation Analysis on the COVID-19 Pandemic's Impact on Enterprises and Workers in the Formal and Informal Economy in India*. ILO DWT South Asia, New Delhi.
14. Kucera, D., & Sarna, R. (2006). Trade union rights, democracy, and exports: A gravity model approach. *Review of International Economics*, 14(5), 859–882.
15. Ministry of Labour and Employment. (2020). *Advisories and Measures for COVID-19 Response*. Government of India.
16. Periodic Labour Force Survey (PLFS). (Various Years). National Statistical Office, Government of India.
17. Ramakumar, R., & Kanitkar, T. (2021). Impact of the COVID-19 pandemic on the Indian economy. *UNAM Journal*, 1–15.
18. Reserve Bank of India. (2020). *Macroeconomic and Trade Bulletins 2020–2022*. RBI Publications.
19. Sharma, M., Singh, K., & Jain, R. (2021). Impact on labour supply due to COVID-19 containment measures in India: An informal employment analysis. *International Labour Organization*, Geneva.
20. Stiglitz, J. E. (2007). Making globalization work: The importance of labour standards. *International Labour Review*, 146(2), 177–188.
21. Walter, D. (2020). Implications of COVID-19 for labour and employment in India. *Indian Journal of Labour Economics*, 63(S1), S47–S51.

22. Wage Rates in Rural India. (Various Years). *EPWRF India Time Series*, EPW Research Foundation.
23. World Bank. (2021). *The Global Economic Outlook: Impacts of COVID-19 on Poverty and Labour Markets*. World Bank Group.
24. International Labour Organization. (2020). *Application of International Labour Standards in Times of Crisis: CEACR 91st Session General Report*. Geneva: ILO.
25. International Labour Organization. (2020). *General Observation on the Employment Policy Convention, 1964 (No. 122)*. CEACR 91st Session.
26. International Labour Organization. (2020). *General Observation on the Worst Forms of Child Labour Convention, 1999 (No. 182)*. CEACR 91st Session.
27. Indian Ministry of Health and Family Welfare. (2023). *COVID-19 Dashboard and Vaccination Statistics*.