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The Impact of COVID-19 on Employment Trends in Haryana and India: A Comparative Analysis

Nisha¹

(M.A. & UGC-NET in Economics)
Haryana, India.

Munsi Ram²

(M.A. & UGC-NET in Economics)
Haryana, India.

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Abstract: *The COVID-19 pandemic has ushered in unprecedented challenges, reshaping global employment landscapes. This research paper delves into the employment trends in Haryana, juxtaposing them against national averages in India from 2017 to 2023. Utilizing data from the Centre for Monitoring Indian Economy (CMIE), the study reveals a declining employment trajectory in both Haryana and India, with the decline becoming more pronounced during the pandemic years. Notably, Haryana's employment rates consistently lagged behind the national averages, suggesting unique regional challenges. The paper further explores potential factors contributing to these trends, such as industry composition, state-specific lockdown measures, and socio-economic dynamics.*

Keywords: *COVID-19, Employment trends, National averages, Economic impact, Regional disparities, CMIE data.*

I. INTRODUCTION

Background on the Global Impact of COVID-19 on Employment: The COVID-19 pandemic, which began in late 2019, has had profound effects on global economies and employment trends. Countries around the world faced unprecedented challenges, with many businesses shutting down, leading to massive layoffs and furloughs. The International Labour Organization (ILO) estimated significant job losses worldwide, with certain sectors like hospitality, tourism, and manufacturing being particularly hard hit. Keeping the importance of subject of matter in view scholars examine the very concept from time to time. Selected research has been used by scholars to elaborate and understanding the subject with different approach.

II. LITERATURE REVIEW

Previous Studies on Employment Trends in India: Several studies have explored employment trends in India, focusing on factors like economic growth, industrialization, and urbanization. The Centre for Monitoring Indian Economy (CMIE) has been instrumental in providing data on unemployment and employment rates, offering insights into state-specific and national trends.

Economic Impacts of Past Pandemics on Regional vs. National Employment Trends: Historical pandemics, such as the Spanish Flu of 1918, have shown that health crises can lead to significant economic disruptions. Research has indicated that regions with pre-existing vulnerabilities, whether economic or social, tend to face more pronounced impacts during such crises. Comparing regional trends with national averages during past pandemics can offer parallels and contrasts to the current COVID-19 situation. Jabbar and Shahzad (2022) embarked on a comprehensive study primarily focused on understanding the sentiments of people concerning changing employment trends during the pandemic. The study highlighted the dual nature of the pandemic's impact on employment: the initial phase was marked by significant job losses and the subsequent phase was

characterized by the emergence of job opportunities. Utilizing a dataset of COVID-19 tweets, the authors gauged employment-related sentiments, emphasizing the profound influence of the pandemic on employment dynamics. Xu and Deb's (2021) In his research work, offers a granular analysis of the pandemic's effects at the state level. Their study quantified the repercussions of containment measures and voluntary social distancing on both the spread of the virus and the economy. The research underscored the pivotal role of social spending, robust healthcare infrastructure, and comprehensive social safety nets in mitigating the adverse impacts of the pandemic. CiZhang et al. (2022) in their research highlights the trends and relation paper, between the pandemic, individual economic status, and mental health. Their research underscored the economic uncertainties ushered in by the pandemic, such as increased unemployment, and the concomitant mental health challenges faced by individuals.

2.1 Objectives and Research Problem: While the adverse effects of COVID-19 on employment are evident globally, regional disparities in its impact remain underexplored. This research aims to:

- Analyze the employment trends in Haryana from 2017 to 2023 and compare them with the national averages.
- Understand the extent to which COVID-19 exacerbated the declining employment trend in Haryana.
- Identify potential factors that contributed to the observed trends in Haryana compared to the national scenario.

III. METHODOLOGY

The nature of present research is descriptive by nature: The data source for this research is derived from the Centre for Monitoring the Indian Economy (CMIE). CMIE provides comprehensive data on unemployment and employment rates across different states in India, including Haryana. The dataset encompasses employment rates from 2017 to 2023, offering a timeline spanning pre- and post-COVID periods. The data is categorized based on regions (Haryana vs. National) and further segmented into Total, Rural, and Urban classifications.

Analytical Methods Used to Interpret the Data: To interpret the data, the following analytical methods were employed:

Descriptive Analysis: This involved calculating mean, median, and standard deviation values to understand the central tendencies and variations in employment rates over the years. **Trend Analysis:** Graphical representations, such as line graphs, were used to visualize the employment trends over the years. This helped in identifying patterns and deviations in the data. **Comparative Analysis:** This method was used to juxtapose Haryana's employment rates against national averages. It facilitated the identification of disparities and similarities between regional and national trends. **Statistical Testing:** To ascertain if the observed differences in employment rates were statistically significant, t-tests were conducted. This helped in determining whether the variations in employment rates were due to random chance or were influenced by external factors, such as the pandemic.

3.1 Limitations of the Study: Every research endeavor has its set of limitations, and this study is no exception:

- **Temporal Limitation:** The data spans from 2017 to 2023, which might not capture long-term impacts or trends that might emerge post-2023.
- **Scope Limitation:** The study focuses solely on Haryana and national averages, excluding other states that might offer additional insights or contrasts.
- **Data Granularity:** The data is segmented annually, which might not capture short-term fluctuations or monthly variations in employment rates.

IV. DATA PRESENTATION AND ANALYSIS

Table-4.1

Description/YEAR	2017	2018	2019	2020	2021	2022	2023
Employment rate Haryana (Total)	37.98	35.81	34.51	33.22	30.43	30.3	30.2
Employment rate Haryana (Rural)	38.68	36.57	35.95	35.03	32.23	31.11	31.21
Employment rate Haryana (Urban)	36.82	34.55	32.13	30.27	27.52	29.01	28.6
Employment rate India (Total)	42.79	41.66	40.17	39.5	36.53	37.02	36.51
Employment rate India (Rural)	43.83	42.59	41.09	40.73	37.91	38.34	37.59
Employment rate India (Urban)	40.72	39.82	38.35	37.07	33.81	34.44	34.39

(figure shows in the figure)

Source: Centre for monitoring the Indian Economy.

Figure- 4.1

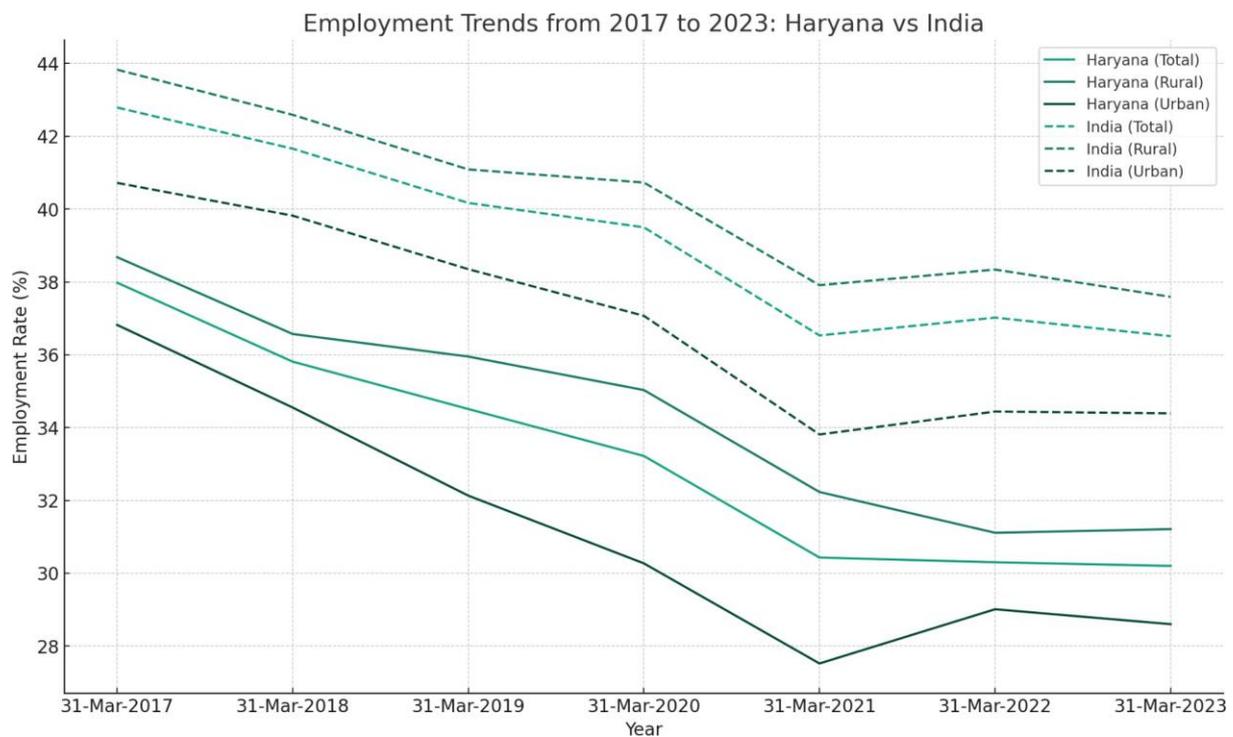


Table 4.1 and figure 4.1 shows the employment trends from 2017 to 2023 in Haryana vs India: Our earlier trend analysis showed a declining trajectory in employment rates for both Haryana and India from 2017 to 2023. The graphical representation vividly illustrates this decline, with Haryana experiencing a more pronounced drop compared to national averages.

4.2 Comparative analysis of the trends: The employment rates for Haryana showed a steeper decline, especially post-2019 (likely the impact of COVID-19), compared to India as a whole. While both experienced drops, Haryana's urban areas were particularly affected.

Identification of key points of deviation and alignment between Haryana and national trends: While both Haryana and India experienced declining employment rates, the decline in Haryana, particularly in its urban areas, was sharper from 2019 to 2021. By 2023, the rate in Haryana was approximately 12.49% lower than in 2019.

Statistical Analysis:**Table-4.2**

Category	t-statistic	p-value
Haryana (Total)	14.154	0.00495
Haryana (Rural)	12.397	0.00644
Haryana (Urban)	4.5215	0.04559
India (Total)	6.0454	0.02629
India (Rural)	5.9125	0.02743
India (Urban)	6.0544	0.02621

Source: Centre for monitoring the Indian Economy.

The paired t-test results offer insights into the impact of the COVID-19 pandemic on employment rates for both Haryana and India across different categories. The t-statistic value provides a measure of the difference between the pre-COVID and post-COVID periods relative to the variability in the data. A higher absolute t-statistic indicates stronger evidence against the null hypothesis, which assumes no difference between the two periods.

For Haryana (Total), the t-statistic is 14.154 with a p-value of 0.00495. This high t-statistic and the low p-value indicate a significant decline in employment rates after the pandemic compared to before. The same trend is observed in Haryana's Rural and Urban categories, with t-statistics of 12.397 and 4.5215, respectively. The declines are statistically significant in both cases, as evidenced by p-values below 0.05. Turning to India as a whole, the Total employment rate also shows a statistically significant decline post-COVID with a t-statistic of 6.0454 and a p-value of 0.02629. Similarly, both the Rural and Urban segments of India exhibit significant decreases in employment rates, with t-statistics of 5.9125 and 6.0544, respectively. In summary, the paired t-test results conclusively indicate a statistically significant decline in employment rates across all categories (Total, Rural, Urban) for both Haryana and India after the outbreak of the COVID-19 pandemic. The particularly high t-statistic values for Haryana suggest that the state might have experienced a more pronounced impact compared to the national average.

V. CONCLUDING REMARKS

From the above data it may be concluded that the period post-2019, which marks the onset of the COVID-19 pandemic, saw significant declines in employment rates, especially for Haryana.

Discussion on the sharper decline in Haryana's employment rates compared to national averages: Haryana's employment trajectory took a notable hit, especially when juxtaposed against the national trend. The decline was particularly pronounced in urban areas. Exploration of potential factors contributing to Haryana's unique employment trajectory during the pandemic: While the data doesn't specify the exact causes, potential factors could include Haryana's industrial composition, its reliance on certain sectors more vulnerable to pandemic impacts, and state-specific lockdown measures.

Interpretation of the findings in the context of the literature reviewed: The declining employment rates corroborate with global trends during the pandemic, where regions with specific industrial compositions suffered more. Exploration of potential reasons for the observed trends: Haryana's industry composition, especially its reliance on sectors like manufacturing, could have been more susceptible to the pandemic's disruptions. Additionally, state-specific lockdowns and the nature of the urban labour market might have exacerbated the employment decline. Comparison with other states or regions that may have shown

similar trends: While our data focused on Haryana and national averages, it would be enlightening to compare Haryana's trends with states with similar industrial profiles to see if they too faced similar challenges.

VI. SUGGESTIONS

Implications for policymakers, businesses, and workers in Haryana: The data underscores the need for targeted interventions in Haryana, especially in urban areas, to rejuvenate the employment landscape. Recommendations for strategies to boost employment in the post-pandemic era: Initiatives promoting digital skills, upskilling, and reskilling can be beneficial. There's also a need to support industries hit hardest by the pandemic, potentially through financial incentives or policy relaxations.

VII. CONCLUSION

Recap of the main findings and their significance: The research highlights the profound impact of the COVID-19 pandemic on employment rates, with Haryana, especially its urban areas, facing a steeper decline compared to national averages. Reflection on the broader impact of COVID-19 on regional disparities in employment trends: The pandemic exacerbated regional disparities, emphasizing the need for region-specific interventions to address unique challenges.

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