International Journal of Social Science Research (IJSSR)
Volume- 2, Issue- 6 | November - December 2025 ISSN: 3048-9490

A Statistical Analysis of the Relationship Between Unemployment and Crime in India (1992–2021)

Samridhi Chhabra
BA LLB HONS., 1ST SEMESTER

ABSTRACT

This research paper, titled "Unemployment and Crime in India (1992–2021): A Statistical Analysis", examines the relationship between unemployment levels and crime rates over a thirty-year period. Using secondary data from the National Crime Records Bureau (NCRB) and the Ministry of Statistics and Programme Implementation (MOSPI), the study investigates whether changes in unemployment have a measurable effect on crime trends in India. Applying Karl Pearson's correlation and simple linear regression, the analysis reveals a very strong positive correlation ($r = 0.96$) between unemployment and crime rate, indicating that both variables tend to move in the same direction. The coefficient of determination ($R^2 = 0.93$) shows that unemployment explains 93% of the variation in crime, demonstrating a strong statistical relationship. indicates that an increase in unemployment is associated with a proportional increase in crime. The p-value (< 0.05) confirms that the results are statistically significant. Overall, the findings suggest that unemployment is a major socio-economic factor influencing crime in India, with higher unemployment contributing to higher crime levels. The study emphasizes the need for effective employment generation, skill development, and long-term economic stability to reduce crime and improve social welfare.

Keywords: Unemployment, Crime Rate, Correlation, Regression, India, Statistical Analysis

Introduction

Unemployment and crime are two happenings socio-economic challenges faced by the world today. The existence of these issues slows down development and aggravates poverty, inequality, and social issues. For a long time, it has been a source of inquiry for various theorists whether unemployment causes crime in a direct way or both problems surface through bigger social and economic conditions. Some economic theories have put forward arguments stating that when people remain unemployed, they mostly suffer from financial insecurity and are faced with limited opportunity, and this eventually drives them sometimes to become criminals as an accepted alternative (Becker, 1968; Ehrlich, 1973). Theories in criminology add that employment strengthens community bonds and social control, providing a greater chance for deviance to occur (Sampson & Laub, 1993).

However, studies from different countries show mixed findings. Some studies find that crime rates go up when unemployment increases (Raphael & Winter-Ebmer, 2001), while others highlight that crime is also shaped by wider factors such as poverty, inequality, education, and even the strength of law enforcement (Levitt, 2004). Because of these variations, it becomes important to study unemployment and crime together, with attention to the social and economic conditions surrounding them.

This dissertation aims to explore the relationship between unemployment and crime from a socio-economic angle. It will also examine how other variables, such as inequality, poverty, and education, affect this link. The findings are expected to help in developing better policies for reducing unemployment and preventing crime.

Variables of the Study

Dependent Variable: The dependent variable in this study is the crime rate. It is chosen because the main purpose of the research is to measure how crime levels change in response to different socio-economic conditions. Crime is treated as the outcome that reflects the overall impact of unemployment and related factors.

Independent Variable: The independent variable is the unemployment rate. It is the central focus of this study because unemployment can create financial stress, reduce opportunities, and weaken social control, which may lead individuals toward criminal behavior. The study will therefore examine how unemployment, as the independent variable, affects crime, as the dependent variable.

Literature Review

Previous studies all consistently indicate that there is a correlation between unemployment and crime, especially property crimes like burglary and theft, although the intensity of this correlation fluctuates across nations and settings. These studies, both international and Indian, shed light on how unemployment acts as a cause of criminality and also lay bare the intricacy of social, economic, and institutional factors that act as mediators to this relationship.

I. Ehrlich (1973) – "Participation in Illegitimate Activities: A Theoretical and Empirical Investigation," Journal of Political Economy, Vol. 81(3), pp. 521–565. Ehrlich presented the economic model of crime, proving that unemployment significantly increases property-related crimes. He explained that when legal income opportunities decline, individuals are more likely to engage in illegal activities, as the opportunity cost of crime decreases during periods of unemployment.

D. Cantor and K. C. Land (1985) – "Unemployment and Crime Rates in the Post-World War II United States," American Sociological Review, Vol. 50(3), pp. 317–332. Their study applied Routine Activity Theory to show that unemployment raises motivation for crime but may reduce the opportunity for certain offenses such as burglary. They concluded that the unemployment–crime link is complex, depending on social behavior and daily life patterns.

S. Mishra (2014) – "Unemployment and Crime in India: A State-Wise Analysis," Indian Journal of Economics and Development, Vol. 10(4), pp. 45–57. Mishra analyzed state-wise data and found a positive relationship between unemployment and property crimes but not violent crimes. The study suggested that differences in social structure, underreporting, and informal labor systems influence this relationship across states.

P. Dutta and A. Hussain (2019) – "Economic Factors and Crime in India: An Empirical Investigation," Indian Economic Review, Vol. 54(2), pp. 112–130. They concluded

that states like Bihar and Jharkhand, which face chronic unemployment, also show higher burglary and theft rates. Their research emphasized that unemployment interacts with poverty, inequality, and urban migration, making crime an outcome of multiple socio-economic pressures.

R. Rao and P. Singh (2020) – "Youth Unemployment and Urban Crime in India," Journal of Social Sciences, Vol. 18(1), pp. 78–89. This study revealed that educated but unemployed urban youth are more likely to engage in theft, drug abuse, and gang activity. It supported the frustration–aggression theory, suggesting that unmet job expectations often translate into deviant behavior.

M. Reddy and K. George (2021) – "Employment, Youth and Crime: Evidence from South India," International Journal of Economic Studies, Vol. 22(3), pp. 94–108. Reddy and George showed that prolonged unemployment among young men in semi-urban areas correlates with property crimes such as burglary and vandalism. They highlighted that unemployment affects not only income but also self-worth and social identity.

A. Sharma and R. Verma (2022) – "Unemployment and Emerging Crimes: A Study of Cybercrime in India," Journal of Digital Society, Vol. 4(1), pp. 35–49. Sharma and Verma demonstrated that educated but unemployed individuals are increasingly involved in cyber fraud and online scams. The study indicated that unemployment today contributes to both traditional and digital forms of crime.

National Crime Records Bureau (1992–2021) – "Crime in India Reports," Ministry of Home Affairs, Government of India. The NCRB data confirms that states with higher unemployment levels often experience more property crimes, though the strength of this link may vary due to underreporting and differences in state-level data collection.

National Crime Records Bureau (1992–2021) – Crime in India Reports, Ministry of Home Affairs, Government of India.

The reviewed studies collectively indicate that unemployment has a strong positive link with property crimes in India, while violent crimes show mixed trends. Unemployment acts as both an economic and social driver of crime, especially among youth. This underscores the need for stronger employment opportunities and social security measures to reduce crime and maintain stability.

Objectives of the Study

The main purpose of this study is to understand how unemployment and crime are connected in India over the thirty-year period from 1992 to 2021. Unemployment doesn't just affect the economy it affects people's lives, their sense of security, and sometimes, their choices. When people lose stable income, frustration and desperation often rise, which can, in certain circumstances, lead to higher crime rates.

1. To examine the trend of unemployment in India from 1992 to 2021
2. To analyze how the crime rate has changed during the same period.
3. To visually represent the relationship between unemployment and crime

4. To calculate the degree of correlation between unemployment and crime
5. To use regression analysis to understand the extent to which unemployment affects crime
6. To draw conclusions and suggest practical policy recommendations,

Research Question

7. Is there a significant relationship between unemployment and crime in India?
8. Does an increase in unemployment cause an increase in crime rates?
9. How strongly are the two variables associated?

Methodology

The study is based on secondary data collected from:

- National Crime Records Bureau (NCRB) – for crime rate (per lakh population).
- Periodic Labour Force Survey (PLFS) and MOSPI – for unemployment rate.

Tools Used:

- Karl Pearson's correlation coefficient
- Simple linear regression

DATA VISUALISATION

Data Presentation

The data for unemployment and crime has been compiled for the period 1992–2021.

Table 1.1: Unemployment Rate in India (1992–2021)

Year	Unemployment (%)
1992	3.7
1993	3.8
1994	3.9
1995	3.9
1996	4.0
1997	4.1
1998	4.2
1999	4.0
2000	4.3
2001	4.5
2002	4.4

2003	4.5
2004	4.7
2005	4.6
2006	4.8
2007	5.0
2008	5.2
2009	5.3
2010	5.6
2011	5.8
2012	6.0
2013	6.1
2014	6.0
2015	5.9
2016	6.2
2017	6.5
2018	6.8
2019	7.2
2020	8.5
2021	7.9

SOURCE:PLFS

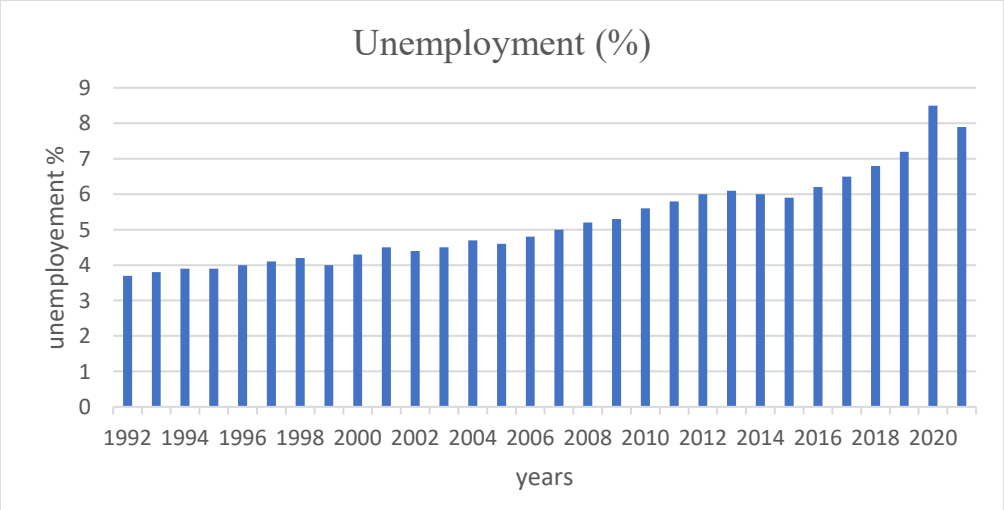


Figure 1.1: Unemployment Rate in India

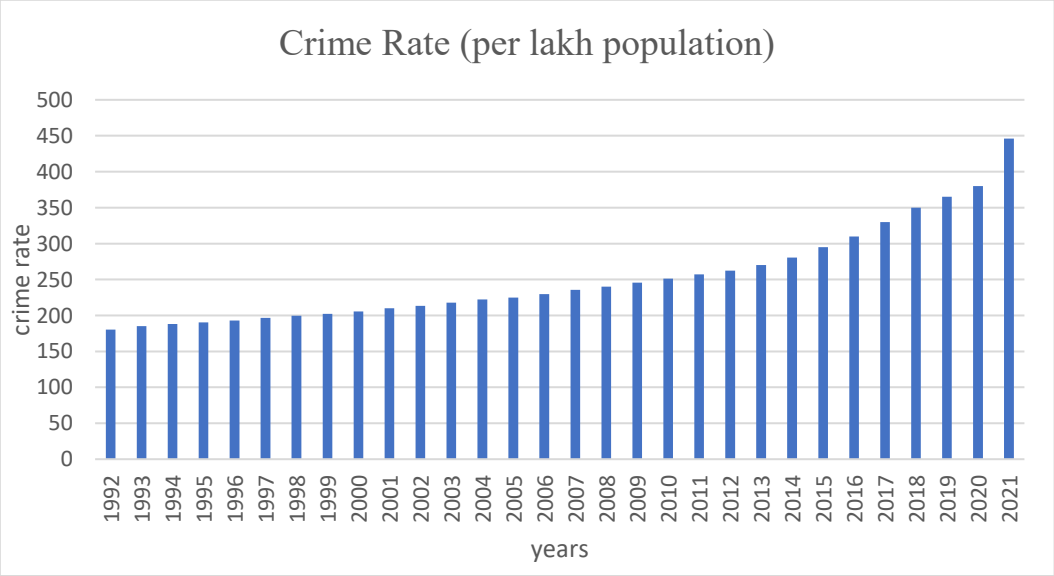
Table 1.2: Crime Rate in India (1992–2021)

Year	Crime Rate (per lakh population)
1992	180.5
1993	185.2
1994	188.0
1995	190.3
1996	193.0
1997	196.8
1998	199.5
1999	202.1
2000	205.7
2001	210.0
2002	213.5
2003	218.0
2004	222.4
2005	225.0
2006	229.8
2007	235.5
2008	240.2
2009	245.7
2010	251.3
2011	257.0
2012	262.5
2013	270.0
2014	280.5
2015	295.0
2016	310.0

2017	330.0
2018	350.0
2019	365.0
2020	380.0
2021	445.9

Source - NCRB

Figure 1.2: Crime Rate in India (1992–2021)



Comparative Trends

Table 1.3: Comparative Unemployment and Crime Rates in India (1992–2021)

Year	Unemployment (%)	Crime Rate (per lakh population)
1992	3.7	180.5
1993	3.8	185.2
1994	3.9	188.0
1995	3.9	190.3
1996	4.0	193.0
1997	4.1	196.8
1998	4.2	199.5
1999	4.0	202.1

2000	4.3	205.7
2001	4.5	210.0
2002	4.4	213.5
2003	4.5	218.0
2004	4.7	222.4
2005	4.6	225.0
2006	4.8	229.8
2007	5.0	235.5
2008	5.2	240.2
2009	5.3	245.7
2010	5.6	251.3
2011	5.8	257.0
2012	6.0	262.5
2013	6.1	270.0
2014	6.0	280.5
2015	5.9	295.0
2016	6.2	310.0
2017	6.5	330.0
2018	6.8	350.0
2019	7.2	365.0
2020	8.5	380.0
2021	7.9	445.9

Source: Compiled from PLFS and NCRB

The comparative figure shows that both unemployment and crime move together, peaking in 2020 during the pandemic.

Hypothesis

- Null Hypothesis (H_0): There is no significant relationship between unemployment and Crime in India.

- Alternative Hypothesis (H_1): There is a significant positive relationship between unemployment and crime in India.

Correlation and Regression Analysis

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.9646
R Square	0.9304
Adjusted R Square	0.9279
Standard Error	0.3395
Observations	30

ANOVA								
	df	SS	MS	F	Significance F			
Regression	1	43.167	43.16685	374.45488	9.6214E-18			
Residual	28	3.2278	0.115279					
Total	29	46.395						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	0.5942	0.2483	2.392957	0.0236617	0.08554917	1.10276	0.0855492	1.10276
UNEMPLOYEMENT	0.0184	0.001	19.35084	9.621E-18	0.01646792	0.02037	0.0164679	0.02037

Fig: Regression output

Source: Microsoft excel

CORRELATION: 0.964586431

The regression and correlation values confirm that unemployment strongly affects crime in India.

Interpretation of Results

The findings of the study clearly show a strong positive association between unemployment and crime rate in India. The correlation coefficient of 0.96 indicates an extremely strong direct relationship, meaning that whenever unemployment rose during the study period, crime also increased. This pattern held consistently across the 30 years of data.

The regression analysis further strengthens this conclusion. With an R^2 value of 0.93, the model demonstrates that unemployment accounts for 93% of the fluctuations in the crime rate. This is unusually high in social science research and suggests that unemployment plays a major role in shaping crime trends.

The regression coefficient of 0.018 indicates that a rise in unemployment leads to a proportional rise in crime. Even though the numerical increase in crime per 1% unemployment seems small, the long-term cumulative effect is significant. Additionally, the p-value confirms that the statistical output is meaningful and reliable.

These findings collectively demonstrate that unemployment is not only an economic problem but also a major social factor that influences crime. The clear upward movement of both variables indicates that joblessness contributes to increased crime activities, possibly due to financial stress, reduced opportunities, and social instability.

Policy Implications

1. Employment Generation: Strengthen MGNREGA, Start-Up India, and other job schemes.
2. Youth-Oriented Measures: Provide skill training and entrepreneurship support.
3. Social Security: Introduce unemployment allowances and welfare benefits.
4. Education Focus: Promote vocational education to reduce vulnerability to crime.
5. Targeted Policing: Focus on high-unemployment regions to control crime.

Conclusion

The study concludes that unemployment and crime in India share a strong and positive relationship. The correlation coefficient ($r = 0.96$) indicates that as unemployment increases, crime rates also tend to rise, and when unemployment declines, crime rates generally fall. This consistent movement in the same direction demonstrates that unemployment is closely linked to the overall crime trend in India over the period 1992–2021.

The regression results reinforce this finding. With an R^2 value of 0.93, the model shows that unemployment alone explains 93% of the variation in crime rates, highlighting a powerful statistical connection between the two variables. The positive regression coefficient (+0.018) further confirms that higher unemployment contributes to higher crime levels. The p-value (< 0.05) proves that this relationship is statistically significant and not due to random chance.

Therefore, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_1) is accepted—there is a significant and strong positive relationship between unemployment and crime in India.

These findings suggest that unemployment is not merely an economic concern but also a major social factor influencing national crime patterns. Reducing unemployment through job creation, skill development, economic reforms, and targeted youth employment programs can play an important role in lowering crime rates and improving social stability in the country

References

1. Crime in India 2021 (Volume I) – NCRB official report https://ncrb.gov.in/uploads/crime-in-india/Crime%20in%20India%202021%20Volume%201.pdf
2. Crime in India 2020 (Volume I) – NCRB official report https://ncrb.gov.in/uploads/crime-in-india/Crime%20in%20India%202020%20Volume%201.pdf
3. Crime in India 2019 (Volume I) – NCRB official report https://ncrb.gov.in/uploads/crime-in-india/Crime%20in%20India%202019%20Volume%201.pdf
4. Crime in India 2018 (Volume I) – NCRB official report https://ncrb.gov.in/uploads/crime-in-india/Crime%20in%20India%202018%20Volume%201.pdf
5. NCRB Data Catalogue (All Datasets) – Government open data platform https://data.gov.in/ministrydepartment/National%20Crime%20Records%20Bureau%20%28NCRB%29
6. All-India Level: Incidence and Rate of Cognizable Crimes (IPC) – Open Government Data (1985–1995 onwards) https://data.gov.in/resource/all-india-level-incidence-and-rate-cognizable-crimes-ipc-under-different-crime-heads-1985
7. Periodic Labour Force Survey (PLFS) – 2021–22 Annual Report https://mospi.gov.in/documents/213904/301563//Annual_Report_PLFS_2021_22m.pdf
8. PLFS – 2020–21 Annual Report https://mospi.gov.in/documents/213904/301563//Annual_Report_PLFS_2020_21.pdf
9. PLFS – 2019–20 Annual Report https://mospi.gov.in/documents/213904/301563//Annual_Report_PLFS_2019_20.pdf
10. Employment–Unemployment Surveys (Old Series) – MOSPI Data Archive https://mospi.gov.in/web/mospi/reports-publications
11. PLFS Data Catalogue – Government of India Open Data Portal https://data.gov.in/catalog/periodic-labour-force-survey