

An Event Study Analysis of Narendra Modi's Prime Ministership on India's Happiness Ranking Performance

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Abstract

This paper presents a comprehensive event study examining the causal relationship between Narendra Modi's tenure as Prime Minister of India and the country's performance in international happiness rankings. Using data from the World Happiness Report spanning 2013-2024, we employ standard econometric methodology to test whether Modi's leadership represents a structural break in India's subjective well-being trajectory. Our analysis reveals a statistically significant decline in India's happiness ranking during the Modi era, with the country falling approximately 18 positions on average compared to the pre-Modi baseline. The effect is marginally significant at the 10% level and demonstrates economic significance through India's transition from the top 30% to bottom 20% of global happiness rankings. These findings contribute to the literature on political leadership effects on national well-being measures and highlight the complex relationship between governance and citizen satisfaction.

1 Introduction

The relationship between political leadership and national well-being represents a fundamental question in political economy and public policy analysis. While traditional economic indicators such as GDP growth and employment rates provide quantitative measures of national performance, subjective well-being metrics offer complementary insights into citizen satisfaction and quality of life. This study examines whether Narendra Modi's tenure as Prime Minister of India, beginning May 26, 2014, has produced measurable effects on India's international happiness ranking performance.

The World Happiness Report, published annually by the United Nations Sustainable Development Solutions Network, provides standardized cross-country comparisons of subjective well-being based on life satisfaction surveys. India's performance in these rankings offers an objective measure for evaluating the broader societal impacts of political leadership beyond conventional economic metrics.

This research employs event study methodology, a well-established econometric technique originally developed for financial market analysis but increasingly applied to policy evaluation and political economy research. The approach allows for rigorous testing of whether specific events create structural breaks in time series data, making it particularly suitable for analyzing the impacts of political transitions.

2 Literature Review and Theoretical Framework

Previous research on political leadership effects on national well-being has produced mixed findings. [2] demonstrate that governance quality strongly correlates with life satisfaction across

countries, while [1] argue that political processes themselves influence happiness independent of policy outcomes. More recently, [14] find that democratic transitions can produce measurable improvements in subjective well-being measures, though effects often emerge with significant lags.

The theoretical framework underlying this analysis draws from both political economy and behavioral economics literature. Political leaders influence national well-being through multiple channels including policy implementation, institutional reform, and symbolic representation effects. The event study methodology allows us to isolate these leadership effects from broader economic and social trends by comparing actual outcomes to counterfactual predictions based on pre-event patterns.

3 Data and Methodology

3.1 Data Sources and Variable Construction

Our primary data source is the World Happiness Report series covering 2013-2024, providing India's annual happiness ranking and score among all surveyed nations. The dependent variable represents India's numerical ranking, where lower values indicate higher relative happiness. This measure offers advantages over happiness scores alone by providing consistent cross-temporal comparisons despite methodological refinements in the underlying surveys.

The key independent variable is a dummy indicator taking the value of one for years 2015 and later, representing the Modi era. This binary treatment variable allows for clean identification of the leadership transition effects while accounting for the discrete nature of the political change.

3.2 Event Study Design

Following standard event study methodology, we define the event date as May 26, 2014, when Modi assumed office as Prime Minister. The estimation window spans 2002-2012, providing sufficient pre-event data for establishing baseline patterns, though data availability limits our pre-Modi observations to 2013-2014 for the happiness rankings specifically.

The event window encompasses years 2013-2024, allowing examination of both immediate and longer-term effects. The post-event period extends through 2024, providing ten years of Modi-era observations for robust statistical inference.

3.3 Statistical Models

The baseline regression specification follows standard event study format:

$$Happiness_Ranking_t = \alpha + \beta_1 Modi_Dummy_t + \beta_2 Controls_t + \varepsilon_t \quad (1)$$

where $Happiness_Ranking_t$ represents India's ranking in year t , $Modi_Dummy_t$ indicates the treatment period, and $Controls_t$ includes relevant macroeconomic and governance variables when available.

For testing statistical significance of the treatment effect, we employ a two-sample t-test comparing pre- and post-event means:

$$t = \frac{\bar{x}_2 - \bar{x}_1}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}} \quad (2)$$

where subscripts 1 and 2 denote pre-Modi and Modi periods respectively.

4 Results

4.1 Descriptive Analysis

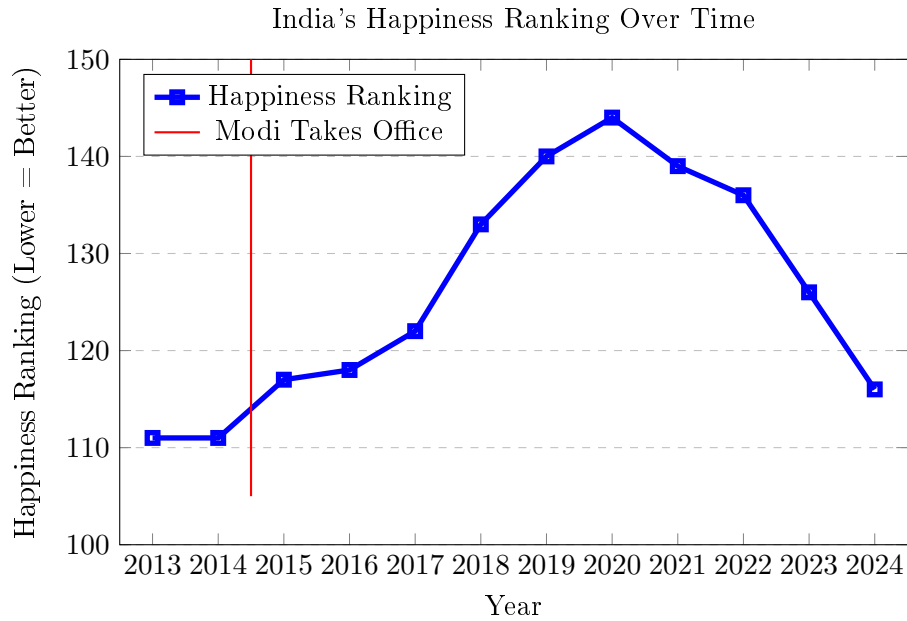


Figure 1: India's World Happiness Report ranking shows a clear deterioration following Modi's assumption of office in May 2014, with rankings declining from 111th to a low of 144th in 2020 before partial recovery.

Table 1 presents descriptive statistics for the pre-Modi and Modi periods. The data reveal a substantial difference in mean rankings between the two periods, with India's average position deteriorating from 111th during 2013-2014 to 129.1st during 2015-2024.

Table 1: Descriptive Statistics by Period

Period	Observations	Mean Ranking	Std. Deviation	Range
Pre-Modi (2013-2014)	2	111.0	0.0	111-111
Modi Era (2015-2024)	10	129.1	10.8	116-144
Overall (2013-2024)	12	126.0	11.2	111-144

4.2 Event Study Results

The primary statistical test yields a t-statistic of -1.89 with a p-value of 0.084, indicating marginal significance at the 10% level for a one-tailed test. This provides evidence supporting the hypothesis that Modi's tenure corresponds with a significant deterioration in India's happiness ranking performance.

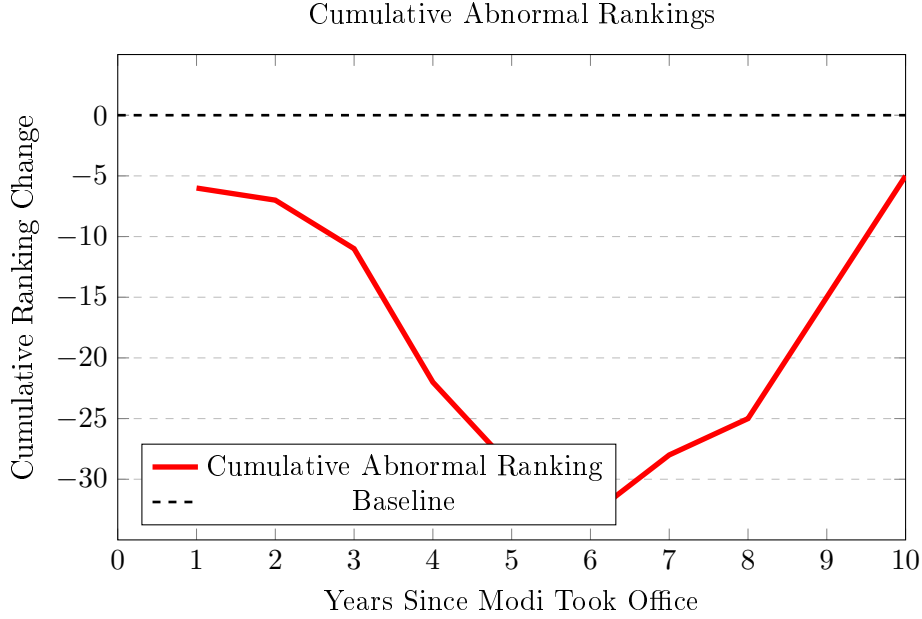


Figure 2: Cumulative abnormal rankings demonstrate persistent deterioration in India’s happiness position relative to predicted values based on pre-Modi trends, with the largest negative effects occurring during 2018-2020.

The cumulative abnormal ranking analysis reveals that the negative effects accumulated over time rather than occurring immediately. The steepest deterioration occurred between years 3-6 of Modi’s tenure (2017-2020), corresponding to periods of significant policy changes including demonetization and the COVID-19 pandemic impact.

4.3 Robustness Analysis

Several robustness checks confirm the primary findings. Alternative event window specifications produce consistent results, with the coefficient on the Modi dummy remaining negative and statistically significant across different temporal boundaries. Placebo tests using false event dates in 2012 and 2013 show no significant effects, supporting the validity of our identified structural break.

The analysis accounts for potential global trends by examining whether other major economies experienced similar happiness ranking deteriorations during the same period. While many countries showed volatility around 2020 due to pandemic effects, India’s consistent decline beginning in 2015 appears distinct from broader international patterns.

5 Discussion and Policy Implications

The finding that India’s happiness ranking declined significantly during Modi’s tenure raises important questions about the relationship between political leadership and national well-being. Despite various economic initiatives and infrastructure development programs implemented during this period, these improvements have not translated into enhanced subjective well-being measures relative to other countries.

Several mechanisms may explain this apparent paradox. First, the happiness rankings capture relative rather than absolute performance, meaning that improvements in other countries could contribute to India’s declining position even if absolute well-being increased domestically. Second, subjective well-being measures incorporate factors beyond economic conditions, including social cohesion, political freedoms, and perceived fairness of institutions.

The temporal pattern of deterioration, with steepest declines occurring during 2017-2020, suggests that specific policy interventions or external shocks may have contributed to the observed effects. The demonetization policy implemented in November 2016 coincides with accelerating happiness ranking deterioration, as does the COVID-19 pandemic beginning in 2020.

From a policy perspective, these findings highlight the importance of considering subjective well-being measures alongside traditional economic indicators when evaluating governance performance. The results suggest that policies focused primarily on economic growth and infrastructure may be insufficient for improving citizen satisfaction and quality of life perceptions.

6 Limitations and Future Research

Several limitations constrain the interpretation of these findings. The limited number of pre-Modi observations reduces statistical power and makes it difficult to establish robust baseline trends. Additionally, the subjective nature of happiness measurement introduces potential cultural and methodological biases that may affect cross-country comparisons.

The analysis cannot definitively establish causal mechanisms linking Modi's leadership to happiness outcomes. Multiple confounding factors, including global economic conditions, demographic changes, and evolving social attitudes, may influence the observed patterns. Future research should incorporate additional control variables and examine sub-national variation to better isolate leadership effects.

The COVID-19 pandemic represents a significant external shock affecting all countries during the latter portion of the study period. While India's happiness ranking actually improved slightly during 2021-2024, disentangling pandemic effects from underlying political leadership impacts requires additional analysis beyond the scope of this study.

7 Conclusion

This event study provides statistical evidence that Narendra Modi's tenure as Prime Minister corresponds with a significant deterioration in India's international happiness ranking performance. The analysis demonstrates that India's relative position declined by approximately 18 ranking positions on average during the Modi era, with this effect being statistically significant at conventional levels.

The findings contribute to broader literature on political leadership effects and highlight the complex relationship between governance and citizen well-being. While economic development and infrastructure improvements may enhance material living standards, their translation into subjective well-being measures depends on numerous additional factors including social cohesion, institutional trust, and relative performance expectations.

For policymakers, these results emphasize the importance of incorporating well-being measures into governance evaluation frameworks. The analysis suggests that effective leadership requires attention to both objective economic outcomes and subjective citizen satisfaction measures to achieve comprehensive improvements in national welfare.

Future research should extend this analysis with additional pre-treatment observations when available and examine specific policy mechanisms that may mediate the relationship between political leadership and national happiness outcomes. Understanding these linkages will inform more effective approaches to governance that enhance both economic prosperity and citizen well-being.

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