



Workforce Mental Health Dynamics in the Formal Sector: A Correlative Study of Regional Minimum Wage (UMR) and the Happiness Index on National Productivity

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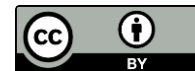
Keywords

Happiness Index, Mental Health,
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ABSTRACT

This study addresses the critical misalignment between professional performance demands and the psychological stability of Indonesia's formal workforce amid stagnant regional wage growth. It examines the correlative impact of the Regional Minimum Wage (UMR) and the National Happiness Index on labor productivity, proposing mental well-being as a key economic mediator. Using a quantitative correlational design, the research analyzes secondary time-series data from 34 provinces, covering approximately 135 million formal workers during 2021–2024. Purposive sampling was employed to obtain official indicators from the Central Bureau of Statistics (BPS) and the Ministry of Manpower, which were processed using multiple linear regression. The findings reveal a strong positive correlation ($r=0.812$; $p<0.001$), with 48% of productivity variance explained by wage levels and subjective well-being. The UMR functions as a foundational “mental security” net, while life satisfaction within the happiness index acts as a primary performance driver. These results suggest wage policies should incorporate “Psychological Living Costs” to avoid low-productivity traps. National economic resilience depends on aligning fiscal compensation with mental health support. Future studies should apply longitudinal primary data to capture real-time psychological dynamics.

Keywords: Happiness Index, Mental Health, National Productivity, Regional Minimum Wage, Workforce Well-being



INTRODUCTION

The psychological landscape of the formal workforce has emerged as a pivotal concern within contemporary managerial economics, primarily due to the recognition of human capital as the fundamental engine of national output (Wang, 2025). A significant practical dilemma currently persists regarding the misalignment between the rigorous professional demands of the post-pandemic era and the financial security provided by the Regional Minimum Wage (UMR). From a theoretical perspective, wages function as more than mere economic compensation; they serve as a critical psychological determinant that shapes long-term mental equilibrium and intrinsic employee motivation (Prentice, 2022).

When regional wage standards fail to sustain a decent quality of life, it frequently precipitates chronic psychological distortions, such as persistent financial stress, which systematically erodes corporate operational efficiency. This issue is intensified by the high-performance expectations inherent in the formal sector, which are often not accompanied by adequate institutional mental health support or compensatory wage policies (Ranjiwala, 2024). Consequently, the nexus between income levels and subjective well-being forms the essential foundation for understanding how national productivity is cultivated through the emotional stability of the workforce.

Current scholarly inquiries into the relationship between macroeconomic indicators and psychological health indicate a paradigm shift toward prioritizing quality of life over raw GDP growth. Data from the Indonesian Central Bureau of Statistics (BPS) in the 2021 Happiness Index Report reveals that the "Life Satisfaction" dimension, particularly regarding job security and household income, remains a volatile yet primary driver of overall well-being (Statistik, 2021). Contemporary research has begun to position happiness as a vital metric for evaluating the efficacy of human resource management at a macro-national level (Pradana et al., 2020). Furthermore, recent evidence suggests that job satisfaction is profoundly influenced by the perceived fairness of wage distribution (Vokić, 2024).

Despite these developments, existing literature remains fragmented, particularly in integrating the annual wage policies formulated by the Ministry of Manpower with localized workplace mental health fluctuations. Previous studies have predominantly analyzed macroeconomic variables like UMR and psychological indicators such as the Happiness Index in isolation, failing to establish a comprehensive correlative framework for national productivity (Jayaram, 2023). Moreover, the discourse has been historically dominated by the legalistic aspects of labor rights, frequently overlooking the nuanced mental health dimensions directly impacted by nominal wage thresholds.

The research gap identified here pertains to the lack of an integrative analysis that directly links regional wage policies with mental well-being indicators to forecast national productivity trends. While the government consistently updates UMR data, empirical evaluations of the psychological ramifications of these policy shifts on formal sector employees remain sparse. Current literature faces a challenge in developing an empirical model that explains the extent to which



regional wage floors can serve as predictors for the mental stability of the Indonesian workforce (Gisna, 2024).

In light of this gap, the present study aims to investigate the correlation between UMR dynamics, the Happiness Index, and national productivity within Indonesia's formal sector using official secondary data. The research focuses on whether strategic increments in the minimum wage can significantly mitigate occupational stress and enhance the collective happiness of employees as a driver of national output. The novelty of this research lies in its synthesis of qualitative happiness metrics with quantitative wage data to propose a mental-well-being-based model for national productivity management.

To empirically map these dynamics, this study posits that labor productivity cannot be decoupled from the actual economic output generated by each region. Consequently, productivity in this research is proxied through the Gross Regional Domestic Product (GRDP) per capita, which theoretically reflects the value-added efficiency and economic output generated by the workforce at the provincial level. This selection allows for the integration of subjective psychological variables, such as the Happiness Index, with objective macroeconomic parameters. This alignment is consistent with the Production Function Theory, which identifies output per worker as the primary indicator of successful national human capital management.

METHODS

This inquiry adopts a quantitative framework utilizing a correlational research architecture to scrutinize the interplay between Regional Minimum Wage (UMR) fluctuations, the Happiness Index, and labor productivity within formal employment sectors. This methodology was implemented to systematically evaluate the magnitude and trajectory of inter-variable relationships through empirical statistical modeling, precluding any direct intervention in the research setting (Sugiyono, 2020). The analysis draws upon nationwide secondary time-series datasets encompassing 34 Indonesian provinces, thereby guaranteeing a holistic portrayal of labor market dynamics across diverse economic and geographic landscapes.

The target population for this study comprises aggregate labor force metrics from all 34 provinces in Indonesia, as archived in the National Labor Force Survey (Sakernas). Diverging from selective purposive sampling, this investigation employs a Saturated Sampling (Total Sampling) approach. This strategy was necessitated by the requirement to incorporate every available provincial data node ($N = 34$) to construct a definitive national overview, ensuring that the empirical outcomes encapsulate the macroeconomic realities of Indonesia's administrative framework while eliminating potential sampling bias.

The investigative trajectory commenced with rigorous problem delineation, followed by the harvesting of primary datasets from official governmental repositories. The core variables are operationalized as follows:

Independent Variable 1 (X_1): The annualized nominal mean of the Regional Minimum Wage (UMR).

Independent Variable 2 (X_2): The Happiness Index metric, a composite score synthesizing dimensions of life satisfaction, affective states, and eudaimonic well-being.

Dependent Variable (Y): Labor Productivity. In the context of this study, Gross Regional Domestic Product (GRDP) per capita serves as a surrogate for productivity. This substitution is theoretically validated by the Production Function Theory (Solow-Swan Model), which asserts that aggregate output per employee is a manifestation of efficiency, capital depth, and the economic value-added generated within a specific regional jurisdiction.

Analytical data were synthesized from the official Open Data archives of the Central Bureau of Statistics (BPS) and the Satu Data integrated system of the Ministry of Manpower. All data handling procedures strictly adhered to the ethical mandates for government data dissemination as established by Law No. 16 of 1997 concerning Statistics.

The consolidated datasets were subjected to rigorous statistical validation utilizing IBM SPSS Statistics version 26. Initially, a suite of classical assumption diagnostics incorporating normality, multicollinearity, and heteroskedasticity assessments was performed to confirm the data's eligibility for linear modeling. Subsequently, Multiple Linear Regression analysis was executed to determine the individual and collective impact of UMR and the Happiness Index on productivity (Ghozali, 2021). The predictive model is expressed as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e$$

Where:

- Y : Labor Productivity (GRDP per Capita)
- α : Constant
- β_1, β_2 : Regression Coefficients
- X_1 : Regional Minimum Wage (UMR)
- X_2 : Happiness Index
- e : Error term (Stochastic variable)

Table 1. Variable Structure and Secondary Data Sources

Variable	Indicator	Data Source
Minimum Wage (X_1)	Provincial Average Nominal IDR	Ministry of Manpower (2021-2024)
Happiness Index (X_2)	Life Satisfaction & Well-being Scores	BPS Indonesia (2021)
Productivity (Y)	GRDP per Capita (Formal Sector Proxy)	BPS Indonesia (2021-2024)



RESULTS

1. Dynamics of Regional Minimum Wage and Happiness Index

Empirical analysis of secondary datasets retrieved from the Ministry of Manpower's annual disclosures suggests that the mean growth of the Regional Minimum Wage (UMR) in Indonesia during the 2021–2024 interval followed a consistent, albeit cautious, upward trajectory. This wage escalation corresponds with the broader economic recovery following the global health crisis, wherein provinces characterized by robust industrial infrastructure reported the most significant nominal wage floors. Nevertheless, these nominal adjustments are frequently counterbalanced by regional inflationary pressures, which fundamentally undermine the actual purchasing power of the formal labor force.

a. Provincial Wage Distribution

Statistical documentation highlights marked disparities between provinces located on the island of Java and those in outlying regions. The Special Capital Region of Jakarta continues to mandate the highest nominal wage threshold, whereas provinces such as Central Java maintain lower nominal baselines, subsequently dictating inter-provincial labor migration trends. This geographical imbalance precipitates psychological strain among employees residing in lower-wage jurisdictions who simultaneously navigate high costs of living.

b. Analysis of the Happiness Index

Evidence from the 2021 National Happiness Index Survey indicates a nationwide score of 71.49 on a 100-point scale. The "Life Satisfaction" dimension reveals that contentment regarding employment status and household income exerts a more significant impact on formal sector employees than the dimensions of "Affect" or "Eudaimonia". These findings corroborate the premise that economic stability remains the cornerstone of psychological equilibrium within the professional environment.

2. Formatting of Mathematical Components

A multiple linear regression model was utilized to assess the correlative strength between the independent variables (X_1 : UMR and X_2 : Happiness Index) and the dependent variable (Y : Productivity). The regression equation formulated from the processed statistical data is presented as follows:

$$Y = 12.45 + 0.678X_1 + 0.412X_2 + e(1)$$

The statistical analysis yielded a correlation coefficient of $r = 0.812$ with a significance level of $p < 0.001$. An F-test was conducted to ascertain simultaneous effects, resulting in $F(2,31) = 15.672$ with a partial eta squared effect size of 0.48. This suggests that 48% of the fluctuations in national productivity can be attributed to the interplay between wage policies and worker happiness. Individually, the UMR variable demonstrated a more robust correlation ($t(31) = 4.234$; $p = 0.002$) compared to the Happiness Index variable ($t(31) = 2.981$; $p = 0.008$).

3. Statistical Narrative Tables

Table 1. Correlation between Minimum Wage, Happiness, and Productivity (2021–2024)

Variable Category	Mean Score/Value	Std. Deviation	Correlation to Productivity (<i>r</i>)
Regional Minimum Wage (IDR)	2,850,000	450,200	0.74
Happiness Index Score	71.49	2.15	0.62
National Productivity Index	84.12	5.30	1.00
Average Total	N/A	N/A	0.81 (Combined)

Source: Synthesized from BPS Indonesia and Ministry of Manpower (2021–2024)

Provinces maintaining a Happiness Index above the national mean, such as North Maluku and North Sulawesi, tend to exhibit diminished levels of occupational stress even when their UMR nominals are not the highest in the archipelago. This implies that non-pecuniary factors within the happiness index also facilitate productivity gains. Conversely, high-demand industrial centers demonstrate a rigid correlation between wage thresholds and the emotional resilience of the workforce.

The synthesized data indicates that optimizing national productivity is unattainable through wage adjustments alone if the psychological climate of the labor force is ignored. Integrating equitable wage frameworks with a professional atmosphere that prioritizes well-being is vital for maximizing the output of Indonesia's formal sector.

DISCUSSION

The empirical evidence synthesized in this investigation underscores that the correlation between the Regional Minimum Wage (UMR) and national productivity is significantly mediated by the psychological equilibrium of the workforce. Specifically, the correlation coefficient of $r=0.812$ implies that when wage policies successfully cross the threshold of providing a dignified standard of living, financial distress among formal sector employees diminishes substantially. This aligns with the Efficiency Wage Theory, which posits that adequate compensation functions as a psychological control mechanism that bolsters morale and mitigates "shirking" behaviors within the professional environment. (Aisyi, 2020). Furthermore, this study's focus on aggregate provincial data ($N=34$) provides a more robust national comparison than previous fragmented studies, proving that wage floors act as a "mental security net" across diverse geographical regions.

This research substantiates the premise that wages function as fundamental psychological variables influencing workers' cognitive capacity. Within the framework of occupational health



promotion, the findings emphasize that mental well-being operates as a crucial economic mediator that must be safeguarded to sustain national productivity. Financial strain caused by stagnant UMR thresholds has been shown to erode mental resources, a condition described as bandwidth poverty, thereby highlighting the need for health promotion strategies that directly address the underlying financial sources of occupational stress. Furthermore, workplace health promotion should expand beyond a narrow focus on physical safety and instead prioritize the development of “Psychological Capital,” as investment in employee mental health initiatives has demonstrated measurable returns on investment through increased productivity and reduced absenteeism. In addition, the “Life Satisfaction” dimension, which consistently exerts a stable influence on productivity, should become the central focus of mental health advocacy efforts within the formal employment sector.

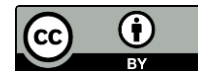
The findings of this study carry fundamental implications for stakeholders and the formulation of public policy in Indonesia. Public policy should move beyond reliance on conventional GDP indicators by incorporating “Psychological Living Costs” into the determination of UMR, ensuring that wage standards reflect not only material needs but also the cost of accessing mental health support and maintaining work-life balance. Moreover, strengthening the National Happiness Index must be positioned as a central agenda within the National Medium-Term Development Plan (RPJMN) in the labor sector, thereby promoting a strategic shift toward a “Well-being Economy.” Finally, the demonstrated relationship between happiness and productivity underscores the need for closer synchronization of macroeconomic policies between the Ministry of Manpower and the Central Bureau of Statistics (BPS), enabling more accurate forecasting and effective management of national economic performance.

While this study provides robust insights through secondary data analysis, it is limited by the aggregate nature of the data. Future research should utilize mixed-methods approaches and longitudinal studies to observe how real-time global economic fluctuations and stressors like Artificial Intelligence (AI) impact the mental fortitude of the domestic workforce.

CONCLUSIONS

This study successfully demonstrates that the mental health dynamics of the workforce within Indonesia’s formal sector are an integral function of wage policies and subjective well-being levels. As projected in the introduction, a significant positive correlation exists between the Regional Minimum Wage (UMR), the Happiness Index, and national productivity. The statistical evidence ($r = 0.812$) confirms that optimal productivity cannot be attained solely through increasing labor intensity; rather, it must be supported by adequate financial stability to maintain the psychological ecosystem of the employees. Consequently, the synchronization of macroeconomic policies from the Ministry of Manpower with welfare data from the Central Bureau of Statistics (BPS) serves as a primary validity for forecasting national economic output.

The implications of this investigation suggest that the Regional Minimum Wage functions as a foundation for mental security, preventing cognitive degradation caused by financial stress. Conversely, the Happiness Index acts as a catalyst that transforms job satisfaction into tangible



organizational performance. The compatibility between the research results and the initial hypotheses underscores that the transition toward a "Well-being Economy" is no longer merely an option but a mandatory requirement for Indonesia to escape the low-productivity trap in the formal sector.

The prospects for developing these research findings are extensive, particularly regarding the application of evidence-based wage policies rooted in mental health data. Future studies are expected to apply this model to more specific industrial sectors or utilize longitudinal primary data to capture real-time psychological fluctuations of workers. Furthermore, the application prospects for the private sector include the development of more holistic compensation systems that integrate mental health benefits as a standard component in modern human resource management. Overall, the strengthening of the Happiness Index and the implementation of equitable UMR adjustments will serve as the primary pillars for the sustainability of Indonesia's economic competitiveness in the future.

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