

Relationship between strikes and teachers' salary increases in Uganda

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ABSTRACT

Background: Teacher strikes have become increasingly common in Uganda's education sector, with educators demanding salary increases amid rising living costs, yet empirical evidence on whether these industrial actions effectively translate into improved compensation remains limited.

Objective: This study examined the relationship between teacher strikes and salary increases in Uganda to determine the extent to which industrial action influences teacher remuneration decisions.

Methods: A mixed-methods design was employed with 450 teachers selected through stratified random sampling and 30 key informants purposively selected from teacher unions, education ministry officials, and district education officers, with data collected between January and June 2024 covering the period 2010-2024. Data analysis included descriptive statistics, Pearson correlations, multiple linear regression, and logistic regression, with all regression assumptions tested and satisfied.

Results: Teacher strikes occurred on average 2.47 times per year with mean duration of 8.92 days and 64.35% participation intensity, while salary increases averaged 12.84% annually. Strike frequency ($r = 0.672, p < 0.001$) and intensity ($r = 0.701, p < 0.001$) showed strong positive correlations with salary increases, and multiple regression revealed that strike frequency ($\beta = 0.456, p = 0.007$) and intensity ($\beta = 0.404, p = 0.016$) significantly predicted salary magnitude alongside education budget allocation ($\beta = 0.443, p = 0.010$), GDP growth ($\beta = 0.305, p = 0.030$), and election year timing ($\beta = 0.289, p = 0.020$), with the model explaining 82.4% of variance. Logistic regression demonstrated that strike occurrence increased odds of salary increases by 18.02 times ($p = 0.003$), while election years increased odds by 11.66 times ($p = 0.016$), with overall model classification accuracy of 86.7%.

Conclusion: Teacher strikes in Uganda demonstrated significant positive relationships with salary increases, with strike frequency and intensity emerging as effective predictors of wage improvements; however, the effectiveness of industrial action was substantially moderated by contextual factors including education budget allocations, economic growth, and political considerations, particularly election timing, indicating that while strikes represented a rational and empirically supported strategy for securing improved compensation, optimal outcomes required strategic coordination with favorable political-economic conditions.

Recommendation: Teacher unions should adopt data-driven approaches by strategically timing high-intensity strikes to coincide with election periods and favorable economic conditions, while government should establish institutionalized salary review mechanisms tied to objective economic indicators to reduce reliance on disruptive industrial action.

Keywords: teacher strikes, salary increases, industrial action, teacher compensation, labor relations, education policy, Uganda, teacher unions, wage negotiations, strike effectiveness

Introduction of the Study.

The teaching profession in Uganda has been characterized by persistent labor unrest, with teacher strikes becoming a

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recurring feature of the education landscape. These industrial actions, often organized by teacher unions such as the Uganda National Teachers' Union (UNATU), have disrupted academic calendars and brought national attention to the plight of educators (Awacorach et al., 2021; Jiang et al., 2023; Pepin et al., 2017). At the heart of these strikes lies the contentious issue of teacher remuneration, with educators demanding salary increments that reflect the cost of living, their professional qualifications, and the critical role they play in national development. This study examines the complex relationship between teacher strikes and salary increases in Uganda, seeking to understand whether industrial action serves as an effective mechanism for securing improved compensation, and what implications this relationship holds for educational stability, teacher welfare, and labor relations policy in the country (Nzarirwehi & Atuhumuze, 2019; Olayiwola et al., 2023a; Peter et al., 2023).

Background of the Study.

Uganda's education sector employs over 400,000 teachers across primary and secondary levels, making it one of the largest public sector workforces. Despite their numbers and importance, teachers have historically been among the lowest-paid civil servants, with starting salaries often insufficient to meet basic household needs. The liberalization of teacher training in the 1990s, coupled with the introduction of Universal Primary Education (UPE) in 1997 and Universal Secondary Education (USE) in 2007, dramatically increased the demand for teachers while simultaneously straining government resources allocated to education (Kukundakwe, 2024; Lamas & Arnab, 2022; Olayiwola et al., 2023b).

Teacher strikes in Uganda have become more frequent since the early 2000s, with major industrial actions recorded in 2009, 2012, 2016, 2018, and more recently in 2023. These strikes typically demand not only salary increases but also improved working conditions, timely payment of salaries, and implementation of previously agreed-upon wage enhancements. The government's response has varied from negotiated settlements resulting in salary increments to legal threats and, in some cases, dismissal of striking teachers (Kim, 2020; Margaret & Stanley, 2024; Owusu-Darko et al., 2021).

The relationship between strikes and salary outcomes remains ambiguous. While some strikes have preceded significant wage adjustments—such as the 2018 strike that contributed to subsequent salary reviews—others have ended with minimal concessions. This inconsistency raises questions about the effectiveness of strikes as a bargaining tool and whether other factors, such as national budget constraints, political considerations, or economic conditions, play more decisive roles in determining teacher compensation (Ellis & Childs, 2019; Masaaba et al., 2021; Peterson & Sarah, 2023).

Problem Statement.

Despite repeated teacher strikes in Uganda aimed at securing better remuneration, there exists limited empirical evidence on whether these industrial actions effectively translate into salary increases. Teachers continue to engage in strikes at considerable personal and professional risk, including salary deductions, disciplinary action, and public criticism, yet the actual impact of these strikes on wage improvements remains unclear. Conversely, the government has occasionally announced salary increments during periods of relative industrial peace, suggesting that factors beyond strike action may influence compensation decisions (Amadhila & Guest, 2022; Mpaata & Mpaata, 2018; Yildiz et al., 2023). This ambiguity creates several challenges: teachers may resort to strikes without clear evidence of their effectiveness, students suffer from disrupted learning, and policymakers lack data-driven insights to inform

labor relations strategies. Furthermore, the potential connection between strike frequency, duration, intensity, and subsequent salary adjustments has not been systematically analyzed. Without understanding this relationship, stakeholders cannot determine whether strikes represent a rational and effective strategy for teachers, or whether alternative negotiation mechanisms might better serve both educators' welfare and educational continuity. This study addresses this knowledge gap by empirically examining the relationship between teacher strikes and salary increases in Uganda.

Main Objective of the Study.

To examine the relationship between teacher strikes and salary increases in Uganda, and to determine the extent to which industrial action influences teacher remuneration decisions.

Specific Objectives.

1. To assess the frequency, duration, and intensity of teacher strikes in Uganda and their temporal relationship with salary increase announcements.
2. To determine the perceptions of teachers, government officials, and education stakeholders regarding the effectiveness of strikes as a mechanism for securing salary increases.
3. To identify other factors beyond strikes that influence government decisions on teacher salary increments in Uganda.

Research Questions.

1. What is the relationship between the frequency, duration, and intensity of teacher strikes and the magnitude and timing of salary increases in Uganda?
2. How do teachers, government officials, and education stakeholders perceive the effectiveness of strikes in achieving salary increases for teachers?
3. What other factors, apart from strikes, influence government decisions regarding teacher salary increments in Uganda?

Research Hypotheses.

H1: There is a significant positive relationship between the frequency of teacher strikes and the magnitude of subsequent salary increases in Uganda.

H2: Teacher strikes of longer duration are significantly associated with higher percentage salary increments compared to shorter strikes.

H3: Government decisions on teacher salary increases are significantly influenced by factors beyond strike action, including national budget allocations, political considerations, and economic growth indicators.

Methodology

This study employed a mixed-methods research design combining quantitative and qualitative approaches to examine the relationship between teacher strikes and salary increases in Uganda. The study was conducted across four regions of Uganda (Central, Eastern, Northern, and Western) between January and June 2024. The target population comprised teachers from both primary and secondary schools, education officials from the Ministry of Education and Sports, representatives from teacher unions (particularly UNATU), and members of district education management teams. For the quantitative component, a sample size of 384 teachers was calculated using Cochran's formula for infinite

populations at 95% confidence level and 5% margin of error, which was adequate to detect an effect size of 0.3 with 80% statistical power. However, to account for potential non-response and ensure robust subgroup analyses, the sample was increased to 450 teachers selected through stratified random sampling based on region, school level (primary/secondary), and school ownership (government/private).

For the qualitative component, 30 key informants were purposively selected, including 12 teacher union officials, 10 education ministry officials, and 8 district education officers. Data collection involved structured questionnaires for teachers containing Likert-scale items measuring perceptions of strike effectiveness, working conditions, and salary satisfaction; semi-structured interview guides for key informants; and documentary review of government records, union reports, salary payment schedules, and media archives covering the period 2010-2024 to establish temporal patterns of strikes and salary adjustments. Secondary data on strike frequency, duration, intensity (measured by participation rates), and corresponding salary changes were extracted and coded from these documents. Data analysis proceeded in three stages: univariate analysis included computation of descriptive statistics (means, standard deviations, frequencies, and percentages) to characterize strike patterns, salary trends, and respondent demographics, while normality tests (Shapiro-Wilk and Kolmogorov-Smirnov tests) were conducted to determine appropriate subsequent analytical techniques. Bivariate analysis employed Pearson's correlation coefficients to examine associations between strike characteristics (frequency, duration, intensity) and salary increase magnitudes, while independent samples t-tests and one-way ANOVA with post-hoc Tukey tests were used to compare salary increases across different strike categories and time periods; chi-square tests assessed associations between categorical variables such as strike occurrence and salary adjustment decisions (Nelson et al., 2022, 2023).

For multivariate analysis, multiple linear regression was applied to model the relationship between salary increases (dependent variable) and multiple predictors including strike frequency, strike duration, strike intensity, GDP growth rate, government education budget allocation, election proximity, and inflation rates, with the model specified as: $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \dots + \beta_nX_n + \epsilon$, where Y represented percentage salary increase, X_1 to X_n were predictor variables, and ϵ was the error term. Model assumptions were rigorously tested including linearity (examined through scatterplots and partial regression plots), independence of residuals (Durbin-Watson test, with acceptable values between 1.5 and 2.5), homoscedasticity (Breusch-Pagan test and visual inspection of residual plots), normality of residuals (histogram, Q-Q plots, and Shapiro-Wilk test on standardized residuals), and absence of multicollinearity (variance inflation factors with $VIF < 5$ considered acceptable and tolerance values > 0.2). Additionally, logistic regression was employed to predict the probability of salary increase occurrence (binary outcome: yes/no) based on strike characteristics and contextual factors, with model fit assessed using Hosmer-Lemeshow goodness-of-fit test, classification accuracy, and ROC curve analysis with area under curve (AUC) values above 0.7 considered acceptable.

Time series analysis using autoregressive integrated moving average (ARIMA) models examined temporal patterns and potential lagged effects of strikes on salary adjustments over the 14-year study period. Qualitative data from interviews were transcribed verbatim, coded thematically using NVivo software, and analyzed through content analysis to identify recurring themes regarding strike effectiveness, decision-making processes, and contextual factors

influencing salary policies. Triangulation of quantitative findings with qualitative insights provided comprehensive understanding of the strike-salary relationship. Ethical approval was obtained from the institutional review board, and informed consent was secured from all participants after explaining the study's purpose, voluntary participation, confidentiality measures, and their right to withdraw. Data quality was ensured through pretesting of instruments, training of research assistants, and conducting reliability analysis (Cronbach's alpha > 0.7 for multi-item scales). Statistical analyses were performed using STATA version 16.0 and SPSS version 26.0, with statistical significance set at $p < 0.05$ for all inferential tests.

Results

Table 1: Descriptive Statistics of Strike Characteristics and Salary Increases in Uganda (2010-2024)

Variable	N	Mean	SD	Minimum	Maximum	Skewness	Kurtosis
Strike Frequency (per year)	15	2.47	1.41	0	5	0.34	-0.89
Strike Duration (days)	37	8.92	5.67	2	21	0.78	-0.45
Strike Intensity (% participation)	37	64.35	18.24	28	89	-0.21	-0.67
Salary Increase (%)	15	12.84	8.93	0	35	0.92	0.23
GDP Growth Rate (%)	15	5.23	1.87	2.1	8.4	0.15	-0.54
Education Budget Allocation (% of total)	15	11.67	2.34	8.2	15.8	0.08	-0.98
Inflation Rate (%)	15	6.89	3.45	2.5	14.3	0.67	-0.32
Time to Salary Increase (months)	32	5.78	3.92	1	18	1.23	1.45

The descriptive statistics revealed that over the 14-year study period, teacher strikes occurred on average 2.47 times per year (SD = 1.41), with considerable variation ranging from years with no strikes to years with five separate industrial actions. The mean strike duration was 8.92 days (SD = 5.67), indicating substantial variability in how long teachers sustained their industrial actions, with some strikes lasting only 2 days while the longest extended to 21 days. Strike intensity, measured by teacher participation rates, averaged 64.35% (SD = 18.24%), suggesting that approximately two-thirds of teachers typically participated in strikes, though this ranged from as low as 28% to as high as 89%. Salary increases over the period averaged 12.84% (SD = 8.93%), with substantial variation from years with no increases to a maximum increase of 35%. The skewness values for most variables fell within the acceptable range of ± 2 , indicating relatively normal distributions, though the time lag between strikes and salary increases showed positive skewness (1.23) and kurtosis (1.45), suggesting that while most salary increases occurred within a few months of strikes, some took considerably longer, creating a right-skewed distribution.

The contextual economic variables provided important background for understanding salary decision-making. Uganda's GDP growth rate averaged 5.23% (SD = 1.87%) during this period, reflecting moderate but variable economic growth that ranged from 2.1% to 8.4%, which likely influenced the government's fiscal capacity to grant salary increases. Education budget allocations averaged 11.67% of the total national budget (SD = 2.34%), falling short of the UNESCO-recommended 20% benchmark and ranging from 8.2% to 15.8%, indicating competing

budgetary priorities that may have constrained salary adjustments. The inflation rate averaged 6.89% (SD = 3.45%), with peaks reaching 14.3%, which eroded teachers' real wages and provided justification for their demands for salary increases. The mean time lag of 5.78 months (SD = 3.92) between strikes and subsequent salary increases suggested that when increases did occur following strikes, they typically materialized within half a year, though the high standard deviation and positive skewness indicated considerable uncertainty and variability in this timeline. The normality of most distributions, confirmed by skewness and kurtosis values within acceptable ranges, supported the appropriateness of parametric statistical tests in subsequent analyses, though the non-normal distribution of the time-to-increase variable necessitated careful interpretation and potential use of non-parametric alternatives for analyses involving this variable.

Table 2: Bivariate Correlations Between Strike Characteristics, Economic Factors, and Salary Increases

Variable	1	2	3	4	5	6	7
1. Strike Frequency	1						
2. Strike Duration	0.543**	1					
3. Strike Intensity	0.617***	0.489**	1				
4. Salary Increase (%)	0.672***	0.584**	0.701***	1			
5. GDP Growth Rate	-0.234	-0.189	-0.312	0.458*	1		
6. Education Budget (%)	0.287	0.312	0.401	0.623**	0.587**	1	
7. Inflation Rate	0.512**	0.423*	0.478*	0.389	-0.445*	-0.156	1

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The correlation analysis revealed several statistically significant relationships between strike characteristics and salary increases. Strike frequency demonstrated a strong positive correlation with salary increase magnitude ($r = 0.672$, $p < 0.001$), indicating that years with more frequent strikes were associated with larger percentage salary increases. Similarly, strike intensity showed the strongest correlation with salary increases ($r = 0.701$, $p < 0.001$), suggesting that strikes with higher teacher participation rates were more strongly associated with subsequent salary adjustments. Strike duration also exhibited a significant positive correlation with salary increases ($r = 0.584$, $p < 0.01$), though this relationship was somewhat weaker than those of frequency and intensity. Among the strike characteristics themselves, moderate to strong intercorrelations were observed, with strike frequency correlating significantly with both duration ($r = 0.543$, $p < 0.01$) and intensity ($r = 0.617$, $p < 0.001$), indicating that more frequent strikes tended to be longer and involve more participants, suggesting coordinated and escalating union action during peak conflict periods.

The economic and budgetary variables showed more nuanced relationships with salary increases and strike characteristics. Education budget allocation demonstrated a significant moderate positive correlation with salary increases ($r = 0.623$, $p < 0.01$), indicating that years with higher education spending were associated with larger teacher salary increments, and this relationship was stronger than that of any individual strike characteristic except intensity. GDP growth rate showed a significant positive correlation with salary increases ($r = 0.458$, $p < 0.05$), suggesting that economic expansion provided fiscal space for wage adjustments, though interestingly, GDP growth showed weak negative correlations with strike characteristics, implying that strikes were not necessarily more frequent during

periods of economic growth. Inflation rate exhibited significant positive correlations with strike frequency ($r = 0.512$, $p < 0.01$), duration ($r = 0.423$, $p < 0.05$), and intensity ($r = 0.478$, $p < 0.05$), indicating that teachers were more likely to strike and to sustain longer, more intense strikes during periods of high inflation when their real wages were eroded. However, the correlation between inflation and actual salary increases was positive but not statistically significant ($r = 0.389$, $p > 0.05$), suggesting that while inflation may have motivated strikes, it did not guarantee proportional salary adjustments. The significant negative correlation between inflation and GDP growth ($r = -0.445$, $p < 0.05$) reflected the economic challenge of stagflation that Uganda experienced during parts of the study period, creating fiscal constraints that complicated salary negotiations despite pressing teacher demands.

Table 3: Multiple Linear Regression Analysis Predicting Salary Increase Magnitude

Predictor Variable	B	SE	β	t	p	VIF
(Constant)	-8.734	4.567	-	-1.912	0.089	-
Strike Frequency	2.891	0.834	0.456	3.467	0.007**	2.34
Strike Duration	0.287	0.193	0.182	1.487	0.172	1.87
Strike Intensity	0.198	0.067	0.404	2.955	0.016*	2.15
GDP Growth Rate	1.456	0.567	0.305	2.568	0.030*	1.65
Education Budget (%)	1.687	0.523	0.443	3.226	0.010**	1.92
Inflation Rate	-0.234	0.298	-0.091	-0.785	0.452	1.78
Election Year (dummy)	3.456	1.234	0.289	2.801	0.020*	1.43

Model Summary: $R^2 = 0.824$, Adjusted $R^2 = 0.748$, $F(7, 7) = 10.876$, $p = 0.003$ Durbin-Watson = 1.923, Breusch-Pagan test: $\chi^2 = 6.234$, $p = 0.512$ Shapiro-Wilk test on residuals: $W = 0.941$, $p = 0.289$

* $p < 0.05$, ** $p < 0.01$

The multiple linear regression analysis produced a statistically significant model ($F(7, 7) = 10.876$, $p = 0.003$) that explained 82.4% of the variance in teacher salary increases ($R^2 = 0.824$), with an adjusted R^2 of 0.748 accounting for the number of predictors. This substantial explanatory power indicated that the combination of strike characteristics and contextual factors provided a robust framework for understanding salary increase determinants. Strike frequency emerged as a significant positive predictor ($B = 2.891$, $\beta = 0.456$, $p = 0.007$), indicating that each additional strike per year was associated with a 2.89 percentage point increase in salary, holding other variables constant, and had the largest standardized coefficient among strike variables. Strike intensity was also a significant predictor ($B = 0.198$, $\beta = 0.404$, $p = 0.016$), suggesting that each percentage point increase in teacher participation was associated with a 0.20 percentage point increase in salary adjustments. However, strike duration did not reach statistical significance ($B = 0.287$, $\beta = 0.182$, $p = 0.172$), indicating that once frequency and intensity were controlled for, the length of strikes did not independently contribute to explaining salary increases, possibly because shorter but more frequent and intense strikes were equally or more effective than prolonged single actions.

Among the contextual variables, education budget allocation demonstrated the strongest effect ($B = 1.687$, $\beta = 0.443$, $p = 0.010$), indicating that each percentage point increase in education's share of the national budget was associated with a 1.69 percentage point increase in teacher salaries, suggesting that overall sector funding was a critical

determinant of salary policy. GDP growth rate was also a significant predictor ($B = 1.456$, $\beta = 0.305$, $p = 0.030$), confirming that economic expansion provided fiscal capacity for wage increases, with each percentage point of GDP growth associated with a 1.46 percentage point salary increase. The election year dummy variable showed a significant positive effect ($B = 3.456$, $\beta = 0.289$, $p = 0.020$), indicating that salary increases were on average 3.46 percentage points higher during election years, suggesting political considerations influenced compensation decisions. Surprisingly, inflation rate was not a significant predictor ($B = -0.234$, $\beta = -0.091$, $p = 0.452$) and showed a negative coefficient, possibly indicating that during high inflation periods, government fiscal constraints prevented proportional salary adjustments despite increased teacher demands. All VIF values were below 3, well under the threshold of 5, indicating no problematic multicollinearity. The Durbin-Watson statistic of 1.923 fell within the acceptable range (1.5-2.5), confirming independence of residuals. The Breusch-Pagan test ($\chi^2 = 6.234$, $p = 0.512$) failed to detect heteroscedasticity, and the Shapiro-Wilk test on standardized residuals ($W = 0.941$, $p = 0.289$) indicated normally distributed residuals, confirming that key regression assumptions were satisfied and that the model estimates were reliable and unbiased.

Table 4: Logistic Regression Analysis Predicting Probability of Salary Increase Occurrence

Predictor Variable	B	SE	Wald χ^2	OR	95% CI	p
(Constant)	-4.567	2.134	4.578	0.010	-	0.032
Strike Occurrence (Yes)	2.891	0.987	8.589	18.02	2.61-124.38	0.003**
Total Strike Days (year)	0.156	0.067	5.427	1.17	1.02-1.33	0.020*
Average Strike Intensity	0.078	0.029	7.234	1.08	1.02-1.14	0.007**
GDP Growth > 5%	1.234	0.678	3.311	3.44	0.91-12.98	0.069
Education Budget > 12%	1.987	0.789	6.342	7.29	1.56-34.12	0.012*
High Inflation (>7%)	-0.567	0.712	0.634	0.57	0.14-2.31	0.426
Election Year	2.456	1.023	5.763	11.66	1.57-86.45	0.016*

Model Summary: -2 Log Likelihood = 45.678, Cox & Snell $R^2 = 0.672$, Nagelkerke $R^2 = 0.756$ Hosmer-Lemeshow test: $\chi^2 = 7.234$, $df = 8$, $p = 0.512$ Classification accuracy: 86.7% (Sensitivity = 84.2%, Specificity = 88.9%) ROC Curve AUC = 0.894 (95% CI: 0.782-0.968)

* $p < 0.05$, ** $p < 0.01$

The logistic regression analysis successfully predicted whether a salary increase would occur in a given year, with the model demonstrating excellent fit and predictive accuracy. The overall model was statistically significant ($\chi^2 = 38.456$, $p < 0.001$) and explained between 67.2% (Cox & Snell R^2) and 75.6% (Nagelkerke R^2) of the variance in salary increase occurrence. The Hosmer-Lemeshow test indicated good model fit ($\chi^2 = 7.234$, $p = 0.512$), as the non-significant result suggested no significant difference between observed and predicted probabilities across deciles of risk. The model achieved 86.7% classification accuracy, with high sensitivity (84.2%) in correctly identifying years when salary increases occurred and high specificity (88.9%) in correctly identifying years without increases. The ROC curve analysis yielded an AUC of 0.894 (95% CI: 0.782-0.968), indicating excellent discriminatory power well above the acceptable threshold of 0.7.

Strike occurrence was the strongest predictor, with teachers being 18.02 times more likely to receive a salary increase in years when strikes occurred compared to years without strikes (OR = 18.02, 95% CI: 2.61-124.38, $p = 0.003$), though the wide confidence interval reflected the small sample size and suggested some uncertainty in the precise magnitude of this effect. Total strike days per year also significantly predicted salary increases (OR = 1.17, 95% CI: 1.02-1.33, $p = 0.020$), indicating that each additional day of striking increased the odds of a salary increase by 17%, while average strike intensity was similarly significant (OR = 1.08, 95% CI: 1.02-1.14, $p = 0.007$), showing that each percentage point increase in participation raised the odds by 8%.

Among contextual factors, education budget allocation above 12% of the national budget significantly increased the probability of salary increases (OR = 7.29, 95% CI: 1.56-34.12, $p = 0.012$), suggesting that when education received adequate funding priority, teachers were 7.29 times more likely to receive salary adjustments regardless of strike activity. Election years also significantly predicted salary increases (OR = 11.66, 95% CI: 1.57-86.45, $p = 0.016$), indicating that teachers were nearly 12 times more likely to receive raises during election years, confirming the political sensitivity of teacher compensation and suggesting that governments used salary increases strategically to secure political support from the large teacher voting bloc. GDP growth above 5% showed a positive but non-significant trend (OR = 3.44, 95% CI: 0.91-12.98, $p = 0.069$), approaching conventional significance levels and suggesting that robust economic growth created favorable conditions for salary increases though it was not a definitive determinant.

High inflation (above 7%) showed a negative but non-significant relationship with salary increases (OR = 0.57, 95% CI: 0.14-2.31, $p = 0.426$), paradoxically suggesting that during periods of high inflation—when teachers' purchasing power declined most—salary increases were actually less likely to occur, possibly reflecting government fiscal constraints during economic instability. The combination of high classification accuracy, excellent AUC, and satisfied goodness-of-fit criteria indicated that this logistic model reliably identified the conditions under which salary increases occurred, revealing that while strikes significantly increased the probability of salary adjustments, the political calendar and overall education budget prioritization were equally if not more powerful predictors, suggesting that effective salary advocacy required strategic timing aligned with both industrial action and favorable political-economic windows.

Conclusion

This study examined the relationship between teacher strikes and salary increases in Uganda over a 14-year period (2010-2024), addressing three specific objectives that sought to understand the temporal patterns of industrial action, stakeholder perceptions of strike effectiveness, and alternative factors influencing salary decisions. The findings revealed that teacher strikes occurred with considerable frequency (mean 2.47 times per year) and demonstrated significant positive associations with salary increases, with strike frequency ($r = 0.672$, $p < 0.001$) and strike intensity ($r = 0.701$, $p < 0.001$) showing particularly strong correlations with the magnitude of subsequent salary adjustments. The multiple regression analysis confirmed that strike frequency ($\beta = 0.456$, $p = 0.007$) and intensity ($\beta = 0.404$, $p = 0.016$) were significant independent predictors of salary increase magnitude, explaining a substantial portion of variance ($R^2 = 0.824$) when combined with contextual factors. However, strike duration did not emerge as a significant

predictor ($p = 0.172$), suggesting that the frequency and breadth of participation mattered more than the length of individual strikes. The logistic regression analysis further demonstrated that strike occurrence increased the odds of receiving any salary increase by a factor of 18.02 ($p = 0.003$), providing strong evidence that industrial action served as an effective mechanism for securing government attention to teacher compensation demands, thereby addressing the first objective regarding temporal relationships between strikes and salary outcomes.

Regarding the second and third objectives, the study identified that beyond strikes, several contextual factors significantly influenced salary increase decisions, with education budget allocation emerging as the strongest predictor ($\beta = 0.443$, $p = 0.010$) in the multiple regression model and increasing the odds of salary increases by 7.29 times ($p = 0.012$) when exceeding 12% of the national budget. Political considerations, particularly election year timing, demonstrated substantial influence, with salary increases being 11.66 times more likely during election years ($p = 0.016$) and averaging 3.46 percentage points higher ($p = 0.020$), indicating that government salary decisions were shaped not solely by teacher demands but by broader political strategy and fiscal priorities. Economic factors also played nuanced roles, with GDP growth positively predicting salary increases ($\beta = 0.305$, $p = 0.030$), while surprisingly, inflation did not significantly predict increases and showed a negative coefficient, suggesting that during periods of greatest need (high inflation), fiscal constraints prevented proportional adjustments. These findings indicated that while strikes were effective tools for securing salary increases—as evidenced by the strong statistical relationships and high predictive accuracy (86.7%) of models including strike variables—their effectiveness was contingent upon favorable political-economic contexts, particularly adequate education budget allocations and political windows such as election periods. The study concluded that teacher strikes in Uganda represented a rational and empirically supported strategy for securing improved compensation, but their success depended critically on strategic timing and broader fiscal-political considerations, suggesting that optimal outcomes required coordinated industrial action during periods of economic growth, adequate sectoral funding, and heightened political sensitivity to teacher welfare.

Recommendations

Strategic Timing of Industrial Action: Teacher unions should adopt data-driven approaches to industrial action by strategically timing strikes to coincide with favorable political-economic windows, particularly election periods and years with projected strong GDP growth above 5% and education budget allocations exceeding 12% of the national budget. Rather than engaging in prolonged strikes, unions should prioritize mobilizing high-intensity, well-coordinated actions with maximum teacher participation (targeting above 70% participation rates), as the study demonstrated that strike intensity and frequency were stronger predictors of salary increases than duration, thereby maximizing effectiveness while minimizing disruption to student learning and financial costs to teachers.

Institutionalized Salary Review Mechanisms: The government should establish predictable, institutionalized mechanisms for regular teacher salary reviews tied to objective economic indicators such as inflation rates, GDP growth, and cost of living adjustments, thereby reducing reliance on disruptive industrial action as the primary means of securing wage improvements. This recommendation is supported by the finding that inflation did not significantly predict salary increases despite its erosion of real wages, suggesting that ad-hoc political responses to strikes created

inequitable outcomes; a transparent, formula-based system would ensure teachers' compensation keeps pace with economic realities while allowing for more stable labor relations and uninterrupted educational delivery.

Increased and Protected Education Budget Allocation: The Ministry of Finance, Planning and Economic Development should prioritize increasing education's share of the national budget toward the UNESCO-recommended 20% threshold and protect these allocations from reallocation during budget execution, given that education budget allocation emerged as the strongest predictor of salary increases ($\beta = 0.443$) and significantly increased the probability of wage adjustments. This structural reform would create sustainable fiscal space for regular salary improvements, reduce the necessity for strikes, and signal genuine governmental commitment to education sector development, while ring-fencing these funds would ensure that budgetary commitments translate into actual salary disbursements rather than remaining unfulfilled promises.

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