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EFFECT OF FUEL SUBSIDY REMOVAL ON STANDARD OF LIVING OF STAFF IN ADAMAWA STATE UNIVERSITY, MUBI

ABSTRACT

This study investigated the effects of fuel subsidy removal on the standard of living of academic and non-academic staff at Adamawa State University, Mubi. The objectives were to examine the extent of the impact on household expenditure, analyze changes across welfare indicators such as food, healthcare, transportation, children's school fees, electricity, and water and sanitation, explore coping strategies adopted by staff, and assess the effectiveness of government and institutional cushioning measures. The study employed a survey research design, with data collected through a structured questionnaire administered to 386 staff members selected from both academic and non-academic categories. Descriptive statistics, including frequencies and percentages, were used to summarize the socioeconomic characteristics of respondents, while ranking techniques and inferential methods, including Structural Equation Modeling (SEM), were applied to establish relationships among constructs. Findings revealed that fuel subsidy removal significantly increased household expenditure across all welfare indicators, with the sharpest rise recorded in food, transportation, and healthcare costs. Respondents reported various coping strategies, including reducing household consumption, cutting back on transportation expenses, and seeking alternative income sources. Although government and university management provided cushioning interventions, such as wage awards, cash transfers, and subsidized transport services, these measures were rated as insufficient in addressing the magnitude of the hardship experienced. The SEM analysis further confirmed strong linkages between fuel subsidy removal and declining living standards, with cushioning measures offering only partial moderation of the adverse effects. The study concludes that fuel subsidy removal has imposed considerable economic pressure on university staff, substantially reducing their welfare. It recommends the introduction of sustainable and broad-based social protection programs by government and institutions, capacity building for staff to diversify income, and continuous stakeholder engagement to ensure that welfare considerations are prioritized in future policy reforms.

1.0 INTRODUCTION

Fuel subsidies in Nigeria were introduced to cushion citizens from high petroleum prices, especially as the country relies heavily on oil (Adeola & Ogundipe, 2019; Okonjo-Iweala, 2021). Over time, the policy has been criticized for fostering corruption, inefficiency, and placing a heavy fiscal

burden on government finances (Akinwumi, 2022). To reduce deficits and redirect funds to development, successive administrations have attempted to reform or remove the subsidy (National Bureau of Statistics, 2021). The 2023 removal marks a major policy shift, raising immediate concerns about its impact on public sector workers, particularly academic and non-academic staff in institutions such as Adamawa State University, Federal Polytechnic Mubi, and the College of Health Technology. Rising transportation, food, and service costs tied to fuel prices strain employees on fixed incomes (Obi, 2023). Although the government argues that subsidy removal will free up resources for infrastructure and social programs, there is anxiety over its short-term impact on welfare (World Bank, 2022). Welfare, defined as the well-being and access to basic needs like healthcare, housing, and transportation (ILO, 2020; Adesina, 2022), is closely tied to macroeconomic policies such as fuel pricing. Without mitigating measures, subsidy removal can erode disposable income and standard of living.

Previous research, including Nwafor and Ogbu (2018), shows that while subsidy elimination may yield long-term growth, it harms household welfare in the short run. Adekoya (2021) notes that low- and middle-income earners face the greatest burden due to high energy expenditures. For staff in Adamawa State University, living conditions may worsen due to inflation, currency devaluation, and existing infrastructural and economic challenges in semi-urban Mubi (Akinwale, 2023). Furthermore, reliance on fixed salaries and limited allowances for housing and transportation makes it difficult for university employees to absorb the economic shock (Ibrahim & Usman, 2022).

The removal of fuel subsidies in Nigeria has triggered sharp increases in the costs of transportation, food, and essential services, raising serious concerns about its impact on public-sector employees, including staff of Adamawa State University (ADSU), Mubi. With transport costs rising by 35 percent and food inflation reaching 22 percent in 2023, employees in semi-urban areas like Mubi already facing limited infrastructure are struggling to maintain their standard of living. Many staff now spend a large portion of their income on fuel and transport, reducing their disposable income and affecting access to basic needs such as housing, healthcare, and food security. These rising costs threaten staff morale, job performance, and retention, especially as government promises of welfare reinvestment have not eased short-term hardship. Prior studies show that workers in low-income, high-inflation contexts bear the heaviest burden, with households in Nigeria spending up to half their income on energy post-subsidy removal. Given the high poverty rates in Adamawa State, the impact is likely more severe, creating an urgent need to assess how subsidy removal affects the welfare and living standards of both academic and non-academic staff at ADSU. This study

addresses that gap by investigating how their standard of living has been affected, how effective government and institutional cushioning measures have been, and the coping strategies adopted by university workers in response.

2.0 LITERATURE AND THEORETICAL FRAMEWORK

Conceptual Review

Fuel subsidies in Nigeria are government interventions that reduce fuel prices to ease living costs and stabilize the economy. While originally intended to curb inflation and protect vulnerable groups, critics argue that subsidies distort markets, encourage inefficiency, and drain public finances. Their removal often triggers higher fuel prices and wider economic consequences.

Fuel subsidy removal involves withdrawing government support, leading to higher retail fuel prices. This policy is typically driven by fiscal pressures, volatile global oil prices, or international reform demands. Although expected to promote long-term economic stability, it has immediate inflationary effects on food, transport, and household consumption. Welfare refers to individuals' overall well-being, including income, access to services, and ability to meet basic needs like food, shelter, and healthcare. Rising fuel prices reduce disposable income and diminish quality of life, particularly for low- and middle-income earners.

Living standards relate to access to essential goods and services such as employment, healthcare, housing, food, and education. Subsidy removal raises the cost of transportation and necessities, reducing purchasing power and worsening living conditions especially for fixed-income earners like university staff. Academic staff include lecturers, researchers, and professors who rely on fixed salaries. Inflation caused by subsidy removal erodes their real income. Non-academic staff administrative and support personnel often earn less and face even greater vulnerability to rising costs. In developing economies, subsidy removal creates inflationary pressure and worsens welfare when social safety nets are weak. In contrast, developed countries experience milder effects due to higher incomes, infrastructure, and compensatory programs. Without adequate protections, workers in institutions like Adamawa State University face reduced welfare, higher inequality, and declining living standards.

Theoretical Review

Welfare Economics Theory examines how subsidy policies affect social well-being. Although removing subsidies may improve efficiency in the long term, it causes short-term welfare losses, especially among low-income, fixed-salary groups like university staff.

Public Choice Theory explains subsidy removal as a product of political and economic pressures, including influence from international bodies. Policy shifts may prioritize fiscal concerns over citizens' welfare.

Consumer Behaviour Theory highlights how rising fuel prices force individuals to adjust spending. Since fuel is price-inelastic in Nigeria, subsidy removal compels workers to cut essential expenses, reducing overall welfare.

Cost-Push Inflation Theory explains how higher fuel prices raise production and transport costs, causing inflation and reducing real incomes. University employees face higher costs for food, energy, and commuting.

Social Safety Net Theory argues that without mitigating policies such as cash transfers or subsidies, vulnerable groups suffer disproportionately from subsidy removal. Weak protections worsen welfare losses.

Fiscal Theory of the Price Level links subsidy withdrawal to efforts to reduce fiscal deficits. While intended to stabilize the economy, abrupt removal without compensation triggers inflation and harms living standards in the short run.

Empirical Literature Review

Several empirical studies have examined the welfare and living standard implications of fuel subsidy removal in Nigeria and beyond. Adeoye et al. (2023) investigated the impact on household income across urban and rural areas using surveys and focus group discussions. They found that while urban households experienced increases in transport and energy costs, rural households were more adversely affected due to their dependence on transportation for agricultural activities, resulting in worsened welfare and increased income inequality. Similarly, Suleiman and Ali (2022) explored the effects on public sector workers in Northern Nigeria, including university staff. They observed rising living costs especially food and transport which reduced disposable income. Due to fixed salaries, workers were unable to adjust their spending

patterns. While Adeoye et al. focused on rural–urban disparities, Suleiman and Ali concentrated on public employees. Both studies agreed on negative welfare outcomes but differed in scope: one emphasized socio-economic inequality broadly, while the other addressed sector-specific impacts.

Adeoye et al. (2023) did not disaggregate effects by occupational groups like university staff, whereas Suleiman and Ali (2022) limited their scope to workers without exploring variation across regions or sectors. Both are relevant to this study as they demonstrate how subsidy removal increases living costs and disproportionately affects vulnerable groups. Ibrahim (2021) used a macroeconomic simulation model to assess the effect of subsidy removal on inflation and poverty. He found short-term inflationary spikes in transport and energy but argued that reallocating subsidy savings to infrastructure could yield long-term economic growth. His conclusions align partially with Atiku and Musa (2020), who used time series data and observed immediate inflation that later stabilized as markets adjusted. However, while Ibrahim emphasized future growth gains, Atiku and Musa were more cautious about inflation persistence.

In contrast, Suleiman and Ali (2022) challenge Ibrahim’s optimism by showing that welfare losses among public sector workers persist despite potential macroeconomic gains. Ibrahim’s macro-level approach overlooks the micro-level effects on specific occupational groups, while Atiku and Musa lack sectoral depth. Nwachukwu and Eze (2019) assessed fuel subsidy removal in the educational sector and reported rising transportation and energy costs, which increased tuition and operational expenses. They noted that public universities were especially vulnerable due to inadequate government funding. Their findings align with Omole and Olaniyi (2018), who documented higher operational costs across public institutions, though the latter took a broader focus on public services. Nwachukwu and Eze provided useful institutional insights but lacked staff-level empirical data. Their findings are still relevant to this research because they highlight how rising operational costs in universities translate into welfare stress for employees. Olaniyan and Bello (2017) conducted a household survey showing that lower-income groups were most affected by rising transportation and food costs. Poverty increased as many households could not adapt. Their findings correspond with Adeoye et al. (2023) and Suleiman and Ali (2022) in identifying vulnerable populations but differ by focusing on income levels rather than location or occupation. While Ibrahim (2021) and Atiku and Musa (2020) debated long-term outcomes, Olaniyan and Bello (2017) stressed enduring welfare impacts on poorer households. However, they did not examine occupation-specific groups like university staff or propose mitigation strategies. Overall, these studies show that subsidy removal produces inflationary pressure, higher living costs, and welfare losses, especially among low-income groups, public workers, and

rural households. Their insights are applicable to understanding how academic and non-academic employees at Adamawa State University face higher living costs and declining disposable incomes.

Theoretical Framework

The study is anchored on two complementary theories: Consumer Theory and Welfare Economics Theory. Consumer Theory explains how individuals and households adjust their spending when faced with rising prices and limited income. Following the removal of fuel subsidies, staff of Adamawa State University now face higher costs of transport, food, and energy. As shown in prior studies, such conditions force households to cut non-essential spending and make trade-offs even on basic needs. This theory helps to understand how university employees reallocate their scarce income in response to these economic pressures. Welfare Economics Theory provides a broader view by examining how government policies affect overall social welfare. While subsidies are meant to support well-being by reducing energy costs, their removal often reduces disposable income, increases poverty risks, and worsens inequality if not accompanied by compensation measures. This theory is useful for assessing how subsidy withdrawal affects the welfare of university staff and whether the policy improves or harms societal well-being.

Together, the two theories provide a balanced framework: Consumer Theory captures the household-level adjustments, while Welfare Economics Theory explains the broader policy implications and distributional effects. This dual approach allows the study to analyze the impact of subsidy removal on living standards both at the micro (family) and macro (societal) levels.

3.0 METHODOLOGY

The study adopted a survey research design. This design is suitable for exploring the effect of fuel subsidy removal by collecting data from the university staff about their perceptions of the effect on their living standards. The study focuses on all 1,120 staff members of Adamawa State University, Mubi, including 300 academic staff, 450 senior non-academic staff, and 420 junior non-academic staff. Using Taro Yamane's formula with a 4.12% margin of error, a sample size of 400 respondents was selected. Data were gathered through structured questionnaires covering demographic characteristics, the impacts of fuel subsidy removal, intervention measures, and coping strategies. For analysis, the study employed descriptive statistics such as frequencies, percentages, means, and standard deviations to summarize demographic and welfare-related data, and applied structural equation modeling to assess both the direct Model Specifications

To empirically estimate the effect of fuel subsidy removal on welfare and living standards, we can use a Multiple Linear Regression (MLR) model. This model estimates the contribution of various independent variables to the dependent variable, which is the welfare and living standards of university staff.

The dependent variable (W,LS) can be a composite index derived from survey data measuring welfare and living standards (e.g., household income adequacy, living conditions, and consumption patterns).

The econometric model can be specified as:

$$WLS_i = \alpha_0 + \beta_1 Y_i + \beta_2 FP_i + \beta_3 TC_i + \beta_4 COL_i + \beta_5 CE_i + \epsilon_i$$

Where:

WLS_i = Welfare and living standards index for staff *i*

Y_i = Income of staff *i*

FP_i = Fuel prices faced by staff *i*

TC_i = Transportation costs for staff *i*

COL_i = Cost of living for staff *i* (including housing, food, utilities)

CE_i = Consumption expenditure for staff *i*

α = Intercept (constant term)

$\beta_1, \beta_2, \beta_3, \beta_4,$ and β_5 = Regression coefficients that represent the marginal effects of each explanatory variable on welfare and living standards

4.0 DATA ANALYSIS AND DISCUSSION

STRUCTURAL EQUATION MODEL ANALYSIS

This section presents the results of the Structural Equation Model (SEM) used to analyze the relationships among key constructs of the study, including standard of living, household expenditure, coping strategies,

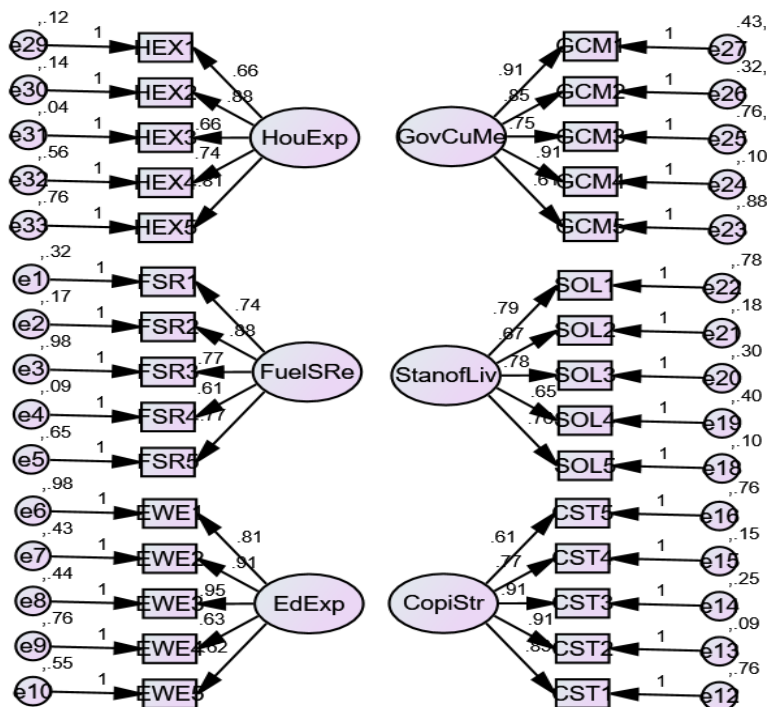
and the effectiveness of government cushioning measures. The SEM analysis provides a comprehensive understanding of both direct and indirect effects of fuel subsidy removal on staff welfare, offering robust statistical evidence to support the research objectives.

The Confirmatory Factor Analysis (CFA) results show that the model fits the data well. All constructs recorded RMSEA values below 0.08, and most had GFI and AGFI values above 0.90, indicating strong structural validity. Similarly, CFI, TLI, and NFI scores were all above 0.90, confirming a good overall model fit. The Chi-square/DF ratios were below 3 for nearly all constructs, with only a slight deviation for HEX, which still remained within an acceptable range. Reliability was also strong across all variables, as Cronbach's alpha for every construct exceeded 0.70. HEX showed the highest internal consistency with a value of 0.962, while others such as FSR, EWE, GCM, SOL, and CST ranged from 0.708 to 0.944. The low PV values (below 0.05) indicate appropriate variance capture. Overall, the model demonstrates high validity and reliability, making it suitable for further statistical analysis.

Table: Individual Confirmatory Factor Analysis CFA (Model Fit) and Reliability Test

Variables	RMSEA	GFI	AGFI	CFI	TLI	NFI	CHISQ/DF	PV	Cronbachα
FSR	0.072	0.911	0.923	0.922	0.944	0.902	28.90	0.047	0.708
HEX	0.041	0.932	0.977	0.987	0.998	0.978	50.443	0.033	0.962
EWE	0.018	0.989	0.909	0.905	0.943	0.950	60.123	0.027	0.816
GCM	0.062	0.966	0.932	0.954	0.977	0.907	30.210	0.054	0.788
SOL	0.062	0.900	0.909	0.913	0.921	0.987	10.111	0.007	0.944
CST	0.031	0.924	0.908	0.998	0.990	0.955	32.21	0.004	0.801

Source: Generated by the author using SPSS Amos/Statistics, version 23



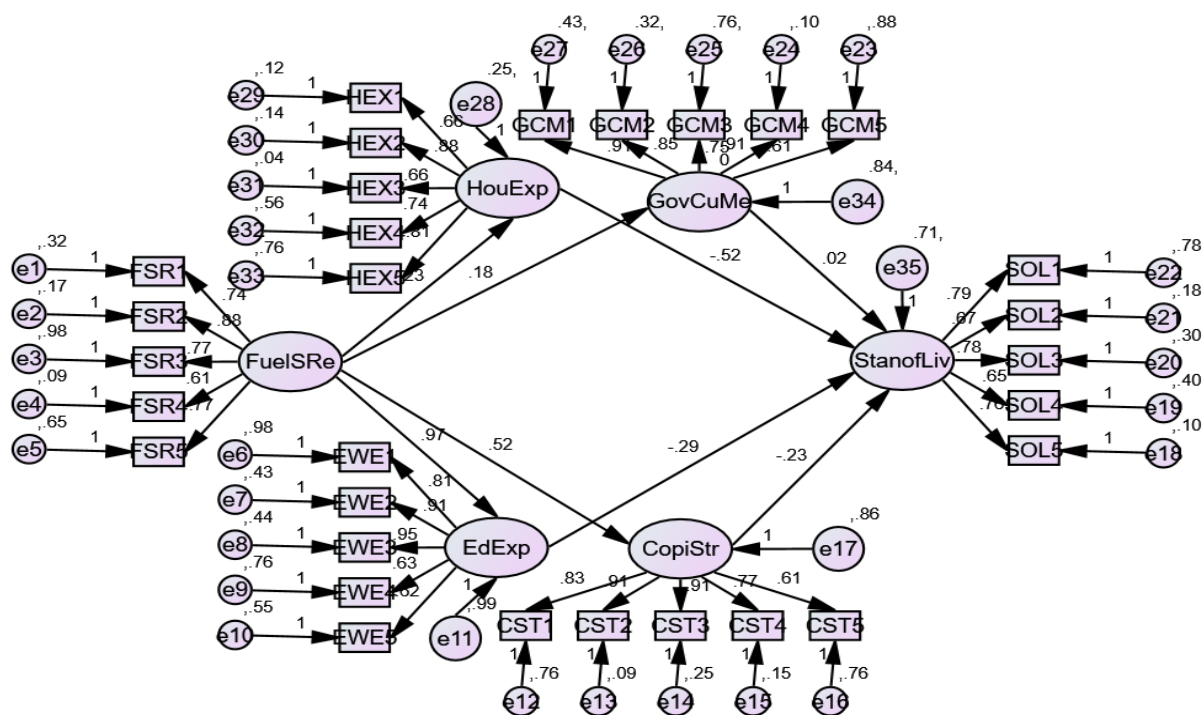
Structural Model Result

The structural model shows that fuel subsidy removal has strong and statistically significant effects on several economic and social outcomes. It increases both household expenditure (0.233, C.R. = 5.322) and education expenditure (0.972, C.R. = 9.463), confirming that subsidy cuts push households to spend more, likely due to rising costs tied to transportation and essential services. The policy change also prompts government cushioning measures (0.182, C.R. = 2.507) and drives households to adopt coping strategies (0.516, C.R. = 5.683), showing both institutional and individual responses to economic pressure.

Structural Model (Hypotheses Testing)

	Coefficient	C.R	p-value
Household Expenditure < -- Fuel Subsidy Removal	0.233	5.322	***
Education Expenditure <-- Fuel Subsidy Removal	0.972	9.463	***

Government Cushioning Measures <--	0.182	2.507	***
Fuel Subsidy Removal			
Coping Strategies<-- Fuel Subsidy	0.516	5.683	***
Removal			
Standard of Living<-- Education	-0.288	8.505	***
Expenditure			
Standard of Living<-- Household	-0.521	2.421	.015
Expenditure			
Standard of Living<-- Government	0.022	3.095	***
Cushioning Measures			
Standard of Living<-- Coping Strategies	-0.233	9.140	***



Discussion

of Major Findings

The study reveals that removing fuel subsidies triggers a chain of economic and social reactions affecting households, government policy, and living standards. A key finding is the rise in household expenditure

especially on transportation confirming earlier evidence that subsidy cuts directly increase living costs. Interestingly, households also increase education spending, likely as a long-term strategy to secure future stability, as other studies have similarly shown. The results indicate that governments typically respond by introducing cushioning measures such as safety nets and targeted interventions. While these efforts reflect policymakers' awareness of the hardship subsidy removal causes, their overall impact remains modest and depends heavily on how well they're designed and implemented.

Households also adopt a range of coping strategies to manage rising costs, including reducing consumption and seeking additional income sources. Though necessary in the short term, these strategies often erode long-term welfare and contribute to declining standards of living. The findings show that increased expenditures and heavy reliance on coping mechanisms are associated with reduced well-being, while government interventions offer only limited relief.

Overall, the results align with broader literature highlighting that without strong and well-targeted social protections, subsidy removal can deepen vulnerability and strain living conditions. The discussion underscores the need for complementary policies to prevent long-term hardship and protect household resilience.

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

This study investigated the impact of fuel subsidy removal on the living standards of academic and non-academic staff at Adamawa State University, Mubi. Using data from structured questionnaires and analyzed through descriptive statistics and Structural Equation Modeling (SEM), the study assessed changes in household expenditure, welfare indicators, coping mechanisms, and the effectiveness of cushioning interventions. Results showed that subsidy removal led to sharp increases in essential household costs, particularly for food, transportation, and healthcare. Staff adopted coping strategies such as consumption reduction, minimizing transport expenses, and seeking alternative income. While government and university interventions such as cash transfers and subsidized transport were acknowledged, they were largely deemed insufficient in addressing the economic strain. SEM confirmed strong negative linkages between subsidy removal and standard of living, with limited cushioning effects from coping efforts and policy interventions.

Conclusion

The study concludes that fuel subsidy removal has substantially eroded the welfare of university staff, compelling lifestyle adjustments and exposing their vulnerability to national policy shocks. Existing palliative measures provided only marginal relief and failed to match the scale of the rising cost of living. The findings emphasize the urgent need for long-term, well-targeted interventions to safeguard staff welfare during macroeconomic reforms.

Recommendations

To mitigate the adverse effects, six key policy directions were proposed:

- i. Government intervention should move beyond temporary cash transfers to include long-term welfare provisions. Subsidized healthcare would ease the burden of rising medical costs, while food support programs such as targeted food vouchers or community food distribution would help families cope with inflation. Housing support through rent subsidies, low-interest housing loans, or staff housing schemes would provide additional relief to workers whose disposable income has been strained by increased living costs.
- ii. Universities should implement more robust internal cushioning mechanisms. Salary adjustments or temporary allowances tied to inflation would help restore purchasing power. Housing aid through subsidized staff accommodation or rental support can reduce financial pressure. Additionally, enhanced transport subsidies such as staff buses, fuel allowances, or shuttle services would address the growing cost of commuting.
- iii. Short-lived palliative measures need to be replaced with durable social protection systems. Affordable and efficient public transport should be prioritized to reduce reliance on costly private mobility. Universal health coverage, adequately funded and accessible, would protect employees from financial shocks caused by healthcare expenses. These long-term policies would build resilience against future economic disruptions.
- iv. To enhance financial security, staff should be supported through capacity-building programs. Training in entrepreneurship, financial management, digital skills, and vocational activities can empower workers to generate supplementary income. Access to microcredit schemes,

cooperative funding, and small business start-up support would further enable staff to engage in viable alternative income-generating ventures.

- v. A structured monitoring and evaluation system is essential to assess the performance of cushioning measures. Tracking implementation, coverage, and impact will ensure effectiveness and fairness. Regular assessments, transparent reporting, and stakeholder feedback will help identify gaps and guide the refinement of interventions. This accountability framework will also ensure that resources reach intended beneficiaries.
- vi. Sustainable reform outcomes require active dialogue between government, labor unions, staff associations, and institutional authorities. Continuous engagement through consultations and joint committees ensures that worker welfare is considered in policy decisions. Inclusive dialogue helps prevent resistance, promotes transparency, and fosters the development of policies that reflect the lived realities of affected employees.

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