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INFLATION AND THE ADEQUACY OF SOCIAL PROTECTION CASH TRANSFERS IN BANGLADESH: A POLICY ANALYSIS OF BENEFIT VALUES AND INDEXATION OPTIONS

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ABSTRACT

Social allowances are effective in protecting vulnerable groups only if they are kept in line with consumer prices. The Old Age Allowance and Allowance for Widow and Husband-Deserted Destitute Women are fixed amounts, adjusted rarely in Bangladesh. This study examines the impact of inflation and periodic revisions on the real value and poverty-line adequacy of these allowances, and estimates the fiscal consequences of applying a rule-based indexation. The real-value measurement, adequacy ratios, counterfactual indexation, and fiscal sensitivity analysis were used to analyze the official program records, budget documents, consumer price indices, and poverty lines from the Household Income and Expenditure Survey 2022 for FY2009-10 to FY2025-26. The nominal allowances grew by 116.7%, and the consumer prices grew by 204.3%, resulting in real values being 28.8% below the baseline. Each benefit was 13.0% of the national upper poverty line in 2022. The lagged full indexation would have cost BDT 8,918 crore in additional direct transfers over sixteen years, which is 16.5% more than the actual transfer. Rule-based reviews protect purchasing power, but decisions on benefit levels are necessary to ensure the benefits are adequate.

Keywords: Social Protection; Cash Transfers; Inflation; Benefit Adequacy; Indexation; Fiscal Policy

1 INTRODUCTION

Non-contributory cash transfers are a central instrument of social protection in low- and middle-income countries. Systematic reviews link them to reductions in monetary poverty and improvements in schooling, food security, and psychological well-being [1–3], without evidence of systematic decreases in work effort [4]. Social pensions also improve the material and subjective well-being of older people [5]. Yet these gains depend on purchasing power rather than nominal payment values.

When inflation rises between benefit adjustments, fixed transfers lose real value until governments increase payment rates. Lower real food-assistance benefits are associated with reduced consumption among beneficiaries [6]. During the 2021-2023 cost-of-living shock, automatic uprating better protected recipients than ad hoc measures [7]. Unadjusted

minimum benefits can gradually lose their protective function without formal cuts [8]. Indexation instead provides a systematic rule for maintaining purchasing power.

The Old Age Allowance (OAA) and the Allowance for Widow and Husband-Deserted Destitute Women (WA), introduced in FY1997-98 and FY1998-99, are managed by the Department of Social Services (DSS) through flat monthly government-to-person (G2P) payments. In FY2025-26, these programs reached 6.1 million older persons and 2.9 million women at BDT 650 monthly, compared with 2.25 million and 0.92 million recipients receiving BDT 300 in FY2009-10. Recipients nevertheless report payment delays and digital-access difficulties [9]. Previous evaluations also identify the exclusion of eligible poor people [10,11].

Annual inflation exceeded 9% from FY2022-23 through FY2024-25, driven by external shocks and facilitated by accommodative domestic policies [12], alongside increased food insecurity among low-income urban households [13]. Fixed payments consequently lose value when recipients face higher prices, making purchasing power and subsistence adequacy more informative than nominal growth.

Benefit adjustments impose recurring fiscal costs determined by payment rates, beneficiary numbers, and revision frequency. In Bangladesh, expanding coverage and increasing rates compete for resources. The budgets for the two allowances were BDT 4,791 crore and BDT 2,278 crore in FY2025-26. Policymakers therefore need evidence on both benefit protection and expenditure before selecting an adjustment rule.

Previous research has examined the poverty impact of the OAA [14], beneficiary satisfaction and implementation issues [15], targeting performance, and perceived well-being [16,17]. However, these studies generally assume fixed allowance levels, while aggregate inflation analyses overlook benefit adequacy. Few integrate real-value changes, poverty benchmarks, counterfactual adjustment rules, and fiscal sensitivity within one framework.

This study examines the real value and adequacy of OAA and WA benefits and the fiscal consequences of alternative indexation policies. Its specific objectives are to:

1. Examine historical benefit revisions and changes in purchasing power.
2. Assess the level of benefits in relation to official poverty lines.
3. Analyze the benefit trajectory observed compared to the benefit trajectory under partial and full CPI indexation.
4. Make estimates of the fiscal needs of different indexation rules and evaluate the sensitivity of the cost estimates.

The study provides a verified FY2009-10 to FY2025-26 program-level dataset and an analytical approach linking real benefits, adequacy, and fiscal costs to benefit-adjustment planning.

2 LITERATURE REVIEW AND POLICY CONTEXT

2.1 Inflation, Purchasing Power, and Benefit Adequacy

Rising prices diminish the purchasing power of fixed nominal transfers. In the United States, declining real food-assistance benefits have been linked to lower daily calorie consumption [6]. Local food prices differ, so identical payments may purchase different quantities across regions. This matters for households reliant on small transfers for food, health, and transport. Recent inflation has disproportionately affected energy-poor households and threatened food security in urban slums; Bangladeshi research also links price pressures to rural well-being and aspirations [13,18,19]. Headline consumer price indices (CPI) may not reflect beneficiaries' spending patterns. Australian evidence shows that inflation exposure is concentrated in particular consumption categories [20], underscoring the choice of deflator. The return of inflation has also heightened attention to indexation rules [21].

Purchasing-power protection and benefit adequacy are distinct. Reference budgets and minimum-living-standard assessments provide benchmarks for basic needs [22,23]. Evidence from the Netherlands shows that benefits may track living costs without lifting recipients out of poverty [24]. The protection offered by benefits also reflects political and institutional decisions [25]. In Bangladesh, cost-of-basic-needs poverty lines provide official benchmarks but require careful regional construction and adjustment [26]. The benefit-to-poverty-line ratio measures payment scale, not causal poverty reduction, because transfers may be shared within households [27]. Benchmarks must use consistent price bases. Non-contributory pensions can reduce food vulnerability without necessarily meeting subsistence needs [28].

2.2 The Indexation Rules and Fiscal Trade-offs.

Indexation determines how inflation is reflected in benefit increases. Studies from the Low Countries illustrate how uprating mechanisms affect income protection [7]. Legal scholarship distinguishes preserving purchasing power from achieving pension adequacy [29]. Price indexation reduces inflation risk for recipients but shifts part of that risk to

public budgets [30]. Research on Spanish pensions finds welfare and fiscal effects, while theory cautions against equating individual gains with aggregate outcomes [31,32].

Full CPI indexation maintains real benefits in principle, whereas partial indexation permits some erosion and delayed uprating causes temporary losses. The reference period, payment lag, revision frequency and rounding influence results. Rule-based decisions may limit political discretion, but this does not establish the impact of allowance indexation [33].

Affordability also matters. The cost of a universal social pension in India offers a relevant comparison [34]. Cross-country research also raises concerns about the affordability of basic old-age pensions [35]. Reforms in Hong Kong and South Korea have improved poverty or well-being outcomes with implications for spending [36,37]. Fiscal comparisons must distinguish annual from cumulative costs, direct from administrative costs, and rate increases from coverage expansion. Deterministic scenarios show consequences under stated assumptions, not forecasts; administrative and delivery costs require separate budget data.

2.3 Bangladesh Policy Evidence and Research Gap

The Old Age Allowance (OAA) and the Widow Allowance (WA) are both non-contributory, flat-rate programs; however, existing scholarship primarily addresses targeting, delivery, and beneficiary experiences. Previous research has examined social-protection targeting and exclusion [10] and alternative beneficiary-selection mechanisms, such as proxy means testing [16]. The poverty-reduction effects of the OAA have also been analyzed [14]. Studies on beneficiary satisfaction and perceived well-being document both benefits and implementation challenges [15,17] while more recent research has identified administrative issues in program implementation [38].

Research concerning older recipients and widows, as well as digital financial inclusion, highlights disbursement delays, reliance on intermediaries, and socioeconomic barriers to government-to-person payment delivery [39]. Although inflation diminishes the value of payments delivered accurately and promptly, these operational challenges can prevent entitled payments from reaching recipients altogether. The discussion of the contributory Universal Pension Scheme in Bangladesh offers relevant context for reform but should not be conflated with tax-financed social allowances [40].

Studies on targeting and implementation in Bangladesh are not only available but also explain the targeting and implementation processes; however, most of them do not include nominal revision histories, CPI-adjusted purchasing power, official poverty benchmarks, full and partial indexation scenarios, and program-level fiscal sensitivity. This study compares observed rates to rule-based alternatives and separates the annual and cumulative direct-transfer costs between FY2009-10 and FY2025-26. The synergistic effect of both policies makes the trade-offs between protecting purchasing power, ensuring its adequacy, and increasing the scope of coverage more transparent while avoiding the presumption that one policy will provide all three.

3 DATA AND ANALYTICAL METHODS

3.1 Research Design and Analytical Framework

This is a secondary data quantitative policy evaluation in a retrospective way. Figure 1 represents a framework of four linked operations: deflating official rates; comparing the observed coverage with poverty benchmarks; simulating indexation rules; and costing alternatives. Real values are defined by consumer prices; benchmarks measure adequacy; and coverage converts simulated payments into implications for the fiscal framework.

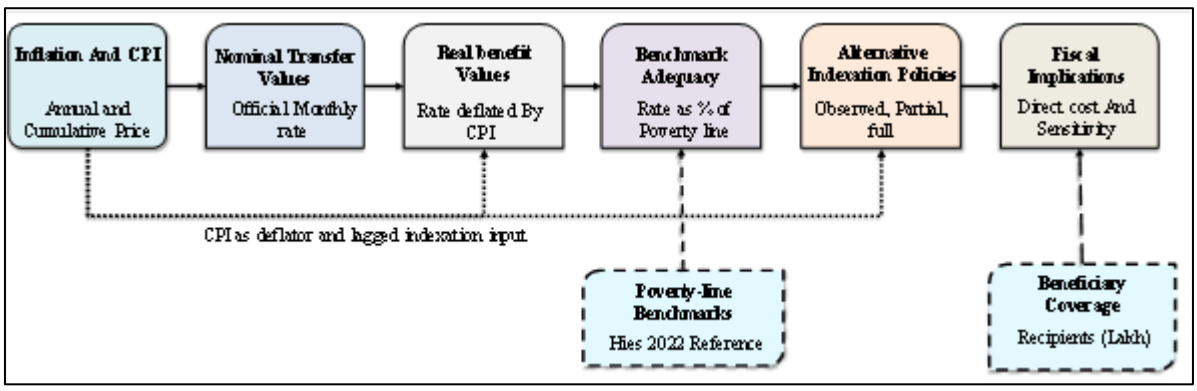


Figure 1: Analytical Framework for Inflation, Benefit Adequacy, and Indexation Policy Evaluation

The framework separates an adequacy mechanism, linking prices, nominal revisions, and real value, from a fiscal mechanism, linking adjustment rules and coverage to expenditure. All relationships are accounting identities or deterministic scenarios, and the chain of relationships is from left to right in Sections 4.1 to 4.5.

3.2 Program Selection, Data Sources, and Observation Period

Two unconditional, flat-rate individual transfers, with different eligibility conditions, were chosen: the Old Age Allowance (OAA) and the Widow Allowance (WA). The OAA is for males aged 65 and females aged 62 whose income is less than BDT 10,000, while the WA is for widows and husband desertees whose income is less than BDT 12,000. The program rates, number of beneficiaries, and allocations were calculated based on the program statistics and implementation manuals of the DSS, social security program tables provided by the Finance Division, and the Social Security Budget Report 2025-26 provided by the Cabinet Division. Price data is obtained from the national general and food Consumer Price Index (CPI) released by the Bangladesh Bureau of Statistics (BBS), from Bangladesh Bank annual reports, and BBS releases. The poverty lines adopted are the poverty lines based on the cost of basic needs, which are derived from the Household Income and Expenditure Survey (HIES) 2022. The observation period (2009-10 to 2025-26) is the longest period for which verified rates, coverage, allocations, and consistent CPI data are available. This time frame includes four revisions of the program and two periods of high inflation. Rates for FY26-27 announced in June 2026 are only provided as policy parameters.

3.3 Data Harmonization and Analytical Procedures

Administrative records were standardized to the fiscal year spanning July to June. Within-year pro-rating was unnecessary because all verified revisions took effect in July, and each program received a single rate, eliminating the need for tier-level aggregation. The Consumer Price Index (CPI) base shifted from 1995-96 to 2005-06 in FY2011-12 and subsequently to 2021-22 in April 2023. As index levels are not comparable across different bases, a chain-linked index (FY2009-10 = 100) was constructed using the published 12-month average inflation for each fiscal year. A similar approach was applied to develop a food CPI. Annual averages correspond to the sum of the 12 monthly payments for each fiscal year. For HIES 2022, conducted during the 2022 calendar year, the mean index of FY2021-22 and FY2022-23 was assigned. Figure 2 outlines the computational workflow for converting these records into analytical outputs.

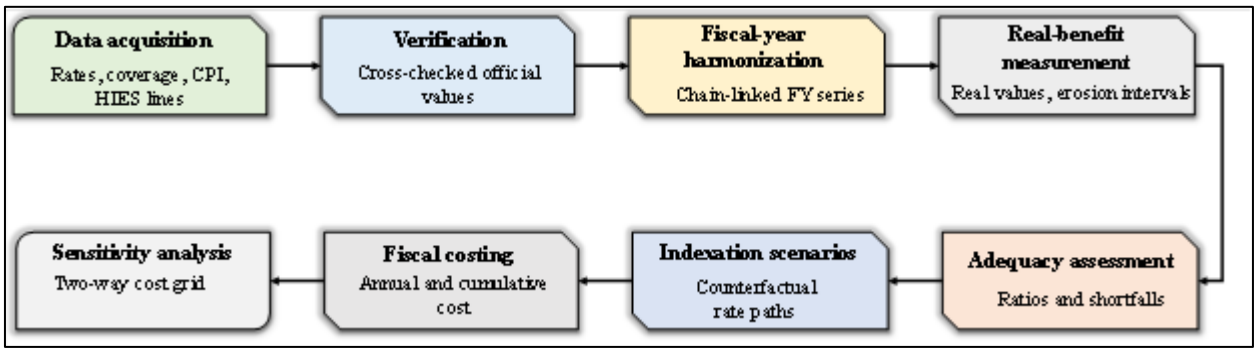


Figure 2: Secondary Data Harmonization and Policy Simulation Workflow

Figure 2 traces the workflow from verified records and chain-linked CPI to real values, adequacy ratios, simulated payment paths, and annual and cumulative costs. Outputs are identified as observed, derived, inflation-adjusted, counterfactual, or sensitivity estimates.

3.4 Real Benefit and Adequacy Measurement

$$RB_{p,t} = NB_{p,t}\frac{CPI_0}{CPI_t} \qquad (1)$$

Here, RB denotes the inflation-adjusted monthly benefit of program p in year t, NB represents the observed nominal benefit, and CPI(0) refers to the index for FY2009-10. The cumulative price change is calculated as (CPI(t)/CPI(0) − 1). Real-value erosion is defined as 1 − CPI(a)/CPI(b) for a period of constant payment from year a to year b, while the restoration requirement is CPI(r)/CPI(a) − 1 for a period of constant payment from year a to year r, where r indicates the next revision year. Adequacy is assessed as:

$$A_{p,t} = \frac{NB_{p,t}}{PL_t} \times 100 \qquad (2)$$

In this context, PL denotes the monthly per-capita poverty line. This ratio does not indicate the causal impact of the allowance on household poverty; instead, it represents the proportion of a benchmark covered by the allowance. Official

HIES 2022 poverty lines are used directly, while lines for other years are derived by scaling with the CPI and are designated as modeled benchmarks.

3.5 Alternative Indexation Policy Scenarios

The FY2009-10 rate of BDT 300 is used for all scenarios, which is shared by both programs. Scenario A is a reproduction of the official rates as verified. Scenarios B and C apply an annual rule,

$$B_t = B_{t-1}[1 + \theta \cdot \max(\pi_{t-1}, 0)] \qquad (3)$$

Here, π(t−1) denotes the average inflation rate in the previous fiscal year, and θ takes the value of 0.5 (partial indexation) or 1 (full indexation). The one-year lag results from budgetary procedures, as rates are set in June before the inflation rate for the upcoming year is available, with the first adjustment occurring in FY2011-12. Since none of the inflation rates were negative, no downward adjustments were necessary. Simulated rates are not rounded; robustness testing was conducted using rounded rates. A single adjustment path was applied to both programs, given their shared baseline and flat-rate rule. These scenarios represent counterfactual calculations rather than actual policy reforms.

3.6 Fiscal Expenditure and Sensitivity Modeling

$$C_{p,s,t} = \sum_{m=1}^{12} \sum_k N_{p,k,m,t} B_{p,k,m,t}^{(s)} \qquad (4)$$

In this equation, N represents the number of beneficiaries covered, and B denotes the monthly payment for program p, tier k, month m, and scenario s. When only one tier and an annual rate are present, Equation (4) simplifies to recipients multiplied by the monthly rate and by 12 payments (expressed in BDT crore). Scenario costs are calculated based on observed coverage, and incremental expenditure is defined as the difference between the scenario cost and that of Scenario A, reported both annually and cumulatively from FY2010-11 to FY2025-26. A two-way sensitivity analysis is conducted using adjustment rates ranging from 0 to 12 percent and coverage changes from −10 percent to +20 percent, based on a baseline of 9 million recipients receiving BDT 650, resulting in 49 combinations. Allocation costs exclude payment-service and administrative expenses.

3.7 Robustness, Validity, and Research Ethics

Rates and coverage figures were verified using two or more official sources. The reconstructed direct costs aligned with published allocations for FY2009-10 and FY2018-19, and accounted for 99.3 percent of allocations for FY2023-24 to FY2025-26, with the remaining portion consisting of government-paid G2P charges. All formulas were recalculated independently using a spreadsheet. Robustness checks included the base transition for FY2011-12, contemporaneous indexation, rounding, and the application of a food-CPI deflator. Although the food index does not represent the actual consumption basket of all poor households, food prices constitute the primary expenditure for these households. The study does not assess changes in household welfare or the causal impact of policies due to limitations such as the use of aggregate rather than recipient-level records, reliance on a single poverty-line round, national price indices, and deterministic assumptions regarding timing and coverage. The analysis is based on secondary data that are publicly available and not derived from human subjects.

4 RESULTS

4.1 Historical Allowance Revisions and Inflation Dynamics

The government revised both allowances infrequently, and the timing of these revisions showed little correspondence with the inflation cycle. Table 1 presents the actual revision episodes, rates, rule changes, and coverage for each program, excluding years without rate changes.

Table 1: Policy Revision Episodes, Allowance Rates, and Beneficiary Coverage in Selected Social Protection Programs

Program	Revision (FY)	Monthly benefit (BDT)	Eligibility / rule change	Coverage (lakh)	Administrative note
OAA	2009-10	300	Men 65+, women 65+; income below BDT 10,000	22.50	Baseline year
	2014-15	400	None	27.23	First revision in five years

	2016-17	500	Women's age threshold 62 (2013 manual)	31.50	Rate held for seven years
	2023-24	600	G2P mobile or bank payment	58.01	Rate above WA
	2025-26	650	G2P charge borne by government	61.00	Last completed year
	2026-27	700	None	62.00	Announced only
WA	2009-10	300	Income below BDT 12,000	9.20	Baseline year
	2014-15	400	None	10.12	First revision in five years
	2016-17	500	Revised manual (2013)	11.50	Rate held for seven years
	2023-24	550	G2P mobile payment	25.75	Rate below OAA
	2025-26	650	G2P charge borne by government	29.00	Realigned with OAA
	2026-27	700	None	30.00	Announced only

During the 17 fiscal years, each program underwent four rate revisions, with intervals ranging from two to seven years. The most significant increase in coverage occurred between FY2016-17 and FY2022-23, as the number of OAA recipients rose from 31.50 lakh to 57.01 lakh, and WA recipients from 11.50 lakh to 24.75 lakh. The only divergence between the programs occurred in FY2023-24 and FY2024-25, when the WA rate was set at BDT 50 lower than the OAA rate. Figure 3 presents these revision years alongside the annual inflation record to assess whether revisions corresponded with periods of price pressure.

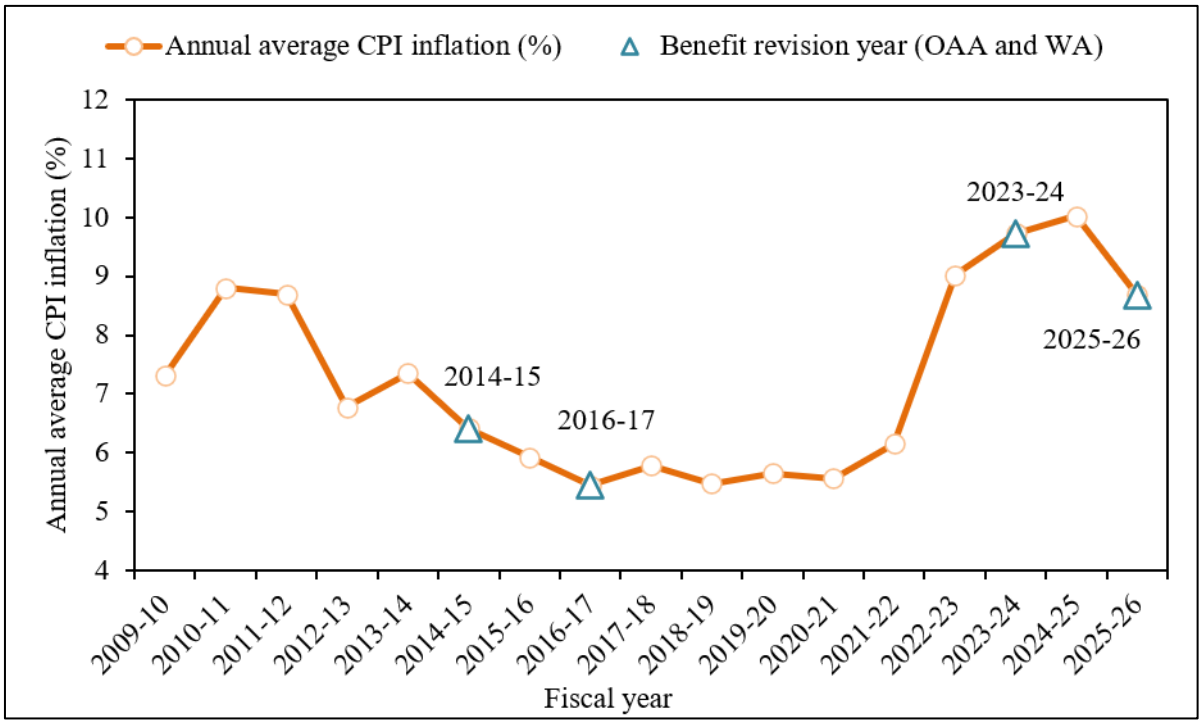


Figure 3: Annual CPI Inflation and the Timing of Social Protection Benefit Revisions in Bangladesh

Annual inflation fluctuated between 5.44% in FY2016-17 and 10.03% in FY2024-25, resulting in a cumulative price level increase of 204.3% over the period. Revisions coincided with moderate inflation rates of 6.40% in FY2014-15 and 5.44% in FY2016-17, whereas no revisions occurred during the high inflation years of FY2010-11, FY2011-12, or the second surge in FY2022-23. The revisions implemented in FY2023-24 and FY2025-26 were unexpected, as they followed three consecutive years with a cumulative price increase of 31.6%.

4.2 Inflation-Adjusted Benefit Values and Purchasing-Power Erosion

Nominal revisions failed to maintain the real value of either allowance. Table 2 quantifies purchasing-power erosion during each payment interval and the increase required at the next revision to restore the original real value.

Table 2: Cumulative Purchasing-Power Erosion and Benefit Restoration Requirements Across Allowance Adjustment Intervals

Program	Unchanged-rate interval (BDT)	Years	CPI rise (%)	Real erosion (%)	Increase to restore % (BDT)
OAA and WA	2009-10 to 2013-14 (300)	5	35.5	26.2	44.2 (433)
	2014-15 to 2015-16 (400)	2	5.9	5.6	11.7 (447)
	2016-17 to 2022-23 (500)	7	44.0	30.6	58.0 (790)
OAA	2023-24 to 2024-25 (600)	2	10.0	9.1	19.6 (717)
WA	2023-24 to 2024-25 (550)	2	10.0	9.1	19.6 (658)

The most significant erosion occurred during the seven-year BDT 500 interval, where a 44.0% increase in prices resulted in a 30.6% loss of purchasing power. Restoring FY2016-17 purchasing power in FY2023-24 would have required a 58.0% increase, but the OAA and WA rose by only 20.0% and 10.0%, respectively. The FY2016-17 revision was the only instance where the adjustment exceeded the required amount, at 25.0% compared to the necessary 11.7%. The FY2025-26 revision of BDT 650 nearly met the WA requirement of BDT 658 but remained BDT 67 below the OAA requirement. These interval measures, presented in constant FY2009-10 BDT, are illustrated in Figure 4.

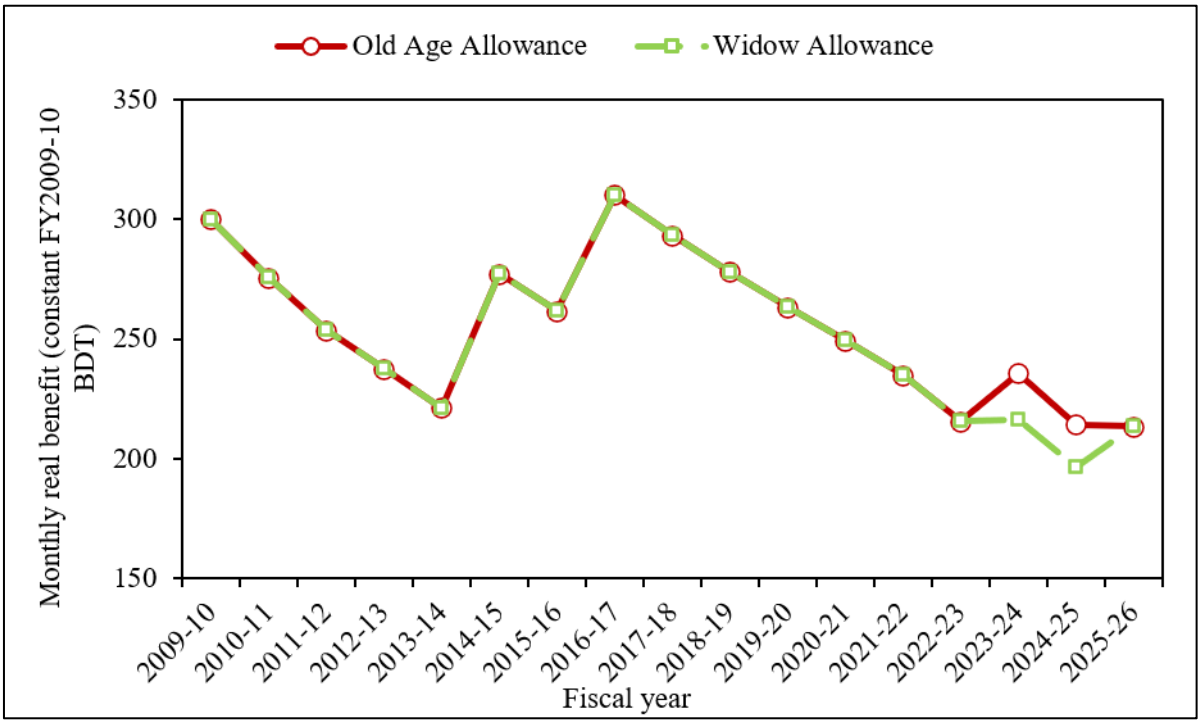


Figure 4: Historical Trajectories of Inflation-Adjusted Real Cash Transfer Values

The revision trajectories exhibit a saw-toothed pattern, where each adjustment produces a one-year recovery that is subsequently eroded by inflation over the following two to four years. The real value surpassed the baseline only in FY2016-17, reaching BDT 310, but declined to BDT 214 by FY2025-26, representing a 28.8% decrease from FY2009-10 despite a 116.7% nominal increase. The inflation-adjusted WA benefit reached its lowest point in FY2024-25, at BDT 196, coinciding with elevated inflation.

4.3 Transfer Adequacy and Inflation-Deflator Sensitivity

Both allowances constituted only a small fraction of the official subsistence benchmarks. Table 3 compares the BDT 500 rate provided by both programs during FY2021-22 and FY2022-23, which correspond to the HIES 2022 period, against the national poverty lines and the lowest and highest stratum-specific upper poverty lines.

Table 3: Cash Transfer Adequacy Against Official HIES Poverty Lines

Program	HIES year	Poverty-line category	Benefit (BDT)	Poverty line (BDT/person/mo)	Benefit/line (%)	Shortfall (BDT)
OAA and WA	2022	National food line	500	1,851	27.0	1,351
		National lower line	500	2,755	18.1	2,255
		National upper line	500	3,832	13.0	3,332
		Rural upper, Rangpur (lowest)	500	3,108	16.1	2,608
		Rural upper, Dhaka (highest)	500	4,234	11.8	3,734
		Urban upper, Mymensingh (lowest)	500	3,470	14.4	2,970
		Urban upper, Dhaka (highest)	500	4,922	10.2	4,422

The allowances represented 13.0% of the national upper poverty line and 18.1% of the lower poverty line, resulting in monthly shortfalls of BDT 3,332 and BDT 2,255 per person, respectively, and covering only 27.0% of the food poverty line. These ratios ranged from 16.1% in rural Rangpur to 10.2% in urban Dhaka, indicating that a single national ratio understates the deficit in higher-cost areas. The ratios pertain to individual allowances rather than total household welfare, which includes other income sources. Given that food constitutes the largest share of poor households' budgets, Figure 5 compares erosion estimates using both food and headline CPI purchasing-power indices (FY2009-10 = 100).

Food price deflation reduced the purchasing-power index in fifteen out of sixteen years, by as much as 2.4 points for the OAA and 2.2 points for the WA in FY2024-25, even as overall prices increased by 204.3% over the period. As a result, the real value for FY2025-26 decreased by 30.8% on the baseline, compared with 28.8% on the headline index, and erosion in the BDT 500 interval increased from 30.6% to 31.2%. The type of deflator may alter the size of results but not the direction or the order of the results.

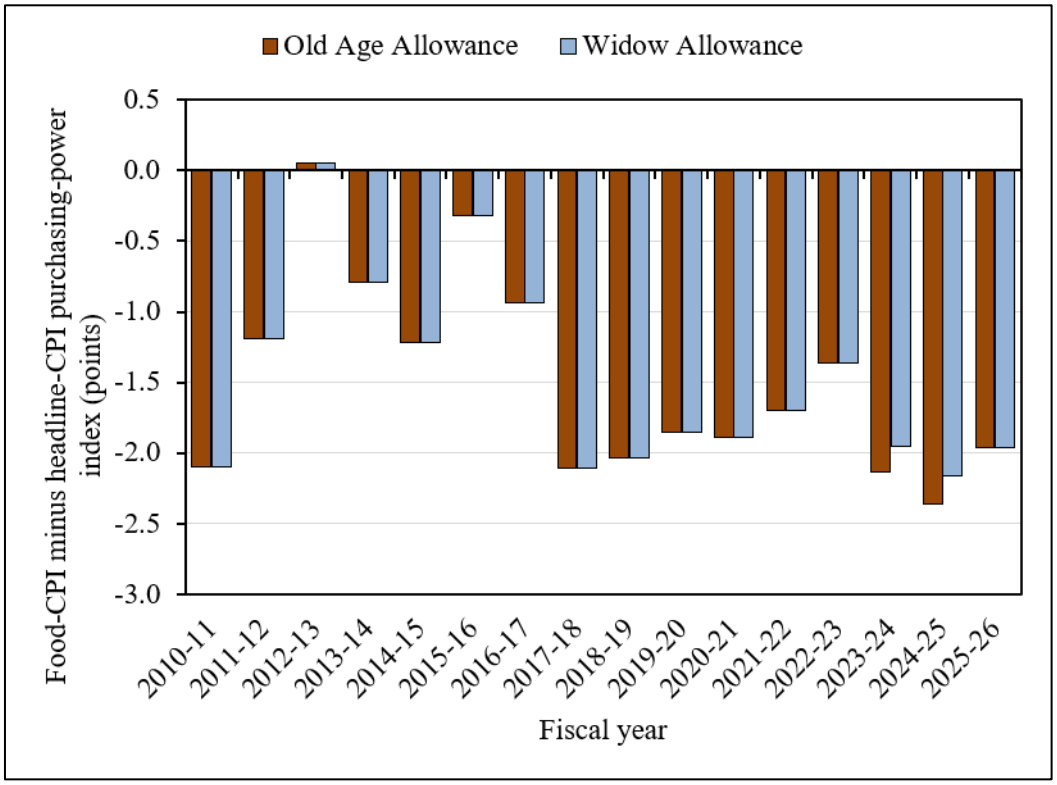


Figure 5: Sensitivity of Cash Transfer Purchasing Power to Headline and Food Price Inflation

4.4 Counterfactual Evaluation of Benefit Indexation Policies

Discretionary revisions produced less stable payment trajectories and, in most fiscal years, lower benefits than rule-based full CPI indexation. Figure 6 displays the observed OAA and WA rates alongside partial and full CPI indexation paths from the common BDT 300 baseline, applying the lagged rule specified in Equation (3).

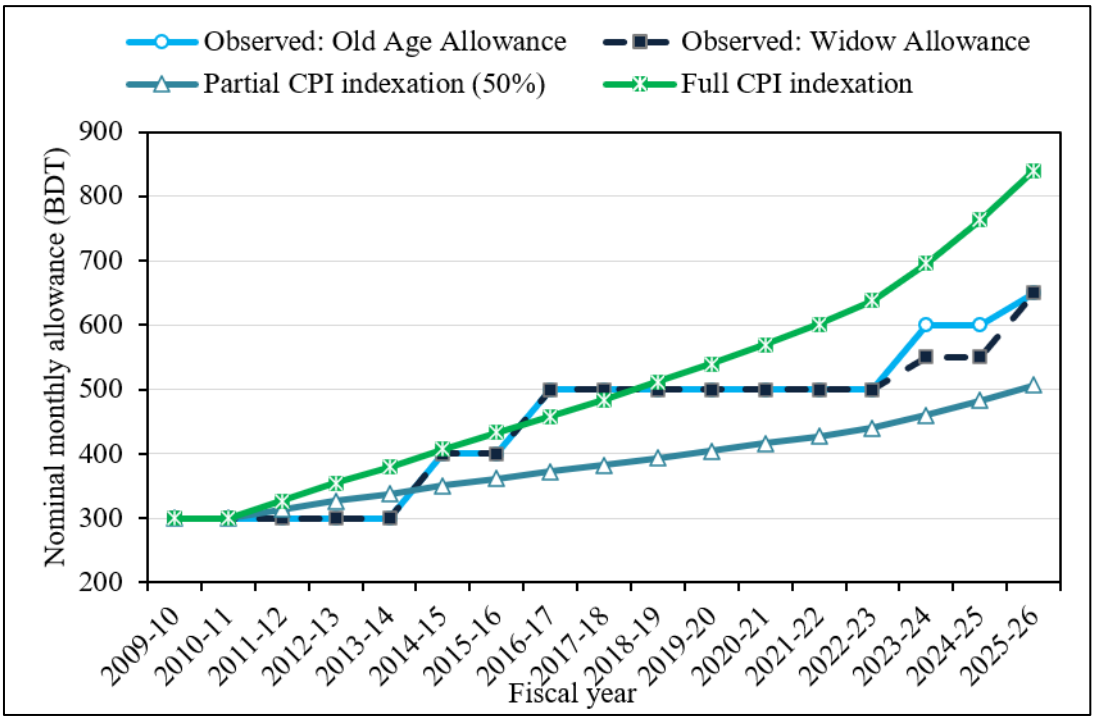


Figure 6: Observed and Counterfactual Cash Transfer Trajectories Under Alternative Inflation-Indexation Rules

Full indexation would have brought the rate to BDT 840 by FY2025-26, BDT 190 above the observed rate, while 50% indexation would have brought it to just BDT 507. Observed rates remained below the full-indexation path in most fiscal years, although temporary deviations occurred around policy revision years. Since FY2019-20, when the rate was held at BDT 500, observed rates have fallen further behind. The observed FY2025-26 rate corresponds to an indexation coefficient of 0.744, meaning discretionary revisions offset approximately 75% of lagged inflation. Under full indexation, the real value would have been between BDT 273 and BDT 285 after FY2010-11. These reconstructed paths assess adjustment rules, not poverty effects.

4.5 Fiscal Requirements and Policy Robustness

Full indexation would have required moderate additional expenditure, primarily concentrated in recent years. Table 4 compares final-period benefits, adequacy relative to the upper poverty line of BDT 5,245 for the modeled FY2025-26, and cumulative expenditure from FY2010-11 to FY2025-26, assuming constant observed coverage.

Table 4: Comparative Indexation Outcomes, Residual Adequacy Gaps, and Cumulative Fiscal Requirements

Program	Indexation scenario	Final benefit (BDT)	Adequacy (%)	Remaining gap (BDT)	Cumulative direct cost (BDT crore)	Incremental cost (BDT crore)
OAA	A: Observed policy	650	12.4	4,595	38,467	0
	B: Partial (50%) CPI	507	9.7	4,738	32,141	−6,326
	C: Full CPI	840	16.0	4,405	44,420	+5,954
WA	A: Observed policy	650	12.4	4,595	15,713	0

	B: Partial (50%) CPI	507	9.7	4,738	13,362	−2,351
	C: Full CPI	840	16.0	4,405	18,677	+2,964

Over sixteen years, full indexation would have increased total costs by BDT 8,918 crore, representing 16.5% of the observed cumulative cost of BDT 54,180 crore, with two-thirds attributable to the OAA due to its broader coverage. In contrast, partial indexation would have resulted in savings of BDT 8,677 crore compared to the observed policy. The benefit remains only 16.0% of the modeled upper limit, as indexation maintains but does not raise the base benefit. Figure 7 presents the annual profile of these differences, though the cumulative format obscures year-to-year variations.

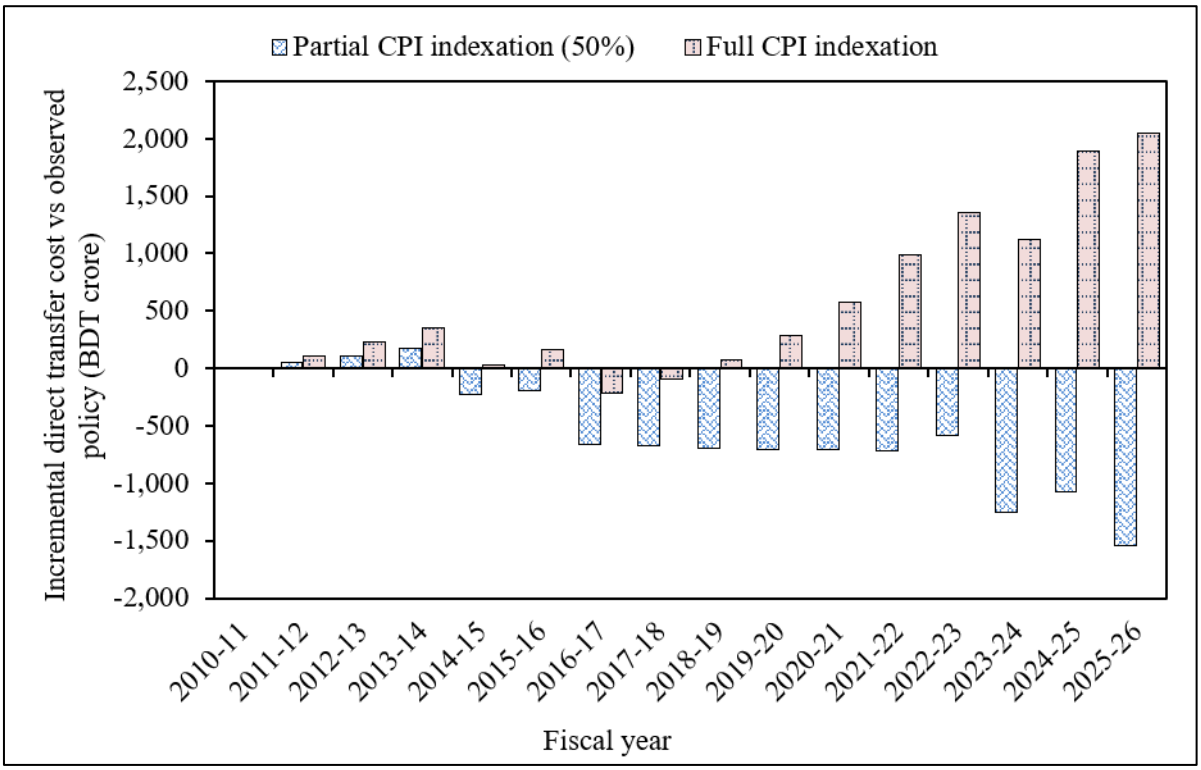


Figure 7: Annual Incremental Transfer Expenditure Under Alternative Inflation-Indexation Policies

The observed policy cost BDT 215 crore and BDT 96 crore more than full indexation in FY2016-17 and FY2017-18, respectively, but BDT 353 crore less in FY2013-14. The additional full-indexation requirement has been incrementally raised from FY2019-20 and reached BDT 2,053 crore in FY2025-26, or 29.2% of the observed direct cost in FY2025-26, of which BDT 1,391 crore was for the OAA. This cost profile has been backloaded to account for compounding costs and the growth of a larger number of beneficiaries. The effect of simultaneous adjustment rate and coverage change is shown in Figure 8, assuming 90 lakh recipients at BDT 650 as the base.

Relative to the baseline of BDT 7,020 crore, incremental costs ranged from a saving of BDT 702 crore, achieved through no adjustment and 10% lower coverage, to an increase of BDT 2,415 crore with a 12% adjustment and 20% higher coverage. At the margin, fiscal effects of expansion and of indexation are the same, and they are reinforcing: A 1 percentage point increase in one of them would change the fiscal costs by about BDT 70 crore at baseline parameters. The announced FY2026-27 parameters indicate an additional BDT 708 crore in direct transfers. The analysis demonstrates that the base rate for FY2011-12 (1995-96) raised cumulative price growth to 209.7%, while full indexation over the same period increased the cumulative requirement to BDT 13,769 crore. Rounding simulated rates to the nearest BDT 10 did not affect the cumulative requirement by more than BDT 4 crore.

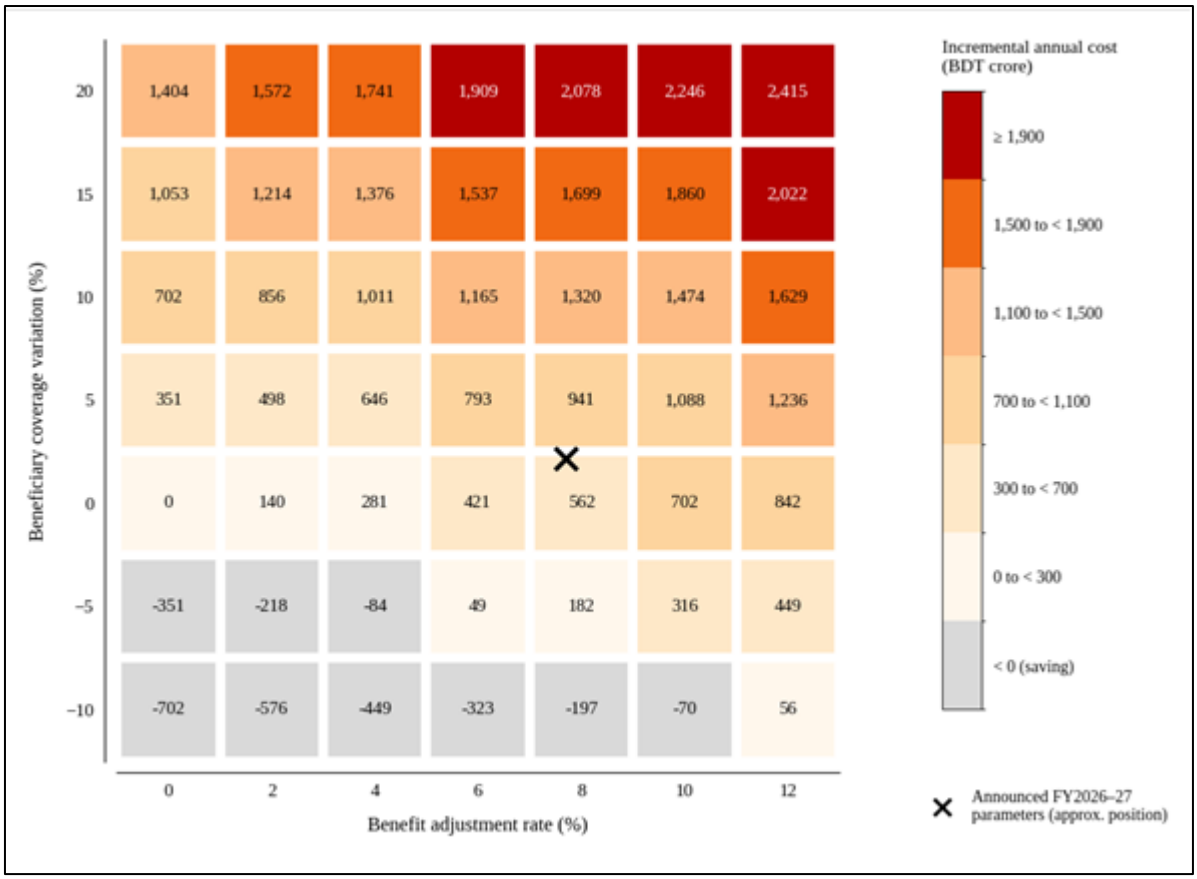


Figure 8: Sensitivity of Annual Cash Transfer Expenditure to Benefit Adjustment Rates and Beneficiary Coverage

5 DISCUSSION

Both of the allowances were insufficient to cover the upper poverty line, and real payments in FY2025-26 were approximately 29% less than in FY2009-10. Recipients were exposed to inflation for as long as seven years with long periods between revisions.

This is similar to policy drift in minimum pensions, which is a loss of protections without any formal benefit reductions [8] but is different from minimum income support in the Netherlands, which preserved purchasing power over 40 years [24]. Belgium's automatic uprating also helped to buffer beneficiaries during the surge in inflation in 2022 [7]. Conditions in the institutions and in the finances vary from country to country, but these comparisons highlight the need for rules for adjustment.

The 13% adequacy ratio does not establish recipient poverty, since household resources may be pooled [27], and small transfers can still improve well-being [14,17]. Food-CPI deflation indicates somewhat greater erosion than headline-CPI deflation, consistent with concerns about food-price pressures on poorer households [13]. Evidence on inflation exposure across low-income groups nevertheless remains mixed [19].

Full indexation would have maintained 91-95% of baseline real value, whereas discretionary revisions offset roughly three-quarters of lagged inflation. Rules improve predictability and can limit discretion [33]. However, indexation cannot correct an inadequate starting benefit [31]; adequacy targets require separate decisions.

Full indexation would have cost 16.5% more cumulatively and 29.2% more in FY2025-26, reflecting the fiscal effect of delayed adjustments. Coverage expansion competes with rate increases for the same resources [34,35]. Partial indexation alone would have allowed greater erosion than the observed policy and would require periodic catch-up revisions. Program allocations include G2P charges, so administrative costs should not be conflated with direct transfers.

The integrated framework links real-value erosion, poverty benchmarks, indexation scenarios, and fiscal sensitivity. Its limits include aggregate administrative data, one poverty-line round, national rather than beneficiary-specific price indices, and deterministic assumptions that exclude behavioral responses.

6 POLICY IMPLICATIONS

The results validate six proportionate measures, ranging from administrative measures to resource or legal changes. First, during budget preparation, the Finance Division and DSS could consider an annual allowance review, comparing the rate to the average change in CPI over the previous year and publishing the rate's real value; no legislation is required, nor is immediate funding needed. Second, it would be costless to publish the rationale for each revision, separating direct transfers from payment and administrative costs, which would improve accountability. Third, a program-level adequacy benchmark, like the allowance-to-lower-poverty-line ratio, would be monitored on an annual basis and would be adjusted with each round of the HIES, but would also be made visible and would separate indexation from decisions on benefit levels. Fourth, medium-term budget frameworks should have explicit assumptions regarding coverage, rates, and adjustment, since a one-point rise in coverage or rate will result in an annual cost of around BDT 70 crore. Fifth, if the OAA and WA were adjusted in the same way, a divergence like that of FY2023-24 would not have occurred, as the real value of the WA would have been kept at its minimum. Sixth, a lagged CPI rule would provide predictable protection – partial indexation with periodic catch-up revisions would offer a graduated path. In contrast, statutory full indexation would require additional resources and legal approval, which would have cost BDT 2,053 crore in FY2025-26. The timing of expansion and indexation decisions is as important as their size, given that coverage is expected to be 92 lakh people in FY2026-27. None of these is best in a formal sense; each is a compromise between purchasing-power protection and fiscal commitment.

7 CONCLUSION

Fixed nominal allowances lose purchasing power when revisions lag behind inflation. This study, using official program records, chain-linked CPI, poverty lines from the HIES 2022, and fiscal scenarios for FY2009-10 to FY2025-26, revealed that the nominal benefit level rose by 116.7% while the real value declined by 28.8%. Both allowances were at the HIES 2022 benchmark, which amounted to 13.0% of the national upper poverty line. Lagged full indexation would have been 16.5% more expensive in terms of direct transfers over sixteen years, and would have resulted in a significant inadequacy. The results endorse the regular, clear review of benefits, which must differentiate between sustaining purchasing power and enhancing benefit adequacy, and must take into account coverage and fiscal costs. The analysis is based on aggregate administrative data and deterministic scenarios, which means that it cannot determine the welfare effects on the household level. Further research could examine the impact of different adjustment rules on living standards, based on recipient-level expenditures, payment records and price indices specific to the beneficiaries.

STATEMENTS ON COMPLIANCE WITH ETHICAL STANDARDS

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Disclosure of conflict of interest

The author declares no conflict of interest.

Data Availability Statement

All data are publicly accessible from official secondary sources covering FY2009-10 to FY2025-26: general and food CPI inflation from BBS, as reported in Bangladesh Bank Annual Reports (https://www.bb.org.bd) and in BBS monthly CPI releases (https://bbs.gov.bd); program rates, coverage, and allocations from DSS (https://dss.gov.bd), the Finance Division (https://mof.gov.bd), and the Cabinet Division SSPS Programme, Social Security Budget Report 2025-26 (https://socialprotection.gov.bd); and poverty lines from the BBS HIES 2022 Final Report, Annex Table A1. Some government portals restrict automated access, so values were cross-verified against archived official copies.

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