

From Access to Continuity: Effectiveness of the Kanyashree Scholarship in Reducing Girls' Dropout in West Bengal

Joy Karmakar¹

Abstract

This paper examines the effectiveness of the Kanyashree Program, West Bengal's flagship conditional cash transfer (CCT) scheme, in reducing school dropout among adolescent girls between 2017 and 2025. Drawing on district-level data, the study evaluates program through different parameters, including retention, renewal, and consistency. The findings reveal contrasting patterns. While K2 scholarships (higher-level continuation scholarships) show relatively stable or positive growth, K1 scholarships (initial entry-level) record a steady decline since 2020–21, coinciding with the COVID-19 pandemic and systemic disruptions in school enrolments. Retention and renewal indices point to both consolidation and fragility, as many districts maintain high continuation rates while others face persistent dropout pressures. Temporal consistency (0.85) reflects sustained program stability over several years, yet the sharp fall in the Retention Index to 65.46 in 2024–25 signals renewed stress. Spatial consistency has improved modestly, from 89.02 in 2021–22 to 91.08 in 2024–25, suggesting a narrowing of inter-district disparities. However, the simultaneous rise in spatial consistency alongside declining overall retention highlights systemic stressors that cut across districts. The analysis underscores both the achievements and limitations of Kanyashree as it has contributed significantly to delaying marriage and sustaining female education; however, the program's long-term sustainability remains vulnerable to structural and systemic pressures.

Keywords: Retention, Renewal, Dropout, Conditional cash transfer

Background

In 2025, West Bengal witnessed a striking decline of 1.7 lakh students in undergraduate admissions to State-run and aided colleges, with registrations dropping from 5.3 lakh in 2024 to 3.6 lakh. This downturn is particularly paradoxical given the State's flagship Kanyashree program, a conditional cash transfer (CCT) scheme explicitly designed to reduce dropouts and encourage female participation in higher education. The decline, despite such targeted interventions, raises critical concerns about both the structural weaknesses of the higher education system and the limits of incentive-based policies. Scholars point to systemic inefficiencies, most notably the nearly three-month delay between the publication of results and the initiation of the admission process as immediate barriers discouraging enrolment. Yet, the shift also reflects deeper transformations, as students are increasingly drawn to vocational and skill-based programs that promise quicker financial returns compared to traditional degree courses (Ghosh, 2025). This raises a fundamental question in the broader debate on CCTs. If even conditional incentives such as Kanyashree fail to sustain undergraduate admissions, does

¹ Dr., Department of Geography, Serampore College, Hooghly, India.

*Corresponding Author, E-mail: dr.joykarmakar@gmail.com

Received 9 January 2026 Revised 11 April 2026 Accepted 2 June 2026

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this indicate a diminishing relevance of conventional higher education, or does it reveal a policy gap wherein financial transfers alone cannot offset administrative inefficiencies and the misalignment between academic curricula and labour market aspirations? This study therefore explores the extent to which the decline in undergraduate admissions in West Bengal reflect the limitations of conditional cash transfer schemes such as Kanyashree in addressing structural inefficiencies and evolving educational aspirations?

The *Kanyashree Prakalpa* (KP), a flagship initiative of the Government of West Bengal, has emerged as one of the most widely recognized social protection programs targeting adolescent girls. Launched in 2012 by the Department of Women and Child Development and Social Welfare, it is designed as a Conditional Cash Transfer (CCT) scheme with the twin objectives of enhancing female secondary education and preventing early marriage. Its international visibility increased when it received the United Nations Public Service Award in 2017, positioning it as a model of gender-focused welfare intervention. The program operates on a two-tier scholarship structure. The first tier provides an annual scholarship to unmarried girls aged 13–19 who remain in education, thereby incentivizing school retention. The second tier offers a one-time grant to unmarried girls aged 18–19, conditional on continued enrolment, which serves as both a symbolic and practical measure to discourage child marriage. The later introduction of *Kanyashree Plus*, with its focus on a “graduation strategy,” further reflects an attempt to move beyond welfare dependence by linking social protection with pathways toward productive and resilient livelihoods. By 2019–20, more than three million scholarships (including both K1 and K2 components) were sanctioned, underlining the scheme’s large-scale reach. While these figures highlight impressive coverage, a critical perspective also demands attention to persistent challenges: ensuring equitable access across districts, monitoring long-term impacts on educational attainment and labour force participation, and addressing structural factors that continue to reproduce gender disadvantage. Thus, the Kanyashree Prakalpa is not merely a cash transfer scheme but a broader social experiment in reshaping gender norms and adolescent opportunities in West Bengal.

One of the most alarming social consequences observed during and after the COVID-19 pandemic in West Bengal was the resurgence of child marriage and child trafficking. Reports in leading newspapers highlighted that prolonged school closures pushed many adolescent girls and boys out of the formal education system, thereby increasing their vulnerability to early marriage and exploitative practices. Districts such as South 24 Parganas, Dakshin Dinajpur, Malda, and Murshidabad were identified as particularly affected (Singh, 2020). This trend stands in sharp contrast to several other Indian states, which have recorded a substantial decline in the prevalence and headcount of child marriage, even as West Bengal continues to grapple with the issue despite flagship interventions such as the Kanyashree Prakalpa (Singh, 2024). These developments necessitate a critical re-examination of the effectiveness of Kanyashree in addressing its core objectives of delaying marriage and promoting continued education among adolescent girls. Against this backdrop, this paper explores seeks to explore the temporal dynamics of *Kanyashree* scholarships (K1 and K2) over the period 2017–2024, focusing on both their growth trajectories and district-level variations. Special attention is given to spatial inequalities in achievement, renewal, and overall coverage rates across districts. To assess the program’s performance more rigorously, four evaluative parameters are employed: retention, efficiency, renewal, and consistency. Together, these indicators provide a nuanced picture of the scheme’s reach, stability, and equity in implementation.

Following this introduction, Section Two outlines the theoretical lens of social inclusion through conditional cash transfers, situating the *Kanyashree* program within broader welfare discourses.

Section Three details the methodology, including the data sources, study area, and analytical techniques employed. Section Four presents the empirical findings and is divided into two subsections: the first examines the temporal and spatial trends of K1 and K2 scholarships over the past eight years; and the second evaluates the program's performance through three indicators—retention, renewal, and consistency. Finally, Section Five concludes the paper by synthesizing the key insights and offering policy-oriented recommendations.

Linking Conditional Cash Transfers to the Discourse on Social Inclusion

Conditional Cash Transfer (CCT) programs have emerged globally as a distinctive approach to social assistance, offering both immediate relief and long-term pathways to social inclusion. Their core principle lies in linking financial support to verifiable behaviours, most often in the form of continued school attendance, regular health check-ups, or other investments in children's human capital. This represents a significant departure from traditional welfare policies that emphasized the direct provision of goods and services. Instead, CCTs recognize poor households as active agents, with responsibilities as well as entitlements, thereby fostering what has been described as a virtuous cycle between social protection and human development (World Bank, 2005). Social protection, once seen merely as a safety net, is increasingly framed as an investment in human capital and poverty reduction, while also strengthening the governance of public expenditure (Vakis, 2005).

By addressing both short-term consumption needs and long-term poverty alleviation objectives, CCTs seek to combine immediate relief with structural transformation. Their impact is particularly visible in societies marked by high inequality, where traditional social insurance tied to formal employment often excludes the most vulnerable. In such contexts, CCTs extend a redistributive function, reaching those at the margins of the labour market and fostering inclusion through education, health, and nutrition. It is within this international discourse that the Kanyashree Prakalpa of West Bengal stands out as a gender-focused adaptation of the CCT model, specifically designed to delay marriage and promote continued education among adolescent girls. Its recognition with the UN Public Service Award in 2017 further underscores its innovative character as a welfare intervention aimed at reshaping entrenched social norms (Singh, 2024).

Yet, while CCTs have demonstrated measurable success in improving short-term outcomes such as school enrolment, nutrition, and health care utilization, their long-term contributions to poverty reduction and social transformation remain contested. Many CCT programs are still too recent for a comprehensive assessment of their sustained developmental impact (Brière and Rawlings, 2006). Kanyashree, however, has operated for more than a decade, offering an opportunity to reflect on its broader influence on the social development landscape of West Bengal (Karmakar, 2023). Nevertheless, questions remain about coverage gaps, spatial inequalities in implementation, and the program's capacity to address structural drivers of gender disadvantage.

More broadly, debates around CCTs highlight both their promise and their limitations. On one hand, they compensate for market failures that perpetuate intergenerational poverty, while their conditionalities may help internalize positive externalities of education and health (Ravallion, 2003; Das et al., 2005). On the other hand, concerns persist regarding targeting accuracy, administrative capacity in low-income contexts, and the replicability of success across different socio-political settings. From a theoretical perspective, the relationship between CCTs and social inclusion can be explored through the share of beneficiaries who exit the scheme three interconnected dimensions, including their contribution to national social policy and poverty targeting, their ability to reshape accountability

relationships between governments, service providers, and beneficiaries, and their potential to extend support to historically excluded groups, particularly women (Brière and Rawlings, 2006). Within this framework, the present paper focuses on the accountability dimension, with specific reference to the Kanyashree Prakalpa in West Bengal. The program provides an important lens to examine how conditional cash transfers not only establish new forms of engagement between the state and adolescent girls but also redefine accountability by linking government commitments with beneficiaries' educational participation and delayed marriage (Karmakar, 2023).

Methodology

This section is divided into the following two part:

1. Data Source and Study Area

The data utilised in this study were obtained from the official West Bengal Kanyashree portal. The period under consideration spans from 2017 to 2024, with the analysis focusing on three specific years—2017–18, 2021–22, and 2024–25—in order to trace and compare progress over time. District-wise data have been collected for these three years, with particular emphasis on the sanctioned K1 and K2 scholarships across 23 districts. The districts include Darjeeling, Kalimpong, Alipurduar, Koch Bihar, Uttar Dinajpur, Dakshin Dinajpur, Malda, Murshidabad, Birbhum, Purba Burdwan, Paschim Burdwan, Nadia, Hooghly, Howrah, Bankura, Puruliya, Jhargram, Purba Medinipur, Paschim Medinipur, North 24 Parganas, South 24 Parganas, and Kolkata. Among these, Kolkata is a fully urbanized district, whereas the others are comparatively less urbanized. Notably, Murshidabad recorded the highest number of scholarship applications in 2024–25, while Kalimpong registered the lowest.

2. Methods Undertaken

To evaluate the program, the analysis begins with an assessment of the temporal trends in both K1 and K2 scholarships. Subsequently, the Compound Annual Growth Rate (CAGR) is computed across districts to capture long-term growth dynamics. In order to assess program effectiveness, three indicators, namely the Retention Index, Renewal Rate, and Consistency Index (CI), are constructed for K1 as K2 is one-time grant. The formulation of these indices is based on the following set of equations.

$$\text{Achievement Rate (AR)} = (\text{Total Sanctioned scholarship} / \text{Target scholarship}) * 100 \quad (\text{i})$$

$$\text{Retention index (RI)} = [\text{K1 Renewals (in year } t) / \text{cumulative K1 fresh scholarships up to year } t-1] * 100 \quad (\text{ii})$$

For instance, when calculating the Retention Index for 2024–25, the numerator comprises the total number of K1 renewals reported in 2024–25, while the denominator is taken as the cumulative number of K1 fresh sanctions between 2020–21 and 2023–24. The choice of a five-year reference period is based on the assumed academic trajectory of beneficiaries. A girl is typically sanctioned the K1 scholarship at entry into Class VIII (around age 13–14), and she remains eligible to renew the award annually through to Class XII. This corresponds to a maximum span of five academic years (Class VIII, IX, X, XI, and XII). Thus, taking cumulative fresh sanctions over the preceding four years (up to $t-1$) ensures that the denominator approximates the pool of students who could legitimately appear as renewals in year t . Accordingly, if 2024–25 is taken as the year of observation (t), then renewals reported in that year are measured against the cumulative fresh sanctions during 2020–21 to 2023–24, which reflects the maximum eligible cohort still in the system.

In the context of the Kanyashree program, the Dropout Index (DI) measures the proportion of beneficiaries who discontinue participation rather than renewing their scholarship. It is constructed as the inverse of the Retention Index (RI). While the RI indicates the share of eligible beneficiaries continuing into the next stage, the DI captures the share who exit from the scheme at that point. The Dropout Rate (DR) is calculated as:

$$\text{Dropout Rate (DR)} = (100 - \text{RI}) \quad (\text{iii})$$

While the Retention Index (RI) provides a cumulative measure of program sustainability by comparing annual renewals against the total pool of fresh beneficiaries since inception, it may not always reflect the actual renewal dynamics of specific beneficiary cohorts. In practice, a large denominator can dilute the indicator, and conversely, a one-year Renewal Rate may inflate values beyond 100 per cent because renewals in a given year often originate from multiple preceding cohorts. To address this, a modified Renewal Rate based on a rolling multi-year denominator is adopted. For instance, a three-year cumulative fresh intake (years $t-1$, $t-2$, and $t-3$) better approximates the effective pool of girls eligible for renewal in year t . This approach recognizes the typical progression of beneficiaries across secondary classes (VIII–XII), where renewals span several years, while also ensuring the index remains within logical bounds. Thus, the multi-year Renewal Rate serves as a complementary measure to the Retention Index: the former capturing cohort-specific continuation, and the latter offering a broader picture of long-term program sustainability. So, the Renewal Rate highlights continuation behaviour. The formula is:

$$\text{Renewal Rate (RR}_n\text{)} = [\{K1 \text{ Renewals (in year } t) / \sum K1 \text{ fresh (in year } t-1) \} * 100] \quad (\text{iv})$$

The Consistency Index measures the degree of stability in the program's performance across time or space. It indicates whether scholarship renewals or achievements are evenly sustained, rather than fluctuating sharply. To assess program stability, both temporal and spatial consistency were examined using two separate formulas. Temporal consistency was measured using the following expression:

$$\text{CI}_T = \{1 - (\sigma_t / \mu_t)\} * 100 \quad (\text{v})$$

σ_t = standard deviation of the retention index across years, μ_t = mean of the retention index across years

CI_T = Temporal Consistency

The following formula captures spatial performance of the program across districts in a given year.

$$\text{CI}_S = \{1 - (\sigma_d / \mu_d)\} * 100$$

σ_d = standard deviation of the retention index across districts, μ_d = mean of the retention index across districts, CI_S = Spatial Consistency

The CI is a useful measure for assessing the effectiveness and stability of conditional cash transfers like Kanyashree in retaining adolescent girls within formal education systems until adulthood. A higher CI indicates that a large proportion of girls either renew their K1 benefits annually, thereby demonstrating sustained engagement and educational continuity. Conversely, a low CI highlights discontinuity in participation, which may point to dropout, child marriage, or migration.

Findings and Discussion

1. Temporal and Spatial Dimensions of K1 and K2 Scholarships

The implementation of the Kanyashree program has had a significant impact on reducing dropout rates among girl students across educational stages in West Bengal. According to the Chief Minister (CM) at the Kanyashree Day celebration, the primary level (Classes I–V) dropout rate among girls, which stood at 4.75 per cent in 2011–12, has now declined to zero. At the secondary level, the dropout rate, once recorded at 16.32 per cent, has decreased substantially to 2.09 per cent in the academic year 2023–24. Similarly, at the higher secondary level, the dropout rate has fallen from 15.41 per cent to 3.17 per cent over the same period, according to the Chief Minister. This section therefore examines these assertions in detail, particularly in terms of whether the program has effectively reduced dropout rates; in other words, whether the scholarship scheme has been successful in retaining students. Figure 1 illustrates the temporal trend in the number of fresh and renewal K1 scholarships, showing that both fresh and renewal scholarships sanctioned under K1 have exhibited a declining pattern over the past eight years. Figure 2 shows a similar pattern for the K2 component, where the number of sanctioned upgrade (renewal) applications peaked at around 5.45 lakh in 2020–21 before gradually declining to about 4.40 lakh in 2024–25, while fresh applications have remained consistently low. This trend suggests a stabilisation of the eligible beneficiary base and a possible saturation effect as earlier cohorts transition out of the program.

Figure 1 Temporal Trends in K1 Scholarships under the Kanyashree Program

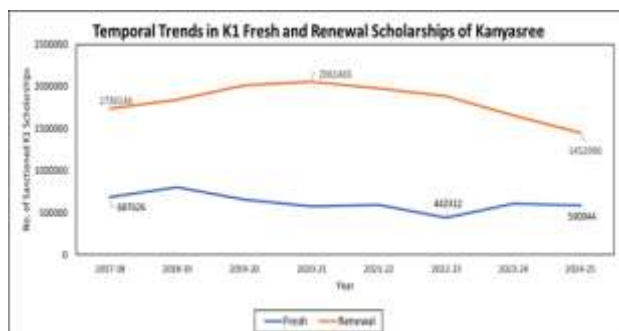
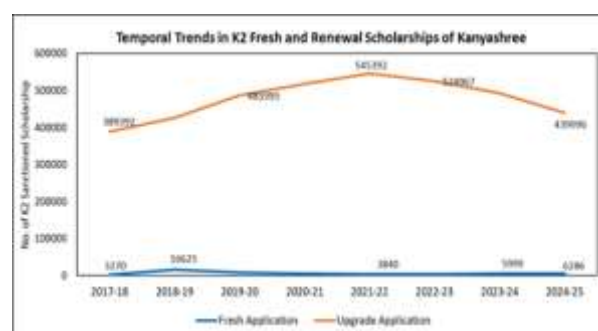


Figure 2 Temporal Trends in K2 Scholarships under the Kanyashree Program



Note: from *Kanyashree portal*, by Government of West Bengal, Department of Women & Child Development and Social Welfare, 2025, (https://www.wbkanyashree.gov.in/kp_4.0/dashboard.php)

Similarly, the number of sanctioned fresh and renewal scholarships under K2 has also shown a decline. Notably, this downward trend in both K1 and K2 scholarships began in 2020–21, coinciding with the onset of the COVID-19 pandemic. During the lockdown years, and even in the period that followed, the number of students receiving scholarships declined. To examine this pattern more systematically, the Compound Annual Growth Rate (CAGR) has been calculated across districts. Table 1 presents the CAGR for K1, while Table 2 reports the corresponding values for K2. Table 1 CAGR (2018–2024) of K1 Scholarships under Kanyashree across West Bengal Districts.

Table 1 CAGR (2018–2024) of K1 Scholarships under Kanyashree across West Bengal Districts

Compound Annual Growth Rate	Districts	Number of Districts
-5--0	Howrah, Jhargram, Purba Medinipur, Bankura, Bardhaman Purba, Malda, South 24 Parganas, Darjeeling, North 24 Parganas, Paschim Medinipur, Murshidabad, Hooghly, Birbhum, Uttar Dinajpur, Alipurduar, Coochbehar, Nadia, Jalpaiguri, Dakshin Dinajpur	19
0--1	Kolkata, Purulia	2
Above 1	Bardhaman Paschim, Kalimpong	2

Note: from *Kanyashree portal*, by Government of West Bengal, Department of Women & Child Development and Social Welfare, 2025, (https://www.wbkanyashree.gov.in/kp_dashboard_report.php)

The district-wise distribution of Compound Annual Growth Rate (CAGR) values for Kanyashree (K1) scholarships reveals a predominantly negative trend across West Bengal. A total of 19 districts fall within the range of –5 to 0, indicating a steady decline in sanctioned scholarships over the study period. This widespread contraction suggests that the downward trend is not confined to specific regions but is rather a general phenomenon across the state.

In contrast, only two districts—Kolkata and Purulia—exhibit marginally positive growth (0 to 1 per cent), suggesting relative stability rather than substantial expansion. Furthermore, a limited number of districts—Bardhaman Paschim and Kalimpong—show growth rates above 1 per cent, highlighting them as exceptions to the overall declining trajectory.

Table 2 CAGR (2018–2024) of K2 Scholarships under Kanyashree across West Bengal Districts

Compound Annual Growth Rate	Districts	Number of Districts
-3-- 0	Coochbehar, Nadia, Jalpaiguri, Dakshin Dinajpur	4
0-3	Bankura, Bardhaman Purba, Malda, South 24 Parganas, Darjeeling, North 24 Parganas, Paschim Medinipur, Murshidabad, Hooghly, Birbhum, Uttar Dinajpur, Alipurduar	12
Above 3	Bardhaman Paschim, Kalimpong, Kolkata, Purulia, Howrah, Jhargram, Purba Medinipur	7

Note: from *Kanyashree portal*, by Government of West Bengal, Department of Women & Child Development and Social Welfare, 2025, (https://www.wbkanyashree.gov.in/kp_dashboard_report.php)

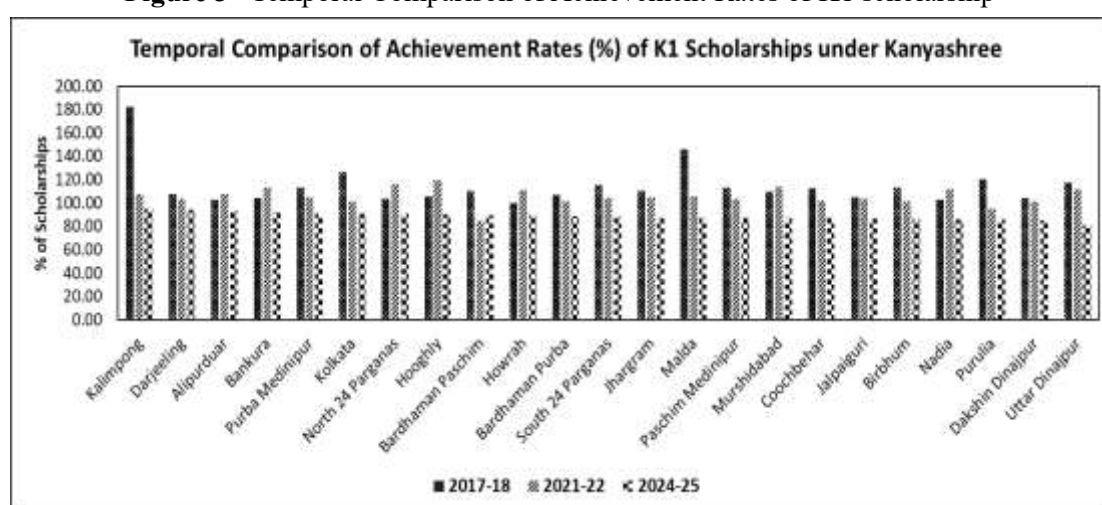
The Compound Annual Growth Rate (CAGR) analysis of K2 scholarships between 2018 and 2024 highlights a mixed but overall positive trend across West Bengal districts. Unlike K1 scholarships, where a widespread contraction was observed, K2 scholarships display a more balanced distribution of growth rates.

A relatively small group of districts—Coochbehar, Nadia, Jalpaiguri, and Dakshin Dinajpur (4 districts)—record negative growth (–3 to 0 per cent), suggesting a contraction in scholarship uptake. However, the majority of districts—12 in total—fall within the 0 to 3 per cent range, including major regions such as Bankura, Bardhaman Purba, Malda, South and North 24 Parganas, Darjeeling, and Murshidabad. This indicates modest yet steady growth, reflecting relative stability in the distribution of K2 scholarships. Interestingly, seven districts (Bardhaman Paschim, Kalimpong, Kolkata, Purulia,

Howrah, Jhargram, and Purba Medinipur) show robust growth above 3 per cent. These comparatively higher growth rates suggest that in these districts, K2 scholarships have gained traction, either through improved program implementation, greater awareness, or enhanced enrolment at higher secondary and tertiary levels.

Overall, the distribution of CAGR values underscores that while some pockets of decline persist, the dominant trend for K2 scholarships has been positive, with nearly half of the districts showing moderate growth and a significant cluster demonstrating strong expansion. This pattern contrasts with the general decline in K1 scholarships, suggesting that retention into the K2 stage has been relatively more successful. This further implies that the impact of external disruptions, particularly the COVID-19 pandemic, has had a long-lasting effect on K1 scholarship uptake, with only a few districts demonstrating resilience or recovery.

Figure 3 Temporal Comparison of Achievement Rates of K1 scholarship



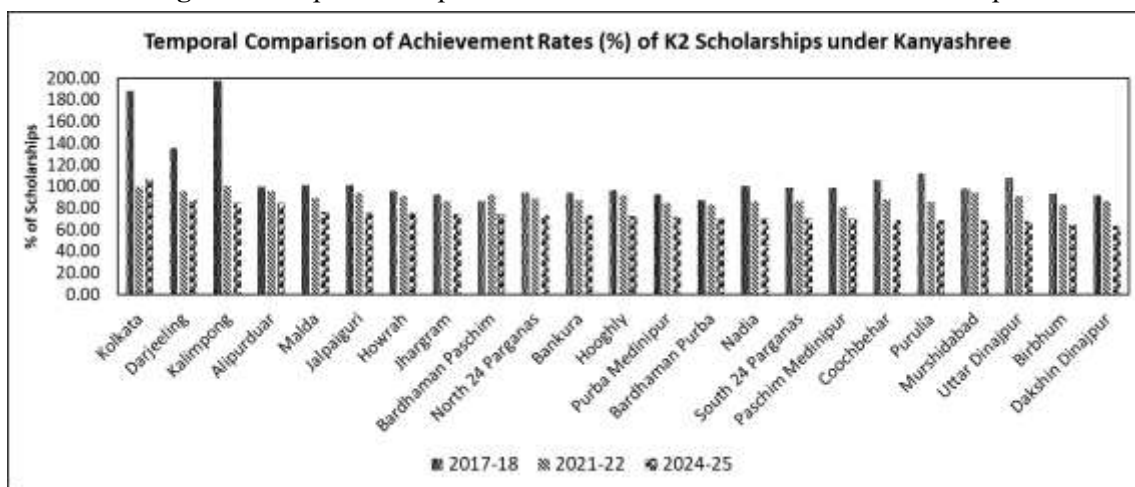
Note: from *Kanyashree portal*, by Government of West Bengal, Department of Women & Child Development and Social Welfare, 2025, (https://www.wbkanyashree.gov.in/kp_dashboard_report.php)

In line with the CAGR findings, the temporal comparison of achievement rates (Figure 3) further substantiates the declining trajectory of K1 scholarships, highlighting how the weakening inflow of new entrants has persisted across most districts over time. As illustrated in Figure 3 the temporal comparison of achievement rates (%) of K1 scholarships across districts of West Bengal for three time points—2017–18, 2021–22, and 2024–25. The figure reveals a general downward trend in achievement rates over time. While most districts recorded relatively high achievement levels in 2017–18, subsequent years show visible declines, particularly by 2024–25. A few districts, such as Kalimpong and Malda, stand out with exceptionally high achievement rates in the initial period (exceeding 150 per cent in some cases), which may reflect either over-reporting in early phases of implementation or a surge in sanctioned applications relative to targets. However, by 2024–25, the rates in these districts, like most others, have contracted significantly.

The broad pattern of decline across nearly all districts is consistent with the negative CAGR values discussed earlier for K1 scholarships. This reinforces the argument that K1 uptake has been disproportionately affected by external shocks, particularly the COVID-19 pandemic, leading to reduced enrolment and sanctioning of fresh applications. In contrast to the relative resilience observed in K2, the decline in K1 achievement rates underscores the challenges of sustaining entry into the program at the initial level. Taken together, the Figure 3 and the CAGR analysis suggest that while the

Kanyashree scheme has remained functional, its capacity to attract new entrants (K1) has weakened over time, posing a potential risk to long-term program sustainability unless corrective measures are taken.

Figure 4 Temporal Comparison of Achievement Rates of K2 scholarship



Note: from *Kanyashree portal*, by Government of West Bengal, Department of Women & Child Development and Social Welfare, 2025, (https://www.wbkanyashree.gov.in/kp_dashboard_report.php)

Figure 4 illustrates the temporal comparison of achievement rates (%) of K2 scholarships across districts of West Bengal for the years 2017–18, 2021–22, and 2024–25. In contrast to the general contraction observed in K1 scholarships, the trend for K2 appears relatively more stable, with several districts maintaining or even exceeding 100 per cent achievement levels in the earlier years. Districts such as Kolkata, Kalimpong, and Alipurduar initially recorded exceptionally high achievement rates approaching or surpassing 180–200 per cent in 2017–18 though these values have gradually declined in subsequent years. Despite this decline, the overall pattern demonstrates that achievement levels for K2 remain comparatively higher than K1 in most districts, suggesting that once students transition into the renewal or higher-level stage of the program, they are more likely to be retained. Even by 2024–25, although the achievement rates have moderated, a broad base of districts still report significant participation.

This finding aligns with the CAGR analysis presented earlier, which showed positive or moderate growth in a majority of districts for K2, unlike the widespread negative growth for K1. The evidence collectively implies that the Kanyashree scheme has been more successful in sustaining student participation at the K2 level, while the real challenge lies in ensuring a steady inflow of fresh entrants into K1.

2. Measuring Effectiveness Beyond Numbers: Retention, Renewal, and Consistency Indices

Building on this distinction between K1 and K2 trends, it becomes essential to move beyond aggregate growth rates and assess the program's effectiveness through deeper indicators. Retention, renewal, and consistency indices provide such measures, capturing both temporal sustainability and spatial equity in participation. A key objective of the K1 scholarship is to ensure that girls remain in the education system for an extended period. Accordingly, this section examines patterns of retention, renewal, and dropout among girl students.

Table 3 District-wise Comparison of K1 Scholarship Retention Index in 2021–22 and 2024–25

District	Retention Index		District	Retention Index	
	2021-2022	2024-2025		2021-2022	2024-2025
Alipurduar	74.82	70.93	Kalimpong	54.45	57.37
Bankura	80.44	74.92	Kolkata	63.36	55.16
Bardhaman Paschim	62.60	62.52	Malda	54.69	56.71
Bardhaman Purba	74.82	67.71	Murshidabad	65.58	60.76
Birbhum	73.50	62.82	Nadia	80.45	70.11
Coochbehar	74.69	66.87	North 24 Parganas	77.05	69.69
Dakshin Dinajpur	74.37	64.40	Paschim Medinipur	79.53	68.42
Darjeeling	60.51	60.58	Purba Medinipur	76.00	70.45
Hooghly	80.50	72.09	Purulia	69.19	65.31
Howrah	77.20	73.23	Siliguri	69.66	66.80
Jalpaiguri	71.70	64.66	South 24 Parganas	73.40	63.33
Jhargram	78.15	68.84	Uttar dinajpur	64.69	53.35

Note: from *Kanyashree portal*, by Government of West Bengal, Department of Women & Child Development and Social Welfare, 2025, (https://www.wbkanyashree.gov.in/kp_dashboard_report.php)

The table 3 highlights a general decline in retention index across most districts between 2021–22 and 2024–25, indicating challenges in sustaining scholarship continuity over time. While a few districts such as Kalimpong (54.45 to 57.37), Malda (54.69 to 56.71), and Darjeeling (60.51 to 60.58) registered marginal improvements, the majority, including high-performing districts like Nadia (80.45 to 70.11) and Hooghly (80.50 to 72.09), witnessed a noticeable drop. Particularly concerning are the steep declines in districts such as Murshidabad (65.58 to 60.76) and Uttar Dinajpur (64.69 to 53.35), which point to deeper systemic challenges in sustaining scholarship retention over time. This pattern suggests that while the program initially achieved high levels of retention in many regions, sustaining momentum has become increasingly difficult, pointing to systemic issues in renewal and progression mechanisms.

Table 4 District-wise K1 Scholarship Dropout Rates in 2021–22 and 2024–25

District	Dropout		District	Dropout	
	2021-2022	2024-2025		2021-2022	2024-2025
Alipurduar	25.18	29.07	Kalimpong	45.55	42.63
Bankura	19.56	25.08	Kolkata	36.64	44.84
Bardhaman Paschim	37.40	37.48	Malda	45.31	43.29
Bardhaman Purba	25.18	32.29	Murshidabad	34.42	39.24
Birbhum	26.50	37.18	Nadia	19.55	29.89
Coochbehar	25.31	33.13	North 24 Parganas	22.95	30.31
Dakshin Dinajpur	25.63	35.60	Paschim Medinipur	20.47	31.58
Darjeeling	39.49	39.42	Purba Medinipur	24.00	29.55
Hooghly	19.50	27.91	Purulia	30.81	34.69
Howrah	22.80	26.77	Siliguri	30.34	33.20
Jalpaiguri	28.30	35.34	South 24 Parganas	26.60	36.67
Jhargram	21.85	31.16	Uttar dinajpur	35.31	46.65

Note: from *Kanyashree portal*, by Government of West Bengal, Department of Women & Child Development and Social Welfare, 2025, (https://www.wbkanyashree.gov.in/kp_dashboard_report.php)

Based on the retention patterns discussed earlier, the dropout analysis (Table 4) provides a complementary perspective on the challenges of sustaining participation in the Kanyashree scheme. While a handful of districts such as Kalimpong, Malda, and Darjeeling show slight improvements, the majority report rising dropout rates, with sharp increases in districts like Nadia, Hooghly, and Paschim Medinipur that were previously strong performers. Particularly concerning are the escalations in Kolkata and Uttar Dinajpur, where dropout has reached critical levels. However, it is important to note that in Kolkata many girls are opting for admission into private institutions rather than government schools, which means that higher dropout figures there may partly reflect shifts in enrolment patterns rather than actual withdrawal from education. In contrast, the steep rise in dropout in Uttar Dinajpur more directly signals exclusion from schooling. Taken together, the decline in retention and the concurrent rise in dropout highlight systemic constraints that threaten the program's primary objective of reducing girls' dropout from education.

Table 5 District-wise K1 Scholarship Renewal Rates in 2020-21 and 2023-24

District	Renewal Rate		District	Renewal Rate	
	2020-2021	2023-2024		2020-2021	2024-2025
Alipurduar	99.00	100	Kalimpong	71.03	84.58
Bankura	100	100	Kolkata	85.13	82.36
Bardhaman Paschim	83.45	94.30	Malda	74.00	86.15
Bardhaman Purba	97.72	100	Murshidabad	88.10	93.55
Birbhum	98.51	98.76	Nadia	100	100
Coochbehar	99.54	100	North 24 Parganas	100	100
Dakshin Dinajpur	98.78	100	Paschim Medinipur	100	100
Darjeeling	80.48	89.05	Purba Medinipur	99.56	100
Hooghly	100	100	Purulia	92.56	100
Howrah	99.11	100	Siliguri	90.38	96.89
Jalpaiguri	95.07	99.97	South 24 Parganas	98.08	99.19
Jhargram	100	100	Uttar dinajpur	87.02	86.69

Note: from *Kanyashree portal*, by Government of West Bengal, Department of Women & Child Development and Social Welfare, 2025, (https://www.wbkanyashree.gov.in/kp_dashboard_report.php)

The above concerns are further contextualised by the district-wise K1 Renewal Rates presented in Table 5, which reflect the extent to which beneficiaries continue within the scheme. The adoption of a modified renewal rate based on a rolling multi-year denominator allows for a more accurate assessment of cohort continuation, and the district-level patterns reveal both consolidation and divergence in outcomes. Several districts, including Bankura, Nadia, North 24 Parganas, Dakshin Dinajpur, Paschim Medinipur, Jhargram, and Hooghly, maintain renewal rates consistently at or near 100 per cent, suggesting strong program stability despite dropout pressures. Other districts, such as Bardhaman Paschim, Darjeeling, Kalimpong, and Malda show substantial improvement over time, pointing to reduced dropout tendencies and more effective outreach. Murshidabad, Siliguri, Purulia, and South 24 Parganas demonstrate steady consolidation from already high levels. In contrast, Kolkata records a slight decline and Uttar Dinajpur remains stagnant, aligning with the dropout patterns noted earlier and indicating persistent localised challenges. Taken together, the evidence underscores the overall effectiveness of the scheme in achieving near-universal continuation, while also reinforcing the need for targeted measures in specific districts where dropout and renewal gaps persist.

Table 6 Temporal Trend in the Retention Index of West Bengal

Year	Retention Index of K1
2017-18	44.42
2018-19	66.92
2019-20	72.08
2020-21	72.04
2021-22	72.48
2022-23	71.63
2023-24	72.96
2024-25	65.46

Note: from *Kanyashree portal*, by Government of West Bengal, Department of Women & Child Development and Social Welfare, 2025, (https://www.wbkanyashree.gov.in/kp_dashboard_report.php)

These district-level patterns gain further meaning when viewed against the temporal trend in the Retention Index for West Bengal as a whole (Table 6). The trajectory highlights both the achievements and the vulnerabilities of the scheme. Beginning at a relatively modest level of 44.42 in 2017–18, the index shows a sharp rise through 2018–19 and before stabilising in the range of 70–73 from 2019–20 onwards, which suggests that the program was able to achieve a broad consolidation phase after the initial years of implementation. However, the decline to 65.46 in 2024–25 signals renewed stress in sustaining participation, and this pattern corresponds with the concurrent rise in dropout rates and the uneven renewal patterns observed across districts.

The calculated Temporal Consistency Index (0.85) for the period 2017–2025 indicates a relatively high degree of stability in retention over time, although the fluctuations, particularly the recent downturn, show that this stability is not absolute. Instead, the pattern reflects both consolidation and fragility, since the scheme has successfully established a plateau of sustained participation for several years but remains vulnerable to systemic pressures that can reduce retention. This broader temporal trend resonates with the renewal analysis, as many districts demonstrate consistent continuation while a few districts mirror the same vulnerabilities evident in the declining retention levels in the declining retention levels, underscoring the need for closer policy attention in lagging regions.

Alongside temporal patterns, the spatial dimension also reinforces the overall assessment. The spatial consistency index, which rose from 89.02 in 2021–22 to 91.08 in 2024–25, suggests a gradual narrowing of inter-district disparities in retention performance. This improvement, though modest, signals that outcomes are becoming more evenly distributed across the state, with fewer districts significantly lagging behind. Importantly, the simultaneous rise in spatial consistency and fall in the state-level Retention Index highlights a dual reality: while gaps between districts are narrowing, the overall level of retention has weakened. This suggests that stressors affecting the scheme are systemic in nature, cutting across regions, and therefore require broad-based interventions rather than purely localised measures.

Conclusion

The Kanyashree Prakalpa has undoubtedly played a critical role in reshaping the educational landscape for adolescent girls in West Bengal by delaying early marriage and promoting continued schooling. The program has achieved notable success in improving renewal and consistency rates, particularly for K2 beneficiaries. However, the persistent decline in fresh K1 enrolments, coupled with rising dropout rates in several districts after the COVID-19 pandemic, signals systemic vulnerabilities that financial incentives alone cannot address. While spatial consistency has improved, indicating reduced inter-district disparities, the overall fall in retention underscores deeper structural constraints, such as administrative inefficiencies, socio-economic pressures, and shifting educational aspirations towards vocational and skills-based alternatives. Sustaining the program's gains, therefore, requires recalibration by integrating financial transfers with institutional reforms, ensuring better alignment between education and labour markets, and strengthening community-level engagement. Without such corrective measures, the long-term sustainability and transformative impact of Kanyashree will remain at risk.

To strengthen the impact and long-term sustainability of the Kanyashree Prakalpa, several measures are necessary. First, renewed efforts should be made to boost fresh K1 enrolments through targeted outreach in disadvantaged districts, while also addressing administrative bottlenecks such as delays in admission processes that often discourage continuation. Second, integrating vocational and

skill-oriented pathways within Kanyashree Plus can align scholarships with employability and labour market demand, thereby making education more attractive to students. Third, district-specific strategies should be developed for areas with persistently high dropout rates, supported by digital platforms that simplify access, improve monitoring, and provide timely information to beneficiaries. Fourth, parental and community engagement must be prioritised to counter social pressures like early marriage and reinforce the value of education. Finally, linking the scheme with complementary social protection programs in health, nutrition, and livelihoods, combined with real-time district-level monitoring and evaluation, can create a more holistic and adaptive framework to ensure that the scheme continues to support adolescent girls effectively.

Declaration of Interest

The author declares that there are no conflicts of interest related to this study. No funding was received for this research.

Acknowledgements

The author declare that this research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Statements and Declarations

Ethics approval and consent to participate

This study did not involve human participants, animal experiments, or personal data requiring ethical approval. All procedures performed in this research complied with institutional, national, and international guidelines. As no human subjects were involved, consent to participate was not applicable.

Consent for publication

Not applicable. The manuscript does not contain any individual person's data in any form (including images, videos, or personal details).

Competing interests

The authors declare that they have no competing interests.

Author contributions

Conceptualisation, methodology design, data collection, data analysis, writing – original draft.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Availability of data and materials

The datasets generated and analysed during the current study are openly available at https://www.wbkanyashree.gov.in/kp_dashboard_report.php

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