


## **Impact evaluation of educational cash transfer programs on college students' academic performance in the Philippines**

Jan Blademir D. Bradecina<sup>1\*</sup>, John Marc Campo<sup>1)</sup>, Kent Wisson Leonardo<sup>1)</sup>, Emmanuel A. Onsay<sup>2,3)</sup> 

<sup>1</sup> College of Education, Partido State University, Goa, Camarines Sur, Philippines

<sup>2</sup> College of Business and Management, Partido State University, Goa, Camarines Sur, Philippines

<sup>3</sup> Graduate School, University of the Philippines Los Baños, Laguna, Philippines

\* Corresponding author: [bradecinajanblademir@gmail.com](mailto:bradecinajanblademir@gmail.com)

### **Article Info**

#### **Article History:**

Received: 15 January 2025

Accepted: 3 June 2025

Available online: 21 June 2025

#### **Keyword:**

Assistance to Individuals and Families in Crisis Situations; College Students; Educational Cash Transfer Program; Pantawid Pamilyang Pilipino Program; Poverty

#### **To Cite this Article:**

Bradecina, J. B. D., Campo, J. M., Leonardo, K. W., & Onsay, E. A. (2025). Impact evaluation of educational cash transfer programs on college students' academic performance in the Philippines. *Dynamics of Rural Society Journal*, 3(2), 122–142. <https://doi.org/10.37905/drsj.v3i2.81>

### **Abstract**

Despite facing severe poverty, many college students continue to pursue higher education, viewing a bachelor's degree as essential to achieving success and lifting their families out of poverty. However, the extent to which the Educational Cash Transfer (ECT) Program supports their academic performance remains unclear. This study aims to evaluate the effectiveness of the ECT Program, particularly among beneficiaries of the Pantawid Pamilyang Pilipino Program (4Ps), compared to non-4Ps students, using Randomized Controlled Trials (RCT). Data were gathered through questionnaires and secondary sources and analyzed using frequency counts, percentage analysis, Likert scale analysis, t-tests, and regression discontinuity design (RDD). The findings suggest that the Assistance to Individuals and Families in Crisis Situations (AICS) program plays a significant role in addressing students' financial needs. However, challenges such as delays in ECT distribution, stringent qualification requirements, cumbersome release procedures, and issues with document submission hinder effective access. Most respondents expressed satisfaction with the ECT Program, citing improvements in academic performance and timely submission of schoolwork. Notably, 4Ps membership significantly influenced student attendance, especially among first-year students who showed the highest punctuality. Although eligibility for ECT positively affects academic outcomes, the lack of statistical significance highlights limitations in its measurable impact. Based on the findings, the study recommends continuing and expanding the ECT Program with increased funding to support college, high school, and elementary students. It also urges improvements in fund disbursement processes by streamlining procedures, enhancing inter-agency coordination, and setting clear timelines to ensure timely delivery of aid. These insights provide valuable guidance for local government units and stakeholders seeking to enhance access to educational financial assistance.

### **Introduction**

Poverty, often intertwined with corruption in political entities and the media, drives societal action against harmful norms (Basu, 2020). This challenge permeates the education system, hindering disadvantaged students



from advancing and exacerbating economic disparities (Hanushek & Woessmann, 2020). Economist Esther Duflo emphasizes the importance of supporting the economically marginalized as a means of combating poverty (Nureev, 2020). In Indonesia, the Conditional Cash Transfer (CCT) program has improved health indicators but has fallen short of achieving transformative poverty reduction (Cahyadi et al., 2020). These cash transfer programs are vital in lower-income countries, as they help enhance educational access for recipients. However, their impact on employment prospects remains limited (Wardani et al., 2022). Similarly, cash transfer initiatives in East Africa have increased school attendance but often fail to ensure the completion of primary education, particularly among indigenous populations (Evans et al., 2023). In Honduras, while cash transfers have increased education spending, they have not consistently led to higher school attendance. Nonetheless, CCTs have gained significant traction in Latin America, benefiting millions by incentivizing investments in children's well-being (Millán et al., 2020). The research underscores the positive impact of Conditional Cash Transfers (CTs) on human capital development, particularly by addressing barriers to education such as school-related expenses and opportunity costs. These programs help reduce time-related costs for children, for instance, the time they might otherwise spend working, performing household chores, or caring for siblings instead of attending school (Garcia & Saavedra, 2023).

In the Philippines, despite ongoing economic growth, poverty remains a persistent issue, leading to the implementation of the Pantawid Pamilyang Pilipino Program (4Ps) in 2008 (Barbado et al., 2024). A comparative analysis of the program's impact on the country's Human Development Index (HDI) reveals a significant increase in the Philippines' mean HDI from 2008 to 2018, coinciding with the introduction of the 4Ps (Diaz, 2021). These findings highlight the potential effectiveness of CCT programs in improving human development outcomes. Further evaluation of these programs is necessary to uncover more substantial and promising results. The Unified Financial Assistance System for Tertiary Education Act (UniFAST), established under Republic Act 10687 in the Philippines in 2015, aims to ensure equitable distribution of student financial aid across regions (Republic of the Philippines, 2015). This law addresses educational disparities by providing equal financial aid opportunities to students, regardless of geographic location or economic status. In addition, this study evaluates a specific cash transfer program for college students in Sagñay from 2020 to the present, seeking to understand the effectiveness of such initiatives for both recipients and non-recipients in the municipality.

Numerous studies on Conditional Cash Transfers (CCTs) have demonstrated a variety of impacts. In Mexico, CCTs have been demonstrated to enhance agricultural productivity, improve food quality, and promote more sustainable land use. Research in Indonesia highlighted the role of CCTs in reducing forest degradation, with primary forests benefiting the most. However, in Pakistan, cash transfers from the Benazir Income Support Program have exacerbated environmental poverty, suggesting the need for customized social protection strategies (Todd et al., 2009). Further studies have also explored integrating youth mental health into cash transfer programs, especially amid the COVID-19 pandemic, in order to address both economic and mental health challenges (Bauer et al., 2021). In India, research revealed that low-income mothers tend to prioritize health benefits and cash transfers over time-consuming services, underscoring the importance of clear communication regarding the available benefits (Rao et al., 2020).

Comparative studies on unconditional versus conditional cash transfers in low- and middle-income countries suggest that further exploration could enhance healthcare spending and outcomes (Pega et al., 2022). Research in Mali and West Africa has shown that cash transfer programs, particularly those empowering women, can reduce intimate partner violence (IPV) in polygamous households. Specifically, the Jigisémèjiri program in Mali was effective in decreasing IPV, especially in polygamous households (Heath et al., 2020). In Bangladesh, conditional cash transfers have improved health indicators for expectant mothers (Farjana et al., 2023), while a study in the Philippines that combined cash transfers with parenting interventions reduced household violence and enhanced parenting practices (Lachman et al., 2021).

In the Philippines, studies emphasize the need for flexible adjustments to the 4Ps program's cash grants to address welfare threats and inflation (Melad et al., 2020). Research also highlights the impact of conditional cash transfers on child labor and savings behavior in Filipino households (Quimbo et al., 2021). Critiques of the national response to COVID-19 call for a more inclusive framework to ensure broader access to rights and protection (Ramos, 2021). In Cambodia, a temporary cash transfer initiative provided crucial support to vulnerable families during the pandemic (Chhoeung et al., 2022). Meanwhile, the Brazilian Cash Transfer Program has proven effective in alleviating hunger and reducing poverty, emphasizing the need for complementary policies to enhance its success (Neves et al., 2020; 2024). Cecilia Osorio Gonnet explores the

proliferation of Conditional Cash Transfer programs in Latin America, which have significantly contributed to poverty alleviation (Gonnet, 2020).

In the United States, research stresses the importance of studying how unconditional cash transfers impact children's development and financial well-being, with particular attention to race and ethnicity (Shah & Gennetian, 2023). In Madagascar, the Fiavota cash transfer program has significantly improved child health by addressing poverty through enhanced food security and better access to healthcare (Woodford-Venables, 2023). Meanwhile, in the Philippines, concerns have been raised about the efficacy of social programs like the 4Ps and Listahanan, with challenges in accurately identifying the impoverished and ensuring adequate social protection (Dadap-Cantal et al., 2021). The Philippine government's digital transformation aims to improve the distribution of social welfare programs through modern technologies (Layola, 2023). Ongoing research in the Philippines continues to examine the impact of the 4Ps CCT program on child health and education in efforts to break the cycle of poverty (Javier, 2023).

Studies on poverty alleviation efforts in the Philippines primarily focus on the Pantawid Pamilyang Pilipino Program (4Ps). Malinao et al. (2022) highlight improvements in healthcare and education access for children, emphasizing the importance of training on responsible cash subsidy usage. Dodd et al. (2024) discuss the 4Ps' potential to break the cycle of intergenerational poverty, while also noting challenges in monitoring its effectiveness. Edmonds and Theoharides (2020) examine the impact of the KASAMA initiative on child labor. Seth and Tutor (2021) propose an evaluation framework for anti-poverty interventions, specifically focusing on cash transfers in the Philippines. Olapane et al. (2021) analyze trends in the 4Ps program, highlighting its resilience during the pandemic. Punongbayan (2021) discusses the "Siguradong Sahod" program, which aims to support improvised families. Panti (2023) details the "Walang Gutom 2027" program under the Marcos Jr. administration. Habito (2021) emphasizes the role of the 4Ps in breaking the poverty cycle. The Asian Development Bank supports initiatives that benefit families and elderly individuals in the aftermath of disasters. Onsay et al. (2025) advocate for the use of regression discontinuity design in evaluating the Educational Cash Transfer Program. Various authors (Barbado et al., 2024; Flojo et al., 2024; Onsay & Rabajante., 2024a; Pagador et al., 2024) contribute to understanding the program's impact on student satisfaction and related factors.

The researchers reviewed literature from a variety of sources to contextualize their study. Todd et al. (2009) explored the impact of Conditional Cash Transfer (CCTs) on agricultural productivity, while (Ferraro & Simorangkir, 2020) and (Nawaz & Iqbal, 2021) examined the effects of CCTs on forest degradation and environmental poverty. Churchil et al. (2021) and Ikira and Ezzari (2021) investigated the causes of child labor through cash transfer programs and their influence on school attendance. Dodd et al. (2024); Malina et al. (2022); and Melad et al. (2020) highlighted the role of the Filipino government's 4Ps program in poverty alleviation despite inflation. Lachman et al. (2021) evaluated the efficacy of cash transfers in reducing household violence, while (Edmonds & Theoharides, 2020) studied the impact of the KASAMA program on families and teenagers affected by child labor. These studies collectively affirm the role of CCTs in addressing key social challenges and promoting human capital development.

However, while previous research demonstrates the broad benefits of cash transfer programs, several limitations remain unaddressed. Many studies primarily focus on outcome-level impacts such as education and health improvements, often overlooking operational challenges like delays in distribution, time-related costs, and gaps in beneficiary targeting. Moreover, there is limited empirical investigation into the efficiency and equity of newer programs such as the Educational Cash Transfer (ECT) Program. This study seeks to fill these gaps by examining not only the effects of the ECT Program on student outcomes but also the administrative barriers that affect program delivery and impact.

Our study specifically evaluates educational cash transfer programs for college students in Sagñay, Camarines Sur. Existing literature primarily focuses on CCTs and Cash Transfer Programs that address issues such as economic wealth, environmental degradation, child labor, school attendance, health, poverty cycles, violence, and the impacts of COVID-19. This study, however, uniquely investigates government-implemented educational cash transfer programs for college students, examining their impact on academic needs and poverty alleviation among students in Barangay Nato, Sagñay, Camarines Sur.

This research involved selected college students, both 4Ps beneficiaries and non-beneficiaries, in the municipality of Sagñay, Camarines Sur. These students were recipients of Educational Cash Transfer Programs in Barangay Nato, Sagñay. The study was conducted from April to May 2024, using a master list provided by the Municipal Social Welfare and Development Office (MSWDO) to identify respondents who had received

the barangay's ECT program from 2020 to the present. The significance of this study lies in its focused evaluation of educational cash transfer programs in Sagñay, Camarines Sur, offering context-specific insights that may benefit various stakeholders. College students, including both 4Ps beneficiaries and non-beneficiaries, may become more informed about available financial support for their academic needs. Parents could benefit from improved awareness, potentially aiding their children's access to these programs. The findings may also provide useful input for local officials – such as SK and Barangay leaders – in developing strategies to promote youth access to educational assistance. Additionally, municipal offices, particularly the DSWD, may consider the results in refining local implementation and resource allocation. While this study is limited to a specific locality, it may offer a foundation for schools to understand how financial support influences student performance and serve as a reference for future researchers interested in similar contexts ([Barbado et al., 2024](#); [Flojo et al., 2024](#); [Onsay & Rabajante, 2024a, 2024b](#); [Pagador et al., 2024](#)).

The study aimed to evaluate the effectiveness of selected Educational Cash Transfer (ECT) programs – particularly the Assistance to Individuals in Crisis Situation (AICS) – in supporting college students in Sagñay, Camarines Sur, by addressing several key questions: What cash transfer programs are currently active for college students in Sagñay? What challenges do these students face in accessing these programs? How satisfied are the recipients with the cash transfer initiatives? In what ways do Educational Cash Transfer Programs impact college student satisfaction? What policies could be implemented to enhance these programs for college students? The study operates under several assumptions: the presence of cash transfer programs for college students in Sagñay, minimal challenges in accessing the programs, high levels of recipient satisfaction, significant impacts of Educational Cash Transfer Programs on college students, and the potential for recommending policies to enhance these programs. The null hypothesis suggests no significant impact of Educational Cash Transfer Programs on college student satisfaction, while the alternative hypothesis proposes a notable impact of these programs on college student satisfaction.

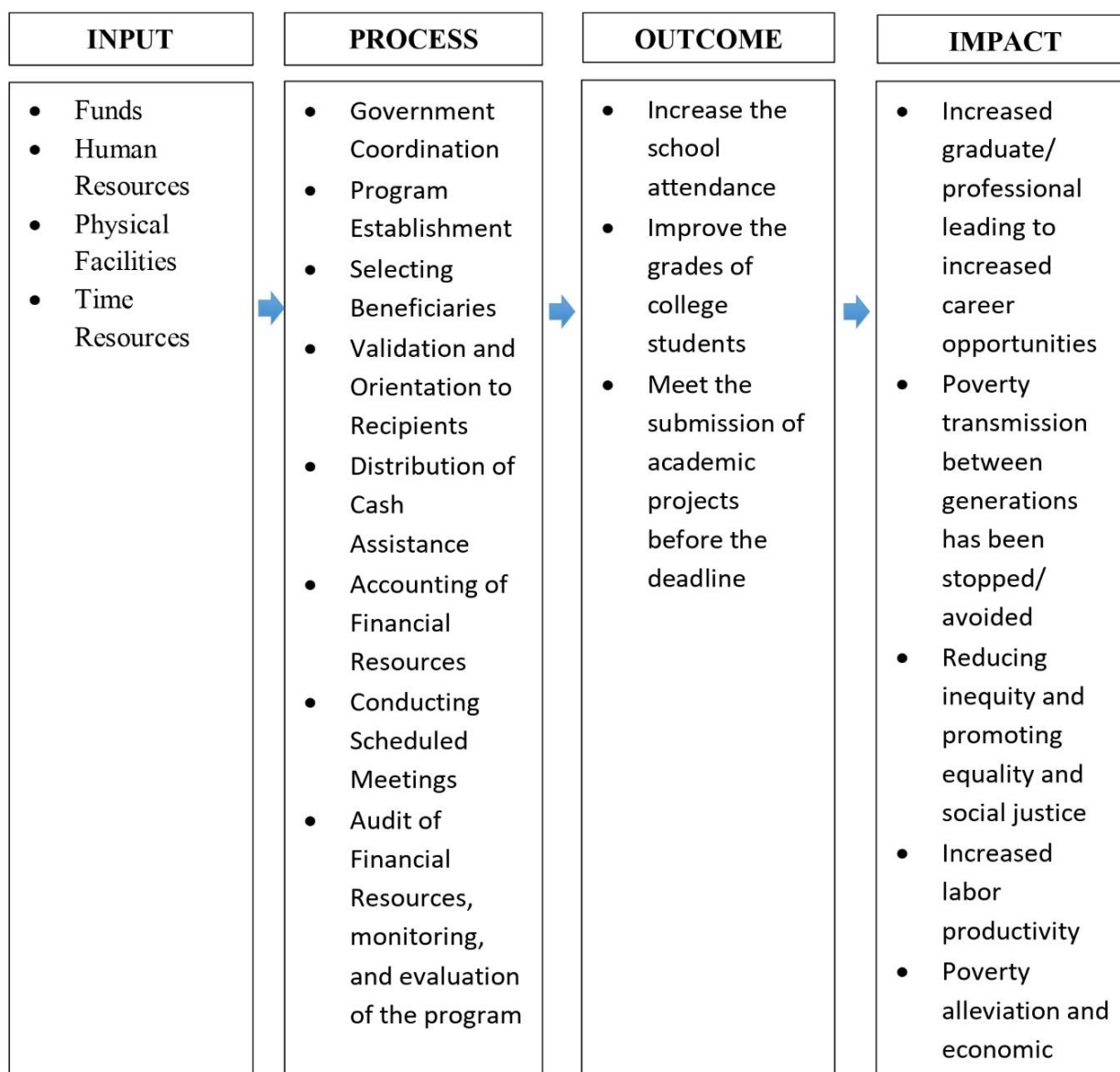
### **Theoretical framework**

This study is grounded in the Theory of Change framework, which provides a clear roadmap illustrating how and why a particular program is expected to achieve its desired outcomes. The foundation begins with inputs, which include essential resources such as cash grants that directly support beneficiaries, human resources responsible for managing and overseeing program operations, physical resources like facilities and materials necessary for program activities, and time allocated to effectively implement the initiative. These inputs form the necessary backbone to ensure that the program is well-supported and capable of functioning smoothly.

Following the inputs, the study focuses on processes — the series of actions and activities that transform these resources into meaningful interventions. This includes active engagement with key stakeholders through consultations to gather insights and ensure their needs are addressed. The process also involves careful selection of beneficiaries, ensuring that those who are most in need receive support, alongside thorough resource validation to confirm that funds and materials are appropriately allocated. Additionally, maintaining program compliance is crucial to ensure transparency, accountability, and efficiency throughout implementation, which helps build trust and maximizes the impact of the intervention.

The immediate outputs of these processes are measurable and tangible results, such as improved student attendance rates, better academic performance, and timely submission of required outputs or assignments. These outputs serve as early indicators that the program is functioning as intended and producing positive short-term effects on the beneficiaries. Importantly, these outputs are not the final goal but rather contribute to more significant, longer-term impacts. Over time, increased attendance and academic success lead to higher education attainment levels, which in turn enhance career prospects for students. This improvement can help break the persistent cycles of generational poverty by providing individuals and families with greater economic opportunities and stability. Additionally, the program's focus on equitable access ensures that marginalized or disadvantaged groups benefit, thereby promoting social equity. Ultimately, this Theory of Change framework highlights the logical progression from well-planned resource allocation and efficient processes to meaningful social and economic development outcomes. It demonstrates that by strategically investing in inputs and carefully managing processes, programs can achieve lasting positive changes that uplift individuals and communities alike ([Barbado et al., 2024](#); [Flojo et al., 2024](#); [Onsay & Rabajante, 2024a, 2024b](#); [Pagador et al., 2024](#)).



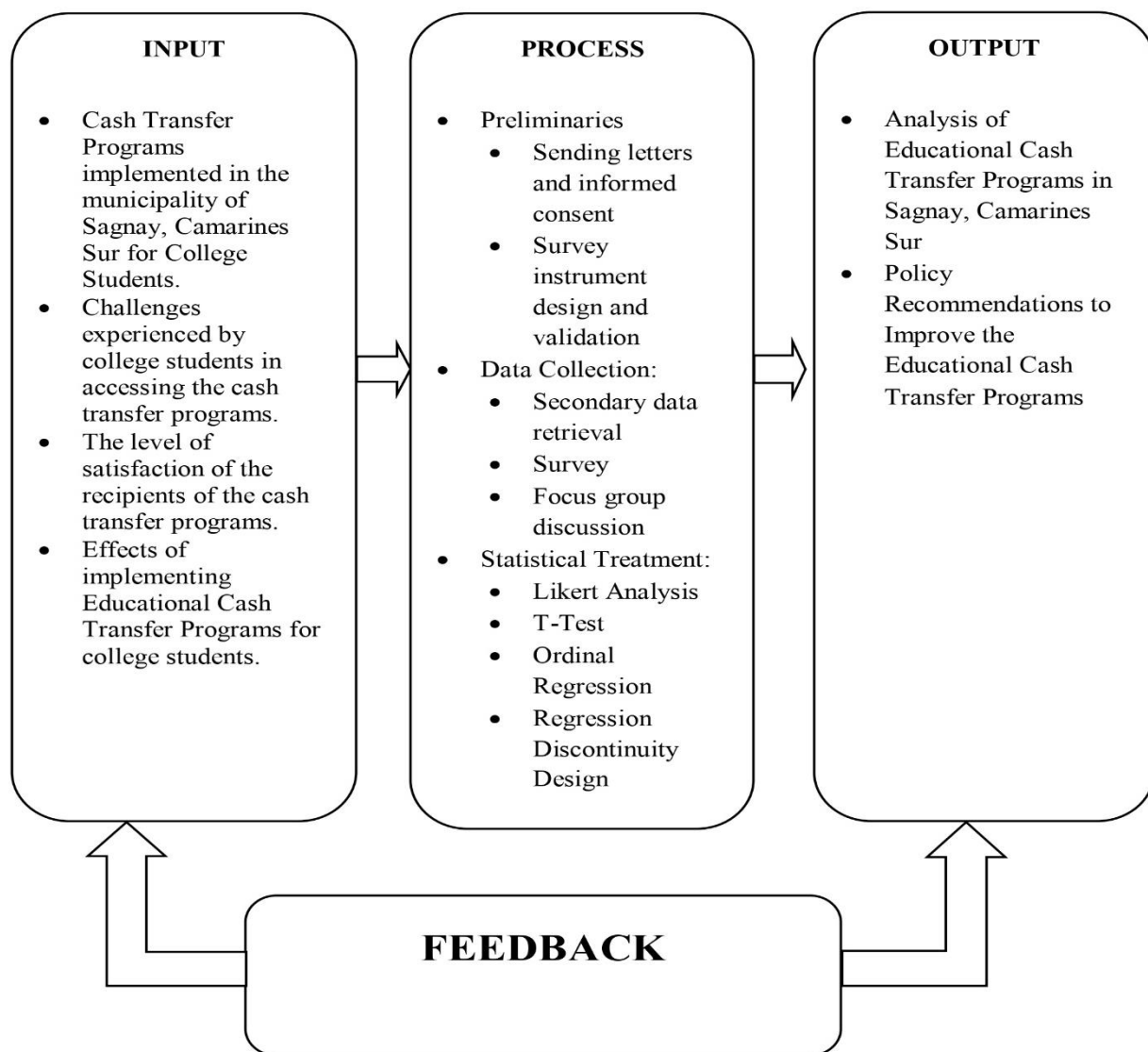


**Figure 1.** Theory of change for measuring the impact of educational cash transfer programs (ECT) on the academic performance of college students

### Conceptual framework

This study revolves around two key variables: (1) educational cash transfer programs and (2) college students. Educational cash transfer programs are initiatives that provide financial assistance to qualified individuals or families, particularly those from marginalized or low-income sectors. These programs aim not only to alleviate immediate financial burdens but also to promote long-term development by encouraging school attendance and improving academic outcomes. As a poverty-reduction strategy, cash transfers have been recognized as effective in empowering disadvantaged groups and helping them access better opportunities through education (Stedman, 2023).

On the other hand, college students refer to individuals currently enrolled in higher education institutions, working toward a degree or professional qualification. They are in a critical stage of academic and personal development, often balancing multiple responsibilities as they prepare for future careers. Supporting their education through financial means can significantly influence their academic performance, motivation, and the likelihood of graduation (Barbado et al., 2024; Caruth, 2016; Flojo et al., 2024; Onsay & Rabajante, 2024a, 2024b; Pagador et al., 2024). By focusing on these two variables, this study aims to better understand the relationship between financial support and educational outcomes among college students.



**Figure 2.** Conceptual framework of the study

## Method

### Research design

This study employed a causal-explanatory design to investigate the effect of selected educational cash transfer programs – such as AICS – on the academic experiences of college students in Sagnay, Camarines Sur. The design was used to determine whether participation in these programs contributes to measurable outcomes such as improved academic performance, reduced financial burden, or increased program awareness. Causal-explanatory research refers to the cause-and-effect relationships between two or more variables. In order to establish causal relationships, this kind of design frequently entails adjusting an independent variable and observing how it affects a dependent variable. In doing so, it offers a more profound understanding of how and why changes to one element result in changes to another (Onsay & Rabajante, 2024a).

### The study area

The study determined the influence of educational cash transfer programs on selected college students from the municipality of Sagnay, Camarines Sur in the Bicol Region. Consisting of six provinces, which are Albay, Camarines Norte, Camarines Sur, Catanduanes, Masbate, and Sorsogon, the Bicol region has an estimated population of 6 million. Bicol's economy is mainly from agricultural production, which is coconut, abaca, corn, etcetera besides these, fishing is also an essential part of their economy, particularly in the coastal provinces, where most people are fisherfolks like Sorsogon and Masbate. Bicol is found to be one of the poorest regions in the Philippines though rich in natural resources. In its report, from 2021, the Philippine Statistics Authority has its poverty incidence at around 30.5%. The Bicol region is also susceptible to natural disasters

such as typhoons and volcanic eruptions which bring damages to both the economy and infrastructures (PSA, 2021). Camarines Sur's fourth congressional district is Partido Area, composed of the towns of Caramoan, Garchitorena, Goa, Lagonoy, Presentacion, Sagñay, San Jose, Siruma, Tigaon, and Tinambac (Plantado et al., 2024). Among these, Goa is the only municipality that has no coastal area. Among these municipalities, the researchers conducted the study in Nato, Sagñay, Camarines Sur. Residents of Sagñay Camarines Sur, are mostly fisherfolks who are also able to earn extra income as part-time vendors and tricycle drivers along Nato Beach (Barbado et. al., 2024; Flojo et. al., 2024; Onsay & Rabajante, 2024a, 2024b; Pagador et. al., 2024).

### Data gathering procedure

The collection of data will be carried out using primary data. But to resolve Problem number 1 – What cash transfer programs are currently active for college students in Sagñay, Camarines Sur? Secondary Data will be utilized. In order to obtain permission to conduct the study in that location, the researchers will submit a permission letter to the barangay and municipal office and request to have the researchers make a master list of college students' beneficiaries of the educational cash transfer program implemented in the municipality of Sagñay. Once it has been approved, the researchers will collect the required data through documentation and dissemination of survey questionnaires among respondents. After the collection of the data, the researchers will present and analyze the data in order to come up with the study's findings, conclusions, and recommendations.

### Research instruments

The researchers used structured questionnaires to conduct surveys among respondents. The survey questionnaires contain first the Demographic Profile of the Respondents, second the challenges experienced by college students in accessing the Educational Cash Transfer Program/s, third the level of satisfaction of the recipients of the Educational Cash Transfer Programs, and lastly the impact of Educational Cash Transfer Program towards college students' satisfaction.

### Data analysis

There are various statistical treatments involved in this study: Likert Analysis to satisfy the second and third objectives, T-Test, Multivariate Regression, Ordinal Regression, and Regression Discontinuity Design to satisfy the fourth objective, and the summary of the answers from the first objective to a fourth objective (Garrett mean score) will serve as an answer to satisfy the fifth objective.

*Frequency Count and Percentage Technique.* This will be used to categorize the responses based on personal background factors such as age, sex, civil status, number of years in attending school, and average monthly family income. This helps to interpret the respondents' profiles. The formula is as follows:

*Likert Analysis.* This will be used to measure the respondent's response to the third question. This statistical tool will help to find accurate verbal interpretations of quantitative data collected by researchers. The scale below was used to find the accurate interpretation for responses to question no. 3.

**Table 1.** Interpretation of response

Scale	Range	Verbal Interpretation
5	4.20-5.00	Strongly Agree
4	3.40-4.19	Agree
3	2.60-3.39	Nearly Disagree
2	1.80-2.59	Disagree
1	1.00-1.79	Strongly Disagree

*T-Test.* This statistical tool will be used to compare the before and after of implementation of Educational Cash Transfer Program and to determine if there is a significant impact or not.

*Ordinal Regression and Regression Discontinuity Design.* This will be used to determine the impact and effect of the Educational Cash Transfer Program to college students. The formula is as follows:

$$Y = \alpha + X\beta + \mu$$

where:

$Y$  = level of satisfaction

$\alpha$  = intercept or individual effects of Educational Cash Transfer Program

$X$  = vector of independent variables or characteristics of Educational Cash Transfer Program

$\beta$  = vector of coefficients, intercepts, or effects of Educational Cash Transfer Program

**Multivariate Regression.** To examine the academic performance outcomes of the program, a multivariate regression model was utilized. The Multiple Linear Regression Model is a tool that analyzes the factors that impact academic performance among beneficiaries with continuous dependent variables. The dependent variable is the academic performance (translated into natural logarithm) and the independent variables are program eligibility, socio-demographic profile, and socio-economic conditions (Barbado et. al., 2024; Flojo et. al., 2024; Onsay et. al, 2025; Pagador et. al., 2024). The multivariate linear model is as follows:

$$AP\_GR = \beta_0 + \beta_1 TREATCOM + \beta_2 ELIGI + \beta_3 AGE + \beta_4 COUR + \beta_5 CS + \beta_6 SCHOOL + \beta_7 YEAR + \beta_8 RELIG + \mu$$

$$AP\_AT = \beta_0 + \beta_1 TREATCOM + \beta_2 ELIGI + \beta_3 AGE + \beta_4 COUR + \beta_5 CS + \beta_6 SCHOOL + \beta_7 YEAR + \beta_8 RELIG + \mu$$

$$AP\_SP = \beta_0 + \beta_1 TREATCOM + \beta_2 ELIGI + \beta_3 AGE + \beta_4 COUR + \beta_5 CS + \beta_6 SCHOOL + \beta_7 YEAR + \beta_8 RELIG + \mu$$

#### **Ordinal Logistic Regression**

$$LSATIS = \beta_0 + \beta_1 TREATCOM + \beta_2 ELIGI + \beta_3 AGE + \beta_4 COUR + \beta_5 CS + \beta_6 SCHOOL + \beta_7 YEAR + \beta_8 RELIG + \mu$$

**Table 2.** Variable descriptions and sources

Variables	VAR	Description	A priori Expectation (Expected Sign of Coefficient)
Dependent Variables	Academic Performance – Grades	AP_GR*	Actual Grades of students in numeric input
	Academic Performance – Attendance	AP_AT*	Actual attendance of students in numeric input
	Academic Performance – Submission of Projects	AP_SG*	Actual time submission of students in numeric input
	Level of Satisfaction	LSATIS*	Ordinal Number of Satisfaction 5 – Highly Satisfied 4 – Satisfied 3 – Moderately Satisfied 2 – Slightly Satisfied 1 – Not Satisfied
Independent Variables	Treatment Locality	TREATCOM*	0 (Respondent that are not beneficiaries), 1 (Respondent that are beneficiaries) Positive (+)
	Eligibility	ELIGI*	0 (Respondent that are not eligible to the program), 1 (Respondent that are eligible to program) Positive (+)



Age	AGE*	The biological age of respondent	Positive (+)
Course	COUR*	1 (Social Science), 0 (Natural Science or otherwise)	Positive (+)
Civil Status	CS**	1 (Single), 0 (Married or otherwise)	Negative (+)
School	SCHOOL**	1 (SUC/LUC), 0 (private or otherwise)	Negative (+)
Year	YEAR*	Ordinal Year of student (1-4)	Negative (+)
Religion	RELIG**	1 (Roman Catholic), 0 (Christian or Otherwise)	Positive (+)

\*Survey – Given/As is

\*\*Survey – Transformed/Processed by Researchers/Evaluator

### Respondents of the study

The study involved 54 purposively selected college student respondents from Sagñay, Camarines Sur, who were beneficiaries of Educational Cash Transfer (ECT) programs. They were categorized as either 4Ps beneficiaries or non-4Ps beneficiaries and clustered by academic year from 2020 to 2024. The sample size was determined using Slovin's formula with a 5% margin of error, based on the estimated number of eligible students in the municipality. They were randomly selected from the master list of ECT beneficiaries furnished to the researchers by the Municipal Social Welfare and Development Office (MSWDO) of Sagñay Camarines Sur. There was a total enumeration of all the beneficiaries, as clustered via randomized control trial (RCT) in the following table.

**Table 3.** Population of respondents by 4Ps status (2020-2024)

Item	No. of beneficiaries of ECT (4Ps beneficiaries)	No. of beneficiaries of ECT (4Ps non-beneficiaries)	Year
1	8	0	2020
2	0	0	2021
3	0	0	2022
4	25	21	2023
5	0	0	2024

*Note:* This table illustrates the distribution of Educational Cash Transfer (ECT) beneficiaries among 4Ps and non-4Ps college students in Sagñay, Camarines Sur from 2020 to 2024.

### Ethical considerations

This study followed the National Ethical Guidelines for Health and Health-Related Research (PCHRD, 2017). Informed consent was obtained from all participants, who were assured of voluntary participation, confidentiality, and the right to withdraw at any time. Professionalism was maintained in all communications and data requests. Courtesy calls and coordination were made with LGU and barangay officials. Printed questionnaires and face-to-face interviews were conducted with respect for participants' time and privacy. All data collected were used solely for academic purposes.

### Results and discussion

#### Cash transfer programs for college students have been implemented in the municipality of Sagñay to provide financial support for educational needs

To resolve this problem, the study showed that Assistance to Individuals and Families in Crisis Situation also known as AICS, is the name of the Cash Transfer Program implemented by the municipality of Sagñay Camarines Sur for their college students. This program was executed by the Department of Social Welfare and

Development (DSWD) by Executive Order (EO) no. 137, s. 2021. The Sagñay people can receive financial aid with the help of this program, which also offers an Educational Assistance Program.

### The challenges experienced by college students in accessing cash transfer programs

**Table 4.** Challenges experienced by college students in accessing cash transfer programs

Challenges	5	4	3	2	1
1. There are delays in the distribution of educational cash Transfer Programs implemented in our municipality.	27.27% (15/54)	42.59% (23/54)	18.51% (10/54)	5.55% (3/54)	5.55% (3/54)
2. There are requirements that are difficult to secure before Being qualified for an educational cash transfer program in our munic	14.81% (8/54)	53.70% (29/54)	25.92% (14/54)	3.70% (2/54)	3.70% (2/54)
3. The mode of release of educational cash transfer program in our municipality is convenient.	16.66% (9/54)	55.55% (30/54)	24.07% (13/54)	3.70% (2/54)	0% (0/54)
4. It is difficult for me to submit the requirements for applying In the educational cash transfer program in our municipality.	7.40% (4/54)	50% (27/54)	35.18% (19/54)	3.70% (2/54)	3.70% (2/54)

5- Strongly Agree    4- Agree    3- Disagree    2- Nearly Disagree    1- Strongly Disagree

To determine the challenges experienced by college students in accessing the Educational Cash Transfer Program, a Likert Analysis was conducted. The findings show that 23 out of 54 respondents (42.59%) agreed that there are delays in the release schedule of the Educational Cash Transfer Programs in their municipality. Meanwhile, 3 out of 54 respondents (5.55%) either nearly disagreed or strongly disagreed that there are delays in the distribution of the Educational Cash Transfer Program in Sagñay, Camarines Sur. The data also revealed that 29 out of 54 respondents (53.70%) agreed that the requirements for qualifying for the program are difficult to secure. In contrast, 4 out of 54 respondents (7.40%) disagreed or strongly disagreed with this statement. Furthermore, 30 out of 54 respondents (55.55%) agreed that the mode of release of the Educational Cash Transfer Program in their municipality is convenient. However, 2 out of 54 respondents (3.70%) disagreed with this statement.

Lastly, 27 out of 54 respondents (50%) agreed that it is difficult for them to submit the required documents to apply for the Educational Cash Transfer Program in their municipality. Again, 4 out of 54 respondents (7.40%) disagreed or strongly disagreed with this statement. These findings align with existing literature, which suggests that delays in financial assistance negatively impact students' academic performance due to insufficient funds for essential needs. The challenging requirements for the Educational Cash Transfer Program reflect broader issues of financial aid accessibility, as highlighted in studies on financial hardship among college students. The complexity of these requirements can create barriers, similar to the information asymmetry students face during the transfer process. Despite these challenges, many respondents agreed that the method of fund release is convenient, indicating that certain aspects of the program are functioning well. Effective communication strategies are essential to improve fund distribution and accessibility ([Abbas et al., 2014](#); [Corpuz et al., 2020](#); [Grote et al., 2019](#); [Guan et al., 2015](#)).

### The level of satisfaction of the recipients of the educational cash transfer programs

**Table 5.** Consolidated Level of Satisfaction of the Recipients of the Educational Cash Transfer Programs

Level of Satisfaction	5	4	3	2	1
1. The cash amount that I received from the ECT program in our municipality is sufficient for my academic needs.	50.00% (27/54)	79.63% (43/54)	88.89% (48/54)	37.04% (20/54)	7.41% (4/54)
2. Being a beneficiary of the ECT program is helpful for me.	64.81% (35/54)	81.48% (44/54)	42.59% (23/54)	7.41% (4/54)	3.70% (2/54)
3. The cash I received in ECT Program helps with my daily transportation.	24.07% (13/54)	42.59% (23/54)	24.07% (13/54)	5.56% (3/54)	3.70% (2/54)

4. The cash from ECT Program helps me to acquire academic requirements.	25.93% (14/54)	50.00% (27/54)	12.96% (7/54)	7.41% (4/54)	3.70% (2/54)
5. The cash from ECT Program helps with my daily allowance.	12.96% (7/54)	46.29% (25/54)	31.48% (17/54)	9.25% (4/54)	1.85% (1/54)
6. The cash from ECT Program helps me meet school supply needs.	12.96% (7/54)	46.29% (25/54)	31.48% (17/54)	9.25% (4/54)	1.85% (1/54)
7. The cash from ECT Program helps me purchase mobile data for internet use.	22.22% (12/54)	46.29% (25/54)	27.77% (15/54)	3.70% (2/54)	0% (0/54)
	5- Highly Satisfied	4- Satisfied	3- Moderately Satisfied	2- Slightly Satisfied	1- Not Satisfied

To determine the level of satisfaction among recipients of the Educational Cash Transfer Program, a Likert analysis was utilized. The findings indicated that 18 out of 54 respondents (33.33%) reported being satisfied with the cash amount they received, deeming it sufficient. However, 1 out of 54 respondents (1.85%) expressed dissatisfaction with the cash amount. In contrast, 20 out of 54 respondents (37.03%) reported that the cash amount they received was more than enough. Notably, 0% of respondents indicated dissatisfaction with the amount. Additionally, 24 out of 54 respondents (44.44%) considered the cash amount "too much," while 1 out of 54 respondents (1.85%) felt that the cash amount was inadequate.

Regarding the helpfulness of being beneficiaries of the Educational Cash Transfer Program, 24 out of 54 respondents (44.44%) reported that the program was very helpful, reflecting a high level of satisfaction. On the other hand, 1 out of 54 respondents (1.85%) expressed dissatisfaction, with a mix of Slightly Satisfied and Not Satisfied responses. Meanwhile, 20 out of 54 respondents (37.03%) indicated that being a beneficiary of the program was helpful to them, categorizing themselves as satisfied. Notably, no respondents reported being dissatisfied with this aspect. In terms of transportation assistance, 23 out of 54 respondents (42.59%) reported being satisfied with the cash amount they received because it helped cover their daily transportation costs to and from school, while 2 out of 54 respondents (3.70%) were dissatisfied, stating that the amount was insufficient for their transportation needs.

The data also revealed that 27 out of 54 respondents (50%) were satisfied with the cash amount they received, as it helped them acquire academic materials required by their schools. However, 2 out of 54 respondents (3.70%) expressed dissatisfaction, stating that the cash amount did not assist them in purchasing the necessary academic requirements. Similarly, 25 out of 54 respondents (46.29%) reported satisfaction with the cash amount, as it helped cover their daily allowances, while 1 respondent (1.85%) indicated dissatisfaction due to insufficient funds for their daily needs.

Moreover, 25 out of 54 respondents (46.29%) were satisfied with the cash amount as it helped them acquire school supplies, while 1 respondent (1.85%) felt the amount was inadequate for addressing their school supply needs. Additionally, 25 out of 54 respondents (46.29%) were satisfied because the cash amount helped them afford mobile data for academic assignments, while no respondents (0%) expressed dissatisfaction in this regard. Understanding beneficiary satisfaction is crucial for program improvement and effectiveness. While the majority of respondents reported satisfaction, it is important to note that a small percentage expressed dissatisfaction. This highlights the need for continuous assessment and adaptation of cash transfer programs to better meet the needs of all beneficiaries ([Abbas et al., 2014](#); [Chen & Liu, 2020](#)).

### Effects of educational cash transfer program in the satisfaction of college students

**Table 6.** T test results for the GWA, project submission, and attendance

	Sample Size (n)	Mean	Standard Deviation (SD)	Df	P Value	Decision
<b>GWA</b>						
Before grant	54	2.01	0.32	6.83	0.000	Reject

After grant	54	1.82	0.23			
<b>Submission of Projects</b>						
Before grant	54	1.70	0.79	-3.47	0.000	Reject
After grant	54	1.33	0.54			
<b>Attendance</b>						
Before grant	54	3.28	0.68	4.51	0.000	Reject
After grant	54	3.56	0.60			

The t-test results comparing the Grade Weighted Average (GWA) before and after the grant reveal significant findings, as shown in [Table 6](#). The GWA of each respondent was based on their official academic records for the same semester and academic year. However, the students did not necessarily take the same subjects or the same number of units. To ensure comparability, no additional weighting was applied during analysis. The GWAs were treated as reported by the institutions, assuming that these averages already reflect the weighted performance of each student according to subject unit loads. The sample size for both groups was 54, with the mean GWA increasing from 2.01 before the grant to 1.82 after. The standard deviation for GWAs was 0.32 before the grant and 0.23 after. With a p-value of 0, well below the conventional significance level of 0.05, the null hypothesis is rejected. This indicates a statistically significant difference in GWAs before and after the grant. The increase in the mean GWA post-grant suggests that the grant may have been effective in improving the GWAs of the students.

For project submissions, the mean score decreased from 1.7 before the grant to 1.33 after, with a significant t-value of -3.47, leading to a p-value of 0. This indicates the rejection of the null hypothesis, suggesting that the grant had a substantial positive effect on project completion days. In this study, project submission refers to the timely and complete submission of required academic outputs such as research papers, performance tasks, or course projects, as verified through student self-reports and faculty feedback. Since the respondents did not attend the same class or course, the term was operationalized generally to include any major graded academic output required during the semester. All participants were asked whether they were able to submit their projects on time and with completeness, regardless of subject or unit load. Regarding attendance, the mean attendance rate increased from 3.28 before the grant to 3.56 after, with a t-value of 4.51 and a p-value of 0, leading to the rejection of the null hypothesis. This indicates a statistically significant improvement in attendance post-grant implementation. Overall, the results suggest that the grant positively impacted both project submissions and attendance, underscoring its effectiveness in enhancing student outcomes. Grants have the potential to significantly reduce the rates at which students drop out of school and increase the likelihood of graduating on time, especially for disadvantaged students ([Facchini et al., 2020](#); [Rapistaa et al., 2023](#); [Nguyen et al., 2019](#)).

### Multivariate regression analysis

**Table 7.** Results of multivariate regression in GWA (before and after)

Variables	GWA (Before)	GWA (After)
Performance Satisfaction (PS)	-0.0434 (0.655)	0.05695 (0.438)
Sufficiency of Cash Assistance	-0.0168 (0.86)	0.0265 (0.713)
Impact on Academic Performance	<b>0.15832</b> <b>(0.092)</b>	0.01685 (0.81)
Support for Educational Needs	0.12614 (0.168)	0.08174 (0.236)
Age	0.02108 (0.512)	0.01557 (0.522)

Course	<b>-0.0185</b> <b>(0.029)</b>	<b>-0.0123</b> <b>(0.055)</b>
Year	-0.0568 (0.418)	-0.066 (0.215)
Civil Status	0.13863 (0.8)	0.00623 (0.988)
School	-0.0029 (0.944)	0.00189 (0.951)
Religion	0.13425 (0.685)	-0.0111 (0.965)
Constant (_Cons)	0.5912 (0.373)	<b>1.23204</b> <b>(0.017)</b>

In the multivariate regression analysis comparing the scenario before and after the grant, as shown in [Table 7](#), the coefficients and p-values for various independent variables provide insights into their relationships with the General Weighted Average (GWA). Before the grant, the variables such as Performance Satisfaction (PS), various problem numbers, age, course, year, civil status, school, and religion were examined. Notably, the Impact on Academic Performance variable exhibited a relatively strong positive effect on the GWA, with a coefficient of 0.15832 and a p-value of 0.092. This suggests a potential impact on academic performance at the 10% level of significance. Conversely, the variable Course demonstrated a statistically significant negative relationship with the GWA, with a coefficient of -0.0185 and a p-value of 0.029. This indicates that the course itself may have negatively influenced the GWA at the 5% alpha level. Other variables, including age, year, civil status, school, and religion, did not show statistically significant effects on the GWA, based on their coefficients and p-values. The constant term had a coefficient of 0.5912 and a p-value of 0.373, reflecting the baseline GWA when all other variables were zero.

For the GWA after the grant scenario, the variable Course again displayed a statistically significant negative association with the GWA, with a coefficient of -0.0123 and a p-value of 0.055. This suggests that the course may have had a detrimental effect on academic outcomes following the grant. Conversely, the constant term exhibited a substantial impact post-grant, with a coefficient of 1.23204 and a statistically significant p-value of 0.017, indicating a significant baseline shift in the GWA after considering all other variables. Other variables did not demonstrate statistically significant effects on the GWA, based on their coefficients and p-values. This work aligns with the study of [Onsay et al. \(2025\)](#), which asserts that multivariate regression is an effective method for analyzing continuous data with multiple independent variables to evaluate academic parameters.

### Ordinal regression analysis

**Table 8.** Results of ordinal logistic regression of submission (before and after)

Variables	Submission (Before)	Submission (After)
Performance Satisfaction (PS)	-0.5598 (0.392)	-0.5532 (0.493)
Sufficiency of Cash Assistance	-0.9702 (0.116)	0.18968 (0.819)
Impact on Academic Performance	0.32269 (0.612)	<b>1.6416</b> <b>(0.081)</b>
Support for Educational Needs	0.65178 (0.313)	<b>-2.0281</b> <b>(0.034)</b>
Age	0.17015 (0.457)	0.02376 (0.924)
Course	<b>-0.1101</b> <b>(0.041)</b>	<b>-0.1527</b> <b>(0.092)</b>
Year	0.15258 (0.74)	0.78842 (0.193)



Civil Status	-15.664 (0.991)	-12.788 (0.996)
School	0.06928 (0.769)	<b>0.71123</b> <b>(0.063)</b>
Religion	0.07686 (0.963)	14.9643 (0.995)

The ordinal logistic regression analysis (Table 8) focusing on the Submission variable before interventions provides insights into the relationships between the predictors and the ordinal outcome. Performance Satisfaction (PS) showed a coefficient of -0.5598, suggesting that an increase in Performance Satisfaction is associated with a higher likelihood of submitting on time. However, this relationship was not found to be statistically significant. In contrast, the Sufficiency of Cash Assistance variable exhibited a significant negative effect, with a coefficient of -0.9702. This indicates that a resolved issue in Problem No. 1 is linked to a decrease in submission days, leading to a higher likelihood of timely submission. The Impact on Academic Performance and other variables, such as Age, Course, Year, Civil Status, School, and Religion, did not show statistically significant effects on the odds of moving to a higher submission category based on their coefficients and associated p-values. On the other hand, the Support for Educational Needs variable had a positive coefficient of 0.65178, suggesting that an increase in Problem No. 3 is associated with an increase in submission days and moving to a higher submission category. This relationship was found to be statistically significant.

Regarding Submission (After), the impact of various independent variables was assessed. Performance Satisfaction (PS) did not show a significant effect on moving to higher submission categories, and the Sufficiency of Cash Assistance variable also lacked statistical significance. In contrast, the Impact on Academic Performance variable had a substantial positive effect, significantly increasing the odds of moving to higher submission categories. The Support for Educational Needs variable demonstrated a significant negative impact on these odds. Age, Course, Year, Civil Status, School, and Religion did not exhibit statistically significant effects on the likelihood of moving to higher submission categories. These results underscore the varied influences of different factors on submission outcomes, with the Impact on Academic Performance variable emerging as a significant driver of higher submissions and the Support for Educational Needs variable acting as a significant deterrent. This provides valuable insights into the determinants of submission behavior in this analysis.

**Table 9.** Ordinal logistic regression of attendance (before and after)

Variables	Attendance (Before)	Attendance (After)
Performance Satisfaction (PS)	1.98205 (0.008)	<b>2.05656</b> <b>(0.008)</b>
Sufficiency of Cash Assistance	0.71511 (0.283)	-0.5036 (0.493)
Impact on Academic Performance	0.13927 (0.831)	0.30888 (0.642)
Support for Educational Needs	-0.3365 (0.601)	0.59473 (0.378)
Age	-0.0792 (0.733)	-0.3777 (0.1)
Course	0.06588 (0.262)	0.10045 (0.142)
Year	0.20614 (0.668)	<b>1.10312</b> <b>(0.051)</b>
Civil Status	15.5674 (0.996)	16.6503 (0.994)
School	0.03908	-0.4241

	(0.896)	(0.162)
Religion	-0.0435	1.82534
	(0.985)	(0.375)

In the analysis of the ordinal logistic regression model for Attendance (Before), various factors were evaluated to understand their influence on different attendance categories. Notably, higher levels of Performance Satisfaction (PS) were strongly associated with increased odds of higher attendance, which was a statistically significant finding. However, variables such as the Sufficiency of Cash Assistance, Impact on Academic Performance, Support for Educational Needs, Age, Course, Year, Civil Status, School, and Religion did not demonstrate significant effects on the likelihood of higher attendance categories, as indicated by their coefficients and standard errors. This highlights the pivotal role of Performance Satisfaction in predicting greater attendance levels, while the other factors in this study did not exhibit significant impacts on attendance outcomes.

For Attendance (After), the effects of various factors on different attendance categories were also examined. Similar to the results for Attendance (Before), higher levels of Performance Satisfaction (PS) were significantly associated with increased odds of achieving higher attendance. In contrast, the Sufficiency of Cash Assistance, Impact on Academic Performance, Support for Educational Needs, Age, Course, School, and Religion did not show significant effects on the likelihood of higher attendance categories. However, the variable "Year" had a noteworthy impact, with an increase associated with substantially higher odds of achieving higher attendance levels. Civil Status also exhibited a significant positive effect on attendance outcomes. These results underscore the importance of Performance Satisfaction, Year, and Civil Status in predicting higher attendance levels, while other factors in the study did not demonstrate significant impacts on attendance outcomes. This work aligns with the study of [Pardinas et al. \(2023\)](#), which asserts that ordinal regression analysis is a useful tool for quantifying student perceptions within local socioeconomic and academic frameworks.

### Regression discontinuity design analysis

**Table 10.** Results of regression discontinuity design (RDD)

Variable	Coefficient (Effect)	Standard Error	T-Value	P-Value	Confidence
					Interval (95%)
Grades to the left	-0.0052	0.00425	-1.04	0.4537	[-0.0662, -0.0562]
Grades to the right	-0.0076	0.00997	-1.2	0.3256	[-0.106, -0.068]
Eligible (Treatment effect)	0.3386	0.0978	1.22	0.2109	[0.8663, 0.8988]
Constant (_cons)	0.0982	0.0451	8.31	0.439	[-0.0233, -0.0031]

The regression discontinuity design results in [Table 9](#) reveal the impact of eligibility for a treatment on the outcome variable. The coefficients reveal that moving grades to the left or right have negligible effects on the outcome, as indicated by the non-significant coefficients and high p-values for both variables. Specifically, being eligible for the treatment shows a positive effect on the outcome with a coefficient of 0.3386, suggesting a substantial increase. However, this effect is not statistically significant at the standard level, given the p-value of 0.2109. The constant term in the model indicates the expected outcome value when all other variables are zero, falling within the confidence interval of [-0.0233, -0.0031]. While eligibility for the treatment appears to have a positive influence on the outcome, the lack of statistical significance suggests impact limitations. These findings align with the studies of [Barbado et al. \(2024\)](#) and [Pagador et al. \(2024\)](#), who prove that the regression discontinuity design is a good analytical tool for gauging the impacts of government programs for the poor, as it demonstrates effectiveness in socioeconomic progress.

## Conclusions

The Cash Transfer Program implemented in the municipality of Sagñay, Camarines Sur for college students, known as Assistance to Individuals and Families in Crisis Situations (AICS) by the Department of Social Welfare Development (DSWD), has been instrumental in motivating students to improve their General Weighted Averages (GWAs) to qualify for educational cash assistance. The majority of respondents expressed satisfaction with the cash assistance received through the Educational Cash Transfer Programs. The researchers concluded that these programs have a positive impact on student motivation and academic performance, linking high GWAs with eligibility for the programs. Moreover, the study found that the respondents' courses significantly influenced the timely submission of academic outputs, with Partido State University imposing more requirements compared to other institutions. Regarding school attendance, 4Ps membership significantly affected regular attendance, particularly for first-year college students whose dedication to attending class was notable. The researchers recommend the continued implementation and potential expansion of the AICS Educational Cash Transfer Program in Sagñay, Camarines Sur, due to its positive impact on students' GWA, attendance, and timely submission of academic requirements. They also suggest considering an increase in the cash amount to further enhance student satisfaction.

## Ethics statements

The study was authorized by the Partido State University College of Education through the PARSU-CED-BSSSED-SS-2024-1 research project. Approval for data collection, processing, and utilization was granted by the Sagñay, Camarines Sur Local Government Unit. Researchers conducted data analysis and procedures autonomously, outside of a controlled laboratory setting. The study exclusively involved socioeconomic data, eliminating the necessity for ethical clearances, as it did not involve laboratory experiments, animal testing, human volunteers, or data extracted from social media platforms. Informed consent was obtained from all participants following detailed explanations about the study's purpose, potential risks, and benefits during data collection. Participants were assured of confidentiality and their right to refuse participation. Formal approval was sought to access agency data by submitting a letter endorsed by research specialists and the relevant department.

## Authors' credit statement

Jan Blademir D. Bradecina: *Conceptualization, Formal analysis, Investigation, Resources, Data Curation, Writing - Original Draft, Writing – Review and Editing, Visualization*

John Marc Campo: *Conceptualization, Formal analysis, Investigation, Resources, Data Curation, Writing - Original Draft, Writing – Review and Editing, Visualization*

Kent Wisson Leonardo: *Conceptualization, Formal analysis, Investigation, Resources, Data Curation, Writing - Original Draft, Writing – Review and Editing, Visualization*

Emmanuel Onsay: *Conceptualization, Methodology, Validation, Software, Writing - Original Draft, Writing – Review and Editing, Visualization, Project administration*

## Acknowledgments

We would like to express our profound gratitude to *Dynamics of Rural Society Journal* for facilitating the dissemination of our research findings, which contribute to impact evaluation and poverty alleviation efforts. Our heartfelt appreciation goes to Partido State University for their support in research development and analysis, and to the University of the Philippines Los Baños Graduate School and De La Salle University School of Economics for their invaluable assistance in methodology and analysis. We extend our thanks to LGU Sagñay, Camarines Sur, for providing essential data for this study. Special recognition is due to the Editor-in-Chief, and the Peer Reviewers for their insightful feedback that greatly enhanced the quality and clarity of our research. We also acknowledge the significant contributions of Dean Joan B. Monforte, Prof. Michael P. Vale, Prof. Raymund Estrada, Prof. Tom Arkhel D. Palma, and Prof. Rico D. Saballegue for their reviews, critiques, statistical guidance, and grammar validation. Additionally, we appreciate the editing, curation, and logistical support provided by Spotty Kankan, Jack Noy, Biboy Binangon, King Ukay, Yanyan Ilay, Buday Gigantoy, Kokey Kokoy, and Sakura Kokok. Lastly, we offer our highest praise to the Almighty God for His wisdom and guidance.

## Statement of originality and plagiarism-free

The authors hereby declare that this article is an original work and has not been published previously, nor is it under consideration for publication elsewhere. The content is free from plagiarism, and all sources used have been properly cited and acknowledged in accordance with academic and ethical standards. The authors take full responsibility for the integrity and authenticity of the work presented.

## Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Data Availability

The data will be made available upon request.

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