Graduate Student Savings Unlocked Through Tax-Efficient 529 Plan Use

P. N. Thomas Lloyd*, Thomas C. Zheng
Renest Horizons, Inc., Santa Barbara, California 93106, USA
(Dated: February 22, 2025)

We present our findings on graduate student stipends and through evaluation of various consumption and savings pathways and applicable internal revenue codes show creation of savings through tax-efficient usage of 529 college savings plans. Graduate students have standing both as students and as income tax-payers. Income earned by graduate students primarily comes from graduate student research / assistantships, which are intended chiefly to cover cost-of-living expenses incurred during a PhD program. The overlap in standing and income create a unique consumption and saving pathway where 529 plans create tax benefits resulting in higher savings balances compared to alternative saving means given tax-free growth. Furthermore, for states which provide tax credits or income tax deductions for 529 contributions, graduate students who contribute to a self-beneficiary 529 plan account receive additional savings from reduced taxable incomes. From surveying and examining cost of living across 11 universities, we uncover an additional 200−700 in savings per graduate student through tax-efficient use of 529 plans.

Introduction.—Graduate students' categorization as students and income tax payers subject them to internal revenue codes set for qualified tuition program expenses1 and state and federal income tax. Graduate program stipends – paid via graduate student research, teaching, and assistantships – typically range between $25,000 to $50,000 depending on the program, department funding, and term period (e.g., 10-month, annual, etc.). Stipends are subject to both state and federal income tax. Stipend amounts are intended to cover cost-of-living expenses incurred during a PhD program. Additionally, university administrations publish cost-of-attendance estimates across key expense buckets: housing & food, books and education supplies, transportation, healthcare, and miscellaneous and personal. These estimates generally fall below the stipend amounts. 529 plan account balances – both contributions and investment growth – can be used for qualified tuition program expenses, which in addition to tuition can be used to pay for rent, utility, grocery / meal plan, and book and education supplies expenses. Furthermore, contribution to a 529 plan account provide an annual tax benefit for state income tax across 38 states (tax-credit and deduction limits vary based on state department of revenue rules), which result in higher savings balances due to lowered taxable income. 529 plan application for graduate students is primarily towards non-tuition expenses, as PhD program typically pay for the graduate student's tuition. Based on both survey results and data triangulation across university estimates and third-party reports on living expenses at respective universities, we find that 60% to 90% of graduate student expenses fall within qualified tuition program expenses. For states which provide a 529 plan contribution tax benefit, the majority of graduate students are eligible to receive the maximum benefit based on their spend. Furthermore, for graduate students with cash savings intended for short-term expenses observe additional savings increases resulting from tax-advantages for 529 plan account investments compared to checking, traditional savings, and brokerage account investments.

	Savings increase	vs. checking	vs. savings	vs. brokerage
State	NJ	$685	$495	$507
	NY	$666	$485	$508
	MI	$413	$221	$232
	MA	$250	$67	$88
	CA	$200	$12	$27
	All States	$443	$256	$272
	High Benefit	**$588**	**$400**	**$415**

Figure 1: Assuming average annual savings balance of $5,000 used for short terms expenses, 529 plan account savings compared to alternative accounts savings yields a greater balance for one year in a PhD program. For states with an income tax benefit, the differential is even larger.

Data Collection and Methodology.—Our analysis combines two comprehensive datasets: the Renest Graduate Student Expense Survey (n=365) spanning five universities across four states, and the MIT Graduate Student Council (GSC) Survey (n=1,698), totaling 2,063 respondents. The Renest survey collected detailed monthly expenditure data across five key categories: groceries, rent, utilities, internet services, and education-related expenses. Survey participants represented diverse geographic regions, including California (UC Davis, UC Santa Cruz), Massachusetts (Boston University), Florida (University of Florida), and Michigan (University of Michigan). To validate survey responses, we cross-referenced the data with university-published cost of attendance (CoA) estimates and local economic indicators. Monthly qualified expenses averaged $1,959 across the Renest survey institutions, with regional variations reflecting local cost-of-living differences. The ratio of qualified expenses to annual stipend ranged from 57.2% to 91.1%, indicating significant potential for tax-advantaged savings through 529 plans.

*plloyd@ucsb.edu, thomas@renesthorizons.com

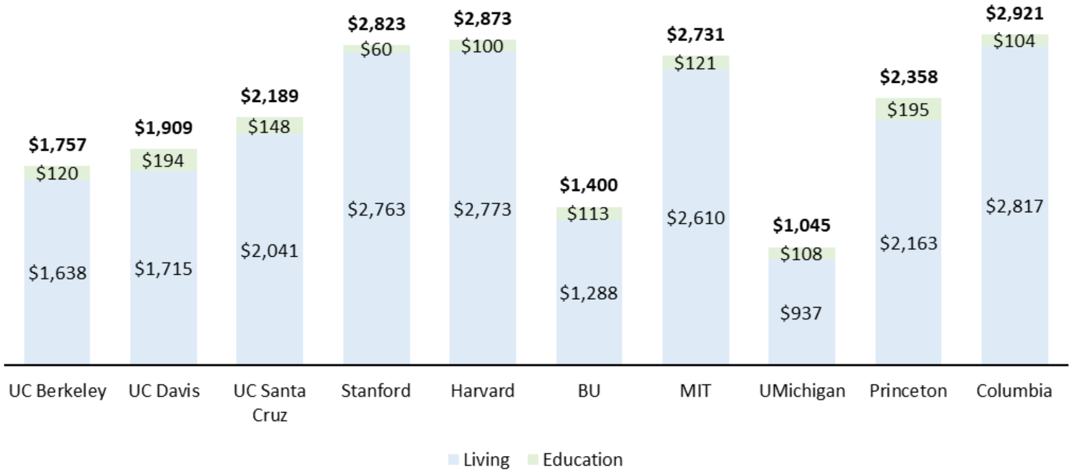

Figure 2: Renest partnered with students at 11 universities in tandem with MITs Graduate Student Council to understand the monthly spending behavior of gradate students and its overlap with 529 qualified categories.

The MIT GSC survey provided complementary data from a large single-institution sample, with average monthly qualified expenses of $2,526, representing 81% of their annual stipend allocation.

Conclusion.—Our analysis demonstrates that graduate students can achieve meaningful tax savings through strategic use of 529 plans for qualified living expenses. With 60-90% of typical graduate student expenses qualifying under 529 plan rules, and annual stipends ranging from $25,600 to $49,614, the potential for tax-advantaged savings is substantial. The $55 million in qualified spend available alone among these 2,000+ graduate students would unlock over $1.2 million in immediate deduction benefits as well as greater long term tax advantage savings and retirement benefits through using a 529 as an investment vehicle. The implementation of 529 plans as a financial strategy for graduate students offers dual benefits: immediate state tax savings in participating jurisdictions and tax-free growth on investments. Given that qualified expenses consistently comprise a significant portion of graduate student stipends across diverse geographic regions and institutions, we recommend the systematic implementation of 529 plans as a standard financial planning tool for graduate students. This approach would enable graduate students to optimize their stipend utilization while building tax-advantaged savings, ultimately improving their financial outcomes during their academic tenure.

Future Directions and Considerations.—The biggest barrier towards unlocking the tax advantages of 529 plans for graduate students is the current perception and marketing of these financial instruments. Despite their flexibility and tax benefits, 529 plans have been predominantly marketed towards parents and grandparents saving for their children's future education, resulting in severely limited adoption among students themselves. Current Ascensus data shows that only 2% of 529 plan owners are below the age of 28, highlighting the significant disconnect between the potential beneficiaries and actual users of these tax-advantaged accounts. This marketing-driven perception gap has created an awareness barrier where graduate students, who could benefit significantly from these plans, often overlook them as viable financial planning tools.

To address these implementation challenges, we have developed both manual and automated tracking solutions through Renest Horizons (www.renesthorizons.com). These tools specifically target the unique needs of graduate students by simplifying the process of identifying, tracking, and documenting qualified expenses. Our ongoing trials with individual graduate students demonstrate that technological solutions can bridge the gap between the theoretical tax benefits and practical implementation challenges. Early adoption data suggests that automated tracking significantly reduces the administrative burden that might otherwise deter graduate students from utilizing 529 plans.

Looking ahead, broader adoption of 529 plans among graduate students will require a multi-faceted approach: enhanced education about their benefits, simplified implementation tools, and potentially revised marketing strategies by state 529 plan administrators to acknowledge graduate students as primary beneficiaries. Future research should focus on quantifying the long-term impact of 529 plan adoption on graduate student financial outcomes and exploring potential policy adjustments to further optimize these plans for graduate student use cases.

Acknowledgments.—We would like to thank the students who participated in our survey as well as MITs Graduate Student Council for providing complimentary data.