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Financial Knowledge or Financial Situations? Toward Understanding Why Some College Students Use Credit Cards to Pay for College Tuition

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While the majority of college students use credit cards for educational expenses like textbooks, recent data reports that college students also use credit cards to directly fund their schooling by charging for at least some part of their tuition (Sallie Mae, 2009). Because credit cards carry a higher interest rate than student loans, and because they do not have a period of deferred payment while a student is enrolled in school, credit cards are a particularly risky method of payment that students resort to in order to attend college. Why do college students participate in such risky spending behavior to fund their education? This paper uses data from a nationally-representative data set (Education Longitudinal Study) and from a recent national study on college student finances (Study on Collegiate Financial Wellness) to investigate whether financial knowledge or financial situations are better predictors of whether a student uses a credit card to pay for at least some of their college tuition. While most research on this topic has focused on social-psychological factors that influence college student credit card use, this study includes important financial resource and situation variables that shed light on the ways in which college students make financial decisions in a broader economic environment.

Keywords: *Credit Cards, Tuition, Financial Knowledge, Financial Situations*

Amid increasing financial responsibility for attending college, students are finding creative ways to pay for tuition. College students are striving for degrees at a time when college tuition has increased and government funding for higher education has declined (Mitchell & Leachman, 2015). At the crossroads of these changes exist prospective college students vying to gain access to a better life by financing their degrees via credit (e.g., student loans, credit cards). Much of the literature has focused on the role of educational loans in student trajectories through college (Baker et al., 2017) but researchers are only beginning to investigate the role of credit cards in students' efforts to pay for college (Montalto et al., 2019).

According to a dated Sallie Mae (2009) report, 92% of undergraduate students who own credit cards use them for educational expenses like textbooks, and 30% of these students use credit cards to directly fund their schooling by charging for at least some part of their tuition. Because credit cards carry a higher interest rate than student loans, and because they do not have a period of deferred payment while a student is enrolled in school, credit cards are a particularly risky method of payment that students resort to in order to attend college.

Investigating why some students resort to such a risky method to pay for college might help researchers and administrators interested in student success and development gain a better understanding of the role finances play in student trajectories through college. Are college students paying for college with credit cards because they do not have a full understanding of the financial risk inherent in this method? Or are college students charging for tuition because they have limited financial resources outside of this approach? For researchers interested in socioeconomic disparities in college access and completion, answering these questions may help us understand the landscape of inequality in higher education a little better as we consider how students respond to greater financial responsibility for their education.

College Students, Credit Cards, and Tuition

Past work draws attention to college student credit card use to pay for educational expenses (Nellie Mae, 2005). In addition to paying for educational expenses like textbooks and school supplies, students also use credit cards to fund recreational, leisure, and consumer pursuits while in college (Manning, 2000).

Substantial research has investigated the topic of college student spending habits and credit card use (Dale & Bevill, 2007; Lyons, 2004, 2007; Palmer et al., 2001; Wang & Xiao, 2009; Xiao et al., 2011), much of it advocating for limiting the influence of credit card companies on college campuses (Burnsed, 2010).

Studies have generally considered risky credit card use among college students (Zhu, 2019), but limited research has considered the role credit cards play in directly financing a student's education through tuition and fees (Montalto et al., 2019). Montalto and collaborators (2019) used data from the multi-institutional Study on Collegiate Financial Wellness (SCFW) to provide a descriptive look at college students' credit card use as a part of the broader picture of college student financial wellness. Montalto et al. (2019) report that nearly 19% of college students in their sample (n = 25,572) pay for at least some of their total college expenses with a credit card. Their analyses provide descriptive trends, however, and do not discuss why these students are using credit cards to pay for college.

Several recent news articles have highlighted a study by Creditcards.com that surveyed 300 colleges and universities in an attempt to understand these institutions' approaches to letting students pay for tuition with credit cards (Gallegos, 2016; Mercado, 2016; Mulhere, 2016). The study showed that many colleges allow students to pay for tuition with a credit card, typically with a 2.5 to 3.5 percent fee charged to the purchase to cover fees required by the credit card issuer. These articles concluded that paying for tuition with a credit card is a bad deal because of the required fees and encouraged their readers to stay away from this financial practice.

Interestingly, not all colleges charge fees at the same rate, and many do not charge any fees when students use credit cards to pay for tuition (Gallegos, 2016). According to the Creditcards.com survey, private colleges are least likely to allow their students to pay for tuition with a credit card, and public colleges are most likely to allow students to pay for tuition with a credit card for a fee. Community colleges, however, are the most likely to allow students to pay for tuition with a credit card, and often without a required fee. One article suggests that community colleges do not charge a fee so that they can attract more students to enroll by offering more flexible opportunities to pay (Gallegos, 2016).

In a survey of 800 college students between the ages of 18 and 24, Sallie Mae (Sallie Mae, 2016) reports that five percent of students use a credit card to pay for college, with an average charge amount of $1,615. In an earlier Sallie Mae (Sallie Mae, 2009) report, nearly all (92%) college students used credit cards to pay for educational expenses like textbooks and school supplies. Furthermore, this report showed that 30 percent of their sample paid for tuition with a credit card. Students who paid for direct educational expenses with a credit card charged an average amount of $2,200.

The smattering of media coverage of this topic and the few reports produced by Sallie Mae give us a general introduction to the issue of college students using credit cards to pay for tuition, but nearly all of the media coverage has focused on the one study by Creditcards.com and Sallie Mae reports generally pull from small samples, often limited to students who are borrowing private loans from Sallie Mae. It might go unsaid that we should not jump to conclusions based on this kind of data and information. In terms of what we know from studies that use reputable data, other than the descriptive findings in Montalto et al. (2019), we know almost nothing about this topic. Yes, paying an additional fee to an already high tuition bill is not a financially savvy choice, especially considering that it would likely negate any rewards a credit card company would offer for using their services to pay for college. Stopping at this conclusion, however, does not provide us with the kind of knowledge we need to understand how this financial practice fits into the structure of social inequality as manifested in higher education.

Most studies on risky credit card use among college students focus on the social psychological predeterminants to this behavior as opposed to focusing on college students' financial contexts to understand risky credit card use (Zhu, 2019). If students from lower socioeconomic backgrounds have limited financial resources at their disposal, it is possible they might use credit cards to pay for college given they are a more easily accessible form of credit. In addition, if community colleges are more likely to accept credit card payment for tuition without any additional fees, the students they serve—who are more likely to be from lower socioeconomic backgrounds—may be more likely to pay for tuition with a credit card. If this

riskier form of credit is associated with negative outcomes both during and after college, these students may occupy a particularly vulnerable position as they attempt to complete college and become upwardly mobile.

Credit cards, on the other hand, may provide college students access to financial resources they would not otherwise have and could aid them in their quest to pay for college. If using a credit card to pay for tuition allows a student with few other financial resources to make it through college, it might be an unrecognized positive resource for helping lower-resourced students through higher education. Either way, we know virtually nothing about this practice and this paper provides an initial exploration into demographic and financial differences in this practice to understand how college students differentially use credit cards to pay for tuition. This paper focuses on socioeconomic differences in this practice, whether a student's financial knowledge or financial situation predict using a credit card to pay for tuition better, and whether this practice varies between institution types with a particular focus on community colleges.

The Current Study

This paper focuses on two primary areas of inquiry: 1) which student populations are most likely to use credit cards to pay for tuition and 2) what situations predict when students resort to this financial practice as a way to pay for college. To be more specific, this paper investigates college student credit card use for tuition to understand whether students are using credit cards because of financial restrictions such that credit cards serve to bridge a necessary financial gap, or because of differences in levels of financial literacy. In other words, do financial situations or financial knowledge better explain student use of credit cards to pay for tuition?

Methods

Data

To examine this paper's empirical questions, I use data from two datasets: the Education Longitudinal Study (ELS: 2002) from the National Center for Education Statistics (NCES) and the Study on Collegiate Financial Wellness (SCFW: 2017) from the Center for the Study of Student Life (CSSL) at The Ohio State University.

The ELS dataset is a nationally representative dataset that surveyed students who were sophomores in high school in 2002 and followed them as they went to college, transitioned into the workforce, and made other life transitions. The ELS spans ten years from 2002 to 2012. The ELS is an excellent source for learning more about the topic of college student credit card use to pay for tuition because of their national scope and their relatively recent collection.

The study sample from the ELS (n = 3,321) includes respondents who were enrolled in a postsecondary institution in 2006 and who own a credit card. Respondents in this sample have information on whether they used a credit card in their name to pay for tuition, as well as information on their employment status, financial aid, what kind of postsecondary institution they first attended after high school, whether they delayed entry into college, and several demographic indicators. While the ELS participants could have enrolled in undergraduate and graduate education over the course of the study (between 2002 and 2012), because the measures are taken in 2006 (two years after high school graduation), this study focuses on students when they are enrolled in undergraduate coursework.

The SCFW is a multi-institutional study administered in the spring of 2017. The SCFW collects data from institutions of higher education across the United States via an online survey. The survey has three primary foci:

1. "How are financial attitudes (including stress), financial behavior, and financial knowledge related to academic success?
2. How are financial attitudes, financial behavior and financial knowledge related to borrowing decisions and career selection?

3. How is student loan debt related to the issues of student financial stress, academic success, decisions to borrow, career selection, and investment in education? What factors (e.g., self-efficacy, financial knowledge, ability to repay, financial behaviors, seeking financial advice) moderate these relationships?
4. How are students' financial situations related to their involvement in on-campus activities outside the classroom?" (*SCFW Study Details*, 2020).

The SCFW was administered on 90 campuses across 65 higher education institutions, spanning two-year and four-year, public and private, colleges and universities. The institutions in the study are primarily public institutions. The study sample from the SCFW (n = 5,335) includes undergraduate students who own a credit card in their name, were enrolled in one of the postsecondary institutions surveyed in the spring semester of 2017, and who had information on whether they used a credit card to pay for tuition as well as information on their financial situation in college, their level of financial knowledge, financial aid indicators, and several other independent variables that comprise the final empirical model.

Variables

ELS variables

The ELS data ask about college students' use of credit cards to pay for tuition. This variable serves as the primary dependent variable in the ELS models. The ELS question that asks students whether they use a credit card to pay for tuition was asked only to students who reported they owned a credit card in their own name. This paper's analyses primarily investigate the difference in who pays for tuition with a credit card among students who own a credit card. While this group of students is a restricted group from all college students, whether or not they own a credit card, it is an appropriate sample to use within the context of this paper's analyses because this paper focuses on this particular financial strategy and not the broader topic of credit card ownership among college students.

Independent variables in the ELS analyses include whether the respondent first attended a 4-year postsecondary institution, the amount of hours they worked per week during the 2005-2006 academic year, whether they delayed entry into college after high school graduation by seven months or more, race, gender, whether they are the first person in their family to attend college (first generation student), whether they are married or have been previously married, whether they have a biological child, whether student loans are paying for part of their college education, and whether parent loans are paying for part of their college education. I also include the respondent's socioeconomic status as an independent variable. The ELS constructs the socioeconomic status variable by combining the following five components that are equally weighted and standardized: father's/guardian's education, mother's/guardian's education, family income, father's/guardian's occupation, and mother's/guardian's occupation.

I collapse two separate variables that describe respondents' marital status and whether they are parents into one family status variable, coded as a dichotomous variable where 1 means that the respondent is currently married, has formerly been married, and/or has a biological child by 2006. I collapse these variables because they are both related to family obligations while in college and when they are collapsed, they have more reasonable (i.e., larger) cell frequencies for inclusion in the main statistical models.

Many of these variables are included to get a basic sense of the financial support college students have (e.g., socioeconomic status, work, student loans, parent loans). Other demographic variables are included to understand how this financial practice differs between student groups—especially in an effort to see which students might be most at risk to engage in this financially risky practice—which can inform our understanding of varying student trajectories through college.

SCFW variables

Similar to the ELS analyses, the main variable of inquiry in the SCFW data is whether students use a credit card to pay for tuition. The SCFW asks this question to all students who indicated that they use credit cards to pay for at least some of their educational expenses. Because not everyone indicated that they use credit cards to pay for educational expenses, fewer respondents were asked the tuition-specific question, limiting the initial sample who answered this question. However, I combined the tuition-specific variable with another question asking students whether they owned a credit card and marked students who owned a credit card but did not indicate they used a credit card to pay for educational expenses as students who did not use a credit card to pay for tuition. In this way, this variable in the SCFW analyses reflects the same format of the credit card for tuition variable in the ELS analyses, containing only students who report that they own a credit card.

Independent variables in the SCFW analyses include students' access to emergency cash, several Likert-type questions that, when averaged, make up two different financial strain variables (financial stress and whether respondent has enough money to participate in desired activities), and several questions that test students' financial knowledge. Control variables in the SCFW include whether the student has been offered or received a Pell Grant, total student loan amount borrowed, work hours per week, whether the student is considered a dependent student of their parents for federal student aid, whether the student is financially responsible for a child, spouse, or other family member, the student's current income, race, gender, and whether the student attends a 4-year institution.

Complete variable descriptions and descriptive statistics for all variables can be found in the appendix.

Statistical Analyses

This paper's analyses begin with several bivariate tests using the ELS data to give a descriptive picture of who uses a credit card to pay for tuition. After these initial descriptive analyses, I conduct a logistic regression model using the variable asking whether students use a credit card to pay for tuition as the outcome variable of interest. That is, the logistic regression model tests which of the descriptive analyses remain statistically significant predictors of whether students use credit cards to pay for tuition, controlling for the variety of other variables considered in the initial descriptive analyses.

Next, I use SCFW data to bring additional nuance to the empirical analyses of this paper. After describing broad patterns in college student credit card use for tuition, I use the SCFW questions that directly ask students who pay for tuition with a credit card why they engage in this financial strategy to get at information about this topic that the ELS cannot provide. Furthermore, logistic regression analyses with the SCFW data test whether students' financial knowledge or financial situations better predict the outcome of whether a student pays for tuition with a credit card.

Limitations

Both the ELS and the SCFW contain unique limitations which balance out by using the datasets together in one empirical approach.

The ELS data span ten years (2002-2012) but focus their credit card questions in 2006 to capture college student credit card use. Because these credit card questions are specific to this year, the results reflect college student credit card use during a specific timeframe that may have changed in the last ten years. For example, the Credit CARD Act of 2009 (Hawkins, 2012; Matthews, 2013) introduced legislation aimed at restricting the influence of credit card companies on college campuses and limiting college student access to credit cards until they are 21. The ELS data on college student credit card use for tuition, collected three years before the Credit CARD Act of 2009, may reflect patterns of college student credit card use that have changed since the introduction of this new legislation. Indeed, more recent appraisals of college student

credit card ownership and use suggest that both the number of credit cards and their associated debt have decreased among college students since the Credit CARD Act of 2009 (Norvilitis, 2014).

The SCFW data provide a much more recent picture of college student credit card use, having been collected in the spring of 2017, but do not reflect patterns within a nationally representative dataset. The SCFW collected data from 65 institutions across the United States, but these institutions all self-selected into participating in the study, limiting the claims the results from these data can make on the national scope of college students paying for tuition with a credit card.

Taken together, these datasets offer an ideal comparison for the study. The ELS data give us a broad idea of college student credit card use to pay for tuition while the SCFW data give us a nuanced, and recent description of why students engage in this financial strategy. Furthermore, despite the limitations inherent in these two datasets, this study is the first large scale empirical study to investigate this topic and provides a much more trustworthy empirical investigation than the news coverage and small surveys related to this topic to date (Gallegos, 2016; Mercado, 2016; Sallie Mae, 2009, 2016). This study makes a needed contribution to understanding this topic with reliable data sources in order to extend current work on college student credit card use that has to date ignored the specific practice of college students using credit cards to pay for tuition.

Results

The following results show several interesting patterns in both the ELS and SCFW datasets that suggest college students attending less than 4-year institutions and students in financially precarious situations are more likely to pay for tuition with a credit card. The ELS analyses offer a broad examination of national trends in college student credit card use to pay for tuition while the SCFW analyses provide additional nuance to the ELS findings and better data on students' financial situations to show when students are most likely to engage in this financial practice.

The final logistic regression models in each set of analyses show that students attending less than 4-year institutions and students who work a high amount while in college are more likely to use a credit card to pay for tuition. The SCFW analyses provide details about students' financial situations and show that students who report being unlikely to come up with $400 cash in an emergency, students who have higher financial stress scores, and students who attend two-year institutions are all more likely to pay for tuition with a credit card than their peers. Furthermore, in the final SCFW logistic regression model, students' financial knowledge is not a significant predictor of whether students use a credit card to pay for tuition.

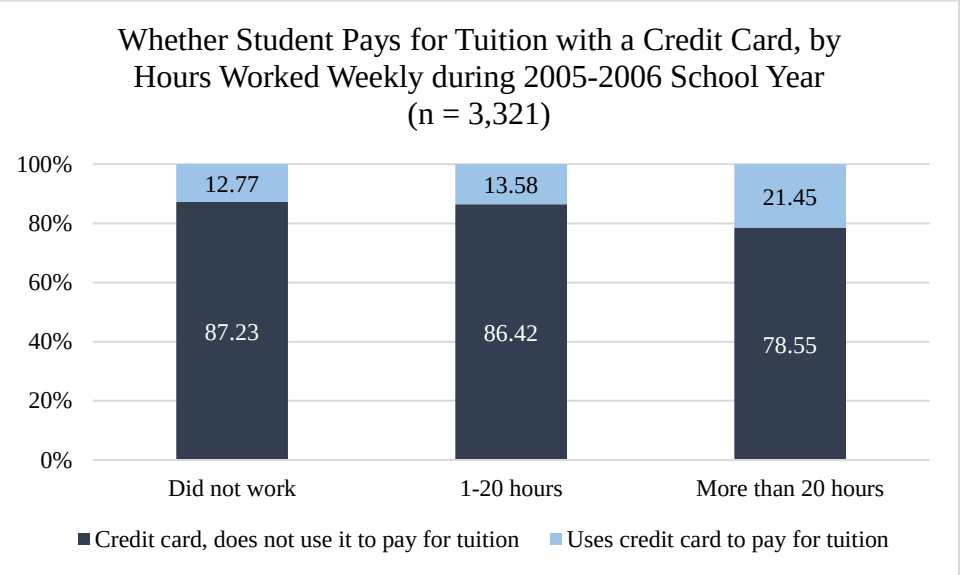
Analyses Using ELS Data

Figures 1 through 5 show statistically significant demographic patterns in college student credit card use to pay for tuition. All these figures were tested in a bivariate comparison using chi-square tests for independence. For the overall sample, a little over 16 percent of students who own a credit card use a credit card to pay for tuition.

Figure 1 shows differences in whether college students use credit cards to pay for tuition by employment status.

Figure 1

Whether Student Pays for Tuition with a Credit Card, by Hours Worked

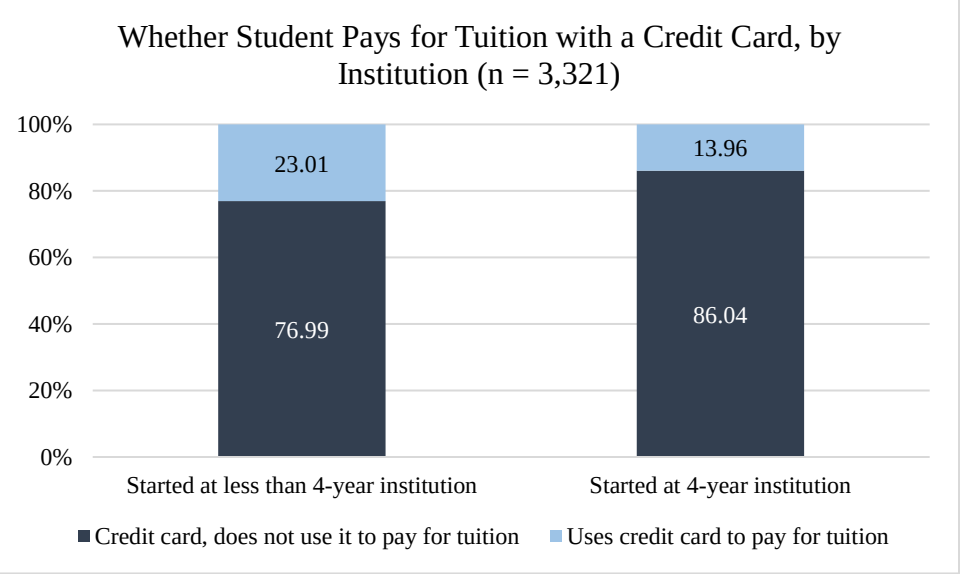


Students who worked more hours per week during the 2005-2006 academic year are more likely to report using a credit card to pay for tuition. Specifically, students who report working more than 20 hours per week pay for tuition with a credit card at higher rates than students who do not work and students who work 20 hours or less per week. The percentage of students who pay for tuition with a credit card is almost the same between students who do not work and students who work 20 hours or less per week. This pattern suggests that working more than 20 hours per week is uniquely associated with higher rates of credit card use to pay for tuition in this comparison.

Figure 2 shows differences in whether college students use credit cards to pay for tuition by institution type first attended.

Figure 2:

Whether Student Pays for Tuition with a Credit Card, by Institution

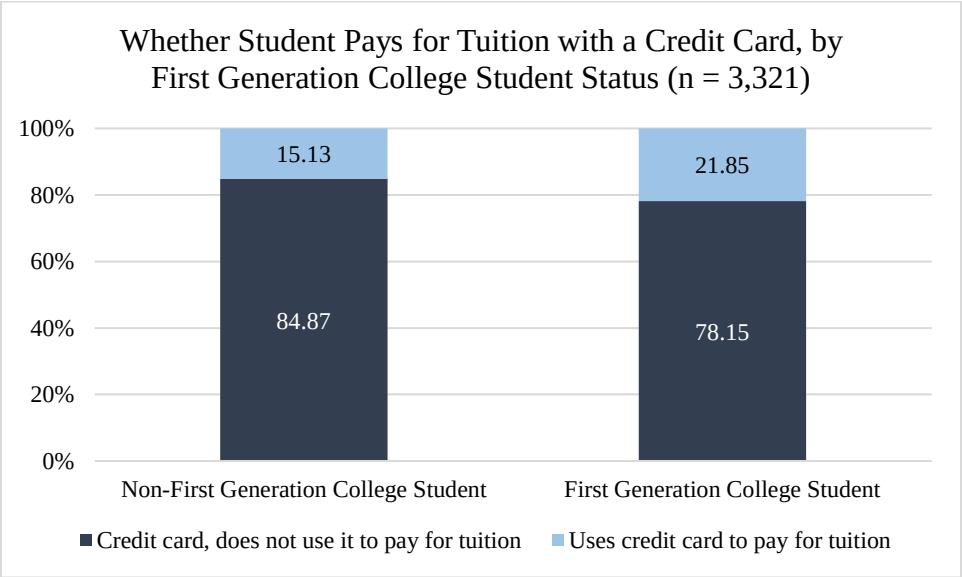


Students who start at a less than 4-year postsecondary institution are more likely to pay for tuition with a credit card. Nearly a quarter of students who start at a less than 4-year institution use a credit card to pay for tuition.

Figure 3 shows differences in whether college students use credit cards to pay for tuition by first generation college student status.

Figure 3:

Whether Student Pays for Tuition with a Credit Card, by First Generation College Student Status

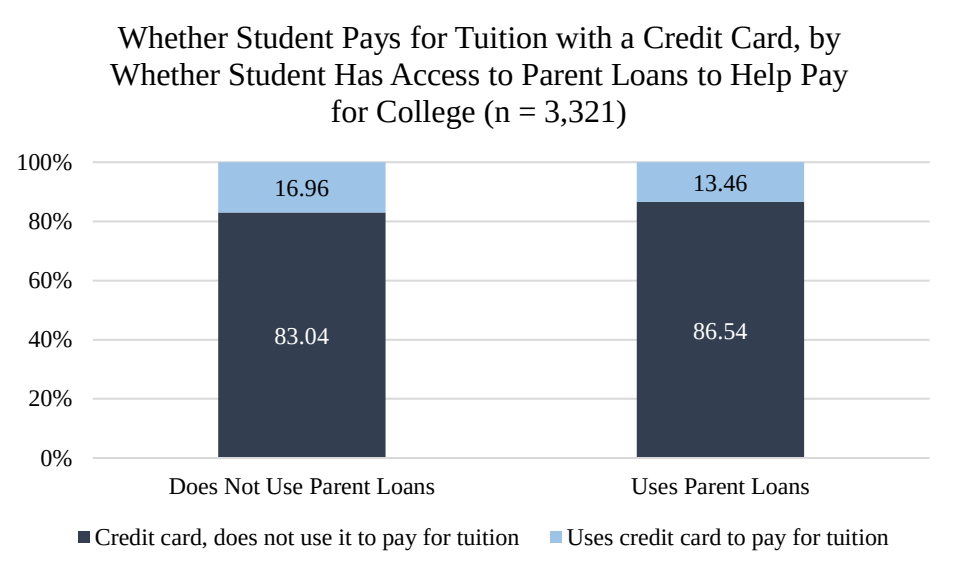


First generation college students are more likely than non-first generation college students to use credit cards to pay for tuition. Over a fifth of the first generation college students in this sample reported that they paid for at least some tuition with a credit card. While this paper does not explicitly focus on first generation students' approaches to paying for college, this finding suggests that this financial practice may be more highly represented among disadvantaged student groups on campus.

Figure 4 shows differences in whether college students use credit cards to pay for tuition by whether students pay for college using parent loans.

Figure 4:

Whether Student Pays for Tuition with a Credit Card, by Whether Student Has Access to Parent Loans to Help Pay for College

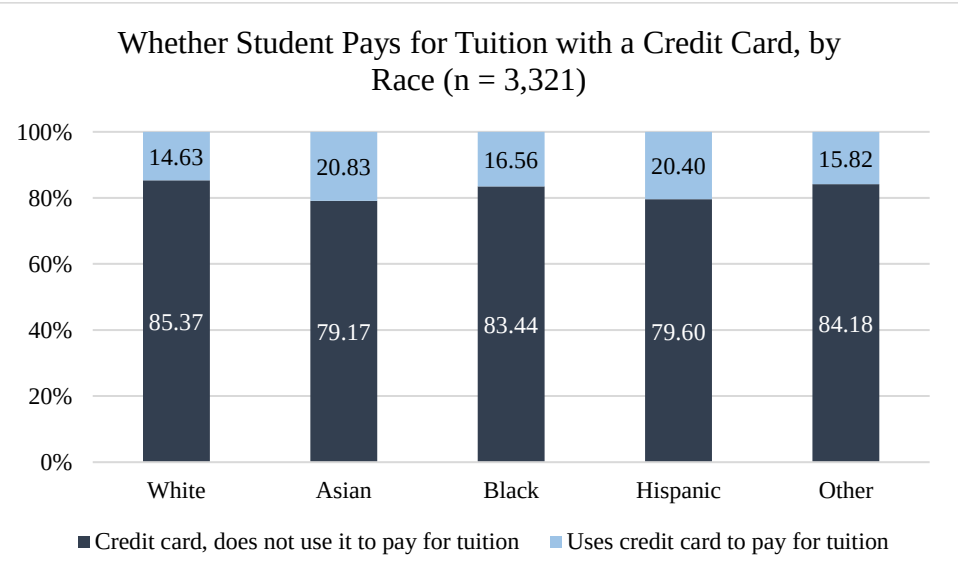


Students who use parent loans to pay for their college tuition in 2006 are less likely to use credit cards to pay for their tuition. Students without access to parent loans to help pay for their college are more likely to pay for tuition with a credit card. While the causal arrow between these two variables cannot be clearly defined in a bivariate analysis, this finding may suggest that students will be more likely to pay for tuition using a credit card if they have access to fewer financial resources.

Figure 5 shows differences in whether college students use credit cards to pay for tuition by race.

Figure 5

Whether Student Pays for Tuition with a Credit Card, by Race



In general, non-White students are more likely to use a credit card to pay for tuition than White students. As Figure 5 shows, there are differences in the percentage of students paying for tuition with a credit card in each category, with Asian and Hispanic students most likely to pay for tuition with a credit card.

Figures 1 through 5 have given a general idea of how paying for college tuition with a credit card varies between demographic groups. In addition, students who use a credit card to pay for tuition have a statistically significantly lower socioeconomic status level (0.10), on average, than students who do not use a credit card to pay for tuition (0.30; the socioeconomic variable is a continuous measure ranging from -1.97 to 1.82). I ran four other cross-tabulation models for students who delayed entry into college by seven months or more, students who had biological children/were married/had previously been married, gender, and whether students used student loans to pay for at least some of their tuition. None of these models showed statistically significant differences in whether students used credit cards to pay for tuition along these lines.

In order to test these general demographic patterns in a more rigorous statistical model, I use a logistic regression analysis that includes all of these variables as independent variables predicting the dichotomous outcome variable of whether students use a credit card to pay for tuition. Table 1 reports the results from this logistic regression model.

Table 1

Logistic Regression Model for Whether Students Use a Credit Card to Pay for Tuition Using ELS Data (Odds Ratios Reported)

VARIABLES	(1) Full Model	(2) Reduced Model
Postsecondary education paid with student loans	1.14	
	(0.14)	
Postsecondary education paid with parent loans	0.77	
	(0.12)	
Delayed entry into college	0.72	
	(0.15)	
First generation college student	1.07	
	(0.21)	
Race (reference group: White)		
Asian	1.39*	
	(0.23)	
Black	1.00	
	(0.21)	
Hispanic	1.29	
	(0.25)	
Other	0.95	
	(0.28)	
Female	0.78*	
	(0.10)	
Respondent has ever been married and/or has a biological child	1.40	
	(0.43)	
Hours worked weekly during 2005-06 school year (reference category: 1-20 hours)		

Did not work	0.87	0.92
	(0.15)	(0.16)
More than 20 hours	1.33*	1.34*
	(0.19)	(0.19)
Socioeconomic status	1.11	1.02
	(0.20)	(0.16)
Respondent started at a 4-year institution	0.70*	0.74*
	(0.10)	(0.10)
SES*Institution	0.65*	0.67*
	(0.12)	(0.12)
Constant	0.26***	0.23***
	(0.05)	(0.03)
Observations	3,321	3,321

*** p<0.001, ** p<0.01, * p<0.05

Note. Standard errors in parentheses

Table 1 presents two logistic regression models: Model 1 includes all variables of interest with an interaction term between a student's socioeconomic status and level of institution they first attended; Model 2 uses stepwise logistic regression to narrow down the predictor variables that hold statistical power in the model. In Model 1 of Table 1, Asian students are more likely to use a credit card for tuition compared to White students, female students are less likely to engage in this practice compared to male students, students who work more than 20 hours a week are more likely than students who work 1-20 hours a week to use a credit card for tuition, and students who start at a 4-year institution are less likely to use a credit card for tuition than students who start at a less than 4-year institution. The interaction effect between a student's socioeconomic status and the institution level they first attend is significant.

When analyzed using a stepwise logistic regression technique, however, the model only retains the work status and institution level variables, as well as the interaction term. I kept the socioeconomic status variable in Model 2 in order to include both main effect variables (socioeconomic status and institution level) in the same model as the interaction term between these two variables. According to the reduced logistic regression model in Model 2, students who work more than 20 hours a week are 34% more likely to pay for tuition with a credit card than students who work 1-20 hours a week. In addition, students who start at a 4-year institution are 26% less likely to pay for tuition with a credit card than students who start at a less than 4-year institution.

Using information from Model 2, Figure 6 shows predicted probabilities of using a credit card for tuition by socioeconomic status and institution level.

Figure 6

Predicted Probabilities of Paying for Tuition with a Credit Card, by SES and Institution Level, 95% Confidence Intervals Included

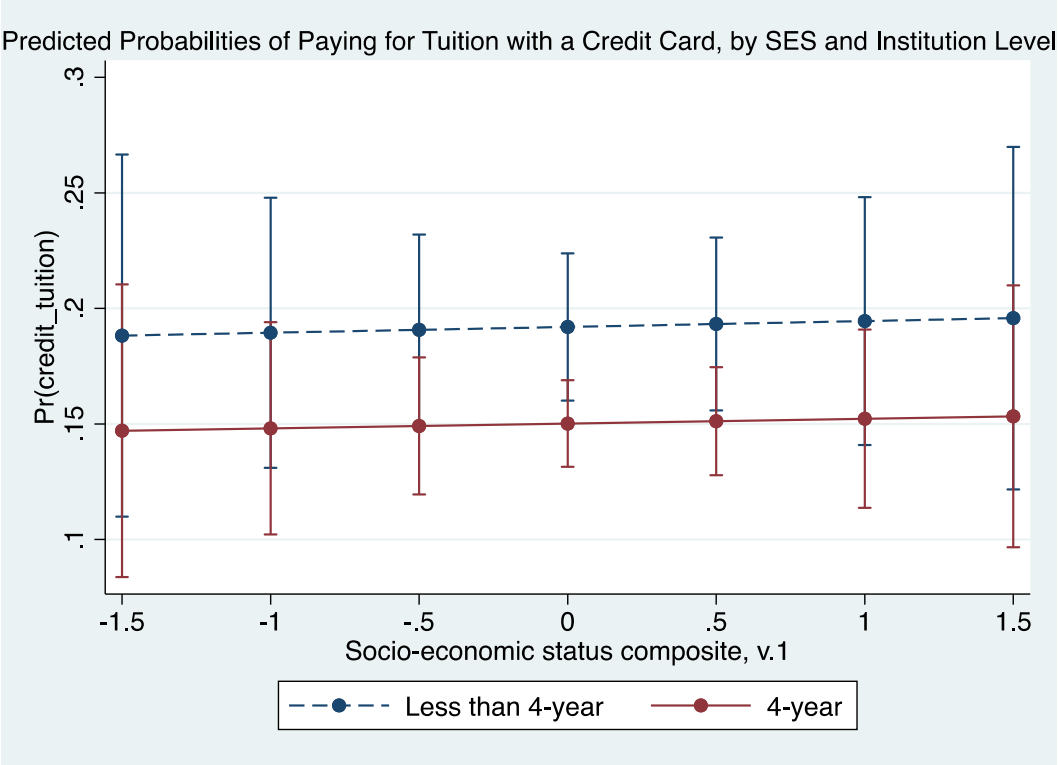


Figure 6 shows that across a range of socioeconomic status values, students who first attended less than 4-year institutions are more likely to pay for tuition with a credit card than students who first attended 4-year institutions. The probability that students will engage in this financial practice remains fairly stable across socioeconomic status values, but higher SES students are marginally more likely to pay for tuition with a credit card than lower SES students at both institution levels. The lowest SES students at less than 4-year institutions, however, are still more likely to use a credit card for tuition than the highest SES students at 4-year institutions. The differences in predicted probabilities by institution level are nearly identical across the range of socioeconomic values, but the predicted probabilities of a lower SES student using a credit card for tuition by institution level are marginally closer by institution level than those for higher SES students.

Taken together, these patterns suggest that the practice of using a credit card to pay for tuition is more common at less than 4-year institutions, even after controlling for demographic factors like SES, race, and gender. In addition, students who work more than 20 hours per week are more likely than students who work fewer hours a week to pay for tuition with a credit card. While these findings provide interesting initial evidence for varying student financial practices in paying for tuition, it is unclear what the motive is behind using a credit card to pay for tuition. Are students using a credit card because they have enough income from higher hours of work that they are confident they can pay it off quickly? Or are students working more hours because they have to in order to pay for college, and therefore using a credit card to pay for tuition because they do not have better financial resources?

Qualitative conclusions from these findings cannot be made because the ELS lacks data describing why students use credit cards to pay for tuition. I turn now to statistical analyses using the SCFW data to gain a better understanding of the reasons why students engage in this financial strategy and whether financial situations or financial knowledge better explains college student credit card use to pay for tuition.

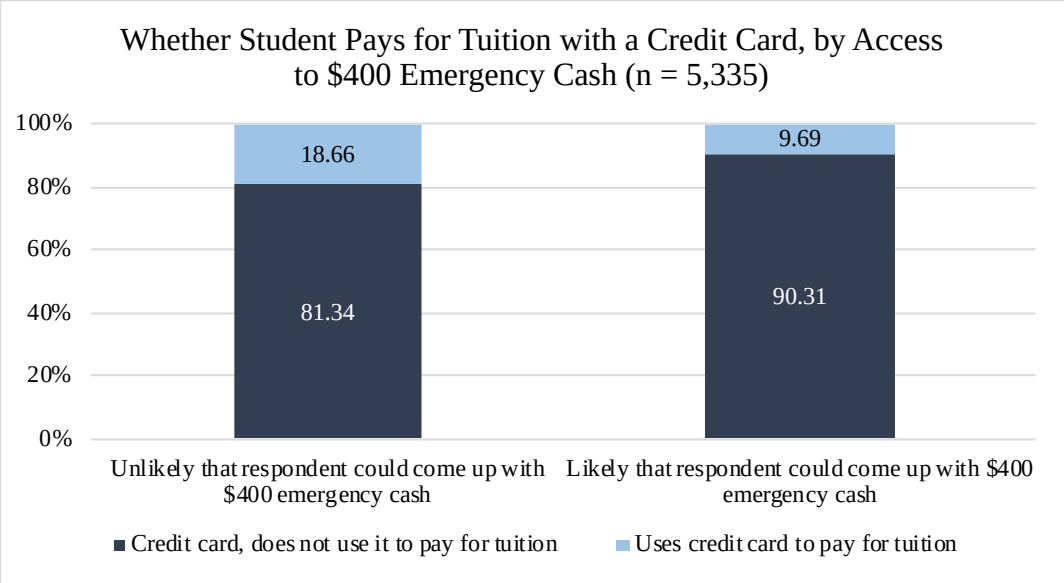
Analyses Using SCFW Data

Figure 7 and Table 2 show statistically significant bivariate relationships in the SCFW data between whether students pay for tuition with a credit card and two variables that indicate their financial situation. These comparisons were tested using chi-square tests for independence or independent samples t-tests. For the overall sample, just over 14 percent of students who own a credit card use a credit card to pay for tuition, similar to the findings in the ELS dataset.

Figure 7 shows students' likelihood of paying for tuition with a credit card by their ability to access $400 cash in an emergency.

Figure 7

Whether Student Pays for Tuition with a Credit Card, by Access to $400 Emergency Cash



Students who report they would be unlikely to come up with $400 cash in the case of an emergency are more than twice as likely to report that they pay for tuition with a credit card than students who report they would be likely to come up with $400 emergency cash. This figure suggests that students in more financially precarious situations are more likely to pay for tuition with a credit card.

Table 2 shows average financial stress scores and average money for activities scores between students who pay for tuition using a credit card and those who do not. Both the financial stress and money for activities scores range between 1 and 4. Students who use a credit card to pay for tuition have higher financial stress scores, on average, and lower money for activities scores. Meaning, students who use a credit card to pay for tuition self-report higher levels of financial stress, but lower levels of having enough money to pay for activities they are interested in.

Table 2

Average Financial Stress Scores and Money for Activities Scores by Whether Student Uses Credit Card to Pay for Tuition

	Does not use credit card to pay for tuition *(n = 4,606)*	Uses credit card to pay for tuition *(n = 729)*
Average financial stress score *(scale: 1-4)*	2.87	3.29
Average money for activities score *(scale: 1-4)*	2.76	2.37

Note. Independent samples t-tests shows statistically significant difference in both financial measures between these groups. Note that the money for activities score is higher when respondents are more comfortable with the money they have access to for activities. This explains the higher average for students who use a credit card to pay for tuition on the financial stress measure, but the lower average for these students on the money for activities measure.

Table 3 reports three logistic regression models interrogating the comparison between financial situations and financial knowledge further. Each model in Table 3 builds on the prior model to show how various control variables influence the outcome variable of whether students use credit cards to pay for tuition.

Table 3

Logistic Regression Models for Whether Students Use a Credit Card to Pay for Tuition Using SCFW Data (Odds Ratios Reported)

VARIABLES	(1) Basic Model	(2) Financial Aid	(3) Full Model
Respondent likely to come up with $400 in an emergency	0.76**	0.72***	0.73***
	(0.07)	(0.07)	(0.07)
Financial stress measure	1.78***	1.78***	1.92***
	(0.11)	(0.11)	(0.12)
Money for activities measure	0.76***	0.77***	0.89
	(0.05)	(0.05)	(0.06)
Financial literacy measure (reference category: 0)			
1	1.08	1.00	1.09
	(0.34)	(0.31)	(0.34)
2	1.40	1.19	1.28
	(0.37)	(0.33)	(0.35)
3	1.06	0.86	0.93
	(0.25)	(0.21)	(0.22)
4	1.38	1.10	1.19
	(0.34)	(0.29)	(0.31)
5	1.62	1.22	1.33

	(0.42)	(0.32)	(0.35)
6	1.69	1.25	1.31
	(0.46)	(0.34)	(0.37)
Respondent's income (reference category: $1-$4,999)			
No income		1.14	0.97
		(0.19)	(0.19)
$5,000+		2.47***	1.52**
		(0.31)	(0.21)
Total student loan amount (reference category: $1-$9,999)			
No student loans		0.62	0.72
		(0.17)	(0.20)
$10,000+		0.80*	0.91
		(0.09)	(0.10)
Whether offered or received Pell Grant		0.99	0.81*
		(0.08)	(0.08)
Dependent			0.52***
			(0.05)
Financially responsible for child, spouse, or other family member			1.25
			(0.16)
Race (reference group: White)			
Black			1.54*
			(0.33)
Latino			1.47*
			(0.24)
Asian			1.54
			(0.44)
Multiracial			1.41
			(0.30)
Other			2.37***
			(0.49)
Prefer not to say			1.13
			(0.39)
Gender (reference category: Female)			
Non-Binary/Other			1.39
			(0.46)
Male			0.91
			(0.10)
Work hours per week (reference category: 1-20 hours)			
Not employed			1.07
			(0.15)
More than 20 hours			1.60***
			(0.18)
Respondent attends 4-year institution			0.57*
			(0.14)
Constant	0.05***	0.04***	0.04***
	(0.02)	(0.02)	(0.02)
Observations	5,335	5,335	5,335

*** p<0.001, ** p<0.01, * p<0.05

Note. Standard errors in parentheses.

Model 1 in Table 3 offers a basic analysis of students' likelihood of paying for tuition with a credit card that only includes the main independent variables in the inquiry: whether the respondent is likely to come up with $400 cash in an emergency, the respondents' financial stress score, money for activities score, and their financial literacy score. Model 1 shows that all these variables except the financial literacy measure are significant predictors of college student credit card use to pay for tuition. Students who are unlikely to come up with $400 emergency cash, students with higher financial stress scores, and students with lower money for activities scores are more likely to pay for tuition with a credit card.

Model 2 in Table 3 introduces three additional variables into the model, all related to a student's financial aid and resources. These variables include students' current income levels, total student loan amount borrowed, and whether they have been offered or accepted a Pell Grant. The three financial situation variables from Model 1 retain significance in Model 2. Students with incomes of $5,000 and more are more likely to pay for tuition with a credit card than students with an income of $1-$4,999. Students with a total student loan amount of $10,000+ are less likely than students with lower student loan amounts to use a credit card to pay for tuition.

Model 3 in Table 3 adds in the final control variables to complete the full logistic regression model with the SCFW data. The added variables include whether the respondent is considered a dependent student, whether the respondent is financially responsible for others, race, gender, work hours per week, and institution type. Similar to the analyses with the ELS data, students who work more than 20 hours per week are more likely than students who work 1-20 hours a week to pay for tuition with a credit card. Students with high incomes, students who were not offered or did not receive a Pell Grant, independent students, Black students, Latino students, students who selected "Other" for race, and students who attend two-year institutions are all more likely to pay for tuition with a credit card.

Whether students have access to emergency cash and students' financial stress scores remain significant predictors of whether students will pay for tuition with a credit card, controlling for the other variables in the model. The money for activities measure, however, becomes non-significant in the final logistic regression model. Net of other factors, students who are unlikely to come up with $400 cash in an emergency and students with higher financial stress scores are more likely to pay for tuition with a credit card. These findings support the idea that students' financial situations are more significant predictors of students' likelihood to use a credit card to pay for tuition compared to students' financial knowledge.

Reasons for Using a Credit Card to Pay for Tuition

In the SCFW survey, students who reported that they have ever used a credit card to pay for tuition were asked a follow up question, "What is the primary reason you used credit cards to pay for your college tuition?" Table 4 shows student responses to this question.

Table 4

Responses to Follow Up Questions About Reasons For Using Credit Cards To Pay For College Tuition

What is the primary reason you used credit cards to pay for your college tuition? (n = 727)	
My financial aid package didn't cover all my tuition	53.1%
I missed a deadline to apply for financial aid/student loans	3.3%
I had to use my tuition money for an emergency	4.3%
I didn't want to take on any more student loans	12.1%
Paying with a credit card is easier than other methods	6.6%

I always pay some of my tuition with my credit card(s)	6.1%
Other (please specify)	14.6%
Total	100%

Over half of students who use credit cards to pay for tuition report they do so because their financial package did not cover the entire cost of tuition. Students expanded on this sentiment in their write-in responses to the "Other (please specify)" option, common responses including that students had to pay for tuition with a credit card to stay enrolled while they waited for a financial aid payment to come in, that there were fees associated with tuition that financial aid did not cover, and that they had no options other than using their credit card pay for college. These results confirm the patterns laid out in the logistic regression models in Table 3. Students seem more likely to pay for tuition with a credit card when they have few other financial options to pay for college, using credit cards as a stopgap in their budget as opposed to using them because they don't understand the financial ramifications of this risky method of payment.

Discussion

The analyses conducted in this paper reveal several important findings. Notably, college students at less than 4-year institutions and in financially fragile situations are more likely than their 4-year institution and financially stable peers to pay for tuition with a credit card. Even when considering students' financial knowledge, financial aid variables, and other demographic variables, students' financial situations remain strong predictors of whether students use a credit card to pay for tuition. The ELS analyses show this pattern in a broad manner while the SCFW analyses give us a closer look at why students engage in this risky financial practice.

One pattern that carries over from the ELS analyses to the SCFW analyses is that students who work high hours (20 or more hours per week) while in college are more likely to engage in risky credit card practices like paying for tuition with a credit card. This finding corroborates prior research that finds this pattern as well (Lyons, 2007). The finding that college students do not need as much financial education as they do financial help to get them out of financially precarious situations runs counter to that of much of the research in this area (Hancock et al., 2013; Norvilitis et al., 2006; Robb & Sharpe, 2009). That is, this paper argues for a more distinctly sociological approach to this topic, one that would assess the structure of funding available to students who are traversing the higher education landscape instead of social-psychological factors as the main interest of study. Recent research pushes scholarship toward this kind of approach (Goldrick-Rab, 2016) and with the ever-changing structure of higher education in the United States, we cannot lose sight of how this perspective can help us understand the broader environment in which college students are vying for better lives.

About 14-16 percent of college students in the two datasets examined here pay for tuition with a credit card. This group of college students is specific to college students who own a credit card in both samples, but it is still a sizeable portion of college students participating in this practice. Furthermore, students engage in this financial strategy at higher rates when they find themselves in financially fragile situations or at two-year institutions. While this paper does not focus at length on the institutional differences in this practice, nearly a third of the students in the SCFW who attend a two-year institution pay for tuition with a credit card.

The students who are most likely to have trouble getting access to higher education and be able to persist through college to the degree are more likely to pay for tuition with a credit card. Because credit cards are high interest financial tools that are non-deferrable, the practice of paying direct educational expenses like tuition with such a risky financial tool suggests that these students encounter continual challenges during their time in college. If higher education is to play the role of reducing inequality in society, scholars and practitioners should pay attention to student financial behaviors as a way to pinpoint

areas of growth in order to help historically underprivileged social groups access higher education and successfully navigate through it.

Conclusion

This paper is just a beginning regarding research in the area of college student credit card use for direct educational expenses. Substantial research has been conducted on the general topic of college student credit card use, many times with methodological limitations and little attention to students using credit cards to pay for college (Hayhoe et al., 2005; Manning, 2000; Manning & Kirshak, 2005; Robb & Sharpe, 2009). Investigating college student credit card use to pay for tuition with two unique and well-suited datasets to answer the empirical questions of this paper is a good start to expanding this field of research to help us better understand how college student credit card use fits in with the broader picture of inequality in society.

Researchers should conduct additional research in this area. First, while there is a clear link between financial stress and paying for tuition with a credit card, the quantitative data cannot determine the causal arrow between these two variables. Do college students have higher levels of financial stress because they used their credit card to pay for tuition and now must deal with a higher debt balance? Or are they using their credit cards to pay for tuition because they are in financially stressful positions? It is likely that financial stress and using credit cards to pay for tuition exist in a mutually-reinforcing relationship—and qualitative responses in the SCFW show some evidence for financially stressful situations leading to paying for tuition with a credit card—but additional research on this relationship is needed.

Second, because of differences in which institutions allow students to pay for tuition with a credit card without additional fees, additional research should investigate the way that community college students navigate paying for their education. Recent data from the NCES National Postsecondary Student Aid Study (NPSAS: 2016) shows that students use credit cards to pay for tuition at an even higher rate than is reflected in the ELS and SCFW datasets, especially at public 2-year colleges (see Table 5).

Table 5

Used Credit Cards to Pay Tuition and Fees In 2015-2016 By NPSAS Institution Sector

	No (%)	**Yes (%)**
Total	69.09	30.91
NPSAS institution sector		
Public 4-year	72.86	27.14
Private nonprofit 4-year	76.13	23.87
Public 2-year	61.54	38.46
Private for profit	76.87	23.13
Others or attended more than one school	68.31	31.69

Note. The names of the variables used in this table are: CRTUIT and SECTOR4. The weight variable used in this table is WTA000. U.S. Department of Education, National Center for Education Statistics, 2015-16 National Postsecondary Student Aid Study (NPSAS:16).

Community colleges aim to provide a way for students who normally would not have access to higher education to go to college and interrogating some of these questions further would add much needed knowledge to our understanding of how to support this particular population of college students best as they navigate through higher education.

Ultimately, the main conclusion of this paper is that students without financial resources to pay for college resort to financially risky behaviors (e.g., paying for tuition with a credit card) to make it through college. This particular behavior is risky given high interest rates on credit cards and given credit card debt cannot be deferred while a student is in college like student loans can. These two factors mean that if students who use credit cards to pay for tuition do not have funds ready to pay their credit card debt immediately, they are taking on an additional, high-interest financial burden during a time when they are already strapped for the funding needed to pay for their college education, theoretically leading to lower odds of successfully funding—and subsequently completing—their degree.

This finding gives credence to the position that students should be recipients of increased funding for higher education and, as a system, we should think about ways to reduce the cost of attending college while increasing the financial support available to college students vying to make a better life for themselves. Recent research has shown that when given the option due to federal student loan policy changes, college students utilize less risky borrowing (e.g., Stafford loans) instead of higher cost and more risky borrowing (e.g., private loans and parent PLUS loans) to pay for college (Lee et al., 2020). To extend this logic to include paying for tuition with a credit card, providing college students with options for less risky college funding may help students pay for college without needing to use such a risky financial strategy. Particularly for students from underprivileged backgrounds, getting them financial resources at a pivotal time in college may prevent them from financial risk that could increase the obstacles they already face to finding a place in the labor market that could help them earn a decent living post-college.

Implications for Practice

- There is some sentiment that college students engage in risky financial behavior because they lack financial knowledge, but this paper suggests that college students' financial situations are better predictors of risky financial behavior—namely, paying for tuition with a credit card—than college students' financial knowledge.
- University practitioners should consider the varied ways college students fund their education in conjunction with their financial aid package. Nearly two-thirds of students who reported paying for tuition with a credit card in this study said they did so either because their financial aid package didn't cover all of their tuition or because they didn't want to take on any more student loans.
- Given this paper's findings that students in financially precarious situations and students who attend two-year colleges are more likely to pay for tuition with a credit card, financial aid practitioners should be particularly sensitive to how these risky methods of paying for college disproportionately impact these students, both during their college years and after as they deal with such high-interest, non-deferrable debt.

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Appendix

The ELS data have questions about college student credit card use that include:

- "Have you used your credit card to pay any portion of your tuition?" This question was asked to any respondent with at least one credit card who ever attended post-secondary school.

Important control variables from the ELS data include:

- Socioeconomic status (continuous measure ranging from -1.97 to 1.82)
- Race
  - White
  - Asian
  - Black
  - Hispanic
  - Other
- Gender
  - Male
  - Female
- Whether student delayed entry into college
  - Enrolled in college within six months of graduating from high school
  - Delayed entry into college by 7 months or more after graduating from high school
- First generation student status
  - Respondent has at least one parent who attended college
  - Respondent is the first person in their family to attend college
- Hours worked weekly 2005-06
  - Did not work
  - 1-20 hours
  - More than 20 hours
- Institution type
  - Respondent first attended a less than 4-year postsecondary institution
  - Respondent first attended a 4-year postsecondary institution
- Whether students' postsecondary education is paid in part with student loans
  - No
  - Yes
- Whether students' postsecondary education is paid in part with parent loans
  - No
  - Yes
- Respondent has biological child or is currently or has been previously married in 2006
  - No
  - Yes

The SCFW data also ask about college students' use of credit cards to pay for tuition, with some additional follow up questions that investigate students' reasons for and beliefs about using credit cards to pay for educational expenses, including tuition:

- "Have you ever used a credit card in your name to pay for your college tuition?"
  - No
  - Yes
- "What is the primary reason you used credit cards to pay for your college tuition?

        - My financial aid package didn't cover all my tuition
        - I missed a deadline to apply for financial aid/student loans
        - I had to use my tuition money for an emergency
        - I didn't want to take on any more student loans
        - Paying with a credit card is easier than other methods
        - I always pay some of my tuition with my credit card(s)
        - Other (please specify) _____"

With regard to financial situation variables and financial literacy variables, the SCFW asks the following questions:

- "How likely is it that you could come up with $400 in cash in the event of a financial emergency during the school year?"
    - Very Unlikely/Unlikely
    - Likely/Very Likely

**Financial stress scale (1-4) reporting respondent's mean score from the following questions

- Please indicate the extent to which you agree or disagree with the following statements:
    - I feel stressed about my personal finances in general
    - I worry about being able to pay my current monthly expenses
    - I worry about having enough money to pay for school
- All questions used to create the financial stress scale were Likert-type items with the following possible responses
    - 1 = Strongly Disagree
    - 2 = Disagree
    - 3 = Agree
    - 4 = Strongly Agree

**Money for activities scale (1-4) reporting respondent's mean score from the following questions

- Please indicate the extent to which you agree or disagree with the following statements:
    - I have enough money to participate in most of the same activities as my peers
    - I have enough money to participate in most activities that I enjoy
- All questions used to create the money for activities scale were Likert-type items with the following possible responses
    - 1 = Strongly Disagree
    - 2 = Disagree
    - 3 = Agree
    - 4 = Strongly Agree

**The following questions were combined into a cumulative financial literacy score from 0-6. Students received 1 point for each question they answered correctly.

- "Imagine that the interest rate on your savings account is 1% per year and inflation is 2% per year. After 1 year, would you be able to buy more than today, exactly the same as today, or less than today with the money in this account?
    - More than today
    - Exactly the same as today
    - Less than today
    - Don't know"
- "Suppose you have $100 in a savings account and the interest rate was 2% per year. After 5 years, how much would you have in the account if you left the money to grow?
    - More than $102
    - Exactly $102
    - Less than $102

    - Don't know"
- "Suppose you borrowed $5,000 to help cover college expenses for the coming year. You can choose to repay this loan over 10 years, 20 years, or 30 years. Which of these repayment options will cost you the least amount of money over the length of the repayment period?
    - 10-year repayment option
    - 20-year repayment option
    - 30-year repayment option
    - Don't know"
- "All paycheck stubs show your gross pay (the total amount you earned before any taxes were taken out for the pay period) and your net pay (the amount of your check after all taxes). The taxes that are commonly taken out include federal, state and local income tax, Social Security tax, and Medicare tax. On average, what percentage of your income would you expect to receive as take-home pay?
    - 100%
    - 90-99%
    - 80-89%
    - 70-79%
    - Don't know"
- "Over a long period of time, which of the following types of investments will give you the highest rate of return on average?
    - Savings account
    - Stocks
    - Bonds
    - Don't know"
- "True/False: Maxing out your credit card will negatively impact your credit score, even if you make the minimum monthly payments.
    - True
    - False
    - Don't know"

Important control variables from the SCFW include:

- Whether respondent has been offered or received a Pell Grant.
    - No
    - Yes
- Total student loan amount borrowed (this includes federal and private loans, but not loans taken out by parent(s)/guardian(s))
    - No student loans
    - $1-$9,999
    - $10,000+
- Current annual income
    - No income
    - $1-$4,999
    - $5,000+
- Work hours per week
    - Not employed
    - 1-20
    - More than 20
- Whether respondent is considered a dependent student of their parents for federal financial aid

    - No
    - Yes
- Whether respondent is financial responsible for a child, spouse or other family member
    - No
    - Yes
- Whether respondent attends a 4-year postsecondary institution
    - No
    - Yes
- Gender
    - Female
    - Male
    - Non-binary/Other
- Race
    - White
    - Black
    - Latino
    - Asian
    - Multiracial
    - Other
    - Prefer Not to Say

Descriptive Statistics for ELS Variables

Variables	Proportion	Min	Max	N
Respondent pays for tuition with a credit card	0.16	0	1	3,321
Socioeconomic status (mean)	0.27	-1.97	1.82	3,321
Race	-	0	4	3,321
White	0.62	-	-	*2,064*
Asian	0.13	-	-	*432*
Black	0.09	-	-	*314*
Hispanic	0.11	-	-	*353*
Other	0.05	-	-	*158*
Female	0.60	0	1	3,321
Hours worked per week 2005-06	-	0	2	3,321
Did not work	0.24	-	-	*799*
1-20 hours	0.39	-	-	*1,296*
More than 20 hours	0.37	-	-	*1,226*
First generation college student	0.17	0	1	3,321
Respondent has biological child or is married or previously married in 2006	0.03	0	1	3,321
Delayed entry into college	0.09	0	1	3,321
Started at a 4-year postsecondary institution	0.74	0	1	3,321
Used student loans to pay for some of college	0.45	0	1	3,321
Used parent loans to pay for some of college	0.19	0	1	3,321

Descriptive Statistics for SCFW Variables

Variables	Proportion	Min	Max	N
Respondent pays for tuition with a credit card	0.14	0	1	5,335
Respondent has access to $400 cash in an emergency	0.56	0	1	5,335
Financial stress measure (mean)	2.93	1	4	5,335
Money for activities measure (mean)	2.72	1	4	5,335
Financial literacy measure	-	0	6	5,335
0	0.03	-	-	*180*
1	0.07	-	-	*357*
2	0.12	-	-	*640*
3	0.21	-	-	*1,094*
4	0.26	-	-	*1,370*
5	0.22	-	-	*1,150*
6	0.10	-	-	*544*
Respondent's income	-	0	2	5,335
No income	0.11	-	-	*566*
$1-$4,999	0.30	-	-	*1,607*
$5,000+	0.59	-	-	*3,162*
Total student loan amount	-	0	2	5,335
No student loans	0.03	-	-	*184*
$1-$9,999	0.27	-	-	*1,439*
$10,000+	0.70	-	-	*3,712*
Whether offered or received Pell Grant	0.62	0	1	5,335
Dependent status	0.60	0	1	5,335
Financially responsible for child, spouse, or other family member	0.18	0	1	5,335
Race	-	1	7	5,335
White	0.67	-	-	*3,558*
Black	0.08	-	-	*411*
Latino	0.12	-	-	*664*
Asian	0.05	-	-	*286*
Multiracial	0.05	-	-	*247*
Other	0.02	-	-	*99*
Prefer not to say	0.01	-	-	*70*
Gender	-	0	2	5,335
Female	0.68	-	-	*3,611*
Male	0.31	-	-	*1,652*
Non-binary/Other	0.01	-	-	*72*
Work hours per week	-	0	2	5,335
Not employed	0.23	-	-	*1,244*
1-20	0.41	-	-	*2,165*
More than 20	0.36	-	-	*1,926*
Respondent attends 4-year institution	0.87	0	1	5,335