

Exploring and Analyzing Students' Financial Perceptions and Trends in Higher Education Using a Dynamic Data Visualization Dashboard

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[Abstract] The main purpose of this research is to explore and analyze financial perception and driving factors within a student population in university environments. Furthermore, this investigation aims to provide an explanation for their financial behavior and identify patterns among the categories of collected data using a dynamic data visualization dashboard. With the results of this study, tailored educational resources can be directed toward the individuals who participated and thus empowering them to better position themselves for financial freedom as they prepare to enter the workforce. Finally, based on the preliminary analysis of the results and conclusions, concise recommendations are provided.

[Keywords] financial perception, higher education, data visualization dashboard

Introduction

The intersection of financial literacy and college education has been studied extensively over the past twenty years. This is due to the long-enduring crisis of well-educated individuals lacking the basic financial literacy skills required to live a comfortable life without financial strain in the United States. Approximately 48% of college graduates live paycheck to paycheck, according to a 2023 study (Intelligent, 2023), and this can, in part, be attributed to mismanagement of funds or a lack of financial literacy.

A 2023 Fidelity Investments study found that 70% of recent graduates would choose a different major for better financial outcomes. Many students lack an understanding of college costs and loan repayment, leading to financial struggles after graduation. The study suggests that improved financial education is essential for future students. Furthermore, reviews by Raj (2023) explore how behavioral biases, like overconfidence, affect students' decisions about loans. These biases can lead to poor financial choices. The study also discusses using social media to improve financial literacy, helping students better manage debt and make informed financial decisions.

Another study by Rodríguez-Correa et al. (2025) reviews financial literacy among young college students. It finds that many students lack essential financial skills, impacting their ability to budget and save. The authors recommend targeted education programs to enhance students' financial understanding and prepare them for future financial responsibilities.

Beschi et al. (2025) in a recent study review how well people understand data visualizations. It looks at how dashboards help users read and interpret data. The authors suggest that better design and education can improve how people use dashboards to make decisions. Furthermore, another paper examines common design patterns in dashboards. By analyzing many examples, the authors

identify the best practices for creating effective dashboards. They provide guidance to help designers make dashboards that are easy to use and understand (Bach et al., 2022). Additional research explores how text is used in interactive dashboards. The authors find that text helps guide users and explain data. They recommend ways to use text effectively to improve user experience (Sultanum & Setlur, 2024).

This paper will explore and analyze university students' financial perceptions and trends using survey responses, describe the methodology used to collect the data, report the results, including a dynamic data visualization dashboard, and propose several recommendations to address the financial literacy crisis among college-educated individuals.

Research Methodology and Design

Research Setting and Participants

For the collection of data, students were selected using a simple random sampling method in the Student Center of the university, in Registered Student Organization group chats, and in other areas of the main campus. Sixty-two (62) students participated in this research study. To ensure a higher level of privacy, no names or other personal attributes such as gender or age were collected.

Survey Questionnaire

To collect the data used for this research and the corresponding data visualization dashboard, students from various parts of the university were asked to participate in a brief survey covering the following five selected questions:

- *Do you consent to your responses being used in a study?*
- *What is your classification?*
- *What is your credit score?*
- *What percentage of your total income do you believe should be saved or invested for the future?*
- *Where do you typically obtain financial advice?*

The vague nature of these questions is due to the numerous recommendations that can be generated from the results of the study. If most students have poor credit scores, solutions such as requiring mandatory financial literacy courses at colleges and universities across the nation can be implemented. Another example would be suggesting that legislators enforce a mandatory warning for content related to personal finance and investing on social media platforms if an overwhelming number of students report that their financial advice comes from these platforms. As evidence, over the past five years, there has been an influx of crypto-related scams and stock price manipulations due to the power that social media influencers have over their audiences (Yahoo News, 2025).

Concise Procedures

The methodology used in this research study was a survey administered to a random selection of Registered Student Organization group chats and other areas of the university on the main campus. If approached in person, students were either approached individually or in pairs and first asked if they consented to participate in the survey. The brief, anonymous survey was hosted on Microsoft Forms and was exported to an Excel sheet. Microsoft Forms has a built-in pie chart feature that shows the breakdown of responses and allows for quick data analysis. After the data was

transferred into the Excel sheet, it was imported into Power BI, Microsoft's premier data analytics tool, for further analysis.

Results Incorporating Data Visualization Dashboard

During the simple random survey, 62 students were surveyed, which lends itself to a balanced and relatively unbiased dataset. To ensure that no biases were intentionally captured, students were not surveyed based on their race, gender, or perceived intelligence. A highly indicative statistic that appeared in the data is that 48% of students receive their financial advice from "parents or family members." While there is not enough data to thoroughly support the correlation between 48% of college graduates living paycheck to paycheck and 48% of students receiving financial advice from parents or other family members, it does call into question the cyclical nature of Americans struggling to achieve financial freedom.

The credit system in America has been heavily criticized by those who have fallen victim to its harsh penalties, particularly the negative impact on credit scores for missed payments, which may result from a lack of knowledge or personal misfortune. Another striking statistic among the surveyed individuals was that 40% reported having a credit score over 700. The national average credit score as of March 2024 is 705, with the state of Georgia having an average score of 686 (Equifax, 2024). Equifax and many other governing bodies of the credit system have determined that a credit score in the range of 670–799 is considered good to very good. Between 65% and 70% of the data fall into the categories of good and very good, which suggests that students have begun to take more responsibility for their credit at an earlier age, allowing them to be better prepared to inquire about loans in the future. Although 40% of students are currently at or above the national average and show a strong ability to pay off their debts, this does not necessarily reflect their ability to manage debts well, which is ultimately what keeps individuals living paycheck to paycheck.

The last major trend that appeared in the data is that 53% of the surveyed individuals reported that they believe 20% to 30% of their annual income should go toward savings and investing, and 15% reported that over 30% should be saved or invested. With a combined total of 68% of students stating that at least 20% of their income should go toward savings and investing, this contrasts sharply with the actual percentage of Americans who have access to an emergency fund of at least \$1,000 for an unforeseen expense, which is only 59% (Annie Marie D. Lee–CBS, 2025). This contrast raises another question: do students actually plan to save at least 20% of their income, or does that money get absorbed by the increasing cost of living and possibly lifestyle inflation?

In recent years, there has been a rising cost-of-living crisis, with the highest food, housing, and insurance prices in modern history, causing immense strain on the average American, regardless of his or her financial literacy. While inflation is out of the average citizen's control, lifestyle inflation is not. With graduating students and recent graduates becoming fully independent of their support systems, they often seek glamorous items and experiences influenced by social media and the overwhelming content they consume daily. This desire to live an "aesthetic life" has led many graduates to pursue high-rise apartments and other "luxury" items to appear wealthy, while sacrificing their financial well-being. While this may not be the case for the students in this survey as they graduate, it should be noted that it has become increasingly difficult to save at least 20% of their annual income when faced with rising living costs and social pressure to maintain a lavish lifestyle.

Dynamic Data Visualization Graphs and Dashboard

Below are five figures from a comprehensive Power BI dashboard, designed to visually represent the data collected in this research paper. This dashboard effectively makes complex data more accessible and easier to understand. The data presented directly corresponds to the study's findings, offering an interactive and insightful overview. Each figure includes a description under the graph to promote comprehension and clarity for the reader. These descriptions help guide the interpretation of the data, highlighting key insights and contextualizing the information. Thus, under each figure, there is a brief yet thorough description explaining what the data means, along with suggestions for interpretation, helping the reader draw meaningful conclusions (Figures 1, 2, 3, 4, and 5).

Figure 1

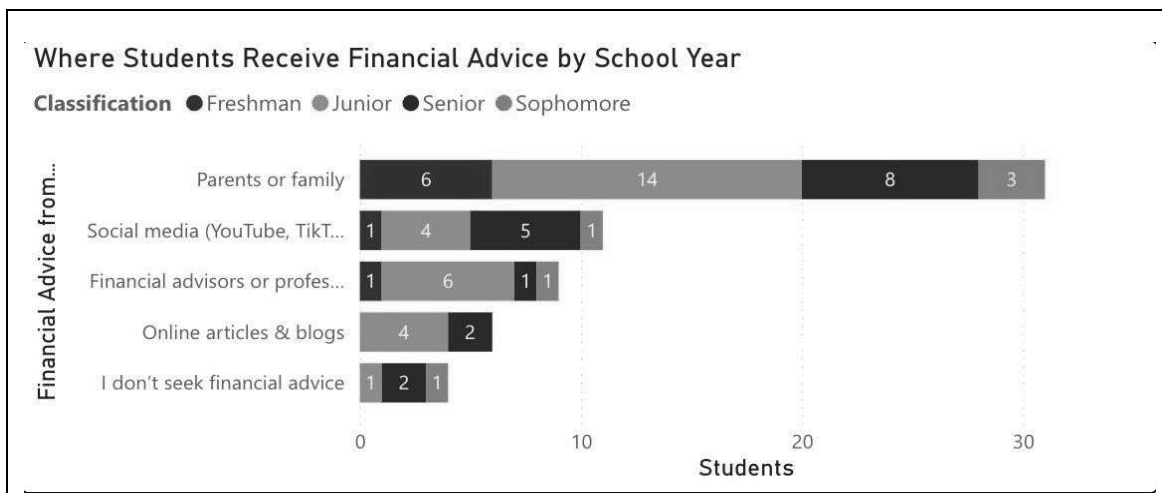


Figure 1 represents the number of students who receive their financial advice from different sources (parents or family, social media platforms, financial advisors or professionals, online articles, or seeking none at all). This data is also broken down into classifications to provide a better understanding of where students at different points in their lives gain financial advice. The most reported response was that students receive financial advice from parents or family, which raises further questions about the cyclical nature of financial struggles among college-educated individuals. Over a third of the participants reported receiving financial advice from parents or family, and just under half (48%) of college graduates in the workforce report living paycheck to paycheck.

Figure 2

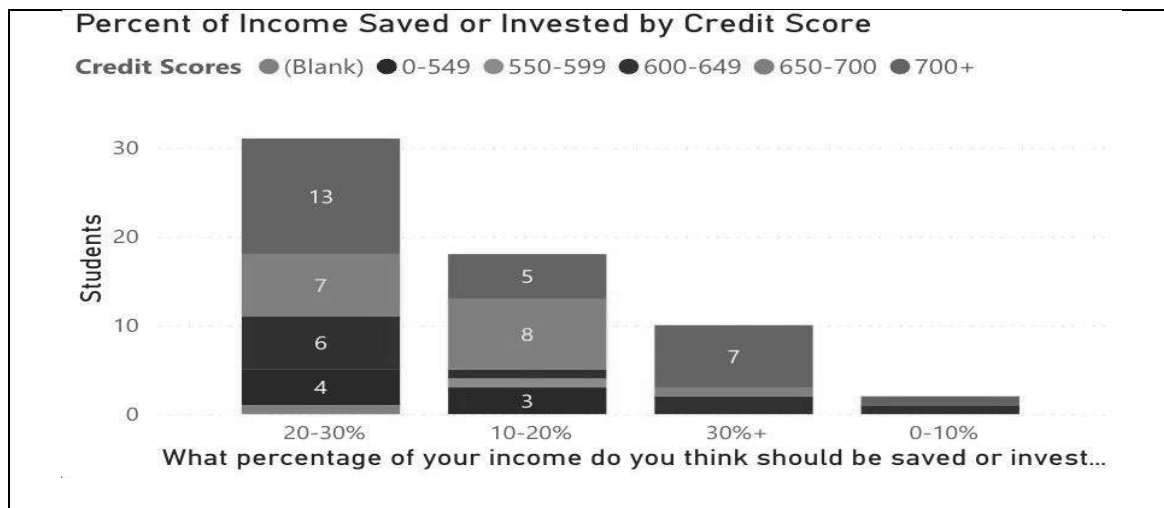


Figure 2 shows the total number of reported responses for the question, “What percentage of your total income do you think should be saved or invested for the future?” Each bar is then broken down into smaller categories using the legend of credit scores. According to the data and its visual representation, approximately half of the students surveyed agree that 20-30% of their income should be saved or invested. Within that group of individuals, 43% have a reported credit score of over 700, putting them either on par with or above the average American. While their credit score shows they have a strong capability to repay debts, it is not a direct indicator of their ability to save their income. This can be seen in a study revealing that 59% of Americans do not have the ability to access \$1,000 in emergency funds.

Figure 3

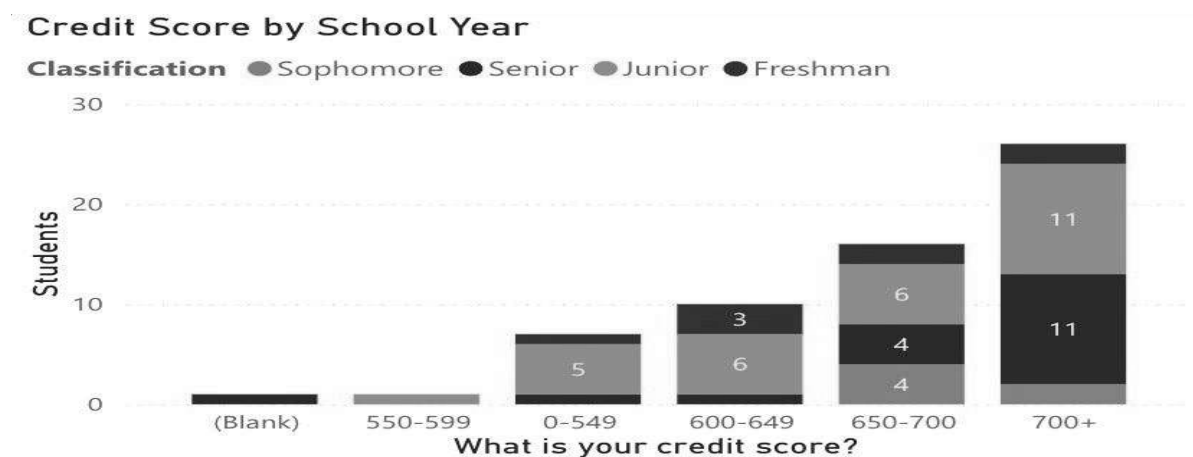


Figure 3 represents the total number of students who reported being within a specific credit score range, broken down by their classification in school. This data shows that approximately 44% of the total population reports having a credit score of over 700, which places them on par with or ahead of the average American credit score of 705 nationally and 686 in Georgia. The credit system

reflects one's ability to repay debts, rather than their ability to manage personal assets and make the best use of those funds. For individuals in the mediocre to lower half of the credit range, an overwhelming majority reported being juniors. This could be due to various reasons, including challenges balancing work and school, excessive use of credit cards for school-related items, or unforeseen circumstances and expenses that may have arisen during this point in their matriculation. Seniors tend to have more established credit scores ranging from 650 to over 700, which can be attributed to having longer credit histories, more experience paying off debts strategically, or seniors having access to more income to pay off debts through internships or other sources of income.

Figure 4

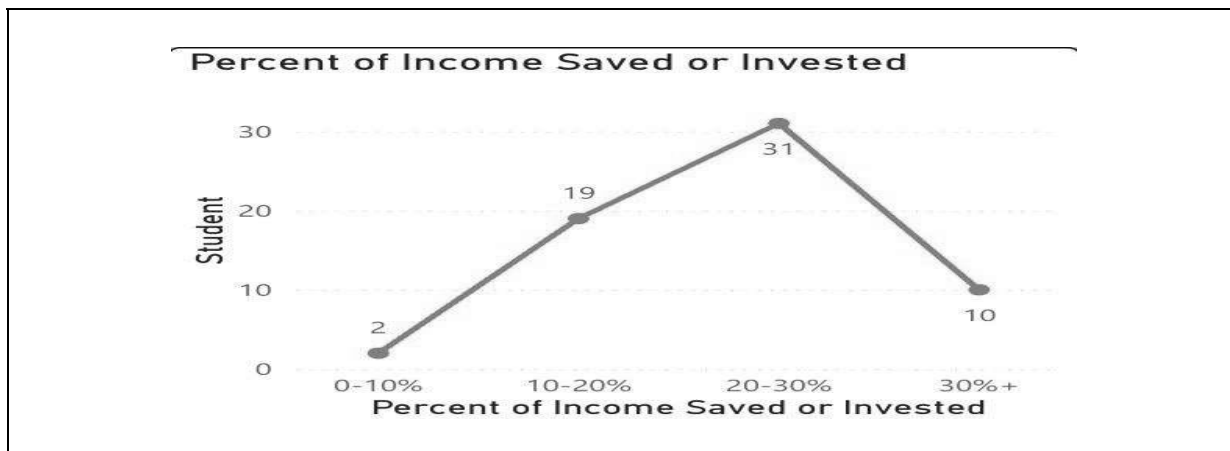


Figure 4 shows what percentage of a student's income should be saved or invested for the future. Sixty-six percent of the population agrees that at least 20% of their income should be saved and invested, which aligns with many popular budgeting strategies. However, with recent increases in the cost of living and the "lifestyle inflation" phenomenon that occurs among individuals who earn more income, it contradicts the reality of these suggested savings figures. With over half of Americans unable to access \$1,000 in case of an emergency, it may indicate that saving this percentage of income has become infeasible in recent years. Due to this lack of savings or access to an emergency fund, credit card debt has reached record highs in the U.S., and payday loan companies have been able to profit from the malicious interest rates associated with the loans they offer.

Figure 5

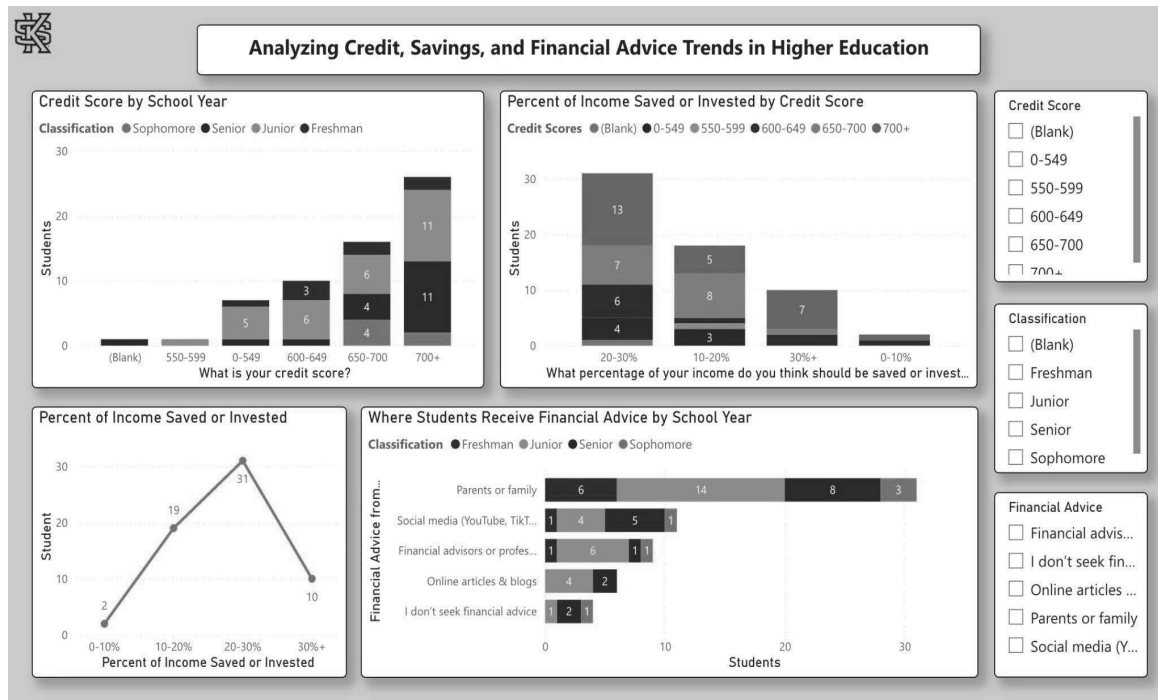


Figure 5 shows the comprehensive dashboard, with all the previous figures mentioned above included. There are three slicers (filters) on the right that allow the user to find highly specific information and extract data relevant to them. Each graphic is dynamic and connected to one another through the data, adjusting based on the user's selections for slicers or their interactions with other visuals.

Conclusions and Recommendations

An obvious recommendation for the savings issue that has been spreading across the nation is to urge politicians to follow strong economic advice and make the necessary changes to shift the state of the economy to favor the average consumer. However, this is a lengthy process and often changes with different presidential administrations. A more stable recommendation would be to offer students a way to systematically allocate their savings and make younger individuals aware of their subconscious desire to live a life similar to someone they see on social media platforms. Regarding credit, the data shows that students can pay off their debts in a timely manner with a relatively low percentage of missed payments. However, it should be emphasized in post-secondary programs that taking on debt is not always optimal and that students should only leverage debt for the sake of increasing their credit score or profiting from it. Lastly, universities across the nation should provide financial advisors in addition to the school's traditional financial aid office to give students personalized insight into their projected incomes and how they can manage their finances when they begin earning substantially larger incomes.

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The primary author of this article is Matai Blain, a senior undergraduate student at Kennesaw State

University who also participated in honors programs under the direct mentorship of coauthors. Coauthors Max North and Sarah North are researchers at the Immersive Visualization Environment Research & Metaverse Supercluster. AI Disclaimer: This paper was created with the assistance of AI-based tools (such as ChatGPT) for tasks including drafting, editing, grammar correction, and idea refinement. However, all intellectual direction, critical analysis, final content decisions, and academic integrity of the work are the sole responsibility of the authors. The use of AI was supplementary and did not substitute human judgment, originality, or authorship. The content of this article does not reflect the opinion, position, or policy of the Information Systems & Security Department, Coles College of Business, or the Computer Science Department, College of Computing and Software Engineering.

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