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RESEARCH ARTICLE

The Impact of The Early Decision Process on College Admission Equality

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ABSTRACT: Research has shown that the amount and quality of education has a clear, positive relationship to an individual's salary. The first step in higher education is to obtain an undergraduate degree from a college or university. There are different ways students can apply to an undergraduate program, the most common being Regular Decision (RD), with early admission processes like Early Decision (ED) and Early Action (EA) also being used due to their various benefits, including higher acceptance rates. However, the process of ED requires students to commit to a college before knowing the financial aid they will receive, making it risky for students reliant on financial aid to afford college. This study uses a mixed method approach to determine whether there is a positive relationship between a student's likelihood to apply ED and their family's ability to afford college. The survey results found that ED significantly favored students whose families were able to afford their education. However, the results of the meta-analysis had to be disregarded due to the extensive limitations. These results implied that ED has unfairly favored those from wealthier backgrounds and that reforms must be made to ensure full economic equality in college admissions.
KEYWORDS: Social Sciences; Economy; Wealth Equality; College Admissions; Early Decision.

Introduction

This paper focuses on analyzing the Early Admission processes of applying to colleges and universities in the United States. Specifically, it focuses on the Early Decision process and its connection with students' household wealth. The leading question of this study is, "Does the Early Decision process favor students whose families can afford their education?" This question is researched by reviewing existing literature on the subject, paired with a survey sent to high school students. Additionally, a meta-analysis was conducted. However, its results were inconclusive due to several overarching limitations.

The literature review concluded that there is a clear positive correlation between education and income. It also highlights the benefits of Early Decision, mainly the increased chance of getting accepted to top, competitive schools. Additionally, it showed that attendance at these top schools resulted in a higher-than-average starting salary. The survey resulted in data suggesting that the Early Decision process favors students whose families can afford their education. Together, this data shows that students whose families can afford their education are more likely to apply Early Decision to a college, have a higher chance of being accepted to these schools, and graduate with a higher starting salary.

This highlights why reevaluating the Early Decision process is so important. The results of this study show a clear unfairness towards students whose families are unable to afford their college. To fully understand this, the following section of this paper explains the different types of early admission processes, the history of these processes, and their benefits and drawbacks. Then, the paper discusses how education and personal wealth are related to highlight the main issues with Early Decision. Then, the paper outlines why and how the survey was conducted, discusses the findings and the limitations, and lays out the implications of the findings. After the paper concludes, there are two appendixes. The first appendix, Appendix A, shows the entire survey, including the consent form. The second appendix, Appendix B, includes the information about the meta-analysis. This information has been placed in the Appendix due to its inconclusive results. Overall, this paper discusses past research on this topic and outlines the entire process and results of the study conducted.

Background on Early Admissions:

Students have several options for processes when applying to university, the most popular being Regular Decision (RD).[1] Besides RD, there are several different early admission processes that students can apply through, the most common being Early Decision I (ED I), Early Decision II (ED II), Early Action (EA), and Restricted Early Action (REA). Table 1 outlines the similarities and differences using data from Best Colleges and The Koppelman Group, two websites to help students understand and get accepted into college.[2, 3]

Table 1: Admission Processes[2, 3]

Process	Binding/ Nonbinding[a]	Restrictions	Application Deadline	Admission Decision Deadline
RD	nonbinding	n/a	January/February 2023	March/April 2023
ED I	binding	Only apply 1 school ED, unlimited EA	November 2022	December 2022
ED II	binding	Only apply 1 school ED, unlimited EA	early/mid-January	February
EA	nonbinding	unlimited	November 2022	December 2022
REA	nonbinding	Cannot apply to any other college EA or ED	November 2022	December 2022

Note: Deadlines are accounting for the Fall 2023 semester of the 2023-2024 school year

[a]Binding/Nonbinding is accounting for the contract made when applying. A binding contract means that if a student is accepted, they will attend that college and rescind any applications submitted to other colleges. A nonbinding contract means that, if accepted, a student does not have to attend the school.

[b]Admissions Decision Deadline is the deadline for colleges to release students' acceptance status.

As of 2022, there were nearly 3,000 four-year colleges and universities in the United States. Tables 1 and 2 show the number of schools offering one or more of the four main early application processes using data provided by Rebecca Safier, a graduate of Harvard's Graduate School of Education.[4, 5, 6]

Table 2: Number of Four-Year Colleges and Universities that Offer One or More Early Admission Processes.[4, 5, 6]

Early Admission Process	# of colleges/ universities
EA only	233
EA & ED I	38
ED I only	41
EA & ED I & II[a]	31
ED I & II only	70
EA & REA	6
REA only	0
total	419

Note: No college offers three or more early admission processes.

[a]All colleges that offer ED II also offer ED I. For this paper, colleges that provide ED I & II will be considered separate from those that only offer ED I.

Table 3: Overall Total Number of Four-Year Colleges and Universities that Offer Each Early Admission Process.[4-6]

Early Admission Process	# of colleges
EA	308
ED I	79
ED I&II	101
REA	6

Tables 1 and 2 show that EA is the most prevalent early admission process, followed by ED I and II, ED I, and REA.

History of Early Decision:

ED is a relatively new process. The first precursor of ED that Fallows identifies was the ABC system used by Harvard, Yale, and Princeton in the 1950s.[7] This system was specifically for students attending traditional high schools, known to have many graduates go to Ivy Leagues called "feeder schools," which cost about $1,250 to attend in the 1950s ($15,400 in 2023 dollars).[8,9] Admissions officers would visit these schools, interview students, look at their transcripts, talk to counselors, and then rank the students based on how likely they were to get accepted.[7] This system gave an advantage to these students, bringing them to these top schools' attention and giving them a higher chance of getting in.[7] This benefit of getting a school's attention is still used as a primary motivator for students to apply through an early admission process, especially ED.[10] ED programs inspired by the ABC program continued to develop throughout the mid-1900s, where students were guaranteed a higher chance of being accepted. Colleges were guaranteed that the students they accepted would attend.[7]

The Importance of Yield Rates:

When looking at ED and early admission processes, one of the main reasons colleges offer them is to increase their average yield rate.[7] A college's yield, or yield rate, is the percent of students accepted into their college that choose to attend. For colleges, a high yield rate shows their prestigiousness and desirability. High yield rates can motivate more donors to invest in the college and maintain prestigious reputations that attract more hard-working and successful students.[11] This makes the ED process highly beneficial to colleges.[12]

Benefits and Drawbacks of Early Decision:

The Princeton Review, a site recognized on a national level for its expertise in college admissions, summarizes the primary motivation for colleges to offer ED. When a student applies through an early admissions process, especially ED, it tells the college that they are the student's first choice, so if they are accepted, they are more likely to attend, increasing the college's yield.[12]

For students, it's more complicated. College Board has published many articles aimed at helping students understand different aspects of the college admissions process. One of these articles, *Early Decision and Early Action*, compares and contrasts ED and EA processes, outlining their benefits and drawbacks.

Many of the benefits outlined apply to all early admissions programs. For example, by applying early, students have less stress and waiting time for results and more time to prepare for college if accepted.[10] The main advantage of early admission processes is an increased acceptance rate, with the most significant increase seen in the ED process. The National Association for College Admissions Counseling's 2019 *The State of College Admission Report* found that, on average, when compared to the average acceptance rate, the acceptance rate for ED is about 24% higher while the acceptance rate for EA is about 14% higher.[13] However, the College Board addresses this statistic, reporting that some colleges have more specific requirements for students who apply through an early admissions process. However, that is not the case for every college. Part of the reason the acceptance rate is so much higher for ED applications compared to the average acceptance rate could be that only the most qualified candidates apply for early admissions. At the same time, regular decision consists of many more applicants who do not meet the minimum acceptance requirements for these colleges.[1] There is still a definite benefit to applying early because fewer applicants make stu dents' applications more likely to stand out.[14] As discussed in the History of ED section, being noticeable to a college gives a student a considerable advantage. Additionally, a college is more likely to favor a student if they know they are more likely to attend the college if accepted, raising the school's overall yield.[14]

While the benefits apply to all early admissions processes, many disadvantages to applying early are regarding the ED application process.[10] First, students are more pressured early on to decide whether they want to attend college. While applying for EA or regular decision means students don't have to decide until all their applications are submitted and the results are back, those who apply for ED must determine if they want to commit to a school seven months earlier than those who apply EA or RD.[10] The second disadvantage is financial risk. If a student applies for an ED, they do not get the opportunity to compare the financial aid packets each college gives them to make their final decision. Instead, they must accept whatever financial aid they get from the college where they applied for ED.[10] This is significant enough that the College Board states that applying for ED is risky for students reliant on financial aid.[10]

A 2019 article on the College Board goes more in-depth into this topic, finding that only 30.4% of ED colleges met 100% of demonstrated needs.[10] According to the 2022 Free Application for Federal Student Aid (FAFSA) statistics, 85% of college students need financial aid to afford college.[15] For these students relying on financial aid, they are not guaranteed enough money to be able to afford the majority of colleges that offer ED, so they need to see their financial aid packet before committing to the school. This prevents them from applying ED without significant risk.[1] It is also important to consider that the amount of FAFSA reports a student needs to afford college is an estimate and does not consider particular scenarios.[16] This means that even the colleges that meet 100% of demonstrated needs could be unaffordable to students with economic factors not accounted for in the FAFSA forms.

Early Decision and Wealth Distribution:

ED started as a way for top universities to get their pick of students at expensive feeder schools. While it has evolved to include more than just a few elite boarding schools, it continues to show a similar trend: it favors students coming from households who can pay for the student's education. Only students who do not have to rely on financial aid can safely apply for ED. Meanwhile, students who must compare financial aid packets before choosing schools cannot safely apply for ED and get its advantages. This is furthermore proven by a 2021 report done by Common App, the site most students use to apply to U.S. colleges, which found that non-first-generation students coming from wealthier backgrounds were more likely to apply to at least one college through an early admission process, with the average household income of a student applying ED being $21,535 more than a student applying regular decision.[17]

The Connection Between Wealth and Education

Wealth and Education in the U.S.:

This brings into question the trends of wealth in America and whether ED affects it. The Brookings Institute, a research institute specializing in social sciences, published an article in 2015 showing income trends for the lower, middle, and upper classes. While outdated, the trends reported are still significant. Since the 1970s, the upper class has been slowly increasing in income while the lower class has been slowly decreasing, causing the gradual growth of a wealth gap between the upper and lower classes of the U.S.

Since wealth is widely reliant on income, education level is an essential factor to look at. Figures 1 and 2 show how education impacts income based on data provided by SmartAsset, a trusted website for financial statistics and advice.[18]

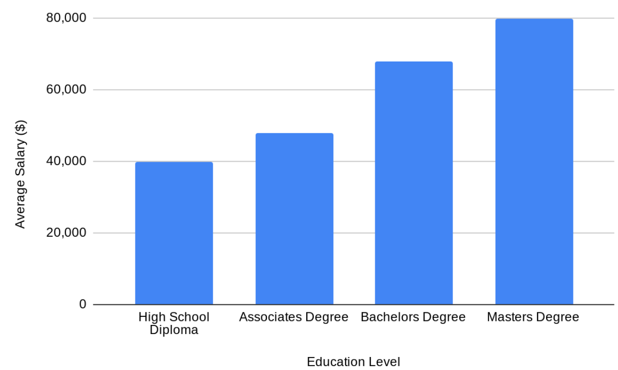

Figure 1: Average Annual Salary ($) Depending on Education Level.[18]

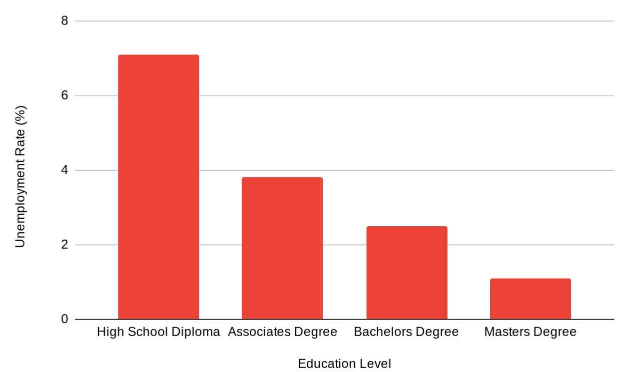

Figure 2: Average Unemployment Rate Depending on Education Level.[18]

The data in Figures 1 and 2 show a significant trend: the more education someone has, the more likely they are to succeed financially. Additionally, people who attend higher-ranked colleges, many of which offer ED, often have higher average starting salaries.[19] This means that graduates of these better-ranked colleges are more likely to make money faster and become part of a higher-wealth class.

The Problem of Early Decision, Gap in Research, and Research Plan:

This highlights a massive problem with early admission processes, specifically ED processes. While it helps increase a student's chances of getting into their dream school, its binding nature makes it a dangerous option for students who need financial aid to afford college since they are unable to compare the financial aid given to them by different colleges so they can make the most economically beneficial decision.[10]

DOI: 10.36838/v6i5.11

This risk makes it so the only students who can safely apply ED for colleges are those whose families can afford their education. Therefore, more students from these backgrounds are applying for ED and getting the advantages of higher acceptance rates and a higher chance of making an impression, giving these students an advantage over those whose economic background makes them unable to apply to ED without high risk.[17] Because most of the top selective schools, which on average have higher starting salaries, offer ED, this leads to the assumption that more students whose families can afford their education are getting into top schools and are, therefore, graduating college with high starting salaries. This highlights a clear bias towards students whose families can afford college education.[20]

The central gap in research about this topic is the specific data connecting a student's likelihood to apply ED to a college to their family's ability to afford their education. While credible data shows that ED is a risky process for students reliant on financial aid and that many of the institutes that offer ED have alums who earn higher first-year salaries, there was no data showing the extent to which these risks discourage students whose families cannot afford their education from applying ED to college. Using the existing data and information, this study's hypothesized results indicate a direct relationship between students applying for ED and their family's ability to afford their education.

Methods

A mixed-method study was conducted with a survey and meta-analysis to determine whether there is a direct relationship between students applying ED and their family's ability to afford their education. Due to the meta-analysis being inconclusive, see Appendix B for the meta-analysis methodology.

Survey: High School Students' Opinion on College and Early Decision:

This survey included twenty-two questions designed to understand high school students' opinions on college and the ED process and whether their demographics affected their views. The participants were high school students, ages 13-19, from an urban county in Kentucky. This means that the data trends are most accurate in Kentucky County and are not generalizable to the United States.

The demographics specifically asked for in the survey were the participants' grades and parents' education level. Because many high schoolers are unaware of their parents'/guardians' income, and income is not the only factor playing into one's financial background, this was not used as a variable. Instead, this demographic was determined by asking how they intend to pay for college, including whether they will rely on need-based scholarships.

As stated above, this survey consisted of twenty-two questions. The first question was a consent form that the participants had to read and agree to before they continued (see Appendix A). This question was the only required question in the survey; the rest were optional and could be skipped if the participant was uncomfortable answering them. The following twenty-one questions were split into three sections. All multiple-choice questions were statements with answers based on the Likert scale, a psychometric rating scale, to ensure responses were as accurate as possible. For more details, see Appendix A.

The first section was for all participants. This section gathered basic demographic information to determine whether different groups view college and ED differently. The final question in this section asks whether or not the participant intended to attend college, with the options "yes," "no," and "maybe." This question was used to break the participants into two main groups to answer the following sections. Only students who answered "maybe" answered all 22 questions. The following two sections aimed to determine two things: the level of knowledge a student had about college and ED and how financial concerns affected a student's view of college and ED (see Appendix A).

This survey had multiple independent variables, including the age and background of the participants and their plans for attending and paying for college. The dependent variable of this survey was the participants' views on college and ED, precisely how their family's ability to afford their college education affects their desire to apply ED to a school. The control variables were the overall age group and education level, with all participants actively working towards their high school degree and between the ages of 13-19. Another control was that all the participants lived in the same county and attended a public school. This survey concerned extraneous variables, meaning the participants could lie about their answers, making the results less accurate. However, the participants could skip any questions they felt uncomfortable answering truthfully, making them less likely to lie.

Results & Discussion

Survey:

After distributing the High School Students' Thoughts of ED survey to every public school's high school English department in the county, 199 surveys were collected. The grade distribution is shown below in Figure 1.

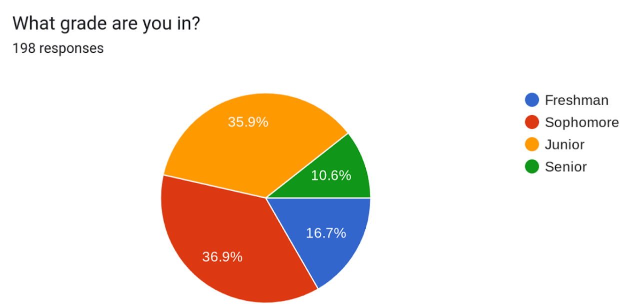

Figure 3: Grade Level Distribution

The survey responses showed several trends that supported the hypothesis that the ED process adds to the wealth gap. Figures 2, 3, and 4 show respondents' answers to the statement "I intend to apply to a college ED" sorted by how much their parents pay for their college.

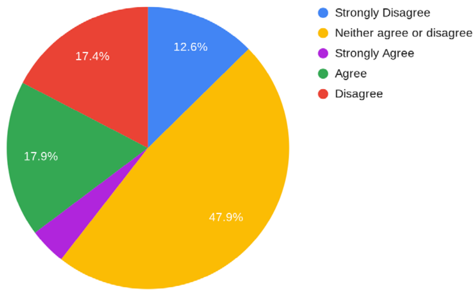

Figure 4: Desire to Apply ED for all Respondents

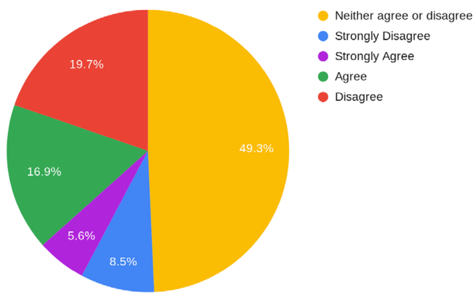

Figure 5: Desire to Apply ED for Respondents Whose Parents are Paying for All or Most of Their College.

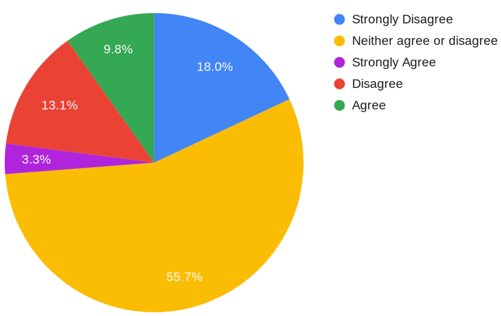

Figure 6: Desire to Apply ED for Respondents Whose Parents are Paying for None or A Little Bit of Their College.

The most significant trend seen when comparing the three figures is the number of respondents who answered "Strongly Disagree," with respondents whose parents are paying for none or a small amount of their college education being more than two times more likely to answer "Strongly Disagree" than respondents whose parents are paying for most or all of their college tuition. Overall, students whose parents were only paying for some or a little bit of their college were 10% more likely to not apply for ED than students whose parents were paying for most or all of their college. These statistics support the hypothesis that students coming from backgrounds where their parents can afford to pay for their college are more likely to apply for ED and gain the benefits that come with it.

One of the questions on the survey was an open-response question asking the respondent's views on early decisions. Approximately half of the respondents replied with either positive comments, saying they like ED or they think it would be suitable for some people, or neutral comments, like "I don't really care," or reporting that they did not know enough about the process to comment on it, or that college applicants should be better educated on the process. However, the other half of the respondents replied with negative responses. Two main themes were seen: the decision-making aspect was challenging, and the financial aid uncertainty made it risky. Nearly 20% of all responses mentioned the financial risk, with several saying that they wished they could apply to ED but were relying on financial aid and scholarships and couldn't risk the financial uncertainty. Nearly 11% of respondents used words like "unfair," "exploitive," or "trap" to describe the process, with several respondents reporting that the process was "scary." Additionally, three respondents recommended that colleges offering the ED process should place a pre-application financial aid packet. These responses all support the idea that ED poses a prominent financial risk, therefore making it unfair to many college applicants.

Figure 5 displays the answers to the survey question, "If money were not an issue, I would apply for ED to a college," to expand on how cost affects students' willingness to apply for ED.

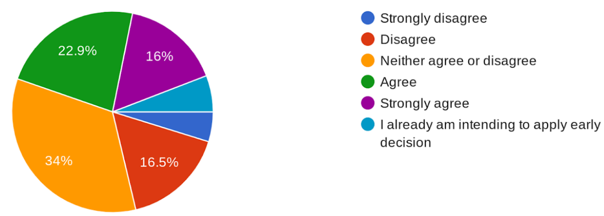

Figure 7: Applying ED Without Factoring in Costs.

As shown in Figure 5, nearly 40% of respondents report that they would apply ED if cost were not a factor. Comparatively, only 22% of respondents reported that they would apply ED when considering cost. This shows that students are twice as likely to apply for ED if they don't have to worry about costs. This also displays the importance of financial risks in students' decisions to apply ED.

The survey results clearly support the hypothesis that students whose parents can afford their education are more likely to apply to a college through the ED process. This gives those students more advantages that help them advance through college and aid them in rising in the wealth bracket. This is further proven by the previous research conducted by Common App, which concluded with the same results: a clear trend of students from wealthier backgrounds applying for ED.[15] Not only does the survey show the measurable effect costs play on ED, but it also shows that the knowledge of the unfairness of ED is known among high school students and actively discouraged several from applying to a college through an ED process.

■ Limitations

This survey had limitations. First, it was only given to students at public schools in one county. This means the data only reports a small portion of students in one concentrated place but is representative of the entire population of high school students in the U.S. While the results are accurate for that location, they become less accurate when put on a larger scale.

DOI: 10.36838/v6i5.11

Furthermore, due to the self-reported survey, there needed to be a way to ensure their responses were truthful. If respondents did not answer truthfully, their responses would be an inaccurate depiction of their beliefs, therefore discrediting the data collected. Since there is no way to ensure that respondents were truthful, this limitation could have affected the accuracy of the results. While this limitation is a definite factor to consider, it is unlikely that respondents would give untruthful answers since the survey was completely optional to participate in. Respondents could skip any question they felt uncomfortable answering truthfully.

Overall, Figures 1, 2, and 3 support the hypothesis that ED favors students whose families can afford their education, and Figure 5 supports the claim that money plays a large part in a student's decision to apply for ED. The data found in this survey strongly show that the ED process is unfair.

Implications

Despite the limitations, the results found in the survey suggest several implications. First, it implies that college admissions in the 180 American schools offering ED have unfairly favored students whose families could afford their education for decades. Second, the sources found in the literature review show that education plays a significant part in a person's wealth. Paired with the survey results, the data found in this study suggests that ED has been giving students whose families can afford their education a higher chance of increased personal wealth than students whose families cannot afford their education. This suggests that wealthier families who can afford their students' education are more likely to utilize the ED process to give their children a higher chance of getting into top schools. Therefore, students from wealthier families graduating from these schools are more likely to graduate college with a higher starting salary and continue growing their family's wealth. While the past cannot be changed, the present can be. These results show a need to reform the college admissions processes at these institutions to ensure economic fairness for all applicants.

One possible solution was mentioned several separate times in the survey results. Several respondents mentioned "pre-application financial aid" that could be given to students wishing to apply to ED to be aware of their financial situation if they get accepted. If these were implemented, students would fill out the FAFSA forms and get results back before the November 1 ED deadline. After receiving their financial aid estimates, the student could choose whether or not they want to submit an ED application, knowing how much financial aid they will receive. This will eliminate eliminate the financial risk associated with ED, allowing more students from all backgrounds to apply for ED.

Another solution that could help decrease financial inequalities in college admissions is the abolition of ED and replacing it with REA. This choice is seen in several Ivy League colleges, such as Harvard and Yale, which were some of the first colleges to implement ED in the 1950s and are now some of the only colleges that have switched to REA. REA allows the college to have the benefits of higher yield rates that ED gives them while not putting applicants in financial danger since applicants are not required to attend if they are accepted.

Additionally, further research could be conducted to expand on other survey findings. For example, determining quantitative data on the relationship between ED and the wealth gap expands on this study's qualitative data. Another example is further research on findings in the survey that were outside of the questions asked in this study. For example, several students reported that they were too indecisive for ED. While this did not directly affect wealth equality, further research could be conducted to determine whether there are ways to help students be more specific in their college applications and whether this deterrent affects the fairness of college admissions processes.

Wealth inequality is a significant concern in America. This study's results suggest that reevaluating the ED process in colleges could bring the U.S. one step closer to fixing this issue.

Conclusion

The information found in this study supports the hypothesis, answering yes to the research question, "Does the ED process favor students whose families can afford their education?" These findings highlight a significant problem within the college admissions process for several schools that can further extend past college. Research conducted by SmartAsset has found that the amount of postsecondary education has a clear, directly proportional relationship with the average salary. If, as the data in this study finds, students from wealthy backgrounds are more likely to get into postsecondary colleges and universities through the early decision process, they will have a higher chance of making larger salaries and rising in wealth class.

Due to limitations, especially in the meta-analysis portion of the study, accurate quantitative data could not be found that directly connected the favoring of students coming from wealthier backgrounds with an increase in the wealth gap. However, this could be determined in further research projects.

The findings of this study could motivate schools that offer the ED process to reevaluate their stance and help them find alternative methods or solutions that make ED more fair to those of all economic backgrounds. By doing this, these findings could help make the college admissions process fairer and allow students of all backgrounds the same chances of getting into college, allowing them the same opportunities to earn higher salaries and grow their wealth, which could help solve wealth inequality in the U.S.

The next step in continuing this research is to find whether or not the wealth inequality caused by ED has a long-term effect on the U.S.'s wealth gap between the upper class and the lower and middle classes. Additionally, more research should be conducted to determine the best solution to fix the ED process or find an alternative process to make college admissions more fair.

Acknowledgment

The research conducted in this study was only possible with the aid of several teachers. I want to thank Mrs. Meredith McCurry for helping me understand the research process and the different factors I would need to consider when conducting this research. I would also like to thank two of my math teachers, Mr. Seth Young and Mrs. Sarah Kinman, as well as my father, Jim Sharpe, for helping me form the several math equations used in the Meta-Analysis, including giving me ideas of math principles to use and ensuring that my formulas were mathematically correct.

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Author

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Appendix

Appendix A

Survey Questionnaire: High School Students' Opinions on College and Early Decision:

This is an anonymous survey. If you do not feel comfortable answering any questions, you will be able to skip the question. For all questions you do answer, please answer honestly.

Consent Form:

Please read the following material that explains this research study. Signing this form will indicate that you have been informed about the study and want to participate. It is important that you understand what you are being asked to do and what it entails, as well as the risks and benefits—if any— associated with the study. This should help you decide whether or not you want to participate in the study.

You are being invited to take part in a research project conducted by Joey Sharpe, a high school student at Lafayette High School, as a part of the AP Research class. This is a class in which high school students have the opportunity to conduct a research project on a topic of their choice. Joey Sharpe can be reached at jenna.sharpe@stu.fayette.kyschools.us. Meredith Dill, the teacher of the class, can be reached at meredith.dill@fayette.kyschools.us

DOI: 10.36838/v6i5.11

Project Description:

You are invited to participate in a research study intended to better understand how the Early Decision process affects students of different backgrounds' chances of getting into college and how that, therefore, affects the wealth gap. It is entirely your choice whether or not to participate in this study, and you can choose to skip any questions you do not feel comfortable answering.

Procedures:

You will be asked to answer a multitude of different questions asking about your opinions on college and early decision, and financial circumstances in relation to these two subjects.

All answers will be completely anonymous and will not be able to be traced back to you. By answering the questions, you will be allowing your answers to be used in a research paper. If you do not wish an answer to be reported, you can skip the question and leave it unanswered. It is expected that the survey will take approximately five minutes to complete.

After you finish the survey, there will be no further contact with you.

Risks and Discomforts:

A potential risk associated with this study is that it may bring up sensitive issues such as financial situations.

By the surveys being strictly anonymous, your answers will not be able to be used against you nor will they be able to be traced back to you.

Benefits:

The benefit of your participation includes that your answers will help us determine whether there is a connection between early decision and the wealth gap, and therefore help improve the fairness in college admissions.

Confidentiality:

Confidentiality will be provided to the extent allowed by law.

Due to the anonymous nature of the survey, there will be no way for your answers to be traced back to you. As a participant in the study, your answers can be used within statistics and some open-response answers may be quoted, but no names will be attached and therefore no personal data will be published. Your individual privacy will be maintained in all published data resulting from this study.

Questions:

If you have any questions regarding your participation in this research, you should email Joey Sharpe, at jenna.sharpe@stu.fayette.kyschools.us, before signing this form, and you can contact them if you have any other questions or concerns during or after your participation.

You may obtain the results of this project after its completion by emailing Joey Sharpe whose contact information is listed above.

Authorization:

I have carefully read the terms used in this consent form and their significance explained to me. By checking "I agree" below, I agree to participate in this project and acknowledge that my answers I put may be used in a research paper.

- I agree

Note: This section is required to move on to further questions

Basic Demographic Questions:

What grade are you in?

- Freshman
- Sophomore
- Junior
- Senior

What year do you plan to graduate?

- 2023
- 2024
- 2025
- 2026
- 2027

Are you planning to graduate early (as in graduate after Junior year)

- Yes
- No
- Maybe

What is your approximate unweighted GPA?

- 4.0
- 3.5-3.9
- 3.0-3.4
- 2.5-2.9
- 2.0-2.4
- 1.5-1.9
- 1.0-1.4
- 0-0.9

Did your parents/guardians go to college?
(multiple responses allowed)

- Yes, I have two or more parents/guardians who have gone to college and have a degree
- Yes, I have one parent/guardians who has gone to college and have a degree
- Yes, I have one or multiple parents/guardians who have gone to college but did not get a degree
- No, none of my parents/guardians have gone to college

Do you have any siblings who have attended or are currently attending college?

- Yes
- No

Do you plan to attend college?

- Yes
- No
- Maybe

College Opinions- Do not want to go to college:

If you answered "no" of "maybe" to whether you want to go to college, answer these questions. If you answered "yes," skip these questions. The following questions will be statements that you will answer whether you strongly disagree, disagree, neither agree nor disagree, agree, or strongly disagree with. Choose the answer that most closely aligns with your beliefs.

The cost of college is the main reason I do not want to go to college.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Do you have any other thoughts on college that you wish to add?

____
____
____
____
____

College Opinions- Want to go to college:

If you answered "yes" or "maybe" to whether you want to go to college, answer these questions. If you answered "no," skip these questions. The following questions will be statements that you will answer with whether you strongly disagree, disagree, neither agree nor disagree, agree, or strongly agree with. Choose the answer that most closely aligns with your beliefs.

The rank of a college matters to me. (aka I want to go to a top college such as an Ivy League)

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

If you wish, explain your answer to the question above.

____
____
____
____
____

My parents/guardians/family members are paying for ____ of my college.

Note: the scale on this question is different

- None
- A little bit
- Some
- Most
- All

I am reliant on need-based scholarships to afford college

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I am relying on merit/sports scholarships to go to college

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I am familiar with the early decision process

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Early Decision Description

Early decision is the process in which a student applies to a specific college earlier than the Regular Decision deadline. By applying early decision, the student is making a binding contract that if they get into the college, they will attend and rescind all applications to other schools. In return, they can have a better chance of getting into the college. In most cases, the student does not know how much financial aid they will be receiving when they apply.

I intend to apply to a college early decision.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

If you wish, explain your answer above here.

____
____
____
____
____

If money was not an issue, I would apply early decision to a college

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Do you have any other thoughts about college or early decision that you wish to add?

____
____
____
____
____

Appendix B

Meta-Analysis Methods:

The other research method used was analyzing existing statistics and findings. While the survey aimed to determine how ED affects the wealth backgrounds of students, it was unable to discern how it affected their wealth after graduation.

This was done by looking at schools offering ED I or ED I & II and finding each school's average first-year salary and student debt. Then, the same data was found for schools that did not offer ED, and the results were compared. Since many colleges did not provide any information on their graduates' salaries throughout their careers, the calculations assumed an annual raise of 7.6%, the average annual raise in 2022.[22] Additionally, to calculate the impact of student debt, calculations assumed the graduates paid the mean monthly student loan payment for graduates with a bachelor's degree of $448 per month. They used the set interest rate for undergraduate direct subsidized and unsubsidized loans: 4.99%.[23-25]

$$E_m=E_{m-1} + (E_{m-1} \times i_m) - 488 \tag{1}$$

$$D_t= 448 \times M_t \tag{2}$$

$$D_m= m \times 448 \tag{3}$$

E_m = ending balance of the month

E_{m-1} = ending balance of the previous month

DOI: 10.36838/v6i5.11

I_m= interest rate for the month

m = months

M_t= total months until the student loan debt is paid off

D_m= total amount of money spent paying off student loan debt

Dm = total amount of money spent paying off student loan debt at a specific month

Note: E_m cannot go below 0. Once it reaches 0, it will stay at 0

Equations (1), (2), and (3) were used to determine the amount of money a graduate would use to pay off student loans. Equation (1) was determined by modifying the compound interest formula to account for monthly payments. Equations (2) and (3) were determined using the mathematical principle of multiplication, with (3) being a slightly modified version of (2) to find the amount of money paid on a specific month rather than the total amount paid (2).

$$S_y = S_i (1.076)^{y-1} \tag{4}$$

S_i = starting first-year salary

y = specified year

S_y = salary for the specified year

Equation (4) was used to calculate the annual salary for each year. It is a simplified version of the compound interest formula.

$$W(y) = \sum_{y=1}^{Y} S_y - \sum_{m=1}^{12Y} D_m \tag{5}$$

$$W(y) = \sum_{y=1}^{Y} S_i (1.076)^{y-1} - \sum_{m=1}^{12Y} 12y \times 448 \tag{6}$$

W(y) = theoretical wealth the graduate would have at the specified amount of years

y = years after graduation

Y = year after graduation specified in W(y)

Equations (5) and (6) were used to determine the overall theoretical wealth of graduates from different schools. Equation (6) is the same as (5), with the only difference being that (6) is expanded to incorporate the full equations for Sy and Dm. Both equations were determined using the principles of sigma notation and summation equations.

The combination of the statistics found in the meta-analysis and survey findings was used to determine whether a link could be made between the ED process and the wealth gap in the United States.

Meta-Analysis Data:

Shown in Table 1 below is the data found in the meta-analysis. This data goes against the hypothesis that ED adds to the wealth gap by helping the wealthier grow, instead showing that non-ED offering schools have higher theoretical wealth. While these findings are significant, they are not included in the research itself because the data found for non-ED offering schools need to account for the same conditions and standards that the data found for ED-offering schools does, making the comparison between the two inaccurate and unusable.

Table B1:

	ED Offering Schools	Non-ED Offering Schools
Avg Student Debt ($)	24,916	37,574
Avg 1st Yr Salary ($)	48,307	55,260
Avg time to Pay of Student Loans (months)	62	101
Avg Theo. Wealth 1 Yr Post-Grad ($)	42,931	49,884
Avg Theo. Wealth 5 Yr Post-Grad ($)	254,268	294,733
Avg Theo. Wealth 10 Yr Post-Grad ($)	659,019	740,550
Avg Theo. Wealth 20 Yr Post-Grad ($)	2,087,455	2,374,573

Meta-Analysis Results/ Discussion:

A meta-analysis was conducted to determine the lasting effect early decision plays on the wealth gap by attempting to find the theoretical wealth of students after graduation. While this research was conducted, and results were found (see Appendix B), the number of assumptions and extraneous variables made the data inaccurate and unusable.

Limitations:

One limitation that caused the meta-analysis to lack accuracy was the availability of data and the need for significant assumptions to standardize known data. For example, when calculating the average theoretical wealth for schools that offered ED, the calculations assumed the loans were subsidized, meaning the student did not have to pay any interest during their time in school or six months after graduation and were not taking into account any purchases, living costs, or income tax an individual would spend money on. It only calculated their theoretical wealth if they did not spend any money. It also assumed that the graduate got a job immediately after graduation and started paying off their debt immediately. These assumptions were needed to simplify the findings. Everyone has individual costs and payments that affect the money they have, as well as different career paths that affect when they get a job, so for the theoretical wealth calculations to be standardized in a way that they could apply to all graduates, individual costs and trajectories had to be factored out.

Limitations in data availability became apparent when the research was extended to find the theoretical wealth of students graduating from schools that do not offer ED. Due to time restrictions, the data could not be found using the same processes for schools that did offer ED. This meant that the numbers found for ED schools had significant sources of errors that needed to be kept consistent within the non-ED-offering schools, making the numbers incomparable and unusable.

While this connection could not be made with the resources and time available, further research could be conducted to find this number and give quantitative results on whether the effects of ED extend past college graduation.