Attitudes of Prospective University Students Towards Divestment of Fossil Fuels

Daniel McClay (40006720)

Concordia University

GEOG-498

15 April 2019

Introduction

While there are many arguments in favour of a university's decision to divest from fossil fuels (Braungardt, Bergh, and Dunlop, 2019), most relate to moral and fiduciary responsibility (Grady-Benson and Sarathy, 2015). These arguments have been somewhat successful with smaller universities who pride themselves on holding values of social responsibility and sustainability as well as a few more eminent institutions (Grady-Benson and Sarathy, 2015). However, many universities with larger endowment funds are not as easily persuaded (Grady-Benson and Sarathy, 2015). University administrations have often contested these types of arguments by doubting the efficacy of the divest movement and by favouring less radical alternatives (Rowe, Dempsey, and Gibbs, 2016). Moreover, arguments based on fiduciary responsibility are often dismissed based on the potential financial cost of divestment (Grady-Benson and Sarathy, 2015).

This is not to say that arguments based on moral and fiduciary responsibility have no value. On the contrary, they make up the core tenets of the divest movement. However, they are debatable and are not cogent enough to legally force any kind of action (Braungardt, Bergh, and Dunlop, 2019). And while they argue that divestment is best for society, they fail to properly demonstrate how divestment could be directly beneficial to the university. In addition to these arguments, large institutions like Concordia may need clear and tangible incentives to implement a divestment policy. For example, the university may respond better to arguments demonstrating how divestment could be profitable in terms of reputation and increased enrolment. After all, capital motivates action in a neo-liberal society.

The proposed research will investigate how a university's divestment would be viewed by prospective university students and how it might impact their choice of preferred academic

institution. Specifically, it will investigate the current attitudes of CEGEP students towards sustainability and the environment as well as examine how divestment would factor into their choice of university. The findings generated by the research might then be used by the divest movement to show how divestment could help a university to improve its reputation and increase enrolment. The findings could also give support to other projects of the GEOG-498 class should they need this information.

This approach was chosen since this angle of pro-divestment rhetoric has not been widely pursued but may be quite practical and useful. Accordingly, there is a gap in the literature concerning the attitudes of prospective university students towards divestment.

Personally, I believe that the most promising approach to divestment is to motivate the university through economic incentives. As previously mentioned, the last decade has demonstrated that the main divestment arguments used are dismissible. In a perfect world, entities would not need to be persuaded to do what is right. However, being the capitalist society we are, I believe tangible, direct monetary incentives are most powerful. These types of incentives have been used successfully used over the last century by governments to change corporate practice. Similarly, if the positive economic implications of divestment are clearly framed and explained, the university may be more attentive to other divestment arguments.

Furthermore, my experience as a Psychology student has taught me how to properly measure attitudes, emotions and behaviours. I also have experience in statistical analysis, constructing surveys and more importantly, ensuring that these surveys validly measure their intended constructs. Furthermore, I also have several connections to John Abbott College as I was part of the it's Honours Social Science program. These connections would give me access to a large number of students.

Literature review

As no research has been done on how a university's pro-environmental reputation effects prospective students' university choice, it is hard to make any specific predictions for the findings of the survey.

However, it is predicted that the students surveyed will generally hold pro-environmental values. A study conducted by Caruana and Vassallo (2003) found that young consumers are highly aware of environmental issues. More recently, a consumer survey by Deloitte (2014) indicated that young consumers have high interest in purchasing pro-environmental products. In addition to holding pro-environmental values, today's youth have been shown to act on them. A global Generation Z survey (Masdar, 2016) found that approximately 50% of respondents paid more for sustainable products and that 31% have boycotted non-sustainable companies.

It is also expected that students rate reputation as an important factor when choosing a university and that the university's position on social issues impacts this reputation. Although many studies have shown that academic reputation is one of the most important factors when choosing a university (Aydin, 2015), they did not measure how social issues contribute to the overall reputation of the school. However, an analysis done by Connors and Miller (2016) indicated that social issues and academics are both important factors in a school's overall reputation. For some schools, position on social issues are even seen as more important than academics. These social issues include racism, sanctuary campuses, freedom of speech and environmental and sustainability issues, amongst other things.

Therefore, based on the fact that social issues have been shown to influence university choice and that environmental issues are prominent amongst today's youth, it is expected that

students' choice of university will be at least somewhat affected by its pro-environmental values and, more specifically, divestment.

Methods

Preliminary procedure

In order to survey students of John Abbott College (JAC), approval from the Concordia Geography department and JAC ethics review boards were necessary. The Geography Department application process was relatively short and straight-forward. A draft copy of the survey was also required to be submitted with the application. The whole process took approximately 45 minutes and the project was approved within a week of submission.

The application process for JAC's ethics review board was lengthier and more in depth. The application consisted of three documents, one of which was 15 pages long. This document contained several specific questions regarding the hypothesis, predictions, rationale of the research, among many other things. Overall, the application documents took approximately a day to complete. Importantly, the JAC ethics review board only meets on one occasion per month. This should be taken into consideration as it could delay any researchers within time constraints. Overall, the research took roughly a month to be approved. Future researchers should note that other colleges or CEGEPS may require a similar application process as JAC's has been based on a more generic procedure also used by Algonquin College and Conestoga College in Ontario. This may be a result of the possibility of including minors in the research.

Focus Group

In order to ensure that the survey was clear and understandable for a CEGEP student audience, a preliminary survey was administered to a focus group of approximately 30 JAC students. This was done by contacting my past Honours Social Science Professor, Dr. Andre

Leblanc, and asking permission to use the current Honours Social Science class a potential focus group. After having Dr. Leblanc's consent, the survey was administered during class time. After having completed the survey, students were asked for their feedback. While most of the survey was clear, the large majority did not know what divestment was, nor did they know that universities had funds invested in fossil fuel corporations. Students had also expressed that while they generally hold pro-environmental values, it would have little to no impact on their choice of University. However, only minor adjustments were made to the original draft as the survey was well understood overall.

Survey

The survey (appendix a) contained 24 items either taken from past studies or created for the purposes of this research. The first section of the survey included 10 demographic questions ranging from more general questions such as gender and age to more specific questions regarding transport habits and career interests. These were followed by 14 questions answerable on a 5-point Likert scale. The first three were taken from a questionnaire used by Schultz, Fielding, & Newton (2018) to assess a person's environmental identity. The next questions then focused on the motivations of students for choosing their preferred universities and were based on the findings of Connors & Miller (2016) and Eagan, Stolzenberg, Ramirez, Aragon, Suchard, & Hurtado's (2016) national survey of college freshman. While these findings indicated that social issues were important in a students' choice of a university, they did not specifically address environmental and sustainability issues. Therefore, questions regarding the importance of a university's reputation on environmental issues and how this effects university choice were created. Finally, questions were created to assess the attitudes of students towards divestment and its effect of university choice. However, the word "divest" was not used as the

aforementioned preliminary focus group had indicated that the term was not understood amongst a CEGEP demographic. Rather, questions asked how students would feel if they were made aware that their institution was invested in fossil fuel corporations.

The estimated time of completion of the survey was five minutes. Surveys taking longer than five minutes have been shown to be less accurate as a result of survey fatigue (Backor, Golde & Nie, 2007). To do this, items were kept short and used basic vocabulary. Furthermore, short questions have been shown to increase response rates (Edwards, 2002).

Survey Administration Procedure

100 surveys were administered to a convenience sample of JAC students using a haphazard sampling technique. In other words, the survey was distributed around the campus to any student who accepted to participate. In order to reach a diverse sample, surveys were distributed in different locations across the campus as students from each program tend to take their breaks near their respective departments. To administer the survey, students were approached and asked if they wanted to participate. After reading and signing the consent form, students completed the survey within 5 minutes. Any students under the age of 18 were asked not to participate. Any clarifying questions regarding specific items or the goal of the research were answered. When finished, surveys were collected and the students were thanked for their time.

Statistical Analysis

All data from the collected surveys were entered into IBM SPSS software for statistical analysis. Five surveys were dropped from the analysis as they were not completed correctly, giving a final sample size of 95. Seeing as this was exploratory research with no hypothesis, all possible relationships and variables of interest were analyzed. First, descriptives and frequencies of each variable were analyzed, and a scale reliability analysis was calculated for the environmental

identity scale. The percentage of responses for the levels of all Likert scale questions were then compared against each other using non-parametric Pearson chi-square tests. Significant omnibus test results were visually examined for interpretation. While post-hoc significance testing is usually appropriate for analyzing the differences between levels of responses, visual inspection was deemed fit in this case as the source of the significant result of the omnibus test was obvious (Ludbrook, 2011). To examine the potential relationships between the categorical variables (i.e., the demographic questions) and the Likert-scale questions, a cross tabs Pearson chi-square analysis was conducted. Once again, visual inspection was used instead of post-hoc significance testing. Furthermore, bivariate correlations were also conducted between all Likert-scale questions. While more statistical analysis such as a factor analysis could have been conducted, they are beyond the scope of this research.

Results

Overall, the results of the survey can only be interpreted in a general way. Comparisons within categorical variables were hard to interpret because of the disproportionate number of participants in each category. For example, 37% of respondents were enrolled in the social sciences, leaving the rest to be distributed among 9 other categories. Similar problems arose with the "preferred subject in university" variable. In order to properly conduct this analysis, a much larger sample size would be needed. According to a G*Power analysis (Faul, Erdfelder, Buchner, & Lang, 2009), a minimum sample size of 253 would be needed to detect an effect of program.

That being said, the survey did generate some interesting findings that addressed the basic questions of the research. Across the sample, the percentages of each Likert scale question had a statistically significant difference (Table 1). Visual inspection of the results (appendix b) indicated that respondents had high environmental identities since 63.1 percent of respondents

answered 4 or 5. When asked how important a university's reputation on environmental issues is when choosing a school, the results are more mixed however, with around 90% answering in the 2 to 4 range. In comparison to other social issues, environmental issues were seen as more important as over 60% or respondents answered 4 or 5. In line with the high environmental identities, only around 15% of respondents answered 4 or 5 when asked how approving they were of having school funds invested in fossil fuels. When asked how much this would influence their university, approximately 40 percent answered 3, with only 3% said it would change their decision.

Discussion

Overall, the results indicate that students affiliate highly with a pro-environmental identity and that they generally harbour negative views towards fossil fuel corporations. However, the prediction that it would impact their choice of university was not accurate. Rather, students did not seem to have a definitive opinion on this topic. (The term "prediction" is used instead of "hypothesis" as hypothesis testing was not done.)

With regard to environmental identity, the results are in accordance with much of the extant literature relating to the population at large. In a survey done by real estate company Trulia (2016), 79% of respondents agreed that they were conscious about the environment in their daily activities. Similarly, 84% of respondents in a study conducted by Diekmann and Preisendörfer (1998) identified themselves as environmentalists. It is logical to assume that this trend applies to youth, especially as environmental issues are prominent amongst this age category (Masdar, 2016). However, these attitudes seldom evoke pro-environmental behaviour. In both the study by Diekmann and Preisendörfer (1998) and Trulia (2016), only approximately 25% performed pro-environmental behaviour.

As it is generally known that the burning of fossil fuels is harmful to the environment, it is logical that respondents were disapproving of their university of choice or JAC having funds invested in them. However, the same discrepancy that exists between attitudes and actual behaviour seen for environmental identity seemed to present itself between one's view on fossil fuels and one's willingness to include that view in school decision-making. Importantly, the responses indicate that students considered having money invested in a company as a sign of support for the industry. Therefore, the large amount of indifference of fossil fuel investment on university choice cannot be attributed to a lack of knowledge about investments and what they signify.

It is difficult to interpret this finding for two reasons. First, as the literature in this specific field is virtually non-existent, there is a very limited ability to look for possible explanations in other studies as to why there was such indifference. Second, a middle score indicating indifference could be the result of many potential causes as opposed to a high score (change my decision) or a low score (not at all). However, there are a few explanations that are worth exploring.

For one, it is possible that the rationale behind the study was unsound. The expectation was that students would be more inclined to come to Concordia if it were to divest since environmental issues are prominent amongst today's youth, and that social issues (including environmental issues) have been shown to affect a university's reputation. However, the study used for this rationale (Connors, & Miller, 2016) did not consider whether the reputation on social issues was more relevant for negative impacts on reputation than positive impacts. Therefore, it is possible that the effect of social issues on a university's reputation were only significant when the social issue was negative. For example, reputation on gender issues may

highly affect the university only if it is notoriously bad for gender issues. This is consistent with the negativity bias (Rozin, & Royzman, 2001), where negative information is more salient than positive information and is thus has more of an impact.

Furthermore, it is important to consider the possibility that the question was not well understood by participants. As the strongest position one could answer was framed as “change my decision”, respondents may have been reluctant to pick that outcome even though their choice of university was heavily affected by divestment. In other words, is possible that divestment heavily influenced their decision although not to the extent of changing their decision, but this would have not been possible to indicate.

Limitations and Future Directions

The first limitation of this study was the lack of information on the reasoning behind the students’ answers. Knowing this would have been greatly beneficial to the interpretation of this current study’s findings. It would have also helped future studies properly cater to a CEGEP audience. Furthermore, it is possible that students had opinions of interest on the fossil fuel industry and its effect on their choice of university that were not assessed properly in the survey. For example, a few students who were very passionate about environmental issues came to talk to me after they had finished the survey.

A second limitation was the small sample size. As mentioned in the results section, this meant that no comparisons were able to be made between the programs. These comparisons may have had some interesting findings as many of the classes in the science program relate to earth and environmental science. There may have also been interesting interactions between the preferred program of study and the effect of divestment on university choice. However, only one

student indicated environmental science as their preferred subject of study. Importantly, this student indicated a high influence of divestment on university choice.

A third limitation was the depth of statistical analysis. While I do have a lot of experience with statistical analysis in psychology, this involves significance testing such as ANOVAS and multiple regressions. In the case of the current study, it is possible that other statistical approaches would have been more appropriate.

The last (and perhaps most important) limitation was the time constraints. As this research was done over the course of one semester for the GEOG-498 course, there were many timing issues that may have impeded the amount of detail that went into the research. This is especially a result of the month long wait for the JAC Ethics Review. Had there been more time, the sample size could have increased as more surveys could have been administered. There would have also been more time to properly conduct focus group sessions and further cater a CEGEP demographic.

In the future, research could follow this structure:

First, semi-structured interviews should be conducted with a diverse sample of students in order to properly assess their main attitudes towards fossil fuels. By having open ended questions, students may bring up different opinions and topics of interest that were not seen in the literature. While the current study did include a focus group for these purposes, it was not in any way representative of the JAC student body as it consisted solely of JAC honours students. Furthermore, the classroom setting may have made the students reluctant to share their opinions.

Second, a survey based on the findings of the interviews should be administered to a large sample of the student body. Instead of using a haphazard sampling technique, researchers should look at the student demographics and use a quota sampling strategy in order to get the

most representative sample possible. In in terms of time, researchers should give themselves approximately 2 days to get an appropriate sample size. Overall, researchers should give themselves 4 months to complete this project.

In conclusion, the current study serves as a good preliminary research for future, more serious studies. While the results indicated that divestment would not substantially influence university choice, it is possible that these results differ greatly depending on the student. Future studies on this subject are highly encouraged as results may still serve as a good argument for the divestment of universities.

References

Backor, K., Golde, S., & Nie, N. (2007, October). Estimating survey fatigue in time use study. In *international association for time use research conference. Washington, DC*.

Connors, C., & Miller, J. (2016, December 12). Factors that make or break a college's reputation. Retrieved from https://quid.com/feed/factors-that-make-or-break-a-colleges-reputation

Diekmann, A., & Preisendörfer, P. (1998). Environmental Behavior. Rationality and Society, 10(1), 79-102. doi:10.1177/104346398010001004

Eagan, K., Stolzenberg, E. B., Ramirez, J. J., Aragon, M. C., Suchard, M. R., & Hurtado, S. (2014). *The American freshman: National norms fall 2014*. Los Angeles: Higher Education Research Institute, UCLA.

Edwards, P. (2002). Increasing response rates to postal questionnaires: Systematic review. *Bmj,324*(7347), 1183-1183. doi:10.1136/bmj.324.7347.1183

Rozin, P., & Royzman, E. B. (2001). Negativity Bias, Negativity Dominance, and Contagion. Personality and Social Psychology Review, 5(4), 296-320. doi:10.1207/s15327957pspr0504_2

Schultz, T., Fielding, K., & Newton, F. (2018). Images That Engage People With Sustainable Urban Water Management. *Science Communication,40*(2), 199-227. doi:10.1177/1075547018760902

Appendix a

Questionnaire

CONSENT TO PARTICIPATE IN "Attitudes of Prospective University Students Towards Divestment of Fossil Fuels"

I understand that I have been asked to participate in a research project being conducted by Daniel McClay of the Geography, Planning, Environment department of Concordia University (438-402-3896, dmcclay67@gmail.com) under the supervision of Dr. Kevin Gould of the Geography, Planning, Environment department of Concordia University (514 848 2424 X5480, kevin.gould@concordia.ca)

A. PURPOSE

I have been informed that the purpose of the research is as follows: To measure CEGEP student attitudes towards pro-environmental values and behaviour. It also measures how these attitudes affect students' preferred institution of higher education.

B. PROCEDURES

I understand that the procedure involves filling out a questionnaire that will take approximately 5 minutes.

I understand that my participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you decide not to participate in this study or if you withdraw from participating at any time, you will not be penalized.

I understand that if I should seek more information on the findings of the survey, I should contact the principal investigator.

C. RISKS AND BENEFITS

There are no risks associated with participating in this research. Benefits may include a better understanding of one's own pro-environmental attitudes and behaviour.

D. CONDITIONS OF PARTICIPATION

- I understand that I am free to withdraw my consent and discontinue my participation at any time without negative consequences.
- I understand that my participation in this study is anonymous.
- I understand that the data from this study will not be published.

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY.

NAME (please print) _____

SIGNATURE _____

If at any time you have questions about the proposed research, please contact the study's Principal Investigator Daniel McClay of the Geography, Planning, Environment department of Concordia University (438-402-3896, dmcclay67@gmail.com) or Dr. Kevin Gould of the Geography, Planning, Environment department of Concordia University (514 848 2424 X5480, kevin.gould@concordia.ca)

If at any time you have questions about your rights as a research participant, please contact the Manager, Research Ethics, Concordia University, 514.848.2424 ex. 7481 oor.ethics@concordia.ca

Please answer the following questions. If you do not want to or do not know the answer to any of the following questions, you do not need to answer.

What is your age in years?

What gender do you identify with?

What program are you in?

What is your preferred method of transport to get to school?

How many semesters do you have left until you graduate from John Abbott College?

Do you plan on pursuing a university degree after you graduate from CEGEP?

Yes ☐ No ☐

Do you know which university you will be attending?

Yes ☐ No ☐

If so, which university are you planning on attending? If not, what is your preferred choice?

What is your preferred subject of study at this university?

What do you plan on doing after you have completed your university degree? (Please circle the preferred option)

Working full-time Pursuing further education (e.g., Masters, Ph.D.) Other

To answer the following questions, please circle the number that best matches your opinion

1. Being an environmentally friendly person is an important part of who I am.

Strongly Disagree				Strongly Agree
1	2	3	4	5

2. I am the type of person who is environmentally friendly.

Strongly Disagree				Strongly Agree
1	2	3	4	5

3. I see myself as an environmentally friendly person.

Strongly Disagree				Strongly Agree
1	2	3	4	5

4. Buying and consuming environmentally friendly products is important to me.

Strongly Disagree				Strongly Agree
1	2	3	4	5

5. When choosing my preferred university, academic reputation is an important factor.

Strongly Disagree				Strongly Agree
1	2	3	4	5

6. When choosing my preferred university, reputation on social issues (e.g. gender equality, safe spaces) is an important factor.

Strongly Disagree				Strongly Agree
1	2	3	4	5

7. When choosing my preferred university, the location of the university is an important factor.

Strongly Disagree				Strongly Agree
1	2	3	4	5

8. I am knowledgeable regarding the effects of fossil fuel emissions on the planet's climate.

Strongly Disagree Strongly Agree

1 2 3 4 5

9. When choosing my preferred university, reputation on environmental issues is an important factor.

Strongly Disagree Strongly Agree

1 2 3 4 5

10. In comparison to other social causes (e.g. gender equality, safe spaces), environmental causes are:

Least Important Most Important

1 2 3 4 5

11. If I were made aware that John Abbott College had funds invested in fossil fuel corporations, I would be:

Very disappointed Very Approving

1 2 3 4 5

12. If I were made aware that my future university or preferred university had funds invested in fossil fuel corporations, I would be:

Very disappointed Very Approving

1 2 3 4 5

13. If I were made aware that my university or preferred university had funds invested in fossil fuel corporations, how much would it make me re-consider your choice?

Not at all Change my decision

1 2 3 4 5

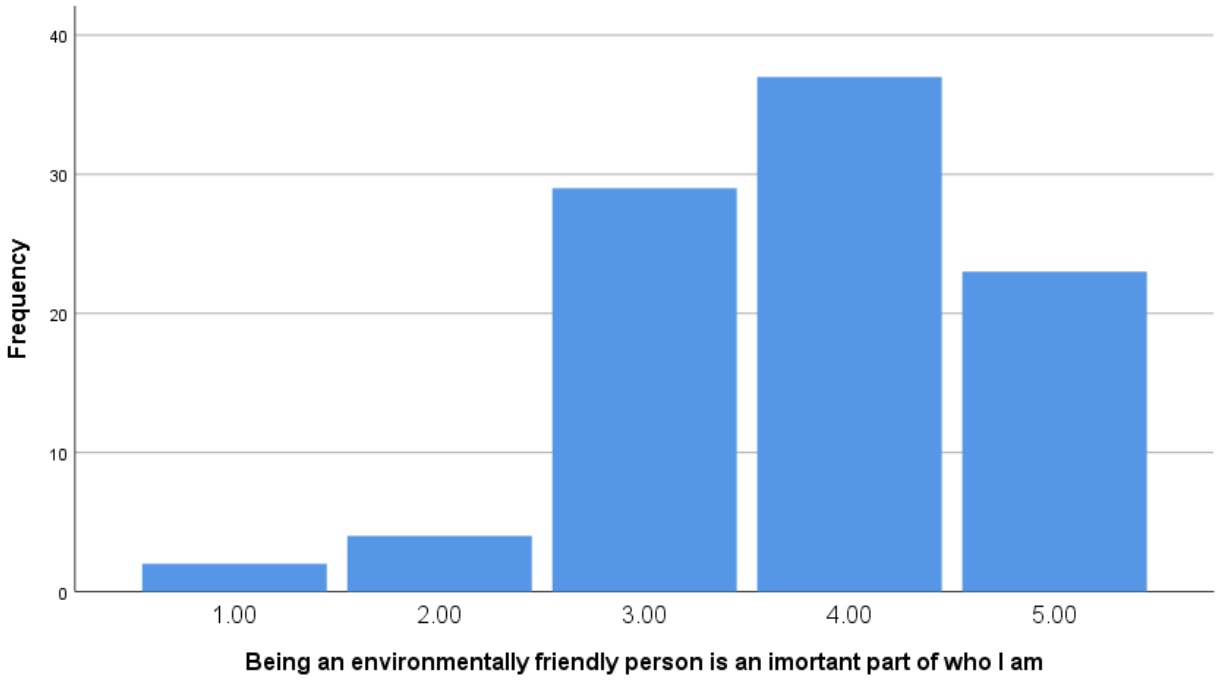
14. I believe fossil fuel corporations are necessary for society to function

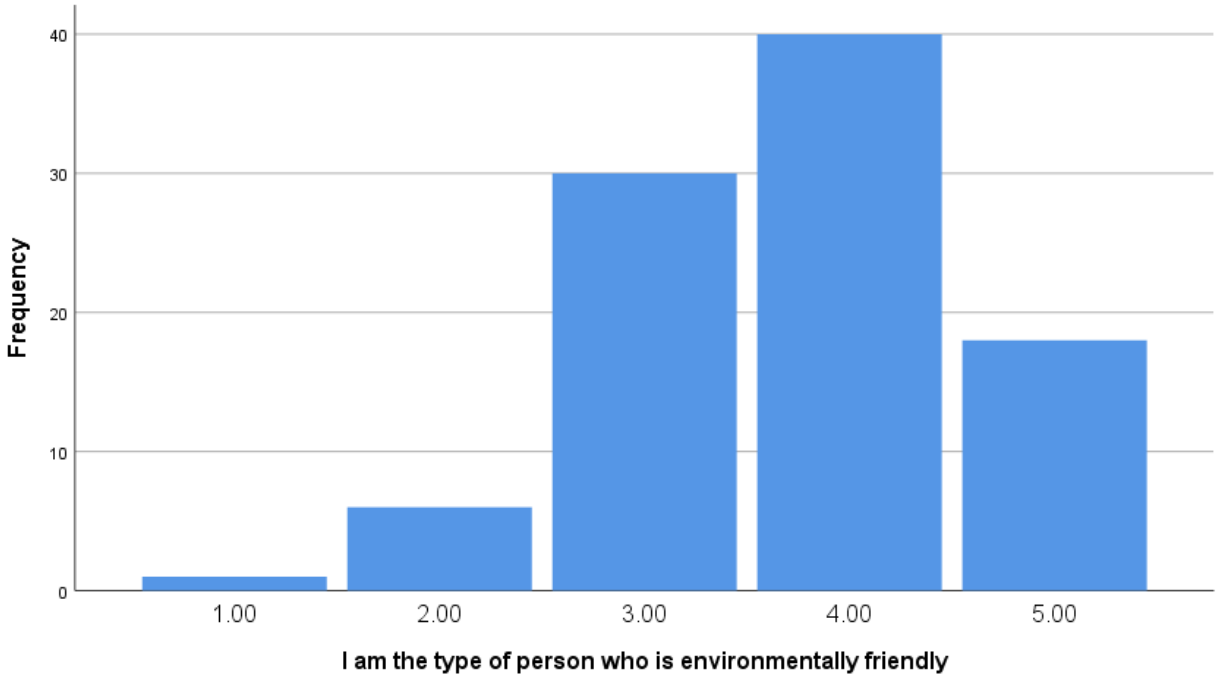
Strongly Disagree Strongly Agree

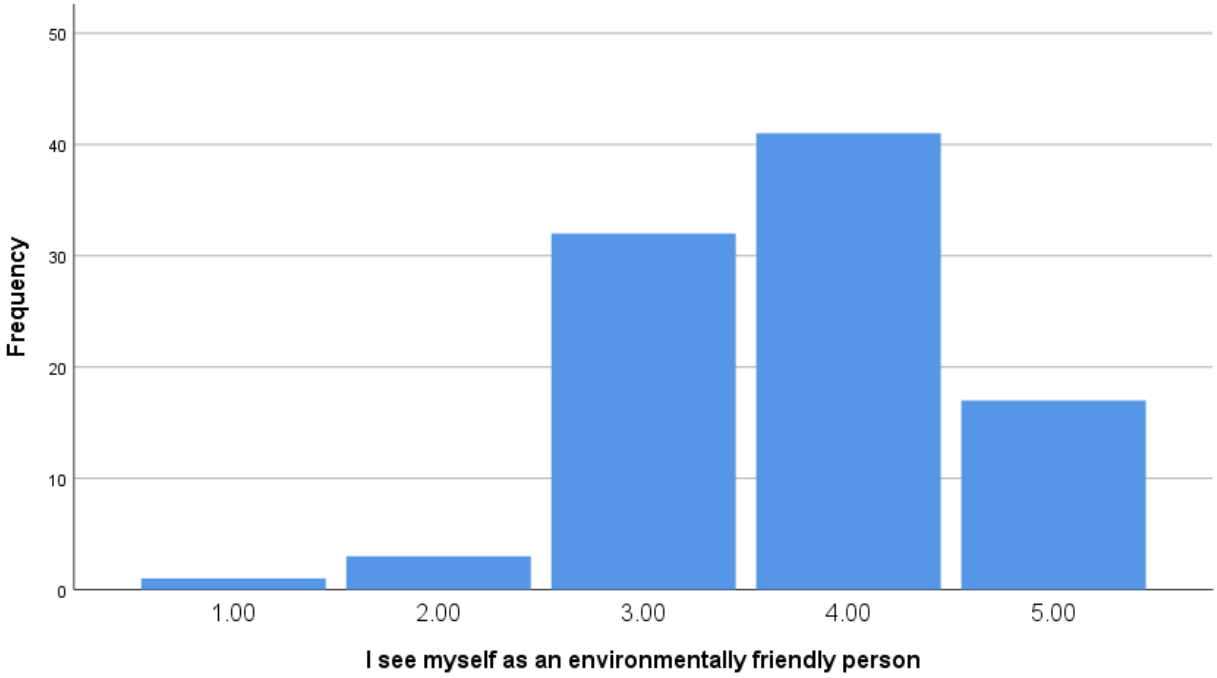
1 2 3 4 5

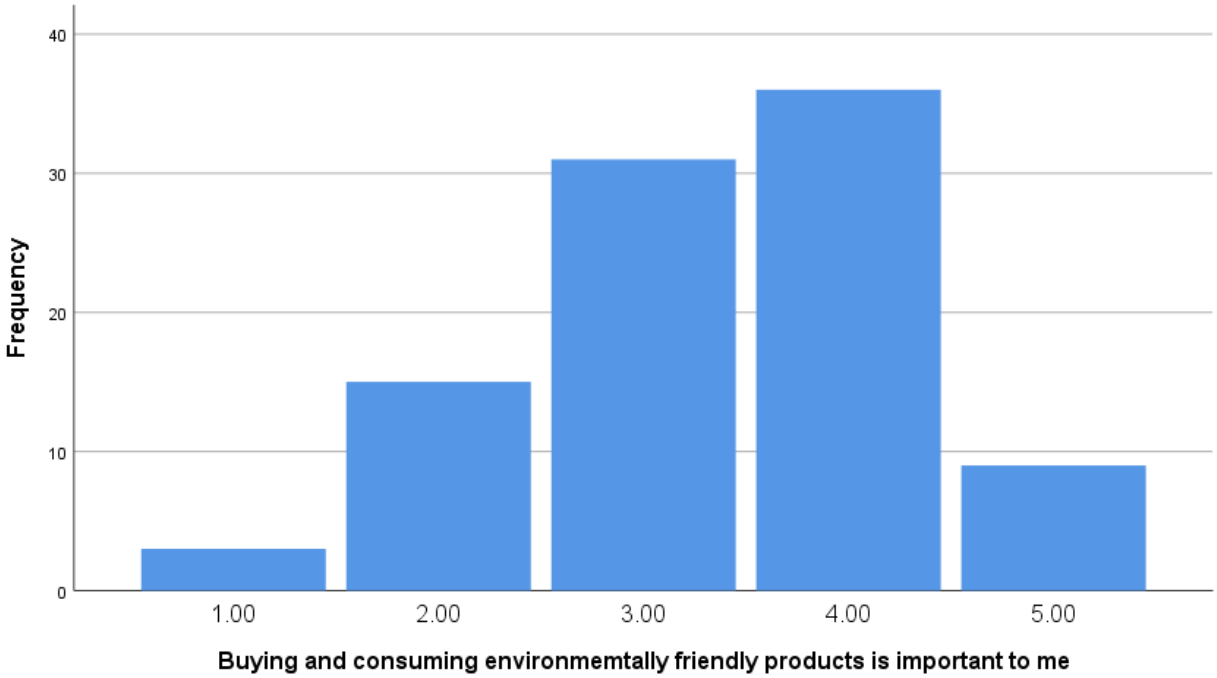
Appendix b

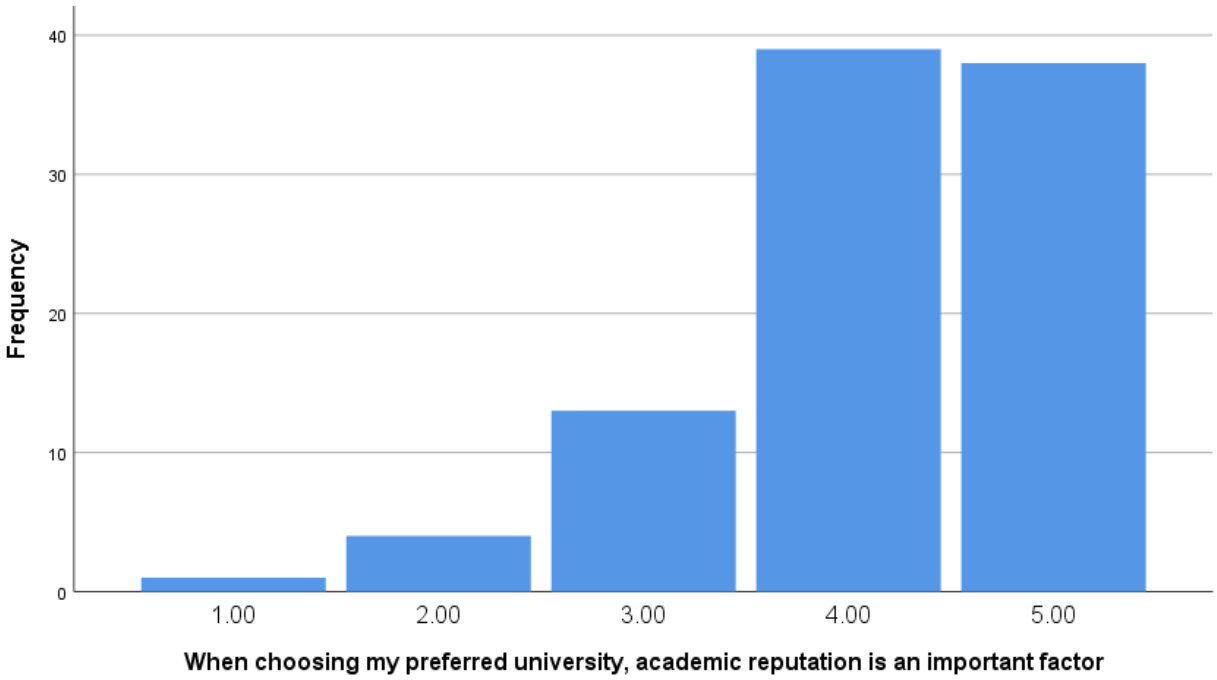
Graphs

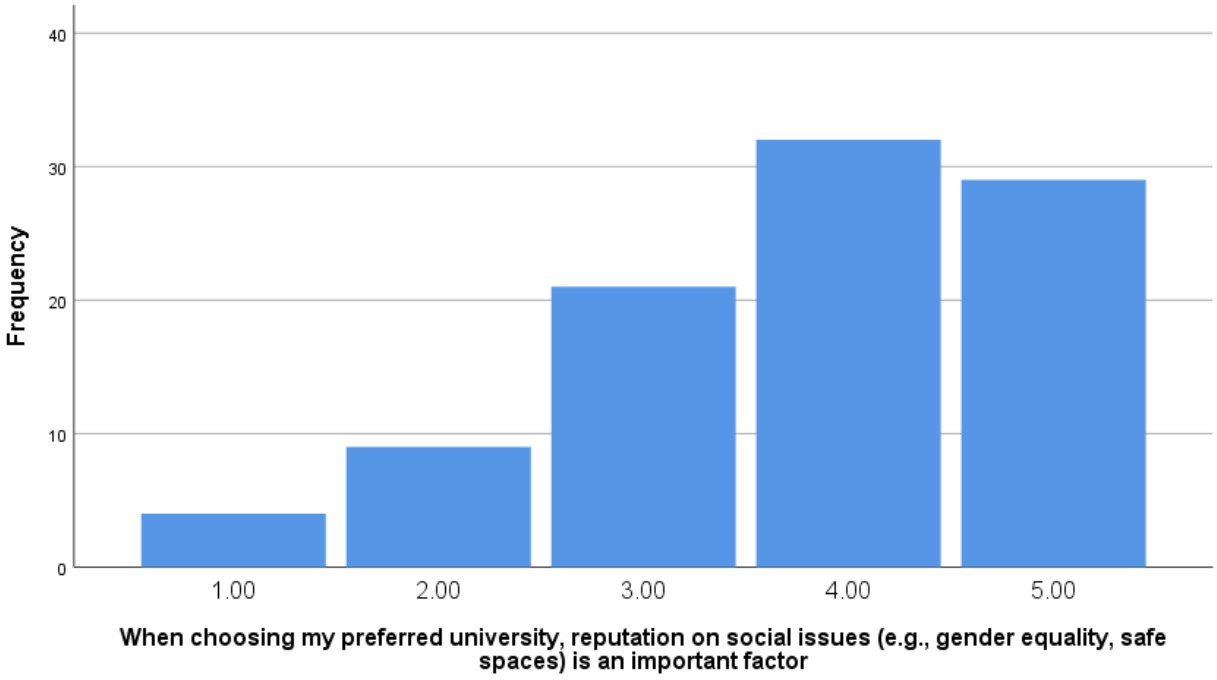

Frequency
40
30
20
10
0
1.00
2.00
3.00
4.00
5.00
Being an environmentally friendly person is an imortant part of who I am

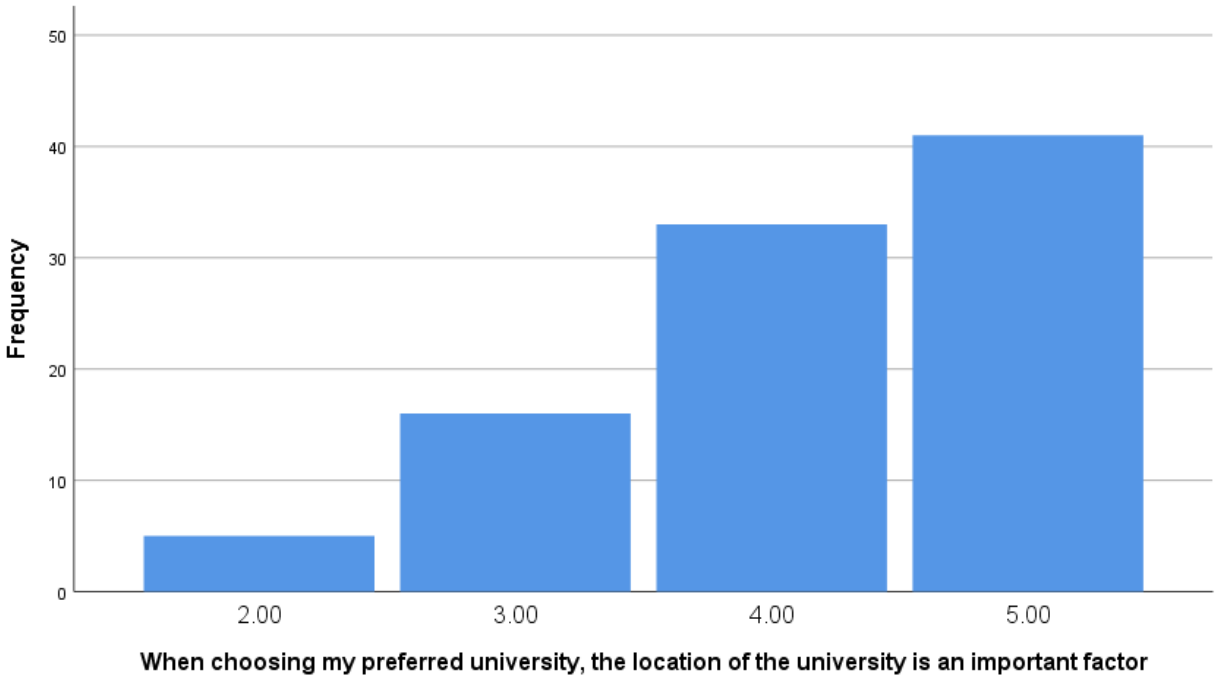

Frequency
40
30
20
10
0
1.00
2.00
3.00
4.00
5.00
I am the type of person who is environmentally friendly

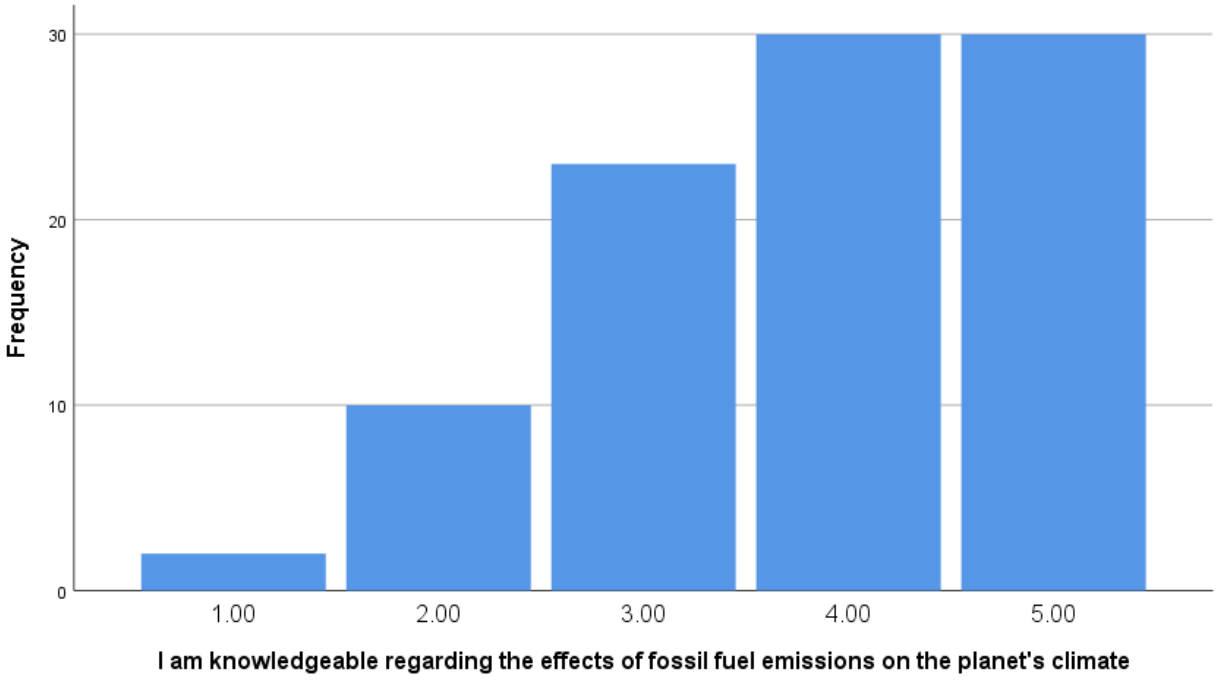

Frequency
50
40
30
20
10
0
1.00
2.00
3.00
4.00
5.00
I see myself as an environmentally friendly person

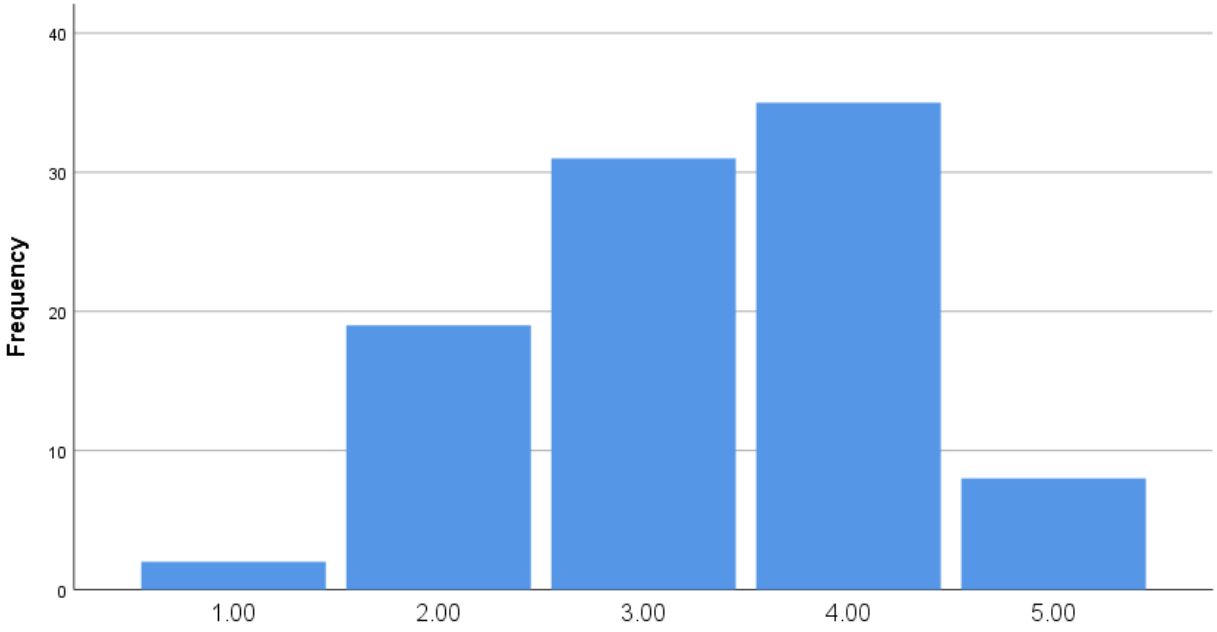

Frequency
40
30
20
10
0
1.00
2.00
3.00
4.00
5.00
Buying and consuming environmemtally friendly products is important to me


Frequency
40
30
20
10
0
1.00
2.00
3.00
4.00
5.00
When choosing my preferred university, academic reputation is an important factor

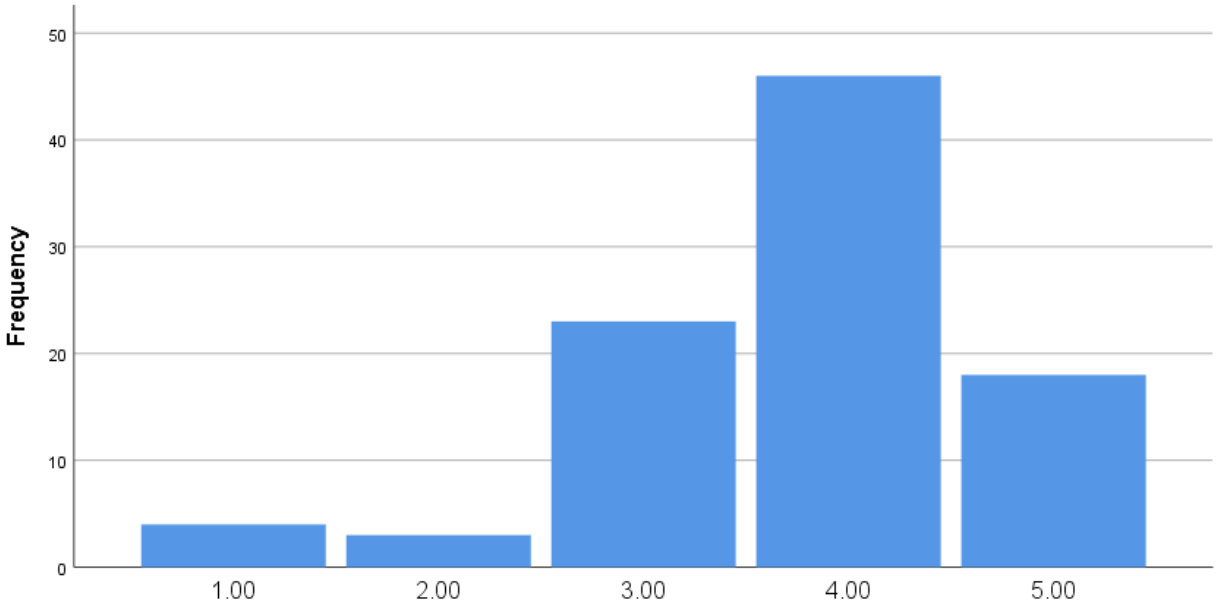

Frequency
40
30
20
10
0
1.00
2.00
3.00
4.00
5.00
When choosing my preferred university, reputation on social issues (e.g., gender equality, safe spaces) is an important factor


Frequency
50
40
30
20
10
0
2.00
3.00
4.00
5.00
When choosing my preferred university, the location of the university is an important factor

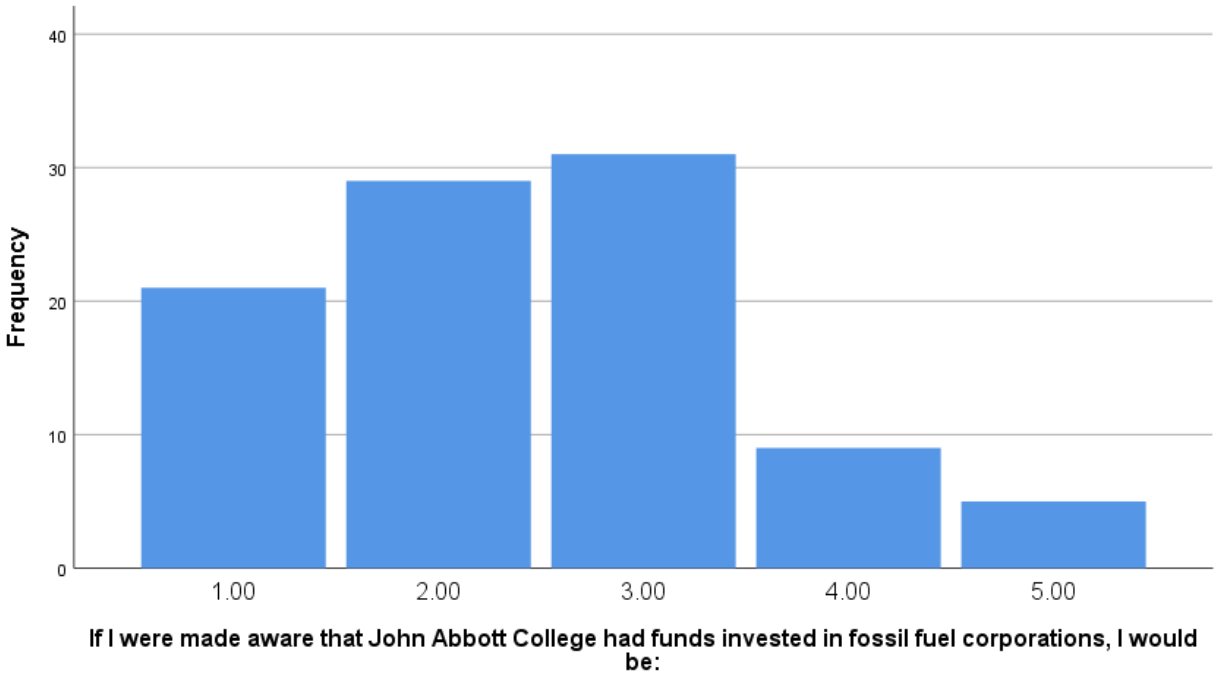

Frequency
30
20
10
0
1.00
2.00
3.00
4.00
5.00
I am knowledgeable regarding the effects of fossil fuel emissions on the planet's climate

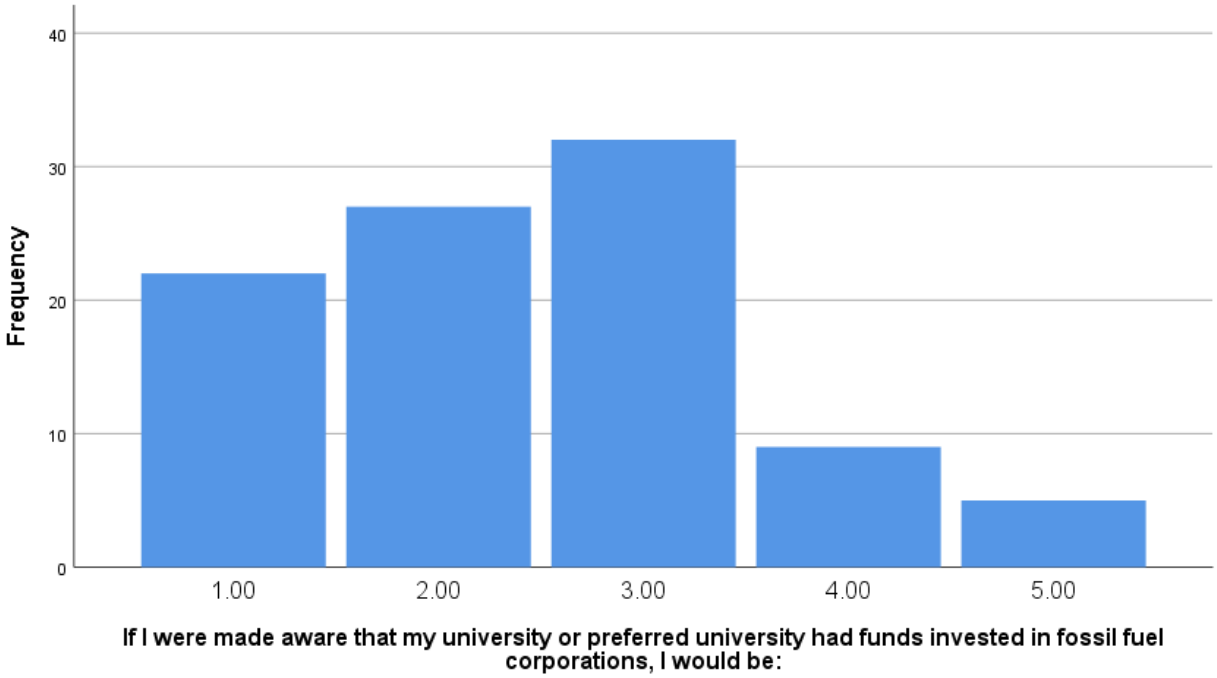


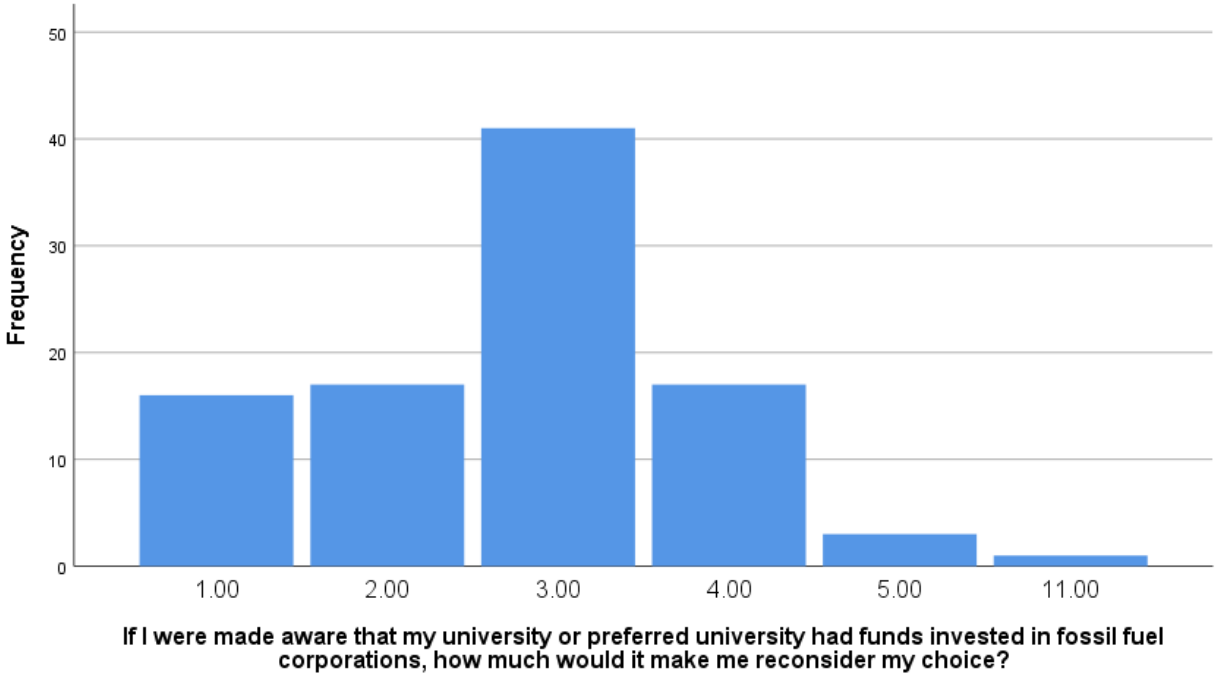
When chossing my preferred university, reputation on environmental issues is an important factor.

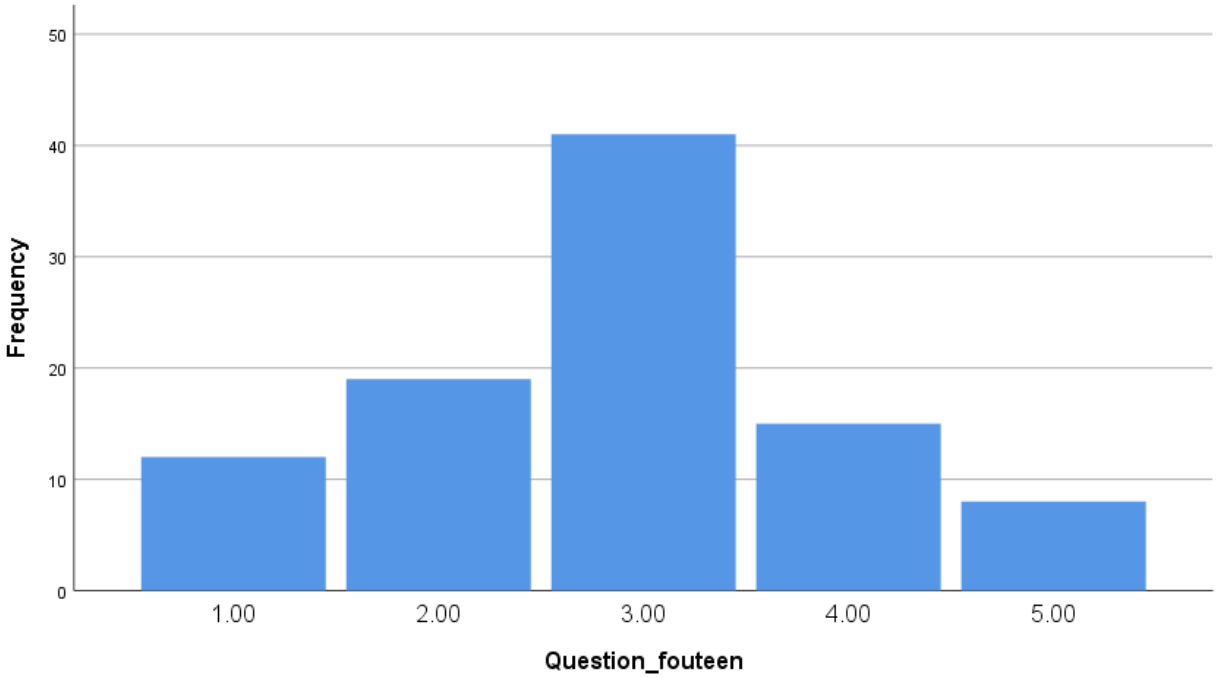


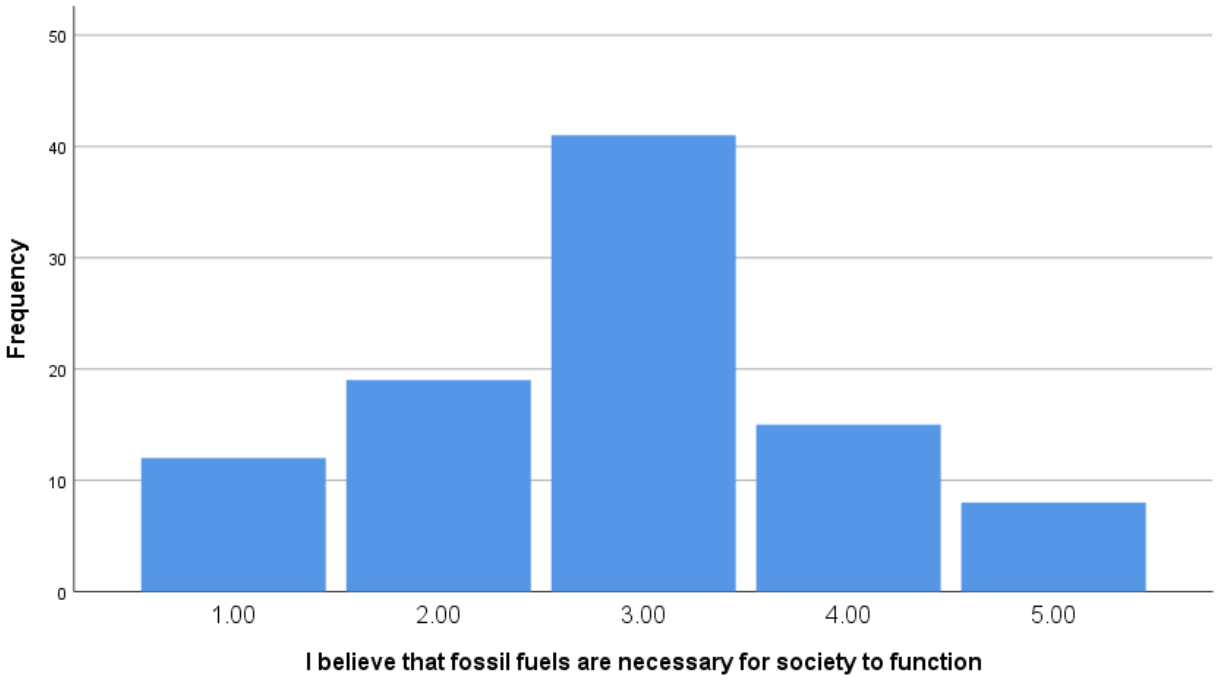
In comparison to other social causes (e.g., gender equality, safe spaces), environmental causes are:


Frequency
40
30
20
10
0
1.00
2.00
3.00
4.00
5.00
If I were made aware that John Abbott College had funds invested in fossil fuel corporations, I would be:


Frequency
40
30
20
10
0
1.00
2.00
3.00
4.00
5.00
If I were made aware that my university or preferred university had funds invested in fossil fuel corporations, I would be:


Frequency
50
40
30
20
10
0
1.00
2.00
3.00
4.00
5.00
11.00
If I were made aware that my university or preferred university had funds invested in fossil fuel corporations, how much would it make me reconsider my choice?


Frequency
50
40
30
20
10
0
1.00
2.00
3.00
4.00
5.00
Question_fouteen


Frequency
50
40
30
20
10
0
1.00
2.00
3.00
4.00
5.00
I believe that fossil fuels are necessary for society to function

Appendix C

Table 1.

Significance of differences between Likert scale answers per question

	1	2	3	4	5	6	7	8	9	10	11	12	13
Chi-Square	50.211[a]	55.579[a]	65.787[b]	42.809[b]	70.842[a]	31.474[a]	33.463[c]	33.053[a]	42.632[a]	65.255[b]	28.632[a]	28.316[a]	64.474[d]
df	4	4	4	4	4	4	4	4	4	4	4	4	4
Asymp. Sig.	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000