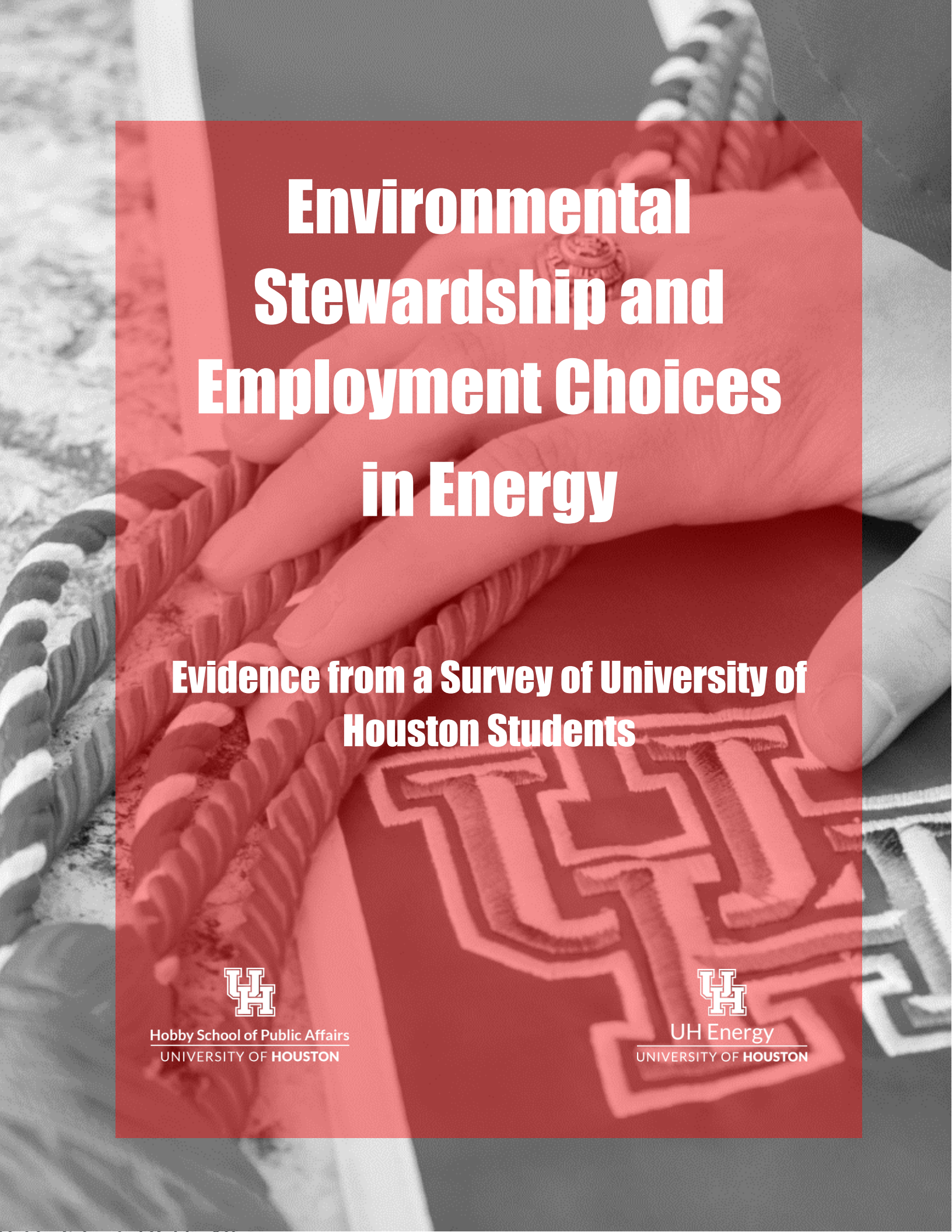

Environmental Stewardship and Employment Choices in Energy

Evidence from a Survey of University of Houston Students

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Executive Summary

UH Energy and the Hobby School of Public Affairs at the University of Houston (UH) conducted an online survey of UH students who are likely to consider a future career in the energy industry. Houston is often referred to as the "energy capital" of the world. Companies calling Houston their home have been key drivers of innovation in the oil and natural gas business for decades and have been leading the research and technological development that is likely to shape the transition to a sustainable energy future.

Economic actors, including investors, consumers and workers, have increasingly shown a penchant for prioritizing their values in their investment, consumption, and employment choices. This, in turn, has created incentives for firms to internalize the environmental, social, and political impacts of their business activities. We observe these practices even in the oil and gas sector, where the adjustment costs to the new environment is more costly.[1] Importantly, On March 21, 2022 the US Securities and Exchange Commission released new proposed rules that would require public companies to disclose how climate-related risks affect their performance.[2] But not all investors, consumers, or workers are as concerned with climate change, nor are they as willing to pay for the costs of curbing emissions. Even governments, like the state of Texas, have pushed back against environmental and social governance by enacting legislation that bans financial companies and investment funds who take into consideration climate risk in their investment decisions from accessing state and local bonds markets or doing business with the state of Texas.[3]

[1] Leading companies in the industry have adopted a series of environmental reporting standards developed by the International Petroleum Industry Environmental Conservation Association (IPIECA), a nonprofit organization created in 1974 in response to the formation of the United Nations Environment Programme (UNEP).

[2] If adopted these reporting rules are expected to have a major impact across publicly traded firms, but specially among those in the energy sector. See US Securities and Exchange Commission, "The Enhancement and Standardization of Climate-Related Disclosures for Investors", Release No. 33-11042, March 21, 2022. https://www.sec.gov/rules/proposed/2022/33-11042.pdf. The proposal is in the comments period and has not been adopted at the time of this report.

[3] Other states engaging in anti-ESG practices include Oklahoma, West Virginia, Arkansas, and Kentucky. See Peter Schroeder, How Republican-led states are targeting Wall Street with 'anti-woke' laws, Reuters, July 6, 2022: https://www.reuters.com/article/wallstreet-esg-insight-idTRNIKBN2OH0O1.

Given the growing role of Environmental, Social, and Corporate Governance (ESG) practices in the energy sector, understanding the attitudes towards social responsibility and environmental stewardship among current UH students is important and relevant in both the business and political realms. For this purpose we designed and fielded a survey aimed at gauging how potential employees in the energy industry perceive ESG practices and how ESG standards influence their employment decisions. A total of 1,068 respondents completed the survey, which was fielded online between March 7 and April 22, 2022.

The most important takeaway from our survey is that while UH students are concerned with climate change, they remain skeptical about about their peers' support for policies aimed at curbing anthropomorphic greenhouse gas emissions. We also find important gender and ideological differences in students' attitudes, including their willingness to work for companies with better environmental stewardship standards. These differences between respondents' own perceptions of the importance of climate change and that of others makes it harder to elicit political support for enacting policy solutions aimed at transitioning to a more sustainable energy future.

The following are our key findings:

- The vast majority of UH students (96%) believe that climate change is happening, and a majority of respondents (57%) said that climate change is caused by both human and natural changes in the environment. The only difference appears when comparing answers across political ideology.
  - While 99% and 97% of liberals and moderates, respectively, concurred that climate change is happening, 85% of conservatives reported the same.
  - Conservatives (67%) are most likely to say that climate change is caused by both human and natural changes whereas liberal students (49%) are the most likely to say climate change is the result of human activities alone.
- The vast majority of UH students (97%) are at least somewhat concerned about the state of the environment. However, there are some differences by students' field of study, gender, and political ideology.
  - Students in business management and administration are less likely to be very or extremely concerned about the state of the environment compared to students in the natural sciences, engineering, and social sciences.
  - Men are more likely to not be concerned about the state of the environment at all and least likely to be extremely concerned about the state of the environment.
  - Conservatives are more likely to not be concerned at all about the state of the environment and least likely to be very and extremely concerned about the state of the environment. The opposite is true for liberals.
  - Respondents think that others are not as concerned about the environment as they are. While 11% of respondents said they themselves were extremely concerned, less than

5% of respondents said that members of any of the nine other groups were extremely concerned.

- The majority of respondents viewed ethical and environmental practices as important when making employment decisions. We also find that the importance students placed on seven attributes varied by gender, ideology, and race and ethnicity.
  - Companies' ethical standards of products (80%) and procurement (77%) were the attributes with the highest proportions of students saying they were important or very important.
  - More than 70% of female respondents said that each of the seven attributes are important.
  - 82% and 81% of Black and Hispanic students, respectively, said that the representation of minorities is important when considering employment offers; 73% of Asian, 71% of two or more and other races, and only 60% of white students said representation is important.
  - Liberal students were the most likely to say the ethical and environmental practices of a company are important when considering employment offers. 77% of liberal students viewed efforts to reduce greenhouse gas emissions as important compared to 68% of moderates and 52% of conservative students.
- Overall, we find that UH students prioritize ESG standards when deciding whether to work for a company in the energy industry and find some differences by gender, political ideology, and race and ethnicity.
  - 66% of respondents agree or strongly agree that it is important for a company to have ESG policies and 40% of UH students agree or strongly agree that environmental responsibility is their top priority when deciding to work for a company in the energy industry.
  - Female respondents and respondents that prefer to self-describe are more likely to think that it is important for a company to have ESG policies, more likely to say that environmental responsibility is a top priority in their job search, and are more willing to accept a lesser role or salary in a company that prioritizes ESG.
  - Likewise, liberals are more likely to agree that it is important for a company to have ESG policies, accept a lesser role or salary in a company that prioritizes ESG, agree that environmental responsibility is a top priority in their job search, and believe that students in their program of study prioritize ESG, though this difference is much smaller.
  - Overall, the percentage of respondents that agree with the statements are similar across the different racial and ethnic groups. However, Hispanics consistently had one of the highest percentages of respondents that agreed with the statements while Black or African American respondents had the smallest percentages.

- Respondents preferred working for a renewable company than a natural gas company or an oil company, and they were twice as likely to choose a job offer from a leader in ESG than one from a company criticized for not meeting even minimum standards.
    - While UH Students preferred jobs with higher starting salaries, they were willing to trade higher salaries to work at companies with stronger ESG stewardship credentials.
    - We find that ESG stewardship was the most important attribute for students when considering job offers, followed by starting salary, then industry.
    - Male students were more likely than female students to prefer higher salaries; female students were more likely than male students to choose an offer from a company recognized as an ESG leader.

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Chapter 1: Introduction

1.1 Background on ESG

Environmental, Social, and Corporate Governance (ESG) are categories of concern that go beyond the traditional financial goals of businesses and corporations. Under the broader umbrella of corporate social responsibility, ESG concerns have led stakeholders to demand changes in business practices affecting the environment, social interactions, and corporate governance. While there is no one definition of ESG nor a specific list of issues that fall within each category, there are general ideas of the types of issues that are considered to be part of ESG (Gnanarajah and Shorter, 2022). In general, environmental factors relate to how a corporation or industry can affect the environment, such as causing or worsening pollution and global warming, increased natural disasters, and a scarcity of resources (Gnanarajah and Shorter, 2022). Social factors are those that can affect different members of society, whether or not they are directly involved with the corporation. These issues include discrimination, infringing on individuals' rights, and a failure to properly handle customer data (Gnanarajah and Shorter, 2022). Lastly, corporate governance refers to the way in which a corporation self-governs and how said corporation conducts its business (Gnanarajah and Shorter, 2022). Despite the lack of a consensus on a definition for ESG and the fact that ESG is a relatively new concept, ESG has become increasingly important for industries across the board.

In recent years, we have seen stakeholders—including investors, consumers, and other individuals and communities—demonstrate growing concerns for a variety of social issues. ESG practices can affect a firm's bottom line; adherence to such standards is neither entirely altruistic (Polonsky 2011; Turker 2008; Friedman 1970) nor necessarily problematic for businesses. A company's decision to adhere to even minimum ESG standards can thus be viewed as a strategic calculation to maintain market competitiveness for stakeholder preferences (Waddock and Graves 1997; Burke and Logsdon 1996), especially for the preferences of consumers, employees, and investors (Friedman 1970, Freeman and Velamuri 2006; Greenwood 2002; Maignan and Ferrell 2004). Under some conditions, demonstrating a commitment to ESG is way to enhance the brand (Boulding and Kirmani 1993), signalling enhanced product quality and/or corporate citizenship (Maignan and Ferrell 2001) and allowing a firm to differentiate itself from competitors.

The divestment movement in colleges and universities across the United States serves as an example of consequences for those corporations that fail to meet ESG standards, though the effectiveness of divestment, especially for oil and gas, is not clear. The Fossil Fuel Divestment (FFD) movement char-

acterizes the fossil fuel industry "as a key actor in perpetuating global climate change" and student groups involved in the movement have influenced the decisions of many campuses across the nation to divest part or all of their endowment from companies in the fossil fuel industry (Grady-Benson and Sarathy, 2016, 664). Since the start of the student-led FFD movement, many educational institutions such as Columbia, Harvard, Georgetown, Pitzer College, and University of St. Thomas, to name a few, have divested or have committed to divest part or all of their endowment from the fossil fuel industry (Global Divestment Commitments Database, n.d.). Furthermore, after the People's Climate March of 2014, hundreds of investors "committed to divestment, bringing the total divested funds to over 50 billion dollars" (Luckerson, 2014, as cited in Grady-Benson and Sarathy, 2016, 662).

In addition, society's heightened pressure for corporations to address social issues like racial injustice has influenced the decisions of many businesses. In response to this pressure, some corporations have done more than simply denounce racial injustice; Goldman Sachs, for example, started the Fund for Racial Equity, which provided $10 million "to support the vital work of leading organizations addressing racial injustice, structural inequity, and economic disparity" (Holloman and Han, 2021, 42). Additionally, another publicly-traded company, Veeva Systems, became a public benefit corporation in 2021 (Holloman and Han, 2021, 42). By becoming a public benefit corporation, Veeva Systems must not only consider the interests of its shareholders, but also the interests of all stakeholders (Holloman and Han, 2021, 42).

Stakeholders are also pressuring corporations to not only reform business practices, but also to employ transparency as it relates to ESG. Both S&P Global and Nasdaq have implemented ESG Ratings and databases. Nasdaq's website even includes a publicly available dataset with ESG data from their listed companies in an effort to promote sustainable markets and transparency (Nasdaq, n.d.). Through the Nasdaq ESG Data hub, investors can access a multitude of datasets that focus on different ESG areas from providers such as Equileap and Upright Project. S&P Global also has several ESG indices. The S&P 500 ESG Index, for example, provides investors with a benchmark and information on companies from the S&P 500 that do not meet ESG criteria, specifically, those companies that do not meet the United Nations Global Compact principles (Steadman and Perrone, 2019).

Furthermore, the Securities and Exchange Commission recently proposed amendments to its Securities Act of 1933 and the Securities Exchange Act of 1934 in order to increase transparency and information for investors. These amendments would "require registrants to provide certain climate-related information in their registration statements and annual reports, including certain information about climate-related financial risks and climate-related financial metrics in their financial statements" (SEC 2022b, 7). The decision on amendments has not been made and public comments were due by June 17, 2022 (SEC 2022a).

In summary, individuals have put more importance on issues of the environment, society, and corporate governance and have pressured Corporate America to address and avoid ESG-related problems. Failure to meet ESG standards has been shown to create negative implications for companies such as those in the fossil fuels industry. Plus, with ratings and more transparent

information regarding practices that go against ESG goals, companies that fail to meet basic ESG criteria may face even more issues in the future. Responsible governance, social awareness, and community engagement are key to sustainable business practices such as talent retention, financial health, and customer care.

Academic research has found that firms' ESG practices can affect individual consumption and employment choices. Yet that research has also unveiled a potential behavioral gap among consumers depending on their individual attributes, attitudes, and needs (Mainieri et al. 1997). In particular, a job applicant might be attracted to the value of ESG demonstrated by a firm, but they may not be willing to accept a lower salary. Salary differences could be considered personal costs of being part of a corporation that behaves in more socially and environmentally conscientious ways (Laroche et al. 2009). Individuals who are more receptive to ESG stewardship when searching for a job, and particularly those who would accept a lower salary based on the firm's ESG practices, may present personal characteristics and attitudes that make them differ from the rest of the applicant pool (Duarte et al. 2014; Barber and Roehling 1993; Albinger and Freemen 2000; Alniacik et al. 2011). In other words, some people would self-select into applying for jobs in oil and gas irrespective of the practices of the potential employer, others would choose to apply for jobs in firms with better environmental stewardship practices, and some would have an altruistic tendency to accept a lower salary to be a team member at a firm with a high ESG reputation.

1.2 About the survey

For the reasons discussed in the previous section, it is important to explore attitudes towards ESG and environmental stewardship among respondents who would have a natural inclination to search for jobs in the energy sector. The University of Houston provides an excellent setting for our analysis. The university houses programs serving the energy sector in engineering, geology, chemistry, business, computer science, and law. With Houston's position as the energy capital of the world, it has been natural for students at the University of Houston to consider careers in energy, but particularly in oil and gas. Given the growing importance of climate change among college graduates, the latest survey seeks to understand whether corporate social responsibility and environmental stewardship practices of employers affect employment preferences among current students at UH, including those enrolled in energy-related programs, and some of whom will supply the future workforce in the energy sector in Houston and around the world.

The survey was distributed between March 7, 2022 and April 22, 2022 to faculty in the natural sciences, engineering, and social sciences as well as law and business administration who then, in turn, distributed the survey to their students. A total of 1,068 respondents participated in the survey. Table 1.1 shows the distribution of respondents by gender, race and ethnicity, student level, and age as well as how the sample compares to the broader UH student population. Overall, the demographic characteristics of the survey sample resemble the UH student population with the exception of women and post-baccalaureate and special professional students who are underrep-

resented in the survey sample compared to the UH student population.

This is the second survey conducted by UH Energy and the Hobby School of Public Affairs examining how environmental stewardship practices impact students' employment preferences and decisions. The first survey was conducted four years prior (April and May of 2018) and included a sample of 608 UH undergraduate and graduate students. The 2018 and 2022 surveys included many of the same questions; others were added and adjusted. The results of the previous survey were published as part of UH Energy's white paper series.[1] The 2018 survey found that the vast majority of students believe that global warming is happening and support increasing the use of renewable energy sources. In addition, a majority of students said agreed that environmental stewardship practices are important in their employment decisions as is working for companies in the energy sector that have policies addressing climate change and other environmental issues. The survey also found that, even after controlling for salary, students were more likely to accept jobs at companies recognized as being leaders in environmental impact mitigation practices.

Table 1.1: Descriptive statistics of sample and UH population

	Sample	**UH Students**
Gender		
Female	43.3%	51.8%
Male	54.5%	48.2%
Other	2.3%	0.0%
Race/Ethnicity		
White	21.9%	21.6%
Black or African American	9.6%	10.7%
Hispanic	30.2%	33.3%
Asian, Hawaiian. Pacific Islander	28.8%	22.1%
Native American	0.2%	0.1%
Two or More	6.3%	3.0%
Others	3.0%	9.2%
Student Level		
Undergraduate	87.8%	80.4%
Postbaccalaureate	0.0%	1.8%
Graduate	12.0%	14.2%
Special Professional	0.2%	3.5%
Age (Mean)	22.5	23.1

[1] Interested readers can read the previous white paper here: https://www.uh.edu/uh-energy/research/white-papers/white-papers-files/insights-into-oil-gas-workforce-future-03-2019.pdf.

Chapter 2: Concern about the Environment and Climate Change

2.1 Belief in climate change

The vast majority of UH students, undergraduate and graduate, believe in climate change. About 96% of students overall said they believe climate change is happening. In the last survey conducted in the spring of 2018, the proportion of students who believed global warming is happening was 88%. Figure 2.1 shows that while 99% and 97% of liberals and moderates, respectively, concur that climate change is happening, 85% of conservatives reported the same.

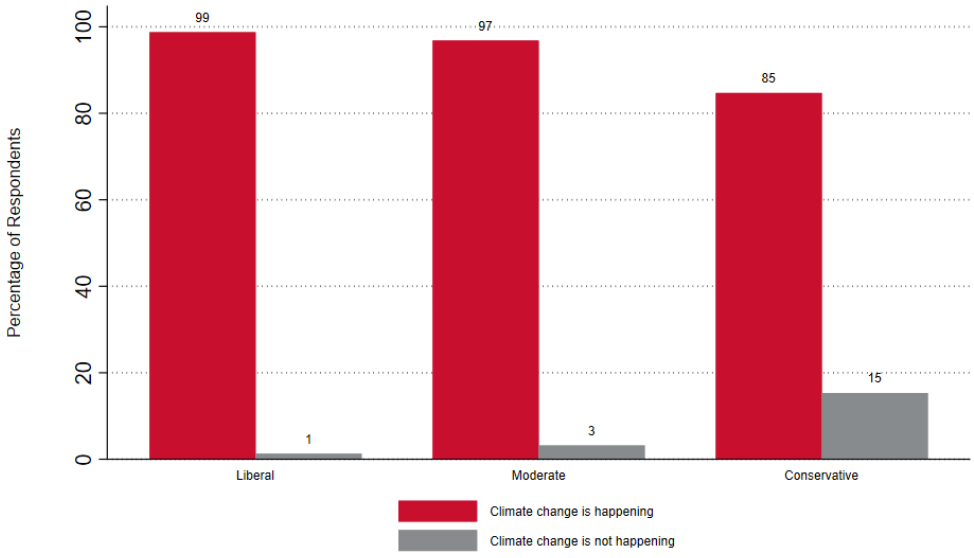


Figure 2.1: Belief in climate change by political ideology

Respondents were then asked about the causes of climate change. The majority of respondents said that climate change is caused by both human activities and natural changes in the environment. About 38% of respondents said that climate is caused by human activity; few respondents (5%) said that climate change is mostly a result of natural changes in the environment. Because the question

was asked differently across the two surveys, we cannot directly compare responses from 2018 to those in 2022. However, as in 2022, few respondents in 2018 said that global warming was caused mostly by natural changes in the environment.

When it comes to the perceived causes of climate changes, we see differences by political ideology (Figure 2.2), with conservatives (67%) most likely to say that it is caused by both human and natural changes followed by moderates (62%), then liberals (49%). Conversely, students who identify as liberal were the most likely to say it is the result human activities (49%) whereas conservatives were the most likely to say it is caused by natural changes in the environment (14%).

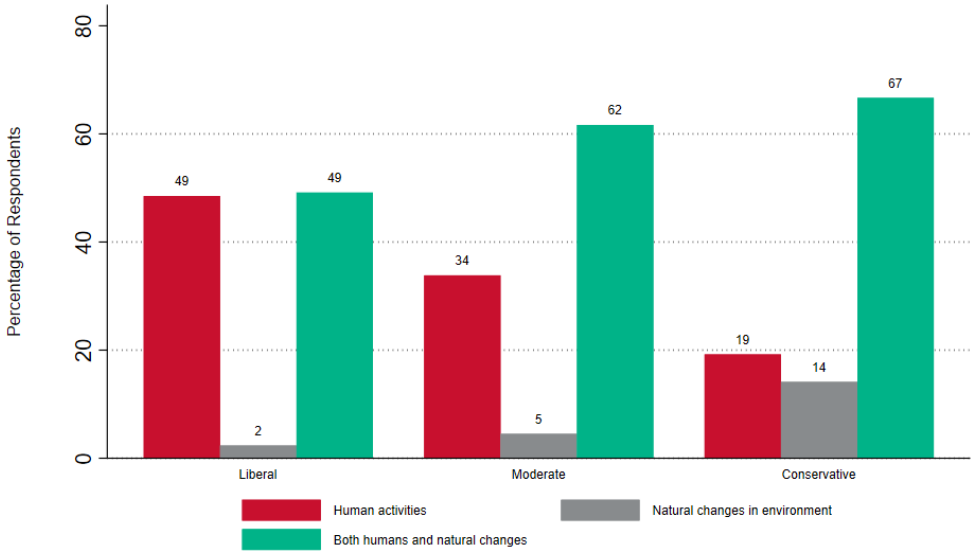


Figure 2.2: Causes of climate change by political ideology

Finally, we see some differences in beliefs about causes of climate change by disciplinary backgrounds (Figure 2.3). Students in business management and administration (62%) were the most likely to say that climate change is caused by both humans and natural changes in the environment compared to those in natural sciences and engineering and social sciences (54%).

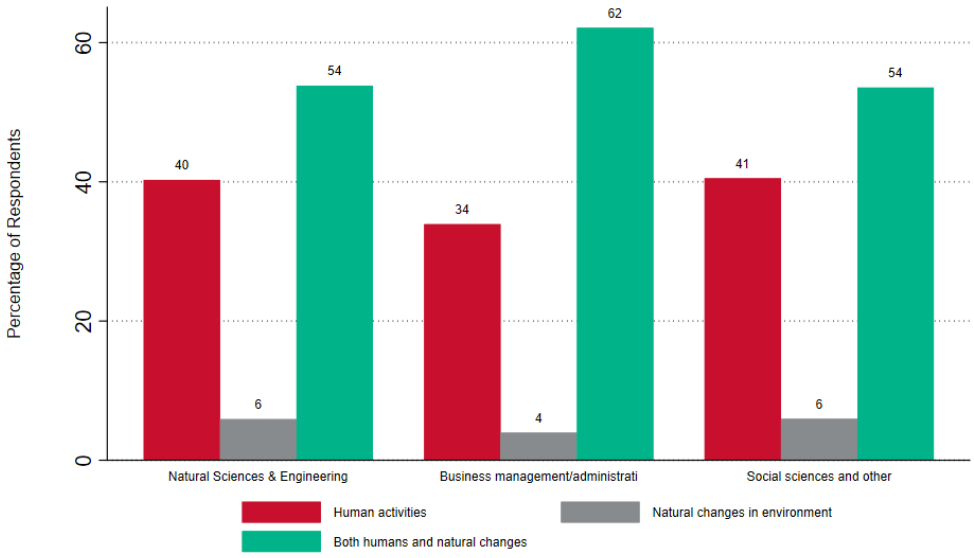


Figure 2.3: Causes of climate change by field of study

2.2 Concern about the state of the environment

Individuals' own concern about state of environment

Overall, we find that the vast majority of UH students are at least somewhat concerned about the state of the environment. Only 3% of respondents are not at all concerned about the state of the environment (see Figure 2.4). We also find that a majority of students are moderately (38%), very (27%), and extremely (11%) concerned about the state of the environment. The distribution of "concern for the state of the environment" among UH students in 2022 closely resembles the distribution in 2018 with the majority of students being either moderately or very concerned (69% in 2018 compared to 65% in 2022).

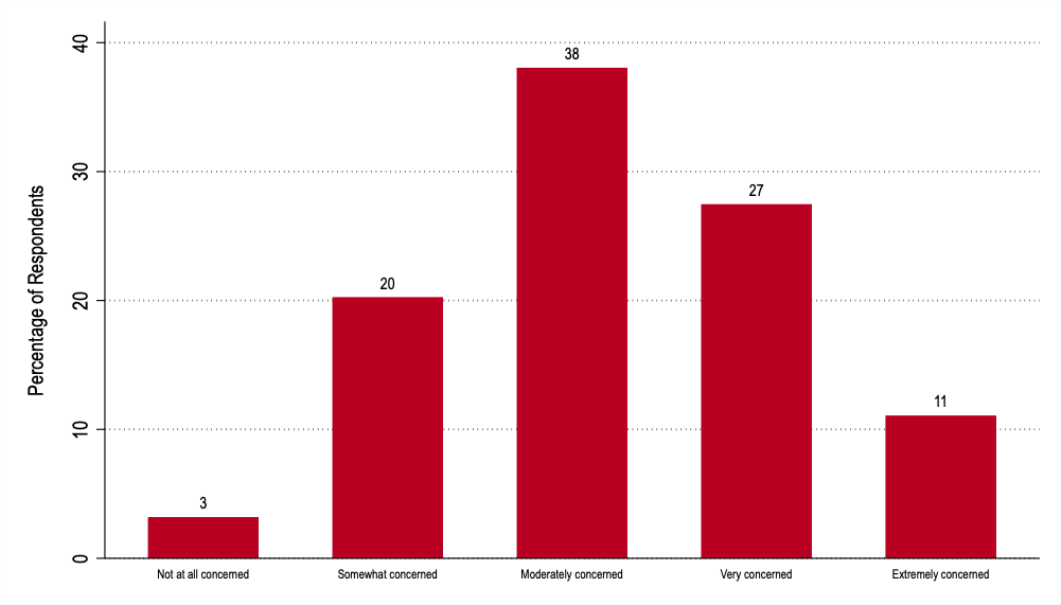


Figure 2.4: Generally speaking, how concerned are you about the state of the environment?

When comparing the concern levels by field of study, we find some small, but clear, differences. Respondents in business management and administration are least likely to be very or extremely concerned about the state of the environment (Figure 2.5). Only 31% of students in business management and administration said that they are very or extremely concerned about the state of the environment, while 45% and 42% of students in the natural sciences/engineering and social sciences/other, respectively, are very or extremely concerned. In addition, we find that business management and administration is the only field of study that has a much higher percentage of respondents that are moderately concerned (41%) compared to both somewhat (25%) and very (24%) concerned. The other fields of study have closer percentages of moderately or very concerned respondents, with fewer respondents that are somewhat concerned. There is no relationship, however, between field of study and the percentage of respondents that are not at all concerned.

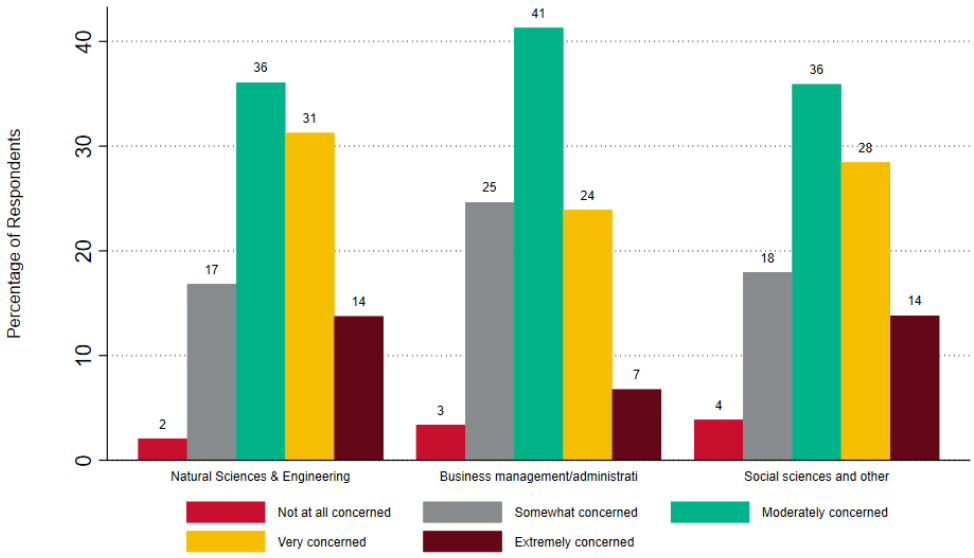


Figure 2.5: Concern level for the state of the environment by field of study

We also find that there are differences in the levels of concern for the state of the environment by gender. Figure 2.6 shows that male respondents have a much higher percentage of moderate concern (39%) than any other concern level. In comparison, both women and respondents that prefer to self-describe have similar proportions of moderate concern (37% and 33%, respectively) compared to those that are very concerned (32% and 38%, respectively). The proportion of men who are somewhat concerned (24%) about the state of the environment was higher than for women (17%) and those that prefer to self-describe (8%). Lastly, respondents that prefer to self-describe are more likely to be extremely concerned about the state of the environment (21%) relative to women (14%) and men (8%).

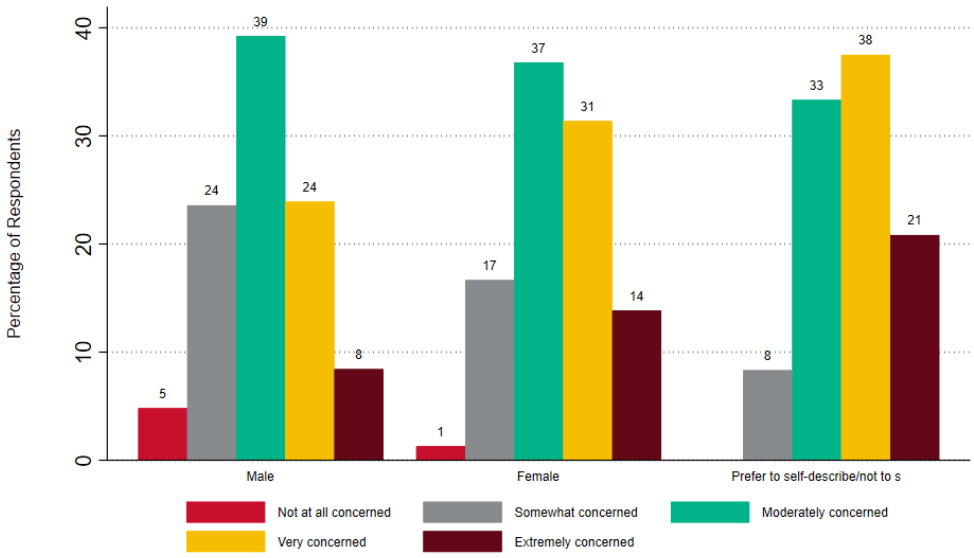


Figure 2.6: Concern level for the state of the environment by gender

Political ideology shows clear differences across all categories (Figure 2.7). We find that a higher percentage of conservatives are not concerned at all about the state of the environment (13%) compared to liberals and moderates (1%). Furthermore, conservatives are more likely than liberals and moderates to be somewhat concerned about the state of the environment, and liberals are the least likely to be somewhat concerned. In addition, moderates are the most likely to be moderately concerned about the state of the environment relative to other concern levels: 44% of moderate respondents are moderately concerned while only 23% and 24% of moderates are somewhat or very concerned, respectively. In comparison, a majority (53%) of liberals are extremely (18%) and very (35%) concerned about the state of the environment. To summarize, comparing across political ideologies, liberals have the highest percentage of very or extremely concerned respondents, conservatives have the highest percentages of somewhat and not at all concerned respondents, and moderates have the highest percentage of moderately concerned respondents.

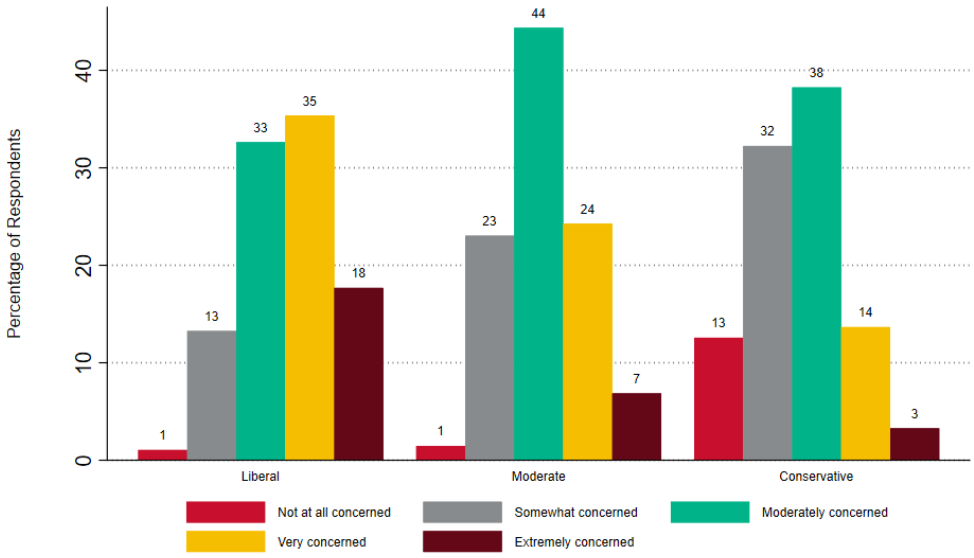


Figure 2.7: Concern level for the state of the environment by political ideology

Perceptions of concern among different groups

In addition to asking students' about their own level of concern about the environment, we asked students how they perceive different groups' concern about the state of the environment.[1] Overall, a majority of UH students think that all but one of these groups are somewhat or moderately concerned about the state of the environment, with the only exception being people in the US in general (see Table 2.1). A majority of UH students believe that people in the US are moderately or very concerned about the state of the environment. In comparison, Texas residents and whites in Texas are the groups that received the highest percentage of respondents believing that the groups are not at all concerned about the state of the environment. Twenty-three percent and 18.2% of respondents believe that Texans in general and whites in Texas, respectively, do not care at all about the state of the environment.

Figure 2.8 shows a clear difference by gender in respondents' opinions regarding the concern levels of UH students and respondents' friends. Men (36%) were more likely to believe that UH students are very or extremely concerned about the state of the environment compared to women (29%) and respondents who prefer to self-describe (21%). However, the opposite is true for respondents' friends. More than two-fifths of respondents that prefer to self-describe believe their friends are very or extremely concerned about the state of the environment while only 29% of female and 24% of male respondents, respectively, believe the same about their friends' concern levels. Men (16%) and women (14%) were more likely to believe that people in the US in general are very or extremely concerned compared to 8% of respondents who prefer to self-describe. By contrast, only 7% of men, 8% of women, and 12% of people that that prefer to self-describe believe that people in the

[1] The groups of individuals were: respondents' family, respondents' friends, Texas residents in general, UH students in general, people in the US in general, whites in Texas, Blacks in Texas, Hispanics in Texas, and Asians in Texas.

Texas are very or extremely concerned for the state of the environment. For most other groups, except for Asians in Texas - for which there is 6 to 7 percentage point difference - the percentage of men, women, and people that prefer to self-describe are similar, with percentage point differences ranging from 1 to 3 percent.

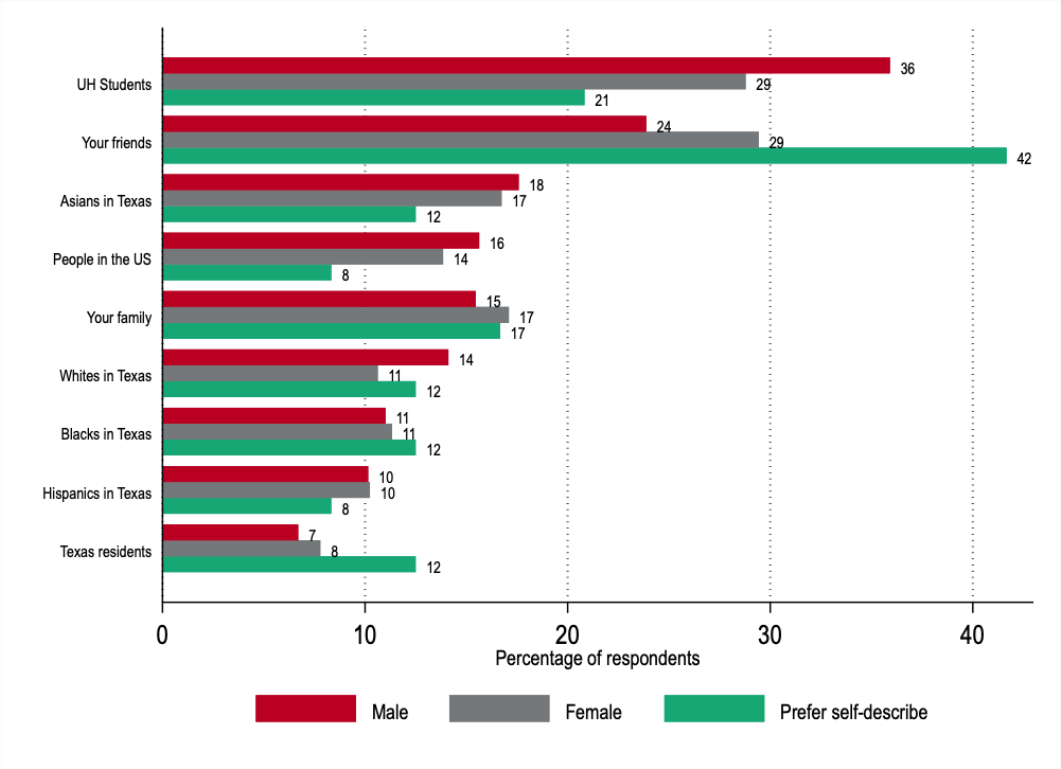


Figure 2.8: Percentage of respondents that believe groups in question are very or extremely concerned over the state of the environment by gender

When looking at perceptions by field of study, we find that students whose field of study is social science or other are, overall, the least likely to believe that any of the groups are very or extremely concerned (Figure 2.9). For example, 5% of respondents in the social sciences, compared to 7% in natural sciences and engineering and 10% in business administration and management, believe that Texas residents are very or extremely concerned about the state of the environment. A notable exception is for friends: 31% of respondents in the social sciences believed their friends were very or extremely concerned about the environment compared to 26% of respondents in the natural sciences and engineering and 23% in business management and administration.

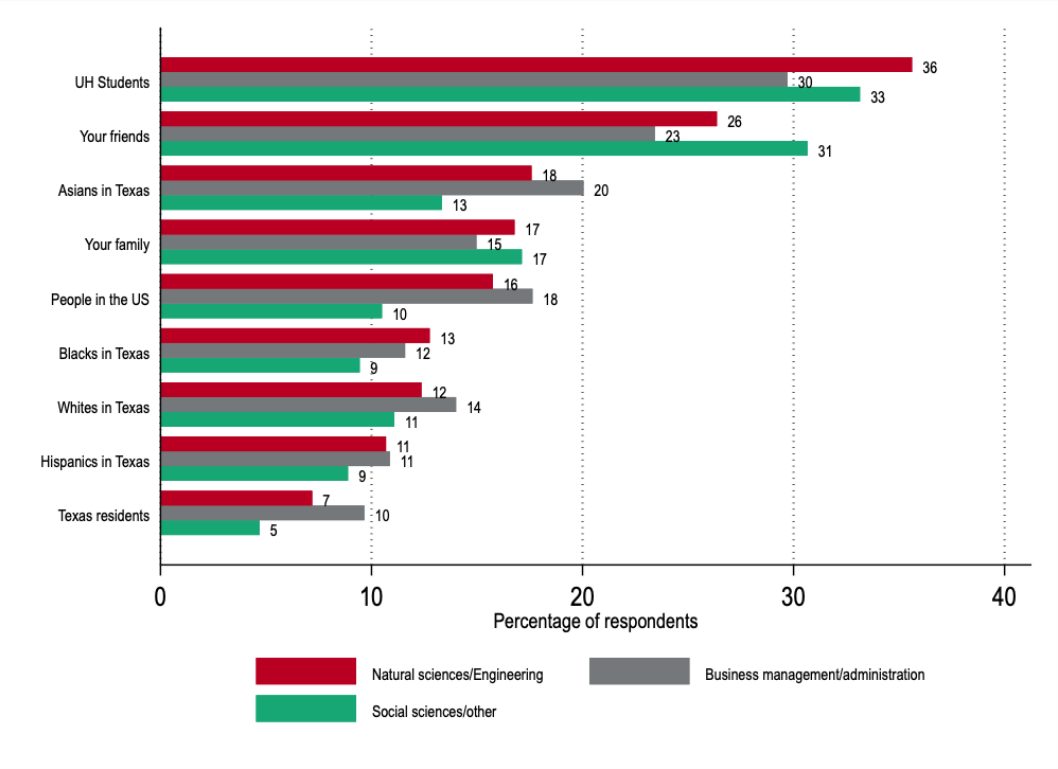


Figure 2.9: Percentage of respondents that believe groups in question are very or extremely concerned over the state of the environment by field of study

Political ideology also has a relationship with the percentage of respondents that believe certain groups are very or extremely concerned about the state of the environment. Figure 2.10 shows that liberals have the highest percentage of respondents who believe that their family (17%) and their friends (35%) are very or extremely concerned about the state of the environment. In contrast, conservatives have the lowest percentage of respondents who believe that their family (11%) and their friends (20%) are very or extremely concerned about the state of the environment. In addition, 21% of conservatives believe that people in the US are very or extremely concerned about the state of the environment, compared to 16% of moderates and 11% of liberals. Similarly, we see that 18% of conservatives believe that whites in Texas are very or extremely concerned about the state of the environment, compared to 15% of moderates and 8% of liberals.

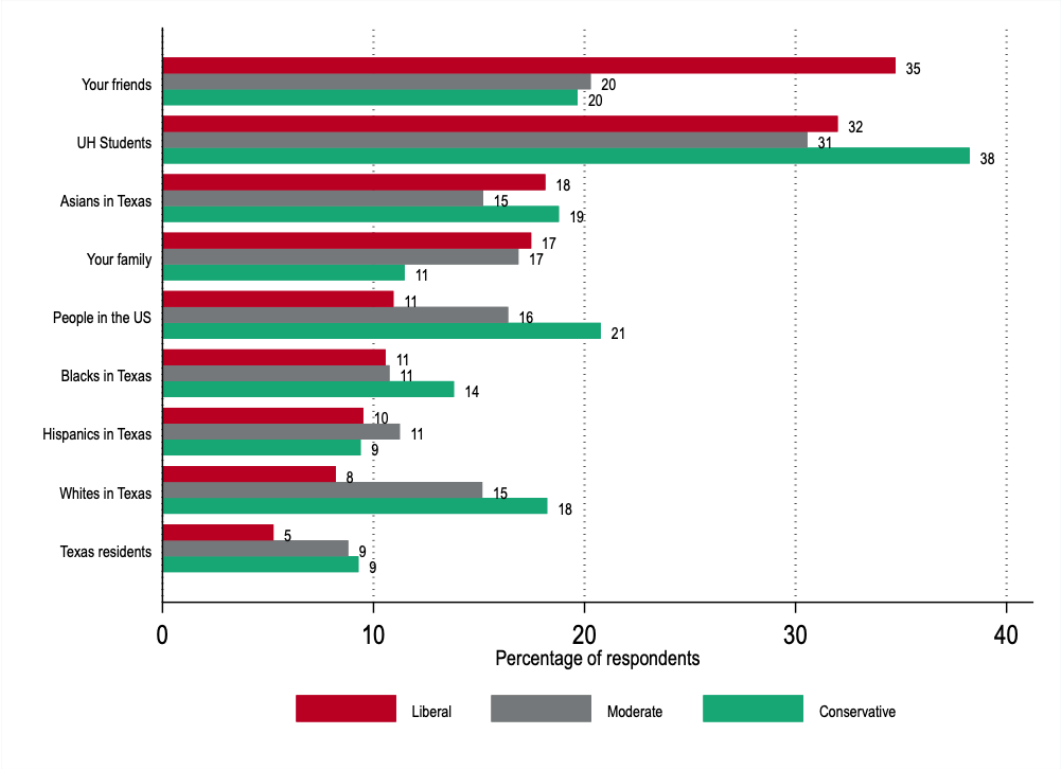


Figure 2.10: Percentage of respondents that believe groups in question are very or extremely concerned over the state of the environment by political ideology

Figure 2.11 does not show a clear relationship or pattern between race and ethnicity of students and their beliefs about the concern levels of others. However, there are some interesting findings overall. First, no racial or ethnic group has a majority of respondents that believe any of the groups in question are very or extremely concerned about the state of the environment. The highest percentage goes to white respondents, for which 40% believe that UH students are very or extremely concerned about the state of the environment. We also find that, overall, whites tend to have the highest or second highest percentage of respondents that believe the groups in question are very or extremely concerned about the environment, with the two exceptions being for Blacks in Texas and Hispanics in Texas.

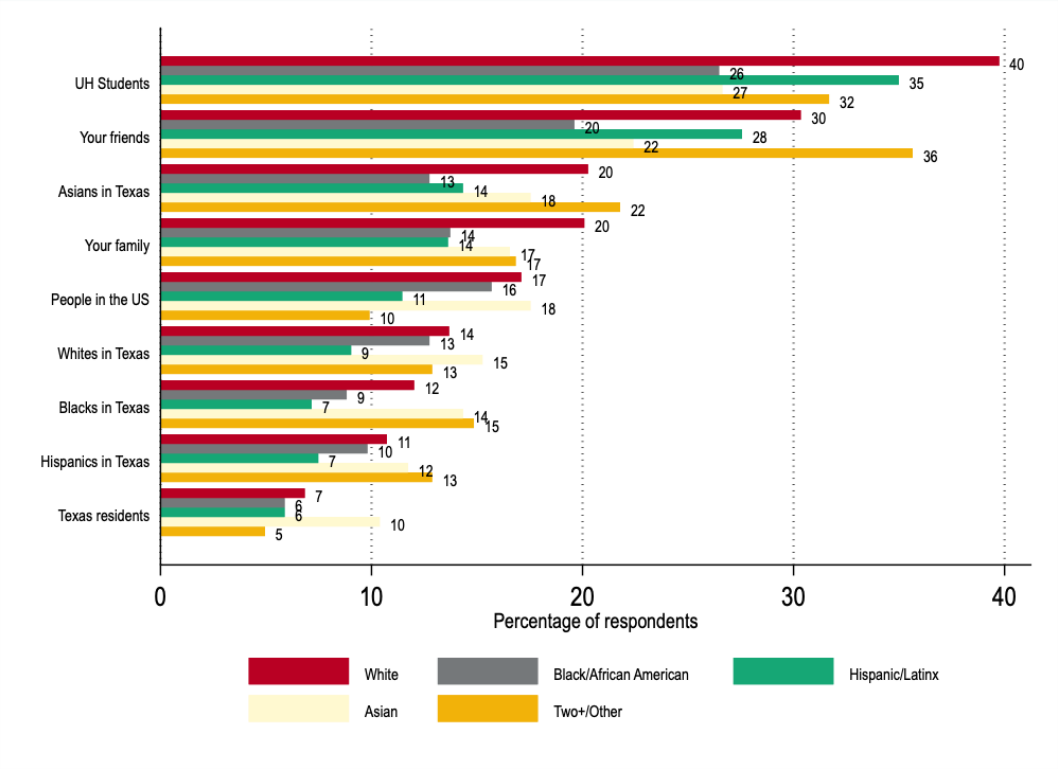


Figure 2.11: Percentage of respondents that believe groups in question are very or extremely concerned over the state of the environment by race and ethnicity

Looking at the distributions presented in Figure 2.12, we see similar responses across respondents' current financial situation. However, we do see that respondents who live comfortably tend to have the highest percentage of respondents that believe individuals in most of the groups are very or extremely concerned. In seven of the nine groups, respondents who have basic expenses met with little extra had the lowest percentage of respondents believing the groups were very or extremely concerned.

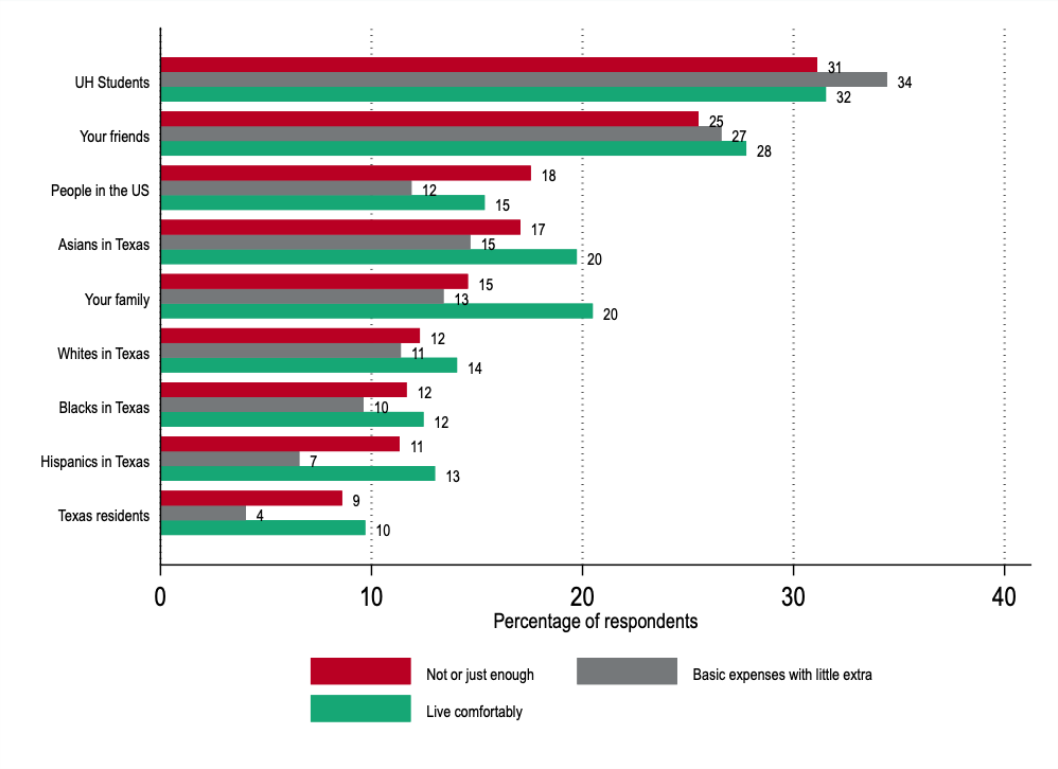


Figure 2.12: Percentage of respondents that believe groups in question are very or extremely concerned over the state of the environment by current financial situation

Finally, Table 2.1 shows the distribution of responses for respondents' own level of concern and how concerned they perceive others to be. As in 2018, we see that respondents think that others are not as concerned about the environment as they are. While 11% of respondents, for example, said they themselves are extremely concerned, less than 5% of respondents said that members of any of the nine other groups are extremely concerned. Similar to findings from the 2018 survey, UH students and friends were the two groups that received the highest proportion of respondents believing the specific groups are very or extremely concerned about the environment. In 2018, 22% and 23% of respondents said that their friends and UH students in general, respectively, were very or extremely concerned about the state of the environment; 27% and 32% of respondents in 2022 said their friends and UH students in general were very or extremely concerned. Overall, perceptions about the level of concern among different groups were similar in 2022 compared to 2018, with the exception of UH students in general which saw a large increase between the two surveys (23% in 2018 vs. 32% in 2022).

Table 2.1: Concern and perceptions of concern among different groups

	You (%) (freq.)	Your Family (%) (freq.)	Your Friends (%) (freq.)	Texans (%) (freq.)	UH Students (%) (freq.)
Not at all concerned	3.2 (34)	16.1 (172)	9.0 (96)	22.7 (242)	4.0 (43)
Somewhat concerned	20.2 (216)	30.2 (323)	23.8 (254)	42.0 (449)	19.6 (209)
Moderately concerned	38.1 (406)	37.5 (400)	40.5 (433)	28.0 (299)	43.9 (469)
Very concerned	27.5 (293)	11.6 (124)	20.9 (223)	5.1 (54)	27.8 (297)
Extremely concerned	11.1 (118)	4.6 (49)	5.8 (62)	2.2 (24)	4.7 (50)
Total	100.0 (1067)	100.0 (1068)	100.0 (1068)	100.0 (1068)	100.0 (1068)
	Americans (%) (freq.)	Texans (white) (%) (freq.)	Texans (Black) (%) (freq.)	Texans (Hispanic) (%) (freq.)	Texans (Asians) (%) (freq.)
Not at all concerned	9.7 (104)	18.2 (194)	13.3 (142)	14.8 (157)	9.1 (97)
Somewhat concerned	32.6 (348)	35.9 (383)	39.1 (416)	40.3 (429)	36.7 (390)
Moderately concerned	43.0 (459)	33.3 (355)	36.4 (387)	34.8 (370)	37.1 (395)
Very concerned	11.9 (127)	9.4 (100)	8.3 (88)	7.6 (81)	14.0 (149)
Extremely concerned	2.8 (30)	3.2 (34)	2.9 (31)	2.5 (27)	3.1 (33)
Total	100.0 (1068)	100.0 (1066)	100.0 (1064)	100.0 (1064)	100.0 (1064)

Chapter 3: Company Attributes and Student Preferences

3.1 Importance of companies' ethical and environmental practices

In the survey, we asked respondents to indicate the level of importance they place on seven practices when deciding whether to accept an employment offer from a company. Only a small percentage of students (fewer than 5%) thought the statements were not at all important. As shown in Table 3.1, a majority of respondents indicated all seven statements to be important or very important. Recycling and disclosure of ESG issues received the lowest proportions of students saying they are very important. Compared to the previous survey, the percentage of UH students indicating high importance to the first three statements - ethical standards for products, efforts to reduce pollution, and recycling - was lower in 2022.[1] In 2018, 83.5%, 76.1%, and 68.9% of respondents, respectively, indicated that the first three statements were important or very important compared to 79.85%, 71.98%, and 66.35% in 2022.

[1]The remaining four practices asked about in 2022 were asked differently or were not at asked in 2018.

Table 3.1: For each statement below, please indicate how important you perceive each attribute to be when deciding whether to accept an employment offer from a company

	Not Important	Slightly Important	Moderately Important	Important	Very Important
The company's ethical standards of products, services, and marketing practices	16 (1.5%)	43 (4.0%)	156 (14.6%)	249 (40.2%)	423 (39.6%)
The company's efforts to mitigate and reduce its contribution to air, water, and soil pollution	18 (1.7%)	66 (6.2%)	215 (20.2%)	383 (35.9%)	385 (36.1%)
The company's recycling standards and policies	32 (3.0%)	79 (7.4%)	248 (23.2%)	400 (37.5%)	308 (28.9%)
The company's efforts to lower its greenhouse gas emissions and manage its environmental footprint	28 (2.6%)	77 (7.2%)	223 (20.9%)	375 (35.2%)	364 (34.1%)
The company's representation of minorities	50 (4.7%)	69 (6.5%)	166 (15.6%)	331 (31.1%)	449 (42.2%)
The company's ethical standards of procurement and supply chain management	15 (1.4%)	54 (5.1%)	176 (16.5%)	420 (39.4%)	401 (37.6%)
The company's disclosure of the board's oversight of ESG issues and their measurement strategy and targets	28 (2.6%)	66 (6.2%)	245 (23.0%)	422 (39.6%)	305 (28.6%)

When we look at the relationship between key demographic variables, we again see that gender, political ideology, and race and ethnicity are significantly related to the importance students place on a company's ethical and environmental practices.[2] Women were more likely to indicate

[2]See Figures A14-A17 in the Appendix for the remaining demographic variables and their relationship with the importance of ESG practices.

that the practices were important or very important than men and respondents who prefer to self-describe (Figure 3.1). An exception is efforts to reduce greenhouse gas emissions for which the proportion of students who prefer to self-describe (75%) was slightly higher than for women (75%). The biggest difference is observed for the representation of minorities for which 86% of women said was important compared to 71% of those who prefer to self-describe and 64% of men.

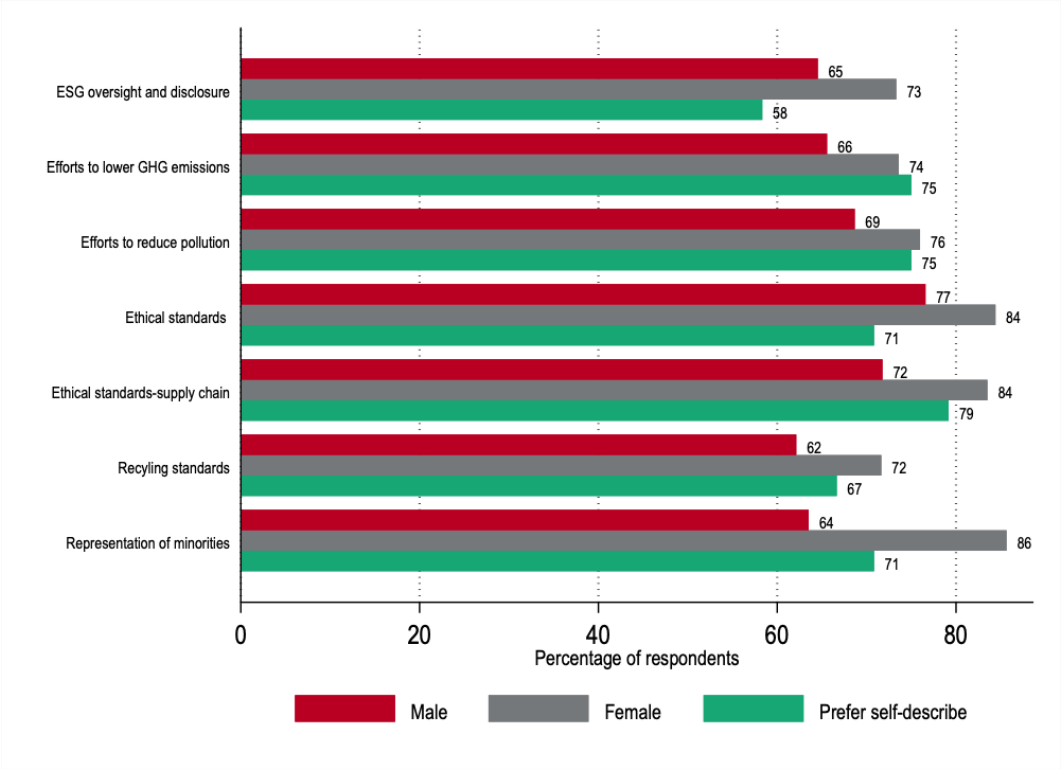


Figure 3.1: Importance of ethical and environmental practices by gender

Figure 3.2 presents the relationship between race and ethnicity and the importance of the seven attributes. Overall, white and other students as well as students identifying with two or more races were less likely than Black, Hispanic, and Asian students to say any of the attributes are important. As with gender, we observe the biggest difference across race and ethnicity groups for representation of minorities. While 82% and 81% of Black and Hispanic students, respectively, said the representation of minorities is important, 73% of Asian, 71% of two or more/other, and only 60% of white students said it is important.

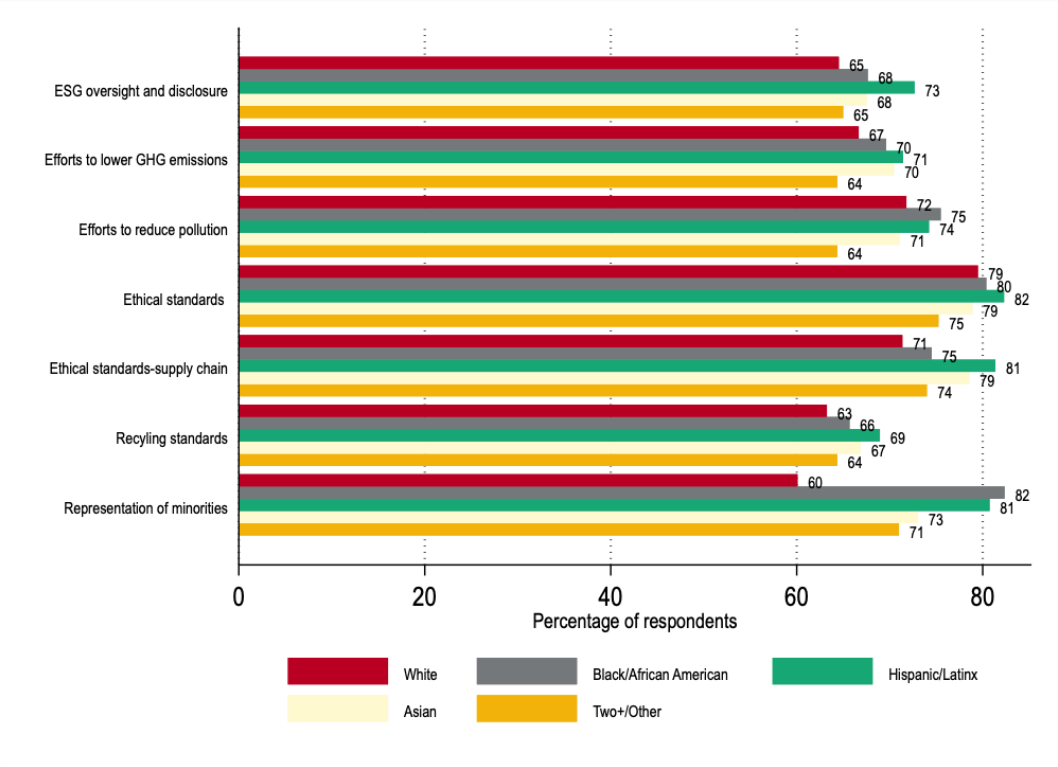


Figure 3.2: Importance of ethical and environmental practices by race and ethnicity

Finally, we see students' political ideology is strongly correlated with the level of importance placed on the ethical and environmental practices. From Figure 3.3, we can see that liberal students are the most likely to see the various practices as important or very important followed by moderates. For example, 77% of liberal students viewed efforts to reduce greenhouse gas emissions as important compared to 68% of moderates and 52% of conservative students. We see the biggest differences across ideology when it comes to the representation of minorities. Eighty-four percent of liberals said a company's representation of minorities is important compared to 73% of moderates and 47% of conservatives (a nearly forty percentage point gap with liberals). Ethical standards of products, services, and marketing practices (75%) and ethical standards of procurement and supply chain management (69%) had the highest percentages of conservatives saying they were important.

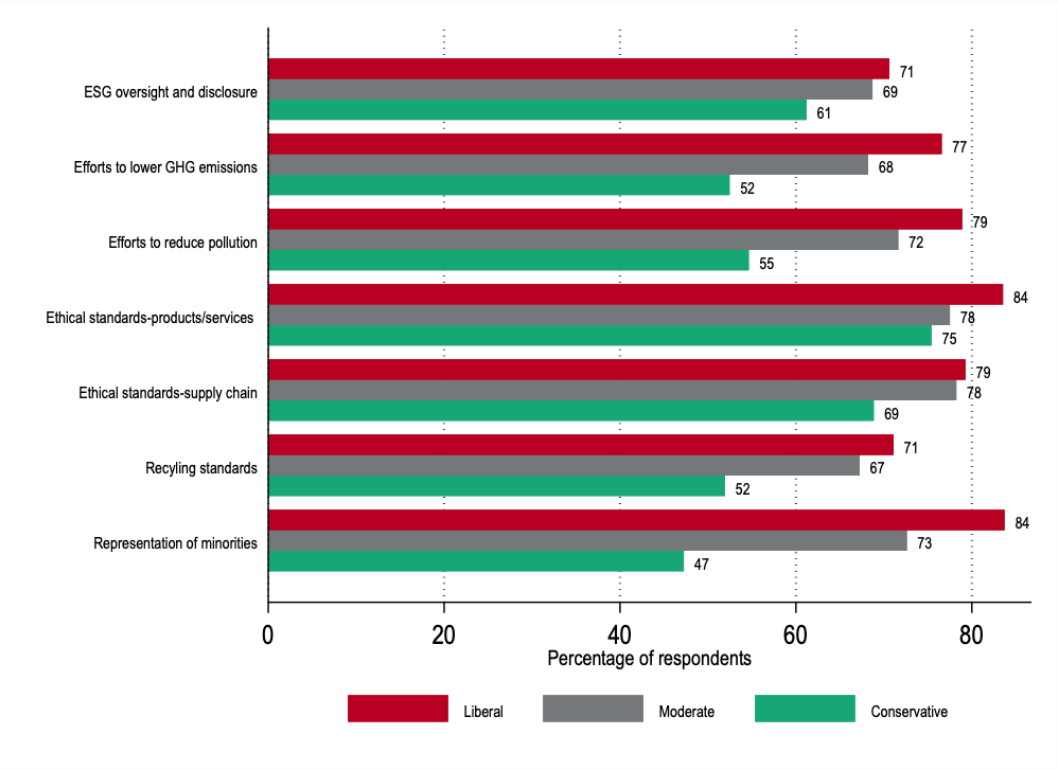


Figure 3.3: Importance of ethical and environmental practices by political ideology

3.2 Importance of ESG in the energy sector

The survey laid out four statements regarding working for a company in the energy industry and a company's ESG stewardship. Students selected whether they strongly disagreed, disagreed, agreed, strongly agreed, or were neutral about the four statements. Overall, we see that the opinions of UH students regarding ESG and companies in the energy industry tend to not be on the extremes-strongly agree or strongly disagree-and neutrality is the most selected response for three out of the four statements. However, there are differences between respondents' own willingness to take a lesser role or less pay to work for a company that prioritizes ESG stewardship versus respondents' opinion on whether students in their major or program would do the same. While 39% of students would accept a lesser role or less pay, only 25% of respondents think that students in their program or major are willing to accept a lesser role or a lower salary to work for a company in the energy industry that prioritizes ESG. Lastly, we find that UH students do prioritize ESG and environmental responsibility in their employment decisions. Around two-thirds of respondents agree or strongly agree that it is important for a company to have ESG policies and 40% agree or strongly agree that environmental responsibility is their top priority when deciding to work for a company in the energy industry (see Figures A18 to A21 in Appendix A).

While the percentage of students agreeing or strongly agreeing was lower in 2022 compared to 2018 for each of the four statements, the percentage of students disagreeing or strongly disagreeing

was also lower.[3] This is likely attributable to the different response options: in 2022 students had the option of selecting neither agree nor disagree (neutral), options that students in the 2018 survey did not have. As shown in Table 3.2, around 35% of students selected this option in the most recent survey reducing the density at the extremes of strongly disagree and strongly agree.

Table 3.2: Please indicate the extent to which you agree with the following statements when deciding whether to work for a company in the energy industry

	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
I am willing to accept a lesser role or a lower salary to work for a company that prioritizes ESG stewardship	66 (6.2%)	211 (19.8%)	378 (35.4%)	338 (31.7%)	74 (6.9%)
It is important for me that the company has policies aimed at ESG stewardship	23 (2.2%)	44 (4.1%)	296 (27.7%)	569 (53.3%)	135 (12.7%)
I think that, on average, students in my program/major are willing to accept a lesser role or a lower salary to work for a company in the energy industry that prioritizes ESG	91 (8.5%)	299 (28.0%)	410 (38.4%)	220 (20.6%)	47 (4.4%)
Compared to other factors, environmental responsibility is my top priority when deciding to work for a company in the energy industry	66 (6.2%)	187 (17.5%)	380 (35.7%)	334 (31.3%)	99 (9.3%)

When we break down the percentage of respondents that agreed to the statements by demographics, we find that some demographic characteristics do not have a big effect on the likelihood of the respondents agreeing with the statements, but there are small differences in some statements. For example, field of study overall does not have a big impact on the percentage of students that agree with the statements, but students whose field of study is business management or administration are less likely to agree with the statements than students whose field of study is natural sciences, engineering, social sciences, or other (see Figure A22 in Appendix A). We see a similar situation when looking at family income, respondents' current financial situation, and whether or not a

[3] See Table 3 of UH Energy White Paper, Insights Into The Oil and Gas Workforce of the Future.

respondent is a native Texan (see Figures A23 to A25 in Appendix A).

Overall, we see that female respondents and respondents that prefer to self-describe are more likely to agree with the statements than male respondents (Figure 3.4). Respondents who prefer to self-describe are more likely to agree with the statements than female respondents, with the only exception being that environmental responsibility is a top priority in their job search: 46% of respondents that prefer to self-describe and women agreed with the statement compared to 36% of men. Additionally, 79% of respondents that prefer to self-describe and 69% of female respondents agree that it is important for companies to have ESG policies compared to 63% of males. The largest difference, however, is observed for accepting a lesser role or lower salary to work in a company that prioritizes ESG: while 67% of respondents that prefer to self-describe agree with this statement, only 44% and 34% of female and male respondents, respectively, also agree.

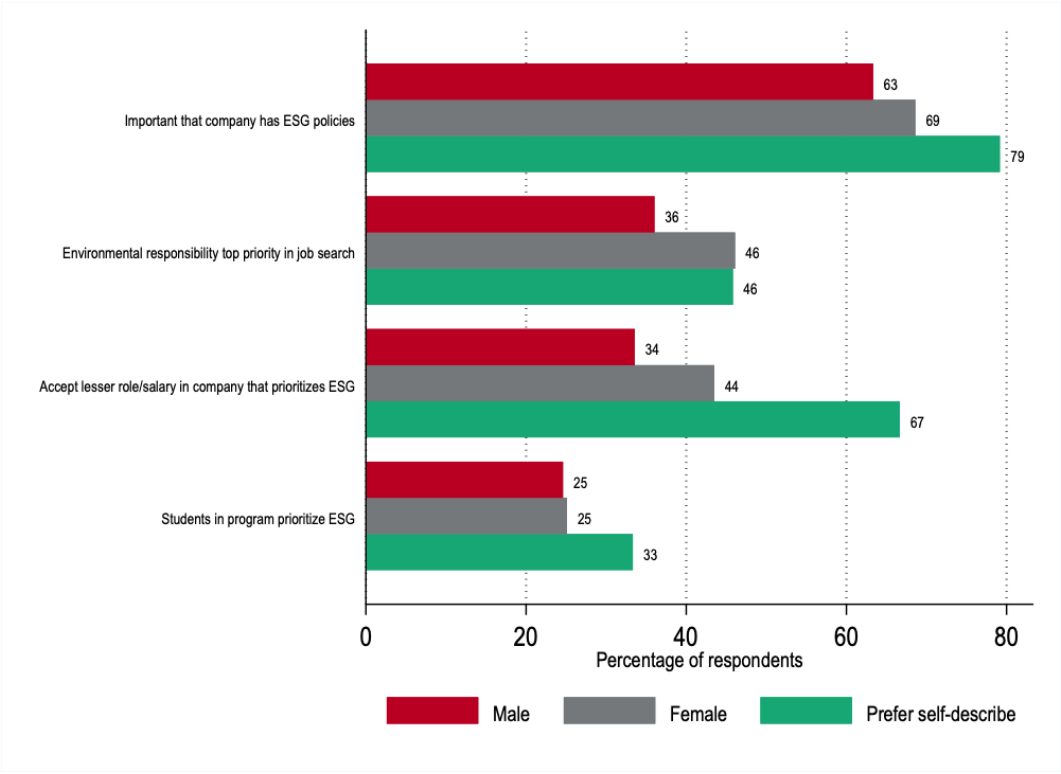


Figure 3.4: Percentage of students that agreed or strongly agree by gender

Once again, political ideology shows clear differences in how respondents view ESG stewardship in relation to their employment decisions. Across all four statements, liberals are more likely to agree than both moderates and conservatives; most of the statements have a difference of 20% or more, except for the statement regarding students in their program prioritizing ESG for which we see consensus across ideology. While 26% of liberals agree that students in their major would take a lesser role or lower pay at a company that prioritizes ESG, 25% of conservatives and 23% of moderates also agree, making the difference between liberals and conservatives a mere 1%. For

the remaining three statements, however, liberals are more likely to agree, followed by moderates, then conservatives. The largest percentage difference between liberals and conservatives is a 24 percentage point difference for respondents willing to accept a lesser role or lower salary to work for a company that prioritizes ESG. Half of liberal respondents agree with said statement, while 31% of moderates and only 26% of conservatives concur. Despite a majority of respondents across the three political ideologies believing that it is important for a company to have ESG policies, there are stark differences: 73% of liberals, 64% of moderates, and 53% of conservatives agree, a 20% difference between liberals and conservatives. Lastly, 49% of liberals, 37% of moderates, and 27% of conservatives agree that environmental responsibility is a top priority in their job search.

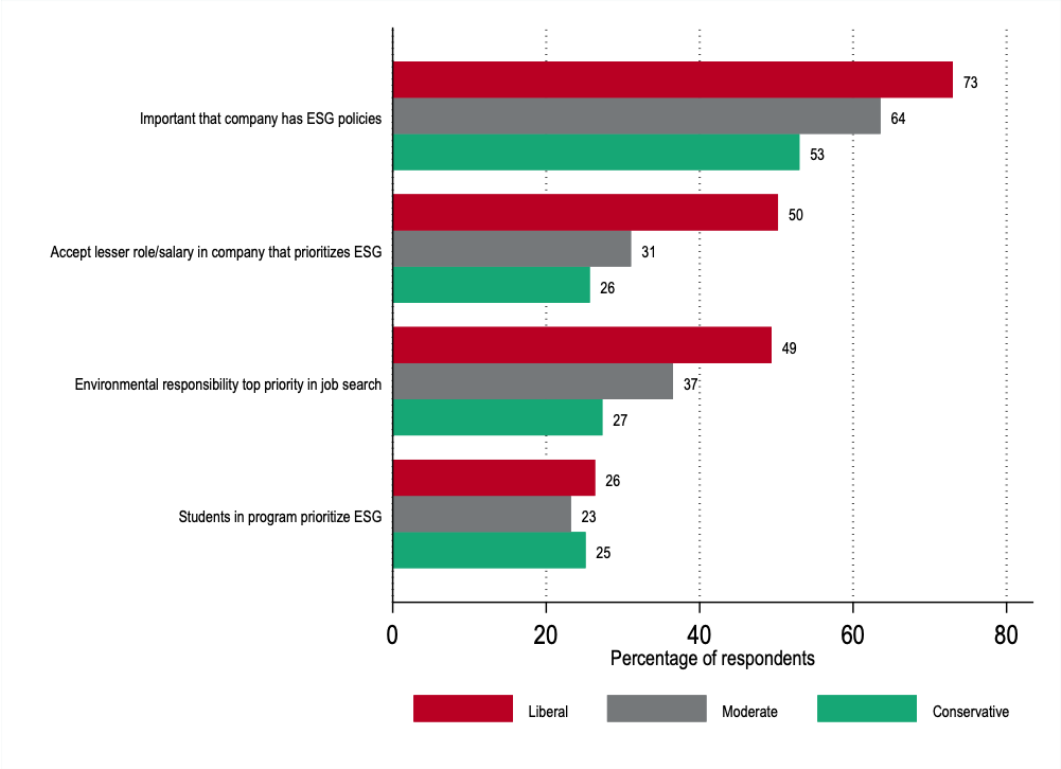


Figure 3.5: Percentage of students that agree or strongly agree by political ideology

Overall, the percentage of respondents that agree with the statements are similar across the different racial and ethnic groups, but we can see a difference when comparing groups with the highest and lowest percentage of students agreeing with the statements (Figure 3.6). Hispanics, for example, have either the highest or second highest percentage of respondents that agree with the four statements; Hispanics are the only racial or ethnic group that consistently had one of the highest percentages of respondents that agree with the four statements. In comparison, Black and African American respondents had the smallest percentage of respondents that agree with the statements.

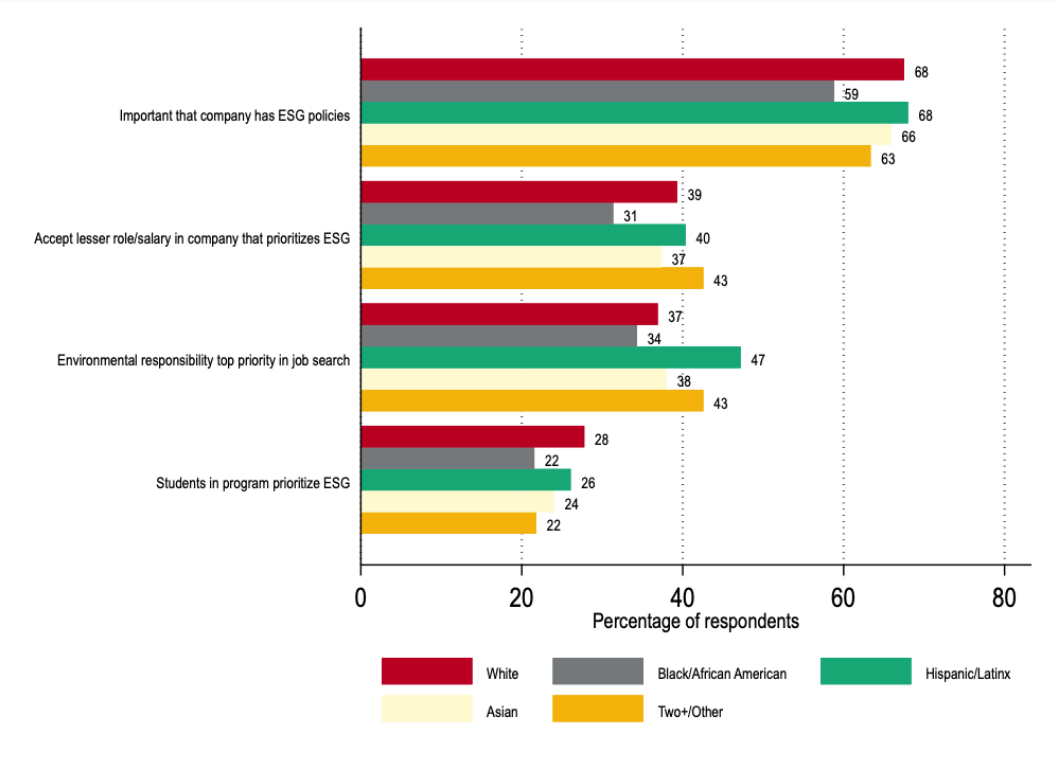


Figure 3.6: Percentage of students that agree or strongly agree by race and ethnicity

Chapter 4: Job Choice and ESG: Results from the Survey Experiment

To analyze the students' preferences for their first job, we conducted a choice experiment, also referred to as conjoint analysis. The purpose of the choice experiment is to ask respondents to compare and choose among hypothetical job opportunities at companies in the energy sector, varying the industry where the company operates, the company's environmental stewardship practices, and the proposed starting salary for each of the job profiles presented. On the industry attribute levels, we asked respondents about working for a (1) renewable energy, (2) natural gas, or (3) oil drilling companies. Starting salary attribute levels were (1) $75,000, (2) $80,000, and (3) $85,000. There were also three attribute levels for environmental stewardship practices: (1) recognized as being a leader in ESG monitoring, disclosure, and management for their sector by an independent watchdog organization; (2) meets minimum standards for ESG monitoring, disclosure, and management for their sector according to an independent watchdog organization; and (3) criticized for not meeting ESG monitoring, disclosure, and management standards for their sector by an independent organization.

Each student was asked to make five sequential choices between two hypothetical job offers in which levels of the three attributes were randomly assigned. Analyzing students' responses over the series of comparisons of hypothetical job offers allows us to assess the relative importance of the the different attributes, namely industry, ESG standards, and starting salary, on students' choices. We are also able to compare how much pay students would be willing to give up to work for an energy company that has better environmental stewardship practices or a lower carbon footprint.

Table 4.1 shows the number of times each attribute was shown to respondents across the five trials and the number and percentage of times that attribute was chosen by respondents, relative to other levels of the attribute in combination with other attributes. On average, respondents preferred working for a renewable company compared to a natural gas company (by about 12 percentage points) or an oil company (by 18 percentage points). In regards to ESG stewardship, respondents were twice as likely to choose the job offer from a leader in ESG over a job offer from a company criticized for not meeting even minimum standards (68.4% vs. 28.3%).

Table 4.1: Distribution of attributes and attribute levels chosen

	Occurrence	Chosen	Percent Chosen
	No.	No.	%
Natural gas company	3,534	1,693	47.9
Oil drilling company	3,507	1,469	41.9
Renewable energy company	3,615	2,166	59.9
$75,000	3,563	1,303	36.6
$80,000	3,593	1,803	50.2
$85,000	3,500	2,222	63.5
Criticized for not meeting ESG standards	3,544	1,003	28.3
Meets minimum standards for ESG	3,637	1,948	53.6
Recognized as being a leader in ESG	3,475	2,377	68.4

We further analyzed the results of the choice experiment using a linear mixed model with random effects for respondent and trial. Results are shown in Figure 4.1. The black dots graph the estimated coefficient for the corresponding attribute level relative to the baseline or reference level. The lines extending from the black dots are the 95% confidence intervals. As we observed from Table 4.1, students prefer to work for a renewable energy company over a natural gas company. However, the negative coefficient for oil drilling company means that students preferred to work for a natural gas company over an oil drilling one. All else equal, students prefer jobs that offer higher starting salaries as indicated by the positive coefficients on $80,000 and $85,000 relative to a starting salary of $75,000. Finally, the positive coefficients for "meet minimum standards for ESG" and "recognized as being ESG leader" indicate that students value working for companies that meet at least minimum ESG monitoring, disclosure, and management standards relative to a company that has been criticized for not meeting ESG standards.

Figure 4.1: Results of conjoint experiment: Average marginal component effect (AMCE)

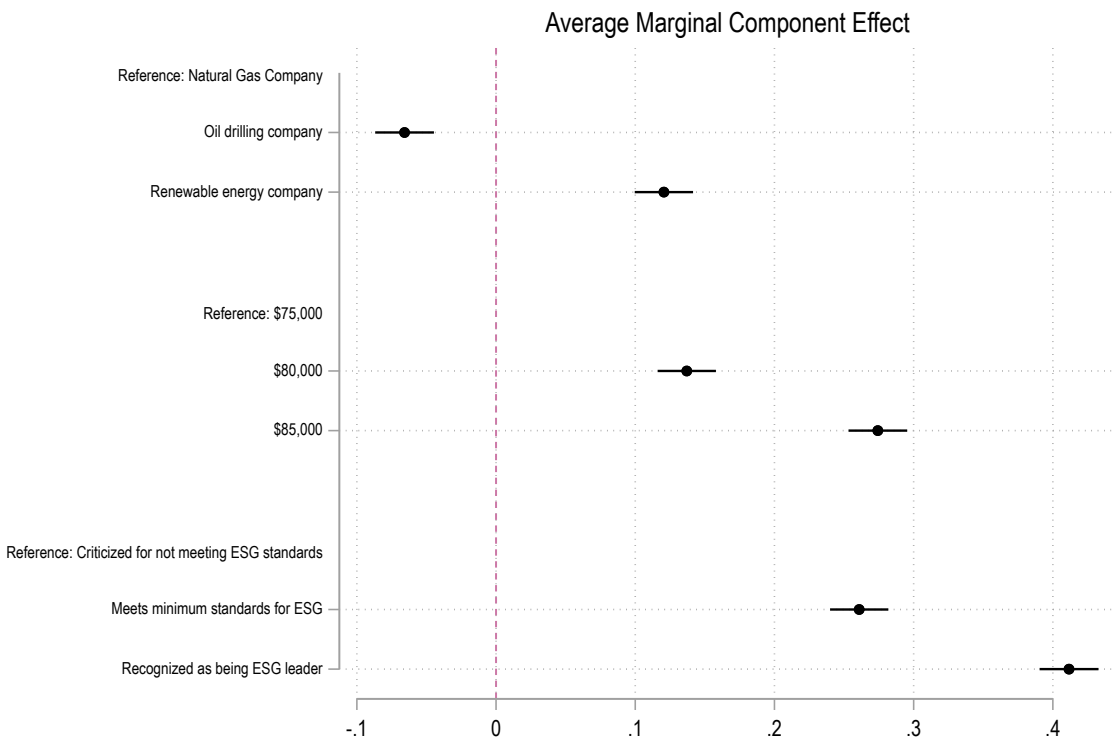
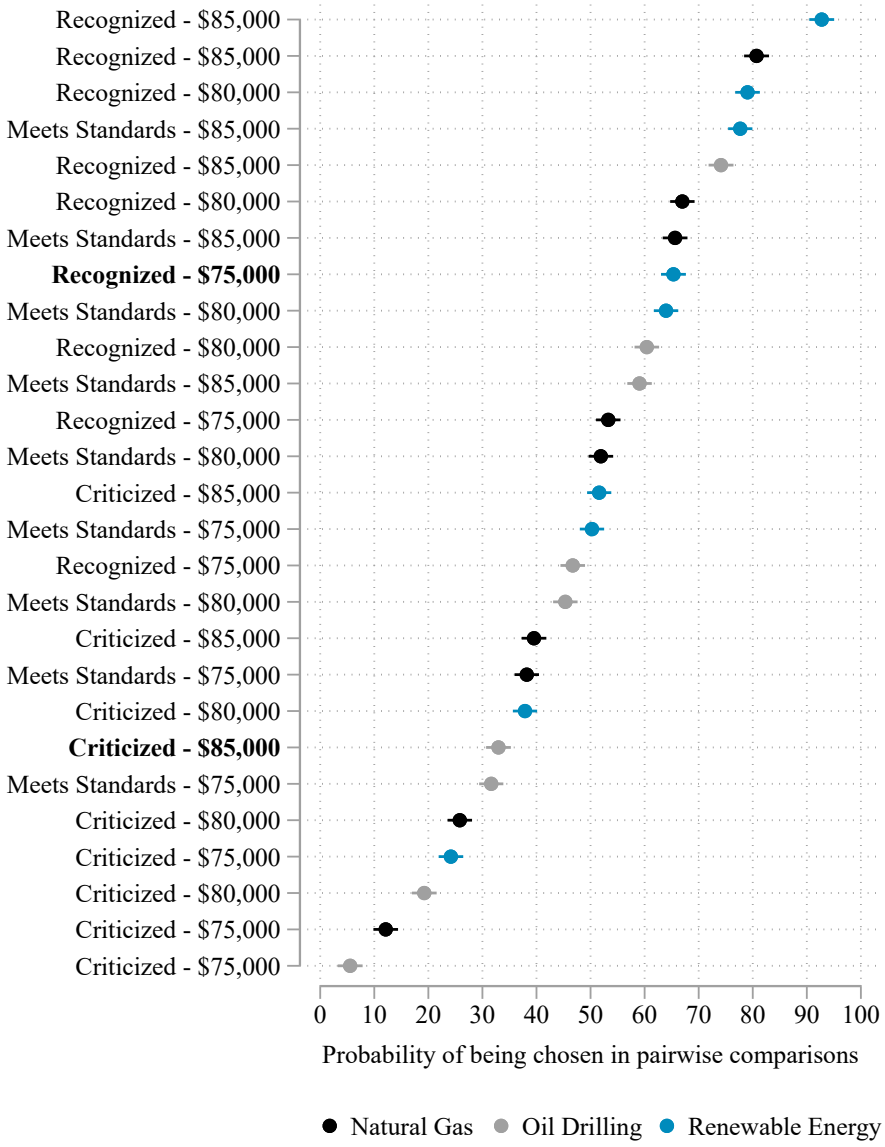


Figure 4.2 plots the probability of a company profile being chosen for each of the 27 possible combinations of the three attributes (industry, starting salary, and ESG stewardship). The dots show the prediction and the lines extending represent the 95% confidence intervals. The black color shows the prediction for natural gas companies and the grey color presents the predicted probabilities for oil drilling companies. Finally, the blue color shows the predictions for renewable energy companies. Combinations are sorted from the most to the least likely to be chosen.

Although students preferred jobs offering higher starting salaries, they were willing to trade higher salaries to work at companies with stronger ESG stewardship credentials. For example, the hypothetical profile of an oil drilling company, criticized for not meeting ESG standards but offering the highest starting salary ($85,000) has a 33% chance of being chosen. By contrast, a renewable energy company, recognized as being an ESG leader but offering the lowest salary in our experiment ($75,000) has almost double of chances of being chosen (65.3%). These two options appear in bold font in Figure 4.2.

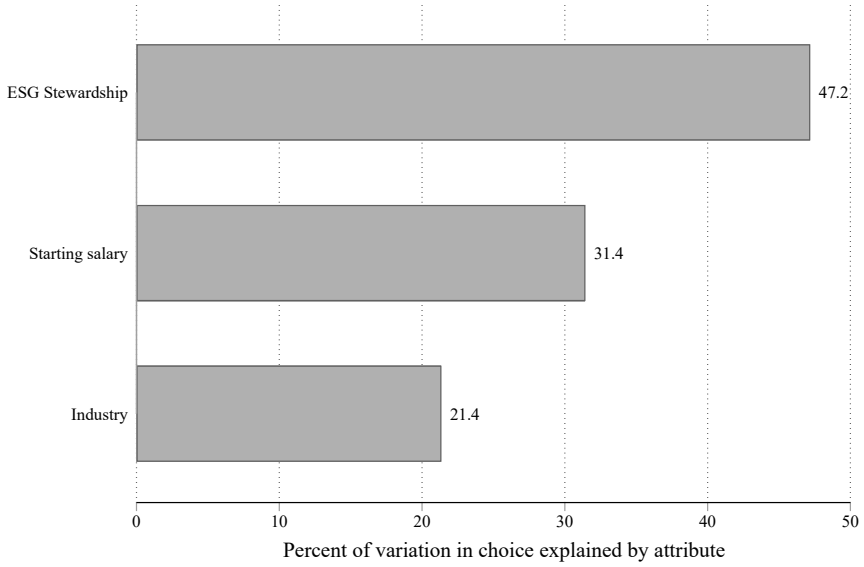
Figure 4.2: Results of conjoint experiment: Average marginal component effect (AMCE)



We further analysed the results of the choice experiment to determine about which attributes the students cared most. Figure 4.3 shows the relative importance of the three attributes.[1] For UH students, the ESG stewardship is the most important attribute, with a relative importance of 47.2%, followed by starting salary with 31.4% and lastly industry with just 21.4% of relative importance.

[1] Relative importance was calculated by subtracting the difference between the largest and smallest coefficients for each attribute used to create Figure 4.1, then dividing by the sum of the ranges of the three attributes.

Figure 4.3: Relative importance of attributes

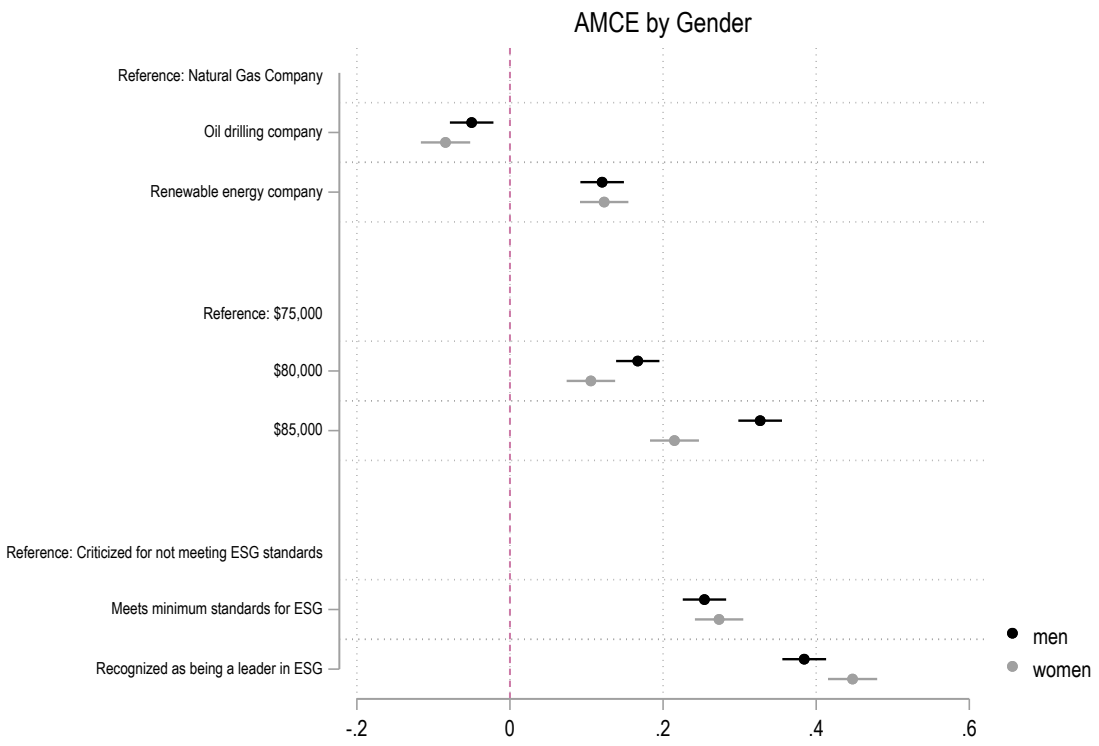


Gender and ESG stewardship

We further explored if students' choices differed by key demographic characteristics, including race and ethnicity and income, but only by gender do we observe significant differences in attribute importance and choice. Figure 4.4 shows the average marginal component effect by gender.[2] Dark grey shows the estimations for men, while light grey presents the estimations for women. For both men and women, we observe similar patterns regarding industry preferences. The most preferred industry is renewable energy, followed by natural gas, then oil drilling. We do, however, observe differences when looking at the the salary attribute. Male students are more likely than female students to prefer the higher salaries ($80,000 or $85,000) relative to the lowest salary ($75,000). These gender differences are statistically significant. Finally, when observing the ESG stewardship attributes, female students are more likely to choose companies that are recognized as being a leader in ESG than their male counterparts; again, a statistically significant difference between male and female students.

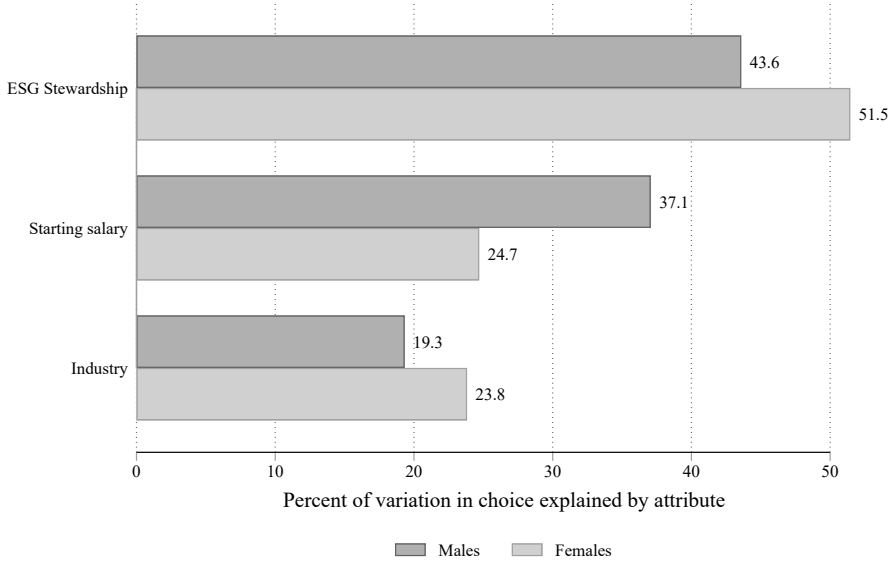
[2]Respondents who prefer to self-describe and those identifying as genders not male or female were excluded. Due to the small number of respondents in our sample, we could not estimate effects for this subsample.

Figure 4.4: Average marginal component effect by gender



Finally, Figure 4.5 presents the relative importance of attributes by gender. It shows that men and women ranked the three attributes in the same order. ESG stewardship was the most important followed by starting salary and then industry. However, the ESG stewardship attribute explains 51.5% of the variation in women's choices and just 43.6% for men. Similar to Figure 4.4, we see a bigger difference between men and women for starting salary, explaining 24.7% of variation for women but 37.1% for men. Overall, we see that when choosing between job options, men are more concerned about salaries, while women focus more on the ESG reputation of the company.

Figure 4.5: Relative importance of attributes by gender



Conclusion

The energy sector is undergoing a major transformation as customers, investors, and workers become more concerned about climate change and more sensitive to their carbon footprint. The oil and gas industry in particular is undergoing the "Great Crew Change," an industry-wide gap in mid-level managers stemming from the oil bust in the 1980s. To keep pace with the current rates of retirement, the industry needs to hire approximately 30,000 people annually over the next 20 years. Meanwhile, new and upcoming entrants to the workforce increasingly recognize that climate change is a serious threat.

To better understand the influence of ESG stewardship on employment decisions, we administered a survey of University of Houston students pertaining to the energy transition and climate change, how they perceive ESG stewardship practices in the energy sector, and whether those practices are likely to affect their employment choices. We find that a majority of respondents in our survey are indeed concerned about climate change and the state of the environment. Respondents think that ethical and environmental practices are important and take into consideration a company's ESG stewardship when evaluating job offers. Students enrolled in technical fields such as petroleum engineering, and those in social science, business and humanities, all view corporate social and environmental practices concerns as important to their employment decisions. Moreover, respondents in all fields would accept lower pay to work for companies with high ESG standards.

These findings are of particular importance in the current political environment, where ESG and climate risk have become a source of political contention. The SEC, for instance, is considering regulations that would required publicly traded firms to report their exposure to climate risk. The reporting of these standards would create a scorecard for listed firms, affecting investment decisions and providing relevant information to potential employees pondering a career in the industries. But there is also strong pushback against this proposal and even political action targeting ESG practices. In the State of Texas, for instance, the Legislature passed in 2021 requiring state pension funds, including the Retirement System of Texas, to divest shares from companies whose ESG practices are deemed by the State Comptroller as threatening the energy industry.

Prior studies have found shifting public opinion on climate change and the energy transition. Large majorities of respondents from around the US strongly support transitioning to sustainable energy sources as well as efforts to mitigate their carbon footprint, even in the state of Texas whose

economy is highly dependent on hydrocarbons.[1] Our current survey shows UH students are too concerned about climate change and support efforts to curb emissions. They also appear willing to seek employment in companies whose environmental and social values align with their own, even if the choice results in a lesser role or lower pay. Yet, UH students are more cynical about their peers and fellow Texans: respondents believe that those surrounding them are not as concerned about climate change as they are. Respondents in our survey further perceive others, including their peers, as less willing than themselves to pay the costs of enacting policies and funding the investment needed to curb climate change and its varied impacts. This result creates a political challenge as it makes it harder to mobilize and coalesce around policies that promote the transition to a sustainable energy future.

[1] See UH Energy and Hobby School Reports on Carbon Management: https://uh.edu/hobby/carbonmanagement/.

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Appendix A: Supplementary Figures

Summary figures of demographic variables

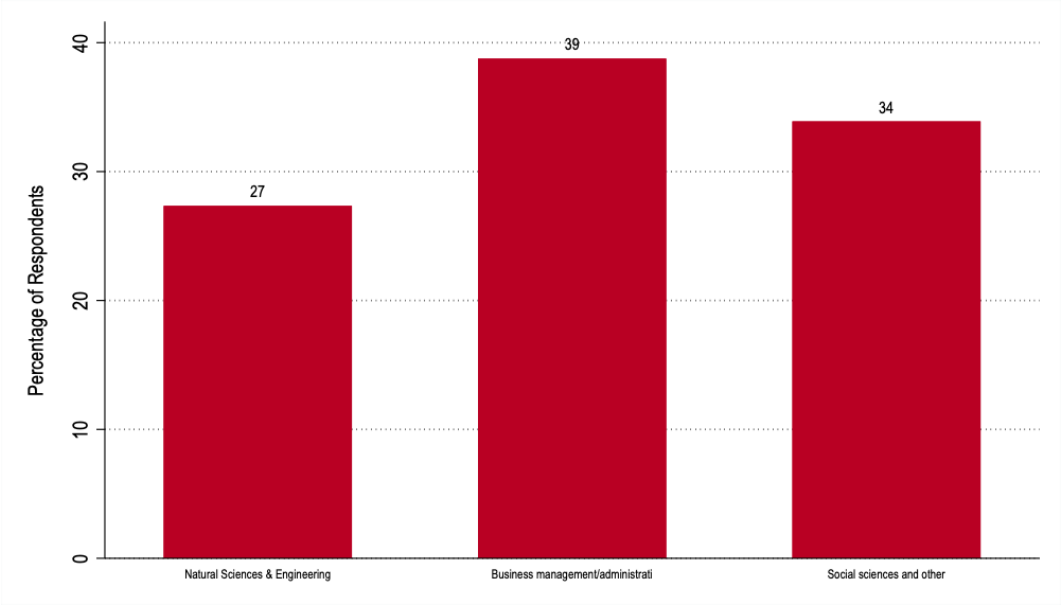

Figure A1: In what field are you currently pursuing your degree?

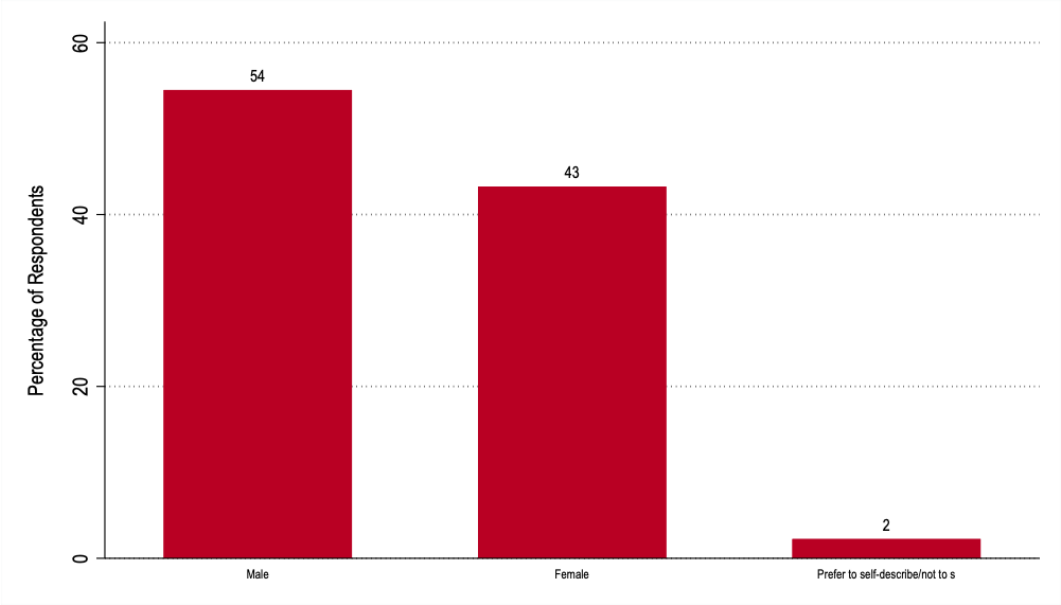

Figure A2: What gender do you identify with?

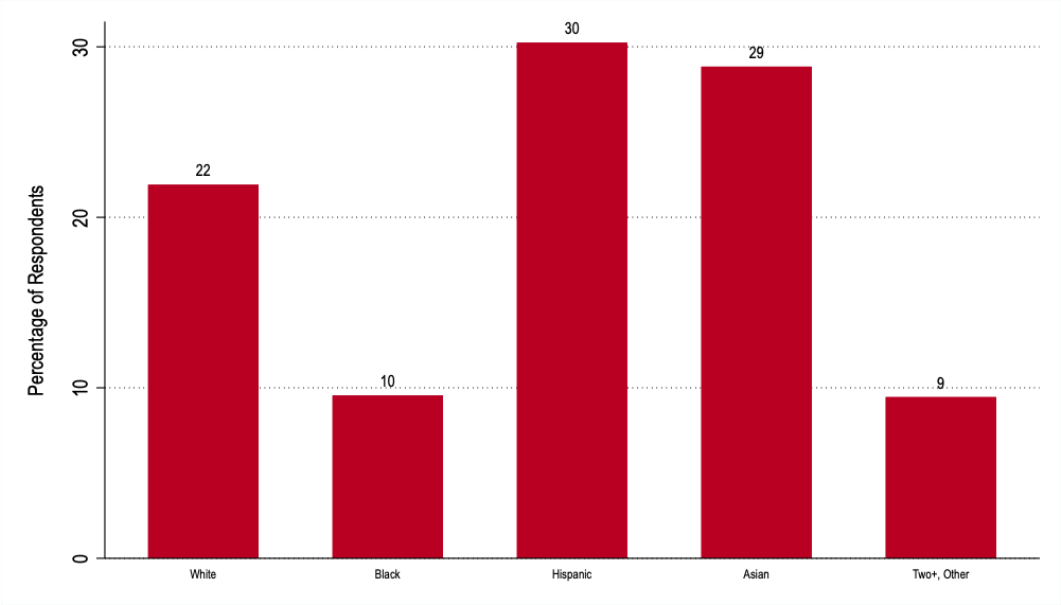

Figure A3: What is your race or ethnicity? Select all that apply

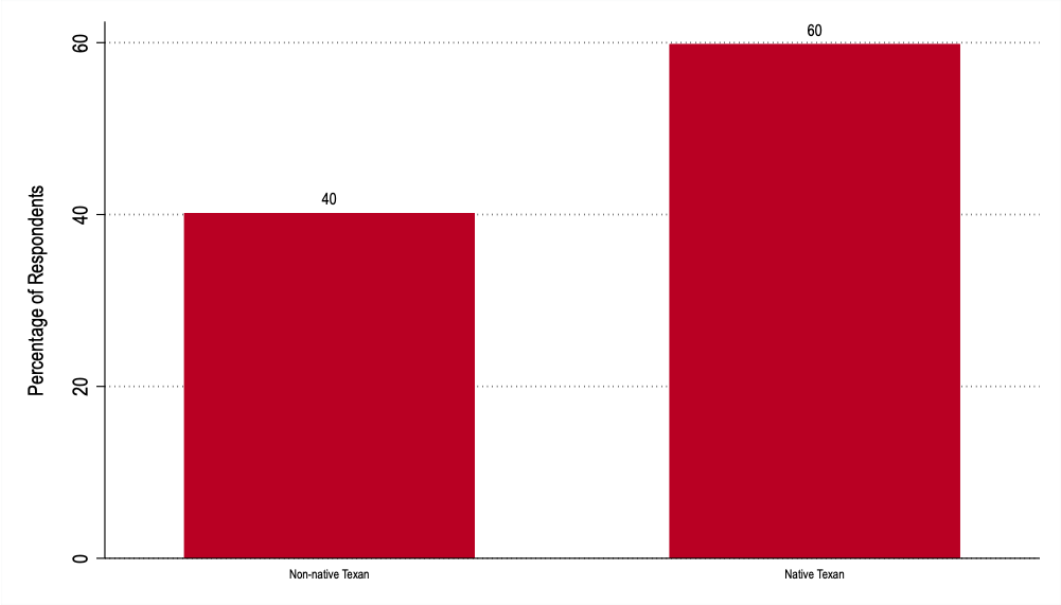

Figure A4: Which of the following statements do you identify with?

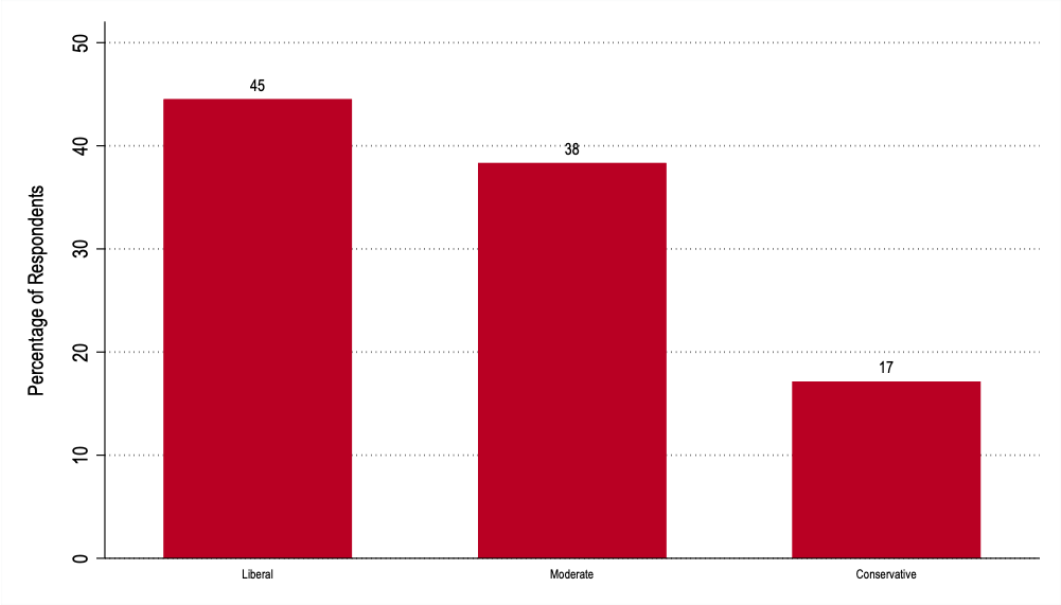

Figure A5: Do you consider yourself as being …?

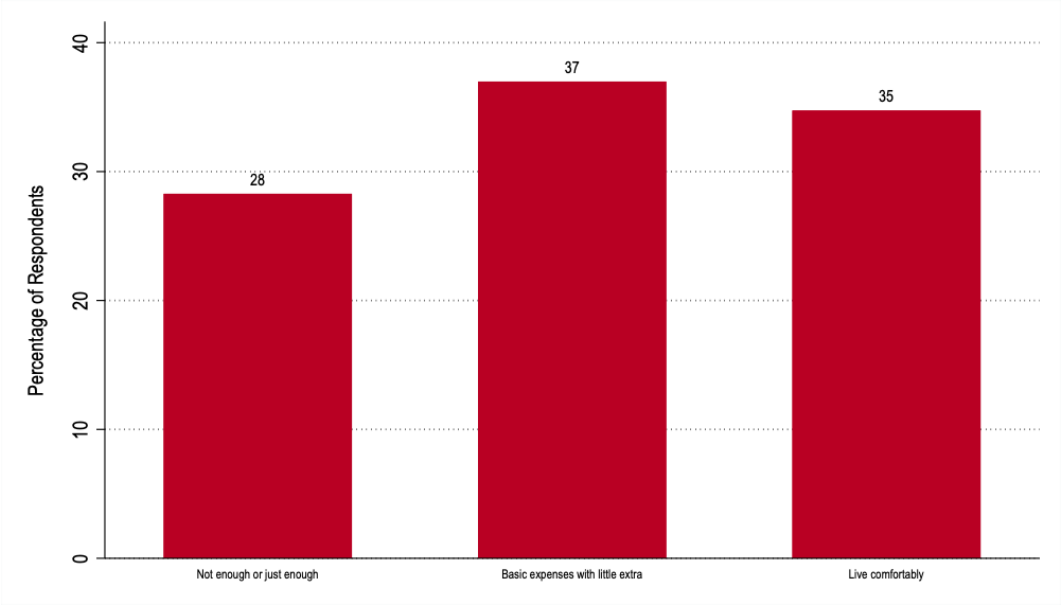

Figure A6: How would you describe your current financial situation?

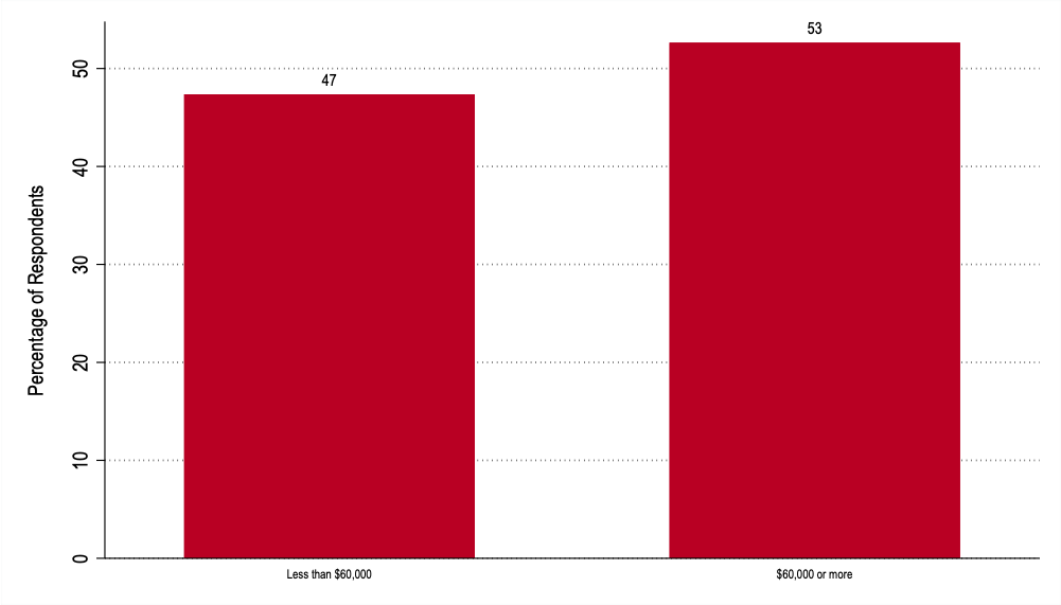

Figure A7: Which of the following categories best describes your family income? Total income includes interest or dividends, rent, Social Security, other pensions, alimony or child support, unemployment compensation, public aid (welfare), armed forces or veteran's allotment.

Additional figures for beliefs in climate change

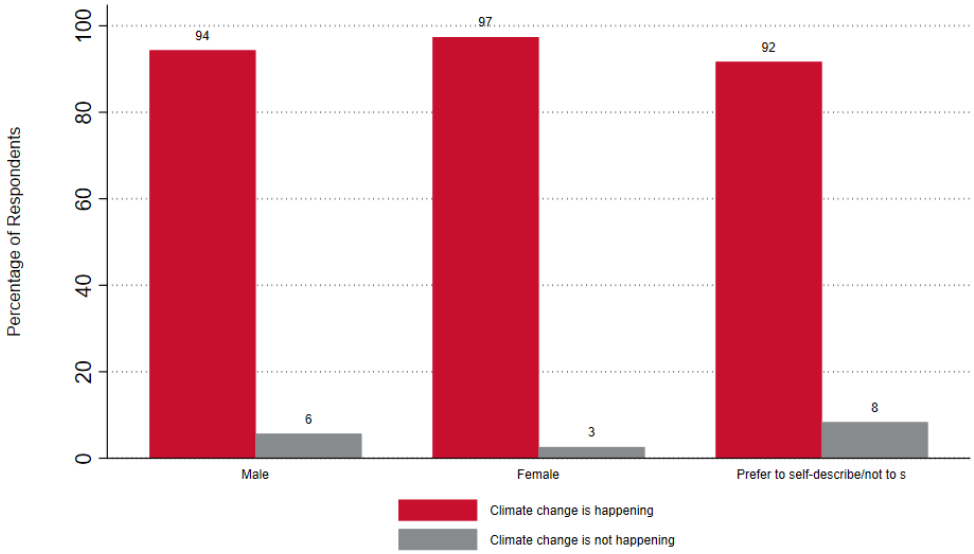

Figure A8: Belief in climate change by gender

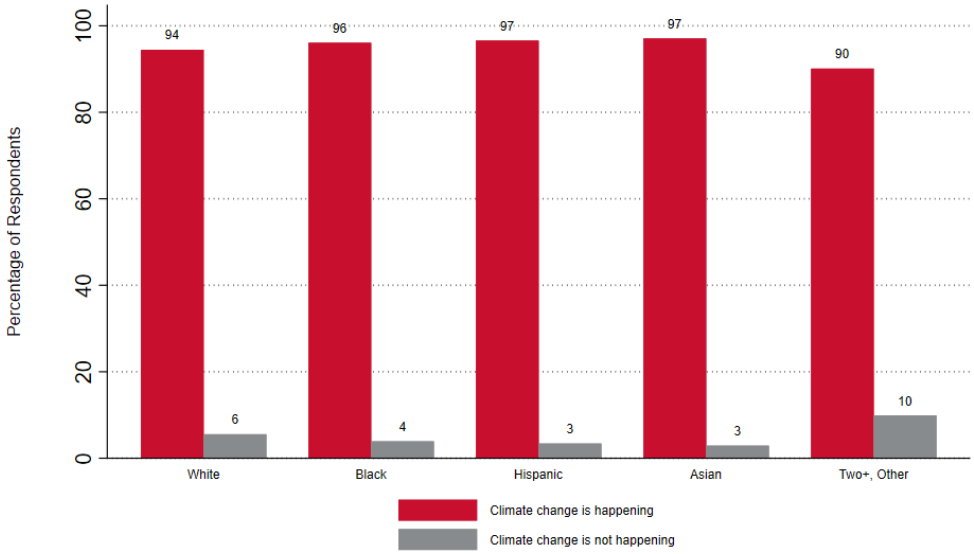

Figure A9: Belief in climate change by race/ethnicity

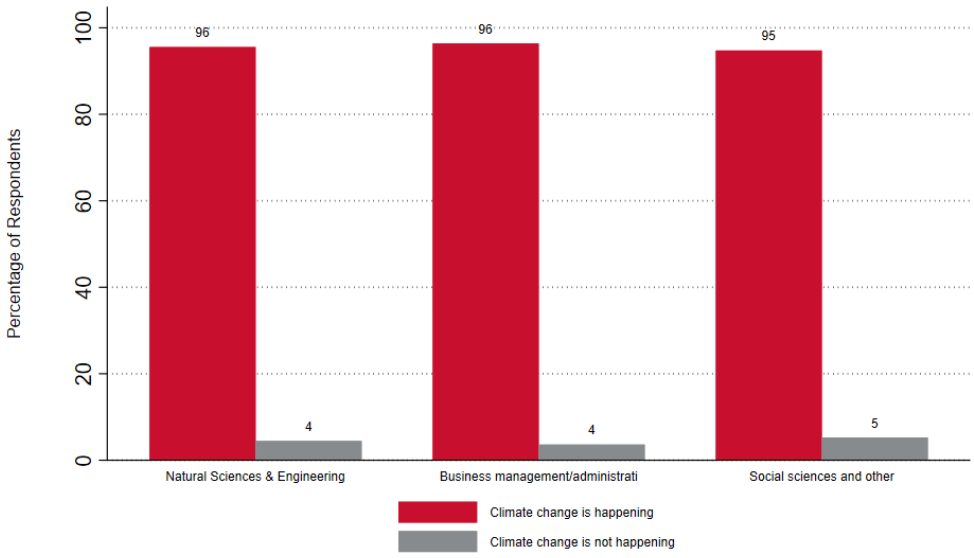

Figure A10: Belief in climate change by field of study

Additional figures for concern about the state of the environment

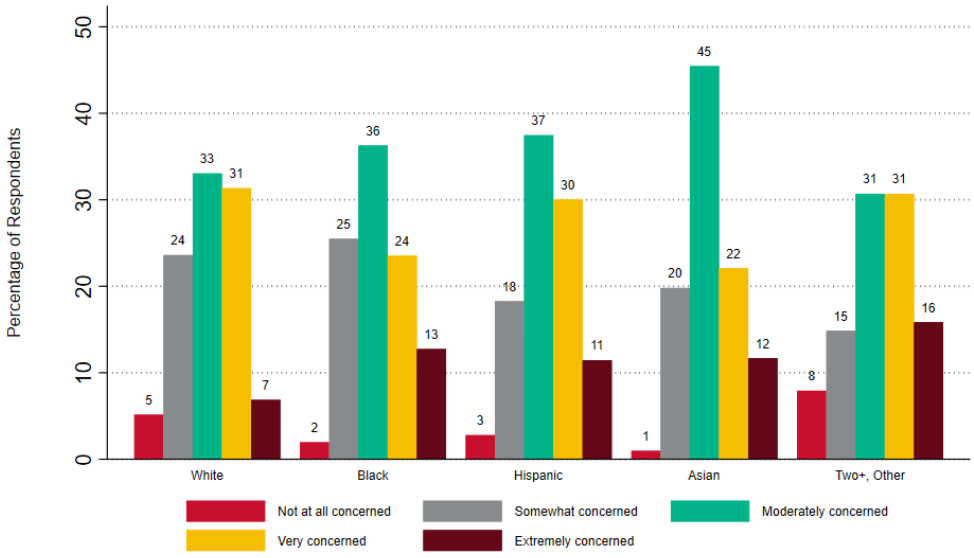

Figure A11: Concern level for the state of the environment by race and ethnicity

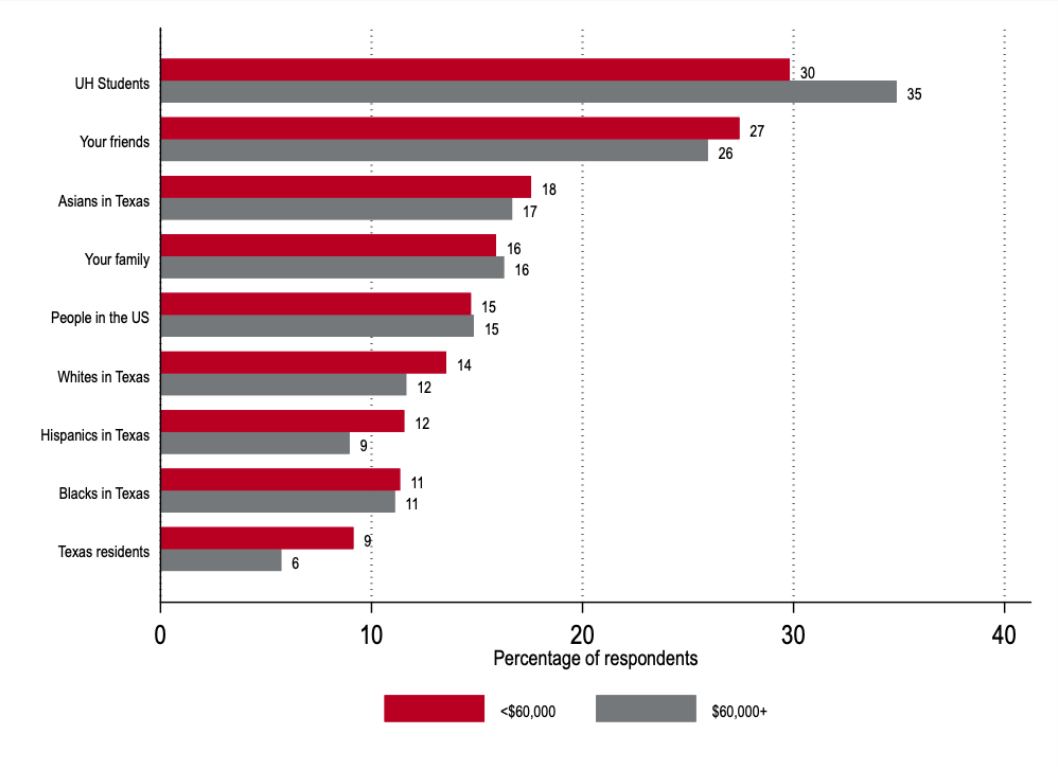

Figure A12: Percentages of respondents that believe groups in question are very and extremely concerned over the state of the environment by family's mean income

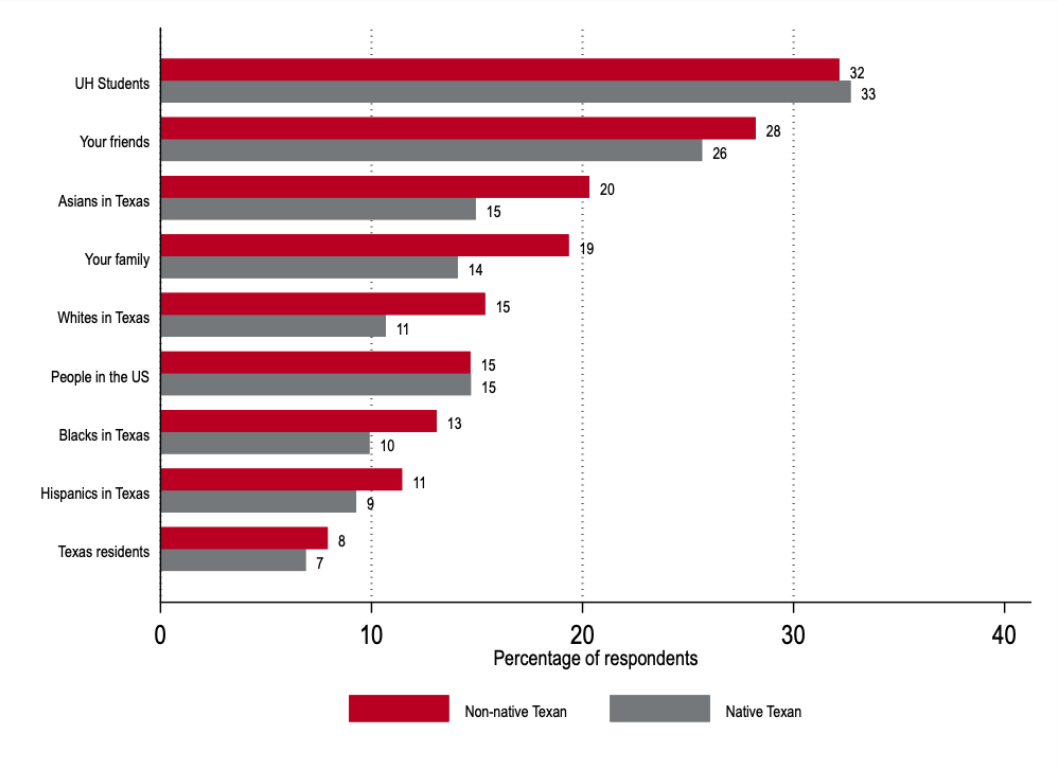

Figure A13: Percentages of respondents that believe groups in question are very and extremely concerned over the state of the environment by native or non-native Texan

Additional figures for importance of ethical and environmental practices

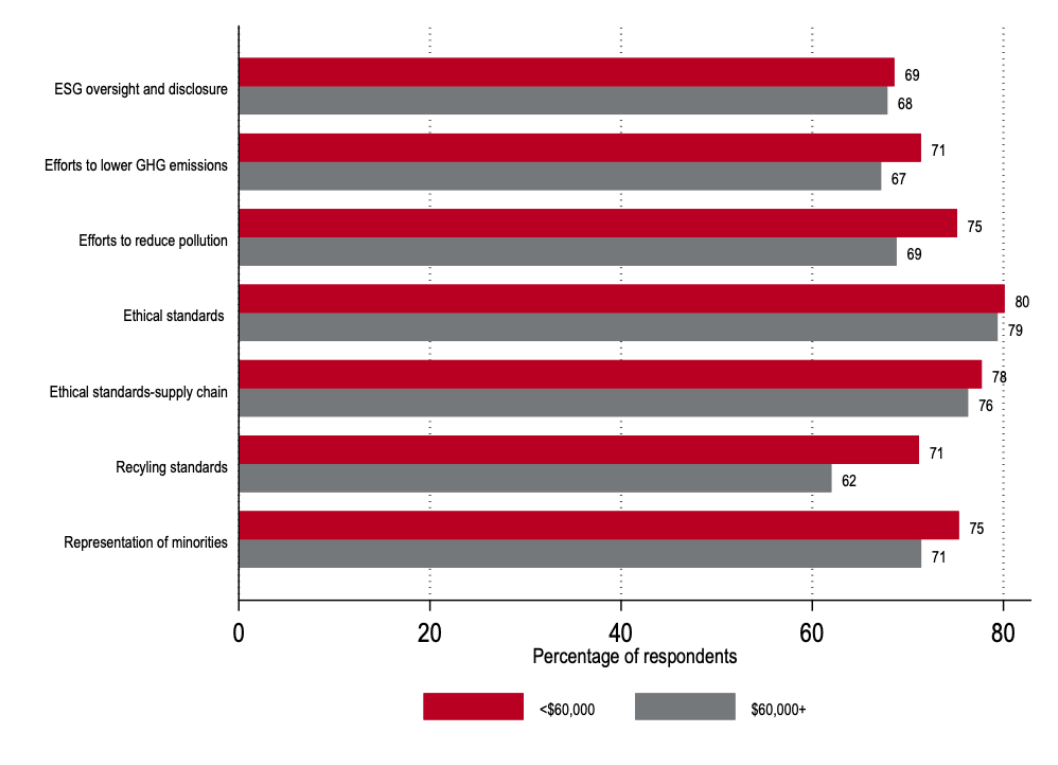

Figure A14: Importance of of ethical and environmental practices by field of study

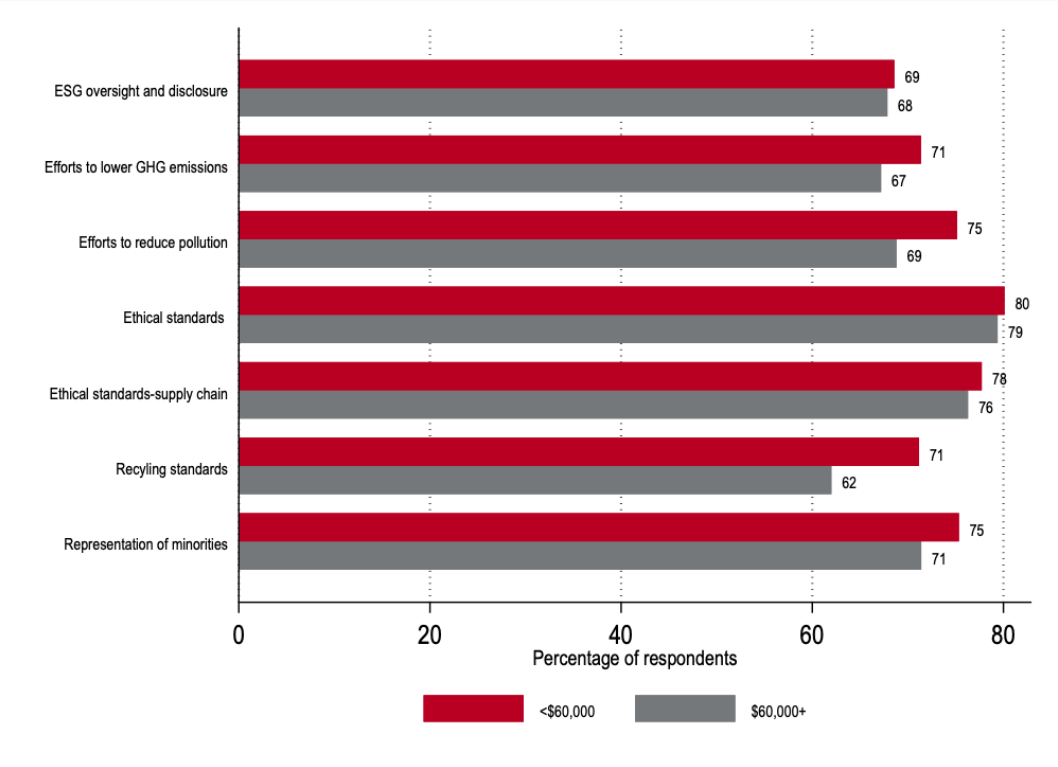

Figure A15: Importance of ethical and environmental practices by mean income

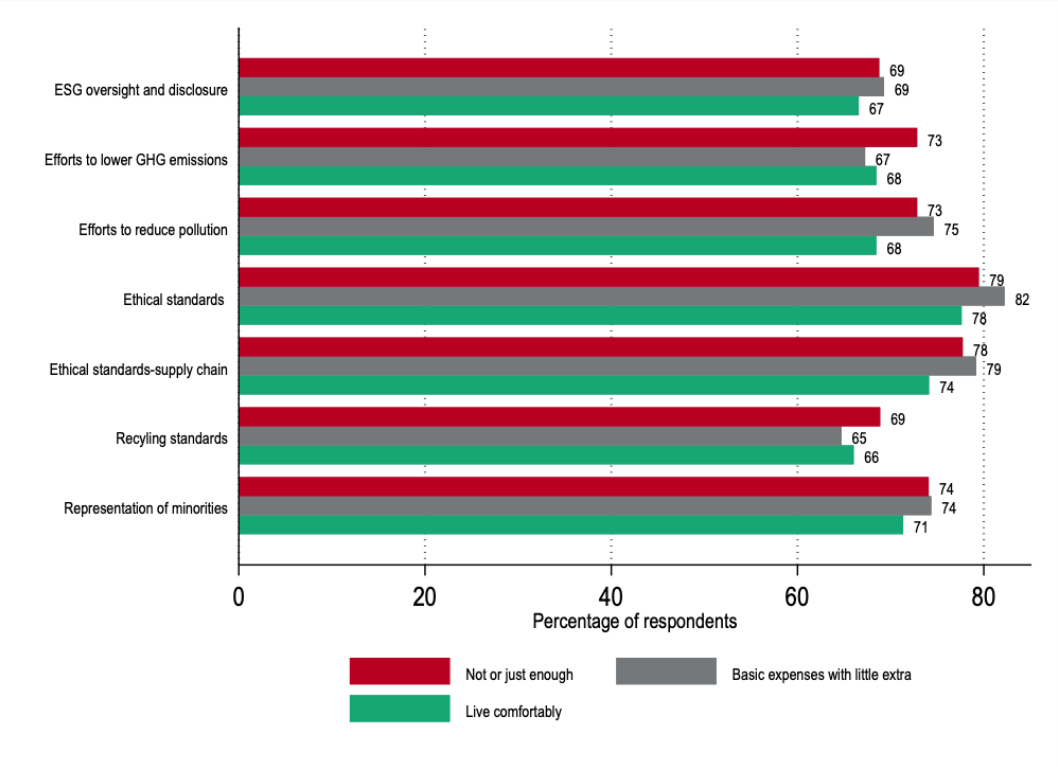

Figure A16: Importance of ethical and environmental practices by current financial situation

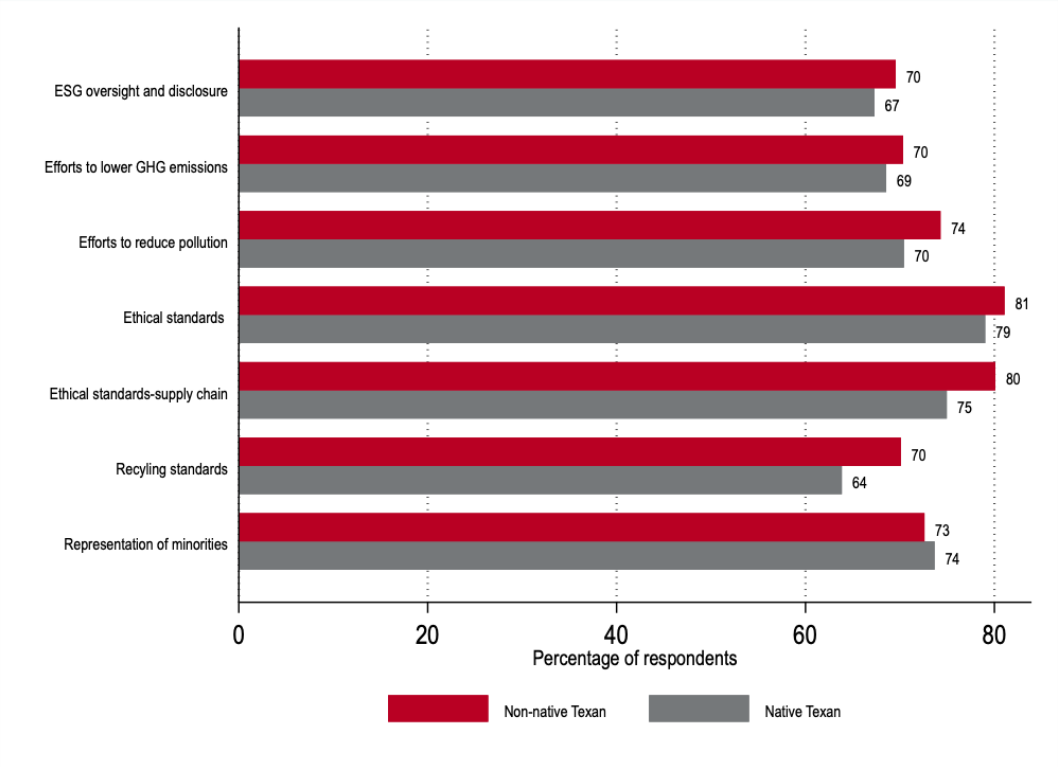

Figure A17: Importance of ethical and environmental practices by whether native Texan

Additional figures for the importance of ESG stewardship on energy sector employment

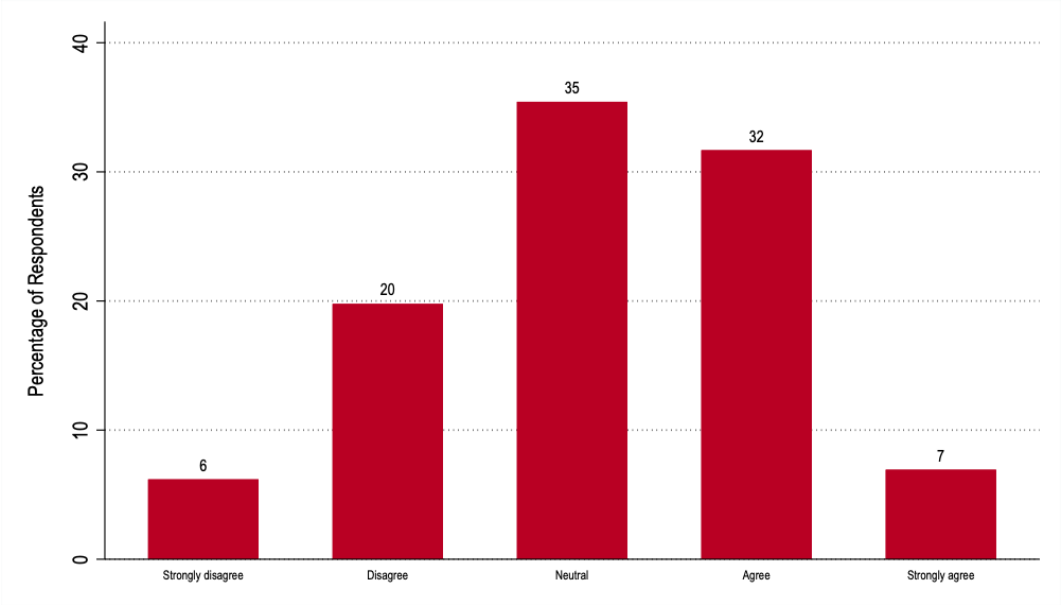

Figure A18: I am willing to accept a lesser role or a lower salary to work for a company that prioritizes ESG stewardship.

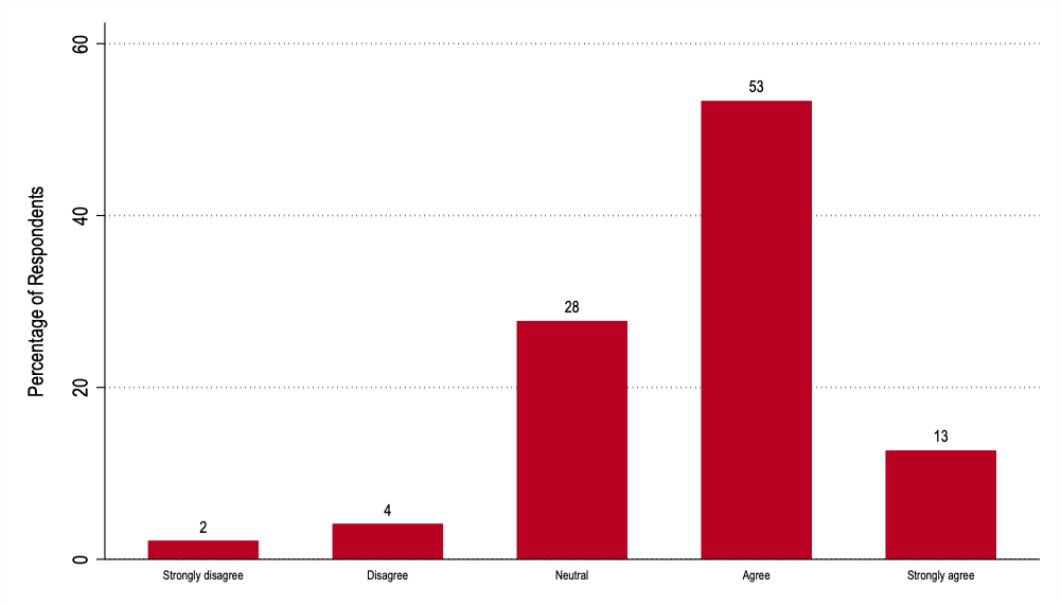

Figure A19: It is important for me that the company has policies aimed at ESG stewardship.

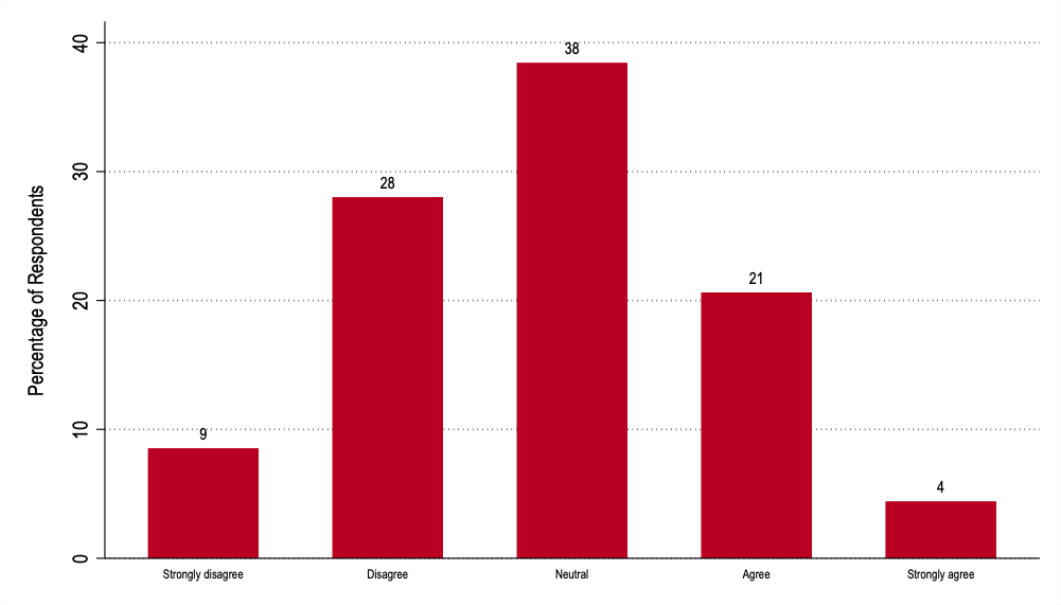

Figure A20: I think that, on average, students in my program or major are willing to accept a lesser role or a lower salary to work for a company in the energy industry that prioritizes ESG.

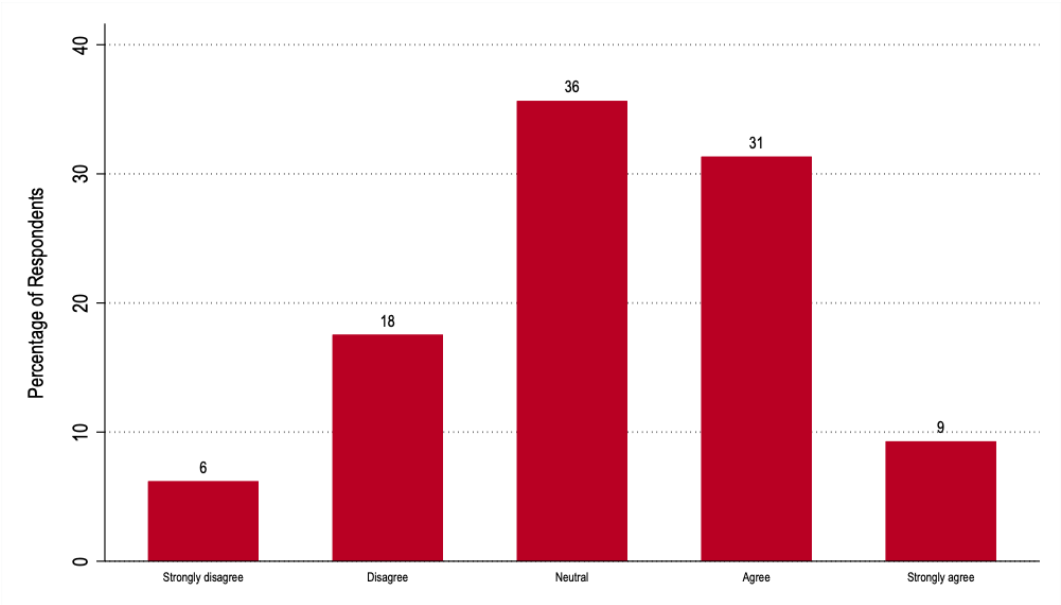

Figure A21: Compared to other factors, environmental responsibility is my top priority when deciding to work for a company in the energy industry.

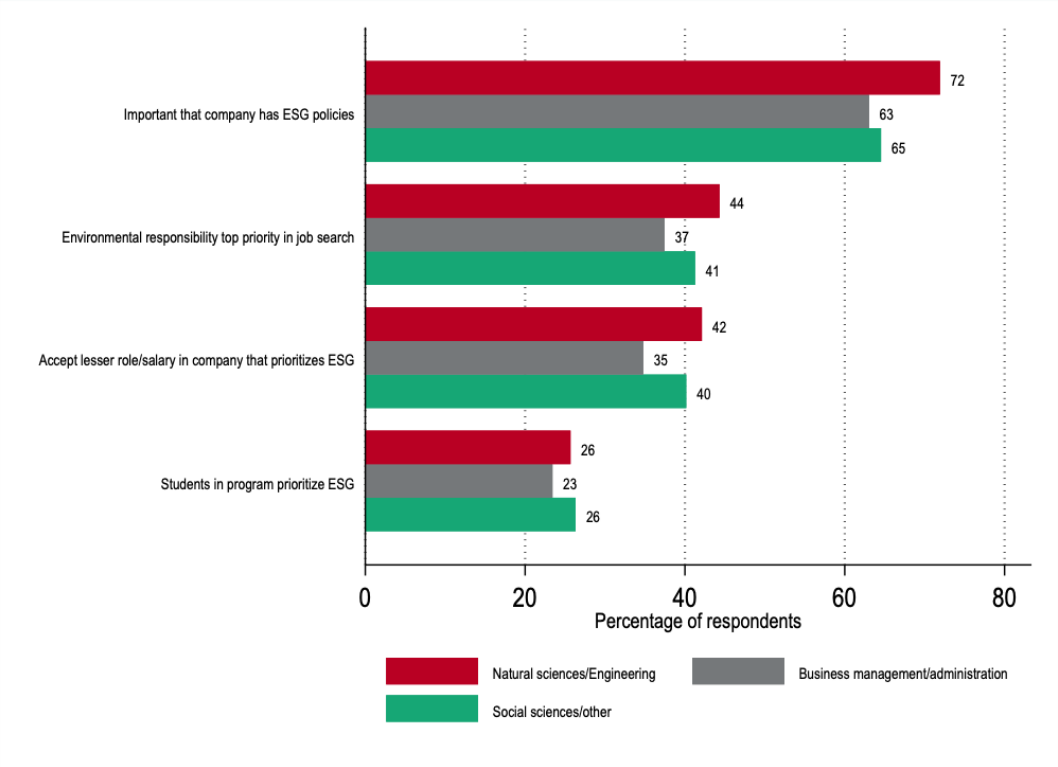

Figure A22: Percentages of respondents that agree or strongly agree by field of study

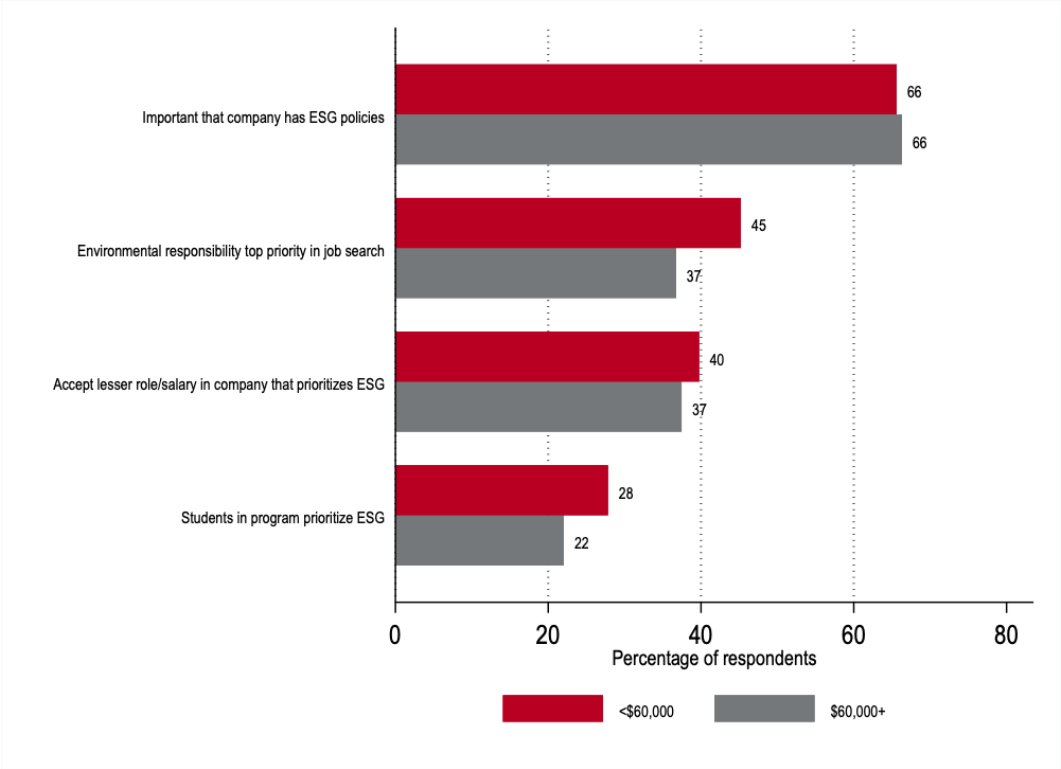

Figure A23: Percentages of respondents that agree or strongly agree by mean family income

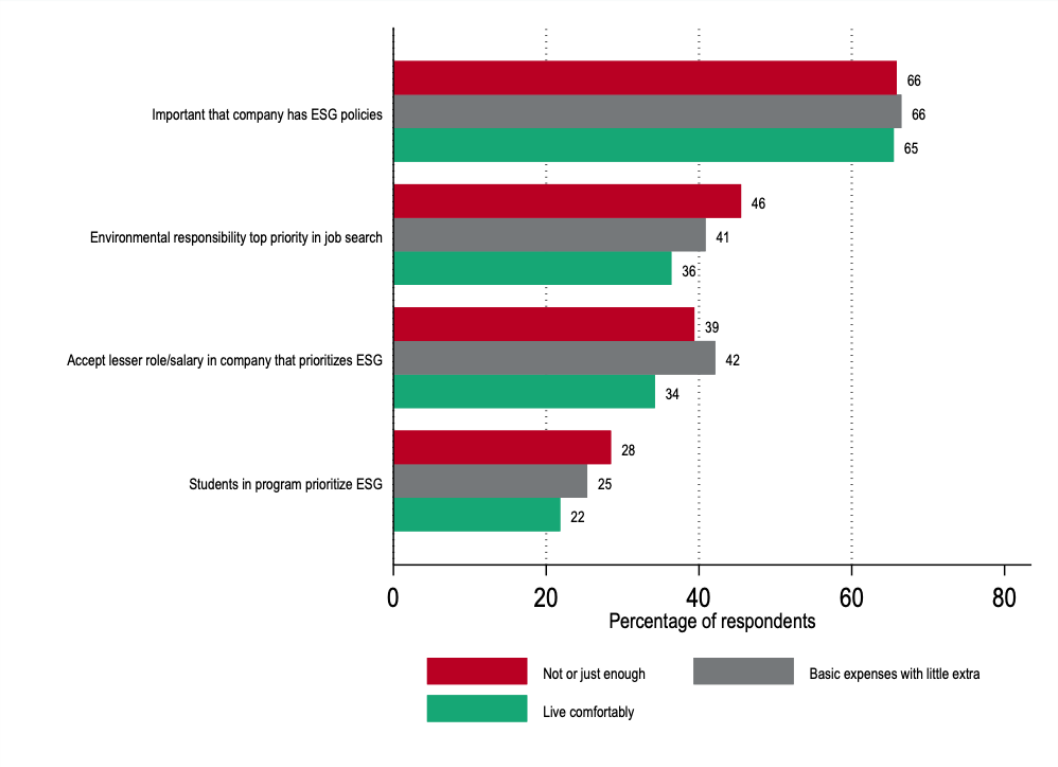

Figure A24: Percentages of respondents that agree or strongly agree by current financial situation

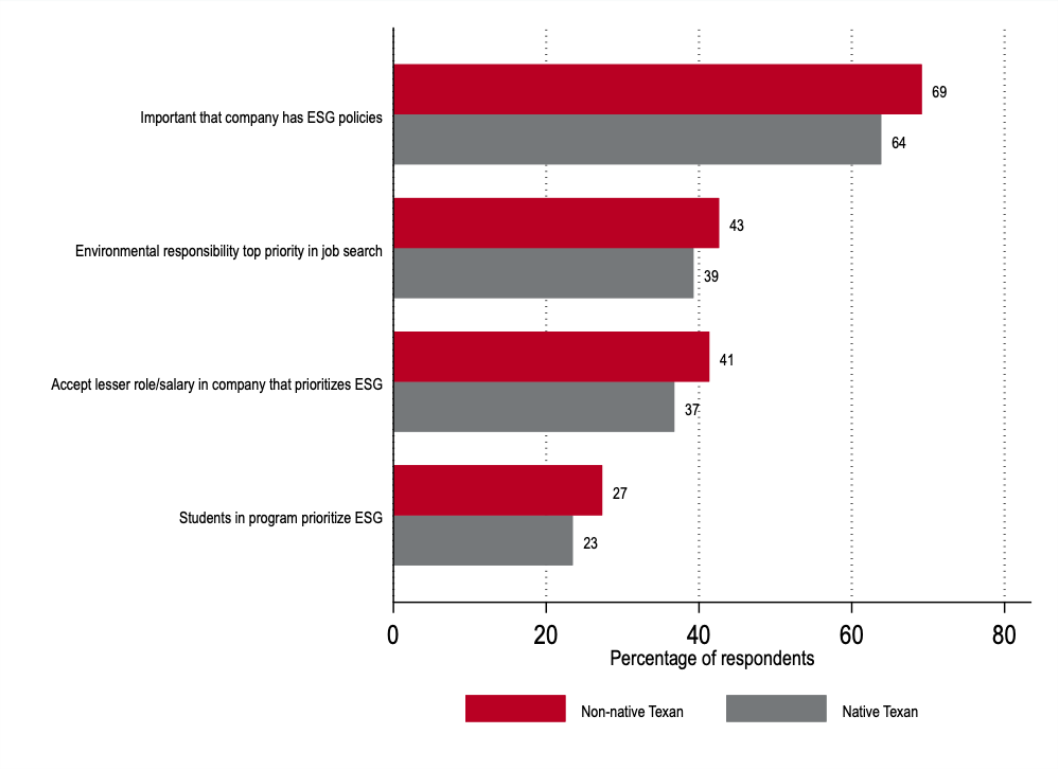

Figure A25: Percentages of respondents that agree or strongly agree by native and non-native Texan