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ESG IS THE MOST POLARIZING NONWAGE AMENITY:
EVIDENCE FROM A FIELD EXPERIMENT IN BRAZIL

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ABSTRACT

We examine job-seekers' heterogeneous preferences for nonwage amenities, with a focus on environmental, social, and governance (ESG) practices, using an incentivized field experiment in Brazil. Our findings reveal that ESG is the most polarizing nonwage amenity across multiple sociodemographic groups, with the strongest preferences observed among highly educated, white, and politically liberal individuals (Colonnelli et al., 2025). While women report a stronger preference for work-from-home policies, all other nonwage amenities exhibit minimal variation across sociodemographic groups. Our findings highlight the critical role of corporate values in shaping economic outcomes within an increasingly polarized society.

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1. INTRODUCTION

Over the past decade, corporations have faced increasing pressure to prioritize not only shareholder interests, but also broader societal objectives, such as climate change or various social issues. This shift has brought greater attention to firms’ environmental, social, and governance (ESG) practices (Hart and Zingales, 2017). At the same time, academic research has increasingly focused on how individuals consider nonmonetary job factors when making employment decisions (e.g., Cassar and Meier 2018; Mas and Pallais 2020).

In Colonnelli et al. (2025), we investigate the role of ESG as a nonwage amenity for talent allocation in Brazil by combining a field experiment with administrative matched employee-employer microdata to estimate an equilibrium model of the labor market. We find that job-seekers, on average, exhibit a strong preference to work for firms with good ESG practices. However, these preferences are highly heterogeneous across the sociodemographic spectrum, with the strongest ESG preferences observed among highly educated, white, and politically liberal individuals.

The finding that firms’ ESG practices seem to polarize job-seekers along multiple sociodemographic dimensions echoes the growing academic literature showing that political and social identities shape opinions about ESG.¹ Prior studies have shown that political polarization affects corporate behavior, investment decisions, and household financial and consumer choices (e.g., Hong and Kostovetsky 2012; Colonnelli et al. 2022; Fos et al. 2022; Colonnelli et al. 2024; Conway and Boxell 2024; McCartney et al. 2024; for a review, see Kempf and Tsoutsoura 2024). The polarizing nature of ESG is further consistent with recent studies documenting differences in preferences or engagement by educational attainment or race (e.g., Schuldt and Pearson 2016; Bauer et al. 2021; Seifert et al. 2024).

It remains an open question whether ESG is a uniquely polarizing nonwage amenity compared to others. A broad range of nonwage amenities exists, and preferences for these amenities may also be polarizing across various socioeconomic and political dimensions. For example, remote work, which is a key determinant of individuals’ workplace preferences (including in our study), may exhibit differential importance for several different subgroups of the population.

Our experimental framework provides an ideal setting to formally investigate this question, as our randomized design ensures orthogonality among job attributes and allows us to isolate preferences for each nonwage amenity in an unbiased way. In this paper, we extend our main analysis to explore the heterogeneity in preferences for a broad range of nonwage amenities commonly observed in the real world and studied in the labor literature (Mas and Pallais, 2020).

¹Throughout this paper, we use the term polarization broadly to refer to the divergence of preferences among distinct demographic groups.

2. EXPERIMENTAL SETTING

2.1. The Job Rating Experiment. To estimate job-seekers’ preferences for nonwage amenities, we adopt a method similar to the nondeceptive incentivized resume rating approach by Kessler et al. (2019). Job-seekers rate their interest in a series of synthetic job postings constructed by our research team, with components such as wages, non-wage amenities, and other firm and job characteristics randomized by design.

Our experimental survey begins with a set of “filtering” questions regarding respondents’ education level and preferred professional areas. We use their responses to these questions to ensure that participants are only shown job postings relevant to their qualifications and interests. Participants then evaluate their interest in 20 unique, synthetic job postings, which we detail further in the following subsection. We conclude with questions on participants’ sociodemographic characteristics. Our main paper, Colonnelli et al. (2025), provides all additional relevant details.

To implement the experiment, we collaborate with Catho, the leading job matching platform in Latin America. Catho invited its active members to participate in the survey between September and November 2022, resulting in a final sample of 1,206 responses.

Our experimental design has several key advantages. First, job-seekers are informed that the job postings are synthetic and created by our research team, eliminating any deception and reducing the risk of biases that commonly arise in survey-based experiments. Second, participants are incentivized to respond truthfully: we inform respondents that their evaluations will feed into a machine learning algorithm that will match them to real job postings aligned with their preferences. Finally, our design allows us complete flexibility in creating the job postings. This ensures that job attributes are independent of each other, enabling us to cleanly isolate preferences for specific job features while controlling for confounding factors.

2.2. Synthetic Job Postings.

2.2.1. Creating Job Postings. To construct the synthetic job postings, we systematically reviewed a large set of randomly selected real job postings from Catho’s platform. We identified the key components of typical job postings—such as job descriptions, qualifications, firm attributes, wages, and nonwage amenities—and analyzed their content and visual layout to ensure the synthetic postings accurately represent real job postings in Brazil. We then approximate the probability distribution of each component’s inclusion in real postings. To generate synthetic job postings, we randomize components based on their inclusion probabilities. We provide a sample job posting in Figure I.

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About us

Founded in 1998, our company is currently a leader in the real estate management and development sector. Our 2,500 employees are distributed across 5 countries. We are seeking a candidate with exceptional verbal and visual presentation skills, the ability to develop and articulate design direction for our team and clients, and a passion for bringing ideas to life. **Financial Performance:** Our company prides itself on its strong financial performance. Last year, we recorded one of the highest profits in our history and among all companies operating within our sector in the last 5 years.

Environmental, Social, and Governance Practices

As part of our commitment to a zero-waste future, our firm has eliminated single-use plastics in all product packaging and offices.

About the Job

Time: Monday to Friday from 10am to 6pm

Hybrid Work Model – You choose how many days of the week you want to work from the office.

Our company is seeking innovative professionals to fill our open positions.

Opportunities

- Full immersion in our corporate culture
- Support from HR throughout your journey with our company
- Global mentoring program

Hiring Stages

1. Online application
2. Interview panel with our managers

Benefits

- Private pension plan
- Internet allowance

FIGURE I. Example of Synthetic Job Posting

Notes: This figure provides an example of a synthetic job posting used in the experiment.

2.2.2. Nonwage Amenities. Nonwage amenities, defined as job attributes that might provide value to employees beyond direct wages, are a key component of the job postings. We incorporate standard nonwage amenities commonly observed in real-world settings and extensively studied in the labor literature, such as transportation subsidies, meal or food allowances, private pension plans, training programs, and remote work arrangements, among others.

2.2.3. ESG as a Nonwage Amenity. ESG attributes are featured in a subset of job postings as a distinct category of nonwage amenities. These attributes highlight a firm's ESG efforts in specific practices, including: (i) environmental practices (e.g., recycling, land use, energy efficiency); (ii) social practices (e.g., diversity & inclusion, professional development); and (iii) governance practices (e.g., policies against lobbying, bribery, and corruption). At least one ESG signaling sentence was included with an unconditional probability of 26%. We also show ESG certifications in a subset of job postings.

2.2.4. Primary Job Characteristics. At the top of each job posting, we include three core components: (i) job title, (ii) location, and (iii) wage. Respondents are shown relevant job titles and locations based on their answers to the filtering questions. To ensure realism, wages are drawn from distributions tailored to respondents' education level and preferred professional area.

2.2.5. *Other Job Attributes.* In addition to benefits, ESG practices, and primary job characteristics, the synthetic job postings include several additional randomized job attributes, such as the firm’s characteristics (e.g., number of employees, company age, financial strength), on-the-job opportunities and activities, work-from-home arrangements, and hiring stages. For additional details on these components, please refer to Colonnelli et al. (2025).

2.3. **Estimating Preferences for Job Attributes.** To estimate job-seekers’ preferences for specific job and firm characteristics, we ask participants to rate their interest in each job posting by responding to the following question: *“How interested would you be in receiving an offer for this job position?”*

The response to this question, which we refer to as *Interest*, is our main dependent variable. *Interest* is measured on a 7-point Likert scale, with higher scores indicating stronger interest in the job.

A potential confounding factor in interpreting these preferences is that job-seekers’ interest in a job might be influenced by their perception of the likelihood of receiving an offer. To address this concern, we explicitly instructed respondents: *“Imagine that the employer guarantees you a job offer—consider only your perception of the quality of the position.”* This framing ensures that the reported interest reflects intrinsic preferences for the job attributes, independent of hiring expectations.

3. ESTIMATION & RESULTS

To examine whether ESG is uniquely polarizing, we compare the heterogeneity of preferences for ESG to those of other nonwage amenities. Specifically, we analyze how preferences for each amenity vary across key sociodemographic groups.

First, we categorize job-seekers into binary groups based on their sociodemographic characteristics: education (equal to one for individuals with a college degree or higher); race (equal to one for individuals identifying as white); political views (equal to one for individuals identifying as liberal or moderate); age (equal to one for individuals aged 45 years old or younger); and gender (equal to one for individuals identifying as female). We then interact each nonwage amenity with the corresponding binary indicator.

We estimate specifications of the following form:

$$\begin{aligned} \text{Interest}_{ij} = & \alpha + \beta_0 (NWA_{ij} \times SDC_i) + \beta_1 SDC_i + \beta_2 NWA_{ij} \\ & + \beta_3 \ln(\text{Wage}_{ij}) + \beta_4 FS_{ij} + \beta_5 \text{Number of } NWA_{ij} \\ & + \text{StrataFE} + \text{IndividualFE} + \epsilon_{ij}, \end{aligned} \quad (3.1)$$

where i represents the i^{th} respondent, and j indicates the job posting evaluated by respondent i . *Interest* captures the level of interest a respondent has in a job posting. *SDC* is a binary indicator denoting a given sociodemographic characteristic. *NWA* is a binary

indicator equal to one if the job posting displays a given nonwage amenity. $\ln(Wage)$ is the natural logarithm of the monthly wage displayed in the job posting, FS is a binary indicator equal to one if the job posting signals the company's financial strength, and $Number\ of\ NWA$ is the number of nonwage amenities shown in the given job posting. We also include strata fixed effects, defined as binary indicators for each combination of a respondent's education level and the professional area they are interested in working in, as well as individual fixed effects.

Nonwage Amenities	ESG Practices-	0.114***	0.078**	0.093**	-0.047	-0.015
	Environmental Practices-	0.075	0.108**	0.118**	-0.045	-0.005
	Social Practices-	0.121	0.030	-0.114	-0.055	0.024
	Governance Practices-	0.169**	0.039	0.087	-0.084	0.034
	Daycare Allowance-	-0.066	-0.024	-0.045	0.013	0.012
	Gym and Physical Activity Support-	-0.033	0.007	-0.038	-0.014	-0.024
	Internet Allowance-	0.072	-0.017	-0.019	0.006	0.019
	Language Course Allowance-	0.036	0.056	0.050	-0.005	-0.016
	Meal and Food Allowance-	-0.007	-0.030	-0.025	0.029	0.058
	Medical, Educational, and Personal Assistance-	-0.027	0.046	-0.039	-0.004	-0.002
	Mentoring and Training Program-	0.016	0.006	0.028	0.016	-0.044
	Multinational-	-0.003	-0.042	0.002	0.036	0.025
	Partnerships with Educational Organizations-	0.018	-0.040	0.066	-0.042	0.007
	Personal Development-	0.062*	-0.016	0.058	0.052	-0.018
	Pharmacy Allowance-	0.067	0.015	-0.035	-0.022	-0.039
	Pregnancy Allowance-	0.015	-0.073	0.027	0.013	0.051
	Private Pension Plan-	0.002	0.047	-0.018	0.057	0.070
	Transportation Allowance-	0.008	0.014	0.043	0.046	-0.058
	Wellness Program-	-0.016	-0.018	0.027	0.027	-0.043
	Work-from-Home-	0.046	-0.051	-0.019	-0.014	0.124***
		High Education	White	Liberal or Moderate	Young	Female
		Sociodemographic Characteristics				
		■ Negative and Statistically Significant □ Not Statistically Significant ■ Positive and Statistically Significant				

FIGURE II. Preferences for ESG Practices and Nonwage Amenities Across Sociodemographic Groups

Notes: This figure presents the interaction coefficients (β_0) from separate regressions for each combination of sociodemographic characteristic and nonwage amenity using the following regression specification: $Interest_{ij} = \alpha + \beta_0(NWA_{ij} \times SDC_i) + \beta_1 SDC_i + \beta_2 NWA_{ij} + \beta_3 \ln(Wage_{ij}) + \beta_4 FS_{ij} + \beta_5 \text{Number of } NWA_{ij} + \text{Strata FE} + \text{Individual FE} + \epsilon_{ij}$, where i represents the i^{th} individual, and j represents the job posting rated by individual i . The variable SDC is a sociodemographic characteristic indicator that equals one for the following groups: in Column (1), respondents with a college degree; in Column (2), respondents who are white; in Column (3), respondents who self-identify as politically liberal or moderate; in the Column (4), respondents aged 45 years or younger; and in Column (5), respondents who are female. NWA is an indicator equal to one if the job posting displays the nonwage amenity in the lefthand column. $\ln(Wage)$ is the natural logarithm of the monthly wage displayed in the job posting, FS is an indicator equal to one if the job posting signals financial strength, and $Number\ of\ NWA$ is the number of nonwage amenities shown in the job posting. We include strata fixed effects, which are binary indicators for each combination of respondent education level and preferred professional area, and individual fixed effects. We use robust standard errors and statistical significance is denoted as follows: * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Figure II presents a matrix of estimated coefficients for the interaction terms $NWA \times SDC$, as specified in equation 3.1. Each coefficient reported in the figure is derived from a separate regression, where a specific nonwage amenity (listed in the matrix rows) is interacted with a particular sociodemographic characteristic (shown in the matrix columns). For example, the coefficient of 0.114 in the first column and first row represents the interaction between the nonwage amenity *ESG Practices* and the sociodemographic characteristic *High Education*, capturing the preference highly educated respondents have for ESG practices relative to respondents without a college degree. Similarly, the coefficient of 0.078 in the second column and first row reflects the interaction between the nonwage amenity *ESG Practices* and the sociodemographic characteristic *White*, capturing the preference white respondents have for ESG practices relative to nonwhite respondents.

As established in our companion paper, the coefficient on *ESG Practices* (a binary indicator equal to one if the job posting contains at least one ESG signaling sentence or third-party ESG certification) is positive and statistically significant at the 95% level or higher in Columns (1) to (3), indicating that preferences for ESG are stronger among individuals who are highly educated, white, and self-identify as politically liberal or moderate. These interaction coefficients range from 0.078 (for white individuals; Column 2) to 0.114 (highly educated individuals; Column 1). In terms of economic magnitude, a coefficient estimate of 0.1 corresponds to a wage equivalent of BRL 390, or 9.33% of the average wage in the sample.

When we next break down *ESG Practices* into subcomponents, we find significant heterogeneity in preferences for *Environmental Practices* and *Governance Practices*, but not for *Social Practices*. Preferences for *Environmental Practices* are strongest among white respondents and those who are politically liberal or moderate, with coefficients for both groups statistically significant at the 95% level. Highly educated individuals exhibit the strongest preferences for *Governance Practices*, with the coefficient statistically significant at the 99% level.

Among all nonwage amenities considered in this study, ESG practices emerge as the most polarizing. Of the 17 nonwage amenities analyzed, 14 exhibit no meaningful heterogeneity across any sociodemographic dimension. This includes important nonwage amenities such as private pension plans, various medical, educational, and personal assistance, and mentoring and training programs, among others, which show relatively uniform preferences across all groups.

The only exceptions include *Work-from-Home* policies, a key nonwage amenity that drives the highest average interest among job-seekers (Colonnelli et al., 2025), and *Personal Development* programs. The coefficient for *Work-from-Home* is positive and statistically significant at the 99% level in Column (5). This finding aligns with previous studies showing

that women value *Work-from-Home* more than men (e.g., Mas and Pallais 2017; Barrero et al. 2021; Goldin 2022; Bloom et al. 2024), which also validates our experimental design. Moreover, our results on *Work-from-Home* are in line with the findings by Wiswall and Zafar (2018) and Le Barbanchon et al. (2021) that women have stronger preferences for flexibility and shorter commute times in job arrangements. Similarly, for *Personal Development* programs, we observe that highly educated job-seekers place greater value on this amenity compared to those without a college degree, although this difference is statistically significant only at the 90% level.

However, even for these two nonwage amenities, heterogeneity is limited to a single sociodemographic dimension—gender for *Work-from-Home*, and education for *Personal Development*. In contrast, ESG preferences exhibit far greater degrees of heterogeneity across multiple sociodemographic dimensions, including education, race, and political affiliation. Overall, ESG appears to be the most divisive of all nonwage amenities, setting it apart from other job attributes.

4. CONCLUSION

Using an incentivized field experiment with real job seekers in Brazil, we find that ESG is both highly valued and uniquely polarizing as a nonwage amenity. Extending our analysis to a broad range of nonwage amenities commonly observed in the real world and studied in the labor literature, we show that this polarizing nature is not prevalent among other amenities.

The polarization of ESG underscores the importance of understanding the distributional consequences of nonwage amenities and the growing role of corporate culture in shaping job-seeker preferences.

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