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Is corporate social responsibility associated with lower wages?

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MEMORANDUM

No 01/2011

**Is corporate social responsibility associated with
lower wages?**

The seal of the University of Oslo is a circular emblem. It features a central figure of a woman in classical attire, holding a lyre. The text 'UNIVERSITAS OSLOENSIS' is inscribed around the top inner edge, and 'MDCCCXXXIII' is at the bottom. The seal is rendered in a light gray tone.

**Karine Nyborg
Tao Zhang**

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Is corporate social responsibility associated with lower wages?

Karine Nyborg¹ and Tao Zhang^{2,3}

Abstract

Firms with a reputation as socially responsible may have an important cost advantage: If workers prefer their employer to be socially responsible, equilibrium wages may be lower in such firms. We explore this hypothesis, combining Norwegian register data with data on firm reputation collected by an employer branding firm. Adjusting for a large set of background variables, we find that the firm's social responsibility reputation is significantly associated with lower wages.

Keywords: Self-regulation, wage differentials, CSR.

JEL classification: C51, D21, D64, Q56

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Introduction

Voluntary approaches to environmental protection have gained increasing attention in the environmental economics literature. One such approach is corporate social responsibility (CSR): the phenomenon that private firms voluntarily make costly efforts to achieve social goals, or to avoid socially damaging consequences of their production activities, over and above what is required by government regulation. The social goals involved may be associated with environmental protection (such as pollution abatement or waste reduction measures), with workers' rights (safety, abstaining from child labor), or other social goals such as poverty reduction.⁴

Although the environmental impacts may be hard to assess, corporate social responsibility as a phenomenon appears to be widespread (Portney 2008). This can hardly be explained by the simplest economic textbook models: in a competitive market populated by *homo oeconomicus* agents, firms paying higher costs than necessary will typically be wiped out by more efficient competitors – regardless of whether the excessive costs were caused by wastefulness or by ethical motives. Recently, however, economists have offered several possible explanations of CSR (see Lyon and Maxwell 2008 for an excellent review). The most common explanation seems to be that customers may have ethical concerns, making them willing to pay more for the firm's products if the production process is viewed as ethically superior (e.g. Arora and Gangopadhyay 1995, Besley and Ghatak, 2007). Similarly, shareholders may be willing to accept lower returns on capital to ensure that the production is ethically defensible (Cullis et al., 1992, Baron 2007, 2009). In the present paper, however, we will focus on the idea that employees may care about the social responsibility of their employer (Frank 2004, Besley and Ghatak 2005, Heal 2005, Brekke and Nyborg 2008, 2010).

If a sufficiently large number of employees prefer their employer to be socially responsible, then this would, presumably, affect equilibrium wages. A worker with such a preference would, all else given, strictly prefer a socially responsible to a socially irresponsible employer. With continuous preferences, this would imply that there exists some strictly positive wage differential such that even if the socially responsible firm offers a lower wage by this amount, the worker would still prefer the responsible employment alternative. Thus, this simple argument implies that we should expect the going market wage in firms with a socially responsible reputation to be lower than in firms with a reputation as less socially responsible.

⁴ For discussions of CSR, see e.g. Heal (2005), Baron (2007, 2009), Besley and Ghatak (2007), Lyon and Maxwell (2008), Portney (2008), Benabou and Tirole (2010).

To our knowledge, however, few empirical studies have looked at this. One exception is Frank (2004), who used an employment survey among recent Cornell graduates in which respondents reported their current salary, type of job, and the name of their employer, and where he was able to combine this with university data on respondents' completed courses and exam grades. Frank then asked another sample (Cornell students) to rate firms and types of jobs according to their social responsibility. Controlling for sex, curriculum and academic performance, he found a large and statistically significant compensating salary differential, with professions and firms rated as less socially responsible earning substantially higher salaries. Interestingly, Frank (2004) also found that although the wage differential was of a similar magnitude for men and women, women were much more likely to be employed in socially responsible firms; which lead him to speculate that women's higher concern for socially responsible work might be one factor contributing to the prevalent wage differences between genders.

Our aim with the present study is to explore whether similar effects can be identified among Norwegian firms. Our data on wages, as well as several background variables such as education, gender, family status, geographical location and industry, originates from register data. Our data on firm reputation comes from surveys conducted by the international, Swedish-based employer branding firm Universum. This strategy yields a data set with observations for more than 100,000 full-time employees.

Our analysis suggests that after controlling for a large number of background variables, there is a substantial and statistically significant negative effect of CSR reputation on wages. This effect, however, is mainly present for men, a fact which is at least partly due to a correlation between CSR and firms' gender equality policies.

Thus, a reputation as socially responsible may provide firms with a cost advantage, possibly allowing such firms to survive even with fierce market competition – and even in the absence of ethical consumers and/or ethical investors.

Data on firm reputation

Universum⁵ is an international employer branding firm, specializing in providing advice to firms on how to attract the firm's preferred potential employees. As a part of this work, Universum conducts several surveys each year in a number of countries. In Norway, Universum conducts two annual surveys: the Young Professionals survey, conducted among recently graduated young professionals,

⁵ See <http://www.universumglobal.com/Startpage.aspx>.

and the Graduate Student survey, conducted among advanced students in economics, business, engineering/natural science, IT and law. Universum has provided us with access to the data from four of their surveys: the Young Professionals studies from 2006 and 2007 (NOYP2006, 4376 respondents; NOYP2007, 4208 respondents) and the Graduate Student surveys from the same years (NOGS2006, 3459 respondents; NOGS2007, 4240 respondents). The questions are roughly, but not completely, identical between these two surveys and between years.

Universum does not directly elicit data on firms' CSR records. Instead, respondents are asked to report up to five "ideal" employers from a list; that is, those firms on this list that the respondent would most prefer to work for.⁶ The respondents are then asked whether they associate a number of characteristics with each of these up to 5 firms.⁷ "Corporate social responsibility" is one of those characteristics.

Thus, for each respondent we have at most one yes/no answer to the question of whether the respondent associates this firm with CSR.⁸ The procedure implies a selection issue in our CSR data: Every observation comes from a respondent who has chosen this particular firm as one of his/her favorite potential employers. Moreover, we have no CSR data at all from those firms who are not on Universum's list. This list is intended as a list of the most popular employers, and firms may be included in or precluded from the list from year to year according to how often it is chosen as an ideal employer among respondents (there is an open response alternative, allowing for inclusion of new, popular employers). Even among the firms on the list, we have no CSR observations for firms, if any, that are sufficiently unpopular to never have been picked as ideal employers at all.

Consequently, in our analysis we only include firms that have in fact been chosen as an ideal employer. This means, of course, that our sample consists of systematically more attractive employers than those firms that are not included. Since our hypothesis is precisely that CSR is one feature improving the attractiveness of an employer, one must consider potential endogeneity problems arising from this: If an employer were attractive only because of its CSR reputation, we might not find any effect of CSR at all in our data, since we would have eradicated all relevant variation in the CSR variable in the very data selection process. Since there may be a multitude of

⁶ If the respondent has reported to be familiar with less than 6 companies on the provided list: "Now choose the company/companies you would like to work for more than any other". Otherwise: "Now choose 5 companies you would like to work for more than any other".

⁷ "What do you associate with these companies? (Please select as many alternatives as are applicable.)"

⁸ Since the format of the question is to tick a box if one associates a characteristic with the firm, a "no" is hard to distinguish from a missing response.

reasons for an employer's popularity, we still believe that our data can be used in a potentially interesting way. We do not find it *a priori* obvious that the relationship between wage and CSR will be different for popular than for unpopular firms; however, the reader should bear in mind that our sample is selected in a special way.

The central CSR indicator used in our analysis is *the relative CSR score*, defined as the number of respondents who have reported to associate this firm with CSR divided by the number of respondents choosing this firm as an ideal employer. That is, we use as our "reputation" measure the share associating the firm with CSR among those who actually did choose that firm.⁹ We will not provide a more precise interpretation of the term *CSR* here; our CSR reputation indicator is simply based on respondents' perception of the concept, which we have no further information about. Unfortunately, we are not able to merge the Universum data with the register data on an individual level.

As indicated above, the data generating process for the relative CSR score implies that we will systematically have more CSR observations from popular employers. Since the relative CSR score is an aggregate indicator, and the number of observations used to calculate each firm's relative CSR score depends on the firm's popularity, our CSR indicator will be more uncertain (based on less information) for less popular firms. To avoid extreme observations generated by this procedure, we have excluded companies chosen as ideal employers by less than 4 survey respondents.

In Universum's survey data, respondents report their views on several company characteristics in addition to CSR. We chose to use a subset of these, excluding characteristics we believe to be directly related to wage determination (the latter to avoid endogeneity problems). The included variables are *Conservative working environment*, *Dynamic organization*, *Good/confidence-inspiring management*, *Good reputation at my school*, *Equality between the sexes*, *Innovation*, and *Corporate social responsibility*. For these variables, we have constructed relative firm reputation indicators corresponding to the relative CSR score explained above.

⁹ An alternative would be to use an absolute CSR count; however, if CSR is not the most important characteristics for choosing ideal employers, this would imply that if two firms A and B have the same CSR reputation, but A is more popular due to e.g. high salaries or prestige, A would receive a higher score.

The register data

We have merged the relative CSR scores derived from the Universum survey with the official Norwegian linked employer-employee register with cash wage for the years 2006 and 2007.¹⁰ This type of data has been widely applied in many empirical studies by Norwegian applied economists, see e.g. Røed and Zhang (2003). One problem with this data is that hourly wages are not recorded, only total annual income and whether or not employment is full- or part-time. In the present study, we include only recorded full-time employment, and only records with yearly cash wage above 200,000 NOK; the latter to avoid including individuals who have not been full-time employees during the entire calendar year.¹¹

The employer-employee register, now linked with CSR, is then further merged with demographic register data, which provides information about each employee's date of birth, gender, marital status, region of living, educational attainment, immigrant's status and citizenship. We restrict our sample to the age span 25 to 67. Appendix tables A1-A3 provide concise statistics of our analyzing samples.

Empirical modeling

The general modeling framework is very simple and straightforward, and is based on an OLS regression of log wage on regressors.¹² The relative CSR score is the main variable of interest in this context.¹³

Since the register data only contains yearly wage and not hours worked during the year, we perform the OLS of log yearly wage on regressors. We have to our disposal the 4 sets of relative CSRs derived

¹⁰ The employment register provides the employer's identification number, which we use to link with our CSR data.

¹¹ Further, we have cross-checked our records against another register database, the yearly wage statistics, and excluded those individuals recorded in that register as working only part-time.

¹² The log wage regression mimics a Mincerian model, see Heckman et al. 2006 and Lemieux 2006 for discussions of Mincer style wage regression analysis.

¹³ In NOYP, respondents report current hourly wages and also whether they associate their *current* employer with CSR. This data cannot be merged with the individual level register data, but one could perform a regression of log hourly wage on a dummy indicator of CSR using only the NOYP survey data (neither NOGS nor register data). Preliminary analysis using this approach did not reveal any clear relationships between wage and CSR. This approach reduces the size and scope of the dataset considerably, however: NOYP 2006 and NOYP 2007 regressions are based on self-reported wage data for 3362 and 3060 individuals, respectively, all of whom are highly educated within economics, business, engineering/natural science, IT or law. Our preferred approach comprises about 109,000 officially registered wage observations, including all types of employees in firms for which we have CSR data.

from 4 surveys. Since we have few CSR observations for some firms (see the discussion of the survey data above), and since there might be time lags between changes in firm reputation and wages, we choose to combine all 4 sets of relative CSRs to form a combined firm reputation indicator from these 4 surveys. This combined relative CSR data is then merged with 2007 employer-employee register data to perform wage regression. The crude samples from NOYP and NOGS contain about 100-150 companies each. In estimations with merged register data, we have clustered on the company id's derived from NOYP and NOGS to produce robust standard errors of estimates. The range of our relative CSR is from 0 to 0.88 across all surveys.

We first estimate a baseline model with only the demographic information, such as age, gender, family status, education attainment etc. We then gradually introduce other control variables, such as industry, relative CSR score, and an interactive term of gender and relative CSR score. We have performed regressions on all individuals, as well as separately on higher educated persons (with at least 13 years of education attainment).

Results

Table 1 presents our main results. The bold faced numbers are statistically significant at the 5% level. We conduct regressions of log yearly wage on relative CSR score and other variables.

Model I is the baseline model, with no controls for industries and corporate characteristics. An immediate observation is that comparing to male workers, female workers have about 16% lower annual wage incomes.

In model II, we add only the relative CSR score. The estimate on relative CSR is now -0.38 and statistically significant. That is, for otherwise similar firms and employees, a firm with relative CSR score of 1 (everyone choosing this firm as an ideal employer associates it with CSR) would be expected to pay 38 percent lower wages than a firm with relative CSR score of 0 (no-one choosing this firm associates it with CSR).

Model III introduces an interactive term between female and corporate social responsibility. The estimated wage loss associated with CSR now increases to 42%, the coefficient still being statistically significant. The gender wage gap increases to about 19%. The interactive term of female with CSR is only weakly significant; note, however, that its coefficient is almost of the same magnitude as the gender gap.

In model IV we add controls for industrial wage differentials, which reduce the coefficient for CSR to -0.24. This is to be expected, since some industries (e.g. health and care giving) presumably have a

better reputation in terms of social responsibility than others (e.g. petroleum and mining).¹⁴ The interaction term between female and CSR is now significant and substantial (a coefficient of -0.22), of the same magnitude as the gender effect (-0.21), and almost cancels out the entire CSR effect for females.

In model V, we introduce the other corporate characteristics. The coefficient for CSR is now further reduced to -0.21, indicating correlation between CSR and other attractive firm characteristics. The interaction term for female and CSR has a coefficient of 0.21, which means that for women, no wage loss is associated with CSR. Part of the explanation can perhaps be found looking at the coefficient for “Equality between the sexes”, which is highly and significantly negative. It may simply be the case that CSR firms have less of a gender gap in wages than other firms. In fact, it turns out that the correlation coefficient between the CSR and gender equality indicators is as high as 0.36.

We have thus also included an interaction term between female and Equality between the sexes in model VI. This term is substantial and significant, meaning that while all employees experience a wage loss by working in firms with gender equality, this loss is considerably smaller for females. Its inclusion decreases the CSR coefficient to -0.18, but also decreases the magnitude of the interaction term for female*CSR. Model VI indicates that while men experience a wage loss of 18% by working in a firm with CSR score of 1 rather than 0, women’s corresponding wage loss is only about 6%.

Model VII estimates on the higher educated workers with educational attainment above high school (college and university degrees). Here, the variable “good reputation at my school” becomes significant; the wage loss from gender equality seems to be the same for men and women, while men again experience a substantially larger wage loss from CSR than women. The coefficient for CSR, however, is still negative, statistically significant, and quite substantial (-0.20).

Our findings on significant negative coefficients for relative CSR are robust across model specifications. However, this effect is mostly observed for men, even when we control for reported gender equality at the firm level. On the basis of our data, this gender difference is hard to explain further; hence we are left to speculation. One possibility is that since CSR and gender equality are highly correlated, their effects may be confounded in the analysis. Another explanation, however, is that women have different jobs than men: they are for example much more likely to have jobs concerned with nursing, caretaking and teaching. These jobs would perhaps be judged by many as socially responsible, but neither our CSR indicator nor the education variables are fine-tuned enough to capture all such differences in job types. Hence, it may actually be the case that there is a wage

¹⁴ Note, however, that we use rather broad industry categories here; see Appendix A.

loss associated with CSR for females as well, but that this is captured by the gender gap. In this respect, it is interesting to note that in most of our model specifications, the gender gap and the interaction variable $\text{female} \times \text{CSR}$, measuring the difference between CSR's effect on men's and women's wages, are of opposite signs and roughly similar magnitudes.

Other coefficients are also rather robust across all model specifications. Married individuals have a wage premium of about 8%; married women, however, have a wage loss compared to this of about 10%. Wage premia (relative to educational level at high school) increase with higher educational attainment above university level. Interestingly, immigrants as a whole do not experience a wage loss comparing to ethnic Norwegians, but immigrants from non-OECD countries suffer a wage loss as large as 28% in general.

Table 1: Estimation of merged employer-employee register data 2007 with combined CSR indicated from NOYP and NOGS

Dependent variable log (wage > 200000 NOK)	I	II	III	IV	V	VI	VII
Nobs	108916	108916	108916	108916	108916	108916	77448
Intercept	11.7245	11.7611	11.7774	11.7676	11.7038	11.7126	11.9069
women	-0.1581	-0.1428	-0.1913	-0.2074	-0.1957	-0.2334	-0.2181
married	0.0669	0.0656	0.0665	0.0619	0.0605	0.0599	0.0738
married women	-0.0522	-0.0483	-0.0510	-0.0457	-0.0452	-0.0443	-0.0525
immigrant	0.0462	0.0300	0.0293	0.0083	0.0111	0.0125	-0.0055
nooecd	-0.2922	-0.2904	-0.2909	-0.2646	-0.2319	-0.2277	-0.1359
immigrant with norwegian citizenship	0.0184	0.0346	0.0358	0.0499	0.0333	0.0309	0.0199
edu < = 9 yrs	0.1398	0.1301	0.1300	0.1216	0.1109	0.1114	
edu 13-16 yrs	0.1584	0.1476	0.1476	0.1453	0.1332	0.1328	
edu > = 17 yrs	0.3599	0.3596	0.3598	0.3461	0.3213	0.3214	
age	0.0507	0.0543	0.0541	0.0531	0.0539	0.0539	0.0532
age squared	-0.0005	-0.0005	-0.0005	-0.0005	-0.0005	-0.0005	-0.0005
Conservative working environment					0.3392	0.3579	0.2902
Dynamic organisation					-0.0769	-0.0775	-0.1364
Good/confidence-inspiring management					0.0776	0.0745	0.1008
Good reputation at my school					0.0593	0.0568	0.1400
Equality between the sexes					-0.4094	-0.4812	-0.4000
Innovation					0.0427	0.0434	0.0058
Corporate social responsibility		-0.3848	-0.4229	-0.2415	-0.2071	-0.1828	-0.2014
women*Corporate social responsibility			0.1360*	0.2211	0.2051	0.1179	0.1701
women*Equality between the sexes						0.2537	0.0859
controlled for region	yes	yes	yes	yes	yes	yes	yes
controlled for industries	no	no	no	yes	yes	yes	yes

Note: bold face indicates significance at 5% level. * indicates significance at 10% level.

Conclusions

If workers prefer socially responsible employment, all else given, then irresponsible employers must pay more to recruit equally qualified employees. Combining survey data on firm reputation with official register data on demographic and labor market variables, comprising wage observations for more than 100,000 full-time employees, we do find a negative, substantial, and statistically significant association between wage and CSR among Norwegian firms.

However, this effect is mainly observed for men. This is partly, but not fully, explained by a high correlation between firm's CSR and gender equality policies. One possible explanation is that due to strong gender differences in job type, not fully accounted for in our analysis, part of the social responsibility wage loss for women may be captured by the gender gap coefficient. This coefficient

is, indeed, of a roughly similar magnitude, but opposite sign, as the coefficient for the gender difference in CSR related wage loss.

Hence, we conclude that firms associated with CSR do indeed have a cost advantage in terms of lower wage payments as compared to other firms. One implication is that even if social responsibility is associated with higher costs, for example in terms of higher emission abatement expenses, responsible firms may survive market competition – even in the absence of ethical consumers or investors. Since labor costs constitute a major cost component for most firms, this might well be of substantial importance when it comes to firm profitability.

Appendix A: Supplementary tables

Table A1: Selected statistics of estimation sample

	Men		Women	
	mean	std	mean	std
Nobs	78910		30006	
married	0.5662	0.4956	0.4835	0.4997
immigrant	0.1333	0.3399	0.1242	0.3298
Non-OECD immigrant	0.0588	0.2352	0.0461	0.2097
immigrant with Norwegian citizenship	0.0704	0.2559	0.0775	0.2674
age	43.8697	10.3068	42.9749	10.1650
<i>Corporate characteristics</i>				
Conservative working environment	0.1587	0.1053	0.1819	0.1293
Dynamic organization	0.2970	0.1182	0.2980	0.1376
Good/confidence-inspiring management	0.4001	0.1118	0.4101	0.1017
Good reputation at my school	0.4538	0.1505	0.4512	0.1457
Equality between the sexes	0.2302	0.1244	0.2859	0.1213
Innovation	0.3905	0.1663	0.3619	0.1832
Corporate social responsibility	0.3325	0.1812	0.3799	0.1829
<i>Education</i>				
	frequency	percentage	frequency	percentage
< = 9 yrs	8753	11.09 %	2685	8.95 %
10-12 yrs	13098	16.60 %	6932	23.10 %
13-16 yrs	40193	50.94 %	13943	46.47 %
> = 17 yrs	16866	21.37 %	6446	21.48 %
<i>Industries</i>				
Manufacture	17470	22.14 %	3856	12.85 %
Electricity	2547	3.23 %	612	2.04 %
Construction	10946	13.87 %	859	2.86 %
Commerce and Service	5356	6.79 %	2770	9.23 %
Transport and Postal Service	11814	14.97 %	6448	21.49 %
Finance and Service	21547	27.31 %	9157	30.52 %
Public Sector Health Care Administration	4484	5.68 %	5177	17.25 %
Oil and Gas	4746	6.01 %	1127	3.76 %

Note: The statistics are from the sample where we combine all CSR from NOYP and NOGS (2006-2007) and merged with 2007 employment register data.

Table A2: Selected statistics of NOYP 2006

Number of observations	3362	
	mean	std
Woman	0.4372	0.4961
Age	29.4123	3.4496
Educations		
Less than 2 years at university/college	0.0351	0.1841
2-4 years at university/college/equival	0.5018	0.5001
More than 4 years at university/college	0.4631	0.4987
Main field of study		
Business	0.3587	0.4797
Engineering/natural sciences/it	0.5241	0.4995
Humanities/liberal arts/law	0.1172	0.3217
Educational institutions		
Bodø Graduate School of Business	0.0482	0.2142
BI Norwegian School of Management	0.1285	0.3347
University of Agder	0.0476	0.2129
Bergen University College	0.0381	0.1914
Gjøvik University College	0.0175	0.1313
Molde University College	0.0083	0.0909
Oslo	0.0425	0.2018
Sør-Trøndelag University College	0.0785	0.2690
Norwegian School of Economics and Business Administration (NHH)	0.0571	0.2321
Norwegian University of Science and Technology	0.1797	0.3840
Norwegian University of Life Science	0.0080	0.0893
University of Bergen	0.0170	0.1291
University of Oslo	0.0333	0.1795
University of Stavanger	0.0289	0.1674
Other	0.2668	0.4424
Industries		
Academic research	0.0330	0.1787
Aerospace	0.0024	0.0487
Airline/travel	0.0065	0.0806
Auditing/accounting/taxation	0.0464	0.2104
Automotive	0.0059	0.0769
Biotechnology	0.0080	0.0893
Chemical/petroleum	0.0851	0.2790
Computer hardware	0.0074	0.0859
Computer software	0.0595	0.2366
Construction	0.0580	0.2338
Consumer electronics	0.0027	0.0517
Consumer goods	0.0152	0.1222
Education/teaching	0.0247	0.1552
Engineering consulting	0.0265	0.1606
Engineering/manufacturing	0.0137	0.1162
Environmental/conservation	0.0030	0.0545
Government/public service	0.0952	0.2935
Healthcare/pharmaceutical	0.0521	0.2222
Hotel/restaurant/tourism	0.0101	0.1001
Insurance	0.0199	0.1398
Internet/e-commerce	0.0054	0.0730

Investment banking	0.0089	0.0941
It consulting/data services	0.0559	0.2298
Management consulting	0.0422	0.2012
Marketing/advertising	0.0143	0.1186
Media/public relations/information	0.0211	0.1438
Metals	0.0092	0.0956
Non-profit	0.0068	0.0824
Power/energy	0.0217	0.1458
Private/commercial banking	0.0336	0.1803
Pulp/paper/forestry	0.0039	0.0621
Retail	0.0250	0.1561
Telecommunications	0.0393	0.1942
Transport/logistics	0.0181	0.1335
Recruiting	0.0048	0.0688
Culture	0.0080	0.0893
Law office/legal counseling	0.0045	0.0667
Other	0.1020	0.3027
Company characteristics		
Conservative working environment	0.1684	0.3742
Dynamic organisation	0.1582	0.3650
Good/confidence-inspiring management	0.2641	0.4409
Good reputation at my school	0.1145	0.3185
Equality between the sexes	0.1368	0.3437
Innovation	0.1811	0.3852
Corporate social responsibility	0.1966	0.3975

Table A3: Selected statistics of NOYP 2007

Number of observations	3060	
	mean	std
Woman	0.5382	0.4986
Age	29.9853	4.2159
Educations		
More than 1 year at university/college/	0.1699	0.3756
Bachelor's degree	0.4013	0.4902
Master's degree	0.2575	0.4373
Civil degree	0.1529	0.3600
Mba	0.0131	0.1136
Phd	0.0052	0.0721
Main field of studies		
Business	0.3814	0.4858
Engineering/natural sciences/it	0.3196	0.4664
Humanities/liberal arts/law	0.1265	0.3324
Other	0.0856	0.2798
Pharmaceutical	0.0869	0.2818
Educational institutions		
Bodø Graduate School of Business	0.0379	0.1910
BI Norwegian School of Management	0.1294	0.3357
Agder University College	0.0529	0.2240
Bergen University College	0.0337	0.1804
Gjøvik University College	0.0147	0.1204
Molde University College	0.0095	0.0969
Oslo University College	0.0703	0.2556
Sør-Trøndelag University College	0.0637	0.2443
Ålesund University College	0.0114	0.1064
Norwegian School of Economics and Business Administration (NHH)	0.0598	0.2372
Norwegian University of Science and Technology	0.0438	0.2047
Norwegian University of Life Science	0.0127	0.1122
University of Bergen	0.0235	0.1516
University of Oslo	0.0869	0.2818
University of Stavanger	0.0252	0.1566
University of Tromsø	0.0310	0.1735
University outside of Norway 1	0.0804	0.2719
University outside of Norway 2	0.0216	0.1453
Østfold University College	0.0219	0.1464
Telemark University College	0.0134	0.1150
Vestfold University College	0.0114	0.1064
Hedmark University College	0.0101	0.1002
Nord-Trøndelag University College	0.0144	0.1191
Other	0.1203	0.3253
Industries		
Academic research	0.0134	0.1150
Aerospace	0.0010	0.0313
Airline/travel	0.0062	0.0786
Auditing/accounting/taxation	0.0464	0.2104
Automotive	0.0036	0.0599
Biotechnology	0.0065	0.0806
Chemical/petroleum	0.0585	0.2347

Computer hardware	0.0069	0.0826
Computer software	0.0490	0.2159
Construction	0.0369	0.1886
Consumer electronics	0.0046	0.0675
Consumer goods	0.0167	0.1280
Education/teaching	0.0529	0.2240
Engineering consulting	0.0108	0.1033
Engineering/manufacturing	0.0078	0.0882
Environmental/conservation	0.0029	0.0542
Government/public service	0.0676	0.2512
Healthcare/pharmaceutical	0.0791	0.2699
Hotel/restaurant/tourism	0.0163	0.1268
Insurance	0.0170	0.1293
Internet/e-commerce	0.0052	0.0721
Investment banking	0.0065	0.0806
It consulting/data services	0.0435	0.2039
Management consulting	0.0278	0.1644
Marketing/advertising	0.0203	0.1409
Media/public relations/information	0.0199	0.1398
Metals	0.0078	0.0882
Non-profit	0.0085	0.0918
Power/energy	0.0196	0.1387
Private banking	0.0245	0.1547
Commercial banking	0.0232	0.1506
Pulp/paper/forestry	0.0026	0.0511
Retail	0.0255	0.1576
Telecommunications	0.0281	0.1653
Transport/logistics	0.0291	0.1681
Recruiting	0.0088	0.0935
Culture	0.0072	0.0845
Law office/legal counseling	0.0059	0.0765
Research and Development	0.0082	0.0900
Pharmaceuticals	0.0072	0.0845
Drugstores	0.0614	0.2402
Teaching professions	0.0007	0.0256
Humanitarian /Charity Organizations	0.0000	0.0000
Other	0.1042	0.3056
Company characteristics		
Conservative working environment	0.1846	0.3881
Dynamic organisation	0.2029	0.4023
Good/confidence-inspiring management	0.3141	0.4642
Good reputation at my school	0.1010	0.3014
Equality between the sexes	0.1592	0.3659
Innovation	0.1425	0.3496
Corporate social responsibility	0.1739	0.3790

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