RISING LEADERS ON ENVIRONMENTAL SUSTAINABILITY AND CLIMATE CHANGE

A Global Survey of Business Students











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"Deans and business leaders have to act on climate change now to maintain leadership"

FOREWORD

The tide is turning and the science is indisputable. From our respective positions as head of the World Business Council on Sustainable Development (WBCSD) and dean of Yale School of Management, we see a new generation of leaders articulating—vocally and intelligently—the need for decisive action on the central challenge of our time: climate change.

This report, which resulted from a survey through the Global Network for Advanced Management of more than 3,700 students at 29 top business schools across five continents, sends this message unambiguously. The young women and men trained at these schools—future leaders of business and society—have a nearly unified perspective that the private sector must aggressively lead in the search for solutions to climate change. Most striking is the number of emerging leaders who view this action as a zero-sum game: about one-fifth of business students state that, regardless of the salary offered, they refuse to work for a company they perceive to have bad environmental practices. Simply put, the brightest talent now rising into ranks of leadership expects corporations to step forward on climate change and is drawn to work for those that do.

Such a message comes at a propitious moment. For the first time, the historic meeting at COP21 convenes political leaders at the same table with business leaders. This cross-sector platform is the ideal setting for businesses to engage with climate change and set an agenda that incorporates the values and expectations of a new generation. In collaboration with government, the private sector has the resources, the management capabilities, and the strength of innovation to present real and scalable solutions for climate action.

Leadership will mean integrating the environmental impacts of business activities into decision making. This will require new skills for business leaders of the future. As such, business schools are an essential part of this

ecosystem—the bridge that connects new ideas about leadership, about what a business can and should do, with realities on the ground. Best practices from WBCSD member companies as well as research coming out of leading universities confirm that solutions to our greatest environmental challenges do exist. The challenge is scaling them up. Business schools, with their reach and impact, are ideally positioned to contribute in this respect, and doing so would enable them to respond to one of the report's core findings: current students do not feel that they are being adequately prepared to address environmental issues. Just as companies that lead in this space can draw on a richer pool of talent, business schools have an opportunity to distinguish themselves through the way they prepare their graduates to tackle these challenges.

The central takeaway of this survey is clear: deans and business leaders have to act on climate change now to maintain leadership.



Peter Bakker President of the World Business Council for Sustainable Development



Edward A. Snyder Dean of Yale School of Management













PARTICIPATING SCHOOLS





























































The Global Network for Advanced Management fosters substantive ties among the world's leading business schools from both economically strong countries and those on the horizon of economic development. Importantly, relationships among network members transcend more traditional bi-lateral interactions with proscribed agendas; each network member benefits from the perspective and intellectual contributions of every other and can use the network in creative ways.

Asian Institute of Management (The Philippines)

Duke Fuqua School of Business (USA)1

EGADE Business School, Tecnológico de Monterrey (Mexico)

ESMT European School of Management and Technology (Germany)

FGV Escola de Administração de Empresas de São Paulo (Brazil)

Fudan University School of Management (China)

HEC Paris (France)

Hitotsubashi University, Graduate School of International Corporate Strategy (Japan)

Hong Kong University of Science and Technology Business School (China)

IE Business School (Spain)

IMD (Switzerland)

INCAE Business School (Costa Rica, Nicaragua)

Indian Institute of Management Bangalore (India)

INSEAD (France, Singapore)

Koç University Graduate School of Business (Turkey)

Lagos Business School, Pan-Atlantic University (Nigeria)

London School of Economics and Political Science, Department of

Management (United Kingdom)

MIT Sloan School of Management (USA)1

National University of Singapore Business School (Singapore)

Pontificia Universidad Católica De Chile School of Business (Chile)

Renmin University of China School of Business (China)

Sauder School of Business, University of British Columbia (Canada)

Seoul National University Business School (South Korea)

Technion-Israel Institute of Technology (Israel)

UCD Michael Smurfit Graduate Business School (Ireland)

University of Cape Town Graduate School of Business (South Africa)

University of Ghana Business School (Ghana)

Universitas Indonesia Faculty of Economics (Indonesia)

Yale School of Management (USA)

¹ Non-GNAM school

INTRODUCTION

This year marks the first publication of *Rising Leaders* on Environmental Sustainability and Climate Change: A Global Survey of Business Students. With this study, we've taken extensive measure of the opinions and attitudes of today's business students on climate change and related environmental sustainability issues. We found two essential conclusions: from the schools they currently attend, business students expect more integrated sustainability curricula and programming to prepare them for the changing demands of leadership—namely, the environmental challenges they foresee facing during their careers. For the companies they expect to work in—and one day lead—students want aggressive leadership in the search for solutions to environmental challenges. Eighty percent of current students expect companies—on par with governments and more than consumers or non-profits—to be working harder to address climate change.

There is growing evidence that this perspective shapes students' choices. Companies and schools that are ahead in the field will benefit in the accelerating recruitment race for top talent; companies and schools that are lagging may find recruitment more difficult and expensive.

To compile this report, two affiliated centers at Yale University,² in collaboration with the Global Network for Advanced Management and the World Business Council for Sustainable Development, launched a global survey of more than 17,600 students at 29 business schools across 25 countries and five continents. We analyzed more than 3,700 responses³ representing an average school-level response rate of 28%. Broadly, the areas we investigated were students':

 Knowledge about climate change and other sustainability issues;

- 2. Opinions on how these issues will impact business;
- Considerations of companies' environmental performance in career choices; and
- Impressions of how well business schools prepare students to navigate issues at the intersection of business and the environment.

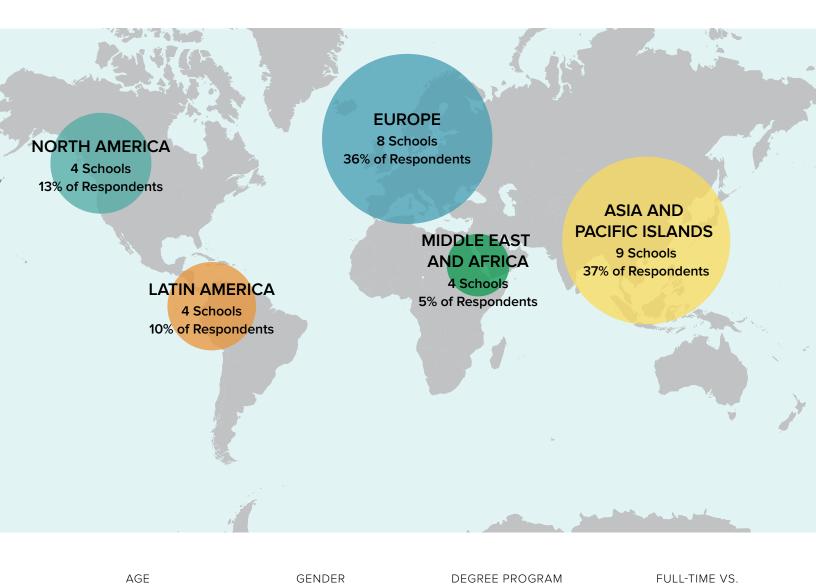
Our robust sample and approach bring new clarity to what the next generation of leaders thinks about issues of environmental sustainability in business. Equally important, this study provides a template for further exploring, testing, and refining inquiry into the opinions that business students hold on these issues.

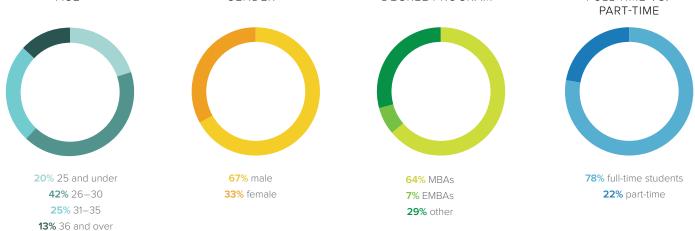
This report comes at a unique moment, with political, business, and academic leaders convened around a single table to discuss the most pressing issue of our time. We hope that the following insights introduce a crucial new perspective into the discussion—that of a future generation who, while demanding quick and forceful action, are eager to step up themselves and join the effort.

² The Yale Center for Business and the Environment and the Yale Project on Climate Change Communication.

³ Because of randomization in the survey design, all respondents did not receive every question that makes up this report.

RESPONDENT DEMOGRAPHICS





EXECUTIVE SUMMARY

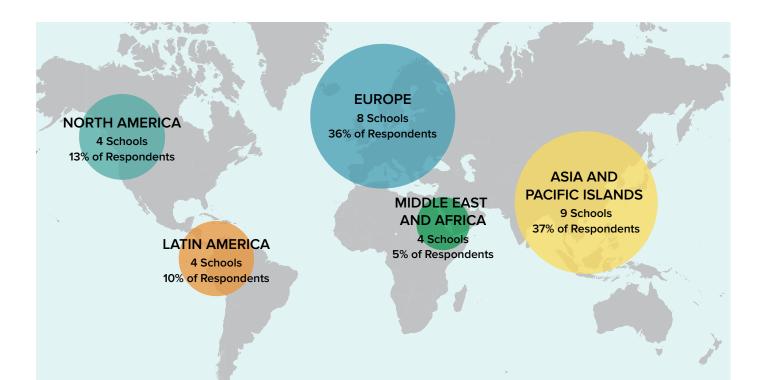
Issues related to climate change and environmental sustainability are critical to the future of business and neither companies nor business schools are doing enough to address them, according to an unprecedented survey of more than 3,700 top business students around the world. These same students—the next generation of business leaders—are deeply invested in addressing the challenges that environmental issues impose on corporations, not simply to mitigate risk, but also to realize opportunity. Eighty percent of respondents believe that taking measures to protect the environment will improve economic growth and provide new jobs; 71% say that excellent environmental performance by corporations will improve market competitiveness.

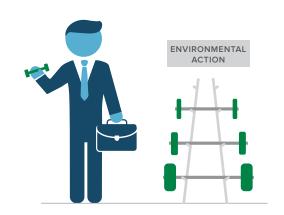
These findings are the result of a first-time collaboration between Yale University, the Global Network for Advanced Management, and the World Business Council for Sustainable Development. The survey polled students from 29 business schools in 25 countries on five continents. Opinions across this broad geography—from Latin and North America to Africa, Asia, and the Pacific

Islands—proved remarkably consistent, upending traditional assumptions about the divide between developed and developing economies.

From the companies they expect to work in, business students want committed, responsible leadership in the search for solutions to environmental challenges. Nearly 90% of students believe, for instance, that companies should instigate board-level action on sustainability issues; 86% believe they should practice integrated reporting of financial and sustainability metrics. Students also expressed the opinion that CEOs and other top leadership are ultimately responsible for reducing a company's environmental impact. In this way, issues related to environmental sustainability have shifted from a peripheral consideration into the realm of core business objectives, corporate governance, and leadership.

These opinions represent real financial value: all else being equal, 44% of students express a willingness to accept lower salaries to work at a company with great environmental performance and nearly one-fifth of those



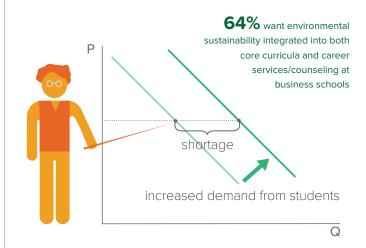


64% do not think business is making sufficient efforts to address environmental challenges









surveyed said that they would refuse to work at a company with bad environmental performance regardless of salary. Put simply, the brightest talent now rising into ranks of leadership is drawn to work at companies with good environmental practices.

These results confirm the survey's general finding that recruiting top talent is no longer a straightforward competition over salary; tomorrow's leaders expect more than just money from the careers they choose. Businesses would do well to respond to this expectation, as would the institutions that train business students.

While 94% of students consider it important for business leaders to be knowledgeable about environmental sustainability, many feel that they are not learning what they need to about this subject. More than three-quarters of all students say they feel only "moderately" to "not at all" knowledgeable across a range of related environmental

concerns. Students generally feel less knowledgeable about the business solutions to environmental challenges than they do about the challenges themselves.

To redress this gap, business students want the schools that they attend to integrate environmental sustainability into core curricula, programming, and career services. For instance, 61% of students want more faculty and staff with expertise in environmental sustainability and 55% think business schools should offer concentrations or joint-degree programs in this field; nearly two-thirds of students believe sustainability demands a more central position in the core curriculum.

Here we present the broad and largely unified voice of future leaders who are demanding action on environmental sustainability and who are equally willing to take part in the search for solutions.

Business students agree with current leaders that environmental solutions are critical to business success

Worldwide, business students are deeply concerned about the spectrum of risks that environmental issues imposes on corporations, regardless of sector. Of most concern are risks related to climate change and four specific areas of resource supply: energy, air, water, and natural resources/materials. A majority of students believe that these five issues primarily—and others secondarily—will have negative effects on business operations.

To address these concerns, business students point to five realms in which corporations should be engaging with and taking action on environmental issues. Companies should:

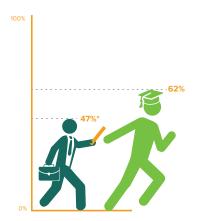
- Address environmental sustainability goals and targets through industry collaborations and multistakeholder partnerships;
- Measure both positive and negative impacts of their activities on environmental sustainability outcomes;
- Instigate board-level discussion and action on environmental sustainability issues;

- Practice integrated reporting of financial and environmental sustainability metrics; and
- Incorporate environmental sustainability issues into discussion with financial analysts.

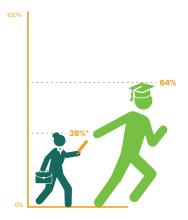
Across every region, students expressed a consistently strong opinion that business as a whole is not making sufficient effort to address global environmental sustainability challenges: from 57% of respondents in Asia, Australia, and the Pacific Islands and up to 76% of respondents in Latin America.

The motivation to tackle these issues represents a progressive trend, with the environmental efforts of engaged CEOs carried forward by a rising set of business leaders. Interest is not waning: the overwhelming consensus among future leaders is that today's economy is on an unsustainable trajectory and business is a key actor in reshaping this trajectory.

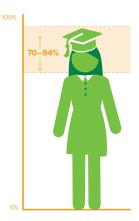
A GROWING IMPERATIVE AMONG THE NEXT GENERATION OF BUSINESS LEADERS



62% do not think the global economy is operating sustainably within environmental constraints



64% do not think business is making sufficient efforts to address environmental



The vast majority (70-94%) of business students believe companies should be integrating environmental sustainability issues into business operations in a variety of ways

^{* &}quot;The UN Global Compact-Accenture CEO Study on Sustainability 2013" conducted by Accenture and the United Nations Global Compact.

https://acnprod.accenture.com/*/media/Accenture/Conversion-Assets/DotCom/Documents/Global/PDF/Strategy_5/Accenture-UN-Global-Compact-Acn-CEO-Study-Sustainability-2013.pdf

Business students believe corporations should take action on climate change and they embrace this future responsibility

Business students divide the responsibility to act on environmental issues equally between business and government. They also believe that, within corporate management, this responsibility falls as much to executive leadership as it does to dedicated senior sustainability professionals. In this way, issues related to environmental sustainability have become fundamentally linked to core business objectives, corporate governance, and leadership.

The business students surveyed also believe that addressing environmental issues creates valuable opportunities. Broadly, 80% of students say that taking measures to protect the environment will improve economic growth and provide new jobs. They also believe that these measures will accrue specific benefits to companies. Excellent environmental performance can:

- Increase brand value and strengthen public trust;
- Enhance innovation and new solutions through research and development;
- Reduce fines and fees in an increasingly stringent regulatory environment; and
- Improve market competitiveness.

Though conventional wisdom views progressive environmental actions as a cost, the wisdom is changing; future leaders instead see potential for profit.

When asked specifically about climate change, business students voiced an expectation that the role of corporations in addressing this challenge is comparable with that of governments. They also think that corporations have the most room to strengthen their actions on this front (compared to citizens, consumers, non-profits, and government). In fact, in Europe and North America, 73% and 78% of business students, respectively, believe that companies should be leading efforts to address climate change; in the Middle East and Africa this number climbs to 90%.

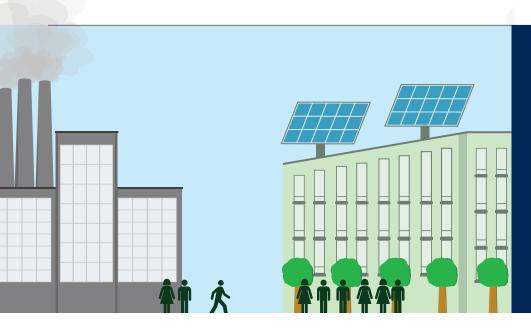
As detailed in Finding #3, these beliefs carry important consequences for the recruitment of talent—positive for those companies at the front of the pack, negative for those companies at the back.







Business students intend to work for businesses with strong environmental performance



84% of students would choose to work for a company with good environmental practices

44% of students are willing to accept a lower salary to work for a company with better environmental practices

19% would not accept a job at a company with bad environmental practices, regardless of how high the salary was

Business students claim they are willing to reward companies with good environmental performance by accepting lower salaries; almost one-fifth of students stated that they would not work for a company with poor environmental performance regardless of salary, when all other factors such as company culture and job responsibility are held constant. Student preferences also suggest that businesses with poor environmental performance may be punished through a loss of talent, demand for higher salaries, and foregone business opportunities. Students, it seems, are increasingly sorting companies into top and bottom environmental performers with associated consequences for recruiting and compensation.

By the numbers, 87% of students report being more likely to do business with companies that have excellent environmental performance; 78% report being more likely to apply for a job at a company with excellent environmental performance; and 80% report a greater willingness to accept a job at firms that have excellent environmental performance.

Wherever they do end up working, more than threequarters of survey participants express a desire to improve the environmental sustainability of their organization; they expect to thread environmental sustainability into whatever role and position they fill, in whichever sector they are employed. Rather than the old-fashioned silo of sustainability offices, students want to integrate environmental concerns into every facet of business.

Companies would do well to respond to this expectation, as would the institutions that train business students.



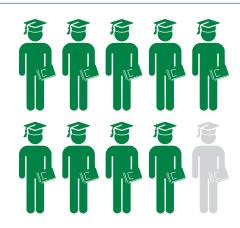
67% of students want to incorporate environmental sustainability considerations into whatever job they choose

Business students want environmental sustainability embedded and expanded into business education

Given student concern about the confluence of environmental and business issues, it is not surprising that 94% say it is important for business leaders to be knowledgeable about sustainability. And yet today's students feel they are not learning what they need to about this subject. More than three-quarters of all students say they feel only "moderately" to "not at all" knowledgeable across a range of related concerns from knowing where to find information on environmentally sustainable business practices, to understanding the risks and competitive advantages posed by environmental issues. These results hold relatively steady across geographical regions. In essence, students worldwide express far less confidence in their knowledge about business solutions to environmental challenges than they do about the challenges themselves.

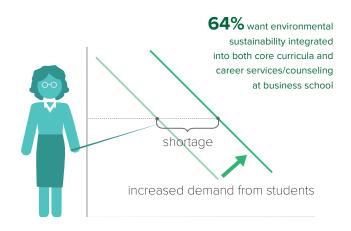
This knowledge gap suggests a unique opportunity for business schools, especially since the majority of students seek better curricula, programming, and career services related to environmental sustainability. Sixty-four percent of students indicate a desire to integrate environmental sustainability into core curricula, embedding it as a central component of business education. The same percentage of students wants more sustainability electives, indicating a desire to deepen their understanding of the connections between business and the environment. In addition, 61% of students want more faculty and staff with expertise in sustainability, 64% want career services and counseling directly related to this issue, and 55% think business schools should offer concentrations or joint-degree programs on sustainability.

The vanishing middle ground faced by companies—good environmental practices are rewarded while bad environmental practices are punished—is mirrored in the academic world: the next generation of leaders wants to be thoroughly educated in the connection between business and the environment, and they expect business schools to supply this education. Schools that take this initiative will benefit from the largest and most progressive pool of applicants.



92% of students believe that climate change is happening





CONCLUSION

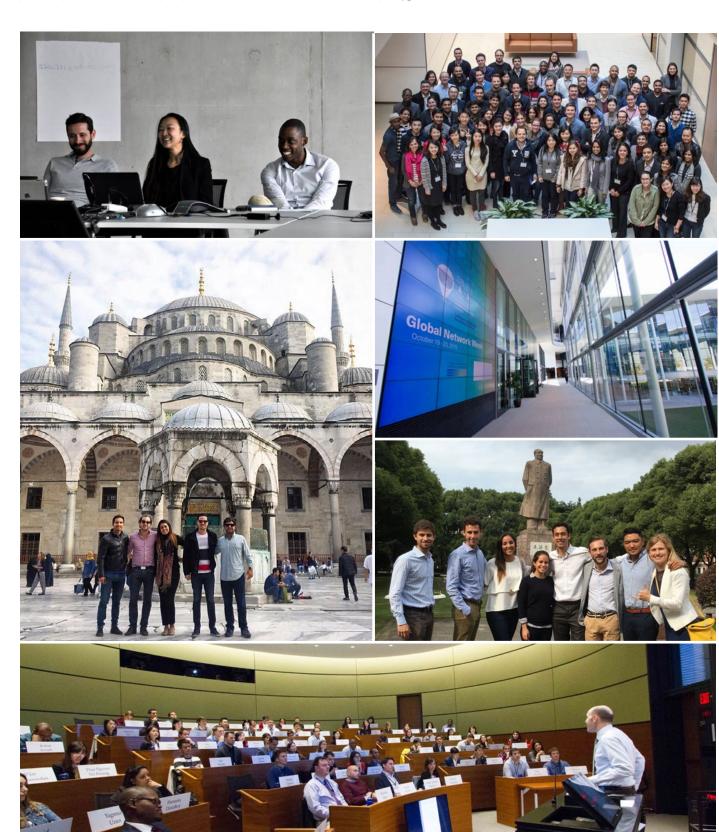
Looking forward, the results of this survey highlight the growing consensus that businesses and business schools must step up to address issues of environmental sustainability—not simply in an effort to mitigate risks, but also to capture new opportunities. And while current students endow business with a leading role in these efforts, they also emphasize the pressing need for cross-sector collaboration.

This report offers strong cause for optimism at a time of general uncertainty. Not only do current students look to business as an essential actor in promoting environmental sustainability, but they are interested in becoming the agents of this change; these students represent the next generation of leaders, and they want to take part in the search for solutions. The environmental efforts of engaged CEOs today will be carried forward by a rising set of business leaders.

Equally hopeful, responsibility to act on these concerns is shifting from the more peripheral realm of sustainability departments directly into the leadership suite, thus becoming inextricably linked to core business strategies and objectives.

In collaboration, schools and companies should re-examine core curricula to prepare business students for the mounting environmental demands of leadership. Partnerships like that between the Global Network for Advanced Management and the World Business Council for Sustainable Development indicate promising and innovative new ways for business education to tackle this challenge.

As climate change and related environmental concerns gather gravity within the business community, it is imperative that business schools and companies seek solutions together. This message—both from this survey and from the increasingly urgent voices of leadership around the world—is undisputed. The question is: will companies and schools rise to meet the challenge?



METHODOLOGY

This survey was conducted by the Yale Center for Business and the Environment and the Yale Project on Climate Change Communication, in collaboration with the World Business Council for Sustainable Development and the Global Network for Advanced Management, with input and analysis from an additional collaborator (Jennifer Wang, Emmett Interdisciplinary Program in Environment and Resources, Stanford University). Data was collected from a survey distributed to participants from 29 business schools located in 25 countries on five continents, representing approximately 17,600 students globally. These business schools comprised the 27 members of the Global Network for Advanced Management (as of September 2015), as well as two additional schools: Duke Fuqua School of Business (USA) and MIT Sloan School of Management (USA).

The survey comprised questions asking business students about environmental sustainability in relation to three key topics: knowledge and views on environmental sustainability and climate change, career choices, and business school education. Fourteen substantive questions were administered to the full respondent population. An additional 18 substantive questions were each administered to approximately half of the respondent population; these 18 questions were grouped into pairs and each respondent was randomly assigned one question from each of these nine pairs of questions. Every survey participant was thus presented with 23 substantive questions. Every respondent also received the full set of 22 demographic questions. In compliance with IRB requirements, identities of individual respondents are anonymous and responses to all questions were voluntary.

Survey questions were generated from a number of sources, including 19 questions adapted from five prior surveys:

- Gallup Poll, 2012, 2015 (three questions)
- Jennifer Wang, Emmett Interdisciplinary Program in Environment and Resources Dissertation Protocol, Stanford University, July 2015 (four questions)
- The United Nations Global Compact-Accenture CEO Study on Sustainability, 2013 (three questions)

- The Yale Project on Climate Change Communication,
 Climate Change in the American Mind Project, April 2014 (seven questions)
- The Associated Press-NORC Center for Public Affairs Research and The Yale School of Forestry & Environmental Studies Environment Poll, November 2014 (two questions)

Survey questions were pre-tested (using cognitive pre-testing methods) with business school students from different regions. The final survey was administered online using the third-party survey platform Qualtrics. The survey was distributed within each school through official administrative channels such as by a senior staff administrator, faculty member, or Dean. Administrators were given a series of template recruitment e-mails to send out to their students. To reduce self-selection bias, the e-mail templates only specified the general nature of the survey's interest in asking about the business school experience, and did not specifically indicate a focus on environmental sustainability or climate change. Respondents were informed that the aggregate results of the study would be published and distributed globally to senior business executives. Respondents were not compensated for their participation in the survey. The survey took approximately 15-20 minutes to complete.

The descriptive findings cited in this report come from 3,711 survey responses collected between September 13 and October 18, 2015, and represent a subset of questions from the full survey. The total set of survey responses (N = 5,135) was cleaned to remove invalid responses (e.g. repeat entries) and responses that were missing key demographic information (e.g., school name, graduate degree status, etc.). All results show percentages among all respondents who completed the question given. Weighting all schools equally (N = 29), the median school response rate was 23% and the mean school response rates fell between 17% and 34%.

Due to rounding, percentages may not add up to 100% in every instance. All analyses were conducted using R (version 3.2.0). For additional details, please visit http://cbey.yale.edu/globalsurveymethodology.

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ABOUT









The Global Network for Advanced Management

Launched in 2012, the Global Network for Advanced Management is a network of leading business schools from a diverse set of market-oriented economies that have become increasingly connected and interdependent. A common motivation of member schools was to position their faculty, students, staff, alumni and other constituencies so that they can deepen their understanding of differences and commonalities in economies, political systems and culture. Related member schools recognized that leaders in all sectors will be asked to contribute to the solutions of major problems that are typically complex and global.

Representing a shift away from the partnership model of business school collaboration, the Global Network enables the development of innovative programs that leverage the schools' comparative advantages. Taking advantage of network efficiencies, utilizing new technologies, building strong institutional and personal relationships, and operating with a minimum of bureaucracy, the Global Network is having a transformational effect on member schools, management education, and beyond.

www.advancedmanagement.net

The Yale Center for Business and the Environment

The Yale Center for Business and the Environment provides a platform for generating, incubating and launching innovative action at the intersection of business and the environment.

The Center joins the strengths of two world-renowned graduate schools—the Yale School of Management and the Yale School of Forestry & Environmental Studies—together with an extensive network of internal and external thought leaders at the business-environment interface.

Driven by student interest, we develop partnerships with a wide range of actors across Yale (students, faculty, staff) and in the professional world (alums, companies, NGOs, governments). Our work covers finance, entrepreneurship, marketing, operations, and strategy on issues involving energy, water, carbon, food, natural areas and society.

www.cbey.yale.edu

The World Business Council for Sustainable Development

The WBCSD is a CEO-led organization of forward-thinking companies that galvanizes the global business community to create a sustainable future for business, society and the environment. The Council provides a forum for its 200 member companies—representing all business sectors, all continents and combined revenue of over \$US 8 trillion—to share best practices on sustainable development issues and to develop innovative tools that change the status quo.

The Council also benefits from a network of 60 national and regional business councils and partner organizations, a majority of which are based in developing countries. By thinking ahead, advocating for progress and delivering results, the WBCSD both increases the impact of our members' individual actions and catalyzes collective action that can change the future of our society for the better.

www.wbcsd.org

The Yale Program on Climate Change Communication

The Yale Program on Climate Change Communication conducts scientific research on public climate change knowledge, attitudes, policy preferences, and behavior and investigates the underlying psychological, cultural and political factors that drive public responses to the issue. We then develop new communication strategies and tactics to engage different audiences in climate change solutions. Finally, we apply these insights through partnerships with government, media, scientific, business, and advocacy organizations and a daily, 90-second radio program (Climate Connections) broadcast on more than 210 stations nationwide.

www.environment.yale.edu/climate-communication

Contact

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