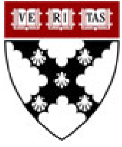

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The Consequences and Benefits of Sustainability: And How to Achieve Them Through Innovation

Presentation at:
Amcham Brazil Eco-Awards Ceremony

Robert G. Eccles
Harvard Business School

Joint work with Ioannis Ioannou (LBS) and George Serafeim (HBS)

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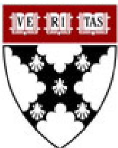
Questions

Characteristics of sustainable firms

- Does the governance structure of sustainable firms differ from traditional firms and, if yes, in what ways?
- Do sustainable firms have better stakeholder engagement?
- Do sustainable firms have longer time horizons?
- How do their information collection and dissemination systems for nonfinancial data differ?

Performance implications

- Could meeting other stakeholders' expectations come at the cost of creating shareholder value since tradeoffs often exist?
- How can financial and nonfinancial (environmental, social, and governance) performance be achieved at the same time?



Sample Construction

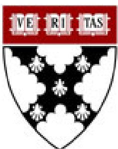
- Firms with an explicit emphasis on employees, customers, products, the community, and the environment as part of their business model
- Adopted policies prior to CSR becoming widespread, less likely to have measurement error by including firms that are either “green-washing” or adopting these policies only for public relations purposes
- Introduce a long lag between our independent and dependent variables - mitigate the likelihood of biases that could arise from reverse causality
- *Outcome: 90 companies* (*High Sustainability* or *Sustainable* firms)

Sample Construction

- Match each firm with another firm that has adopted almost no environmental and social policies throughout the 1990s and 2000s
- Exact matching on subsector and matching with closest neighbor on Size, ROA, MTB, Asset Turnover, and Leverage in 1993
- Outcome: 90 firms (*Low Sustainability* or *Traditional* firms)

		Total assets		**ROA**		**Leverage**		**Turnover**		**MTB**	
Sustainability	N	Average	St. Dev.	Average	St. Dev.	Average	St. Dev.	Average	St. Dev.	Average	St. Dev.
Low	90	8,182	28,213	7.54	8.02	0.57	0.19	1.05	0.62	3.41	2.18
High	90	8,591	22,230	7.86	7.54	0.56	0.18	1.02	0.57	3.44	1.88
p-value diff		0.914		0.781		0.726		0.703		0.927	

Source: WorldScope



Corporate Governance

- Boards of directors perform a monitoring and advising role and ensure that management is making decisions in a way that is consistent with organizational objectives

- Top management compensation plans align managerial incentives with the goals of the organization by linking executive compensation to key performance indicators that are used for measuring corporate performance

- *Prediction 1a: High Sustainability firms are more likely to have the board review the sustainability performance of the corporation*

- *Prediction 1b: High Sustainability firms are more likely to link executive compensation to sustainability metrics*

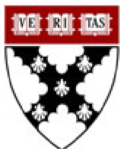
Corporate Governance

	Sustainability		Difference
Governance	Low	High	p-value
Board			
Formal Board Responsibility / Corporate Citizenship	21.6%	52.7%	<0.001
Sustainability Committee	14.7%	40.9%	<0.001
Compensation			
Variable Compensation Metrics / Social Metrics	21.6%	35.1%	0.022
Variable Compensation Metrics / Environmental Metrics	8.1%	17.6%	0.011
Variable Compensation Metrics / External Perception Metrics	10.8%	32.4%	0.004

Source: SAM and ASSET4

Stakeholder Engagement

- Engagement is necessary for understanding these stakeholders' needs and expectations in order to make decisions about how best to address them (Freeman, 1984; Freeman, Harrison, and Wicks, 2007)
- *Prediction 2: High Sustainability firms have better stakeholder engagement practices*



Stakeholder Engagement

	Sustainability		Difference
Stakeholder Engagement	Low	High	p-value
Prior			
Opportunities Risks Examination	2.7%	31.1%	<0.001
Stakeholder Identification	10.8%	45.9%	<0.001
Training	0.0%	14.9%	<0.001
During			
Concerns	2.7%	32.4%	<0.001
Grievance Mechanism	2.7%	18.9%	<0.001
Common Understanding	13.5%	36.5%	<0.001
Scope Agreement	8.1%	36.5%	<0.001
Targets	0.0%	16.2%	<0.001
After			
Board Feedback	5.4%	32.4%	<0.001
Result Reporting	0.0%	31.1%	<0.001
Public Reports	0.0%	20.3%	<0.001

Source: SAM

Time Horizon

- Integrating environmental and social policies in the business model and operations requires a long-term perspective

- Incurring short-term costs while expecting long-term benefits

✓ Providing positive externalities and internalizing negative externalities

✓ Building good stakeholder relations as part of a corporation's strategy takes time to materialize, is idiosyncratic to each corporation, and depends on its history; such relationships are based on mutual respect, trust, and cooperation and such ties take time to develop (Choi and Wang, 2010)

Prediction 3: High Sustainability firms are more long-term oriented

Time Horizon

	Sustainability		Difference
Measures of long-term orientation	Low	High	p-value
Long-term vs. Short-term Investors	-5.31	-2.29	<0.001
Long-term vs. Short-term Discussion	0.96	1.08	0.030

Measurement of Nonfinancial Information

- Performance measurement is essential for management to determine how well it is executing on its strategy and to make whatever corrections are necessary (Kaplan and Norton, 2008)
- Reporting on performance measures to the board is an essential element of corporate governance, so that the board can form an opinion about whether the management is executing the strategy of the organization well
- Quality, comparability, and credibility of information is enhanced by internal and external audit procedures which verify the accuracy of this information or the extent to which standards are being followed

Prediction 4: High Sustainability firms are more likely to collect nonfinancial data

Measurement of Nonfinancial Information

	Sustainability		Difference
Employees	Low	High	p-value
HR Performance Indicators / Nonfinancial	16.2%	54.1%	<0.001
KPI Labor / EHS Fatalities Tracking	26.3%	77.4%	<0.001
KPI Labor / EHS Near Miss Tracking	26.3%	64.5%	<0.001
KPI Labor / EHS Performance Tracking	89.5%	95.2%	0.871

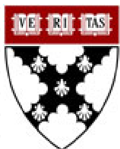
	Sustainability		Difference
Customers	Low	High	p-value
Customer Lifestyle	2.7%	5.4%	0.461
Geographical Segmentation	10.8%	18.9%	0.101
Potential Lifetime Value	2.7%	8.1%	0.164
Customer Generated Revenues	8.1%	18.9%	0.041
Historical Sales Trends	8.1%	16.2%	0.100
Products Bought	8.1%	14.9%	0.194
Cost Of Service	2.7%	6.8%	0.279

Source: SAM

Measurement of Nonfinancial Information

	Sustainability		Difference
Suppliers	Low	High	p-value
Environmental			
EMS	18.2%	50.0%	<0.001
Environmental Production Standards	25.7%	45.6%	<0.001
Environmental Data Availability	0.0%	12.3%	0.018
Environmental Policy	0.0%	17.4%	<0.001
Product LCA	0.0%	6.6%	0.052
Social			
Human Right Standards	5.7%	17.4%	<0.001
OHS Standards	25.7%	62.9%	<0.001
Grievance Process	0.0%	8.1%	0.039
Labor Standards	8.1%	18.6%	0.020
Standards			
International Standards Compliance	0.0%	12.3%	<0.001
National Standards Compliance	8.1%	14.9%	0.057

Source: SAM

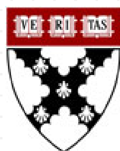


Disclosure of Nonfinancial Information

- External reporting of performance is how the company communicates to shareholders and other stakeholders how productively it is using the capital and other resources they have provided to the corporation
- *Prediction 6: High Sustainability firms are more likely to disclose nonfinancial data*

	Sustainability		Difference
Nonfinancial disclosure	Low	High	p-value
Quantity			
ESG Disclosure - Bloomberg	17.86	29.90	<0.001
ESG Disclosure - Thomson Reuters	36.91	46.38	<0.001
Coverage			
Sustainability report covers global activities	8.3%	41.4%	<0.001
Integration			
Nonfinancial vs. Financial Discussion	0.68	0.96	<0.001
Social Data Integrated in Financial Reports	5.4%	25.7%	0.008
Environmental Data Integrated in Financial Reports	10.8%	32.4%	0.011

Source: SAM, Bloomberg ,and ASSET4



Implications for Financial Performance

- Firms in the *High Sustainability* group might underperform because they
  - ✓ experience high labor costs by providing excessive benefits to their employees,
  - ✓ pass valuable business opportunities that do not fit their values and norms, such as selling products with adverse environmental consequences, and
  - ✓ deny paying bribes to gain business in corrupt countries where bribe payments are the norm

- Firms in the *High Sustainability* group might outperform because they
  - ✓ are able to attract better human capital,
  - ✓ establish more reliable supply chains,
  - ✓ avoid conflicts and costly controversies with nearby communities, and
  - ✓ engage in more product and process innovations

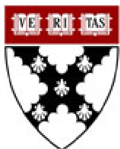
Buy-and-hold returns

- For *High* and *Low Sustainability* firms
- Value-weighted portfolios
- Stock returns

25.00
20.00
15.00
10.00
5.00
0.00

1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

Low
High



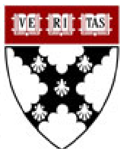
Buy-and-hold returns

- For *High* and *Low Sustainability* firms
- Return-on-Equity (ROE)

35
30
25
20
15
10
5
0

1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

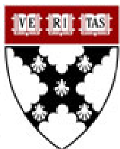
Low VW
High VW
Low EW
High EW



Conclusion

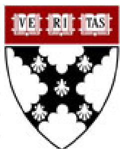
High Sustainability firms are characterized by

- ✓ distinct governance mechanisms which directly involve the board in sustainability issues and link executive compensation to sustainability objectives;
- ✓ a much higher level of and deeper stakeholder engagement, coupled with mechanisms for making it as effective as possible, including reporting;
- ✓ a longer-term time horizon in their external communications which is matched by a larger proportion of long-term investors;
- ✓ greater attention to nonfinancial measures regarding employees; a greater emphasis on external environmental and social standards for selecting, monitoring and measuring the performance of their suppliers;
- ✓ a higher level of transparency in their disclosure of nonfinancial information and
- ✓ superior accounting and stock market performance in the long-term



The Sustainable Corporation

- ✓ Recognizes that a license to operate is given by society
- ✓ Balance stakeholders' interests and genuinely engages with stakeholders
- ✓ Recognizes that trade-offs exist
- ✓ Has a long-term orientation
- ✓ Practices active governance
- ✓ Uses integrated reporting
- ✓ Focuses strategically on ESG issues that are the most "material" (i.e., have the greatest impact on the firm's ability to create shareholder value while contributing to a sustainable society)
- ✓ Produces major innovations in products, processes and business models addressing those material issues



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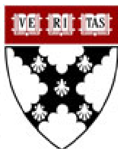
Sustainablity Programs vs. The Sustainable Corporation

- ✓ **Sustainability programs could include….**
  - ✓ **Cutting carbon emissions**
  - ✓ **Reducing waste**
  - ✓ **Enhancing operational efficiency at large**
  - ✓ **Paying workers above-market wages**
- ✓ **But do not create a sustainable corporate strategy that:**
  - ✓ **Addresses the interests of all stakeholders (investors, employees, customers, governments, NGOs, and society)**
  - ✓ **Increases shareholder value while improving the firm's ESG performance**
  - ✓ **Takes into account what is truly *material* to the company's strategy**
  - ✓ **Is realistic about tradeoffs between financial and ESG factors**



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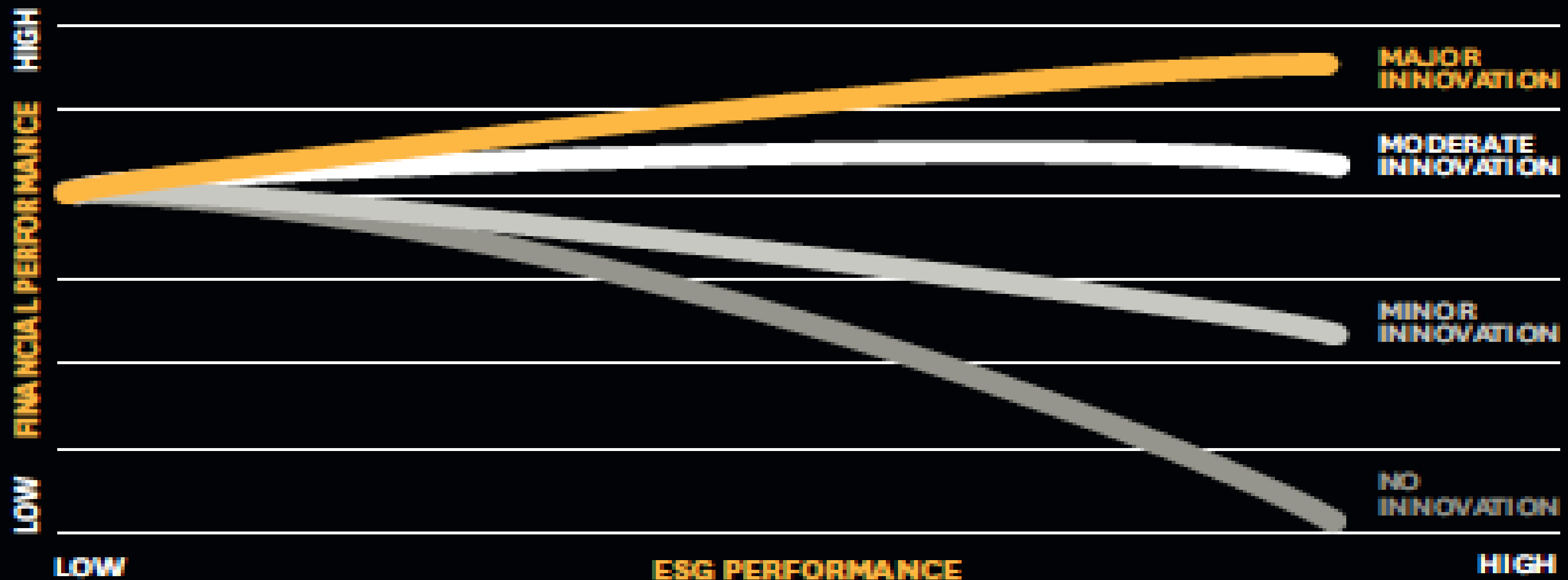
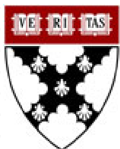
Innovation and Performance



SOURCE AUTHORS' ECONOMETRIC ANALYSIS OF MORE THAN 3,000 ORGANIZATIONS



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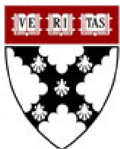
Innovation

	Minor	Moderate	Major
Level of Investment	Small	Medium	Large
Payback Period	<2 years	2-5 years	>5 years
Risk	Low	Medium	High
Adoption	Several companies in the sector or related sectors have already adopted the innovation	Company is not the first to adopt innovation, but *is* an early adopter	Company is the first in its sector or related sector to have adopted the innovation
Example	Energy efficiency programs	Changing sourcing of raw materials to include environmental and social criteria	Reshaping governance, production, marketing, distribution processes, and product attributes to align a company's interests with societal welfare



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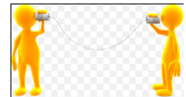
Pushing the Boundary of The Performance Frontier

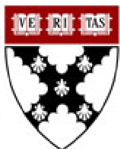


1) Identify material ESG issues
   - Global Reporting Initiative (stakeholders)
   - Sustainability Accounting Standards Board (shareholders)

2) Quantify the relationship between financial and ESG performance
   - Identify synergies and tradeoffs
   - Set priorities among ESG performance objectives

3) Innovate in processes, products, and business models
   - Processes and products lead to minor and moderate innovation
   - Major innovation requires completely new business models

4) Communicate the company's innovations to stakeholders
   - Use integrated reporting and investor conference calls
   - International Integrated Reporting Council's <IR> Framework published yesterday



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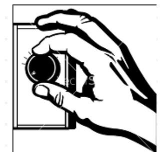
Finding the Solution

✓ Aligning incentives within the organization

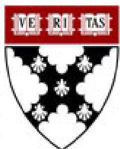
✓ Hiring and training people

✓ Adjusting the discount rate to take into account non-linear effects



✓ Shaping your investor base through communication and integrated reporting

✓ Creating a sustainable brand through marketing campaigns or changing product characteristics



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