



Critical Thinking

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The Spirit Level

Why Equality
is Better for Everyone

CEO remuneration
packages actively
discourage innovation
in UK's top companies

The outperformance of ESG strategies is beyond doubt.

Coronavirus may have infected half of UK
population – Oxford study



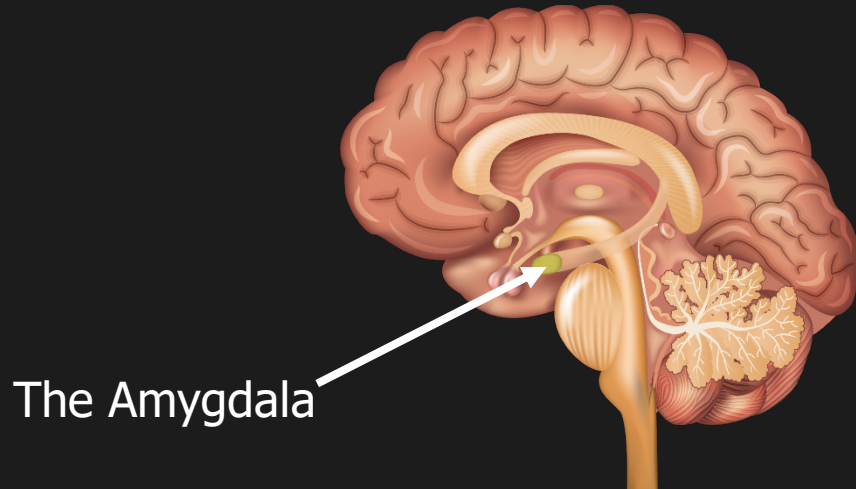
London
Business

Alex Edmans | TEDxLondonBusinessSchool

What to trust in a "post-truth" world

Confirmation Bias

- “The death penalty should be abolished”
- “Gay marriage should be legal”
- “The primary purpose of sleep is to rest the body and mind”
- “Thomas Edison invented the light bulb”





1. Statements Without Evidence

- “Wall Street CEOs who helped destroy the economy, they don’t get police records. They get raises in their salaries” (Bernie Sanders)

1. Statements Citing Evidence That Doesn't Support the Statement

the evidence is at best ambiguous on the impact of individual CEOs on company performance.¹¹⁰

110 Professor Alex Edmans (CGP0028)

CEOs with high equity incentives outperform CEOs with low equity incentives by 4-10% per year, and the researchers do further tests to suggest that the results are causation rather than correlation



The 10,000-hours rule says that if you look at any kind of cognitively complex field, from playing chess to being a neurosurgeon, we see this incredibly consistent pattern that you cannot be good at that unless you practice for 10,000 hours, which is roughly ten years, if you think about four hours a day.

— *Malcolm Gladwell* —

1. Statements Citing Evidence That Doesn't Support the Statement

Rocío Lorenzo at TED@BCG Milan

Want a more innovative company? Hire more women

CEO remuneration packages actively discourage innovation in UK's top companies



2. The Narrative Fallacy

- True facts:
 - Apple's *Why*: "Everything we do, we believe in challenging the status quo"
 - Apple has been extremely successful
- Narrative fallacy: seeing a set of facts and ascribing a cause-effect relationship, even if there's no true link
 - We like to think "everything happens for a reason"
 - Explanation may only be valid ex post
- Very many factors could have led to Apple's success, but "why" is a particularly appealing explanation



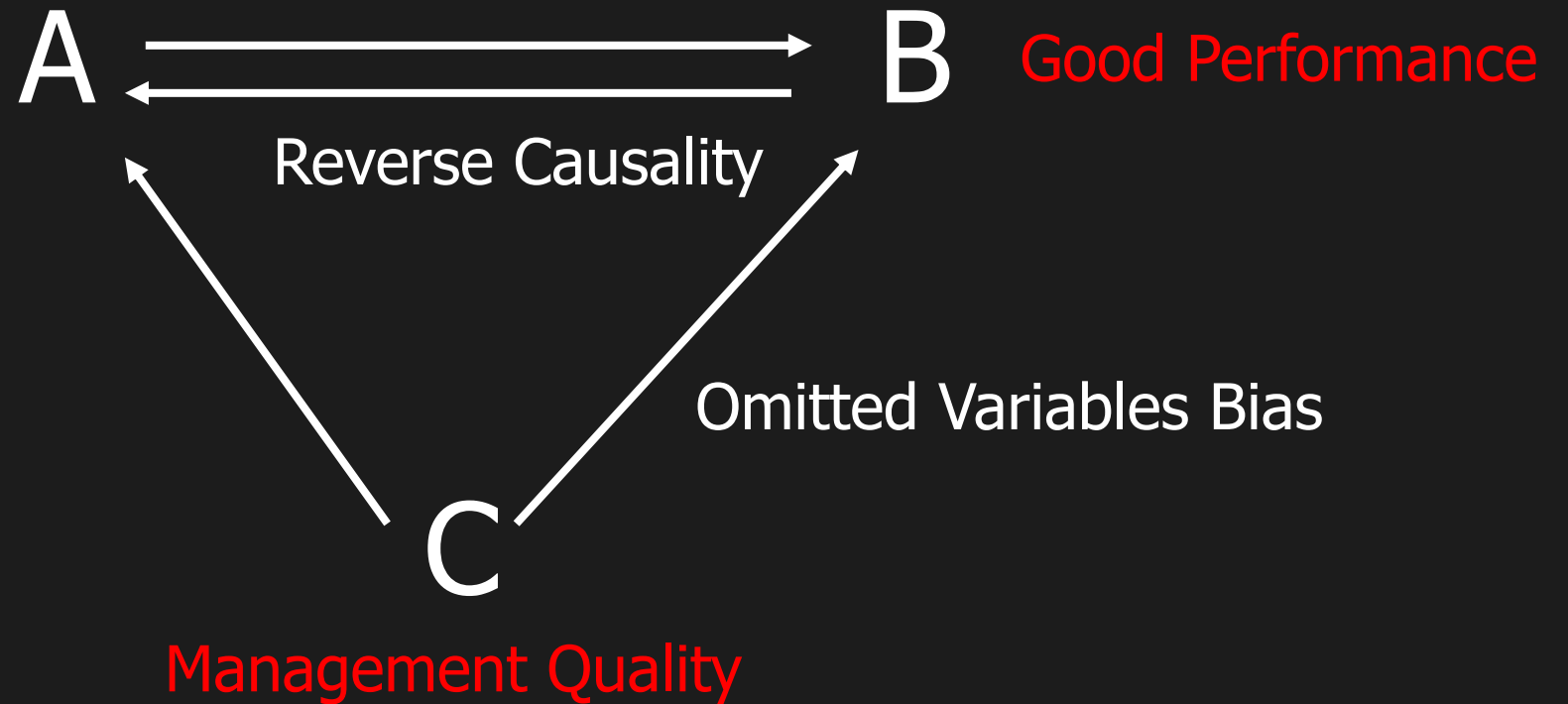


2. The Narrative Fallacy Across Many Companies

- Is the solution to study many companies?
 - “In Search of Excellence” (43), “Good to Great” (11), “Built to Last: Successful Habits of Visionary Companies” (18)
 - “We studied many excellent companies and found they all had the following characteristics”
- But how did *other* companies with these characteristics do?
- Many of these companies subsequently underperformed
 - Xerox, Philip Morris, GE, Fannie Mae, Circuit City, Wells Fargo, Ford

3. Alternative Explanations

Sustainability
Diversity
Purpose





3. Invalid Techniques to Find Causality

- Lead-lag relationships. If B occurred after A, then A must have caused B
- You could have predicted B and thus done A in anticipation
 - Opening an umbrella doesn't cause it to rain



3. Invalid Techniques to Find Causality

- Smoke and mirrors / overwhelming the reader
- “We reestimated our models using the xtabond2 procedure in STATA, which utilizes the generalized method of moments (GMM) model also known as system GMM. The xtabond2 procedure is designed for panels that may contain fixed effects and heteroscedastic and correlated errors within units, and employs first differencing, which instruments variables with suitable lags of their own first differences, to eliminate these issues and potential sources of omitted variable bias (please see Arellano & Bover, 1995; Blundell & Bond, 1998; Roodman, 2009). Furthermore, and importantly, xtabond2 also allows the ability to specify variables as endogenous to examine whether potential endogeneity is influencing findings.”

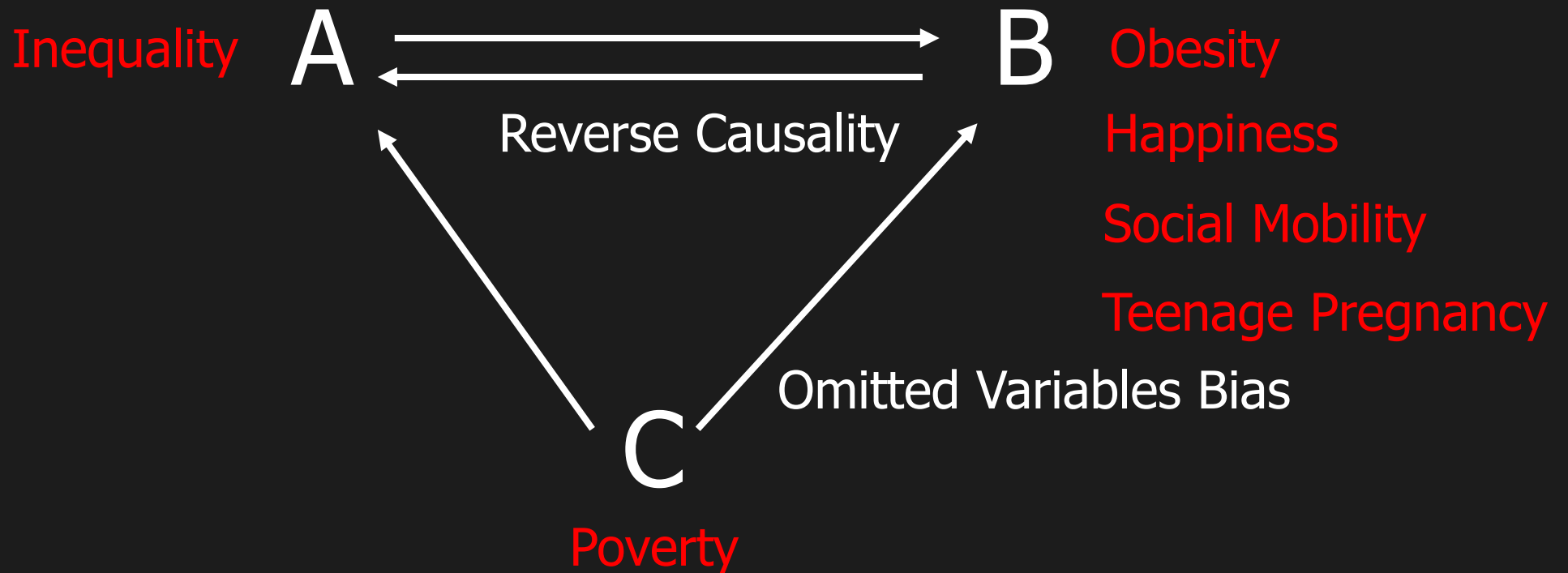


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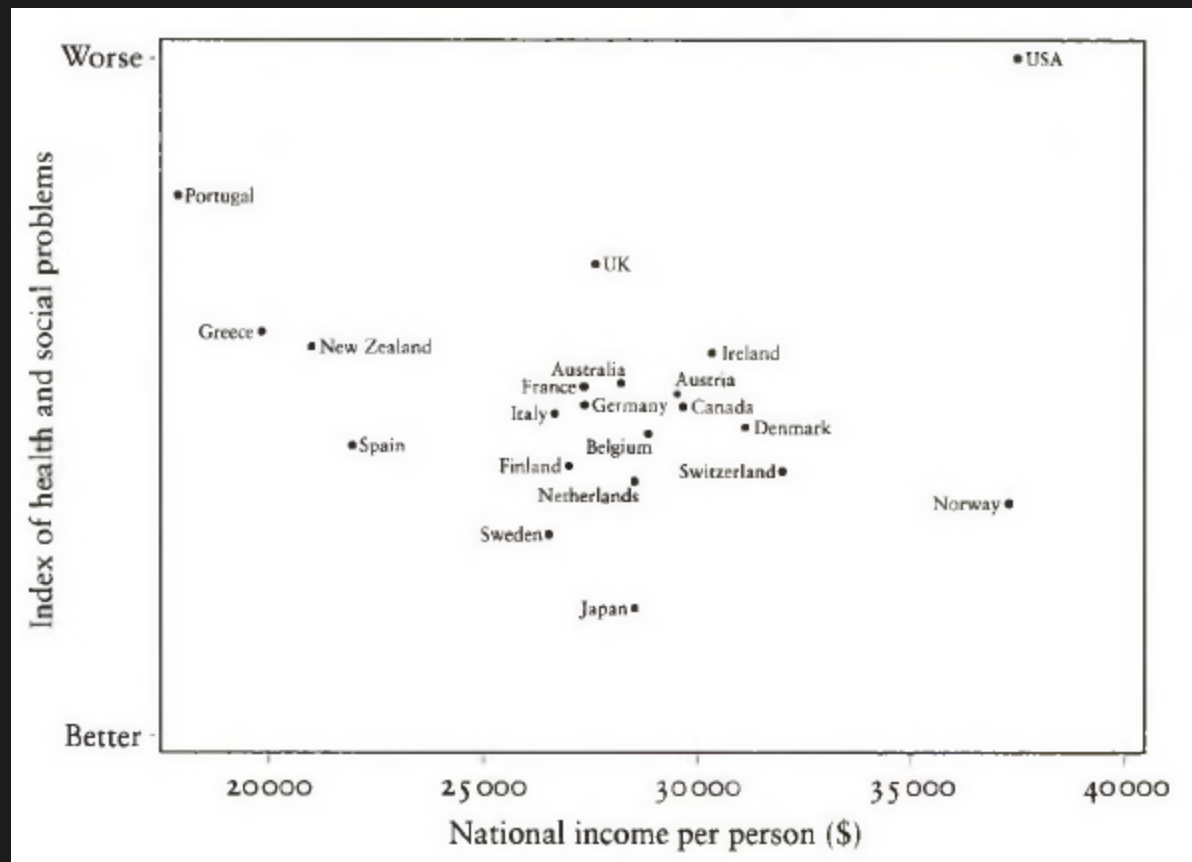
3. Invalid Techniques to Find Causality

- Control for omitted variables (C) in separate regressions
- Example: *The Spirit Level*



3. Invalid Techniques to Find Causality

- Authors' response





3. Invalid Techniques to Find Causality

- Basic statistics: can't do separate regressions on poverty and inequality. Must do a *single* regression on inequality *controlling* for poverty and other explanations
 - National diet
 - Amount of PE taught in schools
 - Availability of fitness facilities
- Valid techniques: see "A Layman's Guide to Separating Causation from Correlation"
(www.alexedmans.com/correlation)



4. Universality Bias

- We've previously considered *internal validity*: a narrative may not be true due to alternative explanations, luck
- Now we consider *external validity*: even if we could prove that Apple's "why" caused its success, this may not apply to other companies
 - Overextrapolation from case studies and stories
- We seek single explanations that apply everywhere
 - A theory of everything
 - Five ways to ...



4. Universality Bias

- A relationship may not apply out-of-sample
 - “Any kind of cognitively complex field, from playing chess to being a neurosurgeon”
 - Ericsson studied violin players



4. Universality Bias

- Alice in Wonderland: “sentence first, verdict afterwards”
 - When you have a hammer, everything looks like a nail
- Why do we mistrust people more in the UK than in Japan? Why do Americans have higher rates of teenage pregnancy than the French? What makes the Swedish thinner than the Greeks?
 - The answer: inequality



Practical Tips

- Is a statement backed up by a reference?
- Examine the reference
 - Does it show what the quoter claims it shows?
 - Does it show what the authors claim it shows?
 - Are there plausible alternative explanations?
 - Omitted variables, reverse causality, luck
 - Is it published in a top peer-reviewed journal?
 - Beware “Research Shows That”

50 Journals used in FT Research Rank

The Importance of Peer Review

- Parliamentary submission: “A second study ... found that firm productivity is negatively correlated with pay disparity between top executive and lower level employees”



Journal of Banking & Finance

Volume 37, Issue 8, August 2013, Pages 3258–3272



The determinants and effects of CEO–employee pay ratios ☆

- We do not find a negative relation between relative pay and employee productivity.
- We find that firm value and operating performance both increase with relative pay.

The TUC states that “There is clear academic evidence that high wage disparities within companies harm productivity and company performance.”¹⁸⁶



An Example of the Publication Process

- Link between short-term CEO concerns and investment
- Initial idea in 2007, but no dataset of sufficient quality to allow study
- Started paper in January 2012



Improving the Paper

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The Peer Review Process

- Revise-and-resubmit at the *Review of Financial Studies* in August 2015
 - “One reviewer has recommended the paper be rejected, and the other that the paper be returned for revisions and invited for resubmission. The more positive is very lukewarm and offers only a “weak” offer ... R1 leaves the door open, but only a tiny crack and only for a major revision.”
 - 14 pages of comments (plus Editor’s mark-up)
 - 47 page response document plus overhauled paper, including recalculating data from scratch
- Second R&R in July 2016
- Conditionally accepted in November 2016
- Accepted in December 2016
- Published in July 2017



Practical Tips

- Examine the authors
 - What are their credentials (in the relevant field)?
 - Beware halo effects
 - Beware “Professor X shows that”
 - Do they have a hammer?
 - Would they have released the study if they’d found the opposite relationship, or no relationship?



It's Impractical to Check Every Source

- Be particularly wary of one-sided articles, claims of “clear evidence”, or universality
 - “The answer was a clear yes, no ifs, no buts. The data in our sample showed that more diverse companies are simply more innovative, period”
 - “Equality is better for everyone”
 - “The outperformance of ESG strategies is beyond doubt”
- There are two sides to almost any issue (in social sciences)
- Be particularly wary of conclusions that you (or the author) would like to be true, or an appealing narrative

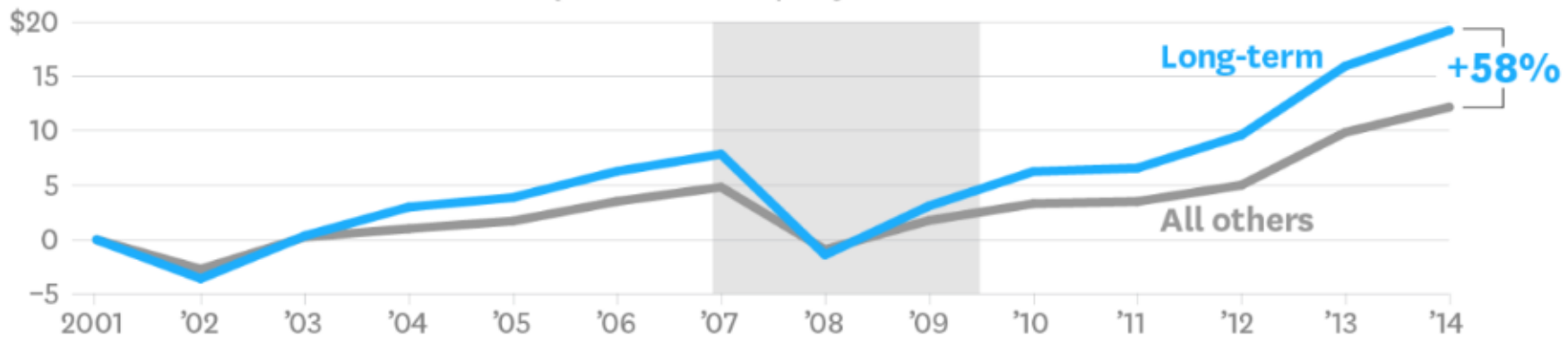


An Example: Test Your Skills

Joe Bower and Lynn Paine “had me at hello” (to quote *Jerry Maguire*) with their new HBR article, “The Error at the Heart of Corporate Leadership.” Laying out their data, they find that long-term oriented companies create more financial value and more jobs. In fact, if more American companies were focused on the long term, they estimate, investors would have an additional \$1 trillion, workers would have an additional 5 million jobs, and the country would have more than an additional \$1 trillion in GDP.

A Case Study: Test Your Skills

AVERAGE MARKET CAPITALIZATION (in US\$ billions per year, indexed to 2001)



What if all U.S. companies had taken a similarly long-term approach?

Extrapolating from the differences above, we estimate that public equity markets could have added more than \$1 trillion in asset value, increasing total U.S. market cap by about 4%. And companies could have created five million more jobs in the United States—unlocking as much as \$1 trillion in additional GDP.



Encouraging Dissent

- Allow juniors to speak first
- Amazon's "golden silence" – don't send out memos in advance
- If asking for approval, prohibit Reply-All saying "I agree"
- Don't put conclusion at the top of a memo
- Don't have discussions on reappointment of people when they're in the room – even if it seems a formality
 - Remove yourself if you're the person being discussed