Selecting research questions, settings, and identification strategies

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Selecting research questions

- The hardest part of research but also the most important
  - First part of any presentation and paper is about convincing people that they should care about what you are doing (i.e., the motivation)
    - Closely connected to the contribution
  - If you cannot convince people, nothing else matters
  - Subjective and reasonably people disagree
    - My papers usually get rejected for issues with contribution/motivation

Regulation and standardization

- A large proportion of financial reporting research is about regulation including standard setting
  - Other important areas include debt contracting or asset pricing
  - Management accounting has another focus
- Often easy to motivate from policy perspective but top journals generally ask for a more general academic takeaway
- Take the finding that IFRS adoption is associated with capital market effects as an example:
  - Why might policy makers care?
  - Why might academics more generally care?

IFRS example

- Policy making:
  - Capital market benefits are relevant to countries considering adopting (e.g., US) or countries evaluating adoption ex post
- Academics have more generally motivated it along these lines:
  - We can speak to whether accounting standards matter
  - Supporting infrastructure and reporting incentives play an important role for firms' reporting practices
  - Important implications:
    - Accounting standards play a smaller role than previously thought
    - Changing accounting standards does not necessarily change reporting practices
- Same issue if you examine US regulation
  - But most top journals are US based so they might cut you a bit of slack on the greater takeaway (but not much)

Using theory to generalize

- A strong conceptual framework is a good way to generalize from one setting to another
  - Economic forces may be fundamental and therefore insights might be relevant to other settings
  - In regulation, typically academics refer to externalities or other market failures. Discuss the importance of institutions and incentives.
- People before you have likely already used the arguments you use
  - Challenge is often to articulate what you add
  - The answer is often in the institutional details
    - Can your setting rule out some mechanism that prior research could not? Or more directly speak to a certain mechanism?
    - One paper rarely settles a debate. As long as you can clearly articulate what makes your setting different there is often room for one more paper

A Practical Approach (that works well for me)

- Write a <u>one page</u> research proposal before starting a new project
  - What is the research question?
    - Ideally, write an actual question with a question mark in the end
  - How will you do it?
    - Be as concrete as possible (data, treatment/control groups, main regression)
  - Why is it important?
    - Short motivation paragraph

What is an Accountant?

- An accountant is not (only) a bookkeeper or tax preparer
- An accountant's area of expertise is much broader
  - For example, CPA exam also tests:
    1. Financial Accounting and Reporting (clearly)
    2. Auditing and Attestation
       - E.g., Internal controls—assessing and ensuring compliance with corporate policies and regulation
    3. Regulation
       - E.g., Business law, Ethics and professional responsibilities
    4. Business Environment and Concepts
       - E.g., corporate governance, economic concepts/analysis, operations management
- An accountant is someone with an expertise in implementing and assessing compliance with corporate policies and regulation
  - Not necessarily a CPA

What is Accounting Research?

- A traditional (narrow/stereotypical) view:
  - Focuses on accountants' bookkeeping and taxation roles
    - E.g., Determinants of disclosure policies, properties of accounting information, effect of disclosing accounting information
- Broader view also includes:
  1. Assesses the effect of the work accountants do in practice
  2. Economic constructs central to accounting: transparency, accountability, trust, enforcement/compliance
     - E.g., transparency regulation in non-financial markets (e.g., healthcare quality/prices)
  - **Extends the scope beyond assessing reporting quality and its effects on capital markets to examining the "real effects" of constructs underlying accounting**

Selecting settings

- We obviously want to pick the best setting possible to answer our research question
  - Common question: Couldn't you have done this better in a different setting?
  - Often, in practice, the setting comes before the research question but that is not ideal and certainly not how you want to sell your paper
- Narrow versus broad sample studies
  - Often a trade-off between internal and external validity
  - The Glaeser and Guay critique (JAE 2017)

"Cute settings"

- By "cute settings" I mean studies with narrow samples that are perhaps somewhat remote from traditional accounting settings
- Recently, financial reporting researchers have used this type of settings to make broader points
  - New York Cap drivers (WP by Rajgopal and White)
  - MBA grade non-disclosure (WP by Floyd, Tomar, and Lee)
  - Mine-safety (Christensen, Floyd, Liu, and Maffett)
  - Field experiments (e.g., WP by Gassen and Muhn 2018)
- Much more common in management accounting
  - Financial reporting researchers are often more skeptical

Advantages and disadvantages of narrow sample studies

- Advantages:
  - Often better identification
  - Sometimes researchers can focus on specific mechanisms or at least rule out some alternative explanations
- Disadvantages:
  - Close to case studies
  - Can we generalize from these rather narrow settings?
    - Theory is even more important

Broad sample settings

- By "broad sample settings" I mean studies that include all firms in a country or perhaps an international sample
- Includes most studies on IFRS, SOX, and Regulation Fair Disclosure
- This types of studies are very common in accounting (since Daske et al. 2008, most IFRS studies fall into this category)

Advantages and disadvantages of "broad sample settings"

- Advantages:
  - Large regulatory reforms that we care about in their own right
  - Often closely connected to "accounting issues"
  - In international studies, we often have country-level variation in institutional features that we can exploit
- Disadvantages:
  - The regulatory reforms often consist of bundles of changes so difficult to isolate specific sources of documented effects
  - Often difficult to find good control groups
  - In international studies, lots of constructs are clustered at the country-level so what are we really examining the effect of?

We are all doing case studies

- It is tempting to conclude that narrow samples studies are case studies and broad samples are more generalizable
- But almost all studies on regulatory changes are case studies. How generalizable are these settings?
  - IFRS adoption the Europe
  - SOX adoption in the US
  - The Securities Acts of 1933/34
- We hope there is a broader takeaway from the joint evidence
  - Only true if we use <u>different settings</u>
  - Number 100 study on IFRS provides little evidence if it uses the same variation as the 99 studies that came before (e.g., maybe something else happened in 2005?)
    - The fact that many papers reach the same (poorly identified) conclusion does not increase our confidence in the takeaway much

Selecting identification strategies

- The key question is what variation do we have in a specific setting
- Most common method today is probably difference-in-differences designs (DiD)
- Parallel trends assumption is critical
  - The trends for treatment and control group would have been the same absent regulation
    - Not that the pre-regulation trends are similar although that could be a way to gauge it
  - This is an identification assumption that is not directly testable so institutional details that can alleviate concerns are critical
    - Often easier in a narrow sample study

Main identification challenge in most studies on regulation

- Regulation is not randomly assigned to treated firms
- Usually regulators/policy makers respond to scandals or other shock to public opinion
  - SOX was partly a response to corporate scandals
  - The Securities Acts of 1933/34 was response to the stock market crash of 1929 and the Great Depression
  - IFRS in Europe was implemented as part of a large reform to make European markets more competitive
- Would firms have changed behavior absent regulation?
  - See discussion in Ball (1980) and Mulherin (2007)

Some of my papers that illustrate the points made earlier today

- A broad based study:
  - Capital-Market Effects of Securities Regulation: Prior Conditions, Implementation, and Enforcement
  - Christensen, Hail and Leuz (RFS 2016)
- A more narrow (or cute) study:
  - The Real Effects of Mandated Information on Social Responsibility in Financial Reports: Evidence from Mine-Safety Records
  - Christensen, Floyd, Liu and Maffett (JAE 2017)
  - Then a few projects I am currently working on that push the boundaries of what accounting research is

Capital Market Effects of Securities Regulation: Prior conditions, Implementation, and Enforcement

Hans Christensen
Luzi Hail
Christian Leuz

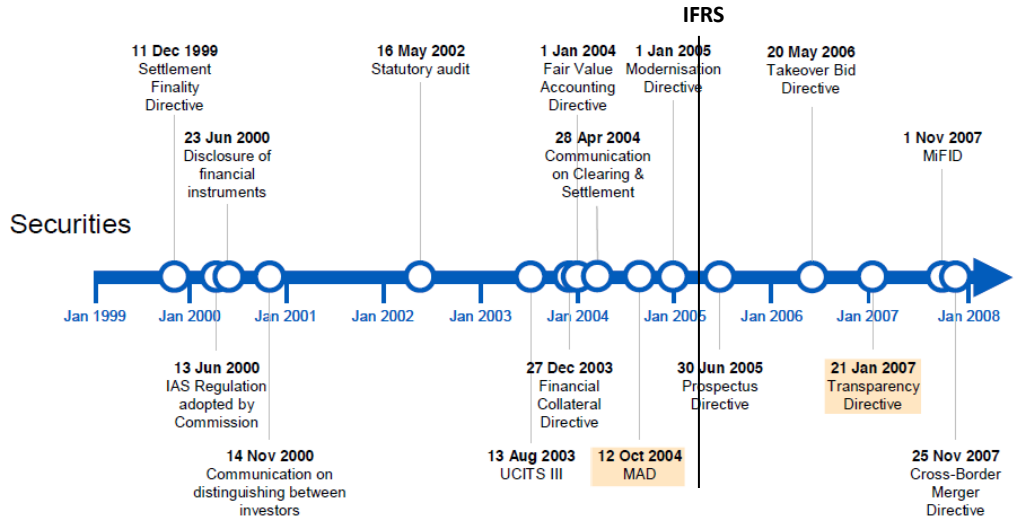
Research question

- Does securities regulation have capital market consequences?
  - Many published studies have already looked at this
- Prior evidence is decidedly mixed and often negative
  - Early studies of 1933 and 1934 Acts provide little evidence on benefits
  - Key problem: They do not control for changing market conditions
  - Similar concerns arise for many studies on Regulation Fair Disclosure and Sarbanes-Oxley Act
  - There are a few studies with good control groups but the price for identification is a focus on smaller firms

Motivation: Our Study

- EU passed a series of directives to harmonize & improve capital-market regulation
  - Market Abuse Directive (MAD) & Transparency Directive (TPD)
  - Same directive applies to all 29 member states (implemented at different times)
- Staggered implementation offers better **identification** compared to a study of single regulatory act in a single country ⇒ standard concerns:
  - Contemporaneous shocks that are unrelated to the new regulation
  - Market response to an event that gave rise to the regulatory act (e.g., scandal)
- Exploit differences in **prior regulation**, **implementation** and **enforcement** across EU countries
  - Typically, the effects of rules, implementation and enforcement are a bundle
  - Less prior evidence on these effects (but much harder to identify the effects)
- Each directive change many different things so hard to say exactly what is important

Securities Regulation in the EU



Source: CRA analysis.

Identification Strategy

- EU Directives were implemented at different points in time
  - EU passes the regulation (same for all countries)
  - Member states are given a fixed window to implement the new directive (2-3 years max)
  - EU countries need to pass legislation to implement the directives
- Setting provides limited discretion as to the timing
  - Leads to some clustering of the implementation quarters
  - Tradeoff: Ideally, some variation in the dates but not too spread out
- Fixed-effects structure
  - Use **country-fixed** and **industry-fixed effects** (or firm-fixed effects)
  - Use **quarter-year fixed effects** to capture time trends and market changes
  - **Control other directives that enter-into-force around MAD/TPD**

Dependent variable: Liquidity

- Examine capital market benefits of two EU directives
  - Focus on market liquidity
  - Market liquidity (and cost of capital) are often used as justification for sec. reg.
  - But we cannot show that the directives are socially beneficial
- Market liquidity is closely tied to info asymmetry and adverse selection
  - Investors are concerned about other investors having better or even inside information
  - More transparency should make it harder for investors to become better informed
- Market liquidity has two desirable features for identification
  - It can be measured over relatively short time periods (use quarterly data)
  - It is less anticipatory in nature – concerns about adverse selection matter (most) when investors actually trade

Liquidity Effects of Tighter EU Securities Regulation

Ln(Liquidity Factor + 1) as Dependent Variable (N=112,260)	*Market Abuse Directive*	*Transparency Directive*	*Both Directives Combined*	*All Lamfalussy Directives*
Test Variables:				
MAD	-0.111***	–	-0.116***	-0.115***
	(-3.73)		(-3.70)	(-3.61)
TPD	–	-0.085*	-0.087*	-0.093**
		(-1.84)	(-1.87)	(-2.20)
Control Variables:				
MiFID	–	–	–	0.033
				(0.51)
Prospectus Directive	–	–	–	-0.013
				(-0.56)
Takeover Directive	–	–	–	0.003
				(0.20)
IFRS	–	–	–	-0.101**
				(-2.33)
Ln(Market Value$_{t-4}$)	-0.250***	-0.250***	-0.250***	-0.248***
	(-13.47)	(-13.52)	(-13.52)	(-13.48)
Ln(Share Turnover$_{t-4}$)	-0.155***	-0.155***	-0.155***	-0.155***
	(-18.92)	(-19.18)	(-19.11)	(-18.63)
Ln(Return Variability$_{t-4}$)	0.172***	0.172***	0.172***	0.172***
	(4.60)	(4.61)	(4.63)	(4.67)
Ln(GDP per Capita$_{t-4}$)	-0.053	-0.019	-0.013	-0.046
	(-0.09)	(-0.03)	(-0.02)	(-0.08)
Fixed Effects:				
Country	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes
Quarter-Year	Yes	Yes	Yes	Yes
R-squared	0.658	0.658	0.658	0.659

Key issue: Is variation in dates exogenous?

- Arguments: Staggered implementation of the two directives in a large number of countries
  - Political decision to regulate was made years earlier at the EU level
  - Implementation window relatively narrow and determined by the EU
- Evidence:

1. Liquidity responds relatively "sharply" around the event dates
2. The variation in entry-into-force dates is *not* explained by pre-implementation liquidity shocks or by institutional features associated with cross-sectional variation in the liquidity effects
   - Variation in dates is mainly explained by procedural requirements in each countries
3. Falsification test based on observables that are potentially associated with liquidity

- Main point: We back up key identification assumption with institutional facts rather than (only) econometric techniques
  - We cannot directly tests it so, ultimately, it is an assumption

Cross-country variation

- After showing the average effect of regulation and arguing that it is well identified, we examine the role of prior regulation, enforcement, and implementation
- Surprising finding: Stronger effect in countries with historically more stringent securities regulation
  - Countries with a weaker starting point don't catch up
- Great features of broad international sample is that can study this type of questions
  - Most people consider this the main result in the papers (referees and editor focused on this result)
  - But important caveat: no longer well identified
  - Many splits variables are correlated at the country-level so hard to unambiguously interpret

Can Accountants Save the World?

1. ***The Real Effects of Mandated Information on Social Responsibility in Financial Reports: Evidence from Mine-Safety Records***
   - With Eric Floyd, Lisa Yao Liu, and Mark Maffett
2. ***Combating Corruption Abroad: The Effect of Internationally Coordinated Regulation on Corrupt Countries***
   - With Mark Maffett and Thomas Rauter
3. ***Whose Lives Matter Most? Firm Responses to Worker Fatalities***
   - With Mark Maffett

- All projects use the mining industry as a setting (at least in some tests)

The Real Effects of Mandated Information on Social Responsibility in Financial Reports: Evidence from Mine-Safety

H. Christensen, E. Floyd, L. Liu, M. Maffett

Published in *Journal of Accounting and Economics*

Research Question

What (if any) are the real effects of mandated information on social responsibility in financial reports?

- Setting: Dodd-Frank Act mandates disclosure of mine-safety records in financial reports
- Real Effects: Compliance with safety laws (i.e., citations), Injuries, and Productivity

Setting

- Unprecedented use of securities regulation to address non-financial issues in Dodd-Frank
  - Issue 1: More than ten million people have died in Africa's Great War
    - Solution: Disclosed purchases of war minerals from Congo in financial reports
  - Issue 2: Hundreds are killed or injured in U.S. mines every year
    - Solution: Disclose safety performance in financial reports
- Regulation intended to address issues 1 & 2 rather than protect investors:

"Currently, there is no requirement to publicly disclose safety records [sic], *which has allowed companies to operate without critical checks and balances. West Virginia suffered a terrible loss recently at the Upper Big Branch mine and we owe it to our miners and their families to do more to make mine safety a top priority."* (Senator John D. Rockefeller IV)

- Intention is to improve safety
- Regulation is endogenous response to disaster

Dissemination of Mine Safety Records in Dodd-Frank

- Requires disclosure of SEC registrants' records on compliance with the Mine Act
  - Forms 10Q and 10K: S&S Violation, Dollar Value of Penalties, Fatalities
  - Form 8K: Imminent Danger Orders within four business days
- Financial reports disseminate information from MSHA website
  - All information is disclosed more timely on government website
- In our setting only <u>one dial</u> is turned: the inclusion of information in financial reports

What do Financial Reports do?

- Financial reports are widely disseminated
  - Investors, analysts, journalists already read SEC disclosures
  - Might become aware of mine-safety records even if they are not specifically looking
- Could result in:
  - Increased awareness (face lower costs of becoming aware)
  - Reduce plausible deniability
    - Even investors already aware of safety issues might have a harder time denying knowledge of safety issues after MSD
- We examine whether awareness increase after Dodd-Frank based on media coverage, returns, and mutual fund holdings after real effect results

Type of Issuers that Disclose Safety Information after Dodd-Frank

Panel B: Industry Distribution

Industry	*Number of Issuers*	*Percentage of Issuers*
Mining:		
Coal	17	11%
Non-coal	27	18%
Oil & Gas Extraction	6	4%
Construction	5	3%
Manufacture	42	28%
Transport and Utilities	29	19%
Wholesale Trade	2	2%
Services	3	2%
Non-classifiable	20	13%
Number of issuers subject to MSD	*151*	*100%*

Not only traditional mining firms

Does Compliance with the Mine Act Increase after Dodd-Frank?

- Assess citations for violations of the Mine Act
  - i.e., the primary subject of the disclosures

Identification Strategy

- Difference-in-differences: Disclosed (SEC registrants) vs. non-disclosed (non-SEC registrants) mines
- Dependent variable: number of citations per inspection hour
  - Measured over one- and two-year periods
  - Alternatives: 1) scale by hours worked 2) control instead of scale by inspection hours
- Fixed effects:
  - Year: Control for changes over time in safety technology and regulation other than Dodd-Frank
  - Mine: Control for time-invariant mine differences (e.g., differences in technology, coal vs. metal)
- Standard errors: block-bootstrapped at the mine-owner level

Results - Citations

Dependent Variable: Citation Rates Measured over One- or Two-year Periods	*One-year Periods*		*Two-year Periods*	
	OLS	*Poisson*	*OLS*	*Poisson*
	(1)	*(2)*	*(3)*	*(4)*
MSD	-0.011***	-0.112***	-0.009***	-0.113***
	(-5.22)	(-3.38)	(-3.99)	(-3.28)
Fixed Effects:				
Mine	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes
R-squared / Pseudo R-Squared	0.249	0.433	0.331	0.559
N (mine-periods)	166,010	159,811	95,383	88,563
Number of Unique Mines	26,259	21,461	26,203	20,014

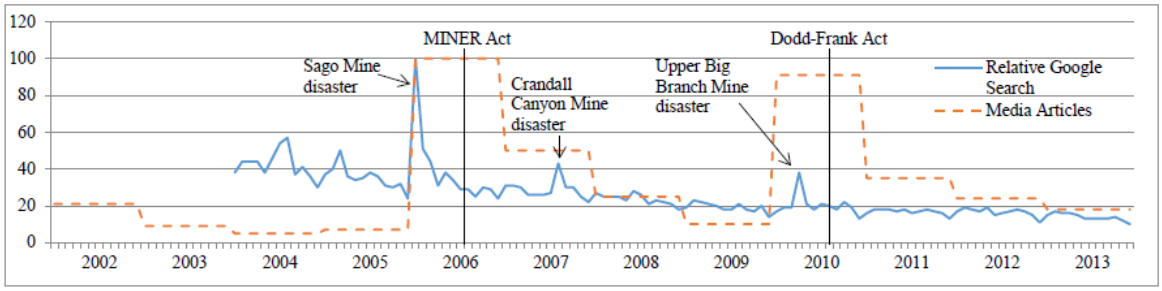
Approximately 11% reduction in citations per inspection hour

(similar results when scaling on hours worked)

Assessing Identification Assumptions

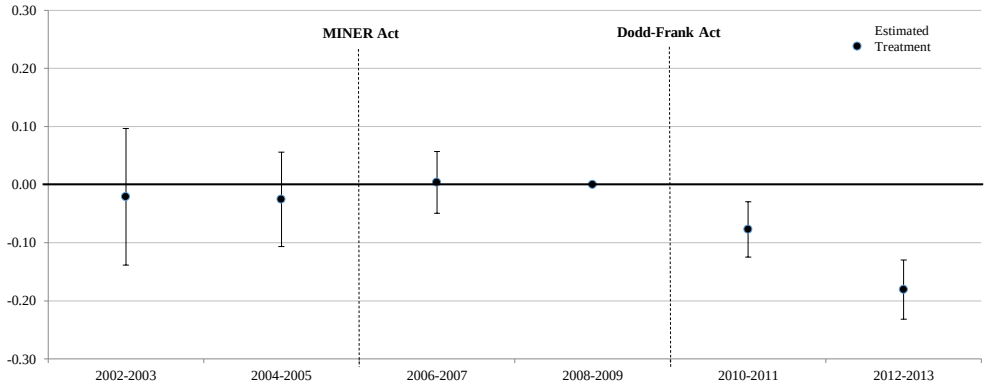
- We rely on the assumption that trends would have been similar for publicly and privately owned mines without Dodd-Frank (i.e., parallel trends assumption)
  - Concurrent regulations
  - Decision to regulate is endogenous (e.g., accident in West Virginia)
  - Macroeconomic conditions (e.g., financial crisis)
- What we do (long pre-period):
  - Compare counterfactual treatment effect to:
    - Mine disasters in the pre-period
    - **Prior regulation (the MINER Act)**
    - Macroeconomic shocks in the pre-period
- Match on observables and assess change in estimated treatment effect

Media Coverage of Mine Safety in General



- Similar media attention to mine safety around the MINER Act and Dodd-Frank
- Both publicly and privately owned mines are subject to the MINER Act
  - Only publicly owned mines are subject to the Dodd-Frank Act

Effect Mapped Out - Citations



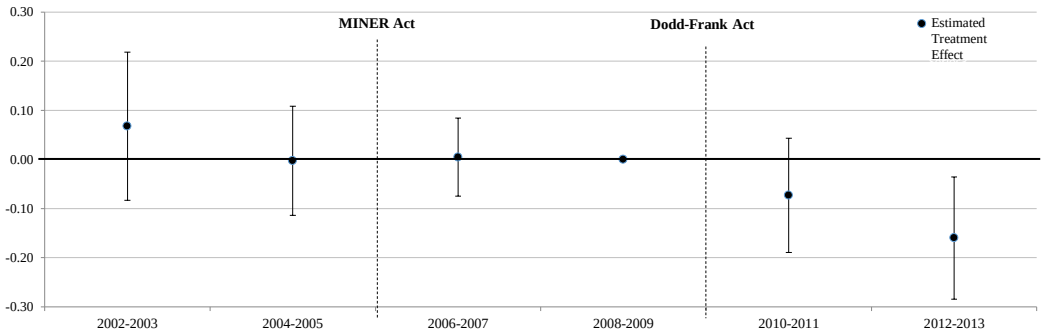
Conclusion: Compliance with the Mine Act Increases

- Incidence rates for citations decrease
  - Does not appear to be an inspector effect (results not in presentation) but indicates general improvement in compliance with the Mine Act (not just for disclosed citations)

Do Injury Rates Decrease after Dodd-Frank?

- Not obvious because compliance with the Mine Act may not translate into less injuries
- Same research design as for citations

Results – Injury Rates



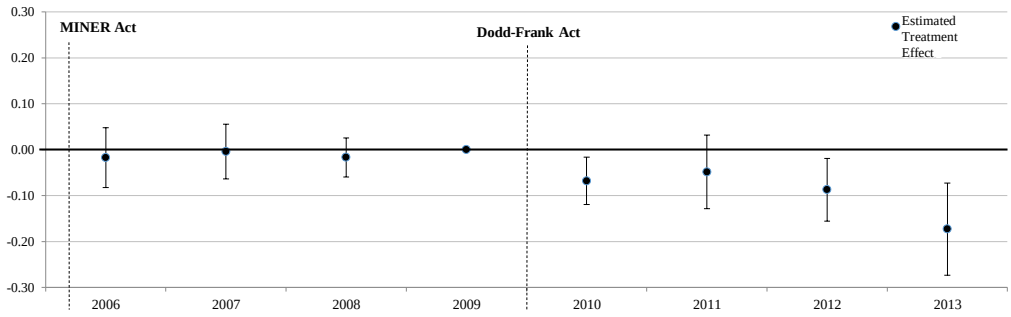
Dependent Variable: Injury Rates Measured over One- or Two-year Periods	*One-year Periods*		*Two-year Periods*	
	OLS	*Poisson*	*OLS*	*Poisson*
	(1)	*(2)*	*(3)*	*(4)*
MSD	-0.196**	-0.130**	-0.231***	-0.130**
	(-2.43)	(-2.35)	(-2.91)	(-2.28)

Approximately 13% reduction in injury rates

Does Productivity Decrease after Dodd-Frank?

- Is there a tradeoff between safety and productivity?
  - Gowrisankaran et al. (2017)
- An increase in safety may lead to lower mineral production per hour worked
  - However, changes in productivity unlikely to fully capture the costs that firms incur when improving safety
- Productivity: Tons of coal per hour worked (test limited to coal mines)

Results - Productivity



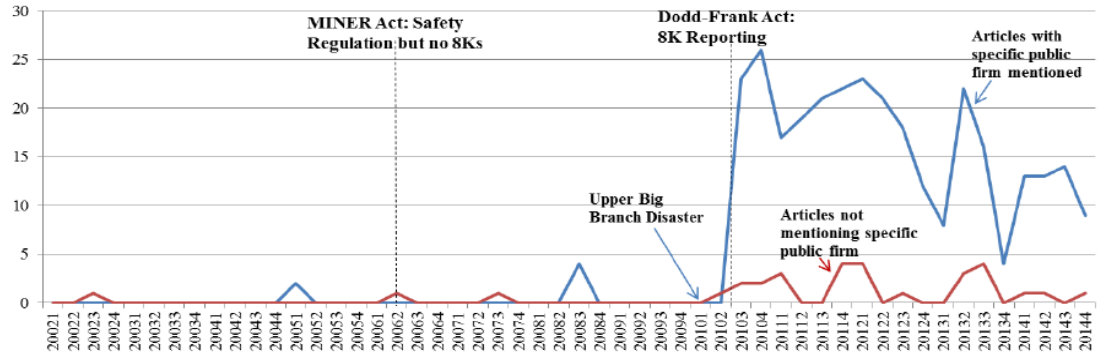
	Labor Productivity
	(1)
MSD	-0.074**
	(-2.50)

Equivalent to approximately 0.9% of revenue

Potential Mechanisms

- Many potential mechanisms could explain our empirical findings for real effects of MSD
  - Most are related to increased awareness. Three tests:
  1. Media coverage of Imminent Danger Orders (IDOs)
  2. Equity market reactions to IDOs
  3. Changes in mutual fund holdings around IDOs
     - Socially responsible vs. the rest
- Imminent Danger Orders are a form of citations
  - Before Dodd-Frank: Disclosed on website
  - After Dodd-Frank: Disclosed on website and in 8K filings
- Caveats:
  - No (convincing) control group for time trends
  - Results not tied back to the real effects we found evidence of before

Media Coverage of Imminent Danger Orders



- Only coverage of IDOs (not coverage of mine safety more broadly)
- After 8K fillings of IDOs they are more likely to be covered by media articles more broadly. Firm name in article.

Market Reactions to Imminent Danger Orders

	Website Only (Pre Dodd-Frank)		*Website & Form-8K (Post Dodd-Frank)*		*Effect of Form-8K (Post minus Pre)*	
	Mean (1)	*Median (2)*	*Mean (3)*	*Median (4)*	*Mean (5)*	*Median (6)*
All Firms Subject to Dodd-Frank:						
CAR - Market Adjusted	0.01%	0.30%	-1.54%***	-1.10%***	-1.55%***	-1.40%***
	(0.04)	(0.67)	(-3.21)	(-3.60)	(-2.74)	(-3.25)
CAR - Industry Adjusted	-0.07%	-0.01%	-1.18%***	-0.81%***	-1.11%**	-0.80%**
	(-0.28)	(-0.34)	(-2.63)	(-2.74)	(-2.15)	(-2.41)
N (IDO disclosures)	754		245		999	
Coal Firms Subject to Dodd-Frank:						
CAR - Market Adjusted	0.19%	0.74%	-2.87%***	-2.67%***	-3.06%***	-3.41%***
	(0.41)	(0.89)	(-3.34)	(-3.86)	(-3.26)	(-3.60)
N (IDO disclosures)	340		112		452	
Mining Firms Subject to Dodd-Frank:						
CAR - Market Adjusted	0.16%	0.46%	-2.06%***	-1.94%***	-2.21%***	-2.40%***
	(0.43)	(1.10)	(-3.24)	(-3.81)	(-3.06)	(-3.64)
N (IDO disclosures)	500		178		678	
Non-Mining Firms Subject to Dodd-Frank:						
CAR - Market Adjusted	-0.28%	-0.02%	-0.16%	-0.01%	0.12%	0.01%
	(-0.65)	(-0.45)	(-0.36)	(-0.28)	(0.13)	(0.03)
N (IDO disclosures)	254		67		321	

- Window: [t, t+5]
- Before Dodd-Frank: Website disclosure
- After Dodd-Frank: Website + 8K Filing disclosure
- Negative returns within five days after Dodd-Frank
- Effect limited to coal mines & mining firms

Changes in Mutual Fund Ownership

Dependent Variable: %ΔHoldings	
Mutual Fund Sensitivity to IDOs Pre- and Post-MSD:	
IDO	-0.009***
	(-3.14)
MSD×IDO	-0.011**
	(2.52)
Incremental SRI-Fund Sensitivity to IDOs Pre- and Post-MSD:	
SRI×IDO	-0.029
	(-0.46)
MSD×SRI×IDO	-0.097
	(-0.96)
Incremental SRI Sensitivity Post-MSD:	
SRI×IDO + MSD×SRI×IDO=0	-0.126*
F(1, 16510)	[2.44]
Fixed Effects:	
Fund	Yes
Year-Quarter	Yes
Year-Quarter*SRI	Yes
Observations (Fund-Firm, Year-Quarter)	1,495,420
R-squared	0.051

- Mutual fund managers react in pre-period but even more in the post period
- Particularly for funds that identify as "socially responsible"
- Consistent with fund managers being aware before Dodd-Frank but caring more when others also become aware

Main Takeaway from "Real Effects of CSR Information"

- Our results illustrate that:
  - There can be significant real effects of mandating information on social responsibility in financial reports
  - Even if this information is publicly available elsewhere
  - Does not imply that the policy is socially efficient
- A traditional accounting disclosure setting (i.e., financial reports)
  - But accounting practitioners spend most of their time on non-disclosure issues
  - For instance, compliance with corporate policies and regulation more broadly

Combating Corruption Abroad: The Effect of Internationally Coordinated Regulation on Corrupt Countries

H. Christensen, M. Maffett, T. Rauter

Work in progress

Research Question

How do firms respond to internationally coordinated anti-corruption regulation and what are the subsequent effects on corrupt countries?

- Evidence on whether policy makers in developed countries can influence MNC behavior and whether any behavioral changes improve the lives of people living in corrupt countries

- Setting: OECD anti-foreign-bribery convention (ABC)
- Effects:
  1. Multinational firm behavior in corrupt countries
     - Changes in investment behavior, due diligence, and internal controls
  2. Outcomes in corrupt countries
     - Perceptions of corruption, violent conflicts

Where accountants play a central role

The ultimate outcome

Evidence in paper

- Multinational corporate activities in corrupt countries
  - Lower investment in corrupt countries (FDI flows & firm level CAPEX)
    - Not substituted with investments from non-signatory countries
    - No evidence that tax havens are used to circumvent ABC
    - The U.S. is a key player in enforcement efforts (stronger for SEC registered and US exposed firms)
  - Currently examining increases in due diligence efforts and the use of international audit firms in connection with direct investments in corrupt countries
- Outcomes in corrupt countries
  - Perceived corruption decreases
    - In the level of pre-ABC FDI from ABC-countries
  - **Political violence in areas with ABC firm activity reduced after ABC**
    - Positive association between mineral prices and political violence is reduced

OECD Anti-Bribery Convention (ABC)

- Signed by 43 countries
  - Signed in 1999 but not effectively enforced until approximately 2005
- Only international anti-corruption regulation focused on the 'supply side' of the bribery transaction
- US pushed for regulation
  - US had regulation since 1967 but no strict enforcement due to concerns over competitive disadvantage
  - Tried United Nations and bilateral trade agreements but failed. Succeeded in the OECD
- Main ABC provisions:
  - Criminalize bribery of foreign public officials and becomes an extraditable offence
  - Require co-operation among signatory countries
  - Penalties must be comparable to those for bribery of domestic public officials
  - Countries may not consider national economic interest or relations with other governments

Accountants play an important role in implementing and assessing compliance with ABC

- ABC Article 8 "Accounting": Specifies that each signatory country must mandate/enforce accounting rules that facilitates enforcement
  - Separate penalties for "omissions and falsifications in respect of the books, records, accounts and financial statements"
  - Recognize the importance of accounting for enforcement
- Consistent with this, most important source of detections are accountants (consistent with findings in Karpoff et al. 2017)
  - Internal audits: 31% of detections
  - Due diligence in M&A: 28% of detections
- Accountants role in the ABC is one of enforcing and implementing ABC rather than preparing disclosures
  - Of course, accountants are only part of the ABC bundle

Mining, Corruption, and Political Violence

- Mining sector is the most powerful setting we have in developing countries
  - Most corrupt sector
  - Foreign firms often directly involved in mining sector
- Mechanism:

Prior literature (e.g., Berman et al. AER 2017):

Mineral prices → Political violence

Armed groups can extract more rent (e.g., through bribes) if they understand corporations' willingness to pay bribes (i.e., they are optimally extractive)
1) Area more lucrative (i.e., more to fight for)
2) More rent can be used to retain power, which can generate unrest or rebellion

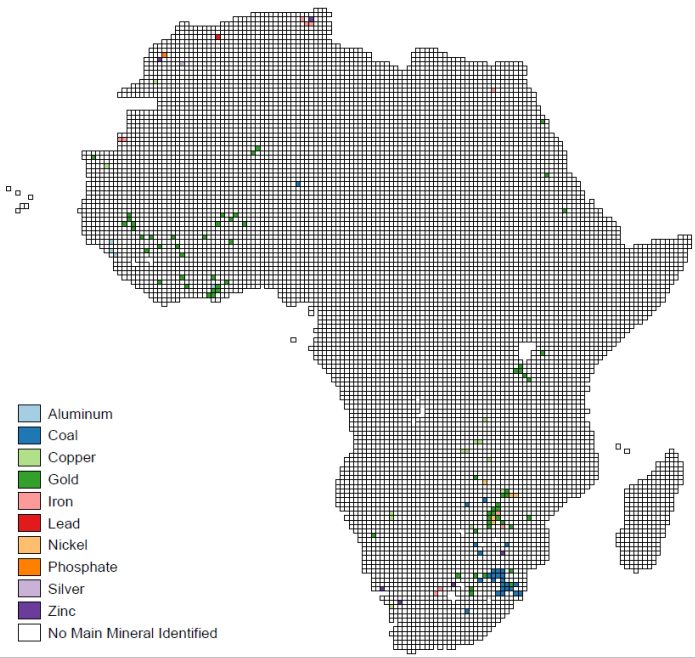
Our project:

Mineral prices → Corruption → Political violence

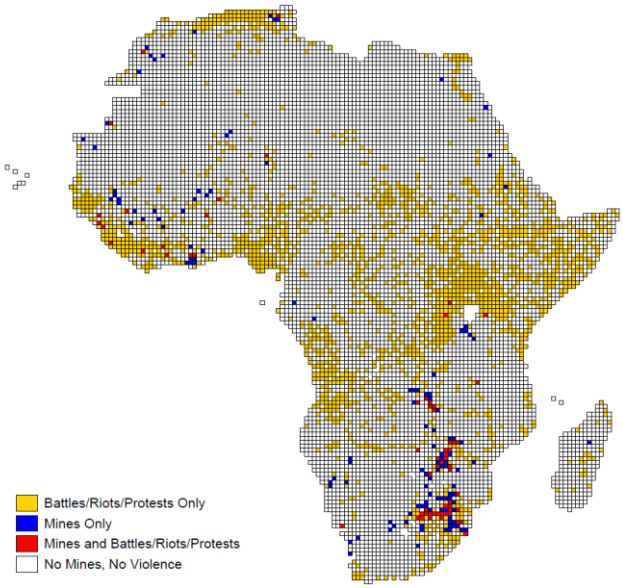
ABC could make it more costly for ABC-firms to offer bribes (could lead ABC firms to pursue other options):
1) Would make ABC areas less lucrative to armed groups
2) Reduce funding for conflicts in ABC areas

Main Minerals in Africa

- Each cell is 0.5 x 0.5 degree latitude and longitude
- Identification strategy (Berman et al. AER 2017):
- ➢ Dependent variable: Incidence of political violence in cell
- ➢ Independent variable is price of main mineral in cell
- ➢ DiD around ABC for cells where a mine is owned by OECD vs. non-OECD firms (before ABC)
  - Approx. half the cells are ABC cells



Mines and Political Violence



Cells with a mine are 70% more likely to experience political violence than cells without.

Main Results - Political Violence in Africa

Table 3: Mining and Conflict without ABC Data

	(1) Battles/Riots/Protests Incidence	(2) Battle Incidence	(3) Riot/Protests Incidence
Mineral Price	0.031***	0.013**	0.026***
	(0.010)	(0.007)	(0.009)
SAMPLE	All	All	All
Year FE	Yes	Yes	Yes
Cell FE	Yes	Yes	Yes
R-Squared	.35	.29	.38
Observations	143,150	143,150	143,150

Replicating Berman et al. (2017):

We find similar results

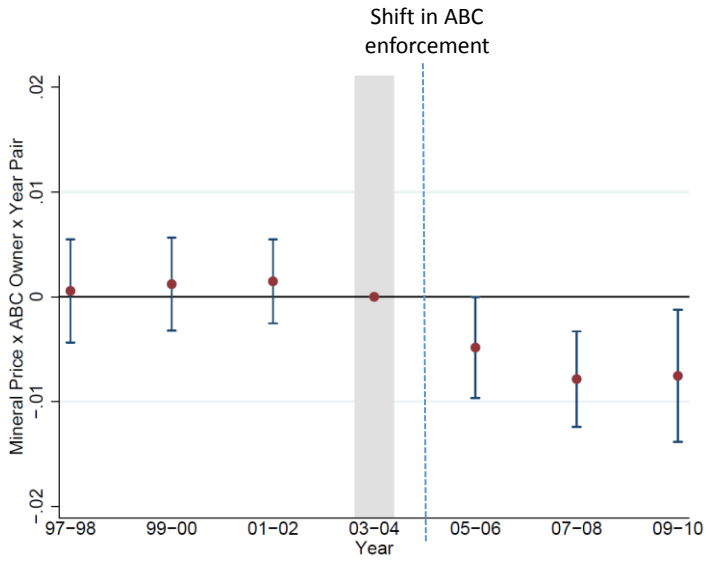
Table 6: Mining and Conflict with ABC Data

	(1) Battles/Riots/Protests Incidence	(2) Battle Incidence	(3) Riot/Protests Incidence
Mineral Price × ABC Owner	0.145***	0.063***	0.108***
	(0.036)	(0.022)	(0.034)
Mineral Price × ABC Owner × Post 2004	-0.007***	-0.003**	-0.006***
	(0.002)	(0.001)	(0.002)
SAMPLE	All	All	All
Year FE	Yes	Yes	Yes
Cell FE	Yes	Yes	Yes
Mineral Price × Year FE	Yes	Yes	Yes
ABC Owner × Year FE	Yes	Yes	Yes
R-Squared	.35	.29	.38
Observations	143,150	143,150	143,150

Adding OECD vs. non-OECD owner data (DiD)

Reduction in association between mineral prices and political violence is ≈ 5% in ABC relative to non-ABC cells

Event-time Plot (All Political Violence Incidences)



Results Including <u>only</u> Cells with Mines

Table 7: Mining and Conflict with ABC Data

	(1) Battles/Riots/Protests Incidence	(2) Battle Incidence	(3) Riot/Protests Incidence
Mineral Price × ABC Owner	0.086	0.001	0.095*
	(0.060)	(0.044)	(0.052)
Mineral Price × ABC Owner × Post 2004	-0.012***	-0.003*	-0.012***
	(0.004)	(0.002)	(0.004)
SAMPLE	Exclude cells which never had mines	Exclude cells which never had mines	Exclude cells which never had mines
Year FE	Yes	Yes	Yes
Cell FE	Yes	Yes	Yes
Mineral Price × Year FE	Yes	Yes	Yes
ABC Owner × Year FE	Yes	Yes	Yes
Observations	1,876	1,876	1,876

Main Takeaway from "Combating Corruption Abroad"

- Internationally coordinated regulation can affect the behavior of MNCs in corrupt countries and it has an effect on corrupt countries
  - Contrast to most findings on bilateral regulation on foreign corruption (U.S., U.K., EU). Generally find little overall effect on corrupt countries.
- Not only important to the people living in corrupt countries
  - Political violence and bad governments can cause migration and migration can affect stability of non-corrupt countries
- Accountants role in the ABC is one of enforcing and implementing ABC rather than preparing disclosures
  - We cannot isolate the effect of accountants but they are a central part of a package that appears to have real effects

Whose Lives Matter Most? Firm Responses to Worker Fatalities

H. Christensen and M. Maffett

Work in progress (very early stage)

Research Question

Do firm responses to worker fatalities depend on the nature of the individual who died?

- Setting: U.S. mining industry and, in separate analysis, top 150 multinational mining firms
- Effects: Increases in safety; internal safety controls; more extensive accounting disclosures (e.g., CSR reporting)

Relationship to Accounting

- My definition of an accountant is as an economic function:
  - Not necessarily a CPA but someone with a expertise in implementing and assessing compliance with corporate policies and regulation
- With well-functioning internal controls, who died should not matter for the firm response: Future safety improvements or reporting of events (e.g., in CSR reports)
  - Differential responses could imply internal control weaknesses
    - There is little doubt that internal controls sometimes fail but are there systematic factors that are associated with those failures?

Evidence in paper

- Safety improvements subsequent to fatalities conditional on:
  - **Ethnicity of late employee**
  - Working on:
    - Effects from one mine to another within same owner (with multiple mines)
      - Parent company location relative to late employee location
      - CEO location relative to late employee location
- Reporting responses to fatalities conditional on similar variables as above
  - Evidence from textual analysis of CSR and financial reports

Fatalities

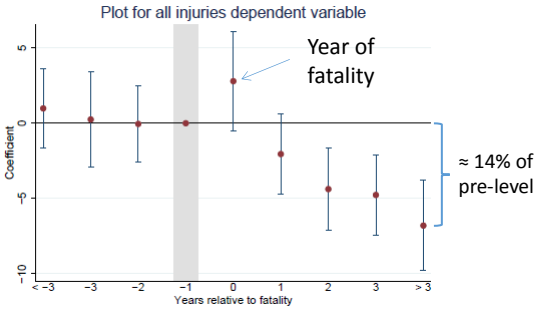
- A fatality is a relatively homogenous event (that is why we use it as the treatment)
- Data from 1995 to 2017
  - Working on expanding time-series (MSHA has given us fatality reports back to 1983)
- Fatalities by ethnicity
  - Determined based on first and last name and geographic location of late employee (we assume the location of the fatality is close to where the deceased lived)

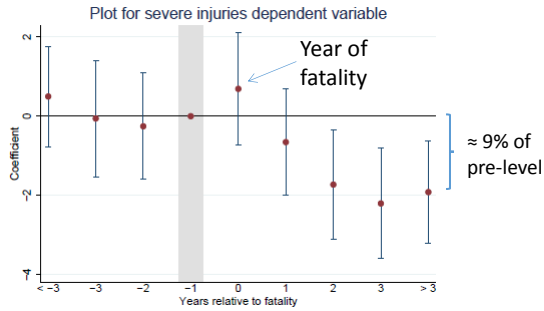
Table 10: Race with Highest Probability

	# Deaths	% Deaths
American Indian/Alaska Native	13	1.00
Asian/Pacific Islander	1	0.08
Hispanic	93	7.13
Non-Hispanic Black	37	2.84
Non-Hispanic White	1,161	88.97
N	1,305	

Measuring Safety Responses

- The outcome is number of non-fatal injuries per million hours worked and the "treatment" is a fatality
- Death Response Coefficients (DRCs):

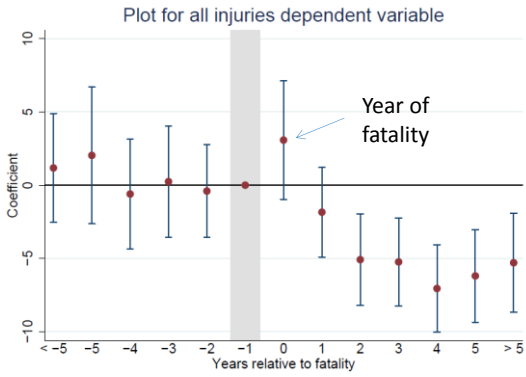


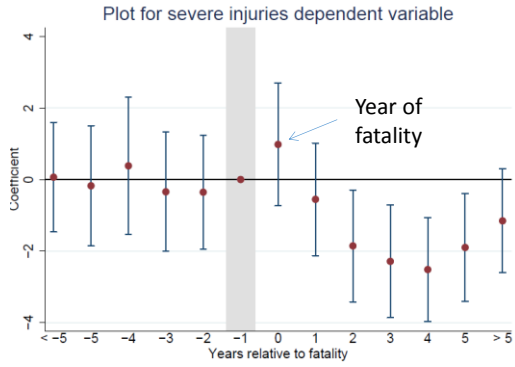


- The pattern is consistent with firm responses (take some time to fully occur) as opposed to only an employee shock effect (that likely is strongest early on)

Firm Responses – Mapping out a longer period

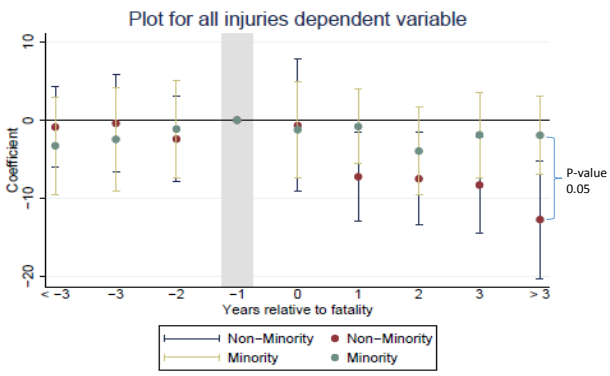
- More lags & leads mean lower sample size

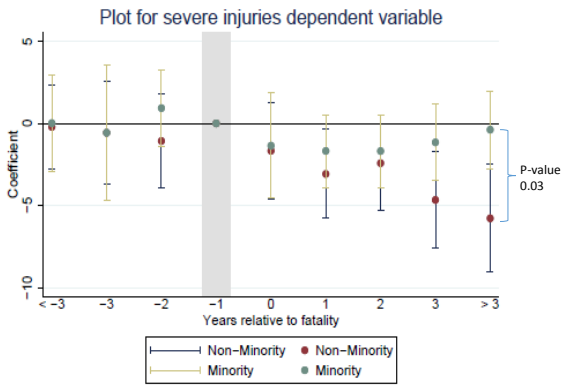




- In the long run it is probably not a permanent effect based on this pattern

DRCs Conditional on Ethnicity of Late Employee





- Note: Shorter sample period because of shorter time-series on ethnicity
  - We are currently collecting more data

Main Takeaways from "Whose Lives Matter Most"

- Preliminary results indicate that firm responses to worker fatalities depend on who died
  - Suggest that corporate policies are not always followed
  - We will try to assess whether there are systematic factors that explain such failures
- In addition to academically interesting, knowing when failures systematically occur could help practitioner design better internal control systems that ensure corporate policies are followed

Main takeaways

- Research question:
  - Most important issue
    - Reasonable people disagree
  - I do what I find interesting
    - Try to connect it to a broader issue
- Settings:
  - Trade-off between broad vs. narrow samples
  - Often a trade-off between external and internal validity
  - Not clear to me that we always learn more from broad samples or that they are always more generalizable
- Identification:
  - Institutional knowledge is often your best bet
  - Advanced statistical methods are rarely a good substitute
    - Although clearly important that you do it "right"
  - A sound econometric analysis always starts with a good understanding of the institutional details (and the variation available)

Visiting a US school as a PhD student

- I did my PhD at Manchester Business School but visited Chicago during my PhD
  - I learned a lot from that (and got a job because of it)
- How to do it
  - Don't be afraid to reach out to academics in your area. Many schools are interested in visitors
- Chicago preferences
  - Visit relatively early on in your program (no need to have a paper)
  - Stay for an entire academic year
  - Apply before Christmas the year before you would like to visit