Fraud culture

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Fraud is costly

- Fraud is costly for investors and firms[1]
  - over 1997–2022, average 192 securities class action filings
  - average maximum dollar losses at $1,083 billion
- Corporate culture is believed to play a role both
  - ..in creating incentives
  - and imposing costs

[1] Cornerstone Research, 2024

Enron's culture

- "Our job was to **take advantage of the law** to make as much money as we can"[2]
- "ruthless and reckless... [lavishing] rewards on those who played the game, while **persecuting those who raised objections**"
- Traders were "**afraid to go to the bathroom** because the guy sitting next to them might use information off their screen to trade against them"

[2] Dallas, 2003

What is the corporate culture of fraud?

- Hard question because fraud is only partially observed
  - Use class periods from securities class action lawsuits
- Corporate culture is hard to measure
  - Measure corporate culture from employee reviews
- Unclear which culture norms are relevant
  - Leverage machine learning with many culture norms

This paper

- Creates firm-year measure of culture norms
- Describe “fraud culture” by predicting fraud using norms
- Examines patterns and changes in fraud culture

Literature

- Fraud prediction
  - AAERs (e.g., Beneish, 1999; Dechow et al., 2011), restatements (e.g., Zakolyukina, 2018; Bertomeu et al., 2021), securities class action lawsuits (e.g., Dyck et al., 2023), violations of laws and regulations (e.g., Campbell and Shang, 2022)
- Organizational culture and its role
  - Performance and value (e.g., Guiso et al., 2015b; Graham et al., 2022; Green et al., 2019), Tobin's Q (e.g., Graham et al., 2022), wrongdoing (e.g., Biggerstaff et al., 2015; Liu, 2016; Li et al., 2021; Graham et al., 2022)
- Measurement of culture
  - Surveys and interviews (e.g., O'Reilly et al., 2014; Graham et al., 2016, 2022), personal experience (e.g., Davidson et al., 2015; Biggerstaff et al., 2015; Liu, 2016), ratings of culture (e.g., Guiso et al., 2015b; Ji et al., 2017; Green et al., 2019; Zhou and Makridis, 2019), firm disclosures (e.g., Guiso et al., 2015a; Li et al., 2021), and employee reviews (e.g., Corritore et al., 2018; Grennan, 2019)

Corporate culture

- Culture
  - "[...] as the norms that characterize a group or organization that, if widely shared and strongly held, act as **a social control system to shape members' attitudes and behaviors**." (Chatman and O'Reilly, 2016)
- Norms can be assessed on
  - *Content*, i.e., what is deemed important
  - *Intensity*, i.e,. how important the norm is
  - *Consensus*, i.e., how widely shared the norm is

Securities class action lawsuits

- Comprehensive data maintained by Securities Class Action Clearinghouse at Stanford Law School and Cornerstone Research
  - Rule 10b-5 covers fraud in the purchase or sale
  - Section 11 covers fraud in the registration statements
- Three categories
  - *All fraud* includes all cases
  - *Fraud* drops dismissed cases
  - *Severe fraud* restricts to settlement over 3 million

Culture norms (1)

- **Adaptability**
  - Adaptability, learning, **innovation**, and creativity
  - vs. Inflexible, conventional, hierarchical
- **Community**
  - Caring for community and employees, **respect**
  - vs. Mostly not caring about employees
- **Customer-oriented**
  - Customer-centric, **quality**
  - vs. Customer complaints, quality issues

Sources: O'Reilly et al., 2014a, Guiso et al., 2015, Graham et al., 2016, Graham et al., 2022, and Li et al., 2021

Culture norms (2)

- Detail-oriented
  - Detail-orientation, expertise
  - vs. Careless, not quality-oriented
- **Integrity**
  - Integrity, ethics, compliance
  - vs. Low ingerity, unethical, dishonest
- Openness
  - Openness and transparency, encourages information flow
  - vs. Secretive, uncommunicative, inhibits information flow

Culture norms (3)

- Results-oriented
  - Results-orientation (over employee-orientation), low respect/concern for employees, pressure to deliver
  - vs. Employee-orientation (over results-orientation) and respect
- **Teamwork**
  - Teamwork and collaboration
  - vs. Competition, politics and power

Corporate culture and fraud

- Transparency in communication (Openness)
- Job dissatisfaction (Results-/detail-/customer-orientated)
- Compliance (Integrity)
- Organizational structure (Adaptability)
- Politics and power (Adaptability, Teamwork)
- Competition (Teamwork)

Sources: Dallas (2003), Biggerstaff et al. (2015), Graham et al. (2016), *Business Fraud: Culture Is the Culprit*, *Fraud examiner's manual (ACFE)*, *Freddie Mac, Four Former Executives Settle SEC Action Relating to Multi-Billion Dollar Accounting Fraud*

Culture norms measure

- Glassdoor reviews (pros and cons separately)
- Textual factors as in Cong et al. (2019)
- Pre-selected seed words with part-of-speech tags
- Clustering on word vectors from `word2vec`
  - Dense low-dimensional word vectors
  - `vec`(King) - `vec`(Man) + `vec`(Woman) $\approx$ `vec` (Queen)
  - `vec`(Paris) - `vec`(France) + `vec`(Italy) $\approx$ `vec` (Rome)

Adaptability





Community


listening culture
unhealthy
line dancing
toxic
civilized
playful
multicultural
carefree
fun
respect
repressive
wholesome
elitist
dog - eat - dog
vibrant
distinctive
autonomous
diversity
hostile
inclusive
caring
community
work life balance
culture foster
stiff
uplifting
youthful
casual
easygoing
militaristic
lively
fun company culture
business casual
chill environment
cult - like
relax
cutthroat
pleasant
collaboration
depressing


persuasion
management behavior
coercion
wrongful
yelling
malicious
ridicule
allegation
mistreatment
deceit
laziness
betrayal
sexist
blatant
cruelty
belittling
insubordination
humiliation
misconduct
slander
discrimination
discrimination lawsuit
deception
condescension
disregard
sexism
slur
age discrimination
terrorist
intimidation tactic
bigotry
disrespect
exploitation
outright
gender discrimination
sexuality
profiling
bullying
misogyny
misrepresentation
violation
playing favorite
racial
overt
intimidation
innuendo
manipulation
violence
racist
banter
swearing
bullying tactic
employee abuse
sabotage
assault
outburst
covert
downright
dishonesty
psychological
unionization
targeting

Customer-oriented culture





Detail-oriented culture





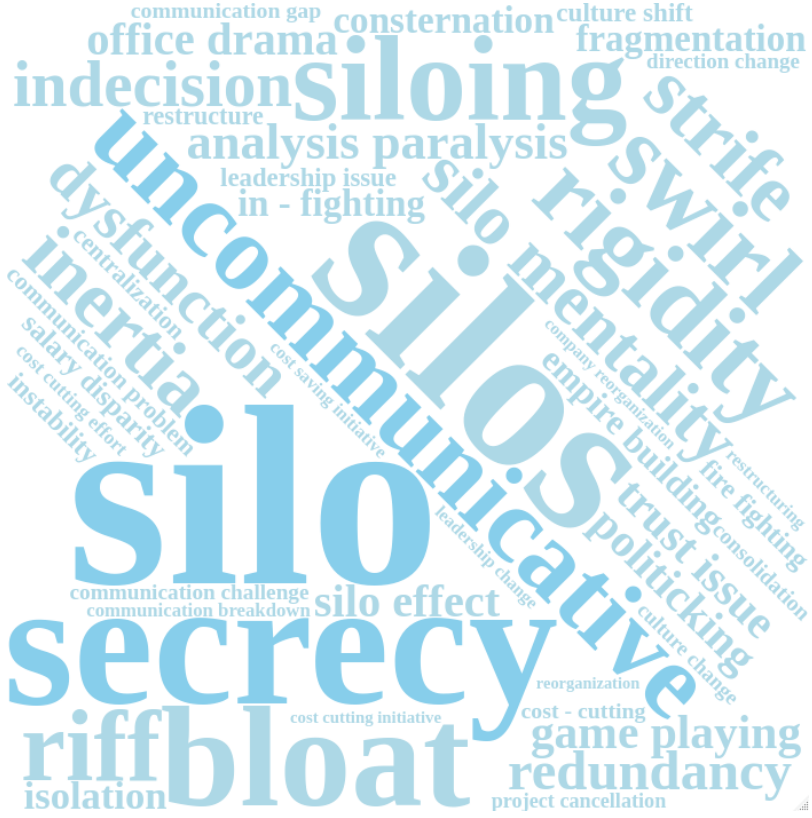
Integrity


ethic
ethical
trusting
respect
integrity
sincere
likeable
conscientious
trustworthy
earnest
thoughtful
articulate
supportive
socialistic
reactive
enthusiastic
destructive
effective
introspective
idealistic
opportunistic
authoritarian
academically
extroverted
altruistic
motivate
operation leadership
aggressive
charismatic
eccentric
customer - centric
inquisitive
tireless
productive
sophisticated
employee - centric
resilient
diplomatic
customer centric
client centric


law
selfish
abusive
unethical
disregard
entitlement
regulation
aggressive
punitive
retaliation
callous
childish
discriminatory
unscrupulous
dysfunctional
sneaky
patronizing
negligent
degrading
retaliatory
authoritative
destructive
distrust
heartless
toxic
dishonest
territorial
deceitful
vindictive
passive
elitist
irrational
chauvinistic
untrustworthy
antagonistic
unfair
manipulative
sadistic
hostile
ineffective
demoralize
egotistical

Openness


open
welcome
responsive
amenable
attentive
relatable
accepting
sympathetic
forgiving
impolite
hand - off
conceited
considerate
communication
clique
comforting
deceitful
appreciative
territorial
indecisive
dictatorial
chauvinistic
pretentious
lackadaisical
disorganize
insensitive
vindictive
rude
abusive
distrustful
untrustworthy
unprofessional
inconsiderate
dismissive
disrespectful
irresponsible
condescending
forthcoming
controlling
apathetic
accommodating
clique - y
unforgiving
accessible
prideful
sexist
dishonest
uneducated


silo
secrecy
bloat
siloing
uncommunicative
silos
mentality
rigidity
swirl
strife
indecision
office drama
consternation
fragmentation
analysis paralysis
in - fighting
dysfunction
inertia
silo effect
politicking
trust issue
empire building
communication gap
culture shift
direction change
restructure
leadership issue
centralization
communication problem
salary disparity
cost cutting effort
instability
cost saving initiative
company reorganization
restructuring
fire fighting
consolidation
leadership change
culture change
communication challenge
communication breakdown
reorganization
cost cutting initiative
cost - cutting
game playing
redundancy
project cancellation
isolation

Results-oriented culture



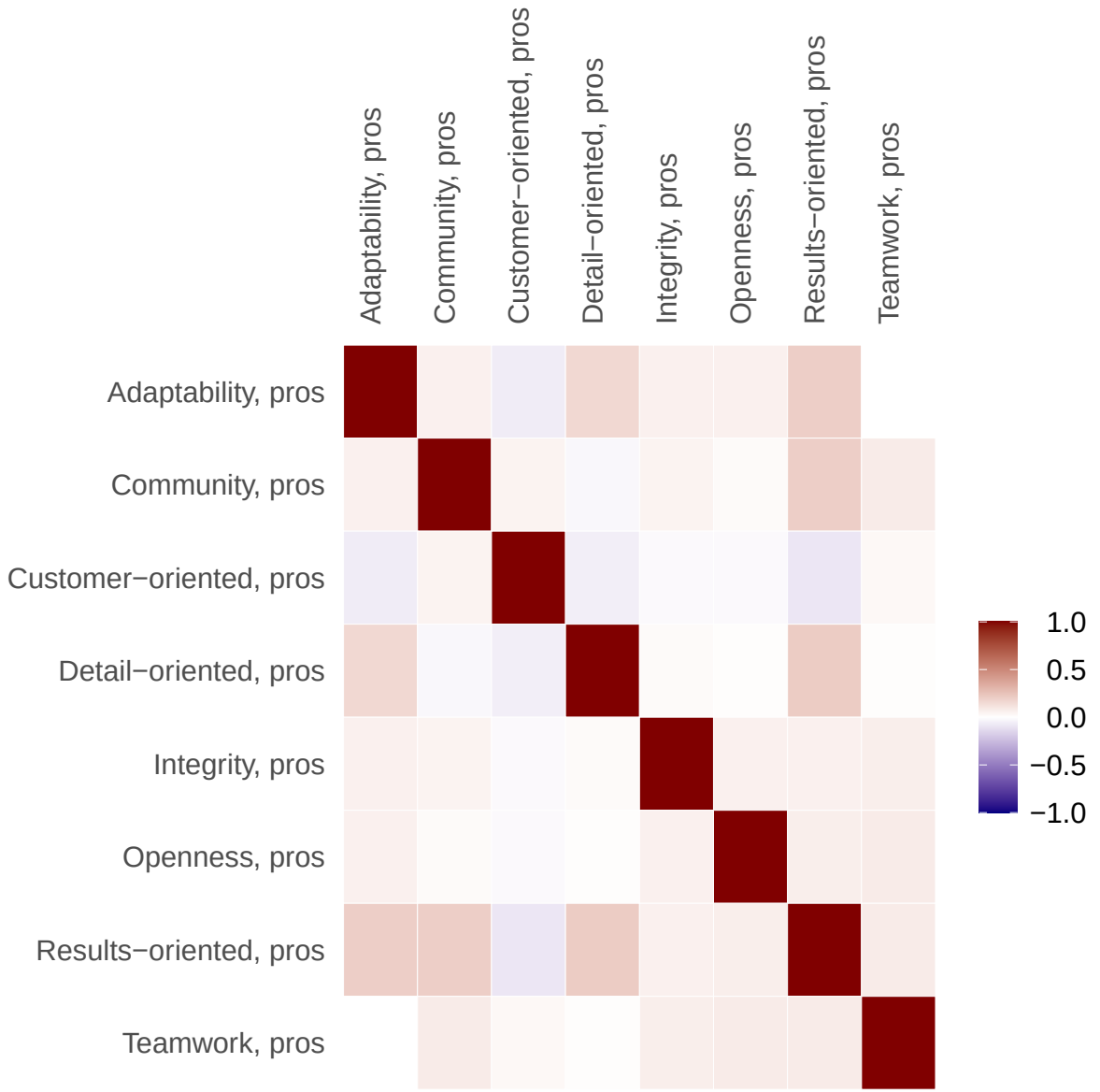


Teamwork

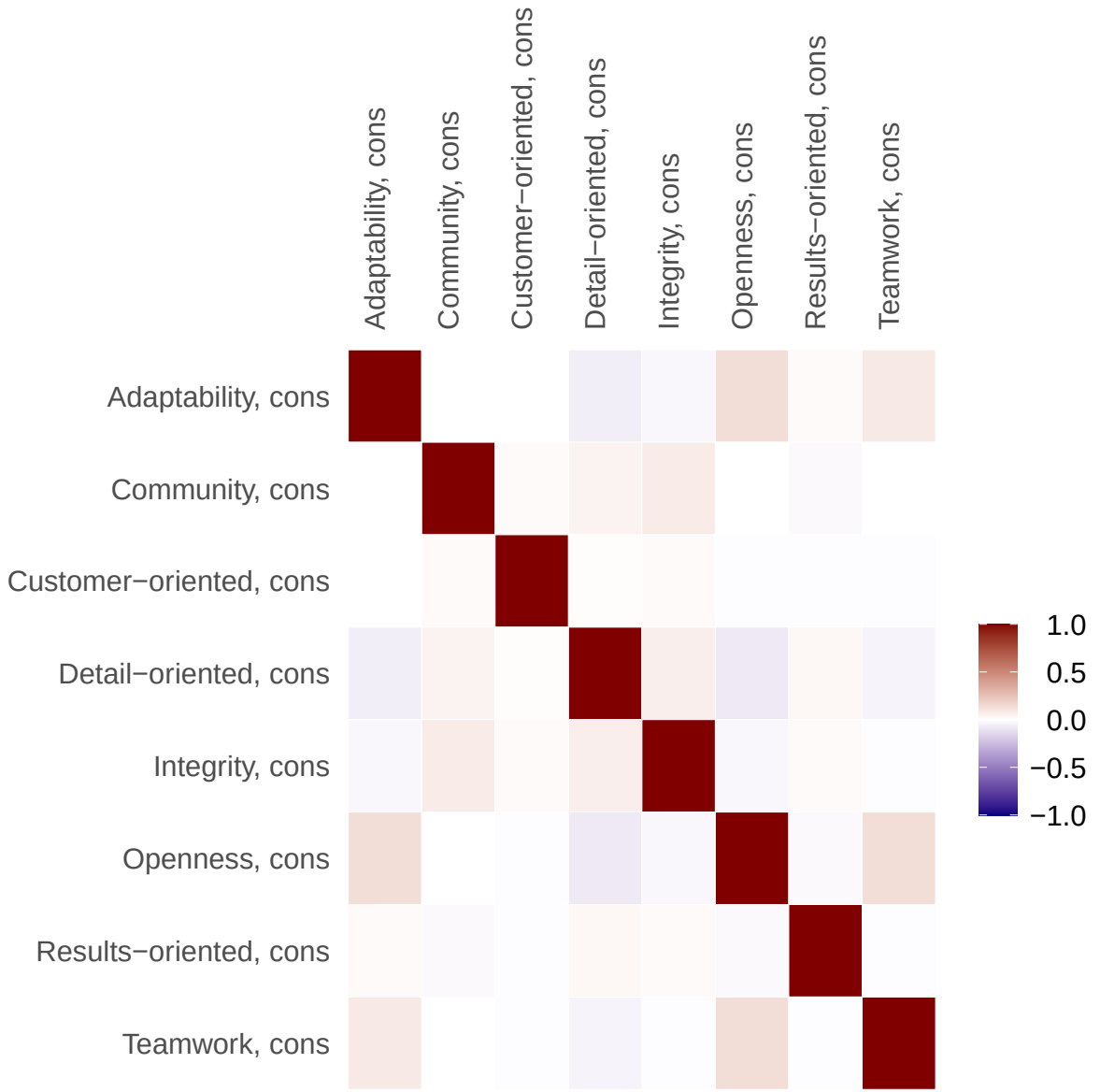

cliquey environment
instructive
unstructured
silo
cheerful
amiable
teamwork
respectful
helpful
stifling
disheartening
friendly
silo'ed
encouraging
disconcerting
cliquy
collaborative
restrictive
collegial
hierarchical
interactive
cooperative
respect
collaboration
communicative
support
hospitable
affable
disciplined
courteous
limiting
classy
clique - y
personable
collaborate
risk - averse


work - life imbalance
workplace politicgender inequality
backbiting
prejudice
fraternization
store politic
conflict
self - interest
elitism
management incompetence
lying
empire - building
favoritism
stabbing
selfishness
backstabbing
politics
toxicity
self importance
arrogant
political
pettiness
infighting
integrity issue
aggressive
selfish
play favorite
corruption
politic
trash talk
office politic
personality disorder
retaliation
finger pointing
clique
competition
dishonesty
vicious
narcissism
partiality
office gossip

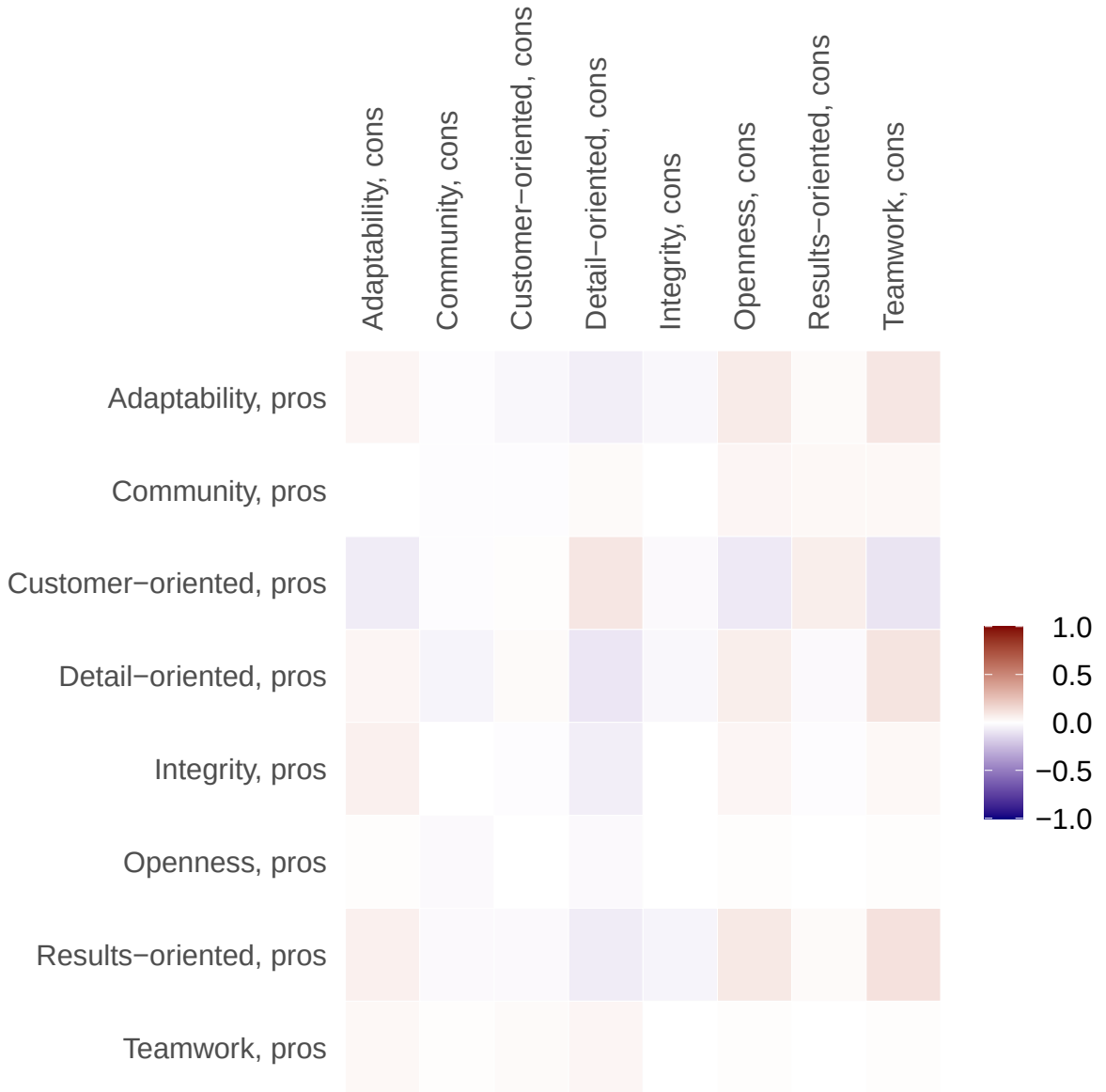
Culture norm correlations (1)



Culture norm correlations (2)



Culture norm correlations (3)



Out-of-sample prediction via machine learning

- Boosted regression trees (Friedman, 2001)
  - depth (highest level of interactions) $\{1, 2, 3, 5, 7\}$
  - shrinkage 0.01
  - maximum number of trees $3,000$
- Prediction benchmarks
  - Uninformed baseline, i.e., an average outcome
  - Financials: size, growth, and profitability
- Train-test split by firm 70/30

Out-of-sample test errors

Outcome	Mean losses				
	Uninformed		Reviews		Firm
Fraud	0.346	$>^{***}$	0.337	$<^{***}$	0.347
All fraud	0.440	$>^{***}$	0.429	$<^{***}$	0.437
Severe fraud	0.321	$>^{***}$	0.315	$<^{**}$	0.323

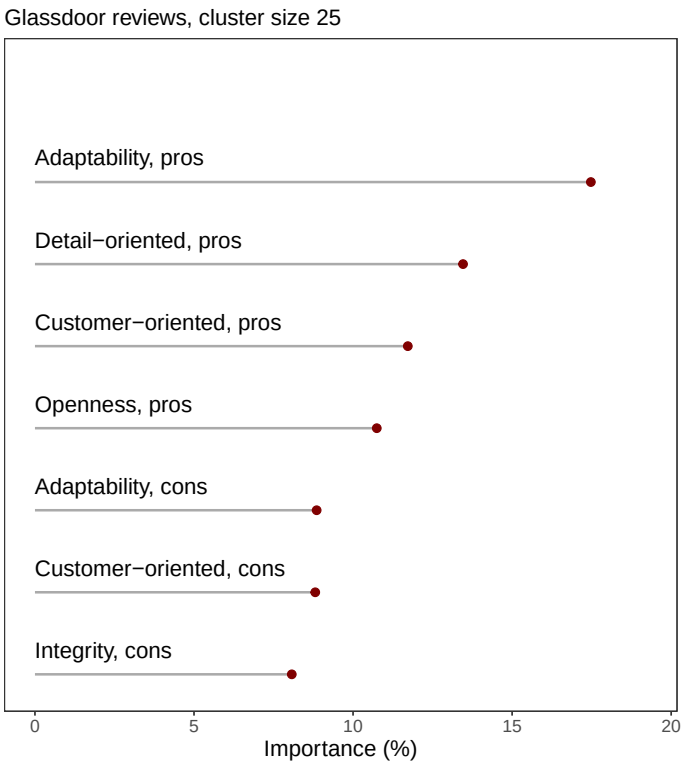
- Test error uses exponential loss function $\ln(1 + \texttt{AdaBoost error})$

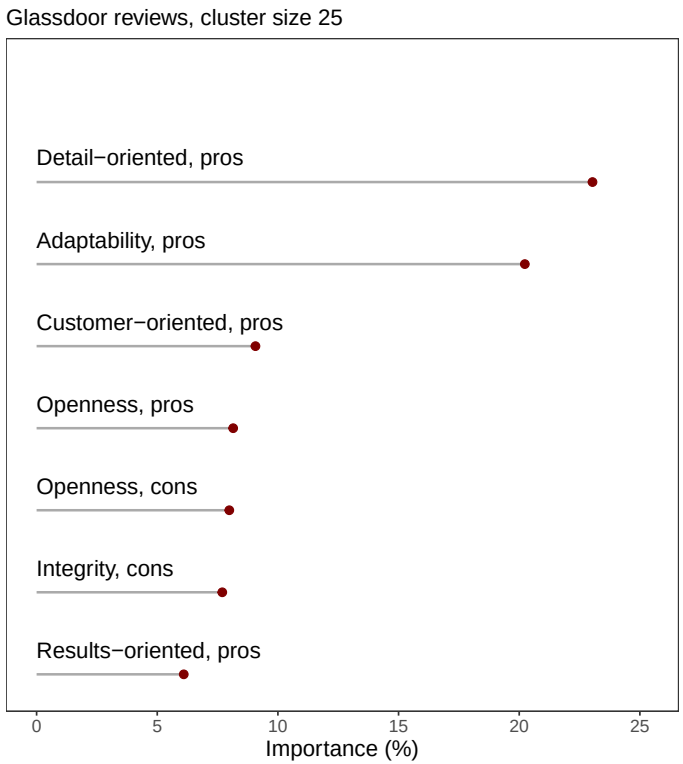
Fraud and fraud culture

Panel A. Fraud

	(1)	(2)	(3)
Fraud culture	0.145***		0.143***
	(0.016)		(0.014)
Size		0.080***	0.022
		(0.022)	(0.019)
Book-to-market		0.016	0.035**
		(0.016)	(0.016)
Return on assets		−0.071***	−0.048***
		(0.013)	(0.012)
R^2	0.021	0.007	0.025
Obs.	11,399	10,925	10,925

Most important norms



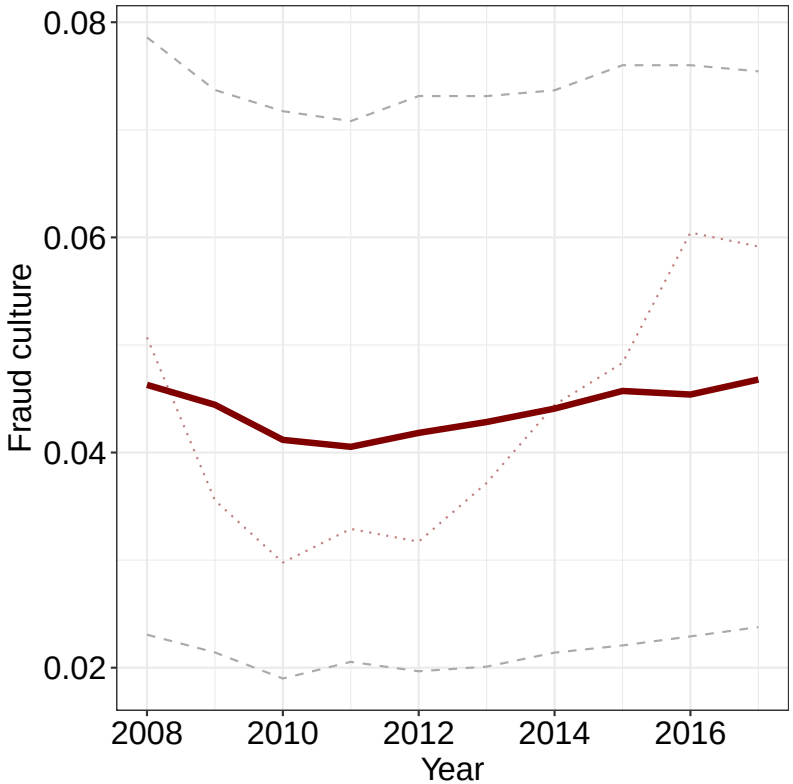


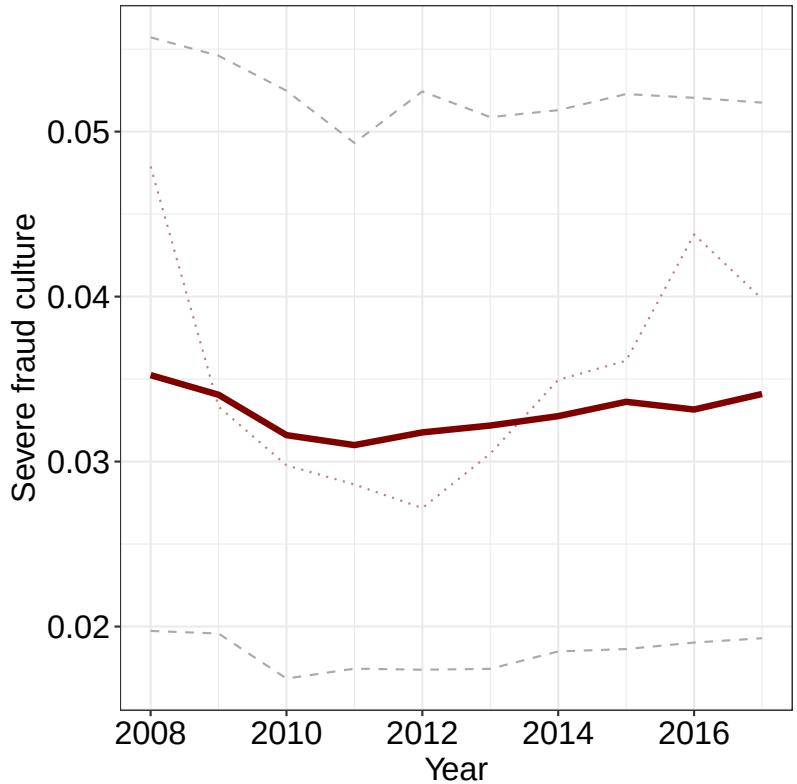
- Adaptability, customer-oriented, detail-oriented, and openness

Fraud culture and norms

- Adaptability, cons (+), Adaptability, pros (+)
- Customer-oriented, cons (+), Customer-oriented, pros (-)
- Detail-oriented, cons (-), Detail-oriented, pros (+)
- Openness, cons (+), Openness, pros (-)
- Integrity, cons (+), Integrity, pros

Fraud culture by year





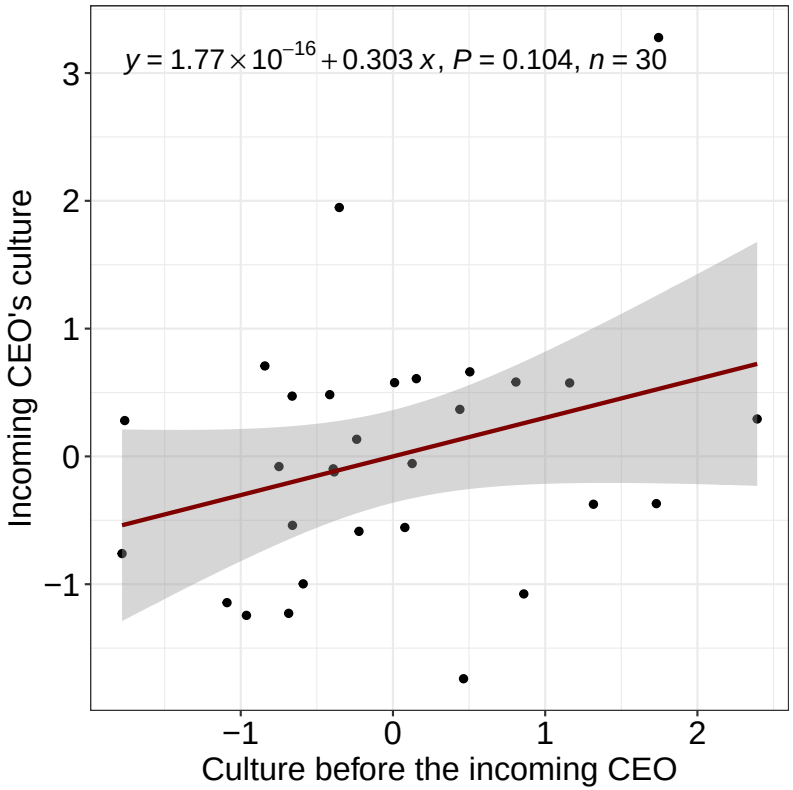
- Temporary drop around Dodd-Frank Act implementation
- Correlation t and $t-1$ is at 0.57 for *Fraud*, 0.66 for *All fraud*, and 0.41 for *Severe fraud*

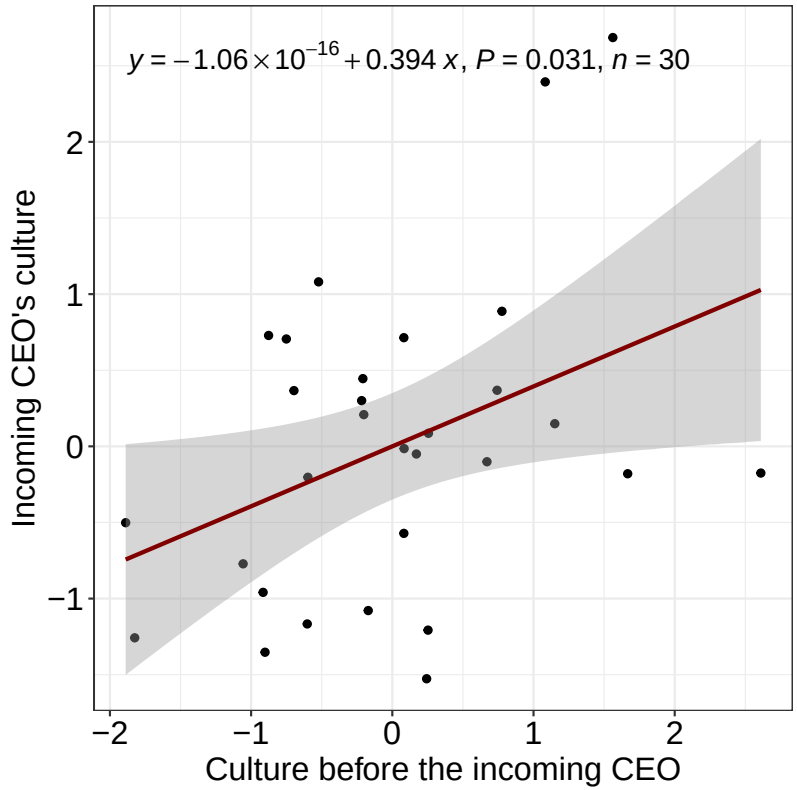
Fraud culture and CEO turnover

- Culture is a consensus about norms
- Leaders' behavior informs about norms of behavior

"... an organization's senior leaders, because of their salience, responsibility, authority, and presumed status, have a disproportionate impact on culture and may be a significant source of cultural influence." (O'Reilly et al., 2014b, p. 599)

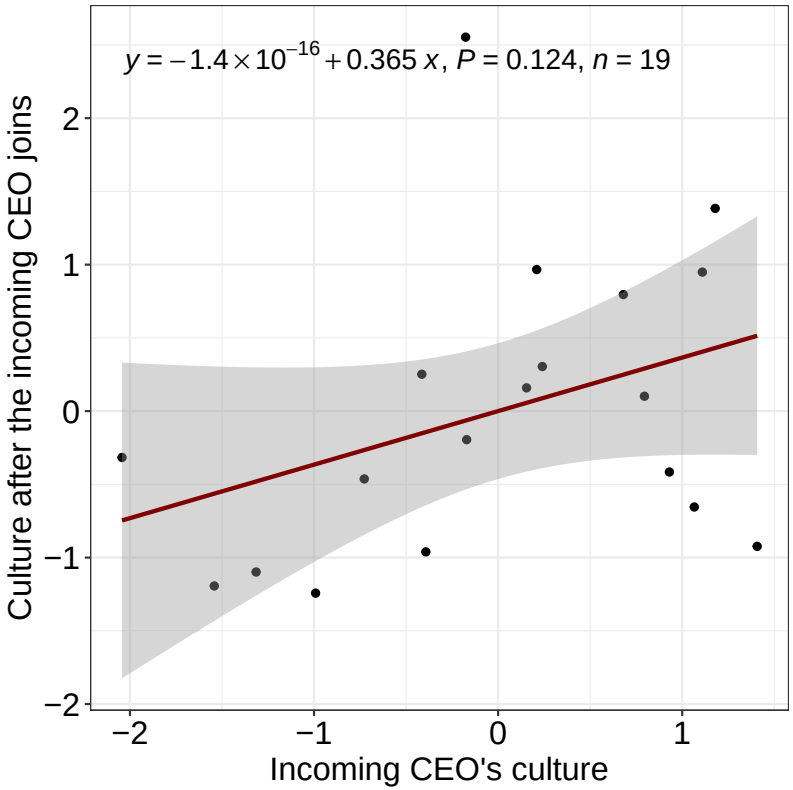
Fraud culture matching

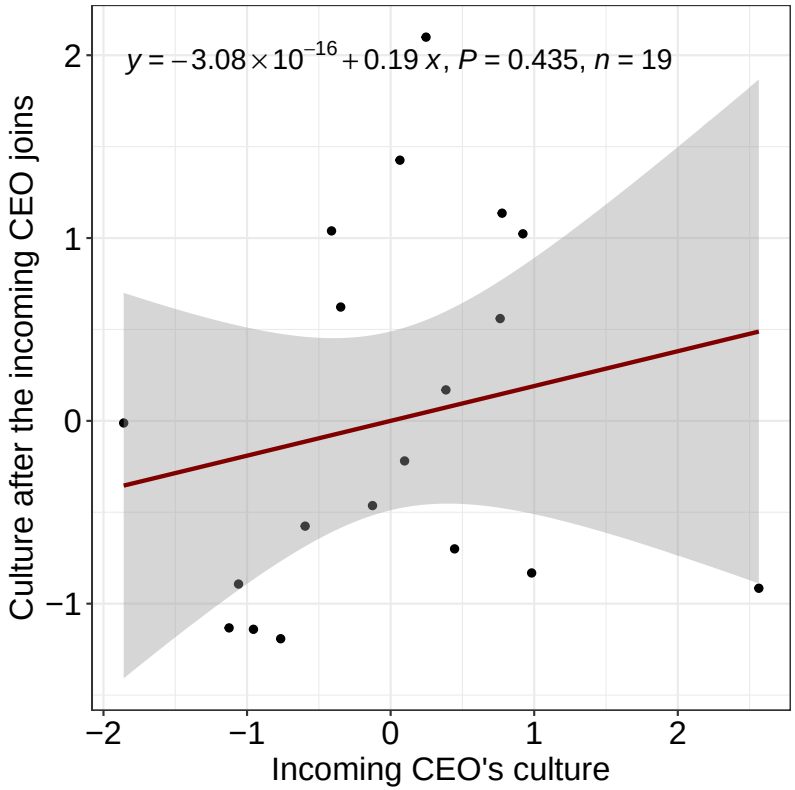




- Drop transition year and require at least two years for CEO tenure

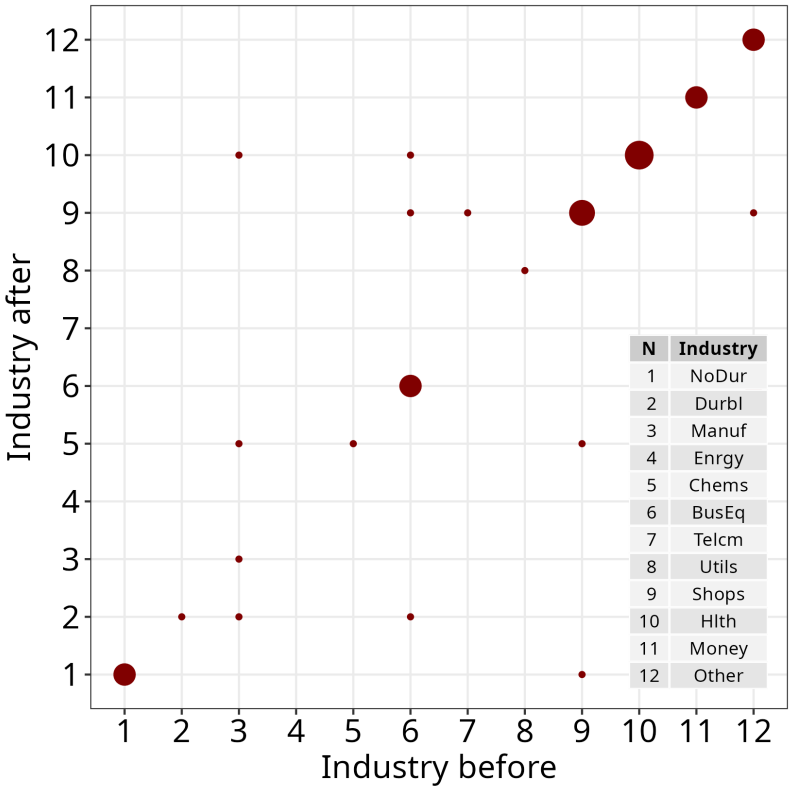
Fraud culture convergence

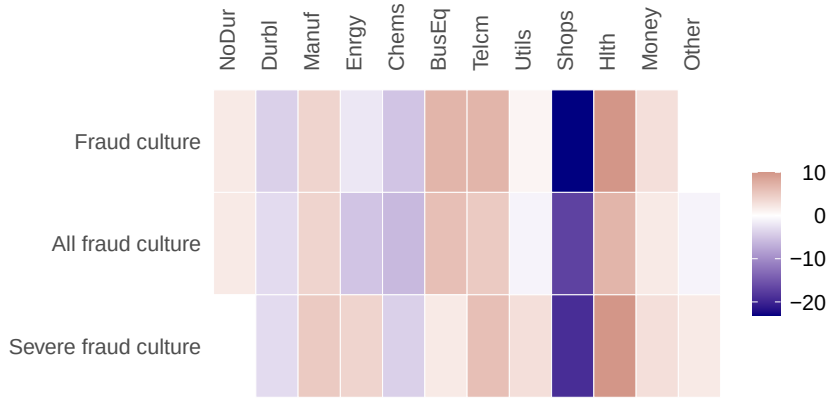




- Drop transition year and require at least two years for CEO tenure for **the same** CEO

CEO turnover within industry





- CEOs tend to stay in the same industry

Conclusions

- Culture norms predict fraud
- Fraud culture is sticky
- CEO turnover exhibits matching and convergence

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