

Which Aspect of Corporate Governance Affect Value (Across Emerging Markets)

Bernard Black

Northwestern, Pritzker, Law School, Institute for Policy
Research, and Kellogg School of Management

(coauthors: Antonio Gledson de Carvalho;
Vikramaditya Khanna; Woochan Kim; Burcin Yurtoglu)

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Talk based on

- Which Aspects of Corporate Governance Matter in Emerging Markets: Evidence from Brazil, India, Korea, and Turkey (working paper 2018) (<http://ssrn.com/abstract=2601107>)
- Project builds on: Methods for Multicountry Studies of Corporate Governance: Evidence from the BRIKT Countries, *J Econometrics* (2014)

Multicountry governance to value: Some broad research questions

Focus on **emerging markets**

- Does **firm-level** corporate governance predict market value **across firms** but *within countries*?
- How do we measure corporate governance (**gov**), anyway?
- How should governance indices vary across countries?
- Which aspects of *gov* “matter” (predict Tobin’s q; share price)

Different questions, not studied here

(LLSV etc.): Effect of **country-level** governance on firm value; economic development, etc.

Effect of *gov* on market value in **developed markets**

Array of “methods” issues

- Data limitations
 - Scarce data on governance, especially time-series
 - Limited data on control variables
 - Small samples in many countries
- “Construct validity” [term borrowed from education, psychology]
 - What is “good” corporate governance?
 - How does it vary across countries?
 - How good are our proxies?
- “Endogeneity”: Best known problem
 - But only get there if: have data; address construct validity
 - Principally omitted variable bias (OVV)
 - Also Reverse causation (value → governance)
- Sample selection bias (in Brazil, India)
 - Because we run our own surveys to get data

Pass over construct validity here

- Boring, technical, and important enough to warrant a separate project:
 - [Same author team] (2017), Corporate Governance Indices and Construct Validity, *Corporate Governance: An International Review*
 - Which even our discussant, at last GCGC, thought was boring.

Also pass over “shock-based” studies

- “natural” or “quasi” experiments
- Stronger causal inference (aka “identification”)
- But local:
 - To particular country’s rules and institutions
 - And a particular reform

Prior emerging markets research: Two Approaches

- [Massively] Multicountry studies (broad and shallow)
 - **Indices that include emerging markets:** S&P disclosure (2002); CLSA (2001)
 - **Overall Governance Papers:** Klapper Love (JCF 2004); Durnev Kim (JF 2005); Aggarwal Erel Stulz Williamson (RFS 2009); Bruno Claessens (JFI 2010); Doidge Karolyi Stulz (JFE 2007)
 - **Board independence across countries:** Dahya Dimitrov McConnell (JFE 2008)
 - Weak research designs
 - Purely cross-sectional
 - “Common index”: Same elements in all countries
 - Someone else’s index (not well designed)
 - Limited covariates

Alternate approach: country studies

- Country studies (narrow and deep) with local indices
- Many with only cross-sectional or pooled OLS
- A few studies of overall *gov* with minimum credibility requirements: (i) panel data: (ii) “firm effects” (at least RE, prefer FE,); (iii) standard errors clustered on firm:
 - **Korea** (Black & Kim, JFE 2012)
 - **Russia** (Black, Love and Rachinsky, EMR 2006)
 - **Turkey** (Ararat, Black, and Yurtoglu, 2016)
- Generalizability is unclear

This (multi-paper) project: “Middle road”

- Careful country studies
 - 4 major emerging markets
 - Panel data: Firm RE and FE
 - Benefit from board structure shocks in Korea, Turkey
- Huge data collection effort
- Embrace construct validity
 - Seek to measure “same” underlying CG concepts using country-specific elements (constructs)
- Confidence bounds on FE estimates

Hierarchy of Research Designs

- Randomized trial
 - Rarely achievable in finance, management
- Shock-based (natural or quasi-experiment)
 - But often only one country; affect only part of *gov*
- **Firm FE (or at least RE)**
 - **With extensive covariates**
- Pooled or cross-sectional OLS
- We're in the middle
 - This is still real progress (or so I think!)
 - For subindices project, referees have not yet agreed . . .

Prior project: results for overall *gov*

- Governance elements vary greatly across countries
- Endogeneity matters:
 - firm FE vs RE vs pooled OLS estimates
 - extensive vs. few control variables
- Broad, **country-specific** indices predict Tobin's q
 - common index has little or no power
- Next question (this project):
 - What aspects of governance drive the power of the overall index to predict governance

Research on aspects (subindices) of governance

- Such as board independence, disclosure
- Should start with broad governance index
 - Different aspects of governance correlate
 - Study one aspect, without control for rest → omitted variable bias (OVB)
 - Rest of *gov is* omitted, but correlates with studied aspect **and** (perhaps) outcome, hence OVB
- Prior studies of aspects of gov **with** (i) panel data, (ii) firm effects, (iii) firm clusters; and (iii) control for rest of *gov*:
 - None! [that we have found]

Overview: results for subindices

- For subindices, within overall country indices:
 - Disclosure predicts Tobin's q
 - Board Structure predicts in Korea, Brazil
 - But not India or Turkey
 - Nothing else predicts **at all**
- Within Board Structure (subsubindices)
 - Board independence predicts in Korea Brazil, Turkey
 - Board committees predicts little
- Within Disclosure (subsubindices)
 - Financial disclosure predicts strongly
 - Non-financial disclosure might matter also

Advice for firms (and maybe countries)

- If our results are causal
 - Likely given lower bounds analysis, but not certain
- Payoff in firm value if investing in disclosure
 - Especially financial disclosure
 - And perhaps board independence too
 - Within the ranges typical for these countries
 - Does **not** imply further payoff from the much higher independence levels typical in US firms

Methods issue 1: governance data

- No good multicountry index over time
 - ISS: US-centric; only developed countries
 - Asset4 and Thomson Reuters:
 - Cover emerging markets **but**
 - We show: no predictive value
 - Maybe because don't address disclosure
- We build our own index, in each country

Collect data across countries, years

- Brazil surveys: 2004, 2006, 2009 (working on 2014)
- India surveys: 2005, 2007, 2012
- Korea: 1998-2004 (extending thru 2010)
 - Rely on KCGS
- Turkey: 2006-2012 (extending thru 2014)

Methods issue 2: construct validity

- In each country: build best **country-specific** overall governance index we can
- Based on subindices (where available) for:
 - Disclosure
 - Financial disclosure
 - Non-financial disclosure
 - board structure
 - Board independence
 - Board committees
 - board procedure
 - ownership structure
 - shareholder rights
 - RPTs

Very different elements

- Governance **elements** must be:
 - Measurable
 - Meaningful (in judgment of local coauthors)
 - attend to local rules, institutions
 - We ***think*** they might reflect “good” governance
 - ***Lots of judgment here!***
 - Significant variation across firms
 - Not useful if required by law; nearly universal; or rare
 - Not too similar to another element
 - similar across countries **to extent feasible (*often not*)**
- Turns out: elements are *very different*.

Brazil Corp Gov Index (BCGI)

- Use Brazil to illustrate approach and complexities
- Subindices (each 0 ~ 100) for:
 - Board Structure (7 elements)
 - Ownership Structure (5 elements)
 - Board Procedure (6 elements)
 - Disclosure (11 elements)
 - Related Party Transactions (5 elements)
 - Minority Shareholder Rights (7 elements)
- $BCGI = [\sum(\text{subindices})/6]$
 - Range: [19, 92]
 - Each subindex: average of nonmissing elements
- $BCGI_{\text{norm}} = \text{normalized } [\sum(\text{normalized subindices})]$

What's in BCGI?

Focus on Board Structure Subindex

Element	Public data	2004 Mean
Board has \geq one independent director	0	0.73
Board has \geq 30% independent directors	0	0.47
Board has \geq 50% independent directors	0	0.20
CEO is NOT chairman of the board	1	0.71
Audit committee exists	1	0.14
Permanent or near-permanent fiscal board exists	0	0.68
Audit committee or permanent fiscal board exists and includes minority shareholder representative	0	0.47

Only 2/7 elements use public data

Guessing may not help: DDM (2008) on board independence

“guess” in 2002: 57% independent in Brazil

We find in 2004: 23% independent

Importance of local institutions

Brazilian institution: fiscal board

- Can be permanent (in charter) or near-permanent (demanded regularly by minority shareholders)
 - We use (4 years out of 5) as measure of “near-permanent”
- Functional substitute for audit committee
 - Many firms have one or the other; few have both
 - Audit committees rare (mean = 0.14)
 - Fiscal board more common (mean = 0.68)

Compare Brazil to Korea for Board Structure

Brazil Element (NP = not public)	Korea Element
Board has ≥ 1 independent directors (NP)	Required
$\geq 30\%$ independent directors (NP)	Requires 25% indep. directors
$\geq 50\%$ independent directors (NP; mean = 0.20)	in KCGI
	Strict majority of indep. directors
CEO is NOT board chairman	Not available
Audit committee exists (uncommon; mean = 0.14)	in KCGI
Permanent or near-permanent fiscal board exists	Not meaningful
Audit committee or permanent fiscal board includes minority shareholder representative	Not available; rare
Rare (NP)	Compensation committee exists
Rare (NP)	Outside director nom. committee exists

Only available common elements are:

- 50% outside directors (uncommon in Brazil)
- audit committee (rare in Brazil; misleading alone)

Only **public** common element: audit committee

Rare in Brazil, misleading alone

Lesson: CG index must be country-specific

- If require same elements in each country:
 - Can measure little
 - What we can measure may not be very relevant
 - Can help to explain why commercial indices have no power
- Problem gets worse if add more countries

Construct validity questions

- We're not sure how to measure "governance"
 - Not sure what counts as "good" CG, for which firms, in which countries
 - We have. . .
 - Different overall indices in each country
 - Different subindices in each country
 - **Very different** subindex **elements** in each country
 - We **hope**:
 - CG indices & subindices proxy for similar concepts

Covariates

- Another boring but important topic
- Personal view: Most corporate finance projects use far too few covariates
 - Governance studies – results often weaken with more covariates
 - OVB (omitted variable bias)!
 - We use extensive covariates in each country
 - Can't measure all of them in all four countries

Prior Results with Country CG Indices (t-stats in paren.)

Dependent variable		ln(Tobin's q; outliers excluded)				
		Brazil	India	Korea	Turkey	Russia
Firm Random Effects	Country CGI	0.117***	0.066**	0.054***	0.073***	0.094***
		(3.03)	(2.63)	(6.51)	(3.17)	(6.22)
	Breusch-Pagan	0.0000	0.0000	0.0000	0.0000	0.0000
	Median λ	0.33	0.30	0.61	0.66	0.71
Firm Fixed Effects	Country CGI	0.074	0.079**	0.051***	0.074***	0.067***
		(0.95)	(2.30)	(5.55)	(3.00)	(2.75)
	No. of firms	81	186	668	190	99

All results: year dummies, **extensive** controls
(best we can find in each country)

Then maybe a step too far . . .

- Push construct validity a step further
- Take governance index from each country
- Build multicountry index
 - Lose Russia
 - Separate “response surface” for each country
 - year*country dummies
 - Country specific control variables

Pooled CGI vs. Common Index

Dep. Variable	ln(Tobin's q), outliers excluded for each country-year				
	(1)	(2A)	(2B)	(3A)	(3B)
	Pooled CGI	Common Index	Non-common	Common Index	Pooled CGI
Pooled OLS (weighted)	0.069***	-0.009	0.135***	-0.021	0.082***
	(5.82)	(-0.70)	(6.35)	(-1.48)	(5.49)
Random effects (unweighted)	0.062***	0.002	0.087***	-0.012	0.074***
	(6.67)	(0.23)	(6.58)	(1.53)	(7.03)
Fixed effects (weighted)	0.063***	0.000	0.079***	-0.011	0.057***
	(3.86)	(0.00)	(2.73)	(0.85)	(3.28)

Non-common GCI: Country CGI w/o Common Index elements

Common index predicts **nothing**

Coefficients small, often *negative*, if control for rest of CGI!

Which Subindices Predict Tobin's q ?

	Brazil		India		Korea		Turkey		Pooled Sample	
Regression	RE	FE	RE	FE	RE	FE	RE	FE	RE	FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Disclosure	0.144	0.194	0.071	0.094	0.026	0.023	0.077	0.070	0.050	0.040
	(4.14)	(3.74)	(2.22)	(2.23)	(3.91)	(3.12)	(3.71)	(3.02)	(5.65)	(4.55)
Board Structure	0.082	0.065	0.024	0.021	0.028	0.033	-0.001	0.016	0.021	0.020
	(3.09)	(1.57)	(0.97)	(0.59)	(4.37)	(4.57)	(-0.06)	(0.79)	(2.64)	(2.26)
Board Procedure	-0.006	-0.001	-0.025	-0.036	0.007	0.006	-0.003	-0.008	0.001	-0.001
	(-0.27)	(-0.03)	(-0.91)	(-0.85)	(1.31)	(0.94)	(-0.17)	(0.44)	(0.13)	(-0.14)
Shareholder Rights	0.016	-0.028	0.011	0.025	0.001	0.001	0.011	0.006	0.007	0.007
	(0.48)	(0.41)	(0.40)	(0.73)	(0.07)	(0.07)	(0.71)	(0.41)	(0.62)	(0.61)
Ownership Structure	-0.014	-0.099			<i>-0.012</i>	<i>-0.015</i>	0.013	<i>0.062</i>	-0.000	-0.003
	(0.50)	(2.04)			<i>(1.68)</i>	<i>(1.74)</i>	(0.61)	<i>(1.97)</i>	(0.04)	(-0.32)
Related Party Transactions	-0.018	-0.033	0.011	0.027					0.009	0.022
	(-0.84)	(-1.32)	(0.42)	(0.95)					(0.42)	(0.93)
No. firms	159	81	401	199	646	644	195	193	5,175	5,175
No. of obs.	236	158	613	411	3,107	3,105	1,092	1,090	1,403	1,403

Disclosure & Board Structure vs. All Else

		Brazil	India	Korea	Turkey	Pooled	Pooled Weighted
RE	Combined D-BS Index	0.176*** (5.83)	0.063** (2.02)	0.045*** (6.21)	0.046** (2.32)	0.057*** (5.69)	
	D-BS index complement	-0.015 <i>(-0.59)</i>	0.006 <i>(0.24)</i>	0.008 <i>(1.14)</i>	0.020 <i>(1.02)</i>	0.006 <i>(0.77)</i>	
FE	Combined D-BS Index	0.194*** (3.54)	0.074 <i>(1.64)</i>	0.046*** (5.85)	0.055** (2.44)	0.050*** (4.85)	0.051*** (2.96)
	D-BS index complement	<i>-0.057*</i> <i>(-1.81)</i>	0.028 <i>(0.95)</i>	0.006 <i>(0.86)</i>	0.017 <i>(0.82)</i>	0.006 <i>(0.65)</i>	0.005 <i>(0.38)</i>

Message: Other aspects of governance predict nothing!

All further results: Firm FE only

Components of disclosure, board structure

Index or subindex	Brazil	India	Korea	Turkey	Pooled	weighted
Financial disclosure	0.132*** (3.79)	0.016 (0.40)	0.024*** (3.20)	0.035* (1.97)	0.035*** (4.33)	0.036*** (2.98)
Non-financial disclosure	0.024 (0.89)	0.062 (1.62)	0.002 (0.27)	0.034 (1.32)	0.015** (2.13)	0.027** (2.47)
Board independence	0.069*** (3.03)	0.031 (1.12)	0.016*** (3.39)	0.027 (1.56)	0.018*** (2.63)	0.020* (1.80)
Board committees	0.042 (1.53)	0.006 (0.23)	0.019*** (2.90)	-0.006 (-0.27)	0.007 (0.84)	-0.004 (-0.28)
Other subindices	yes	yes	yes	yes	yes	yes

Confidence Bounds on OVB

- OVB formula: $\beta_{long} - \beta_{short} = \rho(q, u)_{\mathbf{x}, CGI} * \rho(CGI, u)_{\mathbf{x}}$
 - Long = short plus partial effect of omitted \mathbf{u} on outcome * partial effect of \mathbf{u} on included (CGI).
- We know power of covariates \mathbf{x} to: (i) predict outcome; (ii) predict governance
- Assume omitted variable(s) \mathbf{u} have similar power
- Two approaches:
 - Hosman Hansen Holland (2010) (statistics)
 - Altonji Elder Taber (2005), Oster (2014) (economics)

HHH bounds for Overall CGI

		Omitted variable based on				
Coefficients on Pooled CGI		one cov. (strongly predicts q)	one cov. (strongly predicts CGI)	two covs. (strongly predict both)	all growth, intangibles covariates	all covariates
covariates	β_1	β_{lower}				
common*	0.0633***	0.0624***	0.0620***	0.0579***	0.0613***	0.0518***
country	(3.86)	(3.92)	(3.89)	(3.64)	(3.85)	(3.15)
But if we weaken the covariates (single response surface)						
common	0.0829***	0.0825***	0.0813***	0.0809***	0.0822***	0.0802***
	(4.91)	(4.84)	(4.77)	(4.69)	(4.76)	(4.65)

Lower Bounds for D + BS

	Omitted power = same as strongest predictor of	Brazil	India	Korea	Turkey	Pooled
HHH	<i>q</i>	0.176*** (3.65)	0.065 (1.63)	0.031*** (5.19)	0.048 (2.14)**	0.042*** (5.85)
	governance index	0.160*** (3.32)	0.057 (1.42)	0.041*** (6.76)	0.048 (2.14)**	0.042*** (5.85)
	Both <i>q</i> and <i>gov</i>	0.150*** (3.12)	0.025 (0.63)	0.024*** (3.91)	0.048** (2.14)	0.042*** (5.85)
	all covariates	0.153*** (3.16)	0.036 (0.91)	0.033*** (5.50)	0.009 (0.42)	0.032*** (4.43)
ACETO	all covariates	0.174*** (3.61)	0.060 (1.51)	0.017*** (2.81)	0.027 (1.21)	0.042*** (5.87)

Individual elements?

- Power of individual elements
 - Control for rest of subindex
 - And for other subindices
- Little predictive power
- Subindex power comes from overall subindex
 - overall disclosure, not particular pieces

Does governance predict profitability?

- No consistent evidence
- For disclosure, we would not expect any
- More likely: investors pay more for same reported earnings (lower cost of capital)
 - Lower information costs for investors → greater liquidity (accord, Lang, Lins, Maffett, 2012)
 - Lower risk of self-dealing

Summary

- Single country (e.g., my Korea work):
 - Can sometimes find shocks (natural experiments)
 - stronger basis for “causal inference” (identification)
 - But weak generalizability
- This project: move **toward** causal inference
 - Four major emerging markets
 - FE with strong covariates
 - Moderate generalizability
- A good compromise?
- Evidence that disclosure matters; board structure matters in some countries