#### SOCIALLY RESPONSIBLE FIRMS OUTSOURCE LESS

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# MOTIVATION

- Firms can reap significant economic gains from global outsourcing (=Vertical Disintegration)

- At the same time, they need to implement supply-chain CSR
  - Firms are bound to be responsible beyond their legal boundaries
- Supply-chain CSR implementation riddled with myriad challenges emanating from the multi-tiered nature of global chains
- Extant literature neglects the possibility **firms might eschew outsourcing** and instead decide to vertically integrate to more effectively monitor their entire operations

### TAYLOR GUITARS

#### May/2012



Taylor Guitars and Madinter Trade, S.L partnered in late 2011 to purchase the ebony mill, Crelicam, located in **Cameroon**. Taylor says **the joint purchase of the mill provides Taylor with a direct source of sustainable and legally** acquired ebony.

This acquisition is significant, especially **in light of the legal struggles of one of Taylor's largest competitors: Gibson Guitar**, for allegedly importing ebony in violation of the 2008 Lacey Act.

### FERRERO



July/2014

The Ferrero Group continues to strengthen its presence in the hazelnut market in order to guarantee and further improve the quality of a leading raw material that gives a unique taste to many of its popular products, such as Nutella, Ferrero Rocher and Kinder Bueno.

This acquisition will foster Ferrero's Corporate Social Responsibility engagement on sustainable agricultural practices, already active in Turkey through its dedicated program named Ferrero Farming Values (FFV).

### IKEA



#### July/2015

IKEA is working to wield more control over its most important raw material: wood. The Swedish furniture giant earlier this month **bought a forest in Romania**, marking the first time that the company will manage its own forest operations. IKEA said owning and operating forests would help it secure long-term access to sustainably managed wood at affordable prices.

### SYMRISE



#### September/2017

**Symrise is focusing on sustainability** with its vanilla production in Madagascar. The company works with roughly 7,000 small-scale farmers in the fertile SAVA region, sourcing the spice directly from these farmers. **The result is a sustainable and fully integrated supply chain**. Beyond that, the fragrance and flavoring manufacturer helps the farmers improve their cultivation methods and thereby also improve their living conditions.

### THE QUESTION

#### **DO HIGH CSR-PERFORMING FIRMS TEND TO**

# OUTSOURCE LESS (I.E., VERTICALLY INTEGRATE

MORE)?

# CONCEPTUAL FRAMEWORK

- A transaction cost *logic* 

- Transaction costs contingent to the ability to develop **trust-based relationships**:
  - Extent to which a firm engages with suppliers
    - Buyer's Asset Specificity
  - A firm's expansion beyond domestic market
    - Buyer's International Diversification

# HYPOTHESES

- 1. CSR implementation in global supply-chains is arduous and risky, increasing monitoring needs, increasing the relative costs of outsourcing and leading to higher levels of vertical integration
- 2. Firms investing in specific assets (i.e., a deeper engagement with suppliers) develop relational capital such that they would be more effective in implementing supply-chain CSR, decreasing the relative costs of outsourcing
- 3. Notwithstanding, relational capital can only be developed with a limited number of suppliers. Added, internationally diversified firms facing greater pressure for CSR would tend to more closely monitor supply-chain partners, increasing the relative costs of outsourcing

### MODEL



## DATA, SAMPLE AND APPROACH

- Unbalanced panel S&P500 US-headquartered global firms; 2715 firm-year observations
- Period 2002-2014
- Data sources: Global Compustat, Thompson Reuters ASSET4
- VI measured as Value Added / Sales
- CSR measured as a composite CSR index from ASSET4 ESG scores

Moderators:

- Asset Specificity = log (book value of property, plant & equipment / no. of employees)
- International Diversification = non domestic sales / total sales

Firm-level, Industry, Year Controls

Industry-Year FE; Firm Size (logassets); Financial Slack (receivables/sales); Business Diversification (logbusseg)



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## RESULTS

#### Panel corrected OLS Regression

	<b>Dependent Variable = VI</b>			
-	Model 1	Model 2		
Main Variables				
CSP Portermones (CSP)	0.1310***	0.8332***		
CSR Performance (CSR)	(0.0268)	(0.1528)		
A cost Specificity (AS)	0.0528***	0.0908***		
Asset Specificity (AS)	(0.0069)	(0.0129)		
International	-0.0300	0.2145**		
Diversification (INTL)	(0.0297)	(0.0880)		
CSD. AS		-0.0636***		
CSKXAS		(0.0139)		
CSDVINTI		-0.3769***		
CSKXINTL		(0.1013)		
Controls				
Financial Slack	-0.0696***	-0.0722***		
Financial Slack	(0.0190)	(0.0185)		
Eirm Size	0.0083*	0.0111**		
Thin Size	(0.0047)	(0.0048)		
Pusiness Diversification	0.0229***	0.0269***		
Business Diversification	-0.0079	(0.0082)		
Constant	0.0480	0.3963***		
Constant	(0.0861)	(0.1485)		
Industry Fixed Effects	Yes	Yes		
Year Fixed Effects	Yes	Yes		
No. of Observations (N)	2715	2715		
Wald $\chi^2$	2306.34***	2327.74***		
R <sup>2</sup>	0.2699	0.2802		

We find support for hypotheses 1 and 2, not so for hypothesis 3

Note: Standard errors in parentheses **\*p<0.10,\*\*p<0.05, \*\*\*p<0.01** 

### ECONOMIC SIGNIFICANCE



#### Instrumental Variables 2SLS

	M	odel 3	Model 4	
	1st Stage	2nd Stage; DV = VI	1st Stage	2nd Stage; DV = VI
Main Variables				
CSR performance		0.1629***		0.1564***
		(0.0449)		(0.0447)
LCSR	0.8402***		0.8381***	
(Instrument 1 for CSR:	(0.0113)		(0.0113)	
INDCSR	-0.0015*		0.0020	
(Instrument 2 for CSR: industry mean of CSR)	(0.0008)		(0.0073)	
Asset Specificity	-0.0011	0.0549***	-0.0019	0.0521***
	(0.0018)	(0.0090)	(0.0018)	(0.0085)
International	0.0274***	-0.0214	0.0285***	-0.0159
Diversification	(0.0093)	(0.0431)	(0.0096)	0.0442
CSRxAS				-0.0773***
				(0.0188)
LCSRxAS			-0.0114*	
(Instrument 1 for			(0.0054)	
(SRXAS)			0.0081	
(Instrument 2 for			0.0081	
CSRxAS)			(0.0104)	
CSRxINTL				-0.4598***
				(0.1749)
LCSRxINTL			-0.0416	\ /
(Instrument 1 for			(0.0365)	
CSRxINIL)			(0.0522)	
INDCSRXINIL (Instances of 2 for			-0.0532	
CSRxINTL)			(0.0541)	
Controls				•
Financial Slack	-0.0198**	-0.0791***	-0.0206**	-0.0805***
	(0.0091)	(0.0196)	(0.0092)	(0.0193)
Firm Size	0.0122***	0.0072	0.0129***	0.0104*
	(0.0019)	(0.0061)	(0.0019)	(0.0061)
Business	0.0005	0.0203*	0.0008	0.0253**
Diversification	(0.0028)	(0.0119)	(0.0028)	(0.0122)
ndustry FE	Yes	Yes	Yes	Yes
/ear FE	Yes	Yes	Yes	Yes
No. of Obs. (N)	2454	2454	2454	2454
7 Test	1653.09***	16.97***	1070.19***	13.65***
Centered) R <sup>2</sup>	0.8094	0.0988	0.8099	0.1156
Kleibergen-Raap rk LM tatistic		491.355		395.111
Underidentification test)		(p = 0.0000)		(p = 0.0000)
Kleibergen-Raap rk		2760.516		661 756
Wald F statistic		2.769.516		661.756
W1-:4(C(())		(critical value 5%		(critical value 5%
weak identification test)		= 19.93)		= 12.20)
Hansen J statistic		0.273		4.72
Overidentification test)		(p = 0.6015)		(p = 0.1935)
Hansen J statistic (Overidentification test) Note: Standard errors in pa *p<0.10,**p<0.05, ***p<	rentheses 0.01	0.273 (p = 0.6015)		4.72 (p = 0.1935)

#### Instrumental Variables II 2SLS

	Model 5		Model 6	
	1st Stage	2nd Stage; DV = VI	1st Stage	2nd Stage; DV = VI
Aain Variables				-
CSR Performance		0.1629***	(	0.1556***
		(0.0441)		(0.0434)
LCSR	0.8370***		0.8326***	
(Instrument 1 for CSR:	(0.0112)		(0.0114)	
lagged CSR)	0.0003**		0.0106***	
(Instrument 2 for CSR)	0.0093		0.0100	
constituency statute	(0.0040)		(0.0040)	
dummy)				
Asset Specificity	-0.0011	0.0545***	-0.0015	0.0518***
	(0.0018)	(0.0089)	(0.0017)	(0.0084)
International	0.0268***	-0.0206	0.0271***	-0.0147
Diversification	(0.0094)	(0.0426)	(0.0094)	(0.0437)
CSRxAS				-0.0750***
				(0.0185)
LCSRxAS			-0.0135**	
(Instrument 1 for CSRxAS)			(0.0054)	
CSxAS			0.0050*	
(Instrument 2 for			(0.0007)	
CSRxAS)			(0.0027)	
CSRxINTL			```	-0.4512*** (0.1683)
LCSRxINTL			-0.0414	
(Instrument 1 for			(0.0261)	
CSRxINTL)			(0.0301)	
CSxINTL			-0.0118	
(Instrument 2 for			(0.0153)	
Controls				
Financial Slack	-0.0202**	-0.0710***	_0.0213**	-0.0723***
Tillalicial Slack	$(0.0202^{\circ})$	(0.0202)	(0.0213)	(0.0195)
Firm Size	0.0125***	0.0202)	0.013/***	0.0093
1 IIII Size	(0.0019)	(0.0061)	(0.0134)	(0.005)
Business	0.0002	0.0204*	0.0005	0.0254**
Diversification	(0.0028)	(0.0120)	(0.0028)	(0.0234)
ndustry FF	Ves	(0.0120) Ves	Ves	(0.0121) Ves
Zear FE	Yes	Yes	Yes	Yes
Jo of Obs (N)	2499	2499	2499	2499
Test	1589.67***	17.36***	1041.42***	13.89***
Centered) R <sup>2</sup>	0.8070	0.0988	0.8078	0.1151
Kleibergen-Raap rk LM	0.0070	0.0700	0.0070	0.1101
tatistic		504.471		432.895
Underidentification test)		(p = 0.0000)		(p = 0.0000)
Kleibergen-Raap rk				
Vald F statistic		2.834.782		787.842
Weak identification test)		(critical value		(critical value
T		5% = 19.93)		5% = 12.20
ansen J statistic		0.039		0.396
Overidentification test)		(p = 0.8432)		(p = 0.9411)
Note: Standard errors in par	rentheses			
p<0.10,**p<0.05, ***p<0	0.01			

CS= a regulatory impetus to include social, environmental & corporate governance objectives that go beyond financial objectives in firms' corporate policy

#### Simultaneous Equations 3SLS

	Mode	17	Model 8	
	DV= CSR performance	DV= VI	DV= CSR performance	DV = VI
1ain Variables				
VI	0.0195 (0.0208)		0.0201 (0.0208)	
INDVI		0.6992***		0.6902***
(Instrument for VI:		(0.0334)		(0.0336)
industry mean of VI)		(0.0554)		(0.0550)
CSR performance		0.1532***		0.1459***
LESC	0.9270***	(0.0287)	0.9250	(0.0287)
(Instrument 1 for CSR)	0.8379***		0.8559	
lagged CSR)	(0.0108)		(0.0108)	
INDESG	-0.0018		-0.0001	
(Instrument 1 for CSR: industry mean of CSR)	(0.0032)		(0.0087)	
Asset Specificity	-0.0020	0.0328***	-0.0028	0.0307***
	(0.0022)	(0.0044)	(0.0021)	(0.0044)
International	0.0268***	-0.0241	0.0278***	-0.0219
Diversification	(0.0096)	(0.0223)	(0.0097)	(0.0222)
CSRxAS				-0.0721*** (0.0137)
LCSRxAS			-0.0104*	
(Instrument 1 for			(0.0061)	
CSRxAS)			(0.0001)	
INDCSRxAS			0.0058	
(Instrument 2 for CSRxAS)			(0.0112)	
CSRxINTL				-0.3395*** (0.0835)
LCSRxINTL			-0.0350	
(Instrument 1 for CSRxINTL)			(0.0367)	
INDCSRxINTL			-0.0580	
(Instrument 2 for			(0.0605)	
CSRxINIL)			(,	
Financial Slack	0.0184	0.0782***	0.0190	0.0787***
I manetai Slack	(0.0120)	(0.0276)	(0.0120)	(0.0737)
Firm Size	0.0119***	0.0079	0.0125***	0.0107**
5.20	(0.0021)	(0.0051)	(0.0022)	(0.0050)
Business	-0.0002	0.0058	-0.0000	0.0096
Diversification	(0.0029)	(0.0068)	(0.0030)	(0.0068)
Constant	0.5932***	-0.3113***	0.6036***	-0.2937***
	(0.0265)	(0.0581)	(0.0267)	(0.0584)
ndustry FE	Yes	Yes	Yes	Yes
ear FE	Yes	Yes	Yes	Yes
Io. of Obs. (N)	2427	2427	2427	2427
$\chi^2$	11902.20***	1453.67***	11929.70***	1519.19***
2 <sup>2</sup>	0.8306	0.3743	0.8309	0.3844

#### CSR positively affects VI, yet VI would <u>not</u> affect CSR

Note: Standard errors in parentheses

\*p<0.10,\*\*p<0.05, \*\*\*p<0.01



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## **SUMMARY & DISCUSSION**

## IN SUM:

- High CSR performance is associated with higher levels of VI
- Both asset specificity and international diversification **negatively** moderate the relationship between CSR and VI
- Results robust to endogeneity tests
  - IV regression addresses issues pertaining to measurement error
  - Simultaneous equations addresses simultaneity bias concerns
- Data provides support for H1 & H2, not so for H3

## DISCUSSION

- Global Supply chains would present an opaque field that is difficult for firms to effectively monitor
  - VI is featured as a viable approach to sustainable supply-chain management neglected in extant literature
- Findings contrast a taken-for-granted preponderance of outsourcing over CSR in previous literature
  - CSR concerns have grown so profound shaping corporate and competitive strategy in fundamental ways
- Monitoring and Trust Building can co-occur
  - Internationally diversified players have to develop relational ties with suppliers to cope with complexity



#### **MUCHAS GRACIAS!**