

# Employee Satisfaction, Labor Market Flexibility, and Stock Returns Around The World

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# 1.Introduction

## Background

- Theory provides conflicting predictions as to whether employee satisfaction is beneficial for firm value
- Testing the link between employee satisfaction and firm value is challenging, because causality may run from the latter to the former。
- There is significant prior evidence that intangible assets are not fully priced by the stock market

# 1.Introduction

## Research contents

- We study the link between employee satisfaction and stock returns in 30 countries, and how this link depends on a country's labor market flexibility.
- The abnormal returns to the BCs are higher in flexible labor markets
- Test the main hypothesis that employee satisfaction has value that the market misprices.
- The recruitment, retention, and motivational benefits of employee satisfaction should be stronger for industries with greater labor mobility.

# 1.Introduction

## Related researches

- Abowd (1989), Diltz (1995), Dhrymes (1998), and Edmans (2011, 2012) analyze the link between employee satisfaction and various measures of firm performance in the US .
- A newer literature suggests that rank-and-file employees affect firm value (Kim and Ouimet (2014)), operating performance (Hochberg and Lindsey (2010)), and M&A success (Ouimet and Zarutskie (2020), Tate and Yang (2016)).
- A more individualist national culture is associated with a stronger momentum anomaly (Chui, Titman, and Wei (2010)) and distress anomaly (Gao, Parsons, and Shen (2017)). Asness, Moskowitz, and Pedersen (2013) study the profitability of momentum and value strategies around the world.

# 1.Introduction

## Contributions

- We study the link between employee satisfaction and stock returns in 30 countries, and how this link depends on a country's labor market flexibility . while earlier studies only analyze the US and may not generalize.
- this paper contributes to research on the link between SRI(socially responsible investing) and investor returns. this is the first paper to study the investment performance of a SRI screen in a global context
- we add to the literature comparing the performance of investment strategies across countries.

## 2.Data

Data source : the Best Companies lists compiled by the Great Place to Work Institute

Selection: We include countries with more than five years' history of BC listings. For each country, we only include BCs that are both headquartered and primarily listed in that country.

EPL index (two versions) to measure labor market flexibility

stock return and accounting data from CSRP/Compustat for US firms, and from Datastream for non-US firms

### Panel A: Publicly-listed Best Companies to Work For

Panel A reports the list of countries in which at least one Best Company (BC) is headquartered and publicly listed. For each country, column (1) presents the year of the first published BC list. Column (2) reports our portfolio formation date, which is typically one month after the month of list publication. Column (3) gives the number of publicly listed BCs per country after sample screening. Column (4) presents the total number of listed firms including BCs after sample screening. Column (5) records the total number of firm-month observations. Column (6) indicates the total number of BCs (both private and public) in the year the list was initiated. Column (7) indicates the total number of BCs (both private and public) in the last listing year. Column (8) presents the current main media publication outlet whenever found. The sample period is October 1997 to December 2017.

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		First list	Formation	Public	Total	Observations	List size	List size	Publication outlet
		Year	Date	BC #	Firm #	Number	First	Last	Main
1	Argentina	2002	Dec-01	4	98	11,557	25	50	Clarín
2	Australia	2008	Sep-01	5	2,210	136,577	8	50	Financial Review
3	Belgium	2003	Apr-01	9	239	24,141	25	20	Mark Magazine
4	Brazil	1997	Oct-01	25	333	21,584	30	90	Época Magazine
5	Canada	2006	May-01	13	4,496	270,590	30	108	The Globe and Mail
6	Chile	2001	Dec-01	14	107	9,554	25	50	El Mercurio
7	Colombia	2003	Jul-01	10	13	902	12	35	Dinero
8	Denmark	2001	Dec-01	20	255	26,683	50	60	Dansk Erhverv
9	Finland	2003	Mar-01	12	201	22,576	20	50	Talouselämä
10	France	2002	Apr-01	20	1,266	119,743	5	108	Le Figaro
11	Germany	2003	Feb-01	27	1,341	111,382	50	100	Handelsblatt
12	Greece	2003	Mar-01	12	345	37,863	10	25	To Vima
13	India	2003	Aug-01	66	2,941	207,993	25	100	The Economic Times
14	Ireland	2003	Apr-01	4	100	9,249	50	79	The Irish Times
15	Italy	2002	Apr-01	4	454	44,774	30	55	Corriere Della Sera
16	Japan	2007	Mar-01	52	1,430	87,427	10	95	Nikkei Business
17	Mexico	2002	May-01	18	192	18,045	20	205	Reforma
18	Netherlands	2003	Apr-01	5	216	19,732	10	39	MT
19	Norway	2004	Apr-01	10	348	24,462	10	25	GPTW Norway
20	Peru	2002	Jan-01	15	166	12,570	25	50	El Comercio
21	Portugal	2000	May-01	3	93	9,058	10	20	RH Magazine
22	Saudi Arabia	2014	Jan-01	5	174	5,867	15	17	Saudi Gazette
23	South Korea	2002	Dec-01	40	242	13,719	20	25	The Korea Economic Daily
24	Spain	2003	Aug-01	6	261	22,085	25	50	GPTW Magazine
25	Sweden	2003	Apr-01	11	754	52,338	25	54	GPTW Sweden
26	Switzerland	2009	June-01	2	336	23,743	10	25	20 Minuten
27	Turkey	2013	Sep-01	3	383	17,201	12	25	Kariyer.net
28	United Kingdom	2001	May-01	32	4,026	340,907	50	128	The Guardian
29	United States	1998	Feb-01	194	11,819	1,036,496	100	100	Fortune
30	Venezuela	2005	Apr-01	2	38	2,464	10	10	El Nacional
	Total			643	34,877	2,741,282			



		(1)	(2)	(3)	(4)	(5)
		EPR	EPC	EPR	<i>EPL1</i>	<i>EPL2</i>
		Individual dismissals	Collective dismissals	Temporary contracts	Simple average	Weighted average
1	Argentina	1.820	3.880	2.380	7.307	7.601
2	Australia	1.570	2.880	0.880	8.223	8.410
3	Belgium	1.915	5.130	2.380	6.858	7.317
4	Brazil	1.463	0.667	4.130	7.913	7.800
5	Canada	0.920	2.970	0.250	8.620	8.913
6	Chile	2.630	0.000	3.000	8.123	7.748
7	Colombia	1.370	4.000	1.880	7.583	7.959
8	Denmark	2.130	3.630	1.380	7.620	7.834
9	Finland	2.170	1.880	1.560	8.130	8.089
10	France	2.411	3.380	3.630	6.860	6.998
11	Germany	2.680	3.630	1.077	7.538	7.673
12	Greece	2.489	3.250	2.667	7.198	7.307
13	India	3.290	0.440	1.810	8.153	7.746
14	Ireland	1.356	3.350	0.605	8.230	8.515
15	Italy	2.748	4.072	2.029	7.051	7.240
16	Japan	1.370	3.250	0.880	8.167	8.435
17	Mexico	2.140	4.380	3.394	6.695	7.015
18	Netherlands	2.844	3.063	0.940	7.718	7.749
19	Norway	2.330	2.500	2.964	7.402	7.426
20	Peru	1.750	3.750	2.250	7.417	7.702
21	Portugal	3.999	2.292	2.201	7.169	6.926
22	Saudi Arabia	1.370	0.000	3.380	8.417	8.221
23	South Korea	2.370	1.880	2.130	7.873	7.803
24	Spain	2.237	3.627	2.870	7.089	7.287
25	Sweden	2.610	2.500	1.440	7.817	7.801
26	Switzerland	1.600	3.630	1.130	7.880	8.170
27	Turkey	2.310	2.630	4.880	6.727	6.772
28	United Kingdom	1.260	2.880	0.348	8.504	8.736
29	United States	0.260	2.880	0.250	8.870	9.244
30	Venezuela	3.500	3.500	5.130	5.957	5.957
Mean		2.097	2.864	2.128	7.637	7.746
Std. Dev.		0.790	1.250	1.302	0.665	0.684

## 2.Data

For firms incorporated in the US, we keep only common stocks defined by CRSP/ Compustat, i.e. with share code SHRCD=10 or 11. For non-US firms, we keep only primary, major equities traded on domestic stock exchanges as defined by Datastream.

We include both active and inactive firms to avoid survivorship bias, but drop an observation if either its raw stock return or any of the eight firm controls described in Section 3.2 are missing

# 3.Results

## 3.1. Country-level alphas

$$R_{ct} = \alpha + \beta_{MKT}MKT_{ct} + \beta_{HML}HML_{ct} + \beta_{SMB}SMB_{ct} + \beta_{MOM}MOM_{ct} + \varepsilon_{ct}, \quad (1)$$

$R_{ct}$  is the US dollar returns to a BC portfolio in month t for country c in excess of the US one-month treasury rate

# 3.Results

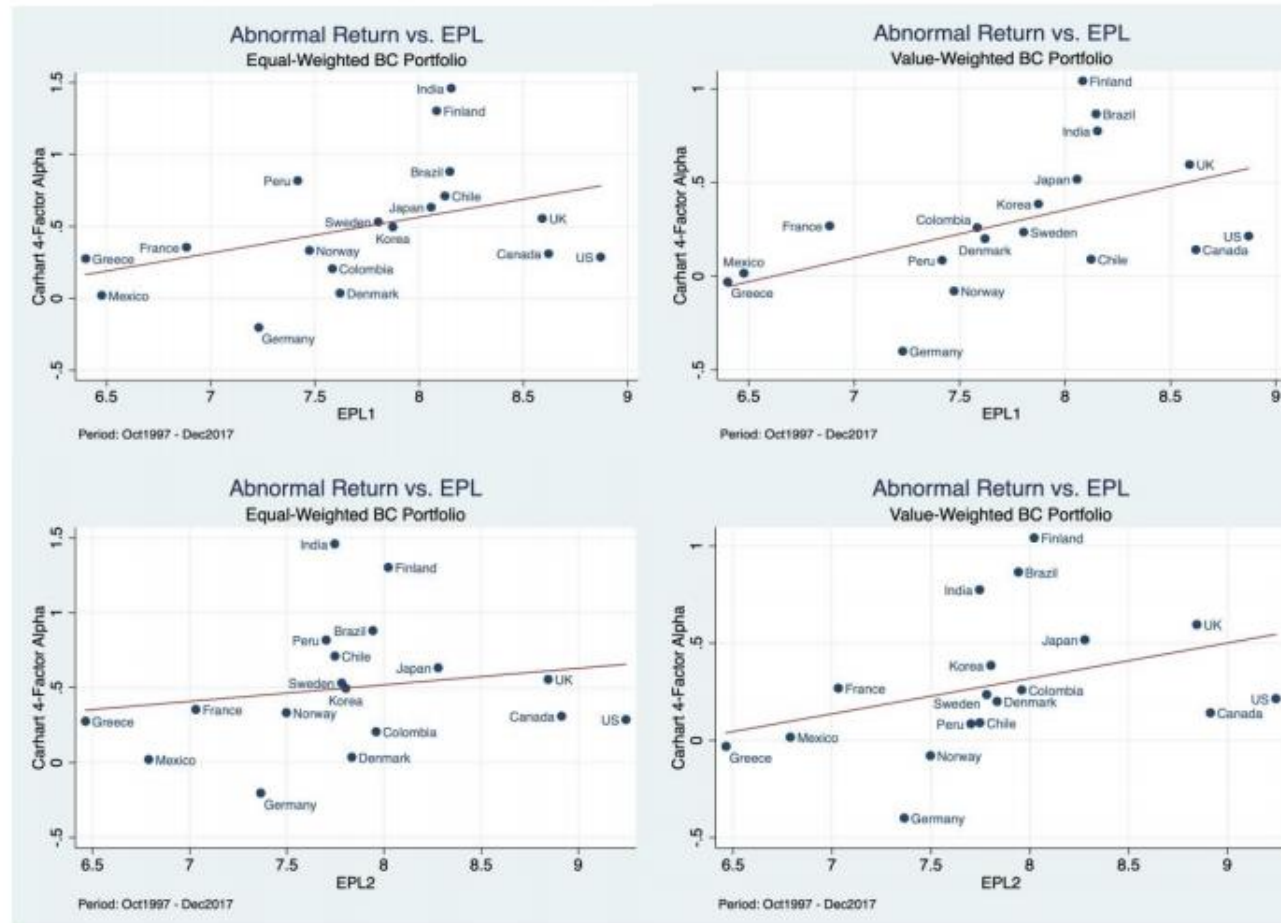
	Equal-weighted			Value-weighted			Obs.
	$\alpha$	Std. Err.	Adj. R <sup>2</sup>	$\alpha$	Std. Err.	Adj. R <sup>2</sup>	
1 Brazil	<b>0.881</b>	(0.613)	0.258	<b>0.865</b>	(0.580)	0.267	240
2 Canada	<b>0.310</b>	(0.435)	0.495	<b>0.141</b>	(0.272)	0.628	140
3 Chile	<b>0.711</b>	(0.436)	0.269	<b>0.090</b>	(0.164)	0.184	162
4 Columbia	<b>0.206</b>	(0.665)	0.121	<b>0.259</b>	(0.385)	0.171	56
5 Denmark	<b>0.036</b>	(0.407)	0.537	<b>0.200</b>	(0.442)	0.311	164
6 Finland	<b>1.303**</b>	(0.564)	0.386	<b>1.041*</b>	(0.544)	0.411	154
7 France	<b>0.355</b>	(0.412)	0.539	<b>0.268</b>	(0.410)	0.440	143
8 Germany	<b>-0.203</b>	(0.349)	0.629	<b>-0.400</b>	(0.387)	0.527	165
9 Greece	<b>0.276</b>	(0.816)	0.259	<b>-0.031</b>	(0.725)	0.266	129
10 India	<b>1.460***</b>	(0.441)	0.533	<b>0.774*</b>	(0.402)	0.446	161
11 Japan	<b>0.633**</b>	(0.281)	0.608	<b>0.517***</b>	(0.180)	0.331	130
12 Mexico	<b>0.021</b>	(0.509)	0.426	<b>0.016</b>	(0.489)	0.445	149
13 Norway	<b>0.333</b>	(0.563)	0.343	<b>-0.079</b>	(0.601)	0.392	141
14 Peru	<b>0.818**</b>	(0.387)	0.023	<b>0.085</b>	(0.579)	0.048	157
15 Korea	<b>0.496</b>	(0.566)	0.305	<b>0.385</b>	(0.349)	0.221	123
16 Sweden	<b>0.531</b>	(0.362)	0.541	<b>0.235</b>	(0.367)	0.509	177
17 U.K.	<b>0.555*</b>	(0.322)	0.461	<b>0.595*</b>	(0.316)	0.360	200
18 U.S.	<b>0.287***</b>	(0.110)	0.903	<b>0.214</b>	(0.142)	0.849	239

# 3.Results

## 3.1. Country-level alphas

Figure 1 plots the relationship between a country's BC portfolio alpha and its labor market flexibility in the year before its first BC list

All four lines have a positive slope, suggesting that the returns to being a Best Company are increasing in labor market flexibility.



**Figure 1.** This graph depicts the weighted least squares regression results of the Carhart (1997) 4-factor cross-country alphas on labor market flexibility. The cross-country alphas are obtained from Table 3. *EPL1* and *EPL2* are the two measures of labor market flexibility described in Table 1, Panel B. Their values are chosen at the year before the start of each country's BC list.

# 3.Results

## Panel B: Country-level alphas and labor market flexibility

This table reports the weighted least squares regression results of cross-country alphas based on portfolios of Best Companies using Carhart's (1997) four-factor model, where the weights are the inverse of the squared standard errors of the alpha estimates. Both alphas and their standard errors are from Table 3 Panel A and Panel B. *EPL1* and *EPL2* are the two measures of labor market flexibility described in Table 1, Panel B. Their values are chosen at the year before the start of each country's BC list.

	<i>EPL1</i>		<i>EPL2</i>	
	Alpha (EW)	Alpha (VW)	Alpha (EW)	Alpha (VW)
<i>EPL</i>	<b>0.325**</b> (0.116)	<b>0.391***</b> (0.104)	<b>0.219*</b> (0.110)	<b>0.339***</b> (0.103)
<i>Constant</i>	<b>-1.948**</b> (0.830)	<b>-2.644***</b> (0.742)	<b>-1.157</b> (0.773)	<b>-2.276***</b> (0.718)
Observations	18	18	18	18
R-squared	0.30	0.45	0.12	0.29

# 3. Results

## 3.2. Characteristics controls

$$R_{it} = \beta_0 + \beta_1 BC_{it} + \beta_2 FirmControls_{it} + \varepsilon_{it}. \quad (2)$$

We use three different variables for the stock return, The first is the raw return. The second is the market-adjusted return in excess of the MSCI stock market index for each country, from Datastream.<sup>15</sup> The third is the industry-adjusted return in excess of the median return among non-BC firms in the same industry and country as firm  $i$  in month  $t$ , using the Fama and French (1997) 48-industry classifications.



# 3.Results

the coefficient on the BC dummy for brevity

		Dependent Variable		
		Raw returns	Market-adjusted	Industry-adjusted
1	Argentina	<b>-0.202</b> (0.589)	<b>-0.200</b> (0.588)	<b>-0.074</b> (0.598)
2	Australia	<b>2.325***</b> (0.815)	<b>2.327***</b> (0.815)	<b>2.109***</b> (0.756)
3	Belgium	<b>0.259</b> (0.533)	<b>0.272</b> (0.532)	<b>0.187</b> (0.519)
4	Brazil	<b>0.868*</b> (0.441)	<b>0.839*</b> (0.440)	<b>0.764*</b> (0.440)
5	Canada	<b>1.758***</b> (0.429)	<b>1.760***</b> (0.429)	<b>1.509***</b> (0.404)
6	Chile	<b>0.133</b> (0.285)	<b>0.139</b> (0.284)	<b>0.052</b> (0.291)
7	Colombia	<b>-0.720</b> (0.764)	<b>-0.673</b> (0.732)	<b>-0.669</b> (0.771)
8	Denmark	<b>-0.559</b> (0.406)	<b>-0.560</b> (0.406)	<b>-0.521</b> (0.408)
9	Finland	<b>0.378</b> (0.427)	<b>0.377</b> (0.427)	<b>0.280</b> (0.425)
10	France	<b>0.172</b> (0.605)	<b>0.175</b> (0.603)	<b>0.046</b> (0.601)
11	Germany	<b>0.342</b> (0.341)	<b>0.343</b> (0.341)	<b>0.333</b> (0.334)
12	Greece	<b>0.943</b> (0.799)	<b>0.945</b> (0.798)	<b>1.019</b> (0.812)
13	India	<b>1.186***</b>	<b>1.184***</b>	<b>1.073***</b>

14	Ireland	(0.340) <b>-0.888</b> (0.870)	(0.340) <b>-0.886</b> (0.870)	(0.335) <b>-0.643</b> (0.869)
15	Italy	(0.945) <b>-0.561</b> (0.944)	(0.944) <b>-0.570</b> (0.942)	(0.942) <b>-0.469</b> (0.942)
16	Japan	<b>0.772**</b> (0.299)	<b>0.778***</b> (0.297)	<b>0.735**</b> (0.295)
17	Mexico	<b>0.087</b> (0.271)	<b>0.086</b> (0.270)	<b>0.042</b> (0.268)
18	Netherlands	<b>-0.334</b> (0.664)	<b>-0.336</b> (0.665)	<b>-0.238</b> (0.668)
19	Norway	<b>0.438</b> (0.663)	<b>0.428</b> (0.662)	<b>0.378</b> (0.650)
20	Peru	<b>0.514</b> (0.521)	<b>0.512</b> (0.517)	<b>0.263</b> (0.518)
21	Portugal	<b>0.146</b> (1.214)	<b>0.153</b> (1.214)	<b>0.705</b> (1.213)
22	Saudi Arabia	<b>0.053</b> (0.919)	<b>0.059</b> (0.919)	<b>-0.173</b> (0.882)
23	South Korea	<b>0.786</b> (0.650)	<b>0.797</b> (0.651)	<b>0.801</b> (0.637)
24	Spain	<b>0.057</b> (0.429)	<b>0.055</b> (0.430)	<b>0.005</b> (0.423)
25	Sweden	<b>0.385</b> (0.349)	<b>0.387</b> (0.349)	<b>0.342</b> (0.354)
26	Switzerland	<b>-0.884</b> (0.958)	<b>-0.879</b> (0.958)	<b>-0.797</b> (0.957)
27	Turkey	<b>-0.208</b> (1.173)	<b>-0.208</b> (1.173)	<b>-0.255</b> (1.159)
28	United Kingdom	<b>0.138</b> (0.323)	<b>0.138</b> (0.324)	<b>0.032</b> (0.319)
29	United States	<b>0.366**</b> (0.151)	<b>0.367**</b> (0.152)	<b>0.381***</b> (0.144)
30	Venezuela	<b>0.967</b> (1.682)	<b>0.955</b> (1.681)	<b>0.902</b> (1.679)

# 3.Results

## The role of labor market flexibility

$$R_{cit} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 EPL_{ct} + \delta_2 CountryControls_{ct} + \delta_3 FirmControls_{cit} + \varepsilon_{cit}. \quad (3)$$

EPL refers to either of our two labor market flexibility measures: EPL1 and EPL2

CountryControls<sub>ct</sub> is a vector of other country-level control variables

# 3. Results

**Panel A: EPL1**

This table reports the results of pooled panel regressions across countries:

$$R_{cit} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 EPL_{ct} + \delta_2 CountryControls_{ct} + \delta_3 FirmControls_{cit} + \varepsilon_{cit},$$

where  $R_{cit}$  is the return for firm  $i$  in month  $t$ , either raw, market-adjusted, or industry-adjusted.  $BC_{cit}$  is a dummy variable that equals one if firm  $i$  has been included in the most recent BC list in country  $c$  prior to month  $t$ , and zero otherwise.  $EPL_{ct}$  is labor market flexibility (*EPL1* or *EPL2*) described in Table 1, Panel B.  $CountryControls_{ct}$  include the following country-level controls: *RuleofLaw* measures the rule of law from La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997); *GDPg* measures GDP growth; *GDP* measures GDP per capita; *ADRI* measures the anti-director rights index corrected by Spamann (2010); *IDV* is the Hofstede measure of cultural individualism; *PriceInf* is the price informativeness measure of Fernandes and Ferreira (2009); and *MktCapGDP* is stock market capitalization over GDP.  $FirmControls_{cit}$  include the firm-level controls described in Table 4. The regression constant is not reported for brevity. Standard errors, given in parentheses, are double clustered by country and year-month. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively. The sample period is October 1997 to December 2017.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Raw returns			Market-adjusted returns			Industry-adjusted returns		
$BC_{cit}$	<b>0.613***</b> (0.165)	<b>-2.730***</b> (0.618)	<b>-4.586**</b> (1.840)	<b>0.609***</b> (0.172)	<b>-2.760***</b> (0.563)	<b>-4.426**</b> (1.872)	<b>0.575***</b> (0.154)	<b>-2.838***</b> (0.565)	<b>-3.507***</b> (1.239)
$BC_{cit} * EPL_{ct}$		<b>0.400***</b> (0.091)	<b>0.629**</b> (0.254)		<b>0.403***</b> (0.087)	<b>0.543**</b> (0.247)		<b>0.409***</b> (0.081)	<b>0.513***</b> (0.189)
$EPL_{ct}$		<b>0.715</b> (1.119)	<b>0.032</b> (0.833)		<b>0.921</b> (0.957)	<b>0.217</b> (0.926)		<b>0.760</b> (1.091)	<b>0.208</b> (0.769)
$BC_{cit} * RuleofLaw_c$			<b>-0.064</b> (0.107)			<b>-0.009</b> (0.093)			<b>-0.056</b> (0.101)
$BC_{cit} * GDPg_{ct}$			<b>0.084</b> (0.097)			<b>0.108</b> (0.099)			<b>0.057</b> (0.091)
$BC_{cit} * GDP_{ct}$			<b>0.242</b> (0.229)			<b>0.180</b> (0.230)			<b>0.198</b> (0.198)
$BC_{cit} * ADRI_c$			<b>0.058</b>			<b>0.069</b>			<b>0.004</b>

			(0.068)			(0.059)			(0.058)
$BC_{cit} * PriceInf_{ct}$			<b>-0.073</b>			<b>-0.082</b>			<b>-0.084</b>
			(0.059)			(0.050)			(0.054)
$BC_{cit} * MktCapGDP_{ct}$			<b>-0.009</b>			<b>-0.008</b>			<b>-0.005</b>
			(0.005)			(0.006)			(0.004)
$BC_{cit} * IDV_c$			<b>0.007</b>			<b>0.008</b>			<b>0.005</b>
			(0.011)			(0.010)			(0.011)
$RuleofLaw_c$			<b>0.068</b>			<b>-0.015</b>			<b>0.065</b>
			(0.454)			(0.364)			(0.414)
$GDPg_{ct}$			<b>0.077</b>			<b>0.002</b>			<b>0.115</b>
			(0.118)			(0.109)			(0.112)
$GDP_{ct}$			<b>-3.079**</b>			<b>-2.159*</b>			<b>-2.596**</b>
			(1.381)			(1.171)			(1.181)
$ADRI_c$			<b>-2.520***</b>			<b>-1.650**</b>			<b>-2.308***</b>
			(0.834)			(0.798)			(0.753)
$PriceInf_{ct}$			<b>0.076</b>			<b>0.093</b>			<b>0.064</b>
			(0.070)			(0.067)			(0.064)
$MktCapGDP_{ct}$			<b>0.047***</b>			<b>0.031**</b>			<b>0.040***</b>
			(0.013)			(0.014)			(0.010)
$IDV_c$			<b>-0.060</b>			<b>-0.038</b>			<b>-0.058</b>
			(0.040)			(0.036)			(0.037)
$SIZE$	<b>-0.259***</b>	<b>-0.260***</b>	<b>-0.223**</b>	<b>-0.234***</b>	<b>-0.235***</b>	<b>-0.209**</b>	<b>-0.275***</b>	<b>-0.276***</b>	<b>-0.243***</b>
	(0.088)	(0.088)	(0.095)	(0.090)	(0.090)	(0.096)	(0.083)	(0.083)	(0.089)
$BM$	<b>0.278***</b>	<b>0.277***</b>	<b>0.283***</b>	<b>0.278***</b>	<b>0.278***</b>	<b>0.282***</b>	<b>0.263***</b>	<b>0.263***</b>	<b>0.269***</b>
	(0.040)	(0.040)	(0.039)	(0.040)	(0.040)	(0.039)	(0.038)	(0.038)	(0.038)
$YIELD$	<b>0.023**</b>	<b>0.023**</b>	<b>0.019*</b>	<b>0.021**</b>	<b>0.021**</b>	<b>0.018*</b>	<b>0.017*</b>	<b>0.017*</b>	<b>0.013</b>
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.009)
$RET2-3$	<b>-0.048</b>	<b>-0.050</b>	<b>-0.130</b>	<b>-0.122</b>	<b>-0.124</b>	<b>-0.137</b>	<b>-0.370</b>	<b>-0.372</b>	<b>-0.434</b>
	(0.485)	(0.485)	(0.520)	(0.485)	(0.485)	(0.528)	(0.471)	(0.472)	(0.509)
$RET4-6$	<b>0.001</b>	<b>-0.000</b>	<b>0.008</b>	<b>0.057</b>	<b>0.055</b>	<b>0.087</b>	<b>-0.087</b>	<b>-0.089</b>	<b>-0.086</b>
	(0.534)	(0.534)	(0.559)	(0.533)	(0.533)	(0.554)	(0.505)	(0.506)	(0.528)
$RET7-12$	<b>-0.184</b>	<b>-0.185</b>	<b>-0.120</b>	<b>-0.071</b>	<b>-0.071</b>	<b>-0.011</b>	<b>-0.205</b>	<b>-0.205</b>	<b>-0.144</b>
	(0.385)	(0.385)	(0.376)	(0.377)	(0.377)	(0.369)	(0.344)	(0.344)	(0.337)
$VOL$	<b>0.121**</b>	<b>0.122**</b>	<b>0.084**</b>	<b>0.106**</b>	<b>0.107**</b>	<b>0.075*</b>	<b>0.152***</b>	<b>0.153***</b>	<b>0.120***</b>
	(0.048)	(0.048)	(0.043)	(0.052)	(0.051)	(0.044)	(0.043)	(0.043)	(0.038)
$PRC$	<b>0.279***</b>	<b>0.279***</b>	<b>0.307***</b>	<b>0.289***</b>	<b>0.288***</b>	<b>0.310***</b>	<b>0.333***</b>	<b>0.332***</b>	<b>0.366***</b>
	(0.080)	(0.080)	(0.081)	(0.078)	(0.078)	(0.080)	(0.083)	(0.083)	(0.083)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,741,282	2,741,282	2,442,281	2,741,282	2,741,282	2,442,281	2,741,282	2,741,282	2,442,281
R-squared	0.108	0.108	0.111	0.024	0.024	0.026	0.039	0.039	0.041

Panel B: *EPL2*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Raw returns			Market-adjusted returns			Industry-adjusted returns		
<i>BC<sub>cit</sub></i>	<b>0.613***</b> (0.165)	<b>-2.466***</b> (0.510)	<b>-4.138**</b> (1.645)	<b>0.609***</b> (0.172)	<b>-2.327***</b> (0.391)	<b>-4.148**</b> (1.677)	<b>0.575***</b> (0.154)	<b>-2.575***</b> (0.457)	<b>-3.046**</b> (1.192)
<i>BC<sub>cit</sub>*EPL<sub>ct</sub></i>		<b>0.359***</b> (0.079)	<b>0.551**</b> (0.223)		<b>0.343***</b> (0.068)	<b>0.494**</b> (0.216)		<b>0.368***</b> (0.071)	<b>0.436**</b> (0.176)
<i>EPL<sub>ct</sub></i>		<b>0.912</b> (1.192)	<b>0.052</b> (0.885)		<b>0.870</b> (0.852)	<b>0.031</b> (0.915)		<b>0.967</b> (1.179)	<b>0.272</b> (0.818)
BC* Country Controls	No	No	Yes	No	No	Yes	No	No	Yes
Country Controls	No	No	Yes	No	No	Yes	No	No	Yes
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,741,282	2,741,282	2,442,281	2,741,282	2,741,282	2,442,281	2,741,282	2,741,282	2,442,281
R-squared	0.108	0.108	0.111	0.024	0.024	0.026	0.039	0.039	0.041

# 3.Results

## Potential mechanisms

We study the relationship between BC status and industry-adjusted Tobin's Q by running the following regression:

$$Q_{cit} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 EPL_{ct} + \delta_2 CountryControls_{ct} + \delta_3 FirmControls_{cit} + \varepsilon_{cit}. \quad (4)$$

$Q_{cit}$  is industry-adjusted Tobin's Q for firm  $i$  in country  $c$  in year  $t$  at the start of the return compounding window, where Tobin's Q is calculated as the sum of book assets plus market equity, minus the sum of book equity plus balance sheet deferred taxes, all divided by book assets.





# 3.Results

## Potential mechanisms

We now study the future accounting performance of the BCs, to investigate whether their excess returns result from the (positive or negative) value of employee satisfaction rather than risk. We run the following regression

$$Perf_{cit+j} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 EPL_{ct} + \delta_2 CountryControls_{ct} + \delta_3 BM_{cit} + \delta_4 Perf_{cit} + \varepsilon_{cit}. \quad (5)$$

$Perf_{cit+j}$  is industry-adjusted accounting performance for firm  $i$  in country  $c$  in year  $t+j$  (for  $j \in \{1, 2\}$ ), measured in three ways.  $ROA_{cit+j}$  is the industry-adjusted return on assets, calculated as operating income before depreciation divided by book value of assets following Chan and Chen (1991).<sup>22</sup>  $NPM_{cit+j}$  is the industry-adjusted net profit margin, calculated as operating income before depreciation divided by sales following Jacobson (1987).  $SGR_{cit+j}$  is the one-year sales growth rate.



**Table 7**  
**Operating performance across countries**

**Panel A: Industry-adjusted return on assets**

This table reports results of the least absolute deviation regressions across countries:

$$ROA_{cit+j} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 EPL_{ct} + \delta_2 CountryControls_{ct} + \delta_3 BM_{cit} + \delta_4 ROA_{cit} + \varepsilon_{cit}$$

where  $ROA_{cit+j}$  is the return on assets calculated as operating income before depreciation divided by book value of assets for firm  $i$  in country  $c$  in year  $t+j$  (for  $j \in \{1, 2\}$ ), and then adjusted by subtracting the industry median.  $BC_{cit}$  is a dummy variable that equals one if firm  $i$  has been included in the most recent BC list in country  $c$  prior to year  $t$ , and zero otherwise.  $EPL_{ct}$  is labor market flexibility ( $EPLI$ ) described in Table 1, Panel B.  $CountryControls_{ct}$  include the country-level controls described in Table 5.  $BM$  is firm  $i$ 's log book-to-market ratio at the beginning of year  $t$ .  $ROA$  is the current year's return on assets. The regression constant is not reported for brevity. Standard errors, given in parentheses, are robust to heteroscedasticity and misspecification, and clustered at the country level. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively. The sample period is October 1997 to December 2017.

	(1)	(2)	(3)	(4)	(5)	(6)
	One year ahead			Two years ahead		
$BC_{cit}$	1.801*** (0.169)	-8.834*** (1.065)	-8.211*** (1.938)	1.485*** (0.144)	-9.161*** (0.990)	-4.259 (2.737)
$BC_{cit} \times EPL_{ct}$		1.285*** (0.139)	1.143*** (0.214)		1.314*** (0.127)	0.601* (0.324)
$EPL_{ct}$		0.285* (0.156)	-0.441** (0.173)		0.764*** (0.170)	-0.008 (0.197)
$BM$	-0.301*** (0.022)	-0.302*** (0.022)	-0.349*** (0.021)	-0.198*** (0.016)	-0.197*** (0.017)	-0.230*** (0.020)
$ROA$	0.219*** (0.024)	0.219*** (0.021)	0.198*** (0.015)	0.206*** (0.024)	0.205*** (0.024)	0.187*** (0.019)
$BC \times Country\ Controls$	No	No	Yes	No	No	Yes
Country Controls	No	No	Yes	No	No	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	171,043	171,043	153,465	146,814	146,814	132,448
R-squared	0.041	0.041	0.040	0.027	0.028	0.026

**Table 7 (Cont'd)**

**Panel B: Industry-adjusted net profit margin**

This table reports results of the least absolute deviation regressions across countries:

$$NPM_{cit+j} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 EPL_{ct} + \delta_2 CountryControls_{ct} + \delta_3 BM_{cit} + \delta_4 NPM_{cit} + \varepsilon_{cit}$$

where  $NPM_{cit+j}$  is the net profit margin calculated as operating income before depreciation divided by sales for firm  $i$  in country  $c$  in year  $t+j$  (for  $j \in \{1, 2\}$ ), and then industry adjusted.  $BC_{cit}$  is a dummy variable that equals one if firm  $i$  has been included in the most recent BC list in country  $c$  prior to year  $t$ , and zero otherwise.  $EPL_{ct}$  is labor market flexibility ( $EPLI$ ) described in Table 1, Panel B.  $CountryControls_{ct}$  include the country-level controls described in Table 5.  $BM$  is firm  $i$ 's log book-to-market ratio at the beginning of year  $t$ .  $NPM$  is the current year's net profit margin. The regression constant is not reported for brevity. Standard errors, given in parentheses, are robust to heteroscedasticity and misspecification, and clustered at the country level. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively. The sample period is October 1997 to December 2017.

	(1)	(2)	(3)	(4)	(5)	(6)
	One year ahead			Two years ahead		
$BC_{cit}$	2.356*** (0.259)	-16.070*** (2.447)	-13.572*** (4.126)	3.384*** (0.372)	-20.713*** (2.857)	-13.445* (7.164)
$BC_{cit} \times EPL_{ct}$		2.195*** (0.300)	1.541*** (0.556)		2.879*** (0.347)	1.189* (0.699)
$EPL_{ct}$		0.852*** (0.274)	0.235 (0.374)		1.342*** (0.377)	0.838* (0.457)
$BM$	-0.401*** (0.028)	-0.401*** (0.028)	-0.472*** (0.036)	-0.428*** (0.033)	-0.435*** (0.029)	-0.505*** (0.032)
$NPM$	0.433*** (0.000)	0.433*** (0.000)	0.434*** (0.007)	0.239*** (0.000)	0.239*** (0.000)	0.254*** (0.000)
$BC \times Country\ Controls$	No	No	Yes	No	No	Yes
Country Controls	No	No	Yes	No	No	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	163,119	163,119	146,289	140,370	140,370	126,616
R-squared	0.203	0.203	0.206	0.137	0.137	0.147

Table 7 (Cont'd)

**Panel C: Industry-adjusted one-year sales growth**

This table reports results of the least absolute deviation regressions across countries:

$$SGR_{cit+j} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 EPL_{ct} + \delta_2 CountryControls_{ct} + \delta_3 BM_{cit} + \delta_4 SGR_{cit} + \varepsilon_{cit},$$

where  $SGR_{cit+j}$  is the one-year sales growth rate for firm  $i$  in country  $c$  in year  $t+j$  (for  $j \in \{1, 2\}$ ), and then industry adjusted.  $BC_{cit}$  is a dummy variable that equals one if firm  $i$  has been included in the most recent BC list in country  $c$  prior to year  $t$ , and zero otherwise.  $EPL_{ct}$  is labor market flexibility ( $EPLI$ ) described in Table 1, Panel B.  $CountryControls_{ct}$  include the country-level controls described in Table 5.  $BM$  is firm  $i$ 's log book-to-market ratio at the beginning of year  $t$ .  $SGR$  is the current year's one-year sales growth rate. The regression constant is not reported for brevity. Standard errors, given in parentheses, are robust to heteroscedasticity and misspecification, and clustered at the country level. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively. The sample period is October 1997 to December 2017.

	(1)	(2)	(3)	(4)	(5)	(6)
	One year ahead			Two years ahead		
$BC_{cit}$	<b>1.900***</b> (0.403)	<b>-5.908</b> (4.681)	<b>-12.040</b> (9.248)	<b>1.521***</b> (0.389)	<b>-5.378</b> (4.207)	<b>-12.939**</b> (6.127)
$BC_{cit} * EPL_{ct}$		<b>0.944*</b> (0.568)	<b>1.021</b> (1.128)		<b>0.827*</b> (0.502)	<b>2.240***</b> (0.809)
$EPL_{ct}$		<b>0.625</b> (0.798)	<b>-7.094***</b> (0.846)		<b>0.458</b> (0.908)	<b>-2.706***</b> (1.006)
$BM$	<b>-0.733***</b> (0.052)	<b>-0.732***</b> (0.048)	<b>-0.739***</b> (0.053)	<b>-0.607***</b> (0.038)	<b>-0.609***</b> (0.038)	<b>-0.640***</b> (0.051)
$SGR$	<b>0.000***</b> (0.000)	<b>0.000***</b> (0.000)	<b>0.000</b> (0.000)	<b>-0.000</b> (0.000)	<b>-0.000</b> (0.000)	<b>-0.000</b> (0.000)
$BC * Country\ Controls$	No	No	Yes	No	No	Yes
Country Controls	No	No	Yes	No	No	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	161,208	161,208	144,787	138,691	138,691	125,344
R-squared	0.000	0.000	0.000	0.000	0.000	0.000

# 3.Results

## Potential mechanisms

The superior operating performance of the BCs in flexible labor markets can only account for their superior stock returns to the extent that they are unanticipated by the market.

$$\begin{aligned} Surprise_{cit} = & \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 EPL_{ct} + \\ & \delta_2 CountryControls_{ct} + \delta_3 FirmControls_{cit} + \varepsilon_{cit}, \end{aligned} \quad (6)$$

where Surprise is the one or two-year earnings surprise

**Table 8****Earnings surprises across countries**

This table reports the results of pooled panel regressions across countries:

$$Surprise_{cit} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 EPL_{ct} + \delta_2 CountryControls_{ct} + \delta_3 FirmControls_{cit} + \varepsilon_{cit},$$

where  $Surprise_{cit}$  is the one- or two-year earnings surprise for firm  $i$  in country  $c$  in year  $t$ . The one- (two)-year earnings surprise is the actual earnings per share for the fiscal year ending in year  $t$  minus the median I/B/E/S analyst forecast, deflated by the stock price two months prior. The I/B/E/S consensus forecast is taken 8 (20) months prior to the end of the forecast period.  $BC_{cit}$  is a dummy variable that equals one if firm  $i$  has been included in the most recent BC list in country  $c$  prior to year  $t$ , and zero otherwise.  $EPL_{ct}$  is labor market flexibility ( $EPLI$ ) described in Table 1, Panel B.  $CountryControls_{ct}$  include the country-level controls described in Table 5.  $FirmControls_{cit}$  include  $BM$  which is firm  $i$ 's log book-to-market ratio and  $SIZE$  which is firm  $i$ 's log market capitalization, both calculated one-year (two-year) prior for one-year (two-year) earnings surprises. The regression constant is not reported for brevity. Standard errors, given in parentheses, are double clustered by country and year-month. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively. The sample period is October 1997 to December 2017.

	(1)	(2)	(3)	(4)	(5)	(6)
	One-year earnings surprises			Two-year earnings surprises		
$BC_{cit}$	<b>-5.606***</b> (1.473)	<b>-5.660***</b> (1.464)	<b>-5.664***</b> (1.466)	<b>-8.500***</b> (2.736)	<b>-8.496***</b> (2.584)	<b>-8.504***</b> (2.586)
$BC_{cit} * EPL_{ct}$	<b>0.481***</b> (0.164)	<b>0.509***</b> (0.164)	<b>0.510***</b> (0.164)	<b>0.512**</b> (0.244)	<b>0.549**</b> (0.233)	<b>0.551**</b> (0.233)
$EPL_{ct}$	<b>-0.292</b> (0.415)	<b>-0.280</b> (0.434)	<b>-0.283</b> (0.435)	<b>-0.331</b> (0.503)	<b>-0.329</b> (0.521)	<b>-0.337</b> (0.522)
$BM$		<b>0.104***</b> (0.015)	<b>0.106***</b> (0.014)		<b>0.132***</b> (0.011)	<b>0.136***</b> (0.012)
$SIZE$			<b>0.004***</b> (0.001)			<b>0.008***</b> (0.000)
$BC * Country\ Controls$	No	No	Yes	No	No	Yes
$Country\ Controls$	No	No	Yes	No	No	Yes
$Country\ FE$	Yes	Yes	Yes	Yes	Yes	Yes
$Year-month\ FE$	Yes	Yes	Yes	Yes	Yes	Yes
Observations	86,739	86,739	86,739	68,693	68,693	68,693
R-squared	0.023	0.028	0.028	0.041	0.046	0.046

# 3.Results

## Potential mechanisms

In our final set of tests, we examine whether the relationship between employee satisfaction and stock returns in flexible labor markets depends on industry labor mobility.

$$\begin{aligned} R_{cit} = & \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times EPL_{ct} \times LM_i + \beta_4 BC_{cit} \times LM_i + \beta_5 EPL_{ct} \\ & \times LM_i + \beta_6 LM_i + \beta_7 EPL_{ct} + \delta_1 BC_{cit} \times CountryControls_{ct} + \delta_2 CountryControls_{ct} + \\ & \delta_3 FirmControls_{cit} + \varepsilon_{cit}. \end{aligned} \quad (7)$$

where  $LM_i$  is a dummy variable that equals one if firm  $i$  is in the top 15 industries by labor mobility (based on two-digit SIC codes manually matched with the four-digit NAICS industries) categorized by Donangelo (2014), who reports the top 15 and bottom 15 industries, and zero otherwise.



**Table 9**  
**Stock returns and industry labor mobility**

This table reports the results of pooled panel regressions across countries:

$$R_{cit} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times EPL_{ct} \times LM_i + \beta_4 BC_{cit} \times LM_i + \beta_5 EPL_{ct} \times LM_i + \delta_1 LM_i + \delta_2 EPL_{ct} + \beta_6 BC_{cit} \times CountryControls_{ct} + \delta_3 CountryControls_{ct} + \delta_4 FirmControls_{cit} + \varepsilon_{cit}$$

where  $R_{cit}$  is the return for firm  $i$  in month  $t$ , either raw, market-adjusted, or industry-adjusted.  $BC_{cit}$  is a dummy variable that equals one if firm  $i$  has been included in the most recent BC list in country  $c$  prior to month  $t$ , and zero otherwise.  $EPL_{ct}$  is labor market flexibility ( $EPLI$ ) described in Table 1, Panel B.  $LM_i$  is a dummy variable that equals one if firm  $i$  is in the top 15 industries by labor mobility categorized by Donangelo (2014), and zero otherwise;  $CountryControls_{ct}$  include the country-level controls described in Table 5.  $FirmControls_{cit}$  include the firm-level controls described in Table 4. The regression constant is not reported for brevity. Standard errors, given in parentheses, are double clustered by country and year-month. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively. The sample period is October 1997 to December 2017.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Raw returns			Market-adjusted returns			Industry-adjusted returns		
$BC_{cit}$	<b>0.613***</b> (0.165)	<b>-1.865***</b> (0.561)	<b>-3.664**</b> (1.629)	<b>0.609***</b> (0.172)	<b>-2.072***</b> (0.576)	<b>-3.605**</b> (1.702)	<b>0.575***</b> (0.154)	<b>-1.735***</b> (0.520)	<b>-2.493**</b> (1.111)
$BC_{cit} * EPL_{ct}$		<b>0.291***</b> (0.076)	<b>0.475**</b> (0.229)		<b>0.317***</b> (0.081)	<b>0.406*</b> (0.227)		<b>0.262***</b> (0.065)	<b>0.356**</b> (0.173)
$BC_{cit} * EPL_{ct} * LM_i$		<b>0.297</b> (0.192)	<b>0.602**</b> (0.240)		<b>0.236</b> (0.207)	<b>0.538**</b> (0.257)		<b>0.317*</b> (0.191)	<b>0.537**</b> (0.227)
$BC_{cit} * LM_i$		<b>-2.418</b> (1.655)	<b>-5.199**</b> (2.140)		<b>-1.946</b> (1.790)	<b>-4.645**</b> (2.273)		<b>-2.447</b> (1.619)	<b>-4.489**</b> (1.992)
$EPL_{ct} * LM_i$		<b>0.089***</b> (0.018)	<b>0.124***</b> (0.021)		<b>0.103***</b> (0.015)	<b>0.129***</b> (0.014)		<b>0.147**</b> (0.067)	<b>0.188***</b> (0.068)
$LM_i$		<b>-0.639**</b> (0.270)	<b>-0.937***</b> (0.273)		<b>-0.745***</b> (0.254)	<b>-0.979***</b> (0.234)		<b>-0.985*</b> (0.557)	<b>-1.329**</b> (0.573)
$EPL_{ct}$		<b>0.679</b> (1.122)	<b>-0.011</b> (0.833)		<b>0.880</b> (0.958)	<b>0.172</b> (0.925)		<b>0.696</b> (1.097)	<b>0.138</b> (0.769)
$BC * Country\ Controls$	No	No	Yes	No	No	Yes	No	No	Yes
Country Controls	No	No	Yes	No	No	Yes	No	No	Yes
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,741,282	2,741,282	2,442,281	2,741,282	2,741,282	2,442,281	2,741,282	2,741,282	2,442,281
R-squared	0.108	0.108	0.111	0.024	0.025	0.026	0.039	0.039	0.041

# 4. Conclusion

- The alphas documented by Edmans (2011, 2012) for the US are not anomalous in a global context, in terms of economic significance. We find similar results for current valuation ratios, operating performance, and future earnings surprises.
- Our findings are consistent with the recruitment, retention, and motivational benefits of employee satisfaction being most valuable in flexible labor markets.
- the value of employee satisfaction depends on the flexibility of labor markets and existing regulations on worker welfare, the value of other SRI screens, such as gender diversity, animal rights, environmental protection, and operating in an ethical industry, also likely depend on the context. This paper shows that even the few strategies that outperform in the US may not outperform globally, further emphasizing the dangers with portraying the academic evidence for SRI as being unequivocal.