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

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Abstract

Studying 30 countries, we find that the link between employee satisfaction and stock returns is significantly increasing in a country's labor market flexibility. This result is consistent with employee satisfaction having greater recruitment, retention, and motivation benefits where firms face fewer hiring and firing constraints and employees have greater ability to respond to satisfaction. Labor market flexibility also increases the link between employee satisfaction and current valuation ratios, future profitability, and future earnings surprises, inconsistent with omitted risk factors and identifying channels through which employee satisfaction may affect stock returns. The findings have implications for the differential profitability of socially responsible investing strategies around the world – in particular, the importance of considering institutional factors when forming such strategies.

JEL classifications: G12, G23, G38, J53, J81, J83, J88, K31

Keywords: Employee Satisfaction, Labor Market Flexibility, Socially Responsible Investing, Corporate Social Responsibility, ESG Investing

This paper studies the relationship between employee satisfaction – a common socially responsible investing ("SRI") screen – and stock returns around the world. Theory provides conflicting predictions as to whether employee satisfaction is beneficial for firm value. On the one hand, it significantly enhances recruitment and retention. This is especially important in the modern firm, where rank-and-file employees are key assets, innovating new products, building customer and supplier relationships, and mentoring subordinates. Employee satisfaction can also be a valuable motivational tool. The above tasks are difficult to measure and thus motivate with the monetary "piece rates" used in 20th-century manufacturing firms. This reduced effectiveness of extrinsic motivators increases the role for intrinsic motivators such as satisfaction. The efficiency wage hypothesis highlights numerous channels through which satisfaction may increase motivation. For example, Akerlof (1982) posits that employees view a positive working environment as a "gift" from the firm and respond with a "gift" of increased effort.[1]

On the other hand, employee satisfaction can represent managerial inefficiency. Taylor (1911) argues that workers should be treated like any other input – management's goal is to extract maximum output from them while minimizing their cost. Satisfaction indicates that employees are overpaid or underworked, both of which reduce firm value.

The relative importance of the above costs and benefits depends on the institutional context. In flexible labor markets, the recruitment benefits of satisfaction are more important since firms engage in more hiring – both because hiring is easier (due to fewer restrictions on the contracts firms can offer) and because firing underperformers is easier, creating more vacancies. The retention benefits are also more important because the rate of departures is higher. Rivals face fewer constraints on hiring away workers; the greater firing risk encourages employees to invest in general rather than firm-specific skills (Thelen (2001)), increasing their ability to be recruited elsewhere.

The motivational benefits of employee satisfaction are also likely greater in flexible labor markets. First, the impact of employee-friendly practices is stronger if these are not mandated by law and thus more likely to be seen as a "gift". Second, the value of autonomy

[1] These theories imply a high *level* of compensation, but do not suggest that the *form* of compensation should be in satisfaction compared to cash. However, Maslow (1943) and Hertzberg (1959) stress that cash is only effective up to a point: once workers' physical needs are met, they are motivated by non-pecuniary factors such as job satisfaction, which cannot be purchased with cash and can only be provided by the firm.

is reduced by collective bargaining (a feature of rigid labor markets) because workers' tasks are decided centrally, giving less freedom for a satisfied worker to take value-creating actions.[2] Third, where dismissal laws are weak, employees may be less willing to innovate, because the firm may punish failure or hold up workers in the case of success (Acharya, Baghai, and Subrahmanian (2013)). Thus, a reputation for treating workers fairly and tolerating failure is particularly likely to spur innovation. Finally, in flexible labor markets, workers are better matched to jobs for which their skills are suited (Acemoglu and Pischke (1998)), and so increased motivation has a greater effect.

Testing the link between employee satisfaction and firm value is challenging, because causality may run from the latter to the former. Edmans (2011, 2012) partially addresses this challenge by using stock returns (rather than, say, profits) as the dependent variable. If satisfaction were the result, rather than cause, of high profits, these profits should already be incorporated into the stock price at the start of the return compounding window, since they are tangible (controlling for momentum to address any slowness in incorporation.) Thus, firms with high employee satisfaction should not outperform going forwards.[3] In contrast, he finds that the "100 Best Companies to Work For in America" subsequently beat their peers by 2.3-3.8% per year over a 28-year period. They also have significantly positive earnings surprises, addressing concerns of omitted risk factors. These results suggest that employee satisfaction has value but is not immediately capitalized by the market. However, these papers only study the US – a country with particularly flexible labor markets – and so their external validity is limited. It is unclear whether these results are generalizable to other countries, especially those with less flexible labor markets.

This paper addresses this open question. 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 US Best Companies ("BC") list is produced by the Great Place to Work® Institute, which compiles similar lists in 44 other countries – 34 of which have at least one BC publicly traded in the domestic market and have at least 5 years' history of

[2] Hypothetically, a satisfied employee could choose to exert effort in excess of the centrally bargained standard. However, a large literature on alienation of "rate-busters" highlights the social costs of doing so (e.g. Roethlisberger and Dickson (1939), Mayo (1949)).

[3] A separate advantage is that stock returns capture all the channels through which satisfaction may improve firm value – in addition to profits, satisfaction may also lead to new products or contracts.

BC listings. We measure country-level labor market flexibility using two versions of the OECD Employment Protection Legislation ("EPL") index, which is available for 30 out of the 34 countries. The index is also used in Blanchard and Portugal (2000), Messina and Vallanti (2007), Pagano and Volpin (2005b), and Simintzi, Vig, and Volpin (2015).

We find that the alphas previously documented for the US are not anomalous in a global context. An equal-weighted BC portfolio generates a significant Carhart (1997) 4-factor monthly alpha of 29 basis points in the US. This alpha is only the 16th highest out of the 21 countries with at least 5 publicly-traded domestic BCs and 100 BC-year observations. However, we also document sizable heterogeneity; for example, Denmark exhibits an insignificantly negative alpha of -0.27%. Thus, prior results do not extend to all countries.

We next show that the abnormal returns to the BCs are higher in flexible labor markets, using two different weightings of the EPL index. We conduct a pooled panel regression of firm-level stock returns on BC status interacted with labor market flexibility, controlling for the firm-level determinants of stock returns identified by Brennan, Chordia, and Subrahmanyam (1998), plus idiosyncratic volatility and illiquidity. To ensure that labor market flexibility is not simply proxying for other time-varying differences between countries, we control for country times year-month fixed effects. Doing so controls for unobservable country-level contemporaneous effects, and means that we are comparing BC and non-BC firms within the same country and year-month. We also control for other country-level variables interacted with BC status. Examples include price efficiency and five proxies for the development of the economy and stock market (GDP growth, GDP per capita, inflation, unemployment, and the ratio of stock market capitalization to GDP), since abnormal returns depend not only on the value of satisfaction but also the extent to which it is not priced by the market.

We find that a one standard deviation increase in labor market flexibility is associated with a 0.23-0.31% higher industry-adjusted monthly return to being a BC, significant at the 5% level. The result suggests that the link between employee satisfaction and stock returns depends critically on the institutional context. This has important implications for both managers and investors. Starting with the former, they suggest that managers should not necessarily increase expenditure on employee satisfaction in countries with low labor

market flexibility. Moving to the latter, investors can only expect to earn alpha from investing in firms with high employee satisfaction in certain countries.

However, our results admit alternative explanations. First, the high stock returns of BCs in flexible labor markets could represent compensation for an omitted risk factor, because employee satisfaction is worth little upon bankruptcy. Second, it could be that employee satisfaction has zero value, but the market erroneously believes that it represents wasteful expenditure and thus discounts BCs upon list inclusion; the positive future returns represent an unwinding of this undervaluation. Both explanations seem inconsistent with the negative excess returns in certain countries, and the variation of returns with labor market flexibility, but we can conduct additional tests to investigate them. If the superior returns to BCs in flexible labor markets stem from an initial discount – either due to risk or a misperception that employee satisfaction is wasteful – then the BCs should initially trade at low valuation ratios. In contrast, we show that, at the start of the return compounding window, they enjoy superior industry-adjusted Tobin's Qs, and this premium is significantly increasing in labor market flexibility. These results are instead consistent with the market partially impounding the value of employee satisfaction upon list publication.

To test the main hypothesis that employee satisfaction has value that the market misprices, we study future accounting performance. We find that the BCs earn higher future profitability than their peers, particularly in flexible labor markets. A one standard deviation increase in labor market flexibility is associated with BCs having a 0.52-0.57 percentage point higher industry-adjusted return on assets the next year. The results are similar for return on assets two years out. In addition, superior future accounting performance should only manifest in higher stock returns if it was unanticipated by the market. We find that the BCs enjoy higher one- and two-year earnings surprises than their peers, and that this difference is significantly increasing in labor market flexibility.

Finally, the recruitment, retention, and motivational benefits of employee satisfaction should be stronger for industries with greater labor mobility. We find that the positive returns to employee satisfaction in flexible labor markets are higher in such industries. A one standard deviation increase in labor market flexibility is associated with a 1.19% (1.62%) higher industry-adjusted (market-adjusted) monthly return to being a BC in the top ten industries by labor mobility, as defined by Donangelo (2014), compared to being a

BC in other industries. Similarly, the benefits of employee satisfaction are also stronger in the ten industries with the highest percentage of skilled workers, as classified by Tate and Yang (2015).

This paper contributes to three literatures. The first is the link between employee satisfaction and various measures of firm performance, e.g. Abowd (1989), Diltz (1995), Dhrymes (1998), and Edmans (2011, 2012). These studies only analyze the US and may not generalize. Second, while an established literature highlights the importance of CEOs, 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)).

The third is the profitability of SRI, the integration of environmental and social ("ES") factors into investment decisions. Despite common claims that SRI beats the market, particularly from practitioners, academic research has found few ES factors that reliably outperform.[4] Employee satisfaction is one of the few: Boustanifar and Kang (2022) document that the original Edmans (2011, 2012) results continue to hold up to 2020 and when using more recent factor models, but still focus on the US. This paper shows that even employee satisfaction may not outperform outside the US, which has implications for the global performance of other SRI factors. The value of other ES factor – gender diversity, animal rights, and whether the firm is in a "sin" industry (such as tobacco, alcohol, and gambling) – likely also depends on the institutional and cultural context. To our knowledge, this is the first paper to study the global performance of an ES factor positively linked to returns.[5] While the "E" of ES is largely quantitative and thus comparable, such as carbon emissions and water usage, many "S" components are qualitative and thus difficult to measure on a comparable scale globally. The Best Companies list uses the same methodology for each country and thus provides a globally comparable measure for an "S" dimension.

[4] Hamilton, Jo and Statman (1993), Bauer, Koedijk, and Otten (2005), Schröder (2007), Statman and Glushkov (2009) and Berchicci and King (2022) find no or a mixed effect of SRI screens on investment returns; Brammer, Brooks, and Pavelin (2006), Renneboog, Ter Horst, and Zhang (2008), Hong and Kacperczyk (2009), Mueller, Ouimet, and Simintzi (2017), and Bolton and Kacperczyk (2021) find a negative effect; Derwall et al. (2005), Fornell et al. (2006), and Edmans (2011, 2012) find a positive effect; and Lins, Servaes, and Tamayo (2017) and Shan and Tang (2022) find a positive one only during crises.

[5] Bolton and Kacperczyk (2022) study the global performance of an ES screen negatively linked to stock returns (better environmental performance in the form of lower carbon emissions is linked to lower returns).

1. Hypothesis development

We first discuss whether we should expect any long-run returns to the Best Companies lists at all, in either direction. Our return compounding window starts at the beginning of the month after list publication. Thus, since these lists are public, we should find no abnormal returns in a semi-strong efficient market. Regardless of the institutional context, and thus regardless of whether employee satisfaction has positive or negative value, this value should already be capitalized by the market.

However, there is significant prior evidence that intangible assets are not fully priced by the stock market. Firms with superior governance (Gompers, Ishii, and Metrick (2003), Giroud and Mueller (2011)), customer satisfaction (Fornell et al. (2006)), environmental efficiency (Derwall et al. (2005)), and high R&D and advertising expenditure (Chan, Lakonishok, and Sougiannis (2001)) all earn higher long-run returns. Edmans (2011) documents that the value of BC list inclusion is not fully capitalized by the market until 4-5 years later in the US, which is arguably the most efficient stock market. Thus, it is reasonable to hypothesize that the value of employee satisfaction will not be immediately capitalized by non-US stock markets. The magnitudes of the abnormal returns to other intangible-based portfolios found by prior work range from 4-8.5% per year, and so the mispricings found in this paper are plausible given these findings.

As explained in the introduction, the use of future stock returns as the dependent variable alleviates concerns that there is reverse causality from firm value to satisfaction. However, reverse causality can still arise if employees have superior information about their firm's future stock returns and those with positive information report higher satisfaction today. This explanation is unlikely for a number of reasons. Existing studies suggest that employees do not have private information: Benartzi (2001) shows that employees make incorrect decisions when investing in company stock, and Bergman and Jenter (2007) find that firms are able to lower total compensation by granting their workers overvalued options in lieu of salary. Even if employees do have superior information, it is likely to be about near-term returns, given that executives are unable to forecast returns past 100 days (Jenter, Lewellen, and Warner (2011)). There is a significant time lag between the survey completion deadline and the start of the return compounding window

– for example, this lag is seven months in the United States. Moreover, it is not clear why employees' ability to forecast future returns would depend on labor market flexibility. Indeed, finding that the returns to employee satisfaction vary with country-level labor market flexibility would not only be interesting in its own right, but also reduce the likelihood that the original US results were due to reverse causality.

We now discuss why the value of employee satisfaction might depend on a country's labor market flexibility. A key branch of the human resource management (e.g. Huselid (1995), Macduffie (1995)) and organizational economics (e.g. Milgrom and Roberts (1995)) literatures, known as contingency theory, emphasizes that the value of investing in employee satisfaction is highly contingent on the setting. Specifically, the introduction gave several reasons for why the recruitment, retention, and motivation benefits of employee satisfaction may be higher in more flexible labor markets. These same reasons imply that these benefits are lower in rigid labor markets, causing a downward shift in the marginal benefit curve, potentially into negative territory. Moreover, rigid labor markets may also entail a downward movement along the marginal benefit curve. When regulations already ensure that the average firm is offering a certain level of wages, job security, and employee representation, companies with high satisfaction relative to their peers may be in negative territory.[6]

Indeed, a manager may spend excessively on employee satisfaction due to an agency problem. He may enjoy more pleasant relationships with his workers by overpaying them (Jensen and Meckling (1976)), or use employee benefits as a takeover defense (Pagano and Volpin (2005a)). Indeed, Simintzi, Vig, and Volpin (2015) find that employment protection increases labor costs and reduces profitability. Cronqvist et al. (2009) show that high worker pay is correlated with managerial entrenchment. Excessive expenditure on employee satisfaction may also result from labor control. In countries where employees have more bargaining power (e.g. there is centralized collective bargaining, a feature of rigid labor markets), it could be workers who are determining human resource policies, and

[6] Prior to 2015, US supermarket Costco paid its rank-and-file employees nearly double that of its close competitor Walmart, contributing to its high level of employee satisfaction. Due to the US's flexible labor markets and thus relatively low minimum wage, many Walmart employees were low-paid and so Costco was able to offer a wage premium without exceeding employees' marginal product; indeed, its profit per employee was over 40% higher than Walmart's. Source: "Why Wal-Mart Will Never Pay Like Costco", *Bloomberg*, August 27, 2013.

so satisfaction could be excessive from shareholders' perspective. Indeed, Gorton and Schmid (2004) find that German firms where one-half of the supervisory board consists of employees trade at a 31% discount to firms with one-third worker representation. Faleye, Mehrotra, and Morck (2006) find that labor-controlled US firms deviate more from value maximization and exhibit lower labor and total factor productivity. Chen, Kacperczyk, and Ortiz-Molina (2011) show that trade unions increase a firm's operating leverage and cost of equity, and Lee and Mas (2012) find that they reduce firm value by an average of $40,500 per unionized employee.

2. Data and summary statistics

2.1. Measures of employee satisfaction

Our main data source is the Best Companies lists compiled by the Great Place to Work® Institute. The first list focused on US companies and was published in a 1984 book entitled the "The 100 Best Companies to Work for in America", later updated in 1993; from 1998 onwards it has been published every January in *Fortune* magazine. Two-thirds of the score comes from a 58-question survey that the Institute administers to 250 employees randomly selected in each firm. The survey asks specific questions on four areas: Credibility (communication to employees), Respect (opportunities and benefits), Fairness (compensation and diversity), and Pride/Camaraderie (teamwork, philanthropy, and celebrations). The survey questions were developed through an extensive process that involved a review of academic literature; interviews with managers, employees, and workplace experts; focus group sessions; and discussions with management consultants, survey design experts, and researchers. This process created 120 statements, which were narrowed down to 58 following extensive testing with groups of employees, postsurvey interviews, and cluster and factor analysis. The survey was then beta-tested in a variety of workplace settings to ensure that each survey statement was measuring correctly. This extensive survey design process, plus the specificity of the questions, helps ensure that the survey is indeed capturing Credibility, Respect, Fairness, and Pride/Camaraderie rather than other factors such as employee optimism.

The remaining one-third of the score comes from the Institute's evaluation of factors such as a company's demographic makeup, pay and benefits programs, and culture. The

top firms are publicly announced in a list. The list is highly regarded as a thorough measure of employee satisfaction, receiving significant attention from shareholders, management, employees, and the media, and has since been extended to 44 other countries around the world. As explained in the introduction, the list uses the same methodology for each country and thus provides a globally comparable measure of employee satisfaction.

The recruitment, retention, and motivation benefits of *aggregate* employee satisfaction likely depend on labor market flexibility, as discussed in the introduction. Moreover, the benefits of *specific* dimensions of employee satisfaction captured in the survey also likely depend on flexibility – the survey questions reflect the dimensions of satisfaction relevant for our hypothesized mechanisms. Certain survey dimensions may already be mandated by law, and thus would not be seen as a "gift" under Akerlof's (1982) model. For example, the Credibility area contains questions on informative communication ("management keeps me informed about important issues and changes", "management makes its expectations clear") and accessible communication ("I can ask management any reasonable question and get a straight answer", "management is approachable, easy to talk with"); the Respect area contains questions on collaboration ("management genuinely seeks and responds to suggestions and ideas", "management involves people in decisions that affect their jobs or work environment"). These dimensions would likely already be satisfied for the average firm in Germany, where worker representation on the board is mandatory and so there is little additional value from being above average. The Respect area also contains questions on work environment, and the Fairness area contains questions on discrimination, both of which may also be mandated by law.

A second dimension discussed in our hypothesis development is autonomy, which is captured by many areas. For example, the Respect area contains questions such as "management genuinely seeks and responds to suggestions and ideas", "management involves people in decisions that affect their jobs or work environment", "I am able to take time off from work when I think it's necessary", and "people are encouraged to balance their work life and their personal life." A third dimension is that, where firing is easier, employees may innovate less due to fear of firing either if the innovation fails or if it succeeds (due to expropriation). The Credibility area contains questions on reliability ("I believe management would lay people off only as a last resort") and honesty

("Management is honest and ethical in its business practices"); the Respect area contains a question on tolerance for failure ("Management recognizes honest mistakes as part of doing business").

Firms apply to be considered for the list. Such selection issues either have no effect or likely bias the results downwards. For it to affect the results, the selection decision must be correlated with either the independent variable (satisfaction) or outcome variable (future returns). If firms with low satisfaction choose not to apply because they expect not to make the list, this simply increases its accuracy. If a firm with high satisfaction chooses not to apply because it believes this quality is already publicly known, this reduces the satisfaction level of the firms in the list and attenuates the results. Turning to the outcome variable, even if the decision to apply were correlated with current profitability or past stock returns, both variables should be incorporated into the stock price at the start of the return compounding window and thus not affect future stock returns (controlling for momentum). Any selection would likely lead to companies with a negative future outlook applying to the list to "greenwash" and mask poor performance, attenuating our results.[7] Moreover, it is not clear why selection issues would lead to the returns to BCs being linked to labor market flexibility.

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, to prevent the results being driven by a small number of multinational firms that are on the BC list of several countries. Table 1 describes the 30 countries with data on labor market flexibility (which we will describe in Section 2.2) and where at least one BC is headquartered and listed. Column (1) shows the start year of BC listings for each country. Since the earliest start year for a non-US country is 1997 (for Brazil), our sample period is from September 1997 to December 2021. As a result, we start the US data from 1998 when the lists were first published in *Fortune*.

To form BC portfolios, we use the beginning of the month after the list publication date for each country as our portfolio formation date. For example, the US list is typically published in mid-January, and so we use February 1 as the portfolio formation date. Thus,

[7] Gibson et al. (2022) document greenwashing in the context of underperforming US mutual finds signing the UN Principles for Responsible Investment.

our analyses jointly test whether employee satisfaction has value and this value is not immediately capitalized by the market. The constituents of BC portfolios are rebalanced once a year on the same day. Column (2) reports the portfolio formation dates for each country. Column (3) gives the number of publicly listed BCs per country. Our sample covers 603 public BCs for across countries.

For the US, the number of firms in the list has remained constant over time. For the other countries, it has increased over time – for example, the first list in Germany (in 2003) contains 50 firms, while in 2021 it contains 100. Columns (6) and (7) of Table 1 indicates the number of BCs selected in the initial list and the 2021 list for each country.

2.2. Measures of labor market flexibility

We use the EPL index to measure labor market flexibility. The index measures the procedures involved in hiring workers on either fixed-term or temporary contracts, and in dismissing individuals and groups of workers. It is based on statutory laws, collective bargaining agreements, case law, contributions from OECD member countries, and experts' advice from each country. It has three components:

Individual dismissal of workers with regular contracts (category EPR) measures three aspects of dismissal protection: (i) procedural inconveniences of the dismissal process faced by employers, such as notification and consultation requirements; (ii) length of notice periods and conditions of severance pay; and (iii) difficulty of dismissal, such as the circumstances under which a dismissal is possible, and repercussions for the employer if an unfair dismissal is discovered.

Additional costs for collective dismissals (category EPC) measures the extra costs faced by employers when they dismiss several workers simultaneously, over and above the costs applicable for individual dismissals.

Regulation of temporary contracts (category EPT) measures regulations for fixed-term and temporary work contracts in terms of job type and duration, requirements for such workers to receive equal pay and working conditions as permanent employees, and regulations for the setup and operations of work agencies.

The first two measures capture the ease of dismissal. As mentioned in the introduction, fewer firing constraints increase the motivational benefits of employee satisfaction (as

workers will exert greater effort to avoid being fired from a satisfying job), and its recruitment benefits (since the ease of firing raises the number of vacancies). The third measure captures constraints on hiring, which reduce the recruitment and retention benefits of satisfaction. Separately, regulations on hiring and firing mean that the average firm already exhibits a certain level of satisfaction, and so an above-average firm may be exceeding the optimal level.

We use two versions of the EPL measure. The first version, denoted as *EPL1,* is based on an equally-weighted average of the three components. The motivation for the second version, *EPL2*, is that the OECD website not only reports the three above components, but also a composite measure of EPR and EPC (which they call "employment protection of regular contracts" (EPRC) which gives a weight of 5/7 to EPR and 2/7 to EPC, implying that it views EPR as 2.5 times as important as EPC. To calculate *EPL2*, we thus assign a 1/3 weight to temporary contracts (EPT), as in *EPL1*, and a 2/3 weight to EPRC, which we then sub-weigh with 5/7 on EPR and 2/7 on EPC. Therefore, our weights for *EPL2* are 10/21 on EPR, 4/21 on EPC, and 7/21 on EPT. For both measures, we subtract the simple or weighted average from 10, so that a higher EPL score indicates high flexibility.

Panel B of Table 1 reports the time series mean of the two EPL measures and each sub-index for each country from 1997-2021.[8] As a rough check that EPL is linked to labor turnover, we were able to collect data on labor turnover rates for nine countries in our sample from OECD (1996). Their correlation with the time series mean of *EPL1* in our sample period is 0.64. Similarly, Messina and Vallanti (2007) and the OECD (2013) show that EPL is positively associated with labor turnover.

We obtain stock return and accounting data from CSRP/Compustat for US firms, and from Datastream for non-US firms. We construct our sample of firm-month observations as follows. 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

[8] The OECD reports EPL data until 2021 for OECD countries, and sometimes for a sub-period only for emerging markets countries such as Brazil and India. We use the first available value to fill in missing EPL values for years prior to it and the last available value to fill in missing values for years after it.

if either its raw stock return or any of the eight firm controls described in Section 3.2 are missing.[9] We also drop observations where the Datastream total return index is less than 3 to avoid the effects of rounding errors, following Guo and Savickas (2008).[10] Unless otherwise stated, we then winsorize all dependent and independent variables at the 0.1% level in each tail.[11] We include firms into the sample after the start year of BC listings for their country. Column (5) ((6)) of Table 1 reports the total number of publicly listed firms (firm-month observations) per country. Our final sample consists of 3,258,280 firm-month observations for 43,239 publicly listed firms.

In Table 2, Panel A presents summary statistics for firm-level stock returns and controls, and Panel B does so for the seven country-level controls. Panel C exhibits the Pearson pairwise correlation coefficients between the country-level control and our two labor market flexibility measures. All variables are described in Appendix A.

3. Results

3.1. Country-level alphas

We first calculate the Carhart (1997) four-factor alphas to the BC portfolios in each country:

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

where R_{ct} is the US dollar returns to a BC portfolio (either equal-weighted or value-weighted) in month t for country c in excess of the US one-month treasury rate (as in Fama and French (2012)). We use dollar returns, consistent with the literature on international asset pricing (e.g. Fama and French (2017) and Griffin (2002)) and also because the Fama and French (2012) factors, described shortly, are in dollars.

[9] We also dropped 5 BCs that were acquired during our sample period to exclude high returns caused by the takeover premium (rather than employee satisfaction being high or low).

[10] Since Datastream rounds RI to the nearest 0.1, it could introduce substantial measurement errors for returns of low RI stocks. Therefore, if the RI is below 3, we set it to missing.

[11] Results are similar with winsorization at either 0.5% or 1% in each tail.

α is an intercept that captures the abnormal risk-adjusted return. *MKT, HML, SMB,* and *MOM* are, respectively, the Fama and French (2012) regional factors on market, value, size, and momentum, collected from Ken French's website.[12]

ε is an error term. Standard errors are corrected for heteroscedasticity and autocorrelation using Newey-West's (1987) estimator with four lags. As portfolio returns with a very small number of stocks can give noisy estimates, we run the country-level alpha regressions only for countries with at least 5 publicly-listed domestic BCs and 100 BC-month observations. Out of the 30 countries in our study, 21 satisfy the above criterion.

Table 3 reports results for both equal-weighted and value-weighted portfolios in these 21 countries; for brevity, we do not report the coefficients on the risk factors. For equal-weighted portfolios, Denmark and Sweden have insignificantly negative alphas. The remaining 19 countries have positive alphas, which are significant at the 10% level or better for Australia, Brazil, Finland, India, Japan, Norway, Peru, and the US. In terms of economic significance, the US has the 16th highest alpha out of the 21 countries, suggesting that it is not an outlier. For value-weighted portfolios, Denmark and Germany have insignificantly negative alphas. The remaining 19 countries have positive alphas, which are significant at the 10% level or better for the same eight countries as before.

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, for both measures of EPL and for both equal-weighted and value-weighted returns. All four lines have a positive slope, suggesting that the returns to being a Best Company are increasing in labor market flexibility. To test for statistical significance, we run weighted-least squares regressions of country-level alphas on both EPL measures. We weight each country by the inverse of the squared standard error of its alpha estimate, since some countries have fewer observations. Panel B of Table 3 shows that, for both equal-weighted and value-weighted portfolios, the coefficients on both measures of EPL are statistically significant at 5% or better.[13]

[12] We use the Europe factors for all European countries, the North American factors for Brazil, Canada, Chile, Columbia, Mexico, Peru, and the US, the Japan factors for Japan, and the Asia-Pacific Excluding Japan factors for Australia, Korea and India. There are no Fama-French factors for Saudi Arabia so it is automatically dropped in this regression.

[13] As a robustness check, we also use Fama and French's (2017) five-factor model, including the market, value, size, profitability, and investment factors. This specification is less appropriate since profitability is a "bad control" – a channel through which BC status may affect stock returns (as we show in Section 5). Nevertheless, results are significant at the 5% level in all specifications (see Internet Appendix C). As a

3.2. Characteristics controls

While Section 3.1 controls for the BCs' covariance with risk factors, this section controls for firm characteristics that may also affect stock returns. We first run the following pooled panel regression across all firms (both BCs and non-BCs) within a country, at the firm-month level:

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

R_{it} is the return on stock i in month t. 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.[14] 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. BC_{it} is a dummy variable that equals one if firm i was included in the most recent BC list prior to month t, and zero otherwise. $FirmControls_{it}$ include the control variables used in Brennan, Chordia, and Subrahmanyam (1998), calculated using CRSP and Compustat for US firms and Datastream and Worldscope for non-US firms. *SIZE* is the log of firm i's market capitalization at the end of month *t-2*. *BM* is the log of firm i's book-to-market ratio at the end of month *t-2*. *YLD* is firm i's dividend yield: the total dividend paid over the 12 months prior to month t, divided by the share price at the end of month *t-2*. *RET2-3* is the log of one plus firm i's cumulative return over months *t-3* through *t-2*. *RET4-6* and *RET7-12* are defined similarly. *VOL* is the log of firm i's dollar trading volume in month *t-2*. *PRC* is the log of firm i's price at the end of month *t-2*. To these controls, we add *IDIOVOL*, the standard deviation of the residual from regressing excess returns for firm i between month *t-13* and *t-1* on the excess stock market return, as in Guo and Savickas (2008); and *ILLIQ*, the average absolute return over trading volume for firm i between month *t-13* and *t-1,* following Amihud (2002). (Results are unchanged without

further robustness check, we use the Fama and French (2012) country-specific rather than regional four factors. They are only available for 13 countries, but our results remain significant at the 10% level in three out of four specifications (see Internet Appendix C).

[14] Results are similar using the CAPM-adjusted abnormal return with a 5- or 3-year rolling-window beta.

these two additional controls.) We also include year-month fixed effects to control for macroeconomic conditions that may affect stock returns in a given month. Standard errors are clustered by year-month; clustering by firm does not change the results.

The results are presented in Table 4; we only present the coefficient on the *BC* dummy for brevity. For all three return measures, it is significantly positive for Australia, Canada, India, Japan, Norway, and the US.[15] For example, in the US, being a BC is associated with an additional industry-adjusted monthly return of 37 basis points. For industry-adjusted returns, 16 out of 30 countries have a positive coefficient; 14 countries have a negative coefficient but none are significant.

4. The role of labor market flexibility

While Figure 1, Panel B and Table 3 showed that BC returns are related to labor market flexibility at the country level, Holderness (2016) stresses that international empirical analyses should be conducted at the firm level, as country-level analyses ignore firm characteristics. We thus conduct a firm-level analysis, linking a firm's stock returns to its BC status interacted with labor market flexibility, plus firm characteristics previously shown to affect returns. To do so, we enhance the pooled panel regression in equation (2) with measures of labor market flexibility and country-level controls, and estimate it across the full sample of all countries using the following regression:

$$R_{cit} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 Country \times Year\text{-}month\ FE_{ct} + \delta_2 FirmControls_{cit} + \varepsilon_{cit}. \qquad (3)$$

where R_{cit} is either the raw, market-adjusted, or industry-adjusted return. *EPL* refers to either of our two labor market flexibility measures: *EPL1* and *EPL2*. $CountryControls_{ct}$ is a vector of other country-level control variables. $RuleofLaw_c$ measures the rule of law from La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997) and $ADRI_c$ measures the anti-director rights index corrected by Spamann (2010). IDV_c is Hofstede's (1980) measure of

[15] The coefficients on the *BC* dummy in Australia and Japan are very high (e.g. respectively, 194 and 126 basis points for raw returns). We have re-run the cross-county analyses that follow excluding Australia and Japan for robustness. The results are very similar, since the Australia and Japan data are only available for a relatively short time period.

a country's cultural individualism, which we include because Chui, Titman, and Wei (2010) and Gao, Parsons, and Shen (2017) find that profits to two other trading strategies (momentum and distress, respectively) depend on individualism. $PriceInf_{ct}$ is a measure of price informativeness based on Fernandes and Ferreira (2009): $\ln\left(\frac{1-R_{it}^2}{R_{it}^2}\right)$, where R_{it}^2 is the R-squared of a regression of monthly equity excess returns of firm i on value-weighted local market excess returns and US market excess returns in year t. We take the median value over all firms for a particular country-year.[16] Since the returns to BCs capture not only the value of employee satisfaction, but the extent to which this value is not immediately capitalized by the market, we include price informativeness as a proxy for market efficiency.[17] We also include $GDPg_{ct}$ (GDP growth), GDP_{ct} (GDP per capita), $Infl_{ct}$ (inflation rate), $Unemp_{ct}$ (unemployment rate), and $MktCapGDP_{ct}$ (stock market capitalization over GDP), all taken from the World Bank, which proxy for the development of a country's economy and stock market, and thus may also be related to market efficiency.

We interact the country-level controls with *BC*, to ensure that any significance of the *BC*×*EPL* interaction does not simply arise because *EPL* proxies for another country-level variable that is causing cross-country differences in the returns to the BCs. We include *Country*×*Year-month* fixed effects to capture country-specific time-varying factors that may affect the overall level of stock returns in a country, and means that we are comparing BCs and non-BCs within the same country and year-month. Thus, to explain our results, any unobservable factor would not only need to be associated with future stock returns, but also the association would have to depend on a firm's BC status in a country-industry-month (since our results hold when R_{cit} represents industry-adjusted returns).[18] Following Petersen (2009), we double-cluster standard errors in all cross-country panel regressions.

[16] Following Fernandes and Ferreira (2009), we exclude firm-years with negative sales and total assets of under $100 million, and require stock returns data in Datastream in every month of a given year.

[17] Note that the control for firm size may also proxy for arbitrage costs and investor sophistication (Lakonishok, Shleifer, and Vishny (1994)).

[18] We were unable to find (from either prior literature or institutional study) any exogenous shocks to labor laws during our sample period that we could exploit for identification. Only Greece, Mexico, and Portugal experience large changes in *EPL* over our sample period, and such changes are likely to be endogenous since countries choose when to change labor laws.

We do so at the country and year-month levels as it is the most conservative specification; the results remain robust to double-clustering at the firm and year-month levels.

Panel A of Table 5 presents the results using *EPL1* as the measure of labor market flexibility. Columns (1)-(3) use raw returns as the dependent variable. In column (1), which contains no measures of labor market flexibility or country controls, *BC* has a positive coefficient of 0.29, which is significant at the 5% level. However, in column (3) when interactions with EPL and the country controls are added, the coefficient on *BC* becomes significantly negative, but the coefficient on *BC*×*EPL* is significantly positive at the 5% level. Thus, the returns to being a BC are significantly increasing in labor market flexibility; indeed, in some countries with rigid labor markets, they are negative.[19] Columns (4)-(6) ((7)-(9)) use the market-adjusted (industry-adjusted) return as the dependent variable. The results are equally strong, with the coefficient on *BC*×*EPL* being 0.43for both market-adjusted and industry-adjusted returns in columns (6) and (9). A one standard deviation increase in EPL is associated with a 0.32% (0.23%) increase in the monthly market-adjusted (industry-adjusted) return to being a BC.

Panel B presents the results using *EPL2* as the measure of labor market flexibility, which are similar to Panel A. For raw, market-adjusted, and industry-adjusted returns in columns (3), (6), and (9) respectively, the coefficient on *BC*×*EPL* is positive and significant at the 5% level. For example, the coefficient of 0.40 in column (9) indicates that a one standard deviation increase in *EPL2* is associated with a 0.31% increase in the monthly industry-adjusted return to being a BC.[20]

5. Potential mechanisms

The results of Section 4 are consistent with a number of potential mechanisms. Our hypothesis is that employee satisfaction has particularly high value in flexible labor markets, but the market does not fully incorporate this value immediately upon list publication. However, there are alternative explanations. First, the abnormal returns stem

[19] For example, in Venezuela, the expected BC premium is -0.47% per month, based on the coefficient in column (2) and the sample average *EPL1* of 5.957 (-2.362 + 0.318 × 5.957 = -0.47).

[20] Leung, Mazouz, Chen and Wood (2018), written after our NBER working paper, study the link between stock returns and organization capital interacted with labor market flexibility, although they do not control for *Country*×*Year-month* fixed effects. Our results remain similar after controlling for organization capital and its interaction with labor market flexibility (see Internet Appendix B).

from risk rather than mispricing – since employee satisfaction is an intangible asset worth little in bankruptcy, the BCs may be particularly vulnerable to changes in economic conditions. It is unclear why an omitted risk factor would vary with labor market flexibility, but additional analyses can be conducted to assess this hypothesis. Second, employee satisfaction creates neither positive nor negative value, but the market erroneously thinks that it represents wasteful expenditure, and so reacts negatively to list inclusion; the subsequent superior returns reflect the correction of this mispricing. This explanation would require the negative returns to employee satisfaction in other countries to result from the market erroneously thinking that it is value-creating and incorrectly reacting positively to list inclusion.[21]

Both alternative hypotheses would imply that the BCs in flexible (rigid) labor markets trade at a discount (premium) at the start of the return compounding window, i.e. the month following list publication. In contrast, under the main hypothesis that the market only partially incorporates the value of employee satisfaction, the BCs would trade at a premium (discount) in flexible (rigid) labor markets. We thus study the relationship between BC status and industry-adjusted Tobin's Q by running the following regression:

$$Q_{cit} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 Country \times Year\text{-}month\ FE_{ct} + \delta_2 FirmControls2_{cit} + \varepsilon_{cit}. \quad (4)$$

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. *FirmControls2* is a vector of firm controls: *Book* is the log of book assets, *ROE* is firm *i*'s return on equity as measured by income divided by book equity, and *FROE*, *F2ROE*, and *F3ROE* represent the return on equity for the next three years. The choice of

[21] A third channel is that list inclusion itself attracts demand from socially responsible investors, leading to price pressure. Edmans (2011) estimates this effect for the US and found it to be very small compared to the magnitude of the abnormal returns. In addition, this channel would require the increased demand from socially responsible investors to depend on labor market flexibility.

these variables follows Gompers, Ishii, and Metrick (2003) and Edmans (2011). The country-level controls are defined as in Table 5.[22]

The results in Table 6 show that, without country controls or *EPL*, the BCs enjoy Tobin's Qs that are 0.94 units higher at the start of the return compounding window. Moreover, this premium is particularly high in flexible labor markets. The *BC*×*EPL* interactions are significantly positive at the 1% level in three specifications, suggesting that the valuation premium to being a BC is increasing in labor market flexibility. With country controls, a one standard deviation increase in *EPL1* (*EPL2*) is associated with BCs having a 0.30 (0.28) unit higher Q. These results are inconsistent with the superior returns to the BCs in flexible labor markets resulting from them initially trading at a discount. In contrast, they are consistent with the hypothesis that employee satisfaction is valuable, particularly in flexible labor markets, and the market partially incorporates its value upon list publication.

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:

$$Perf_{cit+j} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 Country \times Year\text{-}month\ FE_{ct} + \delta_2 BM_{cit} + \delta_3 Perf_{cit} + \varepsilon_{cit}. \qquad (5)$$

$Perf_{cit+j}$ is industry-adjusted accounting performance for firm i in country c in year $t+j$ (for $j \in \{1, 2\}$), measured in two 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).[23] NPM_{cit+j} is the industry-adjusted net profit margin, calculated as operating income before depreciation divided by sales following Jacobson (1987). Following Gompers, Ishii, and Metrick (2003), we include BM_{cit} as a firm-level control. We also add $Perf_{cit}$, current operating performance, to control for potential

[22] Results still hold when we run least-absolute-deviation regressions to mitigate the effect of large outliers (as in Gompers, Ishii, and Metrick (2003)). We do not use this as our main specification as it only allows us to use country and year-month fixed effects, rather than country times year-month fixed effects.

[23] The results remain significant when replacing operating income before depreciation by net income.

persistence. The country-level controls are defined as in Section 4. To mitigate the effect of outliers, we winsorize *ROA* and *NPM* at 1% in each tail.[24]

The results are shown in Table 7. The BCs enjoy return on asset ratios that are 0.96 (1.22) percentage points higher than their peers one year (two years) after list inclusion.[25] When the *BC*×*EPL* interactions are added, they are significantly positive at 10% or better for all four specifications; the coefficient on *BC* alone either becomes insignificant or significantly negative at 5% or better for two specifications. A one standard deviation increase in *EPL1 (EPL2)* is associated with BCs having a next-year return on assets that is 0.53 (0.57) percentage points higher. We find similar results using net profit margin as the dependent variable without country control interactions. The results based on *EPL2* are similar (see Internet Appendix D). Out of the 16 specifications (with and without controls, using *EPL1* or *EPL2,* for *ROA*, *NPM*, as the performance measure, and studying performance one or two years ahead), six of the *BC*×*EPL* interaction terms are significant at the 1% level, five at 5%, and one at 10%.

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. Thus, Table 8 follows Core, Guay, and Rusticus (2006), Giroud and Mueller (2011), and Edmans (2011) by studying the earnings surprises of the BCs. We run the following pooled panel regression across countries:

$$Surprise_{cit} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 Country \times Year\text{-}month\ FE_{ct} + \delta_2 FirmControls3_{cit} + \varepsilon_{cit}. \quad (6)$$

where *Surprise* is the one or two-year earnings surprise. The one-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 eight months prior to the end of the forecast period, i.e. four months after

[24] The results are unchanged if we instead address outliers by conducting least-absolute-deviation regressions.

[25] As a benchmark against which to evaluate the economic significance of this result, if we take the inter-quartile range (standard deviation) of *ROA* for each country and calculate the median across the 30 countries, we obtain 2.30% (5.44%). Thus, the BCs' 0.96% or 1.22% higher return on assets appears plausible.

the previous fiscal year-end. Since most annual reports are filed within three months of the fiscal year-end, this ensures that analysts know prior earnings when making their forecasts. The two-year earnings surprise is calculated in a similar fashion, with the consensus forecast taken 20 months before the year-end. As in Easterwood and Nutt (1999), Giroud and Mueller (2011), and Edmans (2011), we remove observations for which the forecast error is larger than 10% of the price. *FirmControls3* is a vector of control variables. Columns (1) and (4) include no firm controls; (2) and (5) include *BM* one and two years prior, and (3) and (6) also include *SIZE* one and two years prior. All specifications include country times year-month fixed effects.

Our hypothesis is not only that the BCs exhibit superior earnings surprises, but also that this superiority is increasing in labor market flexibility. This is a difficult test to pass: Core, Guay, and Rusticus (2006) show that, even though well-governed firms deliver higher stock returns than poorly-governed firms (Gompers, Ishii, and Metrick (2003)), they do not deliver superior earnings surprises – even in a single-country regression that does not interact the variable of interest (governance) with a country-level variable.

Table 8 illustrates the results using *EPL1* as the measure of labor market flexibility. Columns (1)-(3) show that the BCs enjoy higher one-year earnings surprises, particularly in flexible labor markets: the coefficient on *BC*×*EPL* is significant at 5% or better. Column (1) contains no firm controls while columns (2) includes *SIZE* and column (3) also adds *BM*. Columns (4)-(6) study two-year earnings surprises and show that the interaction is significant at the 1% level for columns (4) and (5). Internet Appendix E shows similar results using *EPL2*.

In our final set of tests, we examine whether the relationship between employee satisfaction and stock returns in flexible labor markets varies by industry. One potential source of variation is industry labor mobility, because the recruitment, retention, and motivational benefits of employee satisfaction in flexible labor markets are likely stronger for more mobile industries. Therefore, we triple-interact the BC dummy, EPL, and industry labor mobility while controlling for all double-interactions between the three variables:

$$R_{cit} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times EPL_{ct} \times LM_i + \beta_4 BC_{cit} \times LM_i + \beta_5 EPL_{ct} \times LM_i + \beta_6 LM_i + \beta_7 BC_{cit} \times CountryControls_{ct} + \delta_1 Country \times Year\text{-}month\ FE_{ct} + \delta_2 FirmControls_{cit} + \varepsilon_{cit}. \quad (7)$$

where LM_i is a dummy variable that equals one if firm i is in the top ten industries by labor mobility, based on manually matching our four-digit SIC codes with the four-digit NAICS industries categorized by Donangelo (2014), and zero otherwise.[26]

Table 9, Panel A shows that the positive returns to employee satisfaction in flexible labor markets, measured using *EPL1*, are even more pronounced for industries where labor is more mobile. Based on the coefficients on $BC \times EPL \times LM$ with country controls, a one standard deviation increase in labor market flexibility is associated with a 1.62% (1.19%) higher raw or market-adjusted (industry-adjusted) return per month to being a BC in the top for 10 industries by labor mobility, compared to being a BC in other industries.

A second source of variation is the proportion of high-skill workers in an industry, since the recruitment, retention and motivational benefits of employee satisfaction are more important where employees are more highly skilled. In Panel B, we replace *LM* in equation (7) with *SK*, a dummy variable for the ten industries with the greatest proportion of high-skill workers, as estimated by Tate and Yang (2015).[27] The coefficient on $BC \times EPL \times SK$ is positive and significant at the 1% level in all three specifications without country control interactions, and 10% with.

Overall, our results suggest that companies with high employee satisfaction exhibit higher future stock returns, current valuation ratios, future operating performance, and

[26] Donangelo (2014) first calculates occupation-level labor mobility as the inter-industry concentration of workers assigned to each occupation. He then computes industry-level labor mobility by aggregating occupation-level labor mobility, weighted by the wage expense associated with each occupation. The ten industries with the highest labor mobility are Cut and Sew Apparel Manufacturing, Gasoline Stations, Metal and Mineral (except Petroleum) Merchant Wholesalers, Wholesale Electronic Markets and Agents and Brokers, Chemical and Allied Products Merchant Wholesalers, Consumer Goods Rental, Tobacco Manufacturing, Metal Heat Treating, Paint, Coating, and Adhesive Manufacturing, and Grocery and Related Product Merchant Wholesalers.

[27] Tate and Yang (2015) obtain information from the Bureau of Labor Statistics on the distribution of workers across Standard Occupational Classification ("SOC") codes for each two-digit SIC. They classify employees as high- or low-skill based on their SOC code, and then calculate the proportion of high-skill workers in each SIC. The top ten industries are Educational Services; Engineering, Accounting, Research, Management, and Related Services; Miscellaneous Services; Legal Services; Health Services; Social Services; Holding and Other Investment Offices; Insurance Carriers; Measuring, Analyzing, and Controlling Instruments, Photographic, Medical, and Optical Goods; Watches and Clocks; and Membership Organizations.

earnings surprises, particularly in countries with high labor market flexibility. These findings are consistent with employee satisfaction being a valuable intangible asset that is not fully priced by the market in countries with flexible labor markets, but having less value in countries with rigid labor markets.

6. Conclusion

This paper studies how the relationship between employee satisfaction and stock returns depends critically on a country's labor market flexibility. The alphas documented by Edmans (2011, 2012) for the US are not anomalous in a global context, in terms of economic significance. However, they do not automatically generalize to every country – the returns to being listed as a Best Company to Work For are increasing in labor market flexibility. 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 results emphasize the importance of the institutional context for both managers and investors. Even if prior results using US data can be interpreted as causal, it is not the case that managers can hope to increase stock returns by investing in employee satisfaction, because a positive link only exists in countries with high labor market flexibility. Turning to investors, a strategy of investing in firms with high employee satisfaction will only generate superior returns in countries with high labor market flexibility.

Given that the vast majority of empirical asset pricing studies that uncover alpha are based on US data, the results emphasize caution in applying these strategies overseas. This caution is especially warranted for strategies that are likely to be dependent on the institutional or cultural environment, such as socially responsible investing. Just as 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 certain industries, also likely depend on the context. This caution is particularly important because many practitioners (and indeed some academics) misportray the academic evidence on SRI, giving the impression that it is unambiguously positive. As discussed in the introduction, academic

research has documented that only certain SRI strategies outperform. 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.

Our results also have implications for academic research on SRI. Some papers aim to study whether SRI leads to long-term alpha, but the findings are decidedly mixed. These mixed results may arise because studies combine several ES dimensions into an aggregate measure, when only certain ES characteristics pay off. Moreover, even if a study focuses on a single ES dimension, it may pay off in some industries or countries and not others, or during some time periods and not others. Our paper highlights the importance of academic research taking a more granular and more situational approach when studying SRI, as advocated by Edmans (2022).

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Table 1
Summary statistics of employee satisfaction measure

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. The sample period is October 1997 to December 2021.

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
		First Year	**Formation Date**	**Public BCs**	**Total Firms**	**Observations**	**List First**	**List Last**
1	Argentina	2002	Dec 1	6	71	9,273	25	53
2	Australia	2008	Sep 1	5	1,158	74,532	8	50
3	Belgium	2003	Apr 1	10	188	21,580	25	20
4	Brazil	1997	Oct 1	28	734	75,314	30	150
5	Canada	2006	May 1	14	1,741	123,791	30	108
6	Chile	2001	Dec 1	10	252	26,608	25	50
7	Colombia	2003	Jul 1	8	72	6,386	12	45
8	Denmark	2001	Dec 1	17	222	26,034	50	56
9	Finland	2003	Mar 1	13	169	21,040	20	50
10	France	2002	Apr 1	26	888	94,717	5	93
11	Germany	2003	Feb 1	28	15,282	722,875	50	100
12	Greece	2003	Mar 1	11	235	24,496	10	25
13	India	2003	Aug 1	55	1,862	162,645	25	100
14	Ireland	2003	Apr 1	5	65	5,815	50	91
15	Italy	2002	Apr 1	3	588	58,820	30	60
16	Japan	2007	Mar 1	54	3,876	460,428	10	155
17	Mexico	2002	May 1	26	1,019	56,682	20	227
18	Netherlands	2003	Apr 1	4	238	22,204	10	40
19	Norway	2004	Apr 1	12	381	30,110	10	36
20	Peru	2002	Jan 1	12	164	14,700	25	50
21	Portugal	2000	May 1	4	89	10,063	10	20
22	Saudi Arabia	2014	Jan 1	5	174	11,495	15	15
23	South Korea	2002	Dec 1	14	1,647	183,484	20	21
24	Spain	2003	Aug 1	4	284	28,785	25	45
25	Sweden	2003	Apr 1	10	522	49,525	25	60
26	Switzerland	2009	June 1	7	995	40,709	10	46
27	Turkey	2013	Sep 1	3	253	6,845	12	50
28	UK	2001	Feb 1	28	2,597	187,272	50	130
29	USA	1998	Apr 1	179	7,446	700,117	100	100
30	Venezuela	2005	Apr 1	2	27	1,935	10	10
	Total			603	43,239	3,258,280		

Table 1 (Cont'd)

Panel B: Employment protection legislation

Panel B summarizes the OECD EPL indicators. Columns (1)-(3) show the time-series averages of these individual components: individual dismissal of workers with regular contracts (EPR), additional costs for collective dismissals (EPC), and regulation of temporary contracts (EPT). Column (4) presents our first EPL measure, calculated as 10 minus the arithmetic average of the three components for a given country-year. Column (5) presents our second EPL measure, calculated as 10 minus the weighted average of the three components for a given country-year. The weights are 10/21 for EPR, 4/21 for EPC, and 7/21 for EPT. The sample period is 1997-2021.

		(1)	(2)	(3)	(4)	(5)
		EPR Individual dismissals	**EPC Collective dismissals**	**EPR Temporary contracts**	***EPL1* Simple average**	***EPL2* Weighted average**
1	Argentina	1.820	3.880	2.380	7.307	7.601
2	Australia	1.170	2.880	0.880	8.357	8.601
3	Belgium	1.890	5.130	2.380	6.867	7.330
4	Brazil	1.430	0.000	4.130	8.147	7.942
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	2.340	3.380	3.630	6.883	7.032
11	Germany	2.680	3.630	1.500	7.397	7.532
12	Greece	2.800	3.250	4.750	6.400	6.464
13	India	3.290	0.440	1.810	8.153	7.746
14	Ireland	1.440	2.750	0.250	8.520	8.707
15	Italy	2.760	4.130	2.380	6.910	7.106
16	Japan	1.370	3.250	0.880	8.167	8.435
17	Mexico	2.190	4.380	4.000	6.477	6.790
18	Netherlands	2.880	3.000	0.940	7.727	7.744
19	Norway	2.330	2.500	2.750	7.473	7.498
20	Peru	1.750	3.750	2.250	7.417	7.702
21	Portugal	4.580	2.880	2.810	6.577	6.334
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	2.360	3.750	3.250	6.880	7.079
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	UK	1.260	2.880	0.250	8.537	8.768
29	USA	0.260	2.880	0.250	8.870	9.244
30	Venezuela	3.500	3.500	5.130	5.957	5.957
	Mean	2.119	2.845	2.254	7.594	7.697
	Std. Dev.	0.862	1.292	1.426	0.760	0.781

Table 2
Summary statistics of firm-level and country-level variables

Panel A: Firm-level descriptive statistics

This table presents the descriptive statistics of firm-level variables used in the regressions. N refers to the number of firm-month observations of 43,239 firms in 30 countries from October 1997 to December 2021. All variables are described in Appendix A.

	N	Mean	Median	Std.	Min	Max
Raw return (%)	3,258,280	1.232	0.358	13.994	-90.471	265.006
Excess return over r_f (%)	3,258,280	1.129	0.251	13.998	-90.631	264.916
SIZE (log)	3,258,280	6.660	6.453	2.102	-1.171	12.594
BM (log)	3,258,280	-0.092	-0.341	71.167	-5.296	28,212.285
YLD (%)	3,258,280	2.208	1.484	3.401	-0.148	71.430
RET2-3 (log)	3,258,280	2.173	1.111	20.517	-95.324	449.114
RET4-6 (log)	3,258,280	3.506	1.860	26.289	-103.136	776.184
RET7-12 (log)	3,258,280	7.274	3.540	42.316	-145.710	2,639.402
VOL (log)	3,258,280	0.845	1.136	3.304	-10.009	9.091
PRC (log)	3,258,280	2.305	2.468	1.633	-6.119	8.496
IDIOVOL	3,258,280	113.364	55.123	170.803	0.000	1,106.297
ILLIQ	3,258,280	0.781	0.004	5.623	0.000	120.201

Panel B: Country-level descriptive statistics

This table presents the descriptive statistics of country-level control variables used in the regressions. N refers to the number of country-year observations in 30 countries from October 1997 to December 2021. All variables are described in Appendix A.

	N	Mean	Median	Std. Dev	Min	Max
RuleofLaw	394	7.635	8.567	2.400	2.083	10.000
ADRI	394	3.744	4.000	1.005	2.000	5.000
IDV	394	53.802	51.000	25.504	13.000	91.000
PriceInf	394	0.383	0.468	0.499	-0.987	1.481
GDPg (%)	394	2.051	2.127	3.331	-11.149	25.176
GDP (log)	394	10.032	10.414	1.042	6.304	11.542
Infl (%)	394	2.448	2.177	2.116	-4.478	14.715
Unempl (%)	394	7.451	6.320	4.348	2.400	27.470
MktCapGDP (%)	394	4.152	4.197	0.584	2.334	5.584

Table 2 (cont'd)

Panel C: Pairwise correlations of country-level variables

This table displays the Pearson's pairwise correlation coefficients between the country-level variables described in Table 2 Panel B. All variables are described in Appendix A. *** indicates significance at the 1% level.

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1)	*EPL1*	1.000										
(2)	*EPL2*	0.950***	1.000									
(3)	*RuleofLaw*	0.174***	0.222***	1.000								
(4)	*ADRI*	0.247***	0.106**	-0.141***	1.000							
(5)	*IDV*	0.369***	0.475***	0.805***	-0.218***	1.000						
(6)	*PriceInf*	0.164***	0.220***	0.234***	-0.047	0.236***	1.000					
(7)	*GDPg (%)*	0.232***	0.175***	-0.256***	0.105**	-0.116**	0.213***	1.000				
(8)	*GDP (log)*	0.100**	0.230***	0.821***	-0.147***	0.662***	0.241***	-0.302***	1.000			
(9)	*Infl (%)*	0.067	-0.041	-0.443***	0.080	-0.287***	-0.271***	0.239***	-0.614***	1.000		
(10)	*Unemp (%)*	-0.318***	-0.326***	-0.062	0.114**	-0.105**	-0.170***	-0.273***	-0.046	-0.153***	1.000	
(11)	*MktCapGDP (%)*	0.559***	0.561***	0.373***	0.146***	0.411***	0.245***	0.147***	0.288***	-0.166***	-0.272***	1.000

Table 3

Four-factor alpha of BC portfolios

Panel A: Country-level alphas

This table reports regression results of monthly returns of equal-weighted portfolios of Best Companies using Carhart's (1997) four-factor model:

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

where R_{ct} is the return on an equal-weighted or value-weighted portfolio of listed BCs in month t for country c in excess of the risk-free rate. α is the intercept that captures the abnormal risk-adjusted return. MKT_{ct}, HML_{ct}, SMB_{ct}, and MOM_{ct}, are, respectively, the Fama and French (2012) regional factors on market, value, size, and momentum. Standard errors, given in parentheses, are adjusted for heteroscedasticity and four lags of autocorrelation. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. The sample period is October 1997 to December 2021.

	Equal-weighted			Value-weighted			
	α	**Std. Err.**	**R^2**	**α**	**Std. Err.**	**R^2**	**Obs.**
1 Argentina	**0.559**	(0.762)	0.182	**0.560**	(0.761)	0.203	204
2 Australia	**1.737***	(0.963)	0.578	**1.749***	(0.933)	0.606	84
3 Belgium	**0.761**	(0.646)	0.530	**0.749**	(0.652)	0.554	213
4 Brazil	**1.421***	(0.822)	0.185	**1.297***	(0.762)	0.226	252
5 Canada	**0.309**	(0.394)	0.612	**0.231**	(0.315)	0.707	180
6 Chile	**0.415**	(0.451)	0.299	**0.422**	(0.452)	0.311	188
7 Colombia	**0.060**	(0.609)	0.241	**0.116**	(0.619)	0.285	97
8 Denmark	**-0.271**	(0.547)	0.501	**-0.289**	(0.550)	0.515	180
9 Finland	**1.138****	(0.524)	0.396	**1.130****	(0.511)	0.416	182
10 France	**0.566**	(0.409)	0.503	**0.551**	(0.394)	0.524	192
11 Germany	**0.005**	(0.349)	0.642	**-0.022**	(0.335)	0.663	202
12 Greece	**0.975**	(0.896)	0.461	**0.531**	(0.791)	0.516	118
13 India	**1.610*****	(0.438)	0.495	**1.580*****	(0.416)	0.525	167
14 Japan	**0.918*****	(0.276)	0.622	**1.011*****	(0.258)	0.642	168
15 Mexico	**0.181**	(0.580)	0.399	**0.178**	(0.575)	0.417	185
16 Norway	**0.990***	(0.554)	0.531	**0.975***	(0.564)	0.561	109
17 Peru	**1.054***	(0.635)	0.009	**1.107***	(0.644)	0.031	189
18 S. Korea	**0.447**	(0.503)	0.314	**0.417**	(0.505)	0.343	149
19 Sweden	**-0.001**	(0.353)	0.531	**0.025**	(0.358)	0.534	159
20 UK	**0.488**	(0.397)	0.486	**0.589**	(0.365)	0.487	228
21 USA	**0.294****	(0.116)	0.896	**0.369*****	(0.113)	0.906	276

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. *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.

	EPL1		***EPL2***	
	Alpha (EW)	**Alpha (VW)**	**Alpha (EW)**	**Alpha (VW)**
EPL	**3.695****	**4.963****	**3.927****	**5.425*****
	(1.498)	(1.943)	(1.476)	(1.890)
Constant	**-25.097****	**-34.293****	**-27.383****	**-38.541****
	(11.615)	(15.066)	(11.630)	(14.889)
Observations	21	21	21	21
R-squared	0.241	0.254	0.272	0.303

Table 4
Stock returns by country, controlling for firm characteristics

This table reports results of monthly firm-level pooled panel regressions:

$$R_{it} = \beta_0 + \beta_1 BC_{it} + \beta_2 FirmControls_{it} + \varepsilon_{it},$$

where R_{it} is the return for firm i in month t, either raw, market-adjusted, or industry-adjusted. BC_{it} is a dummy variable that equals one if firm i has been included in the most recent BC list prior to month t, and zero otherwise. $FirmControls_{it}$ include the following firm-level controls: *SIZE* is the log of firm i's market capitalization at the end of month *t-2*; *BM* is the log of firm i's book-to-market ratio at the end of month *t-2*; *YLD* is firm i's dividend yield as measured by the total dividends paid over the 12 months prior to month t, divided by the share price at the end of month *t-2*; *RET2-3* is the log of one plus firm i's cumulative return over months *t-3* through *t-2*; *RET4-6* and *RET7-12* are defined similarly; *VOL* is the log of firm i's dollar trading volume in month *t-2*; *PRC* is the log of firm i's price at the end of month *t-2*; *IDIOVOL* is the standard deviation of the residual from regressing excess returns for firm i between month *t-13* and *t-1* on the excess stock market return; and *ILLIQ* is absolute returns over trading volume for firm i between month *t-13* and *t-1*. We include year-month fixed effects and winsorize stock returns at 0.1% in each tail. We report only the coefficient on *BC* for brevity. Standard errors, given in parentheses, are clustered by year-month. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. The sample period is October 1997 to December 2021.

		Dependent Variable		
		Raw returns	**Market-adjusted**	**Industry-adjusted**
1	Argentina	**-0.343**	**-0.344**	**0.065**
		(0.509)	(0.509)	(0.514)
2	Australia	**1.937****	**1.938****	**1.809****
		(0.763)	(0.763)	(0.753)
3	Belgium	**-0.075**	**-0.075**	**-0.153**
		(0.476)	(0.476)	(0.472)
4	Brazil	**0.741**	**0.741**	**0.719**
		(0.465)	(0.466)	(0.474)
5	Canada	**0.804****	**0.804****	**0.804****
		(0.331)	(0.331)	(0.331)
6	Chile	**-0.031**	**-0.031**	**0.078**
		(0.318)	(0.318)	(0.321)
7	Colombia	**-0.506**	**-0.506**	**-0.249**
		(0.823)	(0.823)	(0.867)
8	Denmark	**-0.484**	**-0.484**	**-0.204**
		(0.391)	(0.391)	(0.385)
9	Finland	**0.202**	**0.202**	**0.257**
		(0.427)	(0.427)	(0.442)
10	France	**0.371**	**0.371**	**0.357**
		(0.425)	(0.425)	(0.426)
11	Germany	**0.125**	**0.125**	**0.091**
		(0.402)	(0.402)	(0.401)
12	Greece	**0.028**	**0.028**	**0.152**
		(0.832)	(0.832)	(0.868)

13	India	**0.458***	**0.458***	**0.459***
		(0.268)	(0.268)	(0.255)
14	Ireland	**-1.142**	**-1.142**	**-1.092**
		(0.721)	(0.721)	(0.768)
15	Italy	**-0.678**	**-0.678**	**-0.770**
		(1.082)	(1.082)	(1.043)
16	Japan	**1.260*****	**1.260*****	**1.236*****
		(0.321)	(0.321)	(0.312)
17	Mexico	**-0.241**	**-0.241**	**-0.159**
		(0.362)	(0.362)	(0.347)
18	Netherlands	**-0.254**	**-0.254**	**-0.239**
		(0.652)	(0.652)	(0.654)
19	Norway	**1.016***	**1.016***	**0.992***
		(0.598)	(0.598)	(0.597)
20	Peru	**-0.251**	**-0.251**	**-0.127**
		(0.577)	(0.577)	(0.573)
21	Portugal	**0.788**	**0.788**	**-0.079**
		(0.667)	(0.667)	(1.243)
22	Saudi Arabia	**0.625**	**0.625**	**0.756**
		(1.003)	(1.003)	(1.183)
23	South Korea	**0.030**	**0.030**	**-0.187**
		(0.567)	(0.567)	(0.489)
24	Spain	**-0.430**	**-0.430**	**-0.390**
		(0.509)	(0.509)	(0.497)
25	Sweden	**0.463**	**0.463**	**0.466**
		(0.357)	(0.357)	(0.357)
26	Switzerland	**-0.296**	**-0.296**	**-0.292**
		(0.653)	(0.653)	(0.653)
27	Turkey	**-1.118**	**-1.118**	**-1.036**
		(1.815)	(1.815)	(1.905)
28	UK	**0.264**	**0.264**	**0.249**
		(0.340)	(0.340)	(0.341)
29	USA	**0.311****	**0.311****	**0.369*****
		(0.127)	(0.127)	(0.114)
30	Venezuela	**-0.189**	**-0.194**	**-2.116**
		(1.782)	(1.776)	(1.942)

Table 5
Stock returns across countries

Panel A: *EPL1*

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

$$R_{cit} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 Country \times Year\text{-}month\ FE_{ct} + \delta_2 FirmControls_{cit} + \varepsilon_{cit},$$

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); *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); *GDPg* measures GDP growth; *GDP* measures GDP per capita; *Infl* is the inflation rate; *Unemp* is the unemployment rate; and *MktCapGDP* is stock market capitalization over GDP. $FirmControls_{cit}$ include the firm-level controls described in Table 4. *Country*×*Year-month* fixed effects are included in all regressions. 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 2021.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Raw returns			Market-adjusted returns			Industry-adjusted returns		
BC_{cit}	**0.269****	**-2.362****	**-3.853**	**0.271****	**-2.310****	**-3.844**	**0.321*****	**-2.522*****	**-4.322***
	(0.118)	(0.998)	(2.619)	(0.118)	(0.967)	(2.610)	(0.106)	(0.898)	(2.445)
$BC_{cit} \times EPL_{ct}$		**0.318****	**0.425****		**0.312****	**0.425*****		**0.342*****	**0.299****
		(0.123)	(0.152)		(0.119)	(0.151)		(0.109)	(0.138)
$BC_{cit} \times RuleofLaw_c$			**0.036**			**0.038**			**0.109**
			(0.139)			(0.138)			(0.120)
$BC_{cit} \times ADRI_c$			**0.288****			**0.288****			**0.294*****
			(0.119)			(0.119)			(0.104)
$BC_{cit} \times IDV_c$			**0.000**			**0.000**			**0.001**
			(0.011)			(0.011)			(0.010)
$BC_{cit} \times PriceInf_{ct}$			**0.060**			**0.057**			**0.099**
			(0.356)			(0.355)			(0.324)

$BC_{cit} \times GDPg_{ct}$			**0.088**			**0.088**			**0.107**
			(0.077)			(0.076)			(0.064)
$BC_{cit} \times GDP_{ct}$			**0.090**			**0.088**			**0.096**
			(0.269)			(0.268)			(0.270)
$BC_{cit} \times Infl_{c}$			**-0.052**			**-0.052**			**0.011**
			(0.150)			(0.149)			(0.127)
$BC_{cit} \times Unemp_{c}$			**-0.042**			**-0.042**			**-0.047**
			(0.038)			(0.038)			(0.041)
$BC_{cit} \times MktCapGDP_{ct}$			**-0.273**			**-0.272**			**-0.154**
			(0.330)			(0.329)			(0.295)
SIZE	**0.064**	**0.064**	**0.130**	**0.063**	**0.063**	**0.129**	**0.007**	**0.011**	**0.073**
	(0.066)	(0.067)	(0.090)	(0.065)	(0.067)	(0.089)	(0.046)	(0.047)	(0.064)
BM	**0.001*****	**0.001*****	**0.481*****	**0.001*****	**0.001*****	**0.480*****	**0.000*****	**0.000*****	**0.410*****
	(0.000)	(0.000)	(0.112)	(0.000)	(0.000)	(0.112)	(0.000)	(0.000)	(0.090)
YIELD	**0.057****	**0.057****	**0.047***	**0.057****	**0.057****	**0.047***	**0.043***	**0.044***	**0.035**
	(0.023)	(0.023)	(0.027)	(0.023)	(0.023)	(0.027)	(0.022)	(0.021)	(0.024)
RET2-3	**-0.008**	**-0.008**	**-0.008**	**-0.008**	**-0.008**	**-0.008**	**-0.010***	**-0.010**	**-0.011***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)
RET4-6	**0.006**	**0.006**	**0.006**	**0.006**	**0.006**	**0.006**	**0.005**	**0.005**	**0.005**
	(0.004)	(0.004)	(0.005)	(0.004)	(0.004)	(0.005)	(0.003)	(0.003)	(0.004)
RET7-12	**-0.001**	**-0.001**	**0.001**	**-0.001**	**-0.001**	**0.001**	**0.000**	**0.000**	**0.002**
	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)
VOL	**-0.079***	**-0.079***	**-0.071**	**-0.078***	**-0.078***	**-0.070**	**-0.035**	**-0.038**	**-0.035**
	(0.042)	(0.043)	(0.045)	(0.042)	(0.043)	(0.045)	(0.029)	(0.030)	(0.035)
PRC	**-0.240*****	**-0.240*****	**-0.226*****	**-0.239*****	**-0.240*****	**-0.225*****	**-0.214*****	**-0.215*****	**-0.193*****
	(0.059)	(0.059)	(0.073)	(0.059)	(0.058)	(0.072)	(0.042)	(0.043)	(0.057)
IDIOVOL	**0.002*****	**0.002*****	**0.002*****	**0.002*****	**0.002*****	**0.002*****	**0.003*****	**0.003*****	**0.002*****
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ILLIQ	**0.002*****	**0.002*****	**0.002*****	**0.002*****	**0.002*****	**0.002*****	**0.002*****	**0.002*****	**0.002*****
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
Country×Year-month	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Observations	3,258,277	3,258,277	2,989,501	3,258,277	3,258,277	2,989,501	3,258,277	3,258,277	2,989,501
R-squared	0.179	0.179	0.185	0.176	0.176	0.182	0.089	0.089	0.090

Panel B: *EPL2*

	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
	Raw returns			**Market-adjusted returns**			**Industry-adjusted returns**		
BC_{cit}	**0.269****	**-0.037**	**-3.606**	**0.271****	**0.027**	**-3.597**	**0.321*****	**-0.457*****	**-4.535***
	(0.118)	(0.145)	(2.801)	(0.118)	(0.145)	(2.790)	(0.106)	(0.117)	(2.554)
$BC_{cit} \times EPL_{ct}$		**0.036*****	**0.455****		**0.028*****	**0.455****		**0.091*****	**0.400****
		(0.009)	(0.164)		(0.009)	(0.163)		(0.008)	(0.152)
BC×CountryControls	No	No	Yes	No	No	Yes	No	No	Yes
Firm Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country×Year-month	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,258,277	3,258,277	2,989,501	3,258,277	3,258,277	2,989,501	3,258,277	3,258,277	2,989,501
R-squared	0.179	0.179	0.185	0.176	0.176	0.182	0.089	0.089	0.090

Table 6
Tobin's Q across countries

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

$$Q_{cit} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 Country \times Year\text{-}month\ FE_{ct} + \delta_2 FirmControls2_{cit} + \varepsilon_{cit},$$

where 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, i.e. at the start of the month following list publication. 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. 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 (*EPL1* or *EPL2*) described in Table 1, Panel B. $CountryControls_{ct}$ include the country-level controls described in Table 5. $FirmControls2_{cit}$ include the following firm-level controls: *ROE* is the return on equity as measured by income divided by book equity. *Book* is the log of book value of assets. *FROE*, *F2ROE*, and *F3ROE* are the return on equity for the next three years. Standard errors, given in parentheses, are double clustered by country and year-month. *Country*×*Year-month* fixed effects are included in all regressions. ***, **, and * indicate significance at the 1%, 5%, and 10% level, respectively. The sample period is October 1997 to December 2021.

	EPL1			***EPL2***		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
	Industry-adjusted Tobin's Q			**Industry-adjusted Tobin's Q**		
BC_{cit}	**0.943*** **	**-2.257***	**1.845**	**0.943*** **	**-0.351**	**2.350**
	(0.121)	(1.188)	(1.898)	(0.121)	(1.915)	(1.699)
$BC_{cit} \times EPL_{ct}$		**0.381*** **	**0.391*** **		**0.151**	**0.355*** **
		(0.132)	(0.140)		(0.210)	(0.114)
Book	**0.003**	**0.003**	**0.002**	**0.003**	**0.003**	**0.002**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
ROE	**-0.056*** **	**-0.056*** **	**-0.054*** **	**-0.056*** **	**-0.056*** **	**-0.054*** **
	(0.012)	(0.012)	(0.013)	(0.012)	(0.013)	(0.013)
FROE	**-0.017*** **	**-0.017*** **	**-0.017*** **	**-0.017*** **	**-0.017*** **	**-0.017*** **
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
F2ROE	**-0.002**	**-0.002**	**-0.001**	**-0.002**	**-0.002**	**-0.001**
	(0.007)	(0.007)	(0.008)	(0.007)	(0.007)	(0.008)
F3ROE	**-0.009** **	**-0.009** **	**-0.009** **	**-0.009** **	**-0.009** **	**-0.009** **
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
BC×*CountryControls*	No	No	Yes	No	No	Yes
Country×Year-month	Yes	Yes	Yes	Yes	Yes	Yes
Observations	186,145	186,145	176,971	186,145	186,145	176,971
R-squared	0.026	0.026	0.026	0.026	0.026	0.026

Table 7
Operating performance across countries

Panel A: Industry-adjusted return on assets

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

$$ROA_{cit+j} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 Country \times Year\text{-}month\ FE_{ct} + \delta_2 BM_{cit} + \delta_3 ROA_{cit} + \varepsilon_{cit},$$

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 (*EPL1*) 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. *Country*×*Year-month* fixed effects are included in all regressions. 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 2021.

	(1)	(2)	(3)	(4)	(5)	(6)
	One year ahead			Two years ahead		
BC_{cit}	**0.955*** **	**-6.053** **	**-6.467***	**1.222*** **	**-6.969*** **	**-5.571**
	(0.233)	(2.738)	(3.189)	(0.295)	(1.210)	(4.144)
$BC_{cit} \times EPL_{ct}$		**0.846** **	**0.691***		**0.987*** **	**0.670** **
		(0.330)	(0.346)		(0.138)	(0.312)
BM	**-0.223*** **	**-0.224*** **	**-0.238*** **	**-0.286*** **	**-0.287*** **	**-0.304*** **
	(0.035)	(0.014)	(0.036)	(0.048)	(0.048)	(0.051)
ROA	**0.787*** **	**0.787*** **	**0.787*** **	**0.688*** **	**0.688*** **	**0.687*** **
	(0.014)	(0.001)	(0.014)	(0.017)	(0.017)	(0.018)
BC×*CountryControls*	No	No	Yes	No	No	Yes
Country×Year-month	Yes	Yes	Yes	Yes	Yes	Yes
Observations	328,618	328,618	307,200	289,766	289,766	272,875
R-squared	0.614	0.614	0.613	0.473	0.473	0.471

Table 7 (Cont'd)

Panel B: Industry-adjusted net profit margin

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

$$NPM_{cit+j} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 Country \times Year\text{-}month\ FE_{ct} + \delta_2 BM_{cit} + \delta_3 NPM_{cit} + \varepsilon_{cit},$$

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 (*EPL1*) 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. *Country*×*Year-month* fixed effects are included in all regressions. 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 2021.

	(1)	(2)	(3)	(4)	(5)	(6)
	One year ahead			Two years ahead		
BC_{cit}	**5.899***	**-28.776****	**-8.048**	**4.731**	**-68.428*****	**-21.719**
	(3.066)	(12.448)	(36.512)	(4.734)	(24.644)	(25.803)
$BC_{cit} \times EPL_{ct}$		**4.187*****	**-1.203**		**8.816*****	**-0.036**
		(1.363)	(2.281)		(2.704)	(2.761)
BM	**-0.833***	**-0.833***	**-0.951***	**-1.473****	**-1.473****	**-1.552****
	(0.476)	(0.476)	(0.468)	(0.691)	(0.691)	(0.711)
NPM	**0.747*****	**0.747*****	**0.751*****	**0.665*****	**0.665*****	**0.671*****
	(0.052)	(0.052)	(0.055)	(0.069)	(0.069)	(0.072)
BC×*CountryControls*	No	No	Yes	No	No	Yes
Country×Year-month	Yes	Yes	Yes	Yes	Yes	Yes
Observations	298,170	298,170	278,309	263,799	263,799	248,038
R-squared	0.542	0.542	0.547	0.399	0.399	0.404

Table 8
Earnings surprises across countries

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

$$Surprise_{cit} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times CountryControls_{ct} + \delta_1 Country \times Year\text{-}month\ FE_{ct} + \delta_2 FirmControls3_{cit} + \varepsilon_{cit},$$

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 (*EPL1*) described in Table 1, Panel B. $CountryControls_{ct}$ include the country-level controls described in Table 5. $FirmControls3_{cit}$ 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. All coefficients are multiplied by 1,000. *Country*×*Year-month* fixed effects are included in all regressions. 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 2021.

	(1)	(2)	(3)	(4)	(5)	(6)
	One-year earnings surprise			Two-year earnings surprise		
BC_{cit}	**-35.088*** **	**-22.053** **	**-27.070**	**-108.440*** **	**-48.329** **	**-84.831***
	(10.737)	(10.081)	(17.952)	(26.716)	(24.208)	(44.213)
$BC_{cit} \times EPL_{ct}$	**5.426*** **	**3.162** **	**3.728** **	**17.194*** **	**7.375** **	**6.739***
	(1.347)	(1.262)	(1.745)	(3.338)	(3.010)	(3.736)
SIZE		**4.125*** **	**3.589*** **		**17.061*** **	**14.103*** **
		(0.054)	(0.058)		(0.134)	(0.144)
BM			**-4.984*** **			**-25.499*** **
			(0.158)			(0.431)
BC×*CountryControls*	No	No	Yes	No	No	Yes
Country×Year-month	Yes	Yes	Yes	Yes	Yes	Yes
Observations	250,719	250,719	223,091	219,182	219,182	194,303
R-squared	0.049	0.078	0.090	0.076	0.165	0.214

Table 9
Panel A: Stock returns and industry labor mobility

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

$$R_{cit} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times EPL_{ct} \times LM_i + \beta_4 BC_{cit} \times LM_i + \beta_5 EPL_{ct} \times LM_i + \beta_6 LM_i + \beta_7 BC_{cit} \times CountryControls_{ct} + \delta_1 Country \times Year\text{-}month\ FE_{ct} + \delta_2 FirmControls_{cit} + \varepsilon_{cit},$$

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*) described in Table 1, Panel B. LM_i is a dummy variable that equals one if firm i is in the top ten 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. *Country*×*Year-month* fixed effects are included in all regressions. 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 2021.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Raw returns			Market-adjusted returns			Industry-adjusted returns	
BC_{cit}	**-0.165**	**-3.072***	**-3.603**	**-0.163**	**-3.031***	**-3.624**	**-0.116**	**-3.672****	**-4.664***
	(0.130)	(1.626)	(2.592)	(0.129)	(1.594)	(2.583)	(0.115)	(1.505)	(2.492)
$BC_{cit} \times EPL_{ct}$		**0.350***	**-0.009**		**0.346***	**-0.001**		**0.429****	**0.210**
		(0.196)	(0.217)		(0.192)	(0.215)		(0.183)	(0.202)
$BC_{cit} \times EPL_{ct} \times LM_i$		**1.106**	**2.135****		**1.111**	**2.130****		**0.778**	**1.566***
		(0.750)	(0.874)		(0.749)	(0.875)		(0.811)	(0.903)
$BC_{cit} \times LM_i$		**-8.906**	**-17.937****		**-8.945**	**-17.895****		**-6.272**	**-13.253***
		(6.309)	(7.483)		(6.298)	(7.492)		(6.781)	(7.654)
$EPL_{ct} \times LM_i$		**0.344**	**0.174**		**0.344**	**0.176**		**0.480****	**0.318**
		(0.244)	(0.285)		(0.244)	(0.285)		(0.221)	(0.240)
LM_i		**-2.893**	**-1.511**		**-2.896**	**-1.527**		**-4.010****	**-2.688**
		(2.044)	(2.402)		(2.043)	(2.398)		(1.843)	(2.023)
BC×*CountryControls*	No	No	Yes	No	No	Yes	No	No	Yes
FirmControls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country×Year-month	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,258,277	3,258,277	3,004,940	3,258,277	3,258,277	3,004,940	3,258,277	3,258,277	3,004,940
R-squared	0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.001	0.001

Panel B: Stock returns and high-skill industries

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

$$R_{cit} = \beta_0 + \beta_1 BC_{cit} + \beta_2 BC_{cit} \times EPL_{ct} + \beta_3 BC_{cit} \times EPL_{ct} \times SK_i + \beta_4 BC_{cit} \times SK_i + \beta_5 EPL_{ct} \times SK_i + \beta_6 SK_i + \beta_7 BC_{cit} \times CountryControls_{ct} + \delta_1 Country \times Year\text{-}month\ FE_{ct} + \delta_2 FirmControls_{cit} + \varepsilon_{cit},$$

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*) described in Table 1, Panel B. SK_i is a dummy variable that equals one if firm i is in the top ten industries by the percentage of high-skilled workers categorized by Tate and Yang (2015), 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. *Country*×*Year-month* fixed effects are included in all regressions. 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 2021.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Raw returns			**Market-adjusted returns**			**Industry-adjusted returns**	
BC_{cit}	**-0.165**	**-3.771****	**-3.748**	**-0.163**	**-3.727****	**-3.770**	**-0.116**	**-4.404*****	**-4.912***
	(0.130)	(1.688)	(2.696)	(0.129)	(1.657)	(2.687)	(0.115)	(1.575)	(2.591)
$BC_{cit} \times EPL_{ct}$		**0.434****	**0.043**		**0.429****	**0.051**		**0.517****	**0.269**
		(0.202)	(0.224)		(0.199)	(0.222)		(0.191)	(0.211)
$BC_{cit} \times EPL_{ct} \times SK_i$		**1.268*****	**0.808***		**1.262*****	**0.809***		**1.382*****	**0.939***
		(0.434)	(0.469)		(0.433)	(0.468)		(0.439)	(0.464)
$BC_{cit} \times SK_i$		**-10.702*****	**-6.779**		**-10.651*****	**-6.788**		**-11.599*****	**-7.837***
		(3.810)	(4.125)		(3.800)	(4.120)		(3.827)	(4.077)
$EPL_{ct} \times SK_i$		**-0.384***	**-0.265**		**-0.386***	**-0.267**		**-0.385***	**-0.249**
		(0.214)	(0.244)		(0.213)	(0.243)		(0.208)	(0.229)
SK_i		**3.216***	**2.294**		**3.230***	**2.313**		**3.317***	**2.243**
		(1.830)	(2.128)		(1.826)	(2.122)		(1.761)	(1.986)
BC×*CountryControls*	No	No	Yes	No	No	Yes	No	No	Yes
FirmControls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country×Year-month	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,258,277	3,258,277	3,004,940	3,258,277	3,258,277	3,004,940	3,258,277	3,258,277	3,004,940
R-squared	0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.001	0.001

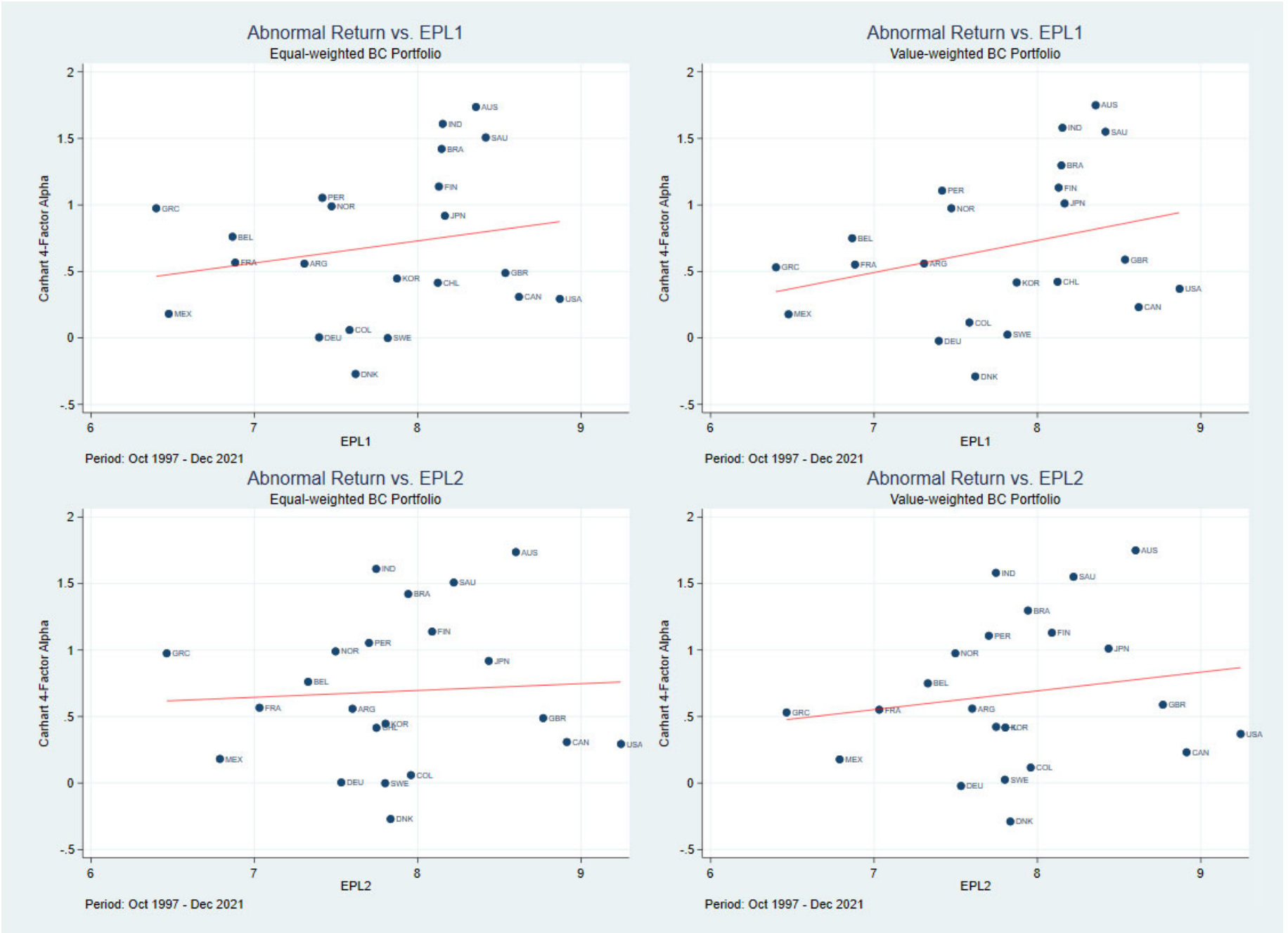

Figure 1. This graph depicts the weighted least squares regression results of the Carhart (1997) 4-factor cross-country alphas on labor market flexibility. The cross-country alphas are obtained from Table 3. *EPL1* and *EPL2* are the two measures of labor market flexibility described in Table 1, Panel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

Appendix A

Definition of variables

This appendix describes the calculation of variables used in the core analyses.

Variable	Definition
Main variables	
BC_{cit}	A dummy variable that equals one if firm *i* has been included in the most recent BC list for country *c* prior to month *t*, and zero otherwise
R_{cit}	The return for firm *i* in month *t* for country *c*, either raw, market-adjusted, or industry-adjusted using the Fama and French (1997) 48-industry classification
R_{ct}	The return on an equal-weighted or value-weighted portfolio of listed BCs in month *t* for country *c* in excess of the risk-free rate
EPL1	10 minus the arithmetic average of EPR (OECD measure of the cost of individual dismissal of workers with regular contracts), EPC (OECD measure of the additional costs for collective dismissals), and EPT (OECD measure of the regulation of temporary contracts) for a given country-year
EPL2	10 minus the weighted average of the three above components for a given country-year. The weights are 10/21 for EPR, 4/21 for EPC, and 7/21 for EPT
Firm-level control variables	
SIZE	Natural logarithm of firm *i*'s market capitalization at the end of month *t-2*
BM	Natural logarithm of firm *i*'s book-to-market ratio at the end of month *t-2*
YLD	A firm *i*'s dividend yield as measured by total dividends paid over the 12 months prior to month *t*, divided by share price at the end of month *t-2*
RET2-3	Natural logarithm of one plus firm *i*'s cumulative return over months *t-3* through *t-2*
RET4-6	Natural logarithm of one plus firm *i*'s cumulative return over months *t-6* through *t-4*
RET7-12	Natural logarithm of one plus firm *i*'s cumulative return over months *t-12* through *t-7*
VOL	Natural logarithm of firm *i*'s dollar trading volume in month *t-2*
PRC	Natural logarithm of firm *i*'s price at the end of month *t-2*
IDIOVOL	Standard deviation of the residual from regressing excess returns for firm *i* between month *t-13* and *t-1* on the excess stock market return
ILLIQ	Absolute returns over trading volume for firm *i* between month *t-13* and *t-1*

Industry-level interaction terms	
LM	A dummy variable that equals one if firm *i* is in the top ten industries by labor mobility categorized by Donangelo (2014), and zero otherwise.
SK	A dummy variable that equals one if firm *i* is in the top ten industries by the percentage of high-skilled workers categorized by Tate and Yang (2015), and zero otherwise.
Country-level control variables	
RuleofLaw	The rule of law from La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997)
ADRI	The anti-director rights index corrected by Spamann (2010)
IDV	The Hofstede measure of cultural individualism
PriceInf	The efficiency of a firm's stock markets constructed following Fernandes and Ferreira (2009): a log transform of one minus the R-squared of a regression of monthly equity excess returns on value-weighted local market excess returns and US market excess returns
GDPg	GDP growth taken from the World Bank
GDP	Natural logarithm of GDP per capita taken from the World Bank
Infl	Inflation rate taken from the World Bank
Unemp	Unemployment rate taken from the World Bank
MktCapGDP	Stock market capitalization over GDP taken from the World Bank
Other variables and controls	
Book	Natural logarithm of book value of assets
ROE	Return on equity as measured by income divided by book equity
FROE	Return on equity for the next year. *F2ROE* (*F3ROE*) measures return on equity two (three) years ahead
ROA	Return on assets as measured by operating income before depreciation divided by book value of assets
NPM	Net profit margin as measured by operating income before depreciation divided by sales