World Benchmarking Alliance

BUSINESS CASE FOR HUMAN RIGHTS
UNDP B+HR Project

B+HR BUSINESS AND HUMAN RIGHTS

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# Human Rights vs. Competitiveness

## A False Dilemma?

Data on the Financial Implications of Corporate Human Rights Performance

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We hope this report does justice to their contributions. Any errors that remain are our own.

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# KEY MESSAGE

The fear of the cost to competitiveness has been a persistent barrier to corporate action on human rights. As part of its *Business Case for Human Rights* project, UNDP decided to examine whether this concern is justified by examining the impact of companies' human rights performance on their financial performance.

The results provide compelling evidence that this fear is unfounded. Our research reveals **not only the absence of any financial trade-off but also clear evidence of tangible financial benefits for companies that strengthen their human rights performance**.

This finding marks a turning point in the conversation. The question is no longer "Can businesses afford to respect human rights?" but rather "How can strong human rights performance be leveraged for strategic advantage and sustainable competitiveness?"

# Summary

Improving **corporate human rights conduct involves real investments** – from building robust due diligence processes to training staff and engaging stakeholders. This naturally raises a critical question for business leaders: **Do these costs ultimately hurt the bottom line?**

Our **five-year analysis of 235 global firms points to a clear conclusion: No.**

While the upfront investments are tangible, our research found **no evidence of a net financial penalty** for businesses. **On the contrary, there is compelling evidence that these investments are associated with a subsequent financial benefit.**

Our research reveals two key strategic findings:

- **A Positive Link to Operational Efficiency:** We observed a significant positive relationship between improvements in a company's human rights conduct and its subsequent **asset efficiency (Return on Assets)**. This suggests that the operational benefits of stronger due diligence – such as more resilient supply chains and a more productive workforce – **meet or exceed the initial costs over time**. Crucially, our time-lagged analysis ensures that the upfront costs are fully accounted for before measuring the subsequent financial results. We also found no evidence that these investments led to weaker operating margins or cash flows.
- **A Neutral-to-Positive Market Reaction:** A core tenet of the cost hypothesis is that investors will punish firms for "wasteful" social spending. Our panel regression models indicate this is false. We found that **strong corporate human rights performance did not result in lower market valuations**. In fact, the data shows a neutral-to-positive market reaction, with indicators such as Tobin's Q displaying a positive (though not statistically significant) signal.

This study provides the evidence needed to shift the conversation from defensive risk management to proactive opportunity.

**For businesses**, it removes the "cost excuse" and reframes human rights due diligence as a strategic investment in resilience and competitiveness.

**For investors**, it highlights the opportunity in supporting companies strengthening their human rights practices.

**For policymakers**, it reinforces the case for "floor-raising" regulations – such as the European Union's Corporate Sustainability Due Diligence Directive and legislative initiatives on human rights due diligence in the Asia-Pacific region, demonstrating that advancing corporate accountability need not come at the expense of economic competitiveness.

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# List of Abbreviations

**AG** – food and agricultural products sector

**AP** – apparel sector

**CHRB** – Corporate Human Rights Benchmark

**CI** – confidence interval

**CFO/sales** – cash flow from operations to sales ratio

**CSR** – corporate social responsibility

**CSDDD** – European Union Corporate Sustainability Due Diligence Directive

**Δ (Delta)** – change (e.g., ΔCHRB = change in CHRB score)

**ΔEBITDA/sales** – change in EBITDA to sales ratio

**ΔOM** – change in operating margin

**ΔROA** – change in return on assets

**EBITDA** – earnings before interest, taxes, depreciation and amortisation

**ESG** – environmental, social and governance

**EV/EBITDA** – enterprise value to EBITDA multiple

**EX** – extractives sector

**HC3 SEs** – heteroskedasticity-robust standard errors

**HRDD** – Human Rights Due Diligence

**IT** – information and communication technology manufacturing sector

**MO** – automotive sector

**OLS** – ordinary least squares

**SD** – standard deviation

**TSR** – total shareholder return

**TRI** – total return index

**UNGPs** – United Nations Guiding Principles on Business and Human Rights

1

# Introduction

## 1.1. Strategic context: human rights and competitiveness

Examining the **business case for human rights** requires moving beyond defensive risk management to identifying tangible sources of long-term value. This paper contributes to that effort by providing empirical evidence for a key pillar of the modern business case: **sustainable competitiveness** – a framework where companies generate durable value by acting responsibly and respecting human rights.

A critical barrier to adopting this model, however, is the pervasive fear of a financial trade-off. When confronted with new human rights due diligence (HRDD) expectations, corporate leaders often ask, "How much will it cost us?" This study empirically tests that concern through the **"competitiveness cost" hypothesis:** does improving corporate human rights performance negatively affect a company's financial results?

To investigate this, we examined this hypothesis through two distinct channels: **operational profitability** and **investor valuation**. Our analysis covers 235 large, publicly listed firms across five high-risk sectors – apparel, extractives, automotive, ICT manufacturing, food and agriculture[1] (see annex 1 for the full sample composition) – using data of the Corporate Human Rights Benchmark (CHRB), developed and published by the World Benchmarking Alliance (WBA).

Crucially, our study period (2017-2024) encompasses a time of significant global volatility, including the COVID-19 pandemic, the full-scale Russian invasion of Ukraine, and major supply chain disruptions. Our longitudinal methodology is specifically designed to isolate the relationship between a firm's human rights performance and its financial outcomes, statistically controlling for the average impact of such widespread economic shocks through year fixed effects.

1. Our study focuses on 235 companies drawn from the CHRB, which assessed 244 firms between 2018 and 2023 across five high-risk sectors. Nine of the companies were excluded from the analysis due to lack of required finanical data. These five sectors were chosen because of their significant human rights risks, particularly in supply chains and operations with large-scale social and environmental impacts. The companies in our dataset represent those consistently covered by CHRB over this five-year period, providing a uniquely comparable longitudinal dataset on corporate human rights performance. The CHRB, produced by the World Benchmarking Alliance, is the leading public benchmark of corporate human rights performance. It assesses companies on their policies, processes and practices in line with United Nations Guiding Principles on Business and Human Rights, making it a uniquely suitable dataset for this study.

By correlating changes in human rights performance, as measured by the CHRB, with subsequent financial outcomes, our findings deliver a clear conclusion: the widespread assumption that human rights due diligence represents a burden to competitiveness does not hold up under empricial scrutiny.

### Box 1. Defining "Human Rights Performance"

In this paper, we use terms such as "human rights performance", "human rights management systems" and "due diligence practices" to describe the composite of a company's human rights policies, processes and practices as measured by its CHRB score.

It is important to note that CHRB methodology is process-oriented and extends well beyond a simple review of policies. It assesses the operational integration of a company's human rights commitments by evaluating whether companies:

- provide evidence of specific actions taken on salient human rights issues;
- describe how human rights findings influence core business decisions (such as supplier relationships); and
- share lessons learned from tracking the effectiveness of their actions.

These process and practice-oriented indicators offer a far more robust proxy for corporate behaviour than policies alone, making CHRB scores an excellent – and the best available – measure of a corporation's conduct on human rights.

Nevertheless, we acknowledge a critical distinction: the CHRB gauges the quality and implementation of a company's management systems, rather than a direct, quantitative measure of on-the-ground human rights outcomes. This distinction reflects a broader limitation in the availability of public data. Therefore, our study tests the financial implications of building and operationalising the necessary corporate architecture for respecting human rights.

Throughout this paper, we refer to this concept – the quality and implementation of these systems as measured by the CHRB – as a company's "human rights performance".

## 1.2. Addressing the "business case" and the rationale for this study

While this study investigates the financial correlates of human rights performance, we begin by explicitly addressing the significant concerns surrounding the "business case" narrative. We firmly oppose the **instrumentalisation of human rights** – that is, the reduction of fundamental entitlements to mere tools for achieving corporate objectives, primarily profit maximisation.

Serious critiques, echoed by scholars and human rights advocates, have rightly cautioned against an excessive focus on financial incentives.[2] Such a focus risks obscuring the fundamental moral and legal imperatives that underpin human rights, which are rooted in inherent human dignity and demand respect regardless of economic utility.[3] Conceptualising human rights primarily as a business opportunity or risk management tool relocates them into the realm of instrumental reason, where they are valued as means to an end (profit) rather than as ends in themselves (grounded in duty).

This framing is deeply problematic. If respecting human rights ceases to serve financial ends under certain conditions (e.g., weak enforcement, conflicting market pressures), a purely instrumental commitment offers no principled basis for upholding them. Such a conditional approach fundamentally contradicts the theory, history and evolving legal status of human rights – including corporate responsibilities outlined in the United Nations Guiding Principles on Human Rights (UNGPs) and increasingly codified in national laws – which establish baseline expectations independent of profitability. Relying *solely* on the business case risks undermining these foundational principles.

That said, acknowledging these critical caveats and aligning ourselves with the principle that human rights must be respected for their own sake, we contend that these ethical considerations do not preclude – and indeed should encourage – empirical investigation into the financial dimensions of corporate human rights performance. Just as researchers legitimately ~~exa~~mine the complex relationship between human rights protection, the rule of law, and national economic development at the **macro level** – recognising that economic factors interact with fundamental state duties – it is similarly valid and important to explore potential economic dynamics at the **corporate level**.[4]

2. Cragg, W. (2012). Ethics, enlightened self-interest, and the corporate responsibility to respect human rights: "A critical look at the justificatory foundations of the UN framework". *Business Ethics Quarterly, 22*(1), 9–36. DOI: 10.5840/beq20122213; Wettstein, F. (2012). Human rights as a critique of instrumental CSR: Corporate responsibility beyond the business case. *Notizie di Politeia, 28*(106), 18–33; Bilchitz, D. (2013). A chasm between 'is' and 'ought'? A critique of the normative foundations of the SRSG's framework and Guiding Principles. In S. Deva and D. Bilchitz (Eds.), *Human Rights Obligations of Business: Beyond the Corporate Responsibility to Respect?* (pp. 107–137). Cambridge University Press. https://doi.org/10.1017/CBO9781139568333.009.

3. Arnold, D. G. (2010). "Transnational corporations and the duty to respect basic human rights". *Business Ethics Quarterly, 20*(3), 371-399; Bonnitcha, J., and McCorquodale, R. (2017). "The concept of 'due diligence' in the UN Guiding Principles on Business and Human Rights: A critique". *European Journal of International Law, 28*(3), 899–919. https://doi.org/10.1093/ejil/chx042; Simanovski, S. (2024). "The business case for human rights? Why financial risk is a dangerous argument". *OpenGlobalRights* (April 8, 2024).

4. Baumann-Pauly, D., and Trabelsi, L. (2021). "The business case for human rights: Irrelevant or indispensable?" In Bantekas, I. and Stein, M. A. (Eds.), *The Cambridge Companion to Business and Human Rights Law* (pp. 115–144). Cambridge University Press. https://doi.org/10.1017/9781108907293.007; Clark, G. L., Feiner, A., and Viehs, M. (2015). "From the stockholder to the stakeholder: How sustainability can drive financial outperformance". University of Oxford and Arabesque Partners Report. Available at https://ssrn.com/abstract=2508281.

Ignoring potential financial correlations of HRDD would be a disservice to a comprehensive understanding of the environment in which businesses operate and make decisions.[5] Understanding whether, how, and under what conditions human rights performance aligns with financial outcomes is essential for several reasons:

1. **Informing stakeholders:** Investors, consumers, employees and policymakers increasingly incorporate human rights considerations into their decisions. Empirical data on potential financial links – positive, negative or neutral – provides valuable information for these stakeholders.
2. **Understanding market perceptions:** Analysing market valuation and stock performance offers insight into how financial markets perceive and price human rights-related risks and performance.
3. **Assessing risk management:** Since HRDD is fundamentally a risk management process, examining its relationship to financial risk indicators (such as volatility) helps assess its effectiveness from a business perspective, complementing the primary assessment of its effectiveness in protecting rightsholders.
4. **Evaluating policy and benchmark effectiveness:** Understanding the economic context can inform the design and evaluation of policies (such as mandatory HRDD laws) and tools (such as the CHRB) intended to drive corporate respect for human rights.

## 1.3. Aim and scope of this study

This study therefore does not seek to justify respect for human rights through financial returns, nor to suggest that profitability should be the driver of corporate responsibility. Rather, its purpose is to **objectively analyse the empirical association between HRDD policies, processes and practices, as measured by CHRB, and corporate financial performance.**

Our goal is to contribute empirical data to a complex discussion, acknowledging the primacy of the moral and legal imperatives while simultaneously exploring the tangible economic dynamics that businesses navigate. This dual framing – upholding respect for human rights as

5. Ruggie, J. G., and Middleton, E. K. (2019). "Money, millennials and human rights: Sustaining 'Sustainable Investing'". *Global Policy, 10*(1), 144–150. https://doi.org/10.1111/1758-5899.12645; Kreitmeir, D., Lane, N., and Raschky, P. A. (2022). "The value of names: civil society, information, and governing multinationals". (working paper); Davis, R., and Franks, D. M. (2014). "Costs of company-community conflict in the extractive sector". Corporate Social Responsibility Initiative Report No. 66, Harvard Kennedy School; Morrison, J. (2016). "Why does the Corporate Human Rights Benchmark Matter?" *Institute for Human Rights and Business – Commentary*, 8 Nov 2016; Investor Alliance for Human Rights (2021). Investors with nearly $7 trillion in assets call out leading companies over human rights performance (press release). Over 200 institutional investors ($7 trillion assets under management) publicly endorsed the CHRB, urging companies to improve human rights due diligence scores. They argue that robust HRDD "makes clear business sense" by reducing risks of operational disruptions, reputational harm, financial loss and legal liability. This demonstrates that investors are using benchmarks such as CHRB as a tool in financial decision-making, linking human rights performance to shareholder value.

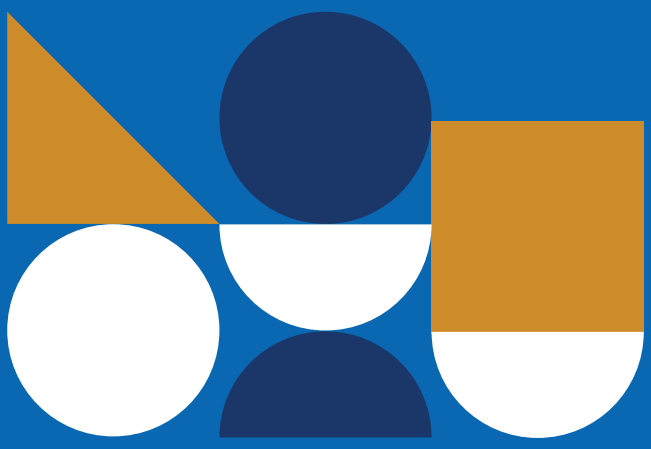
an unconditional duty, while analysing its financial correlates as complementary knowledge – is central to our approach.

By providing data-driven insights, this research is positioned to inform both academic debate and critical policy design. It offers timely evidence for ongoing discussions around mandatory due diligence frameworks – such as the European Union Corporate Sustainability Due Diligence Directive (CSDDD) and emerging legislative initiatives on human rights due diligence in the Asia-Pacific region – by testing the foundational assumptions about competitiveness that often shape these regulations.

This paper represents a core component of UNDP's ***Business Case for Human Rights*** **project**. It is the first step in a long-term research agenda aimed at examining whether the perceived trade-off between human rights and corporate financial performance withstands scrutiny. We view this as a living project and actively welcome suggestions, collaboration and support from the academic, policy and business communities – as well as from civil society and human rights defenders – to further strengthen the evidence base.

2

# Measuring the Correlation Between Human Rights Performance and Financial Performance: A Novel Framework



## 2.1. Measuring human rights performance: a process-oriented approach

A large body of empirical research has examined the link between corporate sustainability initiatives and financial outcomes, typically using broad environmental, social and governance (ESG) or corporate social responsibility (CSR) measures. Our meta-analysis of 31 studies published between 2015 and 2023 shows that the majority report a positive – or at least neutral – relationship between ESG/CSR performance and firm profitability or valuation. However, these studies do not isolate the human rights dimension specifically. As a result, important **knowledge gaps** remain: we still lack evidence on whether improving corporate respect for human rights entails a competitiveness cost, and how such improvements translate into financial outcomes over time.

An important and complementary stream of research investigates the financial consequences of mandatory human rights due diligence laws. For example, Reinsberg and Steinert[6] find no evidence that the French duty of vigilance law negatively affected firm profitability. Methodologically, these analyses treat the *legal obligation* itself as the key explanatory variable, testing its effect on financial outcomes. While powerful for policy evaluation, this approach does not directly observe corporate practice. This distinction is critical, as the link between a legal mandate and substantive change is not automatic. Regulation does not always translate into meaningful improvements in human rights performance; conversely, significant improvements are often driven by voluntary strategic choices independent of any legal requirement.

Our study seeks to bridge these gaps by focusing specifically on **human rights performance** as measured by the **CHRB**. Using a **longitudinal, change-on-change design,** we test whether improvements in human rights performance are followed by financial penalties or gains. In doing so, we respond to the central research question: *Does advancing corporate human rights performance hurt financial performance?*

6. Reinsberg, B., and Steinert, C. V. (2025). "The French Duty of Vigilance Law: Reconciling Human Rights and Firm Profitability". *Review of International Political Economy*, 1-33. https://doi.org/10.1080/09692290.2025.2519189.

## Box 2. Corporate Human Rights Benchmark

### ABOUT CHRB

The **Corporate Human Rights Benchmark (CHRB)** is a global tool developed by the **World Benchmarking Alliance (WBA)**, a non-profit organisation that assesses the 2,000 most influential companies worldwide on their contributions to the United Nations Sustainable Development Goals (SDGs). Since 2017, the CHRB has tracked companies in high-risk sectors – including apparel, agriculture, extractives, ICT manufacturing and automotive – against the UNGPs. It specifically measures their implementation of Human Rights Due Diligence, with the goal of advancing corporate accountability and enabling investors, policymakers and civil society to compare performance and progress across firms and over time.

### WHY CHRB MATTERS

- Provides **credible**, **transparent evidence** on how companies manage human rights risks.
- Highlights **leaders and laggards**, encouraging peer pressure and regulatory action.
- It offers investors and policymakers a **decision-making tool** to demand stronger practices.
- It acts as a **roadmap for companies**, indentifying pathways for continuous improvement.

### METHODOLOGY AND MEASUREMENT AREAS

The CHRB assesses companies using **publicly available information** (policies, reports, websites). Its methodology, grounded in the UNGPs, is structured around **seven measurement areas**:

1. **Policy commitments** – public commitments on human rights and labour rights.
2. **Governance and accountability** – board and executive responsibility for human rights.
3. **Embedding respect** – integration of human rights into management systems, training contracts.
4. **Human Rights Due Diligence** – identification, assessment, prevention, and disclosure of salient risks.
5. **Grievance mechanisms and access to remedy** – availability and effectiveness of complaint and remediation channels.
6. **Sector-specific practices** – addressing high-risk issues such as child labour, land rights, living wage and responsible sourcing.
7. **Response to serious allegations** – transparency and remediation following adverse human rights incidents.

*(Note: The "response to serious allegations" area was introduced in later iterations of the CHRB and is therefore not included in our quantitative analysis.)*

## Box 2 (cont'd). Corporate Human Rights Benchmark

### FURTHER CONSIDERATIONS

**1. The nature of benchmarks: proxies for complex realities**

It is the nature of any large-scale benchmark or index — whether in finance, governance, or human rights — that it serves as a **proxy for a more complex reality**. No public benchmark can fully capture on-the-ground conditions, yet such tools remain the most effective means for systematically tracking and comparing the essential components of corporate conduct across a large sample of companies over time. They are designed to identify the most reliable signals of a company's commitment and systemic capacity.

**2. The CHRB's focus on practice and action, not just policy**

While the CHRB relies on public information, it is crucial to understand that its methodology is **explicitly designed to push beyond a simple review of policies**. It is a process and practice-oriented benchmark that requires companies to provide evidence of their systems in action. Of the 96 core elements used in our analysis, a significant portion demands that companies:

- Describe **how they monitor** policy implementation.
- Provide **examples of specific actions taken** on salient human rights issues.
- Explain how they have **engaged with affected stakeholders** and what they learned.
- Detail **changes made to systems and purchasing practices** as a result of due diligence findings.
- Disclose **how they approach remedy** when adverse impacts occur.

This focus on **evidence of action** makes the CHRB a far more robust proxy for corporate conduct than a simple disclosure checklist.

**3. The CHRB as a foundational, not an advanced, measure**

The CHRB translates the **foundational expectations** of the UNGPs into a measurable framework. It effectively assesses whether a company has the **essential architecture in place for respecting human rights**, moving well beyond a minimalist compliance approach.

However, we also acknowledge that leading companies may be making investments and achieving on-the-ground outcomes that go **beyond the CHRB's baseline scope**. A company could be investing heavily in advanced, innovative programmes that may not be reflected in the CHRB indicators. Moreover, CHRB may not register improvements made by companies that choose not to disclose them due to fear of increased exposure to liability. This means that the real-world investments in human rights can vary significantly, even among companies with similar CHRB scores.

### Box 2 (cont'd). Corporate Human Rights Benchmark

Our study should therefore be interpreted as testing the financial implications of building, operationalising and transparently communicating the foundational systems for human rights due diligence. While not a perfect measure of on-the-ground outcomes, the CHRB provides a robust and credible proxy for the essential corporate conduct that is the prerequisite for respecting human rights.

## 2.1.1. Distinct contributions of this methodological approach

Our methodology is novel and central to this study's contribution for two key reasons:

- *First*, we focus specifically on UNGP-aligned human rights performance. Much of the existing literature relies on broad ESG scores, which can obscure critical issues. For example, a firm might achieve a high overall ESG rating due to strong environmental performance, while masking weak human rights practices within its supply chain.[7]
- *Second*, we employ a "change-on-change" methodology, offering a more dynamic and rigorous test of the competitiveness cost hypothesis. Whereas many earlier studies compare the static financial performance of high vs. low-scoring firms, our approach directly examines the consequences of *change* over time. Specifically, we investigate whether *a demonstrated improvement* in human rights practices is followed by a *negative (or positive) change* in financial metrics over a five-year horizon.

This dynamic approach allows us to test whether the process of making progress on human rights imposes a financial penalty, a more direct and relevant question for corporate decision-makers than a simple static comparison.

## 2.1.2. Data and sample

Our analysis is based on the CHRB publicly available dataset.[8] The sample comprises **235 large, publicly listed companies** that are globally diversified, providing a cross-regional perspective.

7. See, for instance, Berg, F., et al. (2022). "Aggregate Confusion: The Divergence of ESG Ratings." *Review of Finance*.

8. World Benchmarking Alliance. Corporate Human Rights Benchmark. Available at www.worldbenchmarkinalliance.org.

## Box 3. Relevance to the European Union Corporate Sustainability Due Diligence Directive (CSDDD)

To assess the applicability of our findings for companies targeted by the European Unions's CSDDD, we analysed our sample against the directive's size thresholds.[9]

1. **European Union companies:** Our sample includes 63 companies headquartered in Europe and Central Asia, of which **37 companies** are based within the **European Union**. Among these, **30 fall squarely** within the CSDDD's scope based on their number of employees and annual turnover.
2. **Non-European Union companies and analytical approach:** The CSDDD applies a different primary threshold for non-EU companies, based on turnover generated *within* the European Union – data that is not consistently available.[10] To maintain analytical consistency across our global sample, we therefore used the primary EU company thresholds (>1000 employees and >€450 million in worldwide turnover) as a proxy. This approach allows us to identify the firms that, regardless of their headquarters, represent the large, globally significant economic actors that are the focus of the regulation.

Using this consistent proxy, we found that 88 percent of the companies in our sample **(206 out of 235)** meet these size criteria, confirming the high relevance of our findings to the CSDDD policy debate.[11]

We used CHRB data that assesses companies against a consistent set of **96 highly comparable human rights elements**[12] grounded in the UNGPs. These elements are grouped into six core measurement areas, reflecting the key components of a robust HRDD system:

1. **Policy commitments** (14 elements out of 96: the weight is 14.6 percent)
   This foundational area assesses the existence and scope of a company's formal commitment to respect human rights, as expected under **UNGP 16**. The CHRB evaluates whether the company has a publicly available policy that acknowledges its responsibility to respect all internationally recognised human rights and applies this

9. According to the adopted text of CSDDD: >1000 employees and >€450m in worldwide turnover. Available at https://eur-lex.europa.eu/eli/dir/2024/1760/oj/eng.

10. SOMO. CSDDD Datahub. Available at https://www.somo.nl/csddd-datahub/.

11. In its Omnibus proposal, the European Council increased the threshold to 5,000 employees and €1.5 billion in net turnover. Available at https://www.consilium.europa.eu/en/press/press-releases/2025/06/23/simplification-council-agrees-position-on-sustainability-reporting-and-due-diligence-requirements-to-boost-eu-competitiveness/.

12. For further information on CHRB element-level data, see https://assets.worldbenchmarkingalliance.org/app/uploads/2024/11/CHRB-2018-2023-compiled-element-level-data.xlsx.

commitment throughout its value chain, including to its business relationships. A high score here indicates a strong and comprehensive public pledge.

2. **Governance and board-level accountability** (8 elements out of 96: the weight is 8.3 percent)
   This area measures the extent to which the responsibility for human rights is owned at the highest levels of corporate governance, such as through clear board-level oversight for human rights – for instance, via a dedicated committee – or executive remuneration linked to human rights performance. This reflects the expectation of **UNGP 16** that human rights should be embedded in corporate governance structures.

3. **Embedding respect for human rights** (26 elements out of 96: the weight is 27.1 percent)
   This area moves from high-level commitment to operational integration. It evaluates how a company embeds its human rights policy into its culture and day-to-day functions (**UNGP 16**) – whether specific responsibilities and resources are assigned for human rights management, including staff and supplier training, and how human rights considerations are integrated into key business processes such as procurement and supplier contracts.

4. **Human Rights Due Diligence** (12 elements out of 96: the weight is 12.5 percent)
   This is the central, process-oriented pillar of the UNGPs (**UNGPs 17-21**), the core of mandatory HRDD regulations. It assesses the quality and comprehensiveness of companies' due diligence processes, determining if they have robust systems to: (a) identify and assess salient human rights impacts; (b) integrate findings and take action to prevent and mitigate those impacts; (c) track the effectiveness of responses; and (d) communicate externally on its efforts. In short, the "engine room" of a company's human rights management system.

5. **Remedy and grievance mechanisms** (20 elements out of 96: the weight is 20.8 percent)
   Reflecting pillar III of the UNGPs ("Access to Remedy"), this area measures how companies respond to adverse impacts, whether they provide for or cooperate in remediation for harms caused or contributed to. It specifically assesses the availability and effectiveness of **operational-level grievance mechanisms (OLGMs)** for affected stakeholders, evaluating them against the effectiveness criteria outlined in **UNGP 31** (e.g., legitimacy, accessibility, predictability, and equity).

6. **Human rights practices** (16 elements out of 96: the weight is 16.7 percent)
   This area moves from systems and processes to performance on specific, salient human rights issues. Elements here are often tailored to the high-risk nature of the assessed sectors and evaluate a company's practices on key issues such as **forced labour, child labour, living wages, and land rights**.

For each of the 235 companies, we calculated the change in its overall CHRB score between the 2018-2019 assessment (reflecting 2017-2018 baseline performance) and the 2023 assessment (reflecting 2022 performance).

## Box 4. ΔCHRB Score

### FROM RAW DATA TO PROGRESS MEASURE

To capture changes in company human rights performance over time, we constructed a **ΔCHRB score** as our independent variable.

- **Source Data**
  CHRB assessments record whether each element requirement is **met (M)** or **not met (N)**. For each company, these results are available for both the **first year of assessment** (2018-2019; 2020 – for automotive sector) and the **most recent year** (2022-2023).
- **Step 1: Calculate Human Rights Score**
  For each period, we computed the share of expectations met:
  Human Right Score = M / (M + N)
- **Step 2: Calculate Change (ΔCHRB)**
  We then measured progress by taking the difference between the last and first scores:
  $\Delta CHRB = HR\ Score_{last} - HR\ Score_{first}$
- **Comparability of Elements**
  Although the full CHRB framework contains **well over 100 elements**, methodology changes over time made some of them non-comparable between 2018 and 2023. To ensure consistency across this time period, we relied exclusively on the **96 elements that remained stable and comparable** throughout all benchmark cycles.
- **Interpretation**
  **Positive ΔCHRB →** The company improved, meeting a higher share of CHRB expectations.
  **Negative ΔCHRB →** The company regressed, meeting fewer expectations.
  **Zero ΔCHRB →** No change.
- **Example**
  If a company met **24** out of **96** elements in its first year (**25** percent) and **48** out of **96** in its last year (**50** percent), then:
  ΔCHRB = **50% - 25% = +25%**

This ΔCHRB variable provides a **quantitative measure of human rights performance progress** based on consistent elements.

This ΔCHRB score serves as the primary independent variable in our analysis, capturing the firm's trajectory of improvement in human rights performance over the five-year period.

## 2.2. Measuring and testing the financial outcomes

Our study investigates whether the competitiveness cost hypothesis holds true across the full spectrum of financial indicators. In line with prior research on the financial effects of ESG and CSR performance, we selected **two complementary groups of financial indicators.**

1. **Accounting-based indicators** capture the firm's **operational efficiency and resilience**: **operating margin**, **return on assets (ROA)**, and **cash flow from operations**. These are widely used in the literature because they measure profitability, asset efficiency and liquidity, while being less sensitive to market volatility or accounting discretion than earnings per share.
2. **Market-based indicators** reflect investors' perceptions of corporate performance: **market-to-book ratio (Tobin's Q)**, **enterprise value/earnings before interest, taxes, depreciation and amortisation** (**EV/EBITDA)**, and **total shareholder return (TSR)**. Tobin's Q compares market value to the replacement cost of assets; EV/EBITDA provides a capital-structure-neutral measure of how markets value a firm's operating earnings; and TSR captures shareholder gains through both price appreciation and dividends. Together, these indicators reveal whether capital markets penalise or reward firms for improvements in non-financial domains.

Together, the six indicators provide a comprehensive view of both **internal performance dynamics** and **external market responses**. In this study, we apply them specifically to examine the relationship between human rights performance (as measured by CHRB scores from 2017 to 2022) and corporate financial performance (from 2019 to 2024). By measuring corporate financial performance indicators after changes in human rights performance, the analysis accounts for potential time-lag effects, allowing an assessment of whether improvements in human rights practices precede positive financial outcomes. This design helps isolate the impact of human rights performance on subsequent financial performance, mitigating concerns that the results could be driven by reverse causality – for example, the possibility that financially stronger companies simply have more resources to invest in human rights initiatives.

### 2.2.1. Operational profitability

If improving human rights performance imposes a competitiveness cost,[13] it should appear as weaker profitability – through lower margins, reduced efficiency, or weaker cash generation.

13. BusinessEurope Position Paper on Omnibus, https://www.businesseurope.eu/wp-content/uploads/2025/04/2025-04-Businesseurope-position-paper-on-omnibus-I.pdf.

To test this, we used three complementary indicators of operational performance that capture core profitability, asset efficiency and cash generation:

- **Δ Operating margin** (*core profitability*). This metric measures profitability from a firm's core business operations before interest and taxes.[14] The "competitiveness cost" hypothesis predicts that the expenses of HRDD would increase operating costs and therefore shrink profit margins. These perceived costs are complex and may include:
    - **Direct operational expenses** (e.g., on-the-ground monitoring and remediation programmes);
    - **Significant but often untracked administrative overhead** (e.g., personnel time across legal, procurement, sustainability and other teams); and
    - **Strategic costs** (e.g., investments in traceability systems, management of potential legal liabilities).

  This metric was chosen to test the *net effect* of these activities, determining **whether such pressure results in a statistically significant negative impact on a firm's core profitability**.
- **Δ Return on assets** (*asset efficiency*). This metric measures how efficiently a company uses its assets (e.g., factories, equipment) to generate profit.[15] The "return" in "return on assets" is net income. Net income is calculated after all operating and administrative expenses have been deducted. This means every cent spent on human rights due diligence – from staff salaries and training to supply chain audits and new IT systems – is already accounted for and has reduced the numerator of the ROA calculation. If HRDD were purely a financial drain, it would mechanically lower net income and, consequently, force ROA down. There are no "hidden" HRDD costs that ROA fails to capture. At the same time, ROA measures how efficiently a company uses its "assets" to generate that income. The theorised benefits of effective HRDD – such as improved worker productivity, reduced operational disruptions from conflict, and minimised factory downtime – directly enhance this efficiency. Better managed assets generate more income, pushing ROA upwards.
- **Δ Cash flow/sales ratio** (*cash generation*). This metric measures a company's ability to convert sales into tangible cash.[16] HRDD-related activities often involve immediate cash outflows. For many business leaders, the strategic trade-off is whether these certain, upfront cash costs are justified by the **avoidance of potential, but uncertain, future cash drains** from reputational costs or operational failures. **This metric allows us to empirically assess this trade-off, directly measuring whether the process of**

14. Refinitiv. For a standard definition of operating margin as a measure of core operational profitability (calculated as EBIT/sales), see Ross, S., Westerfield, R., Jaffe, J., and Bradford, J. (2019), *Corporate Finance*, 12th ed., p. 56.

15. Refinitiv. For a detailed definition and its interpretation as a measure of profit generated per dollar of assets, see Ross, S., Westerfield, R., Jaffe, J., and Bradford, J. (2019), *Corporate Finance*, 12th ed., p. 55.

16. Refinitiv. For a detailed definition of its primary component, operating cash flow (OCF), see Ross, S., Westerfield, R., Jaffe, J., and Bradford, J. (2019), *Corporate Finance*, 12th ed., pp. 33-35.

**improving human rights performance imposes a net drain on a company's cash-generating ability, as is widely feared.**

(For detailed metric construction, see annex 2.)

## 2.2.2. Investor valuation

If financial markets view human rights improvements as a liability or wasteful expense,[17] this perception should manifest itself in lower valuations or shareholder returns. To test this, we use three standard indicators of market perception:

- **Tobin's Q** (*intangible value*). This metric compares a company's market value to the replacement cost of its tangible assets. A value greater than 1 suggests that the market assigns significant value to a firm's intangible assets, such as brand reputation.18 The "competitiveness cost" hypothesis predicts that investors view HRDD as a liability that erodes value, **considering it a diversion of capital from more profitable, shareholder-focused investments.** Conversely, a modern strategic view argues that strong HRDD *builds* these very intangible assets, making the company more resilient. **Tobin's Q provides a direct test of these competing views, revealing whether the market perceives human rights performance as a source of valuable intangible capital or as a wasteful expense.**
- **EV/EBITDA** (*valuation multiple*). This metric is a core valuation multiple that reflects the market's expectations for a company's future growth and risk profile. A higher multiple indicates that investors are willing to pay more for each dollar of a company's earnings.19 According to the "cost hypothesis", investors should apply a *lower* multiple to firms with strong human rights performance, anticipating that future earnings will be depressed by HRDD costs. The counter-argument is that strong HRDD signals superior risk management and more sustainable, predictable earnings, which should warrant an *equal or higher* multiple. **This metric, therefore, tests whether investors see human rights performance as a drag on future growth or as a de-risking strategy that enhances the quality of future earnings.**
- **Total shareholder return (TSR).** This metric is the ultimate measure of shareholder value, combining share price appreciation and dividends.[20] The "cost hypothesis"

17. See for instance, Bebchuk, L. A. and Tallarita, R., "The Illusory Promise of Stakeholder Governance". Cornell Law Review, Volume 106, 2020, pp. 91-178, Harvard Law School John M. Olin Center Discussion Paper No.1052, Harvard Law School Program on Corporate Governance Working Paper 2020-1, Available at SSRN: https://ssrn.com/abstract=3544978 or http://dx.doi.org/10.2139/ssrn.3544978.

18. Refinitiv. For a standard definition and application in corporate finance, see Ross, S., Westerfield, R., Jaffe, J., and Bradford, J. (2019), *Corporate Finance*, 12th ed., p. 59.

19. Ibid.

20. Refinitiv. For a formal definition and calculation, see Ross, S., Westerfield, R., Jaffe, J., and Bradford, J. (2019), *Corporate Finance*, 12th ed., pp. 332-333.

makes an unambiguous prediction: if investors are penalising firms for diverting resources to HRDD, they will sell their shares, driving down the stock price and ultimately harming TSR. **This metric serves as the final, bottom-line test, allowing us to determine if the perceived costs of HRDD translate into a tangible financial loss for the company's owners.**

(For detailed metric construction, see annex 2.)

## Box 5. Human Rights & Competitiveness: The Hypotheses

**FINANCIAL OUTCOMES (TWO CHANNELS).**

- Operational profitability: ΔOperating Margin (ΔOM), ΔReturn on Assets (ΔROA), ΔCash Flow from Operations/Sales (ΔCFO/Sales).

**For accounting outcomes (OM, ROA, CFO/Sales):** We use a **"change-on-change"** setup. That means we look at whether a **change in human rights performance (ΔCHRB)** is associated with a **change in profitability metrics (ΔOM, ΔROA, ΔCFO/Sales)**.

- Investor valuation: Tobin's Q, EV/EBITDA, TSR.

For market outcomes (Tobin's Q, EV/EBITDA, TSR): we estimate two-way fixed-effects panel regressions where the dependent variable is the level of the valuation ratio (Tobin's Q, EV/EBITDA) or (TSR). **Unlike the 'change-on-change' approach used for accounting metrics, this level-on-level specification is chosen because market valuation is forward-looking and reflects investor perception of a firm's current performance state, not just its rate of change.** The key explanatory variable is the firm's lagged human rights (CHRB) score, with lagged controls for firm size (log of total assets) and leverage (as total debt relative to total assets). All variables are standardised to z-scores.

**PRIMARY HYPOTHESIS — COMPETITIVENESS-COST.**

We test this hypothesis through two channels:

1. **For operational profitability:** An improvement in a firm's human rights performance (ΔCHRB) is followed by a negative change in profitability metrics (ΔOM, ΔROA, ΔCFO/Sales).
2. **For investor valuation:** A higher level of human rights performance (CHRB score) is associated with weaker subsequent market valuation and returns (lower Tobin's Q, EV/EBITDA, TSR).

**ALTERNATIVE HYPOTHESIS A — NEUTRAL ASSOCIATION.**

Improvements in human rights performance have no systematic effect on these outcomes.

### Box 5 (cont'd). Human Rights & Competitiveness: The Hypotheses

**ALTERNATIVE HYPOTHESIS B — STRATEGIC-ADVANTAGE.**

Improvements in human rights performance are followed by better financial outcomes – higher profitability and/or stronger valuation/returns.

**How we test.** Each indicator is assessed separately using a longitudinal change-on-change design with firm and year fixed effects (variables standardised). Market-based outcomes are evaluated with a one and two years lag to reflect investor reaction timing; standard errors are clustered by firm.

Our analysis employed a **panel fixed-effects regression model**, conducted using Python, a software commonly used for regression analysis. Financial data were sourced from Refinitiv Eikon, chosen for its comprehensive cross-country coverage of publicly listed companies, consistent historical time series for key accounting and market indicators, and compatibility with the CHRB dataset over the study horizon. Refinitiv's standardised reporting ensured comparability across firms and industries in different jurisdictions.

Together, the two complementary tests we utilise provide a comprehensive assessment of whether improving a company's human rights conduct negatively affects its financial performance and competitiveness. The first test captures *internal efficiency* through core profitability metrics, while the second assesses *external market perception* via valuation and shareholder returns. By combining both perspectives within a longitudinal, change-on-change framework, our analysis offers a balanced test of the financial materiality of human rights due diligence.

## 2.3. Methodological strengths and limitations

Our study employs two complementary longitudinal strategies. For accounting outcomes (operating margin, ROA, CFO/Sales), we use a change-on-change framework, linking changes in human rights performance (ΔCHRB) to subsequent changes in profitability metrics. This approach tracks how each company evolves over time, rather than comparing it to peers, making the analysis less sensitive to hidden differences across firms. In other words, we test whether improvements in a company's human rights performance are followed by changes in its financial outcomes.

For market outcomes (Tobin's Q, EV/EBITDA, TSR), we estimate two-way fixed-effects panel regressions. Firm-fixed effects control for stable differences between companies, while year-fixed effects absorb macroeconomic shocks that affect all firms in a given year. All explanatory variables (human rights score, firm size, leverage) are lagged by one year to

strengthen causal interpretation. This ensures that we measure the relationship between human rights performance and valuation/returns relative to prevailing economic conditions, rather than conflating them with broad market swings.

While no observational design can replicate a perfect laboratory experiment, our methodology provides a strong statistical control. The change-on-change design compares each company to itself over time, and the panel regressions filter out both firm-specific and year-specific noise. Across both approaches, we also account for firm size and leverage.

This multi-layered strategy strengthens our confidence that the relationships we observe – particularly the positive link between human rights improvements and return on assets – reflect firm-level dynamics rather than artifacts of external shocks.

Despite these strengths, it is important to interpret our findings with a clear understanding of the inherent limitations of this type of research.

- As an observational study based on publicly available data, our analysis identifies strong, systematic **correlations** but cannot definitively prove **causation**. While our models control for key firm characteristics (specifically, firm size, financial leverage, industry, and region of headquarters), **we acknowledge that the inclusion of a broader set of control variables could further strengthen the analysis.**

  Future research, particularly for academic publication, would benefit from incorporating additional firm-level characteristics that could influence both human rights and financial performance. These might include firm age, degree of internationalisation, media visibility, ownership structure, or a company's history of prior misconduct. The data collection required for these variables was beyond the scope of this initial study; however, including them in future research would help further mitigate the risk of omitted variable bias and increase confidence in the results.

- Like all large-scale empirical studies, our analysis relies on proxies. The CHRB score is a best-in-class, process-oriented proxy for a firm's human rights management systems. But it may not capture every aspect of on-the-ground performance. Similarly, standard financial metrics are proxies for a firm's overall economic health.

  While some CHRB components focus on policies and governance, most assess more substantive, process-oriented functions. However, these measurement areas are closely interconnected; for example, a strong governance structure (measurement area 2) is often a prerequisite for implementing a robust due diligence process (measurement area 4). This interdependence makes the analytical separation of these components conditional and potentially misleading. Nevertheless, we conducted separate analyses of these different elements but found no individually significant or noteworthy effects. This result, combined with the conceptual interdependence of the elements, reinforces our view that the aggregate score serves as the most reliable available measure of a firm's overall commitment to and system for managing human rights.

We also recognise that the *meaning* of a change in CHRB aggregate score is not uniform. For example, a two-point gain for a low-scoring firm may represent "low-hanging fruit" (such as adopting a new policy), whereas the same gain for a high-scoring firm likely requires more substantial effort. Similarly, while there is significant variation in performance change across our sample, many firms cluster around zero change, which can make detecting systematic effects challenging. To account for these dynamics, we explored multiple specifications, including disaggregating our sample by starting performance quartiles and isolating "large improvers". The most salient patterns that emerged from these tests are those already presented in our findings, such as the stronger effects for initial laggards and smaller firms. The absence of other significant patterns in these granular tests reinforces the robustness of our main conclusions and suggests they are not artifacts of a specific type of improvement or a narrow subset of elements.

It is also important to clarify that our study is not designed to analyse the short-term market or consumer reaction to specific, high-profile cases of corporate misconduct. Such "event studies" require a different methodological approach and are a separate, valuable field of inquiry. Our focus is not on whether adverse impacts occur – as they inevitably do in complex global value chains – but rather on the corporate architecture built to prevent, mitigate and remediate them.

- Our sample consists of large, publicly listed firms in high-risk sectors. While this is the appropriate group for testing the "competitiveness cost" hypothesis – where such effects are likely to be most pronounced – the findings may not be directly generalisable to smaller, private companies or firms operating in lower-risk industries.
- Our data allows us to observe the effects of change in corporate human rights performance on corporate financial performance over a limited period (2017 to 2024). It is reasonable to assume that many of the positive effects of investing in HRDD processes (such as improved brand reputation, ability to attract and retain workers, and more resilient supply chains) are more likely to be reflected in corporate financial performance in the medium and long term. However, our analysis is currently unable to ascertain the veracity of these claims due to the lack of data on human rights performance prior to 2017.
- In addition, because the CHRB did not collect scores for each company in the intermediary years between our starting and end points (2017-2022), annual CHRB scores are unavailable for those years. For **financial outcomes,** this constraint led us to pose a before-after question: "Did firms that improved in their CHRB scores also improve their profitability over the study window?" – a question best captured through a change-on-change design. For **market outcomes,** which are forward-looking and volatile, annual information is essential. We therefore interpolated CHRB scores between observed years and estimated two-way fixed-effects panel models with lagged predictors to test whether higher levels of human rights performance in one year were associated with valuation or returns in the following year. While

interpolation introduces some measurement error, the ability to analyse annual market dynamics is more essential, and any resulting bias is likely conservative.

Acknowledging these limitations, this study provides the most rigorous empirical tests to date on the financial materiality of improving corporate human rights performance. Let us now have a closer look at the findings.

3

# Findings: Consistent Evidence Against a Financial Trade-off

## 3.1. Operational performance

Our analysis points to a clear and positive association between improvements in human rights performance **(ΔCHRB)** and key aspects of operational efficiency. The most notable result is the **positive and statistically significant link between human rights improvements and return on assets** ($\beta \approx +0.17$, $p < 0.01$). This indicates that companies improving their human rights practices also tend to be more efficient at generating returns from their assets.

This key finding is reinforced by our analysis of other metrics. We found **no statistical evidence of a negative relationship** between human rights improvements and either operating margin (OM) or cash flow from operations (CFO). These results decisively counter the "competitiveness cost" hypothesis, showing that better human rights performance is fully compatible with, and in the case of ROA, positively associated with, stronger financial outcomes.

### Table 1. Association of ΔCHRB (standardised) and financial performance – headline results

| Outcome (z) | Effect of ΔCHRB (β) | 95% confidence interval[21] | Significance | $R^2$[22] | N | Takeaway |
|---|---|---|---|---|---|---|
| **Operating margin (ΔOM)** | **+0.075** | [−0.057, +0.207] | Not significant (p = 0.266) | 0.04 | 235 | Neutral (no penalty) |
| **Return on assets (ΔROA)** | **+0.172** | **[+0.046, +0.298]** | **Significant (p = 0.0077)** | 0.13 | 233[23] | Positive and significant |
| **Cash flow/ sales (ΔCFO)** | **−0.041** | [−0.173, +0.091] | Not significant (p = 0.542) | 0.03 | 235 | Neutral (no effect) |

21. The 95 percent confidence interval (CI) shows the margin of uncertainty around the estimate. It captures the effect sizes that the data and model can reasonably support. If the interval crosses zero, we cannot rule out no effect; if it stays entirely above or below zero, the effect is statistically significant and indicates a positive or negative association.

22. $R^2$ (the coefficient of determination) measures how much of the variation in the dependent variable (e.g., ΔOM, ΔROA) is explained by the independent variables in the regression (here: ΔCHRB plus fixed effects). It ranges from 0 to 1: 0 = the model explains none of the variation; 1 = the model explains all of the variation

In table 1, $R^2$ tells us how much of firms' changes in financial performance can be accounted for by the model, including ΔCHRB and the controls.

For example: $R^2 = 0.13$ for ΔROA means that about 13 percent of the variation in ΔROA across firms is explained by the regression. $R^2$ values (like 0.03–0.13) are very common in firm-level studies. They do not mean the results are unimportant – only that financial outcomes are influenced by many other factors beyond human rights performance.

23. There was a lack of reliable data on ROA for two companies from our sample.

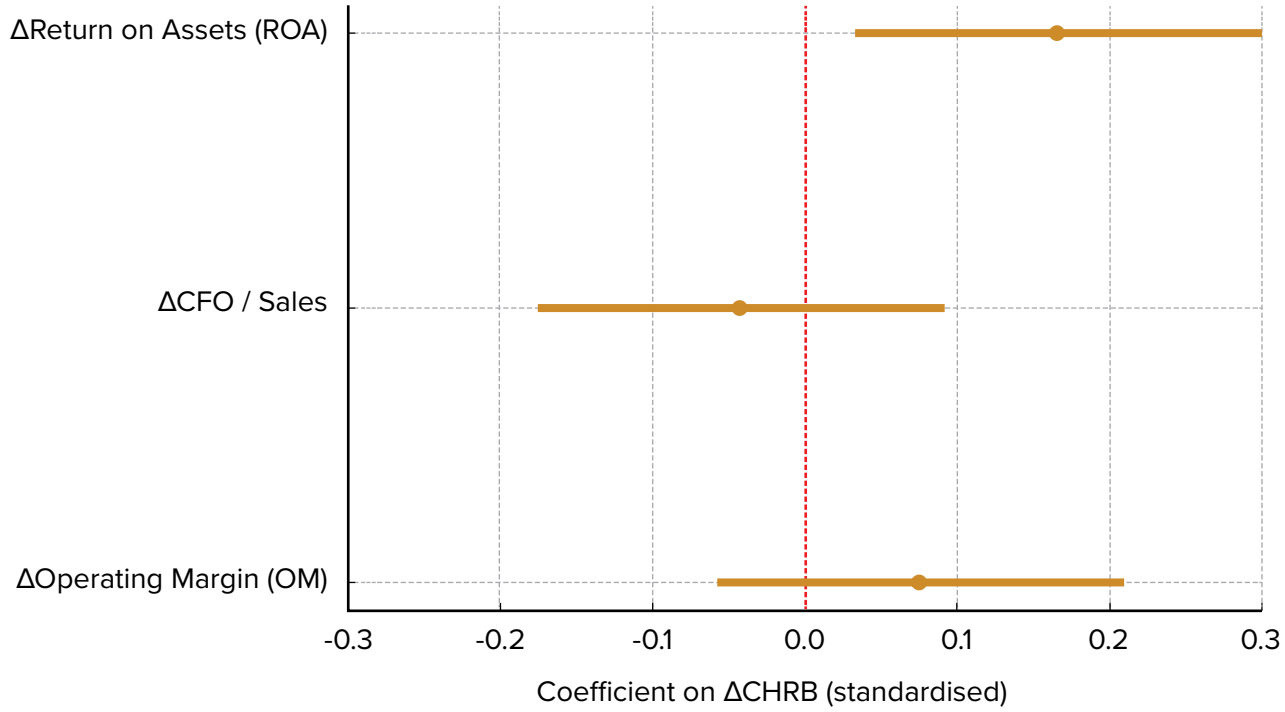
Our finding of a statistically significant positive association between changes in human rights conduct and changes in return on assets is symmetrical. **On average and holding other factors constant,** companies that improve their CHRB scores also tend to see an improvement in their operational efficiency. Conversely, **companies whose human rights conduct worsens tend to see a corresponding decline in their return on assets.** This reinforces our central finding that the real "competitiveness cost" may not be investing in human rights, but rather in failure to do so.

In practical terms, this means that a firm improving its CHRB score by about one standard deviation – roughly a 10-percentage point increase in the share of elements met (out of 96 elements) – is associated with about a 1 percentage point increase in return on assets. This is not merely a statistical abstraction. For instance, one company in our dataset provides a clear illustration of this trend: after improving its share of 'met' elements from 35 percent in the first year to 44 percent in the last year – a gain of 9 percentage points, its ROA rose from 3.8 to 4.7 percent over the same period. Another company improved its share of 'met' indicators from 9.4 percent in the first year to 15.6 percent in the last year – a gain of 6.2 percentage points – and its ROA rose from 6.6 to 7.2 percent over the same period, a 0.6 percentage-point increase. A company, with a larger positive change in CHRB from 8.0 to 26.4 percent (+18.4 percentage points), demonstrated a ROA increase of +1.67 percent. The same relationship also works in reverse: a company that showed a 6.4 percent decrease in CHRB (from 29.5 to 23.1 percent of its share of 'met' indicators) experienced a negative ROA change of −0.64 percent.

Our statistical model for ROA has an R-squared ($R^2$) value of approximately 0.13. This means our model explains about **13 percent of the observed variation in ROA** across the companies in our study. For a firm-level analysis of this nature, an R-squared of 0.13 is considered a robust and meaningful result, indicating that human rights conduct has a level of explanatory power comparable to other well-established drivers of financial performance. A company's financial success is influenced by countless factors, and no single strategic area ever explains the majority of performance. Within a complex business environment, our analysis shows that improving human rights management is a **clear and positive contributor** to financial efficiency. It is a significant part of the performance puzzle, not just statistical noise. Looking more closely, the underlying trends differ. The coefficient for operating margin – a key indicator of core profitability – was positive ($\beta \approx +0.075$). Although statistically insignificant, this directionality suggests that firms improving their human rights performance tended to see slightly improved, rather than diminished, margins. Most importantly, this reinforces the central finding: there is no evidence of a profitability penalty.

CFO, in turn, reflects firms' ability to translate revenues into actual cash flows, which is often more volatile and sensitive to investment cycles. Here the coefficient is close to zero ($\beta \approx -0.04$), with a wide confidence interval that spans both negative and positive values. This underlines the absence of systematic downside risk. The CFO results are best understood as neutral, with no material effect on cash generation.

## Figure 1. Association of human rights improvements (ΔCHRB) and firm financial performance




**Note:** This figure shows the correlation between changes in human rights performance (ΔCHRB) and three financial performance indicators: operating margin (ΔOM), cash flow/sales (ΔCFO), and return on assets (ΔROA). The vertical dashed red line marks the "no effect" point at zero. Each dot represents the estimated coefficient (**ΔOM = +0.075; ΔCFO = −0.04; ΔROA = +0.17**), and the horizontal bars indicate the 95 percent confidence intervals. A 95 percent confidence interval does not mean the effect varies randomly within this range (so it does not mean individual companies in the sample fall somewhere inside these bounds). Rather, it means that if we were to repeat this analysis many times, in 95 out of 100 cases the true effect would fall somewhere within the interval. When the interval crosses zero, it means we cannot rule out the possibility that the observed association is due to chance (and is therefore considered statistically insignificant).

The results reveal a clear pattern. For **ROA**, **the effect is positive and statistically significant**: firms improving their human rights scores tend to use assets more efficiently, with the confidence interval ranging from **+0.05 to +0.30** and never crossing zero. For **OM**, the coefficient is slightly positive (**+0.07**), though the confidence interval spans from **−0.06 to +0.21**, pointing to a neutral effect. Importantly, the estimate itself leans positive; so while not significant, the pattern suggests no harm and a tendency toward improvement. For **CFO**, the point estimate is slightly negative (**−0.04**), with a wide confidence interval from **−0.17 to +0.09**. Because the interval overlaps with zero, the effect is statistically insignificant (**p ≈ 0.54**), meaning that in practical terms, it is best interpreted as neutral.

**Put simply, companies improving their human rights practices face no financial penalties. The outcomes range from neutral (OM and CFO) to clearly positive (ROA), meaning that stronger human rights practices are at least compatible with, and in some cases conducive to, better financial performance.**

To ensure the validity of our findings, the regression models controlled for key firm-level characteristics, including initial company size (log of assets, 2017) and leverage, as well as industry and regional dummies. Including control variables helps to ensure that the observed associations are not simply artifacts of company characteristics or structural differences across industries and regions. Firm size, measured as the log of assets in 2017, was positively associated with financial outcomes in the ROA model ($\beta \approx +0.16$, $p \approx 0.06$), suggesting that larger firms may be somewhat more efficient in converting assets into returns. However, this effect was not statistically robust for OM ($\beta \approx +0.09$, $p \approx 0.32$) or CFO ($\beta \approx -0.004$, $p \approx 0.97$). Leverage, by contrast, showed no systematic relationship with performance in any of the models, with coefficients hovering near zero and consistently insignificant ($p > 0.6$).

Industry and regional controls provided additional nuance, confirming the robustness of our main findings. Sectoral dummies did not yield consistent or significant results, indicating that the link between human rights performance and financial outcomes was not driven by any particular industry. With Europe as the baseline, none of the other major regions (North America, East Asia and the Pacific, Latin America and the Caribbean, South Asia and Sub-Saharan Africa) exhibits statistically significant differences in financial outcomes (ROA, OM, or CFO/sales).

These findings indicate that **the positive relationship between improved human rights performance and ROA is a robust phenomenon**, not an artifact of industry-specific dynamics or regional contexts. Across the major regions of the sample, the pattern is broadly neutral to positive, and no particular sector drives the results. This strengthens the interpretation that improved human rights performance is linked to more efficient use of assets rather than a region or industry-specific anomaly.

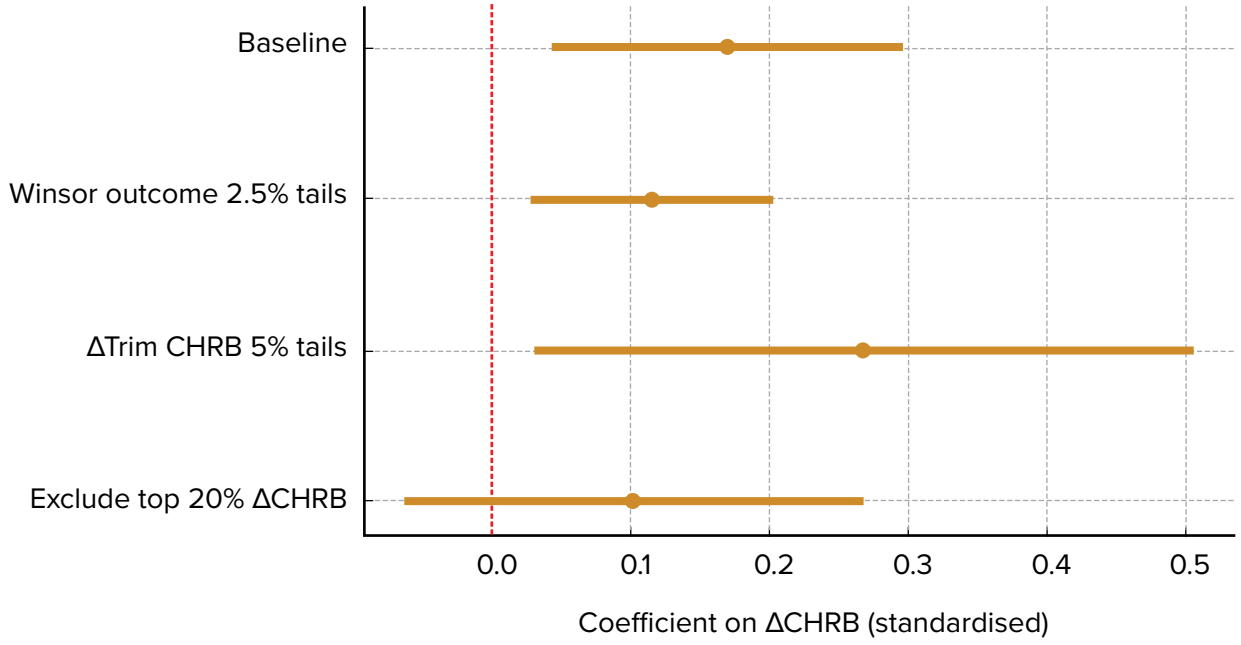
## Table 2. Regression estimates for control variables on financial performance (OM, ROA, CFO)

| Control variable | OM | ROA | CFO |
|---|---|---|---|
| Firm size (log assets, 2017) | $\beta \approx +0.09$ ($p = 0.32$) | $\beta \approx +0.16$ ($p = 0.06$) | $\beta \approx -0.004$ ($p = 0.97$) |
| Leverage (2017) | $\beta \approx -0.03$ ($p = 0.73$) | $\beta \approx -0.01$ ($p = 0.93$) | $\beta \approx -0.03$ ($p = 0.67$) |
| Industry dummies | No consistent effects | No consistent effects | No consistent effects |

While our main analysis controls for key firm characteristics, we also conducted a series of robustness tests to ensure our standout finding for ROA was not being unduly influenced by extreme observations or outlier cases. We tested the stability of the relationship by systematically winsorising the outcome data and trimming the most extreme cases of human rights improvement or decline.

The results of these tests, summarised in figure 2, confirm that the positive association between human rights improvements (ΔCHRB) and changes in ROA is a robust phenomenon.

## Figure 2. ΔCHRB–ΔROA relationship: winsorisation, trimming and excluding major improvers




**First, to check for the influence of extreme profit outcomes,** we winsorised the ROA variable (capping the top and bottom 2.5 percent of cases). The coefficient remains positive and statistically significant ($\beta \approx 0.11$, $p = 0.010$), demonstrating that our finding is not driven by a handful of companies with unusually high or low profits.

**Second, to test for the impact of outlier human rights changes,** we trimmed the top and bottom 5 percent of ΔCHRB values (removing the most extreme improvers and decliners). In this sample of firms with more moderate changes, the positive relationship actually becomes stronger ($\beta \approx 0.27$, $p = 0.028$). This indicates that the positive link is not dependent on outlier cases and is a consistent pattern among the broad majority of companies.

Taken together, these tests increase our confidence that the positive association between strengthening human rights conduct and improving operational efficiency is a genuine and stable finding, rather than an artifact of statistical outliers.

However, this average effect may mask important differences. Within the CHRB score, early gains often come from low-hanging fruit – simple steps like adopting basic policies. Once those are in place, however, each additional improvement requires deeper changes. This suggests the financial impact of an improvement may depend on a firm's starting position.

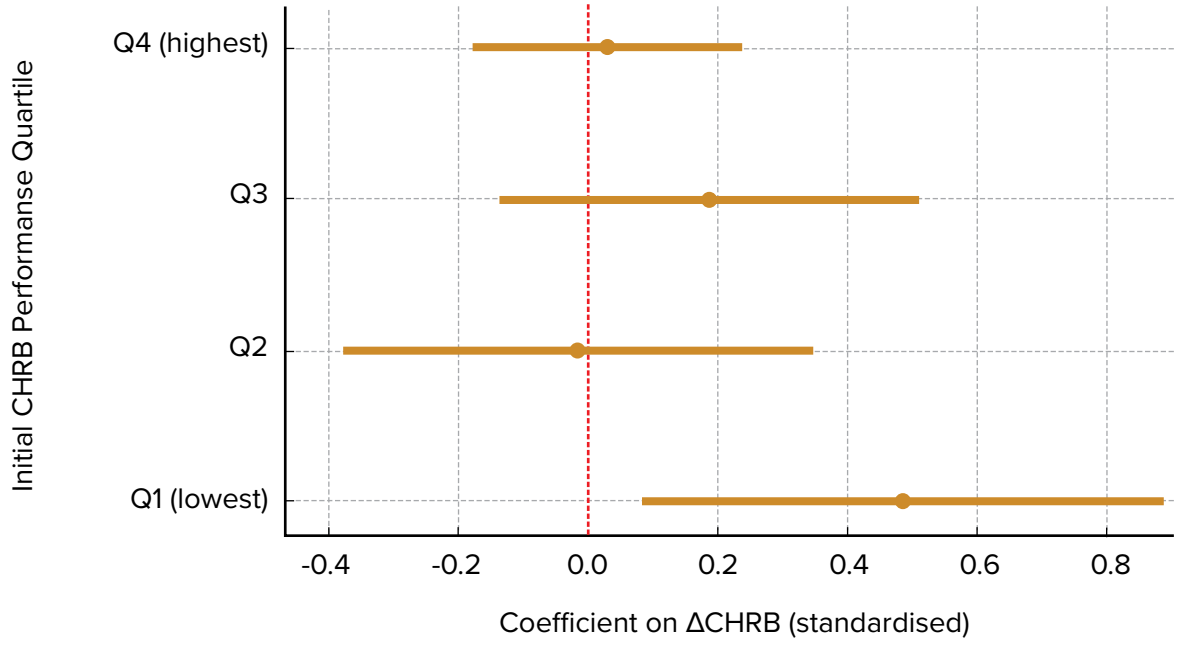
To capture this dynamic, we divided the sample into four quartiles of roughly 60 firms each, based on their initial CHRB score. When we ran separate regressions for each quartile, the coefficients followed the expected pattern – strongest for the lowest-performing group and weakest for the highest. However, none were statistically significant on their own, since the smaller number of firms in each quartile inflated the error terms. To address this limitation

while still testing whether effects differ by starting position, we employed a pooled regression model with quartile interaction terms.

The dependent variable was the standardised ΔROA, and the key explanatory variables were the standardised ΔCHRB score, the initial CHRB score, firm size and leverage, and industry dummies. The interaction terms captured whether the slope of the CHRB-ROA relationship varied across quartiles, with the top quartile (Q4) serving as the baseline reference group.

The overall model is statistically significant ($p < 0.01$) and explains approximately 12 percent of the variation in financial outcomes ($R^2 = 0.123$). The baseline effect of standardised ΔCHRB for Q4 firms is small and positive but statistically insignificant ($\beta = 0.027$, $p = 0.80$). For Q2, the coefficient is near zero and statistically insignificant ($\beta = -0.019$, $p = 0.92$), while for Q3 it is moderately positive ($\beta = 0.182$, $p = 0.28$), though neither differs significantly from the Q4 baseline. By contrast, the interaction term for Q1 (the lowest quartile of initial CHRB performance) is positive and significant ($\beta = 0.471$, $p = 0.017$).

## Figure 3. Effect of CHRB Improvements on ROA based on initial CHRB score




**Note:** Coefficients show the association between standardised CHRB improvements (ΔCHRB) and standardised change in ROA, based on a pooled interaction model with controls. Error bars represent 95 percent confidence intervals. The point estimate for Q4 is the baseline coefficient for ΔCHRB. A clear positive effect appears for firms in the lowest quartile of initial CHRB performance. For middle and top quartiles, the estimated effects are small, close to zero, and not statistically significant – suggesting no robust evidence of either positive or negative impact.

These findings indicate that the financial benefits of human rights improvements are concentrated mainly among firms starting from the weakest baseline. For firms already in the middle or top quartiles, the coefficients suggest either small positive or flat associations, but none are statistically significant, indicating no robust short-term financial payoff beyond

the laggard group. At the same time, we do not observe any signs of "punishment" for these firms: improvements in CHRB performance are not associated with worsening ROA.

Beyond a firm's starting point, we also conducted a series of robustness checks to explore other dynamics, such as the magnitude of improvement and the role of firm size.

We examined whether the results depend on firms making particularly large gains in human rights performance. To do so, we excluded the top 20 percent of ΔCHRB improvers, defined as the cohort of "major improvers".[24] In this more demanding test, the coefficient falls to about 0.10 and loses statistical significance ($p = 0.229$). This pattern suggests that the strongest part of the ΔCHRB-ROA relationship is concentrated among firms undertaking more substantial improvements, while the effect among modest improvers and decliners is too small to detect reliably.

These robustness checks demonstrate that the ΔCHRB-ROA link is not simply driven by statistical outliers. The effect strengthens when extreme values are trimmed and remains positive after adjusting for unusual profit outcomes. At the same time, the weakening of the relationship once the top 20 percent of improvers are excluded points to a threshold dynamic: the correlation between financial benefits and improved human rights performance is most clearly visible among firms making more meaningful, substantive changes. **In other words, the more a company improves its human rights performance, the bigger the increase in its profitability (according to its ROA).**

We include an interaction between the change in CHRB and the baseline firm size (ΔCHRB × log assets) to test whether the association between human rights improvements and profitability varies with firm scale. All variables are standardised, so the ΔCHRB coefficient reflects the effect at average size, and the interaction captures how that effect shifts with size.

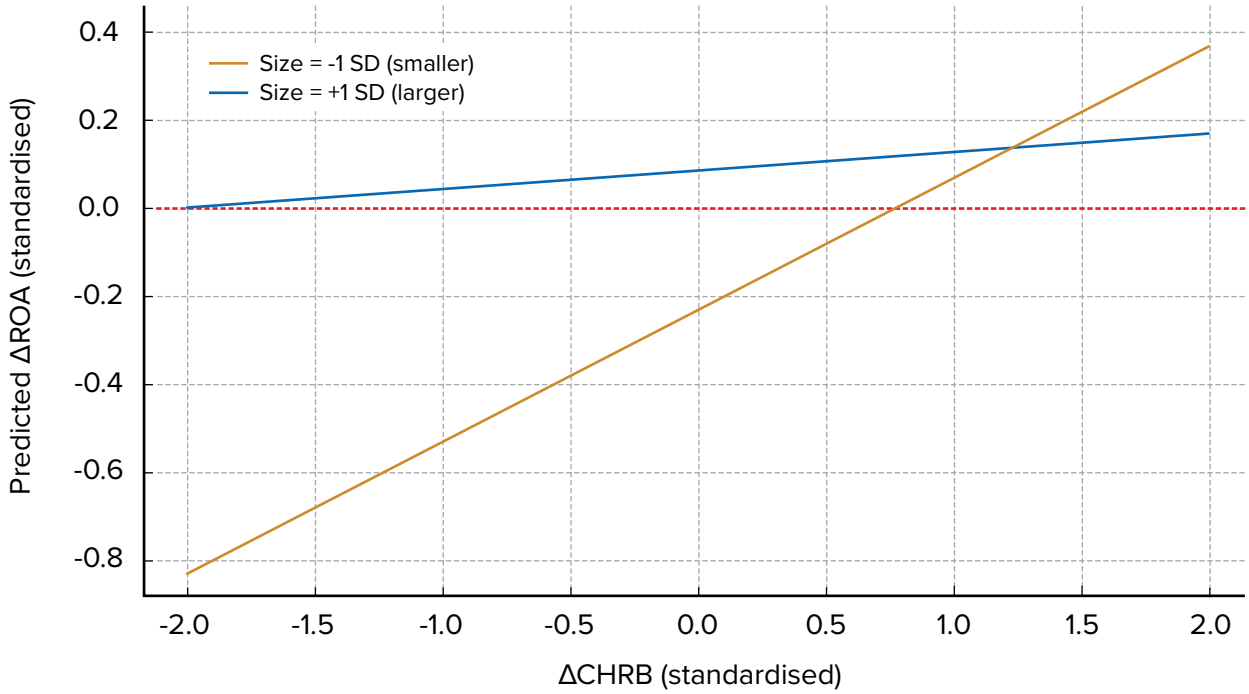
Our results also reveal a correlation between size and performance. Specifically, using standardised 2017 asset size (log of total assets) as a moderator, we find that smaller firms in the sample – those with asset size below the sample mean – convert gains in human rights performance into greater subsequent improvements in ROA (interaction $\beta = -0.131$, $p = 0.043$). **Figure 4 visualises this dynamic, showing the steeper positive relationship between human rights improvement and profitability for smaller firms compared to their larger counterparts.**

Regardless of changes in CHRB, larger firms in the sample tend to show higher ROA overall ($\beta = 0.177$, $p = 0.041$). However, the performance boost they experience from human rights improvements is smaller compared to that of smaller firms (interaction $\beta = -0.131$, $p = 0.043$). **This declining effect is clearly illustrated in figure 4, which shows that the positive impact is strongest and most significant among the smallest firms in our sample, gradually attenuating toward zero for the largest.** It is important to note that all companies included in the analysis are relatively large, publicly listed firms with shares traded on major stock

24. "Major Improvers" are firms in the top decile of year-on-year CHRB score changes during the study period (2017–2022). This category captures companies that undertook the most significant improvements in human rights performance relative to their peers.

exchanges; thus, “smaller” and “larger” represent relative distinctions within an already high-capitalisation group.[25]

## Figure 4. Predicted ΔROA across ΔCHRB at two firm sizes




**Note:** Predicted change in ROA (standardised) as a function of ΔCHRB (standardised) at two representative size levels: **size = −1 SD (smaller)** and **size = +1 SD (larger)**, holding leverage at its mean. The **steeper slope for smaller firms** visualises the size-performance interaction (interaction β < 0), i.e., smaller (still large) firms convert HR improvements into ROA gains more effectively.

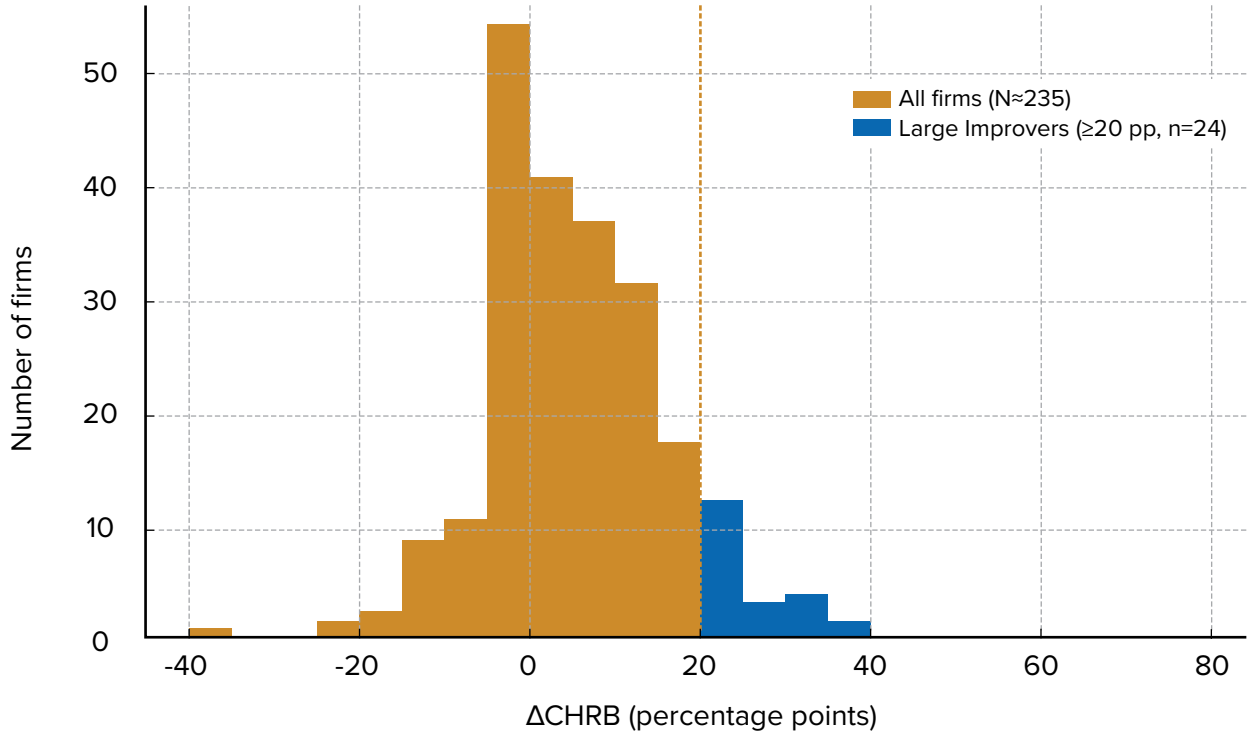
To further test our finding of financial neutrality, we examined a potential exception: non-linear or “threshold” effects. It could be argued that while marginal improvements have a neutral impact, a substantial, resource-intensive improvement might initially impose a net cost on profitability. To test this “high-effort penalty” hypothesis, we identified a cohort of **24 “large improvers” (jumpers)** – companies that achieved a substantial improvement of 20 or more percentage points in their CHRB score between 2017 and 2022. **Figure 5 shows the distribution of performance changes across our sample, highlighting this small but important cohort of high-effort firms.**

This analysis was conducted across our three financial performance metrics: operating margin, return on assets, and the cash flow from operations to sales ratio. Across all three indicators, **we found no statistically significant evidence that substantial improvements**

25. In order to give a sense of the scale of companies in our sample, here are the main characteristics in terms of total assets: companies range from approximately **$180 million** to **$470 billion in total assets**, with a mean of about **$59 billion**. The distribution shows about **12 percent** of firms with assets below $5 billion, the majority (**56 percent**) between $5–50 billion, around **15 percent** between $50–100 billion, and **17 percent** exceeding $100 billion.

**in human rights performance were followed by a financial penalty.** The regression coefficients for being a "large improver" are statistically indistinguishable from zero for all three metrics**.** For operating margin (β = 0.14, p = 0.52) and the cash flow/sales ratio (β = -0.18, p = 0.43), the effects are neutral. Notably, **for ROA, the coefficient is positive** (β = 0.18). While this failed to meet conventional significance levels (p = 0.41), it points directly away from a cost narrative and provides no support for the "competitiveness cost" hypothesis.

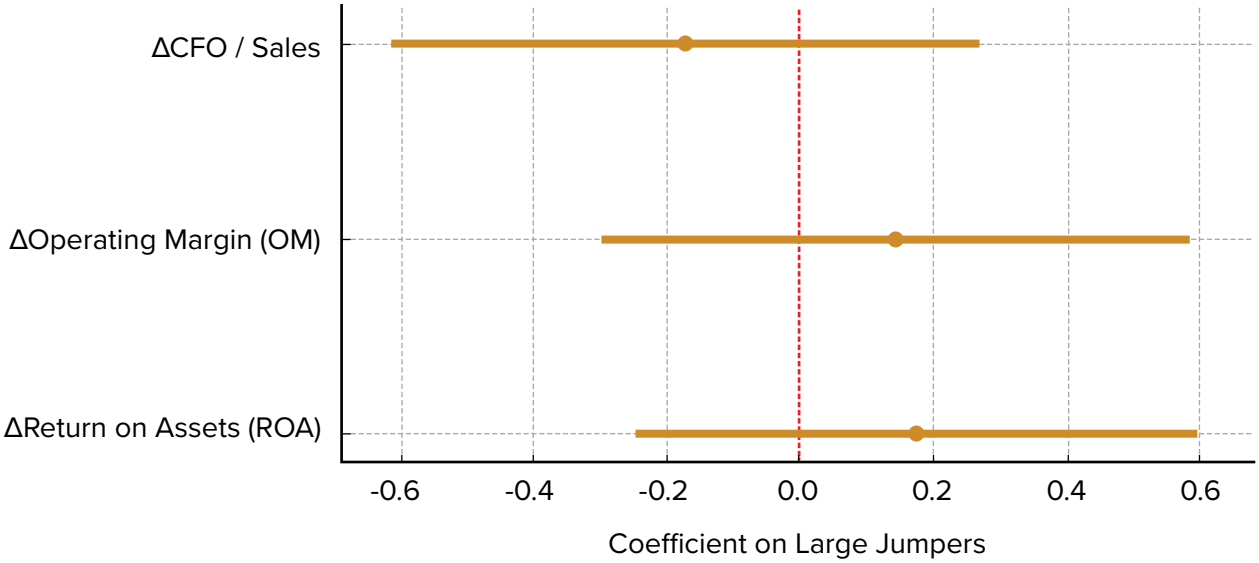
## Figure 5. Distribution of ΔCHRB (2018-2023), with "large improvers" (≥20 pp) highlighted




**Note:** Figure 5 plots the distribution of changes in CHRB scores across all firms. While most companies improved moderately, 24 firms achieved substantial gains of 20 percentage points or more. These "large improvers" provide a valuable test case to examine whether ambitious advances in human rights performance come at a financial cost.

Our analysis suggests, therefore, that even substantial, non-marginal improvements in corporate human rights performance do not impose – over the medium term – a detectable financial penalty on subsequent operating profits.

## Figure 6. Effect of "large improvers" (≥20pp ΔCHRB) on profitability metrics (95 percent confidence interval)




**Note:** Figure 6 shows the estimated effects of being a "large improver" (≥20pp ΔCHRB) on subsequent profitability metrics, with 95 percent confidence intervals. The coefficients are close to zero and not statistically significant for operating margin and CFO/sales, while ROA is positive but also not significant, providing no evidence of a high-effort penalty.

## Box 6. Why is ROA the Standout Indicator? An Interpretation of the Findings

While our study identifies a strong association rather than direct causation, a compelling question arises: why is the link with ROA positive and significant, while the associations with operating margin and cash flow are neutral?

Our interpretation – supported by the time-lagged design of our analysis – is that **although responsible business practices entail real upfront costs, they generate operational benefits that, over time, meet or exceed those costs**. Our methodology, which measures financial performance in a later period than human rights performance, is specifically designed to capture these maturing effects.

The direct costs of HRDD – paying higher wages, using certified ingredients, shouldering recruitment fees, and investing in better purchasing practices – are absorbed within a company's operating expenses in the short term. This may explain the neutral effect of human rights performance on operating margin.

However, as our time-lagged analysis seems to indicate, the diverse benefits – smoother operations stemming from a more stable workforce, more resilient supply chains, and avoided disasters – unfold over time. It is precisely these delayed, efficiency-driving benefits that ultimately **offset the initial investments**. ROA, by capturing the net impact of both costs and efficiencies, thus serves as an excellent indicator for measuring the holistic financial outcome of a well-managed human rights strategy as it matures.

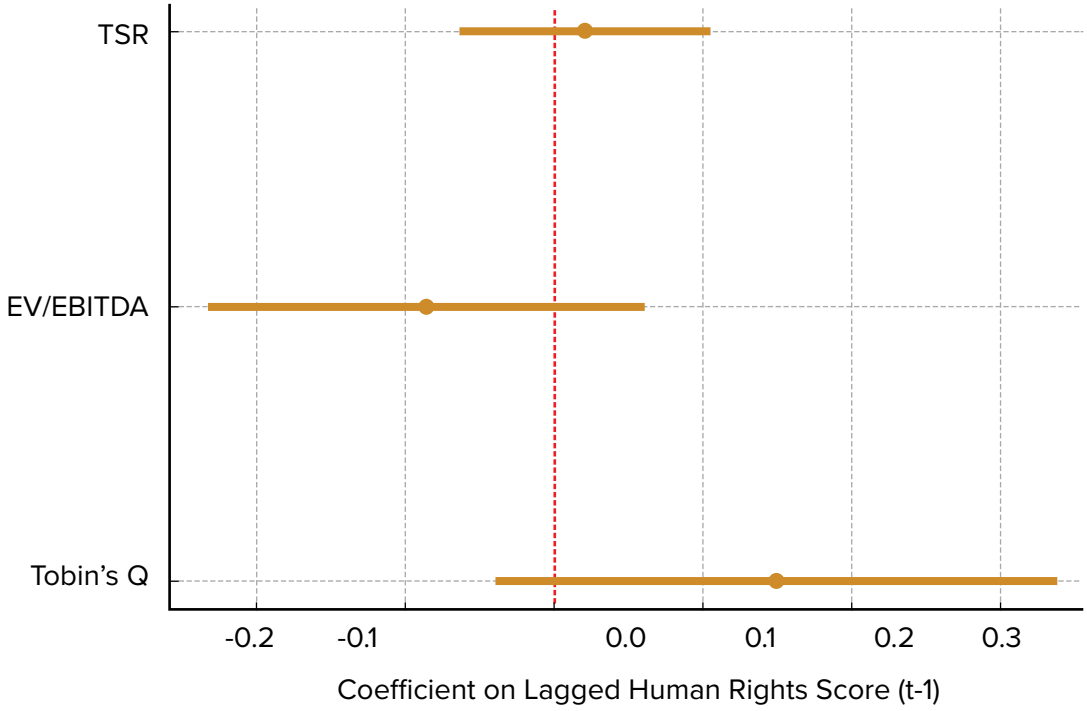
## 3.2. Investor valuation

Our investigation into the market valuation of human rights performance was designed to test a critical aspect of the "competitiveness cost" hypothesis: whether investors systematically penalise firms for their commitment to human rights. Our analysis, conducted through multiple rigorous tests, yielded a consistent and robust conclusion: **investors react neutrally-to-positively to improved corporate human rights performance.**

Our panel fixed-effects model, which tested for a link between a firm's level of human rights performance in one year and its subsequent market valuation, found **no statistically significant negative relationship.** On the contrary, while not statistically significant, the coefficients for the human rights score were neutral or slightly positive, providing no evidence of a market penalty. The score was not a significant predictor of Tobin's Q ($p = 0.12$), EV/EBITDA ($p = 0.23$), or total TSR ($p = 0.64$).

To ensure this finding was driven by a delayed market reaction, we re-ran our analysis using two and three-year lags of the human rights score. The results remained consistently insignificant across all metrics, providing strong evidence against the hypothesis that a market penalty materialises over a longer horizon.

### Figure 7. Association of lagged human rights score and market valuation metrics




**Note:** Figure 7 plots the effect of lagged human rights performance on three market valuation metrics. Across Tobin's Q, EV/EBITDA, and TSR, coefficients are neutral or positive and never significantly negative. The strongest signal comes from Tobin's Q, where the coefficient is positive and close to significance ($p = 0.12$). Taken together, the evidence shows that investors do not penalise firms for strong human rights performance. If anything, there are indications of modest valuation benefits.

We conducted a targeted cross-sectional analysis to test if the market penalises the high costs associated with substantial improvements in human rights performance. Specifically, we identified a group of 24 "large improvers" who increased their human rights score by 20 percentage points or more. The analysis revealed that these large improvers had **no statistically significant negative effects** on a firm's subsequent market valuation, whether measured by Tobin's Q (p = 0.21), EV/EBITDA (p = 0.35), or TSR (p = 0.25). These results confirm that even firms undertaking significant, resource-intensive transformations in their human rights practices were not punished by investors.

### Table 3. Association of human rights performance and market valuation

| Market outcome | Effect of lagged CHRB (β) | Significance (p-value) | Takeaway |
|---|---|---|---|
| Tobin's Q | Positive | p = 0.12 | **Neutral (no penalty).** The positive coefficient is borderline significant, suggesting a potential modest valuation benefit. |
| EV/EBITDA | Neutral | p = 0.23 | **Neutral (no penalty).** |
| Total shareholder return | Neutral | p = 0.64 | **Neutral (no penalty).** |
| **Analysis of "large improvers"** | | | |
| Tobin's Q | Neutral | p = 0.21 | **No penalty for high-effort firms.** |
| EV/EBITDA | Neutral | p = 0.35 | **No penalty for high-effort firms.** |
| Total shareholder return | Neutral | p = 0.25 | **No penalty for high-effort firms.** |

**Note:** Table 3 summarises the results from two sets of analyses. The top panel shows results from a fixed-effects regression testing the association between a firm's lagged human rights performance (CHRB score, t-1) and its subsequent market valuation. The bottom panel shows results from a separate analysis testing whether firms making substantial improvements ("large improvers") were penalised by the market. Both analyses show no evidence of a market penalty.

## 3.3. Mapping fears vs. evidence (sustainable competitiveness)

### 3.3.1. On operational profitability: slight positive returns

The cost hypothesis predicted that the expenses and operational changes required for human rights due diligence would directly harm a firm's internal efficiency. Our analysis of three distinct profitability metrics shows this did not occur:

- **Core profitability (ΔOperating margin):** The fear that HRDD costs – from administrative overhead to on-the-ground programmes – would directly shrink profit margins was unfounded. We found no statistically significant impact. In fact, the

direction of the effect was slightly positive, suggesting that, if anything, improving human rights performance is compatible with stable or even slightly improved core profitability.

- **Asset efficiency (ΔReturn on assets):** This was the ultimate test of whether HRDD is a net drag on efficiency or a driver of it. Our results show a **statistically significant positive effect**. **This not only refutes the idea that HRDD expenses reduce efficiency but provides support for the counter theory:** that effective human rights management – through improved worker productivity, reduced operational disruptions, and minimised downtime – can enhance asset efficiency to a degree that outweighs its costs.
- **Cash generation (ΔCash flow/sales ratio):** The concern that upfront cash outflows for HRDD would impose a net drain on a company's liquidity was not borne out by the data. We found a neutral effect, indicating that companies were able to make these strategic investments without systematically weakening their ability to convert sales into the tangible cash needed to run the business.

## Table 4. Mapping fears vs. evidence (sustainable competitiveness)

| Competitiveness dimension | Traditional fear (cost hypothesis) | Evidence from this study | Practical implication |
|---|---|---|---|
| Operational (ΔOperating margin, ΔROA, ΔCFO/sales) | Lower profits, margins, and efficiency due to HRDD costs. | No evidence of a penalty – and some evidence of a financial benefit. ΔOM and ΔCFO/sales are neutral; ΔROA is positive and significant ($\beta \approx +0.17$, $p<0.01$). Effect is stronger for relatively smaller firms (size interaction $p \approx 0.016$). | HRDD is compatible with profitability; may improve asset efficiency. |
| Investor valuation (Tobin's Q, EV/EBITDA, TSR; lagged 1y) | Investors punish "wasteful" social spending with lower valuation/returns. | No evidence of a market penalty. Coefficients are statistically neutral across all three indicators; even major improvers show no negative follow-on effect. | Markets do not discount firms for human rights improvements; room to pursue HRDD without valuation drag. |

In sum, **the operational engine of the firm was not compromised. Margins were not squeezed, efficiency was not diminished. Rather, it was enhanced**, and cash generation was not impaired.

### 3.3.2. On investor valuation: no market penalty

The second pillar of the cost hypothesis is that even if a firm can absorb the costs, the market will penalise it for "wasteful" social spending. Our analysis of three standard market indicators shows that investors applied no such penalty:

- **Intangible value (Tobin's Q):** According to our findings, the market did not penalise firms for investing in their human rights performance, suggesting that these activities are not perceived as a destruction of intangible assets, such as brand reputation, but are instead seen as neutral or value-preserving.
- **Future growth expectations (EV/EBITDA):** The market did not apply a lower valuation multiple to firms with stronger human rights performance, indicating that investors do not believe future earnings will be depressed by ongoing HRDD costs.
- **Total shareholder returns (TSR):** In the final, bottom-line test, we found no evidence that the perceived costs of HRDD translate into a tangible financial loss for the company's owners. There was no systematic negative reaction from the market that harmed total shareholder return.

The "competitiveness cost" hypothesis was tested from multiple angles – core profitability, operational efficiency, liquidity, intangible value, future earnings expectations, and shareholder returns – and failed to find support on any front.

4

# Advancing the Business Case

With the primary financial objection to respecting human rights – the so-called "competitiveness cost" – now neutralised, the conversation can shift from a defensive cost-benefit analysis to a proactive strategic one. The question is no longer *"Can we afford to respect human rights?"* but rather *"How do we best leverage it for strategic advantage?"*

This shift allows us to advance the business case to evolve from a **foundational focus on risk management** to a **forward-looking strategy centred on value creation.** We propose "**sustainable competitiveness"** as the framework for this strategic vision. This approach extends the traditional model of competitiveness by integrating the principles of HRDD as core strategic drivers, rather than peripheral compliance exercises.

For decades, the traditional model of competitive advantage – defined by cost leadership[26] and differentiation[27] – was sufficient. Developed in an era of stable supply chains and a primary focus on shareholder value,[28] this model is no longer fit for purpose. Today's landscape of heightened stakeholder scrutiny,[29] translation of societal expectations into hard law,[30] and endemic supply chain fragility[31] demands an evolved framework. The traditional model[32] lacks a critical dimension: **resilience** to systemic, non-financial risks.[33]

26. The ability to produce and deliver goods or services at a lower cost than rivals.

27. The ability to offer unique and superior value – in terms of quality, service, or brand – that justifies a premium price.

28. Porter, M. E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. Free Press. See also Barney, J. (1991). "Firm Resources and Sustained Competitive Advantage". *Journal of Management*, 17(1), 99–120; Prahalad, C. K., and Hamel, G. (1990). "The Core Competence of the Corporation". *Harvard Business Review*.

29. See: King, B. G., and Soule, S. A. (2007). "Social Movements as Extra-Institutional Entrepreneurs: The Effect of Protests on Stock Price Returns". *Administrative Science Quarterly*, 52(3), 413-442.

30. See, for instance, Clean Clothes Campaign. (2019). *Figa's Triumph: The French Corporate Duty of Vigilance Law*.

31. Lund, S., Manyika, J., Woetzel, J., Barriball, E., and Krishnan, M. (2020). *Risk, Resilience, and Rebalancing in Global Value Chains*. McKinsey Global Institute.

32. Friedman, M. (1970, September 13). "The Social Responsibility of Business Is to Increase Its Profits". *The New York Times Magazine*; Porter, M. E. (1980). *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. Free Press.

33. Depperu, D. *Analyzing International Competitiveness at the Firm Level: Concepts and Measures*, https://dipartimenti.unicatt.it/dicdr-dipartimenti/dises-wp_azzurra_05_32.pdf. See also: Buckley, P. J., Pass, C. L., and Prescott, K. (1988). "Measures of International Competitiveness: A Critical Survey". *Journal of Marketing Management*, 4(2), 175-200. See also Kaplan, R. S., and Norton, D. P. (1992). "The Balanced Scorecard – Measures That Drive Performance". *Harvard Business Review*; Neely, A., Gregory, M., and

This concept of sustainable competitiveness builds on a well-established intellectual foundation from macroeconomic policy. Institutions such as the World Economic Forum have already concluded that there is no inherent trade-off between national competitiveness and sustainability.[34] Many of the world's most competitive economies are also top performers on sustainability metrics – suggesting the two are complementary, not contradictory.[35]

Yet, a persistent barrier prevents the widespread adoption of this model at the firm level: the deep-seated fear that investments required for robust HRDD represent a net financial cost. This apprehension that regulatory burdens will impose a competitiveness cost extends beyond corporate boardrooms to strategic policy debates – most notably, the ongoing discussion within the European Union. Both the European Commission's *Competitiveness Compass* and the *Draghi Report* on the future of European competitiveness[36] highlight how fears of high costs and regulatory burdens have become a brake on Europe's economic dynamism, while simultaneously calling for a new model where sustainable prosperity is the core driver of competitiveness.

Our empirical findings directly address this dilemma. They provide evidence that responsible business practices, including HRDD, can be pursued without violating fiduciary duties. This allows us to refine how **sustainable competitiveness** creates tangible value through four interconnected pillars.

## 4.1. Enhancing enterprise resilience and mitigating risk

Sustainable competitiveness is fundamentally about building the capacity to thrive in a volatile world. Neglecting human rights exposes businesses to considerable costs and risks,[37] including direct financial penalties from litigation and settlements, costly operational disruptions arising from workforce unrest or community conflicts, potential denial of government incentives or restricted market access, and substantial reputational damage that

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Platts, K. (1995). "Performance Measurement System Design: A Literature Review and Research Agenda". *International Journal of Operations and Production Management*, 15(4), 80-116; Barney, J. (1991). "Firm Resources and Sustained Competitive Advantage". *Journal of Management*, 17(1), 99–120; King, B. G., and Soule, S. A. (2007). "Social Movements as Extra-Institutional Entrepreneurs: The Effect of Protests on Stock Price Returns". *Administrative Science Quarterly*, 52(3), 413-442.

34. World Economic Forum. (2015). *The Global Competitiveness Report 2015-2016*. Geneva: World Economic Forum. P. 9; World Economic Forum. (2019). *The Global Competitiveness Report 2019*. Geneva: World Economic Forum. P. 23. Chapter 1.3 of this report is titled "Competitiveness and Sustainability: Twin Challenges?".

35. Ibid.

36. See European Commission, "A Competitiveness Compass for the EU", COM(2025) 30 final, p. 2; and Draghi, M., "The Future of European Competitiveness," Part A, p. 10 (September 2024).

37. Kappel, V., Schmidt, P. S., and Ziegler, A. (2009). "Human Rights Abuse and Corporate Stock Performance – An Event Study Analysis". *SSRN Electronic Journal*; Terman, R. (2023). *The Geopolitics of Shaming: When Human Rights pressure Works – And When It Backfires*. Princeton University Press. Princetone Studies in International History and Politics.

can erode consumer loyalty, investor confidence, and the ability to attract and retain top talent.[38]

Conversely, proactively embedding respect for human rights and implementing robust HRDD processes offer tangible benefits. Beyond mitigating downside risks, such practices can enhance brand equity; improve employee morale, productivity and retention; strengthen vital stakeholder relationships necessary for a stable operating environment (often referred to as the "social license to operate"); and improve access to capital as investors increasingly integrate environmental, social and governance factors, including human rights performance, into their decision-making.[39] In this view, respecting human rights becomes integral to prudent risk management and the creation of sustainable, long-term corporate value.

Our findings – the absence of a negative impact on valuation, combined with a modest but significant positive impact on profits – **support the view that HRDD functions, at minimum, as a financially neutral insurance policy against catastrophic operational and reputational risk**. It reframes due diligence from a reactive compliance exercise into a core component of enterprise risk management and business continuity. By embedding an ongoing, risk-based process to identify, prevent and mitigate adverse impacts – as mandated by frameworks such as the UN Guiding Principles and the Corporate Sustainability Due Diligence Directive – firms can anticipate and neutralise disruptions before they escalate into material financial costs.

Our findings also illuminate one of the most challenging and transformational aspects of human rights due diligence: **purchasing practices.** We recognise that many of the most meaningful investments – such as moving away from aggressive price negotiations, providing longer-term contracts to suppliers, and paying for certified materials – represent tangible upfront costs. For many businesses, this lies at the heart of the perceived trade-off.

However, our data suggests that companies undertaking these difficult changes are also the ones becoming more operationally efficient. The positive link to ROA can be interpreted as evidence that the long-term benefits of stable, collaborative, and resilient supply chains – characterised by higher quality, fewer disruptions, and greater supplier loyalty – ultimately outweigh the short-term margin pressures. This reframes improved purchasing practices not as a cost centre, but as a **strategic investment** in the long-term health and resilience of the entire value chain.

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38. The common understanding of the 'business case' for human rights in business management literature is typically linked to the following main benefits: (a) improved stakeholder relations; (b) improved employee recruitment, retention and motivation; (c) improved risk assessment and management; (d) reduced risk of consumer protests; (e) enhanced corporate reputation and brand image; (f) a more secure license to operate; (g) strengthened shareholder confidence; and (h) more sustainable business relationships with governments, business partners, trade unions, sub-contractors and suppliers (see https://www.ohchr.org/sites/default/files/Documents/Publications/GuideHRBusinessen.pdf).

39. Eccles, R. G., Ioannou, I., and Serafeim, G. (2014). "The Impact of Corporate Sustainability on Organizational Processes and Performance". *Management Science*, 60(11), 2835-2857; Whelan, T., and Fink, C. (2016). "The Comprehensive Business Case for Sustainability". *Harvard Business Review*.

## 4.2. Securing stakeholder trust and social legitimacy

A core pillar of sustainable competitiveness is the cultivation of stakeholder trust, which secures a company's social license to operate.[40] As our research shows, the market does not penalise firms for investing in human rights. Our null finding on investor valuation is a crucial result: while investors do not yet offer a consistent *premium* for superior human rights performance (a premium that will, it is reasonable to assume, manifest itself in the longer term), they also do not apply a *penalty*.

This creates a **strategic "safe harbour" for companies to invest in building stakeholder trust** to secure their long-term viability without facing immediate market punishment. Credible HRDD processes – including meaningful rightsholder and stakeholder engagement and access to remedy – are the primary mechanisms for building this trust. Strong community relations and more stable and resilient supply chains, built on shared values and a foundation of respect for human rights, lead to lower operational risks and a more stable environment for investment.[41] The conditional "agility advantage" we identified for smaller firms on ROA may be an early signal that markets are beginning to reward the tangible outcomes of this trust-building.

## 4.3. Driving innovation and long-term value creation

Sustainable competitiveness should not be mistaken for a short-term profit driver. It is a long-term strategy for value preservation and creation. As famously articulated by the Porter hypothesis,[42] the process of managing external impacts can be a powerful driver of internal innovation and resource efficiency. Proactively engaging in HRDD forces a company to gain deep, granular visibility of its value chains, often uncovering hidden inefficiencies and opportunities for improvement. For example, investigating working conditions can lead to supplier collaborations that improve productivity and quality.

Our findings suggest the critical first step in this journey is risk neutralisation. This alone justifies the investment. The subsequent steps – building resilience, securing trust, and fostering innovation – are what position a firm to outperform competitors over a much longer horizon than our study's five-year window could capture.

Sustainable competitiveness does not replace the traditional model; it integrates a critical new layer. It proposes that in the modern economy, a firm's ability to manage its societal

40. Porter, M. E., and Kramer, M. R. (2011). "Creating Shared Value". *Harvard Business Review*, 89(1/2), 62–77.

41. Davis, R., and Franks, D. M. (2014). "Costs of Company-Community Conflict in the Extractive Sector". Corporate Social Responsibility Initiative Report No. 66, Harvard Kennedy School.

42. Porter, M. E., and van der Linde, C. (1995). "Green and Competitive: Ending the Stalemate". *Harvard Business Review*, 73(5), 120-134.

and environmental impact is no longer separate from its core strategy but is **a foundational driver of its long-term competitive advantage.**[43]

## 4.4. The societal dividend: reframing the value equation

Our analysis indicates that improving human rights performance is financially neutral for firms and can, in fact, be associated with financial gains.

With this financial barrier removed, even those that place a premium on corporate competitiveness can now turn to the other side of the value equation: the broad societal benefits that flow from responsible corporate behaviour. As previously noted, these are not minor externalities. Ample evidence shows that these societal benefits – greater enjoyment of human rights and a stronger adherence to the rule of law – are foundational elements of a prosperous economy. They produce a more stable and skilled workforce, stronger rule of law, and greater social cohesion, collectively creating a more resilient and predictable operating environment for all businesses.[44]

As the Office of the High Commissioner of Human Rights has observed, human rights abuses are not just morally wrong but also detrimental to business, since "sustainable profits can only stem from stable societies".[45] Our findings therefore do more than just allow discussion of these benefits – they fundamentally change their calculus. These benefits are no longer "nice to have" while being weighed against an assumed corporate cost. Instead, they are revealed as substantial public goods generated by a financially sustainable corporate practice.

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43. Researchers commonly emphasise that true competitiveness must "create and preserve wealth without destroying future resources". In other words, a firm (or nation) can only sustain superior performance if it integrates environmental and social considerations into its value creation. For example, Cheba et al. (2020) define sustainable competitiveness as an entity's *capacity to generate wealth without depleting the resources needed for future prosperity (*Cheba, K., Bąk, I., and Szopik-Depczyńska, K. (2020). "Sustainable Competitiveness as a New Economic Category – Definition and Measurement Assessment". *Technological and Economic Development of Economy*, *26*(6), 1399-1421. This explicitly aligns with the idea of *proactively managing environmental impacts* so as not to undermine long-term competitiveness. Likewise, the concept binds economic performance with social responsibility: Balkytė and Tvaronavičienė (2010) note that *economic dynamism, social progress, sustainability, and competitiveness go hand-in-hand*, tying together the key economic, environmental and social elements (Balkytė, A., and Tvaronavičienė, M. (2010). "Perception of Competitiveness in the Context of Sustainable Development: Facets of 'Sustainable Competitiveness'". *Journal of Business Economics and Management*, *11*(2), 341-365.

44. Blanton, S. L., and Blanton, R. G. (2007). "What Attracts Foreign Investors? An Examination of Human Rights and Foreign Direct Investment". *The Journal of Politics*, *69*(1), 143–155; Layna Mosley and Saika Uno, "Racing to the Bottom or Climbing to the Top? Economic Globalization and Collective Labor Rights". (2007) 40 Comparative Political Studies 923.

45. OHCHR (2015). "Human rights abuses are not just morally wrong, they are also bad for business" Available at: https://www.ohchr.org/en/opinion-editorial/2015/06/human-rights-abuses-are-not-just-morally-wrong-they-are-also-bad-business.

# 5

# Conclusion

For decades, the fear of a "competitiveness cost" has served as a powerful brake on both corporate action and ambitious public policy in the field of business and human rights. This study was designed to empirically test this long-held assumption. Through a five-year longitudinal analysis of 235 large, global firms in high-risk sectors, we correlated changes in their human rights performance, as measured by the Corporate Human Rights Benchmark, with subsequent changes in their operational profitability and market valuation.

Our research makes two primary and interconnected contributions:

**First, we provide solid empirical evidence that stronger corporate human rights performance is associated with positive financial outcomes**, directly refuting **the competitiveness cost argument.** Our analysis found not just an absence of a financial penalty, but a **consistently positive-to-neutral association** with financial health. This is headlined by a **statistically significant positive link** between improved human rights practices and **enhanced asset efficiency (Return on Assets).** The evidence suggests that respecting human rights and maintaining competitiveness are not a dilemma, but are in fact compatible goals.

Our findings also offer a nuanced perspective on the business case for different types of companies. We observe that the positive impact on Return on Assets is strongest for smaller, more agile companies, suggesting they can more quickly translate operational improvements into financial efficiency. This is not the only source of variation. The business case also evolves with a company's maturity on human rights. The financial benefits are most significant for firms starting from the weakest baseline – the initial "laggards" – while for more advanced performers, further improvements are financially neutral rather than immediately profitable. These results suggest a shifting strategic imperative: for agile firms and laggards, there are clear, short-term financial gains to be made. For larger, more established leaders, the focus is less on immediate profit and more on foundational investments in long-term resilience and risk management, reinforcing a forward-looking view of human rights as a core component of sustainable competitiveness.

**Second, by neutralising this objection, our research clears the path for a new strategic framework: sustainable competitiveness.** We propose this as a forward-looking paradigm for leaders to adopt, repositioning human rights management from a defensive, cost-centric compliance exercise to a proactive, strategic imperative for building long-term resilience and trust. The evidence that human rights can be respected without a financial penalty

makes this approach not just an ethical ideal, but a rational and sound business strategy for the 21st Century.

The absence of a financial penalty is, in itself, a profound strategic finding. It fundamentally reframes the narrative that striving to respect human rights harms corporate competitiveness. With the fear of a trade-off removed, the conversation can shift from whether businesses can afford to act to how they can best integrate human rights into their core strategy for long-term value.

However, the cumulative effect of widespread responsible business conduct extends much further, contributing to a more stable and prosperous ecosystem for all. When companies uphold labour rights, they contribute to building a more skilled, secure and productive workforce.[46] When they respect community rights and engage in fair practices, they help strengthen the social fabric and the rule of law.[47] This fosters a more predictable and stable operating environment, reducing the risks of social conflict and political instability, which can disrupt markets and supply chains, and thereby create a powerful virtuous cycle.
A society with greater social cohesion and respect for rights is more economically resilient. It provides fertile ground where responsible (and sustainable) businesses are more likely to thrive in the long term.

These profound – albeit unquantified – societal contributions are therefore not just positive externalities; they are long-term investments in the very ecosystem that enables durable corporate success. For both business leaders and policymakers, these wider benefits should be the decisive factors that tip the scale in favour of taking human rights commitment seriously.

By empirically neutralising the competitiveness cost argument, our study strengthens the **business case for mandatory HRDD frameworks**, such as the European Union's Corporate Sustainability Due Diligence Directive or legislative initiatives on human rights due diligence laws in the Asia-Pacific region. It demonstrates that such regulation need not undermine competitiveness. Instead, it can foster long-term value by establishing a level playing field, operationalising the principles of sustainable competitiveness for all market actors.

The implications of these findings are profound for both business and society:

- **For business leaders:** The cost excuse for inaction is no longer tenable. Human rights due diligence should be viewed as a strategic investment in resilience, stakeholder trust, and long-term value creation. The question is no longer *if* a company can afford to respect human rights, but *how* it can best leverage its performance to build a sustainable competitive advantage.
- **For policymakers:** Our findings provide a strong evidence base to support mandatory human rights due diligence regulations — such as the European Union's CSDDD,

46. Blume, L., and Voigt, S. (2007). "The Economic Effects of Human Rights". *Kyklos*, *60*(4), 509-538. https://doi.org/10.1111/j.1467-6435.2007.00383.x

47. Cole, W. M. (2016). "The Effects of Human Rights on Economic Growth, 1965 to 2010". *Sociology of Development*, *2*(4), 375-412. https://doi.org/10.1525/sod.2016.2.4.375

national laws, or emerging legislation in regions such as the Asia-Pacific. The argument that such "floor-raising" measures will harm economic competitiveness is not supported by our data. Instead, policy can be confidently designed to foster a level playing field where responsible business conduct becomes the norm, generating significant societal dividends – from a more stable workforce to stronger rule of law – at no net cost to the economy.

- **For investors:** These findings broaden the space where responsibility and performance go hand in hand. Progress on human rights can be interpreted as a strong signal of effective leadership and proactive risk management – hallmarks of a well-run organisation. The evidence should therefore encourage investors to integrate respect for human rights more explicitly into capital allocation decisions, reinforcing the case for prioritising companies that demonstrate responsible business conduct and furthering initiatives such as UNDP's Sustainable Finance Hub.
- **For future research:** While this study addresses a critical gap, it also opens new avenues for inquiry. Future research could explore the causal mechanisms linking human rights to asset efficiency, examine these dynamics in smaller, private firms, and track the long-term financial performance of today's "major improvers" to see if a strategic advantage materialises over a longer horizon.

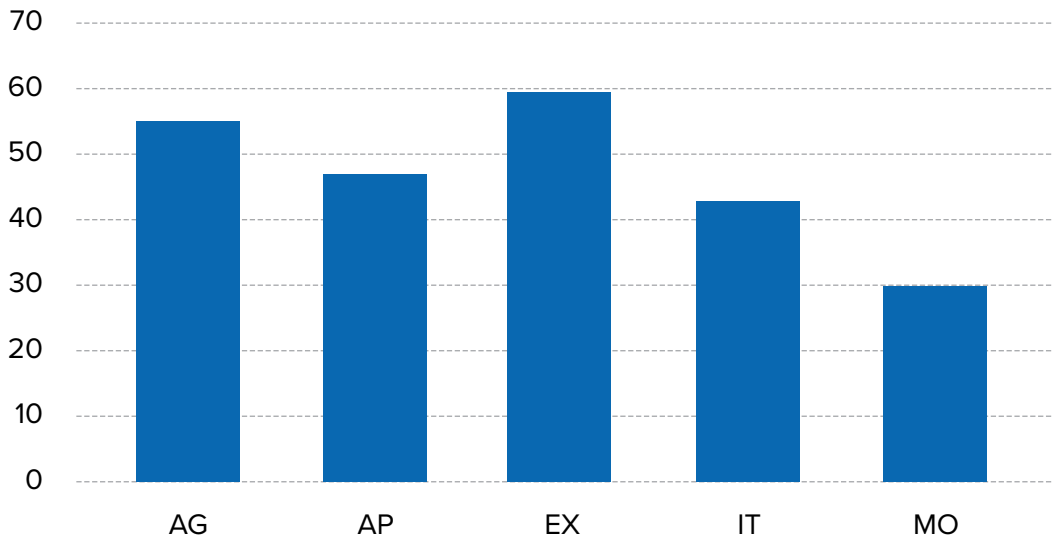
In conclusion, by demonstrating the financial viability of respecting human rights, this study fundamentally shifts the conversation. It provides the evidence needed to move from a paradigm of risk and cost to one of opportunity, resilience and shared value.

# 6

# Annexes

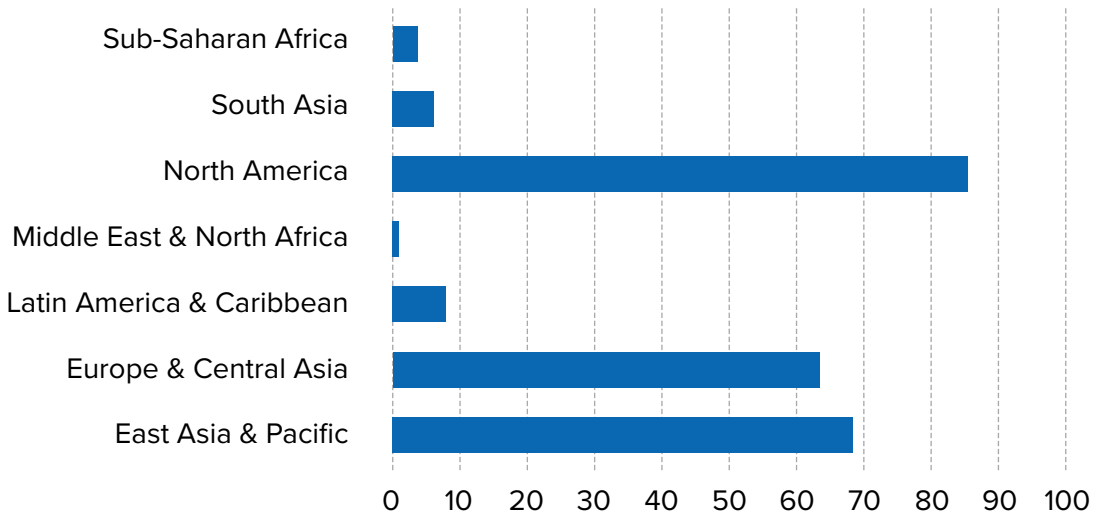
# Annex 1. Sample composition

## Figure 1.1. Sample composition of companies by sector (CHRB high-risk sectors)




**AP** = apparel; **AG** = food & agricultural products; **EX** = extractives; **IT** = ICT manufacturing; **MO** = automotive.

## Figure 1.2. Sample composition of companies by region (headquarters region)




**Note:** Region reflects the company's **headquarters region** in the dataset (e.g., East Asia & Pacific; Europe & Central Asia; Latin America & Caribbean; Middle East & North Africa; North America; South Asia; Sub-Saharan Africa).

# Annex 2. Detailed methodological note

## A.1. Analysis of operational profitability (change-on-change model)

To test the relationship between improvements in human rights performance and subsequent operational profitability, we employed a cross-sectional "change-on-change" regression analysis.

### A.1.1. Variable construction

- **Independent variable (change in human rights performance, ΔCHRB):**

  The Corporate Human Rights Benchmark (CHRB) score was calculated for each firm in the baseline period (average of 2018-2019 assessments) and the final period (2023 assessment). The score represents the percentage of 'met' elements relative to the total number of applicable elements. The primary independent variable – the change in CHRB score (ΔCHRB) – was calculated as the difference between the final period score and the baseline score. This change variable was then standardised to a z-score (mean = 0, SD = 1) to ensure comparability and facilitate interpretation of the regression coefficients.

- **Dependent variables (change in financial performance):**

  To measure the change in operational profitability, we constructed three dependent variables based on the change between a "before" period (average of 2017-2018) and a lagged "after" period (average of 2022-2023). This lagging structure mitigates the risk of reverse causality. The four metrics were:

  - Change in operating margin (ΔOM)
  - Change in return on assets (ΔROA)
  - Change in cash flow from operations/sales ratio (ΔCFO/sales)

  Each of these change variables was also standardised to a z-score. Robustness checks were performed using alternative time windows (e.g., 2017-2018 vs. 2022-2023).

- **Control variables:**

  To isolate the relationship of interest, all regressions controlled for key firm characteristics at the beginning of the period:

  - **Baseline firm size:** The natural logarithm of total assets in 2017, standardised to a z-score. This controls for scale effects.

- **Baseline financial leverage:** "Total debt" divided by "total assets" in 2017, standardised to a z-score. This controls for initial financial risk.
- **Industry and region fixed effects:** A series of dummy variables were included to account for time-invariant, unobserved heterogeneity across different sectors and geographical regions.

- **Variables for additional tests:**
  - **Major improver (dummy variable):** A binary variable coded as '1' for firms that achieved a ΔCHRB of 20 percentage points or more, and '0' otherwise. This was used to test for non-linear or threshold effects.
  - **Size interaction term:** The product of the standardised ΔCHRB and standardised baseline firm size. This was included to test whether the effect of human rights improvement is conditional on firm size.
  - **Initial performance quintiles:** Firms were segmented into four equal groups (quintiles) based on their initial 2017 CHRB score to examine correlations between starting position and subsequent performance.

### A.1.2. Metric construction for operational profitability

Change in human rights performance (ΔCHRB) was measured between a 2017-2018 baseline (2018-2019 CHRB data corresponds to human rights performance in 2017-2018) and 2022 (2023 CHRB data corresponds to human rights performance in 2022). For financial outcomes, we used the change between a stable baseline (average 2018-2019) and a lagged outcome period (average 2023-2024), reducing risk of reverse causality.

- **Standardisation:** All change variables were converted to standardised z-scores (mean = 0, SD = 1) for comparability.
- **Estimation:** We estimated a multivariate ordinary least squares (OLS) regression, controlling for baseline firm size, financial leverage, and industry and region-fixed effects.
- **Regression specification.** The core relationship was tested via the following specification, with the interaction term added in the second stage:

$$z_{\text{-}\Delta\text{Performance}_i} = \alpha + \beta_1 z_{\text{-}\Delta\text{HumanRights}_i} + \text{Controls}_i + \varepsilon_i$$

**The regression model can be read as follows:**

**Dependent variable:** $z(-\Delta Performance_i)$

the standardised change (z-score) in a firm's profitability metric (operating margin, ROA, or cash flow/sales).

**Key predictor:** $z(-\Delta HumanRights_i)$

the standardised change in human rights performance (ΔCHRB). This captures whether firms that improved their CHRB scores subsequently saw different financial outcomes.

$Controls_i$
firm size (log of total assets), leverage, industry and region fixed effects.

$\alpha$
the intercept, i.e., baseline expected change in profitability when all predictors are zero.

$\varepsilon_i$
the error term, capturing unobserved influences.

Because all variables are standardised (z-scores), the coefficient $\beta_1$ can be interpreted as:

*The expected change (in standard deviation units) in profitability when human rights performance improves by one standard deviation, holding other factors constant.*

In the second stage, we extended the model by adding **interaction terms** (e.g. ΔCHRB × firm size) to test whether the effect differs systematically for certain groups of firms (smaller vs. larger, different regions, etc.).

In practice:

- For **Operating Margin** and **Cash Flow/Sales**, $\beta_1 \approx 0$ meaning *no systematic relationship*.
- For **ROA**, $\beta_1 > 0$ and statistically significant, meaning *firms that improved human rights performance also improved efficiency in using assets*.

## A.2. Analysis of investor valuation (panel model)

To test whether investors assign a valuation premium or penalty based on human rights performance over time, we employed a two-way, fixed-effects panel regression model.

### A.2.1. Data and variable construction

- **Panel dataset:** A panel dataset was constructed covering the years 2017-2024, with one observation per firm-year.
- **Dependent variables (annual market valuation):**

Three standard indicators of market valuation were calculated annually:

1. Tobin's Q;
2. EV/EBITDA multiple;
3. Total shareholder return, calculated from the total return index (TRI).

- **Independent and control variables (annual):**
  - **Annual CHRB score:** The biannual CHRB scores were converted to an annual series using linear interpolation for the years between assessments. For years after the final assessment (2023 and 2024), the 2022 performance score was held constant.
  - **Annual controls:** Firm size (logarithm of total assets) and financial leverage (total debt/total assets) were calculated for each year.

### A.2.2. Econometric model

- **Model specification:** A two-way fixed-effects panel regression model was employed. This model is well-suited to control for time-invariant, unobserved firm characteristics (firm fixed effects), such as corporate culture or brand reputation, as well as common macroeconomic shocks affecting all firms in a given year (year fixed effects).
- **Lagging for identification:** To mitigate endogeneity and ensure that human rights performance precedes financial outcomes, all independent and control variables (CHRB score, size, leverage) were lagged by one year in the primary model specification.
- **Additional analyses:** Further robustness tests were conducted to confirm the stability of the findings. These included:
  - Using longer lags (two and three-year lags) for the CHRB score.
  - A cross-sectional analysis focused on the "major improvers" cohort (ΔCHRB ≥ 20 pp from 2017 to 2022) to test if substantial, resource-intensive improvements were penalised by the market.

## A.2.3. Metric construction for investor valuation

**Metric construction:** The analysis used annual data from 2017-2024. We interpolated missing years to create a continuous annual series.

**Standardisation and lagging.** All continuous variables were converted into standardised z-scores. Predictor variables (CHRB score, size, leverage) were lagged by one year to ensure they preceded valuation outcomes.

**Estimation.** We applied a **two-way, fixed-effects panel regression** to control for time-invariant, firm-specific effects (e.g., corporate culture) and firm-invariant, year-specific effects (e.g., macroeconomic shocks). To strengthen causal inference, the primary specification used a **one-year lag for all predictor variables**, including the human rights score and financial controls.

The model compares each company to *itself* at different points in time. This approach allows us to isolate the effect of *changes* in human rights performance, because all the stable, unique characteristics of a firm (such as brand and culture) are mathematically filtered out.

**The regression model:**

$$\text{Valuation}_{it}^{(z)} = \alpha_i + \tau_t + \beta \text{CHRB}_{i,t-1}^{(z)} + \gamma \text{Size}_{i,t-1}^{(z)} + \delta \text{Leverage}_{i,t-1}^{(z)} + \varepsilon_{it}$$

**The Regression Model can be read as follows:**

$\text{Valuation}_{it}^{(z)}$

the standardised (**z-score**) value for one market outcome for firm *i* in year *t* (we run separate models for **Tobin's Q**, **EV/EBITDA**, and **TSR**).

$\text{CHRB}_{i,t-1}^{(z)}$

(key predictor): last year's standardised CHRB score. The **one-year lag** ensures the predictor precedes the valuation outcome, aligning with an investor-reaction story.

$\text{Size}_{i,t-1}^{(z)}$ and $\text{Leverage}_{i,t-1}^{(z)}$

baseline financial controls, also **lagged one year**.

$\alpha_i$:
**firm fixed effect** (the firm's time-invariant fingerprint, removed by the estimator).

$\tau_t$:
**year fixed effect** (common year shocks).

$\varepsilon_{it}$:
idiosyncratic shock; we use **cluster-robust Standard Error by firm**.

**Standardisation.**
All continuous variables are converted to **z-scores** (subtract the sample mean, divide by the sample Standard Deviation). This makes coefficients directly comparable across outcomes and in "SD units."

**Interpreting β (the CHRB effect).**

Because variables are standardised and CHRB is lagged:

**β** = the **expected change (in SD units)** in the valuation metric this year when a firm's **CHRB last year increases by 1 SD**, holding size, leverage, and common shocks constant.

Here is an interpretation example you can use generically: *A one-SD improvement in CHRB is associated with a β-SD change in [Tobin's Q / EV/EBITDA / TSR] in the following year.*

**Why this design helps.**

**Firm Fixed Effects** remove time-invariant differences across companies (so we are not simply comparing different kinds of firms).

**Year Fixed Effects** remove economy-wide movements.

**Lagging** reduces reverse-timing concerns (valuation responding to prior human rights progress rather than the other way around).

**Data handling choices.**

**Annual horizon 2017–2024** for valuation.

**CHRB biannual → linear interpolation** to fill missing years (gives annual variation but can **attenuate** effects toward zero-good to mention in limitations).

**Outlier care** (recommended for market ratios): winsorise extreme **EV/EBITDA** and **TSR** tails; handle cases where **EBITDA ≤ 0** (exclude or flag) so the multiple is well-defined.

# Annex 3. Change-on-change ordinary least squares results (accounting-based indicators)

## A1. Outcome: ΔOM

| Variable | β | Std. Err. | p-value | 95% CI |
|---|---|---|---|---|
| ΔCHRB (std.) | 0.075 | 0.067 | 0.266 | [-0.057, 0.207] |
| AG | -0.031 | 0.207 | 0.882 | [-0.439, 0.378] |
| AP | -0.073 | 0.252 | 0.772 | [-0.570, 0.423] |
| IT | -0.095 | 0.213 | 0.657 | [-0.514, 0.325] |
| MO | 0.141 | 0.240 | 0.556 | [-0.332, 0.615] |
| East Asia & Pacific | -0.087 | 0.188 | 0.645 | [-0.456, 0.283] |
| Latin America & Caribbean | 0.196 | 0.409 | 0.633 | [-0.611, 1.002] |
| Middle East & North Africa | -1.649 | 1.030 | 0.111 | [-3.678, 0.381] |
| North America | 0.137 | 0.177 | 0.439 | [-0.211, 0.485] |
| South Asia | 0.284 | 0.450 | 0.528 | [-0.601, 1.170] |
| Sub-Saharan Africa | -0.070 | 0.537 | 0.896 | [-1.128, 0.987] |
| z_Leverage_2017 | -0.026 | 0.076 | 0.730 | [-0.175, 0.123] |
| z_Log_Assets_2017 | 0.089 | 0.090 | 0.324 | [-0.089, 0.267] |
| Model statistics | $R^2$=0.037; Adj. $R^2$=-0.020; N=235. | | | |

## A2. Outcome: ΔROA

| Variable | β | Std. Err. | p-value | 95% CI |
|---|---|---|---|---|
| ΔCHRB (std.) | 0.172 | 0.064 | 0.008 | [0.046, 0.298] |
| AG | -0.210 | 0.199 | 0.293 | [-0.603, 0.183] |
| AP | -0.228 | 0.242 | 0.347 | [-0.704, 0.248] |
| IT | 0.057 | 0.203 | 0.779 | [-0.344, 0.458] |
| MO | 0.152 | 0.233 | 0.514 | [-0.307, 0.612] |

| | | | | |
|---|---|---|---|---|
| East Asia & Pacific | -0.022 | 0.181 | 0.905 | [-0.378, 0.335] |
| Latin America & Caribbean | 0.348 | 0.390 | 0.374 | [-0.422, 1.117] |
| Middle East & North Africa | -1.979 | 0.980 | 0.045 | [-3.910, -0.048] |
| North America | 0.224 | 0.170 | 0.189 | [-0.111, 0.558] |
| South Asia | 0.592 | 0.429 | 0.170 | [-0.255, 1.438] |
| Sub-Saharan Africa | -0.286 | 0.511 | 0.577 | [-1.293, 0.722] |
| z_Leverage_2017 | -0.006 | 0.073 | 0.933 | [-0.150, 0.138] |
| z_Log_Assets_2017 | 0.163 | 0.086 | 0.061 | [-0.008, 0.333] |
| Model statistics | $R^2$=0.129; Adj. $R^2$=0.077; N=233. | | | |

## A3. Outcome: ΔCFO/sales

| Variable | β | Std. Err. | p-value | 95% CI |
|---|---|---|---|---|
| ΔCHRB (std.) | -0.041 | 0.067 | 0.542 | [-0.173, 0.091] |
| AG | 0.035 | 0.208 | 0.867 | [-0.375, 0.444] |
| AP | 0.083 | 0.253 | 0.742 | [-0.415, 0.581] |
| IT | -0.146 | 0.214 | 0.494 | [-0.567, 0.275] |
| MO | 0.275 | 0.241 | 0.255 | [-0.200, 0.749] |
| East Asia & Pacific | 0.096 | 0.188 | 0.610 | [-0.275, 0.467] |
| Latin America & Caribbean | 0.250 | 0.410 | 0.544 | [-0.559, 1.058] |
| Middle East & North Africa | -0.810 | 1.033 | 0.434 | [-2.844, 1.225] |
| North America | -0.089 | 0.177 | 0.618 | [-0.438, 0.261] |
| South Asia | -0.182 | 0.451 | 0.687 | [-1.070, 0.706] |
| Sub-Saharan Africa | -0.007 | 0.538 | 0.989 | [-1.067, 1.053] |
| z_Leverage_2017 | -0.033 | 0.076 | 0.667 | [-0.182, 0.117] |
| z_Log_Assets_2017 | -0.004 | 0.090 | 0.968 | [-0.182, 0.174] |
| Model statistics | $R^2$=0.032; Adj. $R^2$=-0.025; N=235. | | | |

## A4. Outcome: ΔROA — Interactions with initial CHRB quartiles (Q4 baseline)

| Variable | β | Std. Err. | p-value | 95% CI |
|---|---|---|---|---|
| ΔCHRB (std.) | 0.027 | 0.109 | 0.805 | [-0.188, 0.241] |
| ΔCHRB (std.) × Q1 | 0.471 | 0.196 | 0.017 | [0.085, 0.856] |
| ΔCHRB (std.) × Q2 | -0.019 | 0.184 | 0.918 | [-0.381, 0.343] |
| ΔCHRB (std.) × Q3 | 0.182 | 0.166 | 0.275 | [-0.146, 0.509] |
| AG | -0.240 | 0.196 | 0.222 | [-0.626, 0.146] |
| AP | -0.252 | 0.243 | 0.301 | [-0.731, 0.227] |
| IT | -0.001 | 0.200 | 0.997 | [-0.395, 0.393] |
| MO | 0.069 | 0.228 | 0.760 | [-0.379, 0.518] |
| z_Initial_CHRB | -0.104 | 0.075 | 0.164 | [-0.252, 0.043] |
| z_Leverage_2017 | 0.041 | 0.069 | 0.550 | [-0.095, 0.178] |
| z_Log_Assets_2017 | 0.166 | 0.088 | 0.061 | [-0.008, 0.340] |
| Model statistics | $R^2$=0.123; Adj. $R^2$=0.079; N=233. | | | |

# Annex 4. Two-way fixed effects results (market-based indicators)

## Tobin's Q (z)

| Variable | β | Std. Err. | p-value | 95% CI | t-stat |
|---|---|---|---|---|---|
| CHRB level (t–1) (std.) | 0.184 | 0.097 | 0.058 | [-0.006, 0.374] | 1.901 |
| Log Assets (t–1) | 0.144 | 0.406 | 0.723 | [-0.653, 0.941] | 0.354 |
| Leverage (t–1) | -0.088 | 0.045 | 0.053 | [-0.176, 0.001] | -1.938 |
| Model statistics | $R^2$w=0.009; | N=1600; Entities=234; T=7 | p(F)=0.006 | | |

## EV/EBITDA (z)

| Variable | β | Std. Err. | p-value | 95% CI | t-stat |
|---|---|---|---|---|---|
| CHRB level (t–1) (std.) | -0.087 | 0.072 | 0.228 | [-0.229, 0.055] | -1.205 |
| Log Assets (t–1) | -0.196 | 0.205 | 0.340 | [-0.599, 0.206] | -0.956 |
| Leverage (t–1) | 0.054 | 0.042 | 0.202 | [-0.029, 0.137] | 1.278 |
| Model statistics | $R^2$w=-0.000; | N=1600; Entities=234; T=7 | p(F)=0.638 | | |

## TSR (z)

| Variable | β | Std. Err. | p-value | 95% CI | t-stat |
|---|---|---|---|---|---|
| CHRB level (t–1) (std.) | 0.023 | 0.044 | 0.595 | [-0.062, 0.109] | 0.532 |
| Log Assets (t–1) | 0.232 | 0.157 | 0.139 | [-0.076, 0.540] | 1.480 |
| Leverage (t–1) | -0.023 | 0.045 | 0.610 | [-0.111, 0.065] | -0.510 |
| Model statistics | $R^2$w=-0.001; | N=1357; Entities=233; T=6 | p(F)=0.502 | | |

**Note**: All coefficients from Fixed Effects models are reported (standardised variables). Model statistics include the within $R^2$ ($R^2$w), number of observations (N), entities, time periods, and the p-value of the joint F-test. Significance is judged by p-values; standard errors are clustered at the firm level.