



The impact of compensation on company performance

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Abstract

This study seeks to understand whether it is possible to assess the relationship established between employee compensation and the respective company performance. Compensation is viewed in aggregate terms between fixed and variable, but a distinction is made regarding the type of position held by the employee. To this extent, the analysis is subdivided between the relationship between results and the compensation of executive and non-executive employees.

The existing literature in this area ranges from analyses of the relationship between CEO compensation and company performance to studies that analyze the implications of compensation on company productivity and results. In addition, there are also authors who focus on the concept of corporate social impact and how it is established in the fields of compensation and productivity. This study seeks to establish a more meaningful relationship between compensation and results, in line with those mentioned above.

The study was developed using data collected through Refinitiv Workspace for the period from 2015 to 2024, which was then processed in Stata software using the *xtreg* function.

The variable *adj_ebitda_margin*, which we seek to explain, is related to variables such as market capitalization, asset size, sector of activity, and the compensation actually paid to workers. The main conclusion of this study is that there is a positive correlation between the proximity of executive and non-executive compensation and company performance. From this, it can be inferred that companies can be economically rational and, at the same time, efficient in the redistribution of their resources.

Keywords: Employee compensation, Executive compensation, Non-executive compensation, Firm performance, EBITDA margin, Pay inequality, Compensation ratio, Wealth redistribution, Corporate Social Impact, Productivity, Corporate governance.

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Sumário

Este estudo procura perceber se é possível aferir uma relação entre a compensação dos trabalhadores e os resultados das respetivas empresas. A compensação é vista de forma agregada entre fixa e variável, mas é feita a distinção quanto ao tipo de posição do trabalhador. Nesta medida, a análise subdivide-se entre a relação dos resultados com a compensação dos trabalhadores executivos e não executivos.

A literatura existente na área prolonga-se desde a análise à relação entre a compensação dos CEO's e a performance das empresas, até aos estudos que analisam as implicações da compensação na produtividade e resultados das empresas. Além disto, há também autores que se dedicam ao conceito de *corporate social impact* e de como ele se estabelece nos campos da compensação e da produtividade. Este estudo procura estabelecer uma relação mais expressiva, em linha com as mencionadas, entre compensação e resultados.

O estudo foi desenvolvido com recurso a uma recolha de dados, através do Refinitiv Workspace, para o período de 2015 a 2024, posteriormente trabalhados no software Stata, utilizando a função *xtreg*.

A variável *adj_ebitda_margin*, que procuramos explicar, é relacionada com variáveis como a capitalização em bolsa, o tamanho do ativo, o setor de atividade e a compensação efetivamente paga aos trabalhadores. A principal conclusão deste estudo é de que existe correlação positiva entre a proximidade dos salários de executivos e não executivos com a performance das empresas. Daqui se pode inferir que as empresas podem ser economicamente racionais e, em simultâneo, eficientes na redistribuição dos seus recursos.

Palavras-chave: Gastos com pessoal, Remuneração executiva, Remuneração não-executiva, Desempenho, Margem EBITDA, Desigualdade salarial, Rácio de compensação, Redistribuição de riqueza, Impacto social corporativo, Produtividade, Governance.

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1. Introduction

Wages are one of the main elements of economic relationships, having a broad spectrum of variables dependent on their level, fluctuation and structure. Society depends almost intrinsically on the quality of the relationships work establishes, directly influencing our perception of social justice. To this extent, it academically makes sense to try and understand the impacts of the relationship provided by work and the wages that result from it, as well as the consequences of the assignment of these wages. If, on the one hand, wages depend largely on finding an equilibrium price for a given supply and demand on the labour market, the allocation of this remuneration, on the other hand, also involves the expectation, on the part of those who allocate it, that it will enable them to develop a profitable economic activity, whose gains exceed the costs incurred with the business structure. It therefore seems that the interests of the workforce do not intersect with those who hold shares in companies or are actively involved in their management, but the truth is that they are co-dependent. The company, as an organisation and entity, cannot exist without these various dimensions of its planning, from the more strategic and long-term, to the more pragmatic and short-term. Hence, their behaviour cannot be studied assuming that they are independent variables. On the contrary, we must understand whether there is a causal link between the redistribution of results and the increase in company performance. We do not intend to argue that companies, or those who control them, are obliged or committed to maximising profits, but for the purposes of analysing the redistribution of wealth by private entities, it is more prudent to assume that companies have other priorities that, for example, a state does not have. In doing so, we do not want to define moral relationships or ethical standards, but rather to be pragmatic in our analysis of the circumstances.

By understanding wages, and the entire labour market, as a dynamic relationship between its participants – a true market relation – it is important to understand the motivations of those who operate within it. It is a fact that no company decides on its wage structure without considering the economic conditions it must maintain to support it. However, it is necessary to understand how this wage structure impacts the company's economic capacity, not in the short term, but in the medium/long term, where results can be positively influenced by a workforce that considers its remuneration to be fair and appropriate to their duties and standard of living. This hypothesis, however, lacks scientific support, which is why we propose to analyse the relationship between company performance, i.e. results and profitability, and relate it to any changes made to the compensation structure. In addition, it would be defining of company performance if the

temporal relationship between the allocation of remuneration – more specifically, its increase – and any positive results that the company will obtain from it were to be understood. On the other hand, it is possible that the relationship is only established in the opposite direction, whereby companies will only review their compensation structure after positive results have been recorded. In this case, if the relationship between the company and its employees remains reciprocal and positive, it can be stated that a private player, motivated primarily by individual gain, is also able to be efficient in redistributing wealth, sharing the gains recorded in the course of its operational activity through fixed or variable compensation.

It is important to define the concept of efficient redistribution of wealth, as in this context it differs from its traditional interpretation. The general understanding leads to an idea of wealth redistribution that is closely associated with the ability of a state, through the aforementioned redistribution, of achieving greater social welfare than that which existed at the outset. In addition, it also includes the idea that redistribution can be achieved through investment in public services which, by effectively serving the population, will serve to increase social welfare and improve social mobility. In our hypothesis, looking at companies, the idea of well-being resulting from the redistribution of results can only be understood by maintaining an efficient redistribution over time, associated with continuous positive results. This may prove that the redistribution of results is sufficient to keep the workforce concerned about the company's performance, because it is possible to maintain it continuously while increasing results.

The starting point of this analysis is to verify if there is a positive correlation between employee compensation and company performance. Although possibly establishing a very clear connection, we must then move forward, as this does not allow us to understand what – if any –, is the causal effect between these two variables, and what is their behaviour when looked at having into consideration the type of employee in question – is it an executive or a non-executive? There may be no correlation between employee compensation and productivity, leading for further questioning regarding what the causal effect of company performance is, and what leads to it. There are two main hypotheses to be tested on this subject – positive company performance is a consequence of increases in senior executives' compensation; or positive company performance is a consequence of increases in non-senior employee compensation.

In conclusion, while identifying whether a direct link between employee compensation and company performance exists is a crucial first analytical step, clarifying the nature and directionality of this relationship requires another look taken at the same data. Correlation alone cannot establish cause, and the relationship may be influenced by several confounding variables, including industry, firm size, or external shocks (as in time effects). Indeed, evidence from recent research suggests that the correlation between compensation and company performance can be weak or inconsistent, often reflecting limitations in compensation policy design or contextual factors beyond managerial control. Therefore, disentangling whether compensation drives company success, or is simply a reward for past performance, hinges on robust methodological approaches and consideration of temporal dynamics. Ultimately, only by rigorously testing both hypotheses – compensation as an eventual cause of company performance –, can firms and researchers yield actionable insights into optimizing pay structures for sustained organizational growth.

2. Literature Review

Firm performance is a multifaceted construct encompassing various financial and operational metrics that collectively reflect the success and sustainability of an organization in achieving its strategic objectives, all while being in deep sync with good management practices (Bloom & Van Reenen, 2007). Financial performance indicators, on the other hand, traditionally include profitability ratios such as return on assets (ROA), return on equity (ROE), net income, and stock market valuation measures such as share price appreciation and market capitalization. These metrics convey how effectively a firm uses its resources to generate shareholder value and maintain competitive advantage in the marketplace. So as to ensure it would be possible to maintain the analysis consistent through all the firms under review, EBITDA was the performance indicator selected for this study, although adapted along the way to account for different effects that were felt as the data set was constructed. Being generally understood by researchers as a good indicator for firm performance, it allows us to draw solid conclusions on global company performance across sectors and firm sizes.

However, performance extends beyond mere financial measurements. Contemporary perspectives emphasize operational metrics, including productivity, innovation, customer satisfaction, and employee engagement, all critical drivers of corporate longevity and growth, as Suherman, Rahmawati and Buchdadi (2011) highlight that in emerging economies such as Indonesia, factors like corporate governance and human capital play a pivotal role in shaping firm outcomes, implying that performance evaluation requires a comprehensive approach integrating both quantitative outcomes and qualitative organizational aspects. Although understanding there is truth to a broader view of company performance, Suherman, Rahmawati and Buchdadi's (2011) clarify in their analysis that this understanding is dependent on the existence of these differentiated governance bodies, whose existence is yet to be homogenous. Hence, in the context of a multisectoral analysis such as ours, we must choose a transversal indicator of company performance such as yearly EBITDA, even if adapted to the specific circumstances of this analysis, as we will later describe.

Performance evaluation must consider the alignment between managerial actions and shareholder interests, which is a core argument in principal-agent theory. Edmans, Gabaix, & Jenter (2017), underscore that performance metrics should incentivize executives to make decisions that maximize long-term firm value, avoiding short-termism or rent extraction, trying to align productivity with good performance. The authors correctly understand that the theme of performance, when directly compared with executive compensation, has been broadly

analysed, defining shareholder value maximization, rent extraction, and institutional factors as three reasoning perspectives that can explain what drives executive's pay.

If not directly, nor obviously, affected by performance, productivity could be the defining element of broad compensation policies. Productivity relates directly to how efficiently a firm converts inputs into outputs, as it is defined broadly as output per unit of input, and it is fundamental to a firm's operational excellence and ability to compete effectively. At the micro level, productivity encompasses individual employee effort, skills utilization, and process efficiencies, which are influenced by managerial decisions and workplace policies, including compensation structures that co-depend on managerial decisions and company productivity.

For us to deeply understand productivity, and, in some way, firm performance, we must then understand the underlying mechanics of fixed pay. Engbom and Moser (2023) present detailed evidence on the micro-level dynamics of pay and productivity, where they argue that fixed pay forms part of the compensation valued by employees that is directly linked with increases in productivity. Furthermore, one can infer that stable compensation structures foster knowledge accumulation and skill development, positively impacting productivity over time and, conversely, volatile or poorly designed pay schemes can introduce uncertainty, potentially dampening employee motivation. From here it may be clear that there is an interesting case to be made when looking at the relationship established between variable pay and company performance, but it may require the development of an indicator that relates each employee aversion to uncertainty (i.e. average compensation), to the level of variable compensation received, only then to further relate it to company performance.

Murphy (1998) also stresses the role of incentives in boosting executive productivity by aligning pay with performance, where incentives are more easily quantifiable, thus allowing for more obvious correlation with firm performance and uncovering that, concerning executive compensation practices, firm size, industry and country allow for very different practices, with pay levels and pay-performance sensitivities notably higher in the US and in larger firms. Murphy's paper observes an increase in CEO pay levels combined with an increase in its sensitivity to firm performance during the 1990s, believed to be due to the generalized use of stock option grants. On the other hand, Engbom and Moser's (2023) empirical work reveals that fixed pay tends to increase incrementally, being also a permanent change made to the worker's wage due to institutional factors such as wage norms, labour market regulations, and inflation

adjustment mechanisms. Unlike bonus payments or equity incentives, which are sensitive to firm profits or stock price fluctuations, fixed pay grows positively steady.

Although analysing only at managerial level, Bertrand and Mullainathan (2001) find that CEO fixed salaries generally increase with tenure but show minimal correlation with firm stock returns, suggesting fixed pay acts more like a bureaucratic base wage than a vehicle to incentivize exceptional performance for workers whose pay is already at a very high level (usual in managerial positions). Though primarily focused on upper management, Bertrand and Mullainathan (2001), provide foundational insights into how company performance enhances or erodes internal pay equity. Using data from oil prices, exchange rates, and industry performance, the authors found that CEOs are paid as much for luck as for actual performance, in the sense that good performance can be registered as a result of good or lucky decisions, but this distinction is not taken into consideration when compensation is attributed. Their findings show that CEO pay often includes compensation for luck, if we accept that luck can be defined as performance factors beyond executives' control, which occur especially in poorly governed firms. Firms with stronger governance structures reduce this pay-for-luck effect, suggesting that CEOs in weakly monitored organizations may disproportionately capture firm gains, potentially increasing internal pay disparities.

Murphy and Zabojnik (2004) offer valuable insight into CEO compensation trends, emphasizing that rising pay reflects intensified competition for general managerial talent rather than rent extraction, as their analysis highlights a shift towards external hiring and the increasing importance of transferable managerial skills across firms. This market-based perspective contrasts with traditional views focused on firm-specific knowledge, suggesting compensation trends are shaped by broader labour market dynamics rather than isolated corporate governance failures, meaning companies attribute a growing importance of general managerial skills over firm-specific knowledge.

Considering all the above, how come that companies attribute value to executive decisions in the same way either if they are skill or mere luck, and still participate in the labour market in such a way that look for CEOs with market-based perspectives rather than firm or sector specific knowledge? One must infer that market-based perspectives are more effective in achieving good performance, hence companies are willing to risk remunerating lucky decisions if that means performance is had or maintained.

Still looking at executive compensation, Bebchuk, Fried, and Walker (2002) highlight agency problems when managerial power leads to disconnections between fixed pay and performance, underscoring risks of excessive fixed compensation divorced from firm results. This article critically examines executive compensation through the lens of managerial power and rent extraction, contrasting the optimal contracting theory, which posits compensation aligns managers' actions with shareholder interests and with the managerial power approach, where executives influence their pay beyond optimal levels. The authors argue that boards are often sympathetic to management and the challenges they face, leading to inefficient pay structures that may reduce shareholder value. Empirical evidence supports that managerial power significantly shapes compensation, highlighting the need for governance reforms to curb rent extraction. However, going back to Edmans, Gabaix, and Jenter (2017), this article suggests that well-designed compensation reflects a balance of fixed and performance-sensitive pay, which together optimize firm performance, not matching the view of Bebchuk, Fried, and Walker (2002) when they identify the possibility of poorly designed compensation depending not on company performance, but on specific empathic understandings had between shareholders and management.

On the existence of agency problems, Core, Holthausen, and Larcker (1999) provide a reasoning for understanding the relationship between corporate governance and CEO compensation, with a particular focus on the role accounting metrics play as defining elements of company strategy. Their article uses accounting data such as return on assets (ROA) and market-to-book ratios as main determinants of CEO pay, enabling an analysis of how objective firm performance guides compensation by design. Their research demonstrates that, while economic and accounting performance measures statistically explain a portion of compensation variation, governance structures (meaning board composition or ownership concentration) remain critically important, also showing that when compensation is driven less by accounting-based performance and more by weak board oversight, it often signals higher agency costs and predicts poorer subsequent accounting performance.

Synthesizing these perspectives, research consistently highlights company performance as a multidimensional construct, measured by financial indicators like net income, ROA, and market valuation, as well as operational factors such as productivity, innovation, and employee engagement (Bloom & Van Reenen, 2007, and Suherman et al., 2011). Aligning executive incentives with shareholder interests is critical to long-term value creation, as emphasized in principal-agent theory (Edmans et al., 2017), having to be articulated with efficient governance

bodies (Core, Holthausen, and Larcker, 1999). Stable fixed pay schemes improve productivity and skill development, while variable pay links compensation more directly with firm outcomes (Engbom & Moser, 2023). Studies reveal that CEO pay sometimes reflects luck, particularly in poorly governed firms where executives may capture disproportionate rewards, impacting internal pay equity (Bertrand & Mullainathan, 2001), but, on the other hand, rising CEO compensation is also driven by competitive labour markets favouring managers with transferable skills rather than firm-specific knowledge, fostering external hiring (Murphy & Zabojnik, 2004). Managerial power and rent extraction remain concerns, prompting calls for governance reforms to ensure compensation aligns with genuine performance (Bebchuk, L., Fried, J., & Walker, D., 2002).

Having generally understood the thinking of the practical relationship established between fixed pay and company performance, we must now try and understand what the end product of hypothetical good performance is. Existent research is inclined to state that fixed pay has impact on company performance – a hypothesis we aim at testing later along this article –, but does it impact society with more than mere performance? The current hypothesis, even if not to be verified, makes the case for a follow up question – are companies efficient in redistributing results to their current employees? At the core of this field lies the conceptualization of social welfare within the corporate context. Hunt Allcott et al. (2025) synthesized this framework in their economic view of corporate social impact, presenting the need for corporate bodies to act as vehicles to ensure that corporate objectives go beyond generating economic value. This leads them to highlight the importance of corporate social impact as a key definition so as to understand what new goals companies must have: “corporate social impact framework can be directly useful for firms that want to measure their impact and for investors, workers, and consumers who want to associate their investments with high-impact firms”. This approach nuances traditional profit-centric firm assessments by integrating welfare economics principles and emphasizing the broader ramifications of corporate actions.

However, measuring social welfare contributions remains methodologically challenging, as Garcia-Castro, Ariño, and Canela (2010) highlight endogeneity concerns in empirical research, where causality between social and financial performance can be bidirectional or confounded by unobserved factors. Their panel data underscores the importance of accounting for these econometric issues when drawing conclusions about the social-financial performance link, calling for more sophisticated models and data transparency in future studies. Garcia-Castro et al. (2010) work also has policy significance by demonstrating that the relationship between

social and financial performance is questionable, leading us to understand that well-governed firms are needed to convert social efforts into performance advantages. These insights align with recent trends in ESG (Environmental, Social, and Governance) investing and regulatory emphasis on sustainability disclosures in the financial markets, reflecting a paradigm shift towards stakeholder-inclusive corporate valuation.

Other literature offers a spectrum of findings on the association between social performance and financial outcomes. Margolis and Walsh (2003) conducted an analysis revealing a positive but modest correlation between corporate social initiatives and financial metrics. They argue against the simplistic view that social welfare engagement negatively affects shareholder value, suggesting instead that, when effectively managed, social responsibility can complement financial success. It is, however, important to understand if social responsibility can merely complement good financial performance, if any kind of redistribution can never be properly executed if done by a private player, whose main responsibility is to its shareholders and their value creation expectations. Their review of 127 studies confirms a positive but modest association between corporate social performance and corporate financial performance, challenging simplistic claims that social responsibility erodes shareholder value.

More recent contributions extend this topic into specific domains, expanding our understanding of social welfare into a performance-oriented approach that can both increase financial results and improve social welfare in its general meaning. Wang and Choi (2010) provide a more refined analysis by examining the role of corporate governance, industry context, and the nature of social activities, finding that the strength and quality of social engagement are crucial determinants of whether firms realize financial gains or merely incur costs.

Suherman, Rahmawati and Buchdadi's (2011) examination of Indonesian firms, though more focused on corporate governance and executive compensation, and geographically distant from the American reality we aim at analyzing, indirectly complements the social welfare dialogue by illustrating how governance mechanisms amplify firm social and financial outcomes. Their findings imply that sector-specific dynamics may mediate the welfare-performance link, illustrating that several types of links can be established across industries and geographies. These nuances, although geographically very distant, resonate with Wang and Choi's insights that social performance effects vary with firm size, stakeholder expectations, and local institutional frameworks. Thus, a one-size-fits-all model is inadequate for capturing the

complex interactions between firm behavior and social welfare across diverse economic landscapes.

Bringing welfare economics into corporate finance, Hunt Allcott et al. (2025) extended the discussion by quantifying how firms' policies influence social costs and benefits beyond immediate stakeholders, as their economic model highlights scenarios where firms may underinvest in social welfare due to misaligned incentives, proposing governance and regulatory frameworks to correct these market failures. This theoretical underpinning complements the findings of Margolis and Walsh (2003) by framing social responsibility not just as managerial discretion but as a matter of social efficiency.

Collectively, these contributions highlight a complex, interdependent relationship between company performance and social welfare, while strong evidence supports the notion that socially responsible behavior can enhance financial performance, the extent and mechanisms of this relationship depend critically on governance quality, firm strategy, industry context, and measurement quality. Future research must continue developing robust methodologies to disentangle causality and incorporate broader welfare metrics beyond corporate earnings, given that scholars are increasingly called to bridge firm-level dynamics with societal outcomes, offering policy guidance, best corporate practices, and investment frameworks that promote sustainable and inclusive growth.

There is a recent trend growing, not only but particularly, in the academic and policy world that focuses on understanding how corporate success translates into tangible benefits for the broader workforce. The traditional narrative of shareholder primacy is increasingly scrutinized, as new evidence suggests that the internal distribution of economic activity has significant implications not only for inequality but also for organizational productivity, social cohesion, and even financial market performance. Pan et al. (2020) in the *Journal of Finance* provided an analysis of how equity markets view the allocation of surplus within firms, by examining the market response to newly mandated CEO-to-worker pay ratio disclosures in the United States and their study found that firms with greater internal pay disparity experienced significantly lower abnormal returns when these ratios became public. This suggests that investors are sensitive to how company wealth is shared among employees, interpreting high inequality as a risk to firm value. Not only does this underscore a reputational dimension to compensation policy, but it also highlights wealth redistribution's role as a factor in market valuation.

Empirical work from France by Nimier-David, Sraer, and Thesmar (2025) delves into the impacts of mandatory profit-sharing on both firms and employees. This study reveals that profit-sharing does indeed shift a larger portion of value added towards employees, often at the expense of shareholders or through reduced tax liabilities, and they find that long-term company productivity and aggregate wage bills both increase with profit-sharing. These results provide strong evidence that redistributive policies in the context of strong company performance need not undermine, and may even support, firm efficiency and sustainable wage growth, suggesting that redistributive corporate policies, when implemented alongside robust firm performance, can enhance operational efficiency while enhancing wage growth, challenging fears that such redistribution undermines firm competitiveness

The question of structural change in ownership is central to the analysis by Dudley and Rouen (2021). Through a review of U.S.-based employee ownership models, the authors project significant reductions in national wealth concentration if a large portion of businesses moved to employee ownership. Evidence further suggests that high-performing, employee-owned firms can be both highly productive and more equitable in their internal wealth sharing, as their findings demonstrate that mechanisms linking performance and employee ownership are key levers for addressing both firm-level incentives and broader socioeconomic inequality. At the macroeconomic and evolutionary level, Lima and da Silveira (2020) investigate the longer-term dynamics of wage and profit distribution strategies. Their work shows that profit-sharing firms can achieve higher productivity over time, not simply through direct redistribution but via increased morale and retention, which can reinforce firm performance. With company success, the ability and inclination to redistribute value to employees becomes both a competitive and ethical advantage in the evolving landscape of employment relations, emphasizing the evolving nature of employment relations where profit-sharing aligns business success with social welfare gains.

Altogether, these studies make clear that company performance and internal wealth redistribution are deeply interconnected, considering high-performing firms possess the resources to implement meaningful redistribution through profit-sharing, employee ownership, or equitable pay structures. In turn, those are the firms that can reinforce organizational cohesion, productivity, and even firm value as assessed by markets. Ignoring these mechanisms can erode trust and damage morale, which will ultimately reflect negatively in both company performance and share price, given that markets, employees, and policymakers are increasingly attentive to such dynamics, and the evidence is mounting that wealth redistribution within firms

is not simply an ethical matter, but a strategic and financial imperative that aligns with the interests of multiple intervenient.

3. Objective and methodology

This empirical analysis was conducted using a panel data regression model, estimated with the *xtreg* command in Stata and data was sourced from Refinitiv Workspace to encompass the period from 2015 to 2024. The panel dataset was structured by declaring the firm identifier and year as the cross-sectional and time dimensions, respectively, through the use of the *xtset* command in Stata. The main model estimated was a fixed effects specification, which controls for unobserved, time-invariant heterogeneity across firms, taking the general form:

$$y_{it} = \alpha + \beta x_{it} + \gamma Z_{it} + \mu_i + \varepsilon_{it}$$

where y_{it} represents the dependent variable for firm i at year t , x_{it} denotes the primary independent variable(s) of interest, Z_{it} includes control variables, μ_i captures the unobserved firm-specific effects, and ε_{it} is the idiosyncratic error term.

Missing or incomplete observations for key variables were excluded to ensure data consistency and estimation was performed with robust standard errors clustered at the firm level to account for potential heteroskedasticity and within-firm correlation. To enhance replicability, all analytical steps were implemented using traditional Stata scripts. The choice of a fixed effects model is justified by the panel data structure, and the objective is to control for omitted variable bias linked to stable, unobserved characteristics of each firm.

This study aims at understanding whether there are links between a company's performance and its financial results, while also seeking to understand who the main beneficiaries of the various strategies are. On the one hand, companies may choose to better remunerate their senior/executive positions, as they are the ones who define the company's overall strategy, thus exercising positions with a degree of complexity that goes beyond mere execution. However, as they are fewer in number and receive in a different proportion of remuneration than non-executive positions, executive remuneration may exhibit different types of fractions from company results. In the same vein, non-executive employees, who execute the strategy defined by management, are seen by companies as having a higher level of substitutability and thus are remunerated in a proportion more in line with the size of the company and their individual contributions. We, therefore, try to understand the patterns in the definition of their fixed compensation, especially when analyzed against company results.

What we also aim to grasp is which of these two types of employees has a remuneration that correlates most with results. Furthermore, we seek to test the hypothesis that companies, as private and individual agents concerned only with generating wealth for shareholders, can be

efficient agents of wealth redistribution. In any case, we do not intend to broaden the scope of this discussion to the definition of efficient wealth redistribution, so we limit ourselves to understanding that efficiency manifests itself when results are continuously and positively influenced by their distribution to those who participate least in them. Non-executive workers, whose average remuneration is much lower than that of executives, can be seen as the beneficiaries of the redistribution in question. In this sense, we attempt to demonstrate whether management is efficient in the redistribution of wealth and whether this redistribution varies according to company results.

In order to obtain a significant sample, we chose to observe the constituents of the American S&P 500 index over the last ten years, attempting to ensure that with such a broad time horizon we could capture any temporal effects that we will, in fact, discuss later. In addition, this index ensures that we are looking at companies whose economic viability is observed by the market, all of which are public and required to disclose their accounts on a quarterly basis. This way, we tried to ensure that our analysis does not include outliers of companies where economic viability was not a concern, as this would call into question the very narrow concept of wealth redistribution that we proposed, given that these would be companies where redistribution could be a means of camouflaging poor operational performance.

Our analysis, carried out using Refinitiv Workspace, begins by looking at the name and sector of each company, followed by its market cap. We also extracted the total EBITDA, as well as total revenues and total assets, which allowed us to formulate a regression that took into account the scale effect of companies, where their size could stratify the type of relationship they have with their various employees, both executive and non-executive. Subsequently, moving on to the data that attempts to describe the type of compensation, we extracted the total compensation paid to employees and the total compensation paid to senior executives, which enabled us to estimate the total non-senior executive compensation. The total compensation element was the most problematic, as it was not consistently available for all years, restricting a database that originally had 5,025 entries to 954. In any case, we then proceeded to extract the total number of members of the board of directors of each company, as a proxy for the total number of senior executives present in each company for each respective year. Similarly, we chose to extract the total number of employees in each company, per year, in order to obtain a proxy for the total number of non-senior executive employees. Both proxies mentioned above also had some missing values, which ultimately restricted the final data set to 692 entries. We were, however,

able to create a new indicator for both executives and non-executives, which aims at materializing the average compensation, per company, per year, for each type of employee.

Before moving on to detailing the adjustment made to the traditional EBITDA margin formula, some important information is needed to characterize both the data sets used. The most represented sectors in the initial database were “Software & IT Services” (10.2%), “Residential & Commercial REITs” (5.8%) and “Machinery, Tools, Heavy Vehicles, Trains & Ships” (5.6%). Similarly, after analyzing the size of each company according to its market cap, the sample was mainly populated with Large-Caps (78.2%), followed by Mid-Caps (12.5%) and Mega-Caps (5.6%). Regarding asset size, the initial data set had 80% of the information limited to \$46.4 billion, with the maximum value at \$3.9 trillion, a significant increase from the previous quintiles growth rate of about 100% to then, in the last quintile, close to 44 times the 4th quintile.

The same analysis was conducted for the second dataset, which is that of the regression then made. The need for eliminating all the unavailable information reduced, as previously mentioned, the number of entries on this second data table and significantly changed the composition of its variables. Of all sectors maintained to this new dataset, “Investment Banking & Investment Services” (17.7%), “Software & IT Services” (12.3%) and “Freight & Logistics Services” (11.91%) were the most representative. Conducting the same analysis for market cap, the data kept the tendency shown on the unfiltered dataset, with the most representative sizes being Large-Caps (85.7%), followed by Mid-Caps (8.5%) and Mega-Caps (5.5%). On asset size, the second subset had 80% of all information limited to \$29.9 billion, with a maximum level of \$3.1 trillion. This dataset registered, however, a smaller growth rate among quintiles, averaging 100% growth from the first to the fourth quintiles, then moving on to the fifth quintile with an increase of almost 48 times.

Back to variables description, regarding the need to capture company performance without accounting for the operational circularity of having both types of compensation subtracted from earnings on EBITDA values, we opted for a revised version that allowed us to go around this issue while maintaining sensitivity to company size. This indicator started from EBITDA but was analyzed together with total compensation and total revenue. The available data led us to create an adjusted EBITDA margin, in which total compensation was added to EBITDA, as it is ultimately a type of operating expense, and then divided by total revenue, in order to control for the effect of company size and total revenue. This adaptation of the EBITDA margin traditional formula points towards an analysis that goes beyond company or revenue size, and

truly relates operational activity with average compensation, because compensation is correctly identified as a negative component of EBITDA, which is why we must reintroduce it in this adjusted EBITDA margin calculation.

Having defined this adjusted EBITDA margin as our dependent variable, we must move forward to define all the independent variables used to explain it. Regarding dummy variables, we account for the impact of firm size via dummies on market cap and asset size. On the one hand, market cap had three significant groups, as seen above – large, mid and mega –, and for each was established a dummy, so as to control for the market cap effects on the adjusted EBITDA margin indicator. On the other hand, we proceeded to analyze the size of total assets via dummies on quintiles, which meant that we were able to assess if there could be a less obvious relationship between a specific industry or operating approach that induced more noticeable impact on the dependent variable. This dummy on asset size was established for all five quintiles.

Still regarding dummy variables, we initially approach the sample by establishing an analysis that had selective dummies by year, for the period from 2017 to 2024. We realized, midway through our results analysis, that there was a clear change in patterns since the Covid-19 pandemic, which, according to the World Health Organization, occurred between March 2020 and May 2023. In order to account for this effect in our study, we chose to replace the annual dummies with a single variable that distinguished between entries that had occurred before 2020 or including and beyond 2020. This way, we were able to condense the impact of the pandemic into a single time-based variable, making its possible impacts more evident.

In addition to the dummy variables, we attempted to observe the impact of compensation allocation to senior-executives and non-senior executive workers of the companies under analysis. In this regard, and so as to filter out the impact of each company's size, we used proxies to obtain the average remuneration of senior and non-senior executives, per year, per company. In the case of senior executives, we weighed their total remuneration by the number of members on the boards of directors, used as proxy to determine the average value of compensation per board member (senior-executive). This allowed us to arrive at an approximate value for the average remuneration awarded to each senior executive and the objective will be, from this point onwards, to understand the type of relationship that this indicator establishes with the adjusted EBITDA margin.

On the other hand, regarding non-senior executives, we were able to infer their total compensation from the difference between total compensation and total senior executive compensation. Thus, using the total number of company employees as a proxy for the number of non-senior executives, we were able to obtain the average compensation paid to each non-senior executive, per company, per year. As with average senior-executive compensation, the idea is to identify any relationship between this variable and our dependent variable. In addition, we can take our analysis further and try to understand how the results compare with each other, thus attempting to answer the question “are private entities efficient in wealth redistribution?”

Finally, attempting to address the issue of internal inequality within companies, and a possible miscomparison between amounts paid and the empirical relationship established among senior executive pay and non-senior executive pay, it could be the case that non-senior executives compensation showed a stronger correlation with better results, but are paid much less on average (albeit with more tangible positive consequences). In order to address this issue, we calculated the ratio between senior executives’ compensation and total compensation, to understand if the proportion allocated by each company to these remunerations impacted our dependent variable. This variable shall, from now on, be addressed as the compensation ratio.

In addition to all this, we sought to establish cross-relationships between this compensation ratio we have just discussed and the sector, time and, at a later stage, asset size dummies. To this end, we added to our econometric regression several multiplications of the compensation ratio with the dummies for each of the most representative sectors (previously analyzed independently). This combination of indicators aims to intuit relationships present in the data but less visible to the naked eye, allowing for a more in-depth analysis of an extensive and intricate data set.

The baseline regression used for this study was composed as presented below:

$$\begin{aligned}
 Adj_ebitda_margin = & \beta_0 + \beta_1 \cdot d_size_mid + \beta_2 \cdot d_size_large + \beta_3 \cdot \\
 & d_sector_IB + \beta_4 \cdot d_sector_IT + \beta_5 \cdot d_sector_freight + \beta_6 \cdot d_post2020 + \beta_7 \cdot \\
 & assets_quint1 + \beta_8 \cdot assets_quint2 + \beta_9 \cdot assets_quint3 + \beta_{10} \cdot assets_quint4 + \\
 & \beta_{11} \cdot assets_quint5 + \beta_{12} \cdot av_non_sen_comp + \beta_{13} \cdot av_sen_comp + \beta_{14} \cdot \\
 & sr_exec_comp_ratio + \beta_{15} \cdot sr_exec_comp_ratio_post2020 + \beta_{16} \cdot \\
 & sr_exec_comp_ratio_sect_F + \beta_{17} \cdot sr_exec_comp_ratio_sect_IB + \beta_{18} \cdot \\
 & sr_exec_comp_ratio_sect_IT + \gamma_i + \tau_t + \varepsilon,
 \end{aligned}$$

where γ_i represents the individual fixed effects (e.g., firm) and τ_t represents the time fixed effects (e.g., year).

Moreover, the regression ended up being viewed from different angles largely due to the natural evolution of our research. The stance we sought to adopt was to always to maintain a minimum level of skepticism toward results that seemed too obvious, and it was precisely this mindset that allowed us to arrive at a final formulation of the regression that explained our dependent variable much more effectively than its original form.

In addition, we also sought to refine our analysis according to the results we were iteratively obtaining, never losing sight of the initial objective of this study. In the search for an answer regarding the redistributive capacity of private players, our variables were methodologically revised so that they could provide conclusions as tangible as possible. This was the reason why we introduced quintiles into the compensation ratio, in order to better understand whether the relative size of the variable itself could be an interesting indicator worth considering. Assuming that it could, as we will see later, we also intersected the dimension factor of the ratio with the sector, to determine whether a trend identified in the very first iterations of the regression was maintained.

This extended model specification enables us to capture potential shifts in compensation dynamics that may have emerged after significant structural or economic changes, such as the pandemic. By incorporating these interaction terms, we can assess whether the observed variations in the compensation ratio are consistent across industries or whether they exhibit differential patterns influenced by sector-specific characteristics and temporal effects. This approach enhances the robustness of the empirical results and helps uncover heterogeneity that simple models might overlook. Taken together, these methodological refinements ensure that our analysis not only identifies broad trends but also accounts for nuanced variations across contexts. As we systematically integrate sectoral and temporal dimensions into the regression framework, we provide a more comprehensive basis for interpreting compensation dynamics and set the stage for a richer discussion of the empirical findings in the subsequent sections.

4. Results discussion

When we set out to interpret the results of this study, we must understand that, as mentioned earlier, we built our research based on the conclusions that the data allowed us to draw. This means that we do not have just one regression whose data we have to analyze and cross-reference with the literature, but three regressions that embody the understanding we have taken in relation to the dynamics between employee compensation and company performance.

Starting from the regression with which we began, and that we have already described at length in a previous section, we moved on to test the results we were obtaining, seeking to make a more detailed analysis of the same data pool. The various forms that our regression ultimately took result of the conclusions previously obtained and of intersections made between variables that we found interesting to test, whether in terms of the temporal effect, sectors of activity, or company size.

Table 1

Results of the first regression

adj_ebitda_m~n	Coefficient	Std. err.	t	P > t
d_size_mid	-0.1066 *	0.0444	-2.4000	0.0170
d_size_large	-0.0356	0.0358	-0.9900	0.3210
d_post2020	-0.0451 **	0.0138	-3.2700	0.0010
assets_quint1	-0.0725	0.0633	-1.1500	0.2520
assets_quint2	-0.0517	0.0519	-1.0000	0.3200
assets_quint3	-0.0016	0.0412	-0.0400	0.9690
assets_quint4	0.0610	0.0330	1.8500	0.0650
av_non_sen_c~p	-0.0000 **	0.0000	-3.0900	0.0020
av_sen_comp	-0.0000	0.0000	-0.4800	0.6300
sr_exec_comp~o	0.0016	0.0088	0.1800	0.8590
sr_exec_c~2020	0.0009	0.0223	0.0400	0.9690
sr_exec_comp~F	-0.1000	0.1075	-0.9300	0.3530
sr_exec_comp~B	-0.0513 *	0.0258	-1.9900	0.0470
sr_exec_comp~T	0.0009	0.0135	0.0700	0.9450
_cons	0.6265	0.0495	12.6600	-

*Note: ** p < 0.01 * p < 0.05*

That said, this discussion must necessarily begin with the results of the first regression, above in Table 1, which ultimately determines the entire evolution of the rest of the study. Having described the regression as mentioned in the previous section, the results that are important to highlight relate both to some dummy variables and to two continuous variables whose t-test p-

value demonstrates statistical significance. In relation to the statistically significant dummies, it is important to highlight *d_size_mid* and *d_post2020*. The former was one of the dummies used to measure the impact of market cap on the dependent variable under analysis – the adjusted EBITDA margin mentioned earlier. This dummy remained consistently significant throughout all regression revisions, and in this specific case had a coefficient of -10.66%, from which we can infer that companies with a market cap between \$2 billion and \$10 billion tend to be in a growth phase that negatively impacts the dependent variable under study. One reason that may explain this is the relatively small size of a Mid-Cap in the S&P 500 universe, where these companies will always find it more difficult to assert themselves in the market and are likely to be in a moment of greater investment rather than consolidation of results. This is also in line with what Suherman et al., (2011) mention in their study about the impact of size on the possible social performance effects. Our understanding, following the results obtained, is that the correlation, although being negative, can be verified.

As for the dummy *d_post2020*, it also comes from a previous iteration of the regression, according to which we saw that the years after 2019 were consistently statistically significant and had a negative impact on the earnings of companies under study. In this specific case, it is possible to infer the persistent negative impact of the global lockdown caused by the Covid-19 pandemic, leading this dummy variable to have a coefficient of -4.51%.

In addition to those already mentioned, this first regression also had dummies that sought to control for the effect of sector and asset size, but these were largely ineffective. In an attempt to isolate any specific industry or scale factors that were statistically significant, dummies were placed for the three most represented sectors, “Software & IT Services,” “Investment Banking and Finance,” and “Freight and Transportation,” as well as for four of the five quintiles into which each company's Assets could be divided.

Despite the lack of significance of the previous ones, the variable *av_non_sen_comp*, which reflected the total non-executive compensation per employee, had a statistically significant negative coefficient, although very close to zero. This result is particularly interesting because it suggests that there is a negative correlation between the compensation awarded to non-executive employees and the performance of the companies in question, implying that, from the company's point of view, there should be no tangible incentive to reduce the compensation differential, as it negatively impacts performance. However, this goes in some way against what

Engbom and Moser (2023), state when mentioning that increases in fixed pay are directly and positively linked to productivity.

We then sought to intersect the compensation ratio (already described above) with the aforementioned dummies, and we observed that this ratio, in companies of the “Investment Banking and Finance” sector, had a coefficient of -5.13%, which leads us to believe that our adjusted EBITDA margin improves when the ratio decreases, thereby reducing wage inequality within the company. As a sector famous for its variable compensation, this negative coefficient means higher pay was being provided to the non-executive employees, this time confirming what Engbom and Moser (2023) stated when they argued that variable pay had direct links with firm outcomes. This was the first conclusion that justified a review of the regression, attempting to determine what type of factors have real impact on the variable we propose to explain, given that *av_non_sen_comp* and *sr_exec_comp_ratio_sect_IB* seemed to present contradictory conclusions.

In an attempt to explain the conflicting results, we had obtained in this first form of our regression, we sought to go further. This time, we chose, on the one hand, to intersect *av_non_sen_comp* with the sector dummy variables and, on the other hand, to intersect the variable *sr_exec_comp_ratio_sect_IB* with the dummy variables associated with asset size, and the results are as shown below in Table 2.

Table 2

Results of the second regression

adj_ebitda_margin	Coefficient	Std. err.	t	P > t
d_size_mid	-0.1075 **	0.0445	-2.4100	0.0160
d_size_large	-0.0343	0.0360	-0.9500	0.3400
d_post2020	-0.0542 **	0.0143	-3.7900	0.0000
av_non_sen_comp	0.0000	0.0000	0.2100	0.8370
av_sen_comp	-0.0000	0.0000	-0.1500	0.8820
av_non_sen_comp_sectF	-0.0000	0.0000	-0.3300	0.7420
av_non_sen_comp_sectIB	-0.0000	0.0000	-0.4400	0.6630
av_non_sen_comp_sectIT	-0.0000	0.0000	-0.3700	0.7120
sr_exec_comp_ratio_sect_F	27.7729	54.6714	0.5100	0.6120
sr_exec_comp_ratio_sect_IB	-0.0852 **	0.0292	-2.9100	0.0040
sr_exec_comp_ratio_sect_IT	0.0036	0.0139	0.2600	0.7980
assets_quint1	-0.1810 *	0.0850	-2.1300	0.0340
assets_quint2	-0.1557 *	0.0772	-2.0200	0.0440
assets_quint3	-0.0803	0.0556	-1.4400	0.1500

assets_quint4	0.0470	0.0438	1.0700	0.2830
av_non_sen_quint1	0.0000	0.0000	1.9000	0.0580
av_non_sen_quint2	0.0000	0.0000	1.6900	0.0910
av_non_sen_quint3	0.0000 **	0.0000	2.7000	0.0070
av_non_sen_quint4	-0.0000	0.0000	-1.1200	0.2640
sr_exec_comp_ratio	-0.0000	0.0089	-	0.9980
sr_exec_comp_ratio_post2020	0.0146	0.0240	0.6100	0.5440
sr_exec_comp_ratio_sect_F_As1	-27.8322	54.6556	-0.5100	0.6110
sr_exec_comp_ratio_sect_F_As2	-26.7380	59.1195	-0.4500	0.6510
sr_exec_comp_ratio_sect_F_As3	-29.7235	54.7098	-0.5400	0.5870
sr_exec_comp_ratio_sect_F_As4	-28.3548	54.5554	-0.5200	0.6030
sr_exec_comp_ratio_sect_IB_As1	-0.5735	1.2962	-0.4400	0.6580
sr_exec_comp_ratio_sect_IB_As2	-3.2501	2.0253	-1.6000	0.1090
sr_exec_comp_ratio_sect_IB_As3	-4.5609 **	1.7513	-2.6000	0.0090
sr_exec_comp_ratio_sect_IB_As4	0.7492 **	0.2791	2.6800	0.0080
sr_exec_comp_ratio_sect_IT_As1	-0.0193	0.1294	-0.1500	0.8820
sr_exec_comp_ratio_sect_IT_As2	-0.0272	0.1035	-0.2600	0.7930
sr_exec_comp_ratio_sect_IT_As3	0.0686	1.4550	0.0500	0.9620
sr_exec_comp_ratio_sect_IT_As4	0.3815	0.5827	0.6500	0.5130
_cons	0.6504	0.0633	10.2800	-

Note: ** $p < 0.01$ * $p < 0.05$

In this new analysis, we confirmed some of the conclusions drawn initially, but we also realized that some of the relationships from the first regression did not survive the regression iterations. The variables *d_size_mid* and *d_post2020* remained statistically significant and had coefficients very close to the previous ones. We observed -10.74% and -5.4%, respectively, very much in line with what we had just verified. However, on the other hand, the variable *av_non_sen_comp* ceases to be statistically significant when observed individually, somewhat calling into question the results we had just observed in the previous regression. Nevertheless, when intersected with the dummy variables associated with asset size, we find that *av_non_sen_quint1* and *av_non_sen_quint3* have very close to zero positive coefficients, implying a positive correlation between non-executive compensation and the first and third quintiles of asset size. Unable to confirm or deny this impact, we aimed for further testing later in this study in the third iteration of the regression.

Still in this second regression, the variable *sr_exec_comp_ratio_sect_IB* had a coefficient of -8.5%, reaffirming its negative impact on the explanatory variable and, in the same vein, providing new evidence to support the conclusions of Engbom and Moser (2023). When we analyze the variable in greater depth, we realize that asset size also helps to better understand how *sr_exec_comp_ratio* behaves in the specific sector of “Investment Banking & Investment

Services.” The variables *sr_exec_comp_ratio_sect_IB_As3* and *sr_exec_comp_ratio_sect_IB_As4* are statistically significant, with the coefficient for *sr_exec_comp_ratio_sect_IB_As3* being -4.56 and for *sr_exec_comp_ratio_sect_IB_As4* being 0.75. These coefficients require a more detailed analysis because, at first glance, the opposite signs of the coefficients seem to indicate contradictory conclusions, but the 0.75 for *sr_exec_comp_ratio_sect_IB_As4* is certainly positive due to the difference for companies with Assets in the fifth quintile that are excluded from our dummy and have a much bigger dimension and a different relationship with performance. To this extent, the conclusions that the compensation ratio, particularly in the “Investment Banking & Investment Services” sector, tends to have a negative impact on company performance are reinforced, reaffirming the idea that the closer the remuneration of executives and non-executives is, the better the company's results will be.

Finally, in the third regression shown below in Table 3 we also sought to quantify the dimensions of inequality within companies themselves by introducing a new dummy variable that controls for the size of the compensation ratio through the quintile in which it is found. The results of this third iteration of the regression were very similar to the previous ones – the variables *d_size_mid*, *d_post2020*, *av_non_sen_quint3*, and *sr_exec_comp_ratio_sect_IB_As3* remained statistically significant and had coefficients that induced the same correlations as in the previous regression.

Table 3

Results of the third regression

adj_ebitda_margin	Coefficient	Std. err.	t	P > t
d_size_mid	-0.0909 *	0.0453	-2.0100	0.0450
d_size_large	-0.0158	0.0374	-0.4200	0.6740
d_post2020	-0.0548 **	0.0144	-3.8100	0.0000
av_non_sen_comp	0.0000	0.0000	0.4400	0.6590
av_sen_comp	0.0000	0.0000	0.4000	0.6880
av_non_sen_comp_sectF	-0.0000	0.0000	-0.2900	0.7700
av_non_sen_comp_sectIB	-0.0000	0.0000	-0.7300	0.4630
av_non_sen_comp_sectIT	-0.0000	0.0000	-0.2200	0.8240
sr_exec_comp_ratio_sect_F	36.8741	55.3600	0.6700	0.5060
sr_exec_comp_ratio_sect_IB	0.3496	0.2545	1.3700	0.1700
sr_exec_comp_ratio_sect_IT	-0.1025	0.1654	-0.6200	0.5360
assets_quint1	-0.1120	0.0869	-1.2900	0.1980

assets_quint2	-0.1113	0.0780	-1.4300	0.1540
assets_quint3	-0.0455	0.0565	-0.8000	0.4210
assets_quint4	0.0586	0.0442	1.3300	0.1850
av_non_sen_quint1	0.0000	0.0000	1.1500	0.2500
av_non_sen_quint2	0.0000	0.0000	1.3400	0.1810
av_non_sen_quint3	0.0000 *	0.0000	2.0300	0.0430
av_non_sen_quint4	-0.0000	0.0000	-1.1100	0.2660
sr_exec_comp_ratio	-0.0268	0.0336	-0.8000	0.4240
sr_exec_comp_ratio_post2020	0.0265	0.0335	0.7900	0.4290
sr_exec_comp_ratio_sect_F_As1	-36.8619	55.3352	-0.6700	0.5060
sr_exec_comp_ratio_sect_F_As2	-27.5075	66.5244	-0.4100	0.6790
sr_exec_comp_ratio_sect_F_As3	-40.3335	54.7453	-0.7400	0.4620
sr_exec_comp_ratio_sect_F_As4	-37.3232	54.5202	-0.6800	0.4940
sr_exec_comp_ratio_sect_IB_As1	-0.8136	1.8533	-0.4400	0.6610
sr_exec_comp_ratio_sect_IB_As2	-3.6061	2.2283	-1.6200	0.1060
sr_exec_comp_ratio_sect_IB_As3	-4.5664 *	1.9218	-2.3800	0.0180
sr_exec_comp_ratio_sect_IB_As4	0.2842	0.4276	0.6600	0.5070
sr_exec_comp_ratio_sect_IT_As1	-0.0216	0.3333	-0.0600	0.9480
sr_exec_comp_ratio_sect_IT_As2	-0.0069	0.3492	-0.0200	0.9840
sr_exec_comp_ratio_sect_IT_As3	0.4799	1.8668	0.2600	0.7970
sr_exec_comp_ratio_sect_IT_As4	0.4222	1.0543	0.4000	0.6890
comp_ratio_quint1	0.1401	0.0721	1.9400	0.0530
comp_ratio_quint2	0.0933	0.0701	1.3300	0.1840
comp_ratio_quint3	0.0108	0.0591	0.1800	0.8550
comp_ratio_quint4	-0.1203 **	0.0460	-2.6200	0.0090
comp_ratio_quint5	-	(omitted)	-	-
sr_exec_comp_ratio_sect_F_q1	-13.0981	31.6983	-0.4100	0.6800
sr_exec_comp_ratio_sect_F_q2	-0.0969	7.6455	-0.0100	0.9900
sr_exec_comp_ratio_sect_F_q3	3.6212	4.8673	0.7400	0.4570
sr_exec_comp_ratio_sect_F_q4	2.5291	9.4349	0.2700	0.7890
sr_exec_comp_ratio_sect_F_q5	-	(omitted)	-	-
sr_exec_comp_ratio_sect_IB_q1	-9.6495	15.6466	-0.6200	0.5380
sr_exec_comp_ratio_sect_IB_q2	-11.7973 *	5.4180	-2.1800	0.0300
sr_exec_comp_ratio_sect_IB_q3	-4.9643 **	1.8826	-2.6400	0.0090
sr_exec_comp_ratio_sect_IB_q4	-0.6389	0.9941	-0.6400	0.5210
sr_exec_comp_ratio_sect_IB_q5	-	(omitted)	-	-
sr_exec_comp_ratio_sect_IT_q1	-	(omitted)	-	-
sr_exec_comp_ratio_sect_IT_q2	-9.4282	9.6314	-0.9800	0.3280
sr_exec_comp_ratio_sect_IT_q3	-0.8139	2.5961	-0.3100	0.7540
sr_exec_comp_ratio_sect_IT_q4	0.4801	0.2969	1.6200	0.1070
sr_exec_comp_ratio_sect_IT_q5	-	(omitted)	-	-
_cons	0.5989	0.0812	7.3800	-

Note: ** p < 0.01 * p < 0.05

What was new was the statistical significance of some of the compensation ratio quintiles and their intersections with the different sectors. As for the quintile dummy variables, the first and fourth quintiles, represented by the variables *comp_ratio_quint1* and *comp_ratio_quint4*, presented statistically significant coefficients, but appear to vary in different directions. In the case of the *comp_ratio_quint1* variable, the coefficient was 14.02%, from which we can infer that having smaller ratios, and therefore less wage disparity, positively affects the company's performance via our adjusted EBITDA margin. With regard to *comp_ratio_quint4*, as with another dummy tested previously, it is likely that the impact of the results of the omitted fifth quintile is making the coefficient of this variable negative (-12.03%), making its analysis less tangible. In any case, the coefficient of 14.02% for *comp_ratio_quint1* leads us to conclude that these types of companies can benefit not only from their own good performance but also, and accordingly to Pan et al. (2020), from disclosing their CEO-to-worker pay ratios, because the market would view this type of internal policy as positive, potentially increasing share price.

Finally, we sought to retest the relationship between compensation ratio and sector, this time adding the effect of the quintiles of the compensation ratio itself. We found, with statistical significance, that for companies in the "Investment Banking & Investment Services" sector, the compensation ratio, if present in the second and third quintiles, negatively impacts company performance via our dependent variable. We can therefore admit that these results, although limited to a specific sector, are consistent with the results obtained regarding the relationship between the first quintile of the compensation ratio and company performance. What can be inferred from this is that, as the ratio increases, moving to the second and third quintiles, wage disparity within the company increases, leading to a negative impact on company performance.

5. Conclusion

Overall, the evidence presented suggests that there is a case to be made in favor of understanding companies as vehicles not only for optimal financial performance but also for internal equitable redistribution of earnings. Returning to the question that has been implicit throughout this article – is it possible for a company to guarantee good financial performance while being fair in the redistribution of the income it generates? Our research had several iterations and is subdivided into analyses of some specific sectors, but the overall conclusion is that it is possible to be economically sustainable and efficient in redistribution. In line with the reading presented by Margolis and Walsh (2003), there is a positive but modest correlation between corporate social initiative and financial metrics. While it is true that redistribution in the form of salary payments (total compensation) is not the same as the corporate social initiative mentioned above, it is possible to understand that the two views intersect through their shared focus on value distribution and the broader impact of corporate decision-making.

The results of this study, in addition to answering the overall question that gave rise to this research, should be subdivided into the conclusions to be drawn from the specific results of the “Investment Banking & Investment Services” sector and what the statistically significant correlations of the compensation ratio quintiles mean.

On the one hand, it is clear that the “Investment Banking & Investment Services” sector was the only one that systematically presented results where the association with the variable we intend to explain was most evident. In the first and second iterations of our regression, we found that the compensation ratio in this sector was negatively correlated with the adjusted EBITDA margin we set out to study but was then analyzed together with the asset quintile of the companies in question. This control kept not only the variable statistically significant but also allowed us to continue to observe consistent results. Finally, when controlling the compensation ratio of this sector by its quintiles, we were again able to verify that the negative correlation remained in the second and third quintiles, therefore the compensation ratio of these companies decreases when executive compensation is diluted in the total compensation attributed to employees, at which point an increase in the company's performance can be verified through an increase in our adjusted EBITDA margin. This trend favors the specific sector, but above all, favors a team management and compensation policy model where, with clear objectives, variable compensation is known to comprise a substantial part of the total compensation of these individuals, always in proportion to the company's performance.

On the other hand, another important finding of this study is the statistically significant correlation between company performance as we defined it and the compensation ratio quintiles, particularly the first one. This first quintile contains the lowest values for the ratio, where executive compensation accounts for the least significant proportion of the total compensation paid by each of these companies. In this sense, given that the correlation with adjusted EBITDA margin is positive, it is possible to infer that somewhere in the first quintile there is an optimal point at which total compensation should be divided between executives and non-executives, while still maintaining the company's positive economic results.

This conclusion should be the highlight of this study precisely because it answers the initial question regarding the redistributive capacity of a company that does not compromise its financial viability. Taking into account our sample, the available information, and the years that were considered, we can confirm that it is possible to be efficient in the internal redistribution of companies' resources while maintaining positive results.

6. References

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