Article

The Relationship Between CEO Power, Labor Productivity, and Company Value in the Iraqi Stock Exchange

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Abstract: The current study investigates the relationship between the CEO's power, the workforce's productivity, and the company's value in Iraqi stock exchange companies. A sample of 34 companies listed on the Iraqi Stock Exchange from 2016 to 2021 was tested using a multiple regression model, a panel data approach, and a fixed effects model. CEO power is measured by the busing factor analysis approach, which integrates four indices: CEO salary, CEO ownership, CEO tenure, and CEO control over board members. The findings indicate a positive and significant relationship between CEO power and labor productivity. Also, there is a negative and significant relationship between CEO power and the stickiness of labor costs. On the other hand, we found a positive and significant relationship between the CEO power and firm value. In addition, labor cost stickiness has a positive effect on firm value. By highlighting the CEOs' power, this research tries to increase companies' attention to this issue and its effect on improving employment productivity, cost management, and firm value.

Keywords: CEO power; workforce efficiency; company value

1. Introduction

Human capital is an inexhaustible issue that all developing countries, including Iraq, have experienced. Achieving the goals and increasing the efficiency of any organization depends on the correct and effective management of these funds (Araya Solano 2019). As a developing country, Iraq needs the right quality of human resources. Employees have an influential role in company decisions and operations because every organization and business needs employee participation for success and performance improvements (Tong et al. 2018). If human resources are managed well, we will witness an increase in labor productivity, which is an important economic indicator. Since this is a critical indicator in the development of societies, the productivity and effectiveness of their activities are essential. Labor productivity is closely related to economic growth, competitiveness, and living standards in an economy and is directly related to improved living standards in the form of higher consumption. As an economy's labor productivity grows, it produces more goods and services for the same relative amount of labor. Highly productive manpower is one of the vital factors in a country's achievement of scientific and economic progress (Rapp et al. 2014; Becker 2020).

While previous studies have explored the role of human capital in enhancing labor productivity (Rapp et al. 2014; Becker 2020), there is a lack of specific research linking CEO power directly to labor productivity within the context of the Iraq business environment. This relationship remains under explored, particularly in terms of how different levels of CEO authority and decision-making levels impact employee engagement and productivity

in an emerging market. As a developing country, Iraq is undergoing an economic transition where enhancing productivity is crucial for sustainable growth. Research indicates that labor productivity is a key driver of economic development, especially in emerging markets (Kang et al. 2018). Understanding how CEO power influences labor productivity can provide insights into effective leadership practices that drive wealth creation and economic development (Daemigah 2020b; Salehi et al. 2020b). In other words, in Iraq, improving labor productivity can lead to increased output and efficiency, which is essential for economic recovery and growth in a post-conflict environment attributed to ISIS. Furthermore, Iraq faces challenges related to human capital, including skills gaps and underemployment. Investigating the role of CEOs in managing human resources effectively can help identify strategies to leverage talent and improve employee engagement, ultimately enhancing productivity.

According to Cabral (2017), organizations and businesses have different performances, which can influence their managers' decisions. Business managers are considered a source of power and influence in various dimensions (Koo and Qureshi 2021) and are usually the most critical factor in the company's mechanisms (Supatmi et al. 2019) and the main factor in creating shareholder value. (Papadakis 2006). In this way, as much as the company can use capable and expert managers in different fields, it can perform better and acquire better forces. If the manager has power in other fields, he can perform and lead the activities and processes of the company better. This means that these companies have higher levels of trust and will have higher profits in the future.

Some studies show that CEO power is negatively related to a company's market value and accounting performance (Bebchuk et al. 2011), the bond credit rating (Liu and Jiraporn 2010), and financial leverage (Jiraporn et al. 2012). Other studies (Adams et al. 2005) show that a powerful CEO may positively impact a company's results, growth, and excellence under certain conditions (Larcker and Tayan 2020). The above views show that powerful managers can positively and negatively affect the company's performance. Managers with excessive confidence and optimism about investment opportunities lead to a decrease in the company's value. Managers with power can create multiple values through quick responses to the market and the use of opportunities (Kibiya et al. 2016).

On the other hand, one of the main goals of managers in business is to maximize the company's value. Recent studies raise this critical question: Do the CEO's characteristics affect the results and value of a company? For example, Van den Steen (2005) clearly stated that the CEO's characteristics influence the policies of the business. During their research, Bertrand and Schoar (2003) confirmed the influence of CEO characteristics on a wide range of corporate decisions. In general, empirical evidence supports the idea that CEO characteristics affect the performance of companies. In this regard, one of the CEO's most important and influential aspects is his "power" in decision making. In other words, when the decision-making power of a company is more in the hands of the CEO, he plays a more critical role in the company's process and operations. In the same way, his opinions are more effectively reflected in the company's results. Therefore, in this research, we seek to answer whether or not the CEO's power can increase the company's value.

The paper offers a novel perspective by directly linking CEO power to labor productivity within the specific context of Iraq's business environment. This is a significant departure from previous research, which often explored broader leadership and human capital themes in corporate financial performance (Sun and Yu 2015) and environmental performance (Mefford 2023). By focusing on the Iraqi context, the study provides a unique lens to understand how leadership dynamics, particularly CEO power, impact productivity in a post-conflict, emerging market (Bloom et al. 2009). This contextual specificity allows for a deeper analysis of the challenges and opportunities faced by Iraqi organizations. The paper offers valuable insights into the impact of leadership styles on organizational outcomes by investigating how different levels of CEO authority and decision making influence workforce productivity.

The implications of this research extend beyond the Iraqi context. The findings can provide valuable lessons for other emerging markets facing similar challenges, such as human capital development and economic growth (Hall 2016). Policymakers can leverage these insights to promote effective leadership and foster a conducive business environment. Additionally, the study can contribute to a better understanding of corporate governance practices and human resource management strategies in emerging markets. By highlighting the importance of strong, capable leaders, the research can encourage the enhancement of effective leadership development programs.

By providing a detailed and documented analysis of the relationship between the CEO's power and labor productivity in Iraqi stock exchange companies, this research helps to increase our understanding of the performance of organizations and the role of managers in their improvement. The results of the research indicate that the level of influence of managers on the workforce's productivity is such that it can lead to the improvement of the performance of the organizations and, ultimately, the improvement of the value of the companies. This information can be helpful to managers, investors, and decision-makers because they can use it to adopt more optimal strategies for managing resources and improving the performance of companies. Also, examining the relationship between the CEO's power and the company's value shows the importance of the role of managers in organizations in creating added value and its effect on companies' stock values. Therefore, this research not only helps improve the performance of companies but also helps investors and other economic agents make successful decisions in the field of investment and cooperation with companies. The current research investigates the relationship between the CEO's power, the workforce's productivity, and the company's value in Iraqi stock exchange companies. The structure of the article includes the second part, i.e., the theoretical foundations and literature and research backgrounds; the third part, the methodology and how to conduct the research; the fourth part, the statistical analysis; and finally, the results and practical suggestions are presented in the final part.

2. Theoretical Foundations and Hypothesis Development

2.1. Firm Value and the Affecting Factors

The value and concepts surrounding it are known as capital and wealth from the past until today. In other words, an index is always used to evaluate performance (Braggion and Moore 2013). With the growth and expansion of global markets and the development of companies in recent years, researchers pay special attention to value because customer value and shareholder value are significant (Melinda and Wardhani 2020; Susbiyani et al. 2023). With the passage of time and the improvement of fundamentals in this sector, investors and stakeholders see the company's value in sustainable growth and continuous value creation, not past profitability (Faccio and Xu 2018). The valuation and pricing process in companies and businesses is one of the duties and responsibilities of managers and investors. Valuation means showing how managers' strategies and financial decisions affect the market value of the business's shares. This value is vital for users, stakeholders, managers, and other creditors to analyze the company's future and determine the business's risk and return. Companies can create significant cash flows and increase their value by using their resources and investing in high-return practical projects. A company uses limited resources as necessary tools to achieve development and value in facing upcoming opportunities. According to the past literature, the impact of various criteria and indicators on the value of companies has been investigated (Jeng and Yang 2014; Coad et al. 2016), some of the most important of which include the following: (1) Company size because large companies have access to resources. Sufficient finances have provided them with the opportunity to have a more competitive advantage over competitors with more production and economies of scale and to earn more profit and thereby affect the value of the company (Jeng and Yang 2014). (2) Financial leverage because financial resources are the company's growth tools. In developing countries where the financial and monetary markets are not developed in a balanced way, accumulated profits are the primary sources of financing. Therefore, financial

leverage and financing methods affect the company's value creation (Alex et al. 2018). (3) It is profitable because any company's goal is to maximize its shareholders' profit and wealth. As a result, business managers are trying to plan and implement policies to achieve this lofty goal in the best possible way. According to the financing constraint theory, there is a direct relationship between profit and company value. Because the company's financing limit theory makes a profit, it can be used to achieve the desired value (Pour 2015).

2.2. The Concept of Productivity and Labor Productivity

Different definitions of productivity have been expressed in the literature, most of them called productivity as the ratio of output to input (Proverbs et al. 2000; Jarkas and Bitar 2012; Thomas et al. 1990; Hanna et al. 2005; Shehata and El-Gohary 2011). The concept of productivity can be applied to any economy: small, medium, and large businesses, governments, and individuals. The goal of productivity is the maximum use of resources to produce as many goods and services as consumers desire at the lowest possible cost. Productivity is the production ratio in time to input in the same period (Helmer and Suver 1988). In other words, productivity in activities means achieving the maximum benefit through the efficient and optimal use of expert staff, used machines, places of activity, etc., to improve welfare at the community level. In addition, productivity can be considered as the ratio of the work performed to the work that should be performed (Landier et al. 2013).

On the other hand, productivity has been widely studied in developed countries to identify opportunities for improvement. The most essential elements to improve productivity are managing materials, equipment, and labor (Banik 2017). In 1766 AD, the issue of exploitation and its surrounding issues were raised worldwide. In the next century, a new definition of labor productivity was presented, which pointed out that power means the ability of people to produce. This issue has expanded with extensive changes at the international level and the need for a solid force to carry out activities. Today, human power has been the focus of much research due to its increasing importance in economic development. The productivity of human resources is one of the most fundamental factors in achieving the progress and expansion of organizational performance and economic development in countries. Human resource efficiency can be defined as the effective and efficient use of human resources to achieve organizational goals.

Nojedehi and Nasirzadeh (2017) classified twenty-six labor productivity factors into five categories: motivational factors, factors related to working conditions, political factors, labor-related factors, and management-related factors. A study conducted by Hickson and Ellis (2014) ranked the factors affecting labor productivity and reported that a lack of labor supervision is the most influencing factor of labor productivity, followed by unrealistic planning, lack of skilled labor, lack of construction, management experience, delays in requesting information, delays in the payment of wages to the labor force, poor communication on site, and bad weather conditions. Jamadagni and Birajdar (2015) identified the most critical factors affecting labor productivity as overtime, clarification of technical documentation, labor fatigue, delays in payment of labor, change in order change delays, poor management communication, and a lack of labor training. Mahamid (2014) believes that factors such as the country's political situation, lack of equipment, old equipment, lack of work experience, and poor management have a negative impact on labor productivity. However, these techniques differ from one industry (Pheng and Meng 2018; Thomas and Daily 1983). Achieving higher productivity is the goal of any organization because it sets the foundation for cost savings and plays a crucial role in careful planning. Moreover, financial success plays a role. Researchers in their countries have identified 16 different labor productivity factors (Maloney 1983). Hence, similar studies should be conducted in other developing countries and cultures to determine whether the meaning of labor productivity and its causes and determinants are immutable. According to Zahoor et al. (2017), a stronger focus on cross-cultural studies would help explain how critical determinants of labor productivity vary across national contexts.

2.3. CEO Power and Its Dimensions

Managers have a leadership role in organizations; they can significantly influence the behavior and performance of employees (Brune and Bossert 2009). One of the tools that the CEO can use to influence the performance and efficiency of the company's employees is power (Ryan 2012). On the other hand, CEOs can cause the deviation and eventual fall of their company with their power. Therefore, this factor's positive or negative impact on the company's performance depends on how managers use it. Power can be defined as the capacity and ability of people to influence and dominate others. In other words, this ability is created from the amount of control over available resources and mastery over punishment and reward (Lim and Lee 2019). The presence of powerful managers in companies and organizations will lead to better performance and greater risk taking in companies. Chowdhury et al. (2023), employing a comprehensive measure of CEO power, find that highly powerful CEOs tend to reduce investment efficiency by increasing overinvestments. This inefficiency is more pronounced with strong information asymmetry, agency problems, and product market competition. They also find that a firm's operation complexity and the presence of effective internal and external governance can help mitigate investment inefficiency; however, when most independent directors are co-opted or powerful CEOs are recruited from outside the firm, the investment inefficiency deteriorates. Moreover, inefficiency and overinvestment tend to increase with CEO tenure, the level of CEO power, and financial constraints faced by the firm. These findings shed light on the complex dynamics between CEO power, investment decisions, and various factors influencing their effectiveness. Ellul et al. (2024) find that after unemployment insurance benefits become more generous, boards increase the convex payoff structure of CEO pay to encourage risk taking. The increase in CEOs' convexity payoff is stronger in firms with more independent and diverse boards, higher ownership of long-term shareholders, and industries requiring highly skilled labor.

To measure power, Ting (2013) stated four aspects and dimensions, including structural power, ownership, status, and expertise:

(a) Structural power: It is the power that exists through the structure of the company, including the structure in the board of directors, the duality in the position of CEO and organizational tenure originates. This power provides the necessary and potential ability of the organization to improve management relations and the results of the economic unit (Ting 2013).

(b) Power of ownership: This dimension of power can be implemented in two ways. In the first case, it refers to the manager buying shares and ownership of the company to maintain and develop his power. A CEO, one of the company's principal shareholders, can intervene when making important decisions and substantially impact the company's strategies. On the other hand, a manager who is the company's founder or has a relationship with the founder can increase his power by increasing interactions and establishing long-term relationships with board members or other important people in the company (Ting 2013).

(c) Expert power: CEOs with different levels of expertise and sufficient information in many fields can provide information and data to people inside and outside the organization more broadly than other managers. The correct and accurate performance of management duties can provide stakeholders with sufficient evidence of the CEO's power. Therefore, the presence of experts and expert managers will lead to more power in that position (Ting 2013).

(d) Status power: Executive level is derived from individual or credit level or individual status. CEOs whose members are expert managers are more important than others who can be selected from inside or outside the company. A capable and reliable CEO can help organize the business and communicate with reliable people. In addition to the services provided by the CEO, other activities, such as being a member of the board of directors of other organizations and graduating from a valid educational institution, are proof of the credibility of the CEO (Ting 2013).

In the following section, the research hypotheses will be explained according to the foundations and backgrounds of this field.

2.4. Hypothesis Development

With the expansion of global markets and the increasing number of companies, one of the main challenges companies face is providing the resources they need. In this regard, trying to use various resources effectively and efficiently, the most important of which is human resources, is the vital goal of managers of organizations, commercial and industrial units, and service institutions (Davenport 2011). A suitable structure for a company, effective implementation of methods, and sufficient and quality equipment are among the necessary things to increase the workforce's productivity. The company's workforce and employees are part of its capital and valuable resources, and its productivity is essential for organizations. Labor productivity shows employees' knowledge, ability, and valuable criteria, so companies must identify factors affecting labor productivity to achieve labor efficiency. The past literature and recent studies have measured the impact of various criteria on labor productivity. For example, Ryan (2012) found that the resources spent on employee training positively affect workforce productivity. In addition, Bukit et al. (2018) showed that better planning in human resources, employment, and selection strategies has a significant and positive effect on workforce productivity. Despite the studies that were conducted, the critical point that needs to be more evidenced is the effect of the CEO's power, as the main feature of the role of the CEO and his effectiveness in the organization, on the productivity of the company's workforce.

The board of directors elects the highest-ranking CEO in the business to act as an intermediary between the board of directors and the stakeholders. Based on the theory of games, it is argued that the CEO has the best performance in the hierarchy of an organization (Menon et al. 2000). When a CEO is more powerful, the CEO's relative performance is more potent, as is the ability to increase labor productivity. As a result, powerful CEOs better manage the company's resources (including labor), leading to higher labor productivity. As one of the primary factors in making decisions and guiding organizational strategies, the CEO's power can significantly impact employee performance. Managers with high power can draw policies and strategies that improve efficiency and increase workforce productivity. This impact may come through motivating employees, optimizing work processes, and effectively interacting with work teams. Hence, we expect a positive relationship between CEO power and labor productivity.

Several studies have been conducted in this field, including Holzer (2015), showing that salary, experience, current job tenure, hours spent in training, and workers' gender positively relate to labor productivity. Also, the results of Dyer and Reeves (1995) indicate that a company's success is strongly related to labor productivity. In this regard, Breit et al. (2019) addressed the impact of CEO power on workforce productivity and showed a positive relationship between CEO power and workforce productivity. Companies with more powerful executives show higher labor productivity. Kudyba (2003) found that employees' skills can be improved through proper training, which can increase the organization's efficiency. Han et al. (2016) found a positive and significant relationship between CEO power and labor productivity. They further decompose labor productivity into efficiency and cost components and find a positive (negative) relationship between CEO power and labor efficiency (cost), suggesting that more powerful CEOs improve labor efficiency by managing and controlling labor costs. In other words, according to the tournament theory, labor productivity is higher in companies that have more powerful CEOs. Creemers et al. (2023) showed that family ownership generates a productivity advantage for firms located in the lower tail of the labor productivity distribution. In contrast, it negatively affects labor productivity in the upper tail compared to their nonfamily counterparts. Shi (2024) suggests that both augmented innovation investment and alleviated bankruptcy costs explain the reduction in labor income shares. Heterogeneity tests also show that the effect is more pronounced in firms with weaker political connections, higher institutional ownership,

higher customer concentration, and in state-owned firms. Therefore, the first hypothesis of the research is as follows:

H1. *A positive and significant relationship exists between the CEO's power and the workforce's productivity.*

According to the theories about the behavior of costs, the change in the cost amount depends on the companies' activity level. In other words, the only factor of change in cost is the amount of change in the activity level. In this regard, costs are divided into two general groups: fixed and variable. Variable costs change with changes in the organization's activity level; fixed costs are permanently fixed and unrelated to the business's activities. These costs for organizations are always a fixed amount (Horngren et al. 2002); however, now, the basis of the cost has changed, and discussions about cost stickiness have been raised. Cost stickiness can be defined as when sales decrease, the ratio of reduction that occurs in fixed costs is lower than when sales increase and costs increase. CEO characteristics may impact the firms' strategic decision-making process. For example, Salehi et al. (2020a) investigate the impact of managerial ability on investment efficiency. Accordingly, we expect that CEO power might be influential in this regard. When the organization's managers become powerful, they can influence resources and other employees more and show more opportunistic behaviors (Dichev et al. 2013). The presence of powerful CEOs means that the employees are under the CEO's power, and the management can easily manage their expenses. Therefore, the stickiness of the manager reduces labor costs. The CEO's power in long-term decisions and setting financial policies can impact labor cost stickiness. Managers with more power may formulate financial policies in a way that helps regulate and predict labor costs. These measures can reduce financial uncertainty and create peace in the work environment, and as a result, increase labor cost stickiness. Supportively, Salehi et al. (2018) have argued that cost stickiness is likely to impact firms' financial reporting quality. Sun and Yu (2015), using a list of member companies of the China Stock Exchange, show that socially responsible companies show lower labor force stickiness. Deshmukh et al. (2013) found that when managers have too much confidence and trust in their behavior when the company is financing, they prefer to reduce the dividend to avoid foreign investment and impose more costs on the company. Chen et al. (2013) believed that managers overestimate demand and, as a result, predicted a small probability of reducing general, administrative, and sales costs when sales decrease. Finally, the results of this research show their significant role. Lee et al. (2020) showed that the CEO's financial expertise has a negative effect on cost stickiness. Also, a negative and significant relationship exists between CEO power and labor cost stickiness. Short-sighted managers may manage profits by reducing expenses when sales decrease to prevent losses and costs from creating stickiness. Managers' short-term attitude has a negative relationship with cost stickiness. On the other hand, when the level of sales and incomes decrease, managers with more power act to reduce costs, including labor costs and the stickiness of labor costs.

Recent investigations also suggest that CEO power has a positive and significant effect on stickiness, and free cash flow has a positive and significant impact on cost stickiness (Tajedini 2024). Jeon and Ra (2024) uncover that higher CEO risk-taking incentives are associated with increased cost stickiness. Moreover, they observe that this relationship is strengthened under specific conditions, namely when financial leverage is lower, corporate governance is weaker, equity market uncertainty is higher, and real investment opportunities are limited. Zhang et al. (2023) document that cost stickiness is negatively associated with internal governance after controlling for legitimate economic reasons for cost stickiness, suggesting that internal governance mitigates agency-based cost stickiness. Consistent with the agency's explanation, their results show that the impact of internal governance on cost stickiness is stronger for firms with lower future value creation of selling, general, and administrative (SG&A) costs. In addition, they contend that the impact

of internal governance on cost stickiness is more pronounced for firms with more-effective board monitoring.

Therefore, the second hypothesis of the research is as follows:

H2. *There is a negative and significant relationship between CEO power and labor cost stickiness.*

Given that managers and senior managers are recognized as critical factors in financing, investment, and other strategic decisions, their opinions about the company profoundly affect the company's practices and results. Several recent studies try to fill this gap and raise this critical question: Do the behaviors and characteristics of managers affect the company's activities and strategies? For example, Van den Steen (2005) explicitly incorporates the CEO's perspective into his corporate policy model. Bertrand and Schoar (2003) report strong evidence of director-fixed effects for various corporate decisions. Overall, the empirical evidence supports that director-level characteristics affect firm outcomes. An essential dimension of top management team characteristics is power. When a company's decision-making power is more concentrated in the hands of the CEO, he will have more authority to influence decisions. Thus, his opinions will be more directly reflected in the company's results. This has positive and negative implications for stakeholders, as CEOs can use this dominant role to set company policy better or advance their goals.

Various studies have been conducted on the above topic that showed a positive and significant relationship between CEO power and company value. However, this effect is driven by competition in the product market because the power of CEO has a positive effect on the company's value only in highly competitive markets and has no effect on the company's value in low-competition markets. The results show that CEO power positively relates to firm value in highly competitive markets when corporate governance is vital, suggesting that corporate governance and competition are complementary. In other words, the results show that the competition in the product market motivates powerful CEOs to use their power to increase the company's value. Mousa et al. (2023) showed that organizations with excess human capacity provide more investment in research and development on average, and in concentrated industries where executives are less under competitive pressure, powerful CEOs intervene in this strategic choice and the relationship between slack and innovation (slack–innovation relationship). Although CEOs in this context may have sufficient slack resources, they appear inclined to allocate such resources to goals other than innovation. Chu et al. (2023) showed that companies with more powerful CEOs are less involved in CSR activities, and this negative relationship is intensified by younger, more competent, and overconfident CEOs. However, this negative relationship is exacerbated by women CEOs. Garcia-Sanchez et al. (2021) found that CEOs with more power oppose integrated information disclosure, and more significant growth opportunities increase CEO opposition to integrated information disclosure about value creation. Brahma and Economou (2024), in a literature review, show that the existing findings are mixed in relation to the effects of CEO power on firm strategies. Overall, the negative impact of CEO power on firm performance is attributed to agency theory, where CEOs pursue their own vested interests, thereby leading to weak corporate governance. Their review reveals that the positive impact of CEO power on corporate outcomes is due to effective board monitoring, a powerful board, and high market competition. Their study also shows that most prior studies have adopted Finkelstein's (1992) four sources of CEO power but have taken different proxies to measure these powers. Saleh et al. (2024) show that institutional ownership and CEO power positively affect firm performance. In addition, it has been established that CEO power strengthens the relationship between institutional ownership and performance. Thus, it can be summarized that institutional ownership improves firm performance; however, with powerful CEO intervention, the performance will improve even more. Saiyed et al. (2023) indicate that entrepreneurial orientation has an inverted U-shaped relation with firm performance. Strong support is also found for a negative moderating influence of CEO power on the inverted U-shaped relationship between en-

trepreneurial orientation and firm financial performance, suggesting that powerful CEOs eventually harm entrepreneurial firms.

Therefore, the third hypothesis of the research is as follows:

H3. *A positive and significant relationship exists between the CEO's power and the company's value.*

Studies have investigated the factors and consequences of the asymmetric behavior of costs. In other words, while the traditional variable-fixed cost model emphasizes the automatic reaction of the cost to the change in activity levels, the literature and background of asymmetric cost behavior emphasize the critical role of insight and management understanding that can influence how resources are managed and how costs occur and are eliminated. In this regard, cost stickiness affects managers' performance and strategies. The existence of stickiness in the cost of labor affects various aspects of the company's performance and ultimately affects the value of the company (Aboody et al. 2005).

Gong et al. (2010) showed that in companies suspected of profit management, the cost behavior is different from those not suspected of management, which shows a relationship between profit management and cost stickiness. Xu et al. (2023) find that agency cost mediates the effect of a privately owned business group (POBG) on labor cost stickiness. Tileal et al. (2023) showed that labor cost stickiness is higher in government and family firms than in non-government and non-family businesses. Ma et al. (2023) found that CSR suppresses cost stickiness. The higher the performance level, the lower the cost stickiness and agency cost partially moderates the relationship between CSR and cost stickiness. Costa and Habib (2023) find a robust negative relationship between cost stickiness and firm value. They then explore whether the resource adjustment, managerial expectations, and agency theories of cost stickiness affect the negative relation and find support for the managerial expectation and agency theories. Furthermore, they find evidence that the detrimental impact of cost stickiness on firm value is mediated partially through the cost of equity and cash flow channels. Further investigation suggests that the adverse effects of cost stickiness on firm values are stronger in the presence of high information asymmetry. The study of Kong et al. (2023) reveals that labor cost changes driven by the adjustment of employee education levels are sticky. The standard adjustment cost theory cannot explain this stickiness. This further shows that firms that actively adjust their employee quality during downturns experience improved future performance. Xu et al. (2023) find that, on average, a privately owned business group-affiliated firm entirely mitigates labor cost stickiness when it has a decrease in sales. In addition, they document that, to adjust its labor cost downward, a privately owned business group-affiliated firm hires fewer employees rather than paying lower wages. They show that the lower labor cost stickiness is due to the movement of employees from the focal firm to other firms within the same privately owned business group. When sales fall, the privately owned business group reallocates excess employees at the focal firm to other firms within the business group via an internal labor market, and the focal firm thereby increases its per capita profit. Moreover, they find that agency cost mediates the impact of a privately owned business group on labor cost stickiness. When the external market is less effective, or the privately owned business group headquarters have strong incentives, the effect of privately owned business group affiliation on reducing an affiliated firm's labor cost stickiness is more salient. Therefore, the fourth hypothesis of the research is as follows:

H4. *A positive and significant relationship exists between labor cost stickiness and company value.*

3. Research Methodology

3.1. Statistical Population

Based on Table 1, the population studied in this research is the companies listed on the Iraqi Stock Exchange, considered from 2016 to 2021. In this research, to measure the CEO's tenure, 3 years is considered. According to its topic, the sample of this study is of the

type of elimination sampling in which the companies selected according to the limitations mentioned below are among the companies accepted in the Iraqi Stock Exchange that have the following conditions:

Table 1. Statistical sample.

No.		Description	No. of Companies
Limitations	1	Statistical population in the history of information collection	132
	2	The target company should not include banks and financial institutions	(77)
	3	The target company should not include banks and financial institutions	(14)
	4	Companies that did not disclose data	(7)
		Statistical population	34

Therefore, according to Table 1, 34 Iraqi stock exchange companies were analyzed as a statistical population.

3.2. Statistical Research Models

To check the first hypothesis, we considered the following regression:

$$LABEFF_{it} = a_0 + a_1\text{CEOPOWER} + a_2\text{FSIZE}_{it} + a_3\text{MTB}_{it} + a_4\text{LEV}_{it} + a_5\text{ROA}_{it} + a_7\text{ADI}_{it} + a_9 Age_{it} + Year$$

To check the second hypothesis, we considered the following regression:

$$\text{LCS}_{it} = a_0 + a_1\text{CEOPOWER} + a_2\text{FSIZE}_{it} + a_3\text{MTB}_{it} + a_4\text{LEV}_{it} + a_5\text{ROA}_{it} + a_7\text{ADI}_{it} + a_9 Age_{it} + Year$$

To check the third hypothesis, the intended regression is as follows:

$$CV_{it} = a_0 + a_1\text{CEOPOWER} + a_2\text{FSIZE}_{it} + a_3\text{MTB}_{it} + a_4\text{LEV}_{it} + a_5\text{ROA}_{it} + a_7\text{ADI}_{it} + a_9 Age_{it} + Year$$

To examine the fourth hypothesis, we consider the following regression:

$$CV_{it} = a_0 + a_1\text{LCS} + a_2\text{FSIZE}_{it} + a_3\text{MTB}_{it} + a_4\text{LEV}_{it} + a_5\text{ROA}_{it} + a_7\text{ADI}_{it} + a_9 Age_{it} + Year$$

3.3. Variables and How to Measure Them

3.3.1. Dependent Variable

Labor force efficiency (LABEFF): the sales ratio to the total cost of employees (Banik 2017).

Labor cost stickiness (LCS) is the change in the natural logarithmic value of labor costs. According to the cost stickiness model (Anderson et al. 2003), hypotheses can be tested by substituting labor costs.

$$LN\left[\frac{COST_{i,t}}{COST_{i,t-1}}\right] = \beta_0 + \beta_1 LN\left[\frac{SALES_{i,t}}{SALES_{i,t-1}}\right] + \beta_2 DECDUM * LN\left[\frac{SALES_{i,t}}{SALES_{i,t-1}}\right] + \varepsilon_{i,t}$$

$COST_{i,t}$ = cost of company i in period t
$COST_{i,t-1}$ = cost of the company i in period $1 - t$
$SALES_{i,t}$ = net sales of the company i in period t
$SALES_{i,t-1}$ = net sales of company i in period $t - 1$

DECDUM: If $SALES_{i,t}$ is $SALES_{i,t-1}$, its value is equal to 1; otherwise, its value equals 0.

Considering that the value of the DECDUM research variable is zero when there is a change and improvement in the company's sales level, the coefficient B1 expresses the amount of change and increase in a company's costs according to a 1% change in their sales level. In addition, since the variable coefficient of DECDUM is one when the company is facing sales decline, the sum of the coefficients + B2 B1 indicates the reduction and weakening in the amount of a one percent decrease in the sales level. If the company's costs are sticky, the percentage of the increase in the cost in periods of increased sales should be higher than the percentage of the decrease in costs in periods of decreased sales. In other words, B1 must be > 0 and B2 < 0.

Company value (CV): Lindenberg and Ross (1981) pointed out in their research that from a scientific and theoretical point of view, Tobin's q index can be a valuable measure to measure variables such as competition in the capital markets and the value of companies. To measure the company's value, some researchers used Tobin's q index, in which the book value is used instead of the replacement value (Rathinasamy et al. 2000). The Tobin's q criterion is calculated from the following equation:

Tobin's q = (shares of the company, total market value + book value debt)/(total book value assets).

3.3.2. Independent Variables

CEO power (CEOPOWER): The current research's independent variable is the CEO's power. In other words, CEOs are considered powerful managers who can make decisions effectively and efficiently and can influence others. Therefore, this research uses four critical criteria.

(a) CEO's salary: This is the CEO's annual salary. Many studies on CEO power use the CEO's salary as a measure of power (Adams et al. 2005; Tong et al. 2018).

(b) IBD (*independence of the board of directors*): The independence factor of the board of directors is also an indicator of CEO power (Bhagat et al. 2004). In this research, if the ratio of independent directors on the board of directors is less than the average value of the companies in the population, the number is considered one. Otherwise, it is considered zero (Sheikh 2018).

(c) CEO TURN: This is the length of tenure of the CEO. If the CEO has a long tenure, in other words, if they stay in the company for a longer time, their supervision decreases. If the tenure of the CEO is longer than the average tenure of the companies in the population, the number is considered as one, and otherwise, it is considered as zero. This research measures the tenure of the CEO in the period.

(d) CEO Ownership: The CEO's ownership is the percentage of shares at the CEO's discretion relative to the company's total shares. If the ownership percentage of the CEO is more than the average of the companies in the population, the number is considered as one and otherwise as zero (Sheikh 2018).

3.3.3. Control Variables

Firm size (FSIZE): The natural logarithm of the company's sales.
Growth opportunities (MTB): The ratio of market value to the book value of equity.
Total debt ratio (LEV): The ratio of total debt to company assets.
Return on assets (ROA): Found from dividing net profit by the company's assets.
Advertising intensity (ADI): The ratio of advertising expenses to the company's sales.
Age of the company (AGE): The year under review minus the year of establishment.

4. Findings

4.1. Descriptive Statistics

Table 2 shows the descriptive statistics of the quantitative variables, and Table 3 shows the descriptive statistics of the qualitative variables.

Table 2. Descriptive statistics of quantitative research variables.

Sign	Variable	No. of Observations	Total Mean	Standard Deviation	Min.	Max.
LABEFF	Labor efficiency	200	7.217	14.470	0.007	102.237
CV	Firm value	204	2.505	3.039	0.133	15.964
CEOPOWER	CEO power	204	0.774	0.545	0.000	2.482
FSIZE	Firm size	188	20.746	2.692	16.507	28.039
MTB	Growth opportunities	204	3.103	4.627	−0.830	25.669
LEV	Total debt-to-asset ratio	204	0.262	0.380	−0.006	2.507
ROA	The ratio of net profit to assets	204	0.033	0.093	−0.333	0.327
ADI	Advertising intensity	188	0.007	0.021	0.000	0.200
AGE	Firm age	204	28.412	13.986	3.000	75.000

Table 3. Descriptive statistics of qualitative research variables.

Sign	Variable	No. of Observations	Total Mean	Standard Deviation	Min.	Max.
LCS	Labor cost stickiness	204	0.382	0.487	126	78

According to Table 2, the lowest average of 0.007 is related to the advertising intensity variable, and the highest average of 28.412 is related to the company life variable. Also, the variable of advertising intensity, equivalent to 0.021, has the lowest standard deviation, and the variable of labor efficiency, with a value of 14.470, has the highest standard deviation. The lowest and highest values belong to growth opportunities and workforce efficiency variables, with values of −0.830 and 102.237, respectively. The labor cost stickiness variable has a qualitative nature of zero and one, and the related information is shown in Tables 2 and 3.

4.2. Exploratory Factor Analysis

CEO power variable (CEOPOWER) itself consists of four variables. To calculate the CEOPOWER variable, an exploratory factor analysis based on the correlation coefficient matrix is performed between the four variables of CEO salary, independence of the board of directors, CEO tenure, and CEO ownership by year. After extracting the correlation matrix of the factor loadings, exploratory analysis is obtained to create the CEOPOWER variable. The effect of each of the three variables that make up the CEO's power variable is presented separately in Table 4.

Table 4. Factor loadings of the exploratory analysis of CEO power variable by year.

Variable	2016	2017	2018	2019	2020	2021
CEO salary	0.008	0.010	0.009	0.012	0.015	0.007
Board independence	0.047	0.042	0.055	0.062	0.015	0.009
CEO tenure	0.125	0.111	0.175	0.088	0.224	0.221
Ownership of the CEO	0.008	0.045	0.005	0.007	0.022	0.025

4.3. Collinearity Test

As seen in Table 5, the VIF calculated for all variables is less than 10. Hence, there is no co-linearity between the research models' variables, so there is no problem with collinearity.

Table 5. The results of the collinearity test.

Variable	Model 1		Model 2		Model 3		Model 4	
	VIF	VIF/1	VIF	VIF/1	VIF	VIF/1	VIF	VIF/1
CEOPOWER	1.930	0.517	1.220	0.823	0.891	1.120		
FSIZE	1.340	0.747	1.350	0.739	1.320	0.758	1.280	0.779
ROA	1.320	0.759	1.300	0.769	1.290	0.772	1.310	0.764
AGE	1.270	0.790	1.540	0.649	1.240	0.808	1.190	0.843
MTB	1.260	0.797	1.230	0.812	1.200	0.836	1.150	0.886
LEV	1.190	0.841	1.190	0.841	1.180	0.846	1.140	0.874
ADI	1.070	0.932	1.090	0.919	1.050	0.955	1.050	0.954
IND3			1.280	0.779				
Y2017	1.710	0.583						
Y2018	1.820	0.549						
Y2019	1.740	0.575	1.090	0.921				
Y2020	2.270	0.441						
Y2021	2.150	0.464						
Mean VIF	1.590		1.250		1.200		1.170	

4.4. Integration Test Results

According to Table 6, the F-statistics for the research models are equal to 13.11, 227.52, 12.80, and 11.13, respectively. The null hypothesis indicating that the data are integrated at the 99% confidence level is rejected for all models. As a result, the panel data model should be used to estimate the coefficients of these models.

Table 6. The results of the integration test of research models.

	Calculated Statistic	Probability Level
The first research model	13.110	0.000
The second research model	227.520	0.000
The third research model	12,800	0.000
The fourth research model	13.110	0.000

4.5. Test Results to Determine Fixed or Random Effects

The results of this test are given in Table 7. The Hausman test statistics for the research models were obtained as 47.25, 3.91, 333.54, and 306.10, respectively. In this table, according to the statistics for the first, third, and fourth research models, the null hypothesis is rejected at the 99% confidence level. Therefore, the fixed effects model is more suitable for estimating the mentioned models. According to the statistics obtained for the second model, the null hypothesis of mini is accepted on the appropriateness of the random effects model. In the following, the correlation matrix has been used to check the relationship between the variables.

Table 7. Hausman test results.

	Calculated Statistic	Probability Level
The first research model	47.250	0.000
The second research model	3.910	0.918
The third research model	333.540	0.000
The fourth research model	306.100	0.000

4.6. Correlation Matrix Result

Table 8 shows the results of correlation matrix of the variables.

Table 8. Correlation matrix results.

AGE	ADI	ROA	LEV	MTB	FSIZE	CEOPOWER	CV	LCS	LABEFF	
									1.000	LABEFF
								1.000	** 0.178	LCS
							1.000	−0.094	−0.014	CV
						1.000	*** 0.207	** 0.143	*** 0.218	CEOPOWER
					1.000	* 0.126	0.105	*** 0.189	*** 0.472	FSIZE
				1.000	* 0.139	** 0.179	*** 0.936	−0.048	0.042	MTB
			1.000	0.047	0.047	** 0.144	* 0.137	−0.030	0.017	LEV
		1.000	*** 0.227	* 0.133	*** 0.299	0.053	0.010	** 0.166	** 0.144	ROA
	1.000	0.003	−0.083	−0.086	** 0.148	−0.019	−0.077	0.019	0.054	ADI
1.000	−0.080	−0.072	** 0.152	0.108	*** −0.306	0.102	** 0.152	−0.091	−0.106	AGE

Note: *, **, and *** indicate 90, 95, and 99% significance levels, respectively.

4.7. Estimation of the Model and Interpretation of the Results

4.7.1. Estimation of the First Research Model

As said, the method of fixed effects data should be used to achieve the best estimation of regressions according to the results of integration and the Hausman test. Table 9 shows the results of this estimation. The width from the origin obtained for the first research model with a value equal to −123.721 is significant at the 99% confidence level. The dependent variable of the first model is the effectiveness of the workforce. The power factor of the CEO is equal to 2.111 at the confidence level of 99%. Therefore, by increasing CEO power by one unit at the confidence level of 99%, the workforce's efficiency increases by 2.111%. Thus, the research's first hypothesis indicating a positive and significant relationship between the CEO's power and the workforce's efficiency is accepted with 99% confidence.

Table 9. Estimation results of the first research model.

Variable	Coefficient	Standard Deviation	t Statistic	*p*-Value
CEOPOWER	2.111	0.233	9.050	0.000
FSIZE	9.554	0.917	10.420	0.000
MTB	−0.625	0.425	−1.470	0.143
LEV	11.530	7.112	1.620	0.107
ROA	−16.152	11.424	−1.410	0.160
ADI	13.331	38.687	0.340	0.731
AGE	−2.711	1.271	−2.130	0.035
Cons	−123.721	38.093	−3.250	0.001
Obs	188			
R2	0.325			
F Test	12.930			0.000
Normality of Resid				0.403

Among the control variables of the research, the variable of company size with a coefficient equal to 9.554 and with 99% confidence is an increase factor, and the variable of company age with a value of −2.711 and with a probability of 95% is a factor of reducing the effectiveness of the workforce.

Other control variables of the research, including growth opportunities, financial leverage, return on assets, and advertising intensity, are insignificant and do not affect labor efficiency. The effect of virtual variables of year and industry on the regression model was considered.

After we estimated the model, we examined the variance of the disturbance component heterogeneity. The results shown in Table 10 show that the chi-square statistic equal to 135.64 was obtained, which is greater than the chi-square value in the table, and the null hypothesis, which indicates the homogeneity of variance, is rejected at the 99% confidence level. Therefore, the disturbance components of the variance model are heterogeneous.

The serial correlation of disturbance components of the model was also tested. According to the results in Table 11, the F-statistic of serial correlation equal to 2.892 was obtained. Therefore, at the 90% level, the model has a serial correlation of disturbance components.

Table 10. The results of the variance heterogeneity test of the first research model.

Test	X2 Statistic	*p*-Value
Breusch–Pagan	135.640	0.000

Note: The zero assumption is the homogeneity variance.

Table 11. The results of the serial correlation test of the first research model.

Test	F-Statistic	*p*-Value
Wooldridge	2.892	0.000

Note: The null hypothesis is the absence of serial correlation.

The model specification test has been used to check the presence of omitted variables in the model and the skewness of the results. The results of this test are presented in the table below. According to the results of Table 12, the F-statistic of the Ramsey RESET test is calculated to be 0.25, which is smaller than the F value in the table. Therefore, the null hypothesis is accepted, indicating that the model has no omitted variables.

Table 12. The results of the specification test of the first research model.

Test	F-Statistic	*p*-Value
Ramsey RESET	0.250	0.859

Note: The null hypothesis does not have an omitted variable.

4.7.2. Estimation of the Second Research Model

The dependent variable of the second model is labor cost stickiness, a qualitative variable of zero and one. Therefore, logistic regression with random effects can be used to estimate the model best according to integration and Hausman tests. The estimation results of the second regression model of the research are shown in Table 13. The variable coefficient of CEO power is equal to -0.724 and has been obtained with 99% confidence. In this way, with the increase of one unit of the CEO power variable, the cost of labor decreases by 0.724%. Therefore, the second hypothesis of the research, that there is a negative and significant relationship between the CEO's power and labor cost stickiness, is confirmed with 99% certainty.

Table 13. Estimation results of the second research model.

Variable	Coefficient	Standard Deviation	Z Statistic	*p*-Value
CEOPOWER	-0.724	0.053	-13.700	0.000
FSIZE	0.280	0.600	0.470	0.640
MTB	-0.099	0.245	-0.410	0.685
LEV	-0.349	0.050	-7.050	0.000
ROA	4.962	14.435	0.340	0.731
ADI	-12.716	63.409	-0.200	0.843
AGE	-0.148	0.110	-1.350	0.178
Cons	-5.199	12.634	-0.410	0.685
Obs	188			
Wald test	61.340			0.000
Normality of Resid				0.871

Among the research control variables, financial leverage, with a coefficient equal to -0.349 and 99% confidence, is the factor that reduces labor cost stickiness. Other control

variables, including company size, growth opportunities, return on assets, advertising intensity, and company age, are insignificant and do not affect labor cost stickiness. The effect of virtual variables of year and industry on the regression model was considered.

We also examined the normality of the disturbance component, and the probability level was 0.871, which indicates that the disturbance components have a normal distribution.

According to the results obtained in Table 14, the chi-square statistic was equal to 0.12, which is smaller than the chi-square value in the table, and the null hypothesis, which indicates the homogeneity of variance, is accepted. Therefore, the disturbance components of the variance model are identical. Similarly, the serial correlation of disturbance components of the model was also tested. According to the results obtained in Table 15, the F-statistic of the serial correlation was equal to 502/613. As a result, at the 99% level, the model has a serial correlation of disturbance components.

Table 14. The results of the variance heterogeneity test of the second research model.

Test	X2 Statistic	*p*-Value
Breusch–Pagan	0.120	0.732

Note: The zero assumption is the homogeneity variance.

Table 15. The results of the serial correlation test of the second research model.

Test	X2 Statistic	*p*-Value
Wooldridge	502.613	0.000

Note: The null hypothesis is the absence of serial correlation.

The model specification test has been used to check the presence of omitted variables in the model and the skewness of the results. The results of this test are presented in the table below. According to Table 16, the F-statistic of the reset code test was 2.08, which is smaller than the table's F value. As a result, the null hypothesis, which indicates that the model does not have omitted variables, is accepted.

Table 16. The results of the specification test of the second research model.

Test	F-Statistic	*p*-Value
Ramsey RESET	2.080	0.105

Note: The null hypothesis does not have an omitted variable.

4.7.3. Estimation of the Third Research Model

According to the results of integration and Hausman test, for the best estimation of the third model, the regression method with fixed effects should be used. The estimation results of this model are presented in Table 17. The width obtained from the origin for the third model is equal to 3.401 and with 95% confidence. The variable coefficient of CEO power, with 99% confidence, is equal to 0.179. Therefore, by increasing CEO power by one unit, the company's value increases by 0.179%. In this way, the third hypothesis of the research, that there is a positive and significant relationship between the CEO's power and the company's value, is accepted with 99% confidence.

Among the control variables of the research, the variable of growth opportunities with a coefficient equal to 0.495 and 99% confidence and the age variable of the company with a coefficient equal to 0.314 and 99% confidence are the factors that increase the company's value. On the contrary, the variable of financial leverage, with a coefficient equal to −3.804 and at a confidence level of 99%, reduces the company's value. Other control variables of the research, including company size, return on assets, and advertising intensity, are insignificant and do not affect the company's value. The effect of virtual variables of year and industry on the regression model was considered.

Table 17. Estimation results of the third research model.

Variable	Coefficient	Standard Deviation	t Statistic	*p*-Value
CEOPOWER	0.179	0.051	3.520	0.000
FSIZE	0.080	0.055	−1.460	0.146
MTB	0.495	0.025	19.690	0.000
LEV	−3.804	0.425	−8.960	0.000
ROA	0.508	0.683	0.740	0.458
ADI	1.630	2.317	0.590	0.558
AGE	0.314	0.059	5.300	0.000
Cons	3.401	1.360	2.500	0.013
Obs	188			
R2	0.439			
F Test	60.020			0.000
Normality of Resid				0.103

After considering the model based on the fixed effects method, we checked the normality of the disturbance component. The probability level for this test was calculated as 0.103. As a result, the model's residuals have a normal distribution. Therefore, conventional tests Z, t, F, etc. can be used.

In addition, the variance of the disturbance component heterogeneity was investigated. According to the results of Table 18, the chi-square statistic was calculated to be equal to 367.32, which is greater than the chi-square value in the table. The null hypothesis, which indicates the homogeneity of variance, was rejected at the 99% confidence level. Therefore, the disturbance components of the variance model are heterogeneous.

Table 18. The results of the variance heterogeneity test of the third research model.

Test	X2 Statistic	*p*-Value
Breusch–Pagan	0.120	0.732

Note: The zero assumption is the homogeneity variance.

Also, the model's serial correlation of disturbance components has been tested. According to the results obtained in Table 19, the F-statistic of the serial correlation equal to 4.103 has been obtained, which is greater than the F value in the table. Therefore, the model has a serial correlation of disturbance components.

Table 19. The results of the serial correlation test of the third research model.

Test	X2 Statistic	*p*-Value
Wooldridge	502.613	0.000

Note: The null hypothesis is the absence of serial correlation.

The results of the model specification test to check the presence of omitted variables in the model and the skewness of the results are presented in the table below. According to the results of Table 20, the F-statistic of the Ramsey RESET test was 1.66, which is smaller than the F value of the table. As a result, the null hypothesis that the model does not have omitted variables is accepted.

Table 20. The results of the specification test of the third research model.

Test	F-Statistic	*p*-Value
Ramsey RESET	2.080	0.105

Note: The null hypothesis does not have an omitted variable.

4.7.4. Estimation of the Fourth Research Model

According to the results of integration and Hausman test, for the best estimation of the fourth model, the regression method with fixed effects should be used. The estimation results of this model are presented in Table 21. The dependent variable of the fourth model is the company's value. The width obtained from the origin for the fourth model is equal to 2.734 with 95% confidence. The variable coefficient of labor cost adhesion was obtained at 0.052 with 99% confidence. Therefore, with the increase of one unit of labor cost stickiness, the company's value increases by 0.052%. In this way, the fourth research hypothesis that there is a positive and significant relationship between labor cost stickiness and company value is accepted with 99% certainty.

Table 21. Results of estimation of the fourth research model.

Variable	Coefficient	Standard Deviation	t Statistic	*p*-Value
LCS	0.052	0.011	4.730	0.000
FSIZE	−0.076	0.055	−1.380	0.171
MTB	0.495	0.025	19.580	0.000
LEV	−3.717	0.420	−8.850	0.000
ROA	0.464	0.685	0.680	0.499
ADI	0.013	0.005	2.620	0.009
AGE	0.023	0.023	1.010	0.314
Cons	2.734	1.263	2.160	0.032
Obs	188			
R2	0.451			
F Test	59.300			0.000
Normality of Resid				0.344

Among the control variables of the research, the variable of growth opportunities with a coefficient equal to 0.495 and 99% confidence and the variable of advertising intensity with a coefficient equal to 0.013 and 99% confidence are the factors that increase the company's value. On the contrary, the variable of financial leverage, with a coefficient equal to −3.717 and at the confidence level of 99%, causes a decrease in the company's value. Other control variables of the research, including company size, return on assets, and company age, are insignificant and have no effect on company value. The effect of virtual variables of year and industry on the regression model was considered.

According to the obtained results, the probability level for the normality test of the disturbance component was calculated as 0.344. Therefore, the residuals of the model have a normal distribution.

After being able to estimate the model, the researcher investigated the variance of the disturbance component heterogeneity. According to the calculated results in Table 22, the chi-square statistic was 376.16, which is more significant than the chi-square value in the table, and the null hypothesis of equal variance is rejected at the 99% confidence level. As a result, the disturbance components of the variance model are heterogeneous. The serial correlation of disturbance components of the model was tested. According to the calculated results in Table 23, the F-statistic of serial correlation was equal to 4.021. As a result, at 90%, the model has a serial correlation of disturbance components.

Table 22. The results of the variance heterogeneity test of the fourth research model.

Test	X2 Statistic	*p*-Value
Breusch–Pagan	376.160	0.000

Note: The zero assumption is the homogeneity variance.

Table 23. The results of the serial correlation test of the fourth research model.

Test	X2 Statistic	*p*-Value
Wooldridge	4.021	0.054

Note: The null hypothesis is the absence of serial correlation.

The model specification test has been used to check the presence of omitted variables in the model and the skewness of the results. The results of this test are presented in the table below. According to the results of Table 24, the F-statistic of the reset code was obtained equal to 1.64, which is smaller than the F value of the table. As a result, the null hypothesis that the model does not have omitted variables will be accepted.

Table 24. The results of the specification test of the fourth research model.

Test	F-Statistic	*p*-Value
Ramsey RESET	1.640	0.178

Note: The null hypothesis does not have an omitted variable.

5. Discussion

The main objective of the current research is to examine the impact of the CEO's power on the labor force's productivity and cost stickiness. In addition, this study aims to assess the CEO's power on the company's value in Iraqi stock exchange companies.

Our findings indicate that CEO power is positively incorporated with labor productivity. It means that managers with more power have remarkable abilities to influence the organization's structure and processes, significantly impacting workforce productivity. In addition, aligning with network theory's specifications (Afridi et al. 2024), the constructive interaction of CEOs with employees may play a critical role in improving work morale and increasing employee participation to meet organizational goals. In this sense, prior investigations also show a positive and significant relationship between the CEO's power and the workforce's performance. Powerful CEOs are more likely to manage company resources (including labor) more effectively, leading to higher labor productivity. The results are aligned with the results of Breit et al. (2019), who identified that companies with more powerful executives show higher labor productivity. Based on the organizational theory's framework, powerful CEOs implementing moral-based cultures may impact motivation, decision making, and alignment of labor with organizational goals (Aliahmadi 2024; Afzali et al. 2023). They also may improve labor productivity by focusing on individuals and groups within organizations. This area looks at motivation, team dynamics, leadership, communication, and conflict resolution.

In addition, the research results state a negative and significant relationship between CEO power and the stickiness of labor costs. According to the game theory, managers with more power may continuously adjust their business policies and financial strategies, which is well known as a repeated game framework, to benefit from sustainability in maintaining labor costs (Menon et al. 2000). Powerful CEOs often exhibit over-optimistic behavior regarding future performance, leading them to resist necessary wage adjustments, believing that the company will rebound quickly from any downturn. Such a mindset can, therefore, prevent timely and necessary cost-cutting measures, reducing labor cost stickiness (Zhai et al. 2023). According to another explanation, powerful CEOs may lead organizations to maintain high labor costs even when adjustments are necessary, as they may prioritize their own interests or those of their inner circles over cost efficiency (Guo et al. 2021), reducing labor cost stickiness. Finally, powerful CEOs may resist organizational structure or strategy changes that could lead to more flexible labor cost management and lower labor cost stickiness (Li and Sun 2023). Their influence can create a culture that is averse to making difficult decisions regarding workforce reductions or wage cuts, even when market conditions warrant such actions.

More analyses also indicate a positive and significant relationship between the CEO's power and the company's value. This means those companies employing powerful CEOs are more likely to enjoy greater firm value. Powerful CEOs can efficiently manage resources and make decisions to improve the company's performance, which aligns with the research of Gan and Park (2017). To be more precise, powerful CEOs who hold substantial equity in their companies have aligned interests with shareholders, motivating them to make decisions that enhance firm value (Hamidlal and Harymawan 2021). CEOs empowered with longer tenures accumulate extensive knowledge about the firm's operations, culture, and industry dynamics (Jelle 2016), enabling them to make informed decisions that can enhance firm value. Based on the specifications of tournament theory, a high CEO salary, as another indicator of powerful CEOs, can signal confidence in the company's future prospects. In this regard, tournament theory posits that promotions and rewards are often based on relative performance rather than absolute performance in organizations. This competitive framework incentivizes CEOs to outperform their peers. Powerful CEOs may engage in behaviors that enhance corporate performance to win the tournament (Jiang et al. 2024). Investors may interpret substantial compensation as an indication that the board believes in the CEO's ability to generate value for shareholders. This perception can boost investor confidence and positively affect the firm's stock price, thereby increasing its market value (Brochet et al. 2021). In other words, effective compensation structures can lead to better decision making by CEOs, reducing agency costs associated with misaligned incentives and increasing firm value (Ning et al. 2024). Finally, when a CEO has significant power, often reflected in their ability to influence board decisions, it can lead to a more unified strategic direction, swift decision making, and the implementation of strategies that enhance firm value. A powerful CEO can streamline processes and reduce bureaucratic delays, allowing the firm to respond quickly to market changes and opportunities (Brahma and Economou 2024).

Finally, the results show a positive and significant relationship between labor cost stickiness and company value. The results that were obtained align with those of Garrison et al. (2020), suggesting that increasing labor cost stickiness is likely to assist companies in improving their performance and value. Firms with sticky labor costs tend to maintain a predictable cost structure, facilitating better budgeting and financial forecasting. This stability can enhance investor confidence and reduce perceived risk, potentially increasing the firm's market valuation (Chang et al. 2022). In addition, a stable workforce minimizes disruptions in production. Firms that retain employees during downturns can maintain productivity levels, which is crucial for operational efficiency and value creation (Xu et al. 2023). Sticky labor costs often correlate with lower turnover rates, allowing firms to retain skilled employees. This retention is crucial for maintaining a competitive edge, as experienced workers contribute significantly to innovation and customer satisfaction. The ability to keep talent within the organization is linked to higher performance metrics and market positioning (Gnoth et al. 2024). Firms with sticky labor costs are often better equipped to absorb economic shocks without resorting to layoffs or drastic cost-cutting measures. This resilience protects the firm's reputation and maintains stakeholder trust, which is vital for long-term value creation (Wang and Qiu 2023).

6. Conclusions

6.1. Practical Implications

According to the findings, several implications are proposed for organizations' management, investors, and policymakers. Organizations are recommended to prioritize appointing powerful CEOs with strong leadership skills and the ability to influence organizational culture positively. Empowering these leaders can lead to improved workforce productivity, as they can effectively manage resources and motivate employees. Furthermore, companies should invest in training programs that enhance the strategic decision-making capabilities of their CEOs. This training can focus on fostering managerial power and leading constructive interactions with employees to boost morale and engagement.

Firms should develop policies that allow more flexible labor cost management regarding labor cost stickiness. This may involve training powerful CEOs to recognize necessary adjustments, thus reducing labor cost stickiness. Implementing regular reviews of labor costs can help identify areas for potential savings without sacrificing employee morale. Empowering CEOs through aligning their compensation with performance metrics can mitigate the risks associated with over-optimism. By linking incentives to realistic performance outcomes, firms can encourage CEOs to make timely decisions regarding workforce adjustments when needed.

Companies should encourage CEOs to adopt a long-term perspective in their strategic planning. Powerful CEOs who understand market dynamics and possess extensive knowledge about their organization can make informed decisions that enhance firm value over time. Organizations should establish clear frameworks that allow powerful CEOs to make swift decisions. Reducing bureaucratic delays enables firms to respond quickly to market changes, enhancing competitive advantage and overall value.

Firm authorities are recommended to implement retention strategies that focus on maintaining a stable workforce. This could include offering competitive salaries, benefits, and career development opportunities that align with employee expectations, thus reducing turnover rates. Creating an organizational culture that values employee contributions can further enhance productivity. Encouraging open communication between management and staff fosters an environment where employees feel valued and motivated to perform at their best.

Policymakers are recommended to set clear guidelines on the scope and limits of CEO power, ensuring accountability while enabling CEOs to act decisively to boost productivity. They also can encourage policies that promote constructive CEO–employee engagement through open communication channels, regular town halls, and feedback mechanisms to enhance workforce morale and productivity. Policies encouraging regular assessments of CEO tenure's impact on company strategy may also ensure value creation through experience and industry knowledge without stagnating growth. Succession plans should be a part of this policy to ensure continuity without over-reliance on a single individual.

6.2. Limitations

Similar to other studies, the current paper is subjected to some limitations. Initially, the employee models contained limited control variables controlling the potential impacts of some variables in the regression. Other variables might have the potential to impact the connections or patterns observed in the current study. In this regard, identifying these other variables could suggest new avenues for future research. Moreover, Iraq lacks a robust infrastructure for collecting and disseminating accurate and up-to-date economic and financial data. National statistics and corporate financial disclosures are often outdated, precluding researchers from investigating the latest financial reports. Additionally, many accounting records are still paper-based or insufficiently documented, which limits data access and impedes comprehensive analyses in this region.

6.3. Future Research Directions

To tackle the study's limitations, we propose that researchers in similar contexts, like Iran and other countries located in the Middle East, conduct similar investigations with the latest data and a larger sample. Moreover, as it is documented in the literature that firm characteristics are likely to determine auditors' performance (Salehi et al. 2019a) and pricing behavior (Daemigah 2020a), future researchers are highly recommended to extend the current literature by investigating the impact of CEOs' power on audit–client negotiations. Finally, as environmental factors, such as the financial crisis (Salehi et al. 2019b) and intense competition in the market (Tavakoli and Daemi Gah 2024), are assessed as influential factors on corporate performance and decisions, investigating the moderating role of CEOs' power in streamlining the repercussions of these factors may significantly improve our knowledge.

References

Aboody, David, John Hughes, and Jing Liu. 2005. Earnings quality, insider trading, and cost of capital. *Journal of Accounting Research* 43: 651–73. [CrossRef]

Adams, Renée B., Heitor Almeida, and Daniel Ferreira. 2005. Powerful CEOs and their impact on corporate performance. *The Review of Financial Studies* 18: 1403–32. [CrossRef]

Afridi, Farzana, Amrita Dhillon, and Swati Sharma. 2024. The ties that bind us: Social networks and productivity in the factory. *Journal of Economic Behavior & Organization* 218: 470–85.

Afzali, Aaron, Lars Oxelheim, Trond Randøy, and João Paulo Vieito. 2023. The Impact of Relative CEO Pay on Employee Productivity (1458). IFN Working Paper. Available online: https://hdl.handle.net/10419/297254 (accessed on 1 September 2024).

Alex, Fitri Utami, Widiyanti Marlina, and Hanafi Agustina. 2018. Profitability, growth opportunity and free cash flow: Dividend policy with debt policy as the intervening variable on the manufacturing companies listed in Indonesia stock Exchange. *Russian Journal of Agricultural and Socio-Economic Sciences* 79: 21–34.

Aliahmadi, Saeid. 2024. Does CEO power moderate the link between labor productivity and financial performance: Agency theory or stewardship theory. *Asian Journal of Accounting Research* 9: 47–56. [CrossRef]

Anderson, Mark C., Rajiv D. Banker, and Surya N. Janakiraman. 2003. Are selling, general, and administrative costs "sticky"? *Journal of Accounting Research* 41: 47–63. [CrossRef]

Araya Solano, Manuel. 2019. Efficiency assessment of Costa Rica's counties: A non-parametric analysis of the county competitiveness index. *Tec Empresarial* 13: 78–92. [CrossRef]

Banik, Gouranga C. 2017. Construction productivity improvement. Paper presented at 35th ASC Annual Conference, California Polytechnic State University, San Luis Obispo, CA, USA, April 7; pp. 165–78.

Bebchuk, Lucian A., KJ Martijn Cremers, and Urs C. Peyer. 2011. The CEO pay slice. *Journal of Financial Economics* 102: 199–221. [CrossRef]

Becker, Gary S. 2020. *The Economic Way of Looking at Life*. Working Paper No. 12. Chicago: Department of Economics, University of Chicago.

Bertrand, Marianne, and Antoinette Schoar. 2003. Managing with style: The effect of managers on firm policies. *The Quarterly Journal of Economics* 118: 1169–208. [CrossRef]

Bhagat, Sanjai, Bernard Black, and Margaret Blair. 2004. Relational investing and firm performance. *Journal of Financial Research* 27: 1–30. [CrossRef]

Bloom, Nick, Tobias Kretschmer, and John Van Reenen. 2009. Work-life balance, management practices and productivity. In *International Differences in the Business Practices and Productivity of Firms*. Chicago: University of Chicago Press, pp. 15–54.

Braggion, Fabio, and Lyndon Moore. 2013. The economic benefits of political connections in late Victorian Britain. *The Journal of Economic History* 73: 142–76. [CrossRef]

Brahma, Sanjukta, and Fotini Economou. 2024. CEO power and corporate strategies: A review of the literature. *Review of Quantitative Finance and Accounting* 62: 1069–143. [CrossRef]

Breit, Emily, Xuehu Song, Li Sun, and Joseph Zhang. 2019. CEO power and labor productivity. *Accounting Research Journal* 32: 148–65. [CrossRef]

Brochet, Francois, Peter Limbach, Markus Schmid, and Meik Scholz-Daneshgari. 2021. CEO tenure and firm value. *The Accounting Review* 96: 47–71. [CrossRef]

Brune, Nancy E., and Thomas Bossert. 2009. Building social capital in post-conflict communities: Evidence from Nicaragua. *Social Science & Medicine* 68: 885–93. [CrossRef]

Bukit, Ipak Neneng Mardiah, Yulina Ismida, Rizcy Maulana, and Muhammad Nasir. 2018. The influence of wage, age and experience to labor productivity in construction works in Kota Langsa, Aceh. *MATEC Web of Conferences* 147: 06004. [CrossRef]

Cabral, Sandro. 2017. Reconciling conflicting policy objectives in public contracting: The enabling role of capabilities. *Journal of Management Studies* 54: 823–53. [CrossRef]

Chang, Hsihui, Xin Dai, Eric Lohwasser, and Yue Qiu. 2022. Organized labor effects on SG&A cost behavior. *Contemporary Accounting Research* 39: 404–27.

Chen, Clara, Xiaoling Gores, and Julia Nasev. 2013. *Managerial Overconfidence and Cost Stickiness*. Munich: SSRN (Social Science Research Network). [CrossRef]

Chowdhury, Md Raihan Uddin, Feixue Xie, and Md Mahmudul Hasan. 2023. Powerful CEOs and investment efficiency. *Global Finance Journal* 58: 100886. [CrossRef]

Chu, Hsuan-Lien, Nai-Yng Liu, and She-Chih Chiu. 2023. CEO power and CSR: The moderating role of CEO characteristics. *China Accounting and Finance Review* 25: 101–21. [CrossRef]

Coad, Alex, Agustí Segarra, and Mercedes Teruel. 2016. Innovation and firm growth: Does firm age play a role? *Research Policy* 45: 387–400. [CrossRef]

Costa, Mabel D., and Ahsan Habib. 2023. Cost stickiness and firm value. *Journal of Management Control* 34: 235–73. [CrossRef]

Creemers, Sarah, Ludo Peeters, Juan Luis Quiroz Castillo, Mark Vancauteren, and Wim Voordeckers. 2023. Family firms and the labor productivity controversy: A distributional analysis of varying labor productivity gaps. *Journal of Family Business Strategy* 14: 100515. [CrossRef]

Daemigah, Ali. 2020a. A Meta-Analysis of Audit Fees Determinants: Evidence from an Emerging Market. *Iranian Journal of Accounting, Auditing and Finance* 4: 1–17. [CrossRef]

Daemigah, Ali. 2020b. Does financial statements information contribute to macroeconomic indicators? *Iranian Journal of Accounting, Auditing and Finance* 4: 61–79.

Davenport, Thomas H. 2011. Rethinking knowledge work: A strategic approach. *McKinsey Quarterly* 1: 88–99.

Deshmukh, Sanjay, Anand M. Goel, and Keith M. Howe. 2013. CEO overconfidence and dividend policy. *Journal of Financial Intermediation* 22: 440–63. [CrossRef]

Dichev, Ilia D., John R. Graham, Campbell R. Harvey, and Shiva Rajgopal. 2013. Earnings quality: Evidence from the field. *Journal of Accounting and Economics* 56: 1–33. [CrossRef]

Dyer, Lee, and Todd Reeves. 1995. Human resource strategies and firm performance: What do we know and where do we need to go? *International Journal of Human Resource Management* 6: 656–70. [CrossRef]

Ellul, Andrew, Cong Wang, and Kuo Zhang. 2024. Labor unemployment risk and CEO incentive compensation. *Management Science* 70: 885–906. [CrossRef]

Faccio, Mara, and Jin Xu. 2018. Taxes, capital structure choices, and equity value. *Journal of Financial and Quantitative Analysis* 53: 967–95. [CrossRef]

Finkelstein, Sydney. 1992. Power in top management teams: Dimensions, measurement, and validation. *Academy of Management Journal* 35: 505–38. [CrossRef]

Gan, Huiqi, and Myung S. Park. 2017. CEO managerial ability and the marginal value of cash. *Advances in Accounting* 38: 126–35. [CrossRef]

Garcia-Sanchez, Isabel-Maria, Nicola Raimo, and Filippo Vitolla. 2021. CEO power and integrated reporting. *Meditari Accountancy Research* 29: 908–42. [CrossRef]

Garrison, Ray H., Eric W. Noreen, and Peter C. Brewer. 2020. *Managerial Accounting*, 10th ed. New York: McGrawhill. New York: Lrein.

Gnoth, Carsten, Marc Steffen Rapp, and Julia Udoieva. 2024. Listed founding family firms and labor cost stickiness. *Industrial Relations: A Journal of Economy and Society*, 1–28. [CrossRef]

Gong, Q., H. Liu, and H. Shen. 2010. The development of regional factor market, state holding and cost stickiness. *China Accounting Review* 4: 431–46.

Guo, Ruining, Ziyang Li, Xiaosong Zhou, and Yu He. 2021. The Impact of Managerial Power on Cost Stickiness—Based on Empirical Evidence from Chinese Listed Company. Paper presented at the 2021 7th International Conference on Information Management (ICIM), London, UK, March 27–29; pp. 30–34. [CrossRef]

Hall, Curtis M. 2016. Does ownership structure affect labor decisions? *The Accounting Review* 91: 1671–96. [CrossRef]

Hamidlal, Kharisma Elfianda, and Iman Harymawan. 2021. Relationship between CEO power and firm value: Evidence from Indonesian non-financial companies. *Jurnal Dinamika Akuntansi Dan Bisnis* 8: 15–26. [CrossRef]

Han, Seonghee, Vikram K. Nanda, and Sabatino Silveri. 2016. CEO power and firm performance under pressure. *Financial Management* 45: 369–400. [CrossRef]

Hanna, Awad S., Craig S. Taylor, and Kenneth T. Sullivan. 2005. Impact of extended overtime on construction labor productivity. *Journal of Construction Engineering and Management* 131: 734–39. [CrossRef]

Helmer, F. Theodore, and James D. Suver. 1988. Pictures of performance: The key to improved nursing productivity. *Health Care Management Review* 13: 65–70. [CrossRef]

Hickson, Brent G., and Leighton A. Ellis. 2014. Factors affecting construction labour productivity in Trinidad and Tobago. *The Journal of the Association of Professional Engineers of Trinidad and Tobago* 42: 4–11.

Holzer, Harry J. 2015. *Sector-Based Training Strategies: The Challenges of Matching Workers and Their Skills to Well-Paying Jobs*; Future of Work Paper Series; Olympia: U.S. Department of Labor.

Horngren, Charles T., Alnoor Bhimani, Srikant M. Datar, and George Foster. 2002. *Management and Cost Accounting*. Harlow: Financial Times. Harlow: Prentice Hall.

Jamadagni, Sneha, and B. V. Birajdar. 2015. Productivity improvement in Construction industry. *International Research Journal of Engineering and Technology* 2: 1330–34.

Jarkas, Abdulaziz M., and Camille G. Bitar. 2012. Factors affecting construction labor productivity in Kuwait. *Journal of Construction Engineering and Management* 138: 811–20. [CrossRef]

Jelle, Diks. 2016. The Impact of CEO Characteristics on Firm Value. Doctoral dissertation, Tilburg University, Tilburg, The Netherlands. Available online: http://arno.uvt.nl/show.cgi?fid=141992 (accessed on 1 September 2024).

Jeng, Vivian SC, and Sharon S. Yang. 2014. A new look at the dynamic interrelationship between growth and profitability in the Chinese property liability insurance industry. *Academia Economic Papers* 42: 369.

Jeon, Heung-Jae, and Kyeongheum Ra. 2024. Risk-taking incentives and CEOs' cost-management strategy: Evidence from cost-stickiness. *Asia-Pacific Journal of Accounting & Economics* 1: 1–22.

Jiang, Ying, Xiuqi Jiang, and Wendan Deng. 2024. CEO industry tournament, investor attention, and company value. *Managerial and Decision Economics* 45: 4084–104. [CrossRef]

Jiraporn, Pornsit, Jang-Chul Kim, Young Sang Kim, and Pattanaporn Kitsabunnarat. 2012. Capital structure and corporate governance quality: Evidence from the Institutional Shareholder Services (ISS). *International Review of Economics & Finance* 22: 208–21. [CrossRef]

Kang, Young-Hee, Kyunga Na, and Yang Sok Kim. 2018. Labor productivity in emerging markets: Evidence from Brazil, China, India, and Russia (BRIC). *Journal of Applied Business Research* 34: 1–14. [CrossRef]

Kibiya, Muhammad Umar, Ayoib Che Ahmad, and Noor Afza Amran. 2016. Audit committee characteristics and financial reporting quality: Nigerian non-financial listed firms. In *European Proceedings of Social and Behavioural Sciences*. Working Paper. Kano: European Publisher.

Kong, Dongmin, Shasha Liu, and Rui Shen. 2023. Labor cost stickiness and managerial decisions on human capital adjustment. *Journal of Accounting Literature*, ahead-of-print. [CrossRef]

Koo, Jahwan, and Nawab Muhammad Faseeh Qureshi. 2021. Fine-grained data processing framework for heterogeneous IoT devices in sub-aquatic edge computing environment. *Wireless Personal Communications* 116: 1407–22. [CrossRef]

Kudyba, Stephan. 2003. Knowledge management: The art of enhancing productivity and innovation with the human resources in your organization. *DM Review* 13: 58–59.

Landier, Augustin, Julien Sauvagnat, David Sraer, and David Thesmar. 2013. Bottom-up corporate governance. *Review of Finance* 17: 161–201. [CrossRef]

Larcker, David F., and Brian Tayan. 2020. Diversity in the C-suite: The dismal state of diversity among Fortune 100 senior executives. Rock Center for Corporate Governance at Stanford University Closer Look Series: Topics, Issues and Controversies in Corporate Governance No. CGRP-82. Available online: https://ssrn.com/abstract=3587498 (accessed on 1 September 2024).

Lee, Woo-Jong, Jeffrey Pittman, and Walid Saffar. 2020. Political uncertainty and cost stickiness: Evidence from national elections around the world. *Contemporary Accounting Research* 37: 1107–39. [CrossRef]

Li, Jia, and Zhoutianyang Sun. 2023. Government audit, employee efficiency and labor cost stickiness. *PLoS ONE* 18: e0291014. [CrossRef] [PubMed]

Lim, Jaemin, and Sang Cheol Lee. 2019. Relationship between the characteristics of CEOs and excess cash holdings of firms. *Emerging Markets Finance and Trade* 55: 1069–90. [CrossRef]

Lindenberg, Eric B., and Stephen A. Ross. 1981. Tobin's q ratio and industrial organization. *Journal of business* 54: 1–32. [CrossRef]

Liu, Yixin, and Pornsit Jiraporn. 2010. The effect of CEO power on bond ratings and yields. *Journal of Empirical Finance* 17: 744–62. [CrossRef]

Ma, Xiaowei, Wanwan Ma, Xin Zhao, Xiaoxiao Zhou, and Kamel Si Mohammed. 2023. Increasing burdens or reducing costs: Influence of corporate social responsibility on cost stickiness. *Journal of the Knowledge Economy* 15: 2136–55. [CrossRef]

Mahamid, Ibrahim. 2014. Contractors' perception of risk factors affecting cost overrun in building projects in Palestine. *The IES Journal Part A: Civil & Structural Engineering* 7: 38–50. [CrossRef]

Maloney, William F. 1983. Productivity improvement: The influence of labor. *Journal of Construction Engineering and Management* 109: 321–34. [CrossRef]

Mefford, Robert N. 2023. The COVID-19 pandemic and the productivity paradox. *Journal of Behavioral Economics for Policy* 7: 11–18.

Melinda, Anna, and Ratna Wardhani. 2020. The effect of environmental, social, governance, and controversies on firms' value: Evidence from Asia. *In Advanced Issues in the Economics of Emerging Markets* 27: 147–73. [CrossRef]

Menon, Nirup M., Byungtae Lee, and Leslie Eldenburg. 2000. Productivity of information systems in the healthcare industry. *Information Systems Research* 11: 83–92. [CrossRef]

Mousa, Fariss-Terry, Jaideep Chowdhury, and Scott R. Gallagher. 2023. The implications of CEO power on the relationship between firm resources and innovation. *Journal of Management & Organization* 29: 14–29. [CrossRef]

Ning, Yixi, Jun Yang, and Yuan Wang. 2024. The long-term impact of CEO compensation structure on CEO pay for luck and asymmetry. *Journal of Economics and Finance* 48: 834–56. [CrossRef]

Nojedehi, Pouya, and Farnad Nasirzadeh. 2017. A hybrid simulation approach to model and improve construction labor productivity. *KSCE Journal of Civil Engineering* 21: 1516–24. [CrossRef]

Papadakis, Vassilis M. 2006. Do CEOs shape the process of making strategic decisions? Evidence from Greece. *Management Decision* 44: 367–94. [CrossRef]

Pheng, Low Sui, and Chan Yue Meng. 2018. *Managing Productivity in Construction: JIT Operations and Measurements*. Working Paper. London: Routledge.

Pour, Eilnaz Kashefi. 2015. IPO survival and CEOs' decision-making power: The evidence of China. *Research in International Business and Finance* 33: 247–67. [CrossRef]

Proverbs, D. G., G. D. Holt, and H. Y. Cheok. 2000. Construction industry problems: The views of UK construction directors. Paper presented at 16th Annual ARCOM Conference, Glasgow, UK, September 6–8; Glasgow: Glasgow Caledonian University, vol. 1, pp. 73–81.

Rapp, Marc Steffen, Thomas Schmid, and Daniel Urban. 2014. The value of financial flexibility and corporate financial policy. *Journal of Corporate Finance* 29: 288–302. [CrossRef]

Rathinasamy, R. S., C. R. Krishnaswamy, and Krishna G. Mantripragada. 2000. Capital structure and product market interaction: An international perspective. *Global Business and Finance Review* 5: 51–66.

Ryan, Kevin. 2012. Gilt Groupe's CEO on building a team of A players. *Harvard Business Review* 90: 43–46.

Saiyed, Abrar Ali, Ekrem Tatoglu, Salman Ali, and Dev K. Dutta. 2023. Entrepreneurial orientation, CEO power and firm performance: An upper echelons theory perspective. *Management Decision* 61: 1773–97. [CrossRef]

Saleh, Mohammed WA, Derar Eleyan, and Zaharaddeen Salisu Maigoshi. 2024. Moderating effect of CEO power on institutional ownership and performance. *EuroMed Journal of Business* 19: 442–61. [CrossRef]

Salehi, Mahdi, Ali Daemi, and Farzana Akbari. 2020a. The effect of managerial ability on product market competition and corporate investment decisions: Evidence from Iran. *Journal of Islamic Accounting and Business Research* 11: 49–69. [CrossRef]

Salehi, Mahdi, Ali Daemi Gah, Farzana Akbari, and Nader Naghshbandi. 2020b. Does accounting details play an allocative role in predicting macroeconomic indicators? Evidence of Bayesian and classical econometrics in Iran. *International Journal of Organizational Analysis* 29: 194–219. [CrossRef]

Salehi, Mahdi, Farzaneh Komeili, and Ali Daemi Gah. 2019a. The impact of financial crisis on audit quality and audit fee stickiness: Evidence from Iran. *Journal of Financial Reporting and Accounting* 17: 201–21. [CrossRef]

Salehi, Mahdi, Mohamad Reza Fakhri Mahmoudi, and Ali Daemi Gah. 2019b. A meta-analysis approach for determinants of effective factors on audit quality: Evidence from emerging market. *Journal of Accounting in Emerging Economies* 9: 287–312. [CrossRef]

Salehi, Mahdi, Nasrin Ziba, and Ali Daemi Gah. 2018. The relationship between cost stickiness and financial reporting quality in Tehran Stock Exchange. *International Journal of Productivity and Performance Management* 67: 1550–65. [CrossRef]

Shehata, Mostafa E., and Khaled M. El-Gohary. 2011. Towards improving construction labor productivity and projects' performance. *Alexandria Engineering Journal* 50: 321–30. [CrossRef]

Sheikh, Shahbaz. 2018. CEO power, product market competition and firm value. *Research in International Business and Finance* 46: 373–86. [CrossRef]

Shi, Huaizhi. 2024. Managerial ownership and labor income share. *Finance Research Letters* 62: 105183. [CrossRef]

Sun, Li, and T. Robert Yu. 2015. The impact of corporate social responsibility on employee performance and cost. *Review of Accounting and Finance* 14: 262–84. [CrossRef]

Supatmi, Sutrisno, T. Sutrisno, Erwin Saraswati, and Bambang Purnomosidhi. 2019. The effect of related party transactions on firm performance: The moderating role of political connection in indonesian banking. *Business: Theory and Practice* 20: 81–92. [CrossRef]

Susbiyani, Arik, Moh Halim, and Animah Animah. 2023. Determinants of Islamic social reporting disclosure and its effect on firm's value. *Journal of Islamic Accounting and Business Research* 14: 416–35. [CrossRef]

Tajedini, Fatemeh. 2024. Investigating the effect of CEO power and free cash flow on cost stickiness. *Journal of Accounting and Management Vision* 7: 129–42.

Tavakoli, Mohammad, and Ali Daemi Gah. 2024. The Effect of Product Market Competition on Conditional and Unconditional Conservative Accounting Procedures. *Iranian Journal of Accounting, Auditing and Finance* 8: 131–50.

Thomas, H. Randolph, and Jeffrey Daily. 1983. Crew performance measurement via activity sampling. *Journal of Construction Engineering and Management* 109: 309–20. [CrossRef]

Thomas, H. Randolph, William F. Maloney, R. Malcolm W. Horner, Gary R. Smith, Vir K. Handa, and Steve R. Sanders. 1990. Modeling construction labor productivity. *Journal of Construction Engineering and Management* 116: 705–26. [CrossRef]

Tileal, Mohammed Arkan Sahib, Farzaneh Nassirzadeh, Mohammad Javad Saei, and Davood Askarany. 2023. The impact of ownership type on labour cost stickiness. *Journal of Risk and Financial Management* 16: 268. [CrossRef]

Ting, Hsiu-I. 2013. CEO turnover and shareholder wealth: Evidence from CEO power in Taiwan. *Journal of Business Research* 66: 2466–72. [CrossRef]

Tong, Lijing, Ningyue Liu, Min Zhang, and Liming Wang. 2018. Employee protection and corporate innovation: Empirical evidence from China. *Journal of Business Ethics* 153: 569–89. [CrossRef]

Van den Steen, Eric. 2005. Organizational beliefs and managerial vision. *Journal of Law, Economics, and Organization* 21: 256–83. [CrossRef]

Wang, Haonan, and Fangjuan Qiu. 2023. AI adoption and labor cost stickiness: Based on natural language and machine learning. *Information Technology and Management* 1: 1–22. [CrossRef]

Xu, Hui, Kam C. Chan, Chaohong Na, and Qiaoling Fang. 2023. The bright side of the internal labor market: Evidence from the labor cost stickiness of firms affiliated with privately owned business groups in China. *Journal of Corporate Finance* 78: 102356. [CrossRef]

Zahoor, Hafiz, Albert PC Chan, Wahyudi P. Utama, Ran Gao, and Irfan Zafar. 2017. Modeling the relationship between safety climate and safety performance in a developing construction industry: A cross-cultural validation study. *International Journal of Environmental Research and Public Health* 14: 351. [CrossRef] [PubMed]

Zhai, Dongxue, Xuefeng Zhao, Yanfei Bai, and Delin Wu. 2023. A study of the impact of executive power and employee stock ownership plans on corporate cost stickiness: Evidence from China a-share non-financial listed companies. *Systems* 11: 238. [CrossRef]

Zhang, Bo, Limei Yang, and Ruixue Zhou. 2023. Internal governance and cost stickiness. *Journal of Management Accounting Research* 35: 173–94. [CrossRef]