

Career path through education: The academic background of becoming a CEO in Türkiye

Eğitim yolu ile kariyer: Türkiye’de CEO olmanın akademik arka planı

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Abstract

This study examines the relationship between the educational attainment of CEOs serving in firms listed in the BIST 500 and the likelihood of their appointment to the chief executive position, with particular emphasis on the universities from which they graduated. Drawing on upper echelons theory, the study is based on the assumption that executives’ individual characteristics, including their educational backgrounds, play an important role in shaping top management selection processes. The dataset was compiled between February 24 and October 20, 2025, using multiple sources, including firms’ official websites, annual reports, disclosures on the Public Disclosure Platform (KAP), press releases, interviews, and professional platforms such as Bloomberg and LinkedIn. In the analytical stage, both descriptive statistics and inferential statistical techniques were employed. More specifically, Chi-square tests and Cramer’s V coefficients were used to evaluate the strength and significance of the relationships among the relevant variables. The findings reveal that CEOs’ educational profiles and the universities they attended are significantly associated with their selection as top executives, suggesting that educational credentials continue to function as an important factor in executive appointments within major Turkish firms.

Keywords: Education, CEO, Upper Echelons Theory, Türkiye.

Citation:

Eroğlu, O. (2026). Career path through education: The academic background of becoming a CEO in Türkiye. *OPUS- Journal of Society Research*, 23, e1861317.
<https://doi.org/10.26466/opusjsr.1861317>

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Review Note:

Evaluated by Double-Blind Peer Review

Ethics Reporting:

To report potential ethical concerns, contact: editorialoffice@opusjournal.net

Similarity screening was conducted via intihal.net.



Öz

Bu çalışma, BIST 500’de yer alan şirketlerde görev yapan CEO’ların eğitim düzeyleri ile CEO olarak atanma olasılıkları arasındaki ilişkiyi, özellikle mezun oldukları üniversiteler çerçevesinde incelemektedir. Üst kademe kuramına dayanan araştırma, yöneticilerin bireysel özelliklerinin üst yönetim pozisyonlarına atanma süreçlerinde önemli bir rol oynadığı varsayımından hareket etmektedir. Veri seti, 24 Şubat ile 20 Ekim 2025 tarihleri arasında şirketlerin resmi internet siteleri, faaliyet raporları, Kamuyu Aydınlatma Platformu (KAP) bildirimleri, basın açıklamaları, röportajlar ve Bloomberg ile LinkedIn gibi profesyonel platformlardan derlenmiştir. Analiz sürecinde betimleyici istatistiklerin yanı sıra çıkarımsal istatistik tekniklerinden de yararlanılmıştır. Bu kapsamda, değişkenler arasındaki ilişkinin anlamlılığını ve gücünü değerlendirmek amacıyla Ki-kare testi ve Cramer’s V katsayısı kullanılmıştır. Bulgular, CEO’ların eğitim geçmişleri ile mezun oldukları üniversitelerin, üst düzey yönetici olarak seçilmeleriyle anlamlı biçimde ilişkili olduğunu göstermektedir. Bu sonuç, eğitim niteliklerinin Türkiye’nin önde gelen şirketlerinde CEO atamalarında hâlen etkili ve belirleyici bir unsur olduğunu ortaya koymaktadır.

Anahtar Kelimeler: Eğitim, CEO, Üst Kademe Teorisi, Türkiye

Introduction

The Chief Executive Officer (CEO) is a central actor within the top management team, responsible for determining the strategic direction of the firm, overseeing strategic decision-making processes, and exerting a direct influence on organizational profitability. Within the corporate hierarchy of modern organizations, the title of CEO refers to the individual who holds ultimate legal authority and responsibility. In this respect, the CEO possesses the power to shape the organizational structure through strategic choices. In modern organizations, the CEO is regarded as the most influential actor due to the extensive knowledge and capabilities he or she possesses, which play a decisive role in shaping the firm's strategic orientation and operational processes (Kaur & Singh, 2018: 2). The primary reason for the significant influence of CEOs lies in the notion that organizational outcomes including strategic choices and organizational effectiveness are reflections of top executives' cognitive frames, values, and career backgrounds. Accordingly, it is argued that organizational performance largely depends on the performance of the CEO, who is considered the most powerful member of the top management team.

Due to their high visibility and substantial influence within firms, CEOs have long been a central focus of research in the management and organization literature. Numerous studies have demonstrated that CEO characteristics play a significant role in a wide range of corporate decisions. Among CEOs' personal attributes, educational attainment has been confirmed in prior research as an important determinant of managerial style (Hambrick & Mason, 1984). In recent years, individuals' educational backgrounds on the path to senior leadership positions have become a prominent research domain in the management literature, attracting increasing scholarly attention over time. In particular, CEOs' academic backgrounds are regarded as one of the key determinants influencing strategic decision-making processes, organizational performance, and leadership approaches. Research indicates that executives' fields of study and academic

degrees shape not only individual career advancement but also firms' innovativeness, risk-taking tendencies, and corporate governance practices. In this context, the relationship between CEOs' academic formation and organizational behaviors has emerged as a critical topic of inquiry in the management and organization literature.

CEOs with higher levels of education are observed to be more capable of generating innovative solutions, coping with uncertainty, attracting investors, and making appropriate decisions in complex environments (Bantel & Jackson, 1989; Certo, 2003; Cheng et al., 2020; Ghardallou et al., 2020). In the selection of CEOs, the influence of educational background, the prestige of the university attended, and academic credentials has drawn considerable attention in the international literature (Khurana, 2002). Research indicates that CEOs predominantly originate from disciplines such as business administration, engineering, and economics; however, academic training in different fields contributes to diversity in leadership styles. For instance, CEOs educated in business and management sciences tend to adopt more systematic approaches to strategic planning and corporate control processes, whereas CEOs with engineering backgrounds are reported to exhibit more active leadership in analytical thinking, problem solving, and technological investments.

This study aims to examine the relationship between the education of CEOs in BIST 500 firms and the universities from which they graduated, and their likelihood of being selected as CEO. The central research question seeks to reveal how CEOs' educational attainment and the universities they attended influence their appointment to the CEO position. The theoretical framework of the study is grounded in upper echelons theory, which posits that executives' individual characteristics shape corporate decisions. By extending prior research largely concentrated on BIST 100 firms to the broader BIST 500 context, this study addresses an underexplored area in the Turkish setting and seeks to make a meaningful contribution to the international literature from the perspective

of Türkiye. The remainder of the article is organized as follows. Section 2 reviews the relevant literature. Section 3 presents the data and methodology. Section 4 reports the main empirical findings, and Section 5 concludes with a discussion of the results and implications.

Literature review

The role of individual attributes in advancing to top management positions has long been a central area of inquiry in the management literature. Upper echelons theory, developed to explain how the characteristics of the top management team influence a firm's future, posits that executives' individual attributes are reflected in organizational outcomes (Hambrick & Mason, 1984). According to this theory, top executives' prior experiences, values, and personal characteristics play a decisive role in shaping firms' strategic choices and performance levels. Organizations are largely formed by how their executives think, perceive, evaluate, and what they believe. Consequently, organizational success emerges as a reflection of top management in terms of both strategic decision-making and managerial effectiveness. Upper echelons theory emphasizes the importance of executives' psychological and demographic characteristics in understanding organizational outcomes, highlighting observable attributes such as age, functional background, career experiences, level of education, socioeconomic background, financial position, and group characteristics (Hambrick & Mason, 1984).

In light of the assumption executives' education is believed to influence firm performance, it plays an important role in CEO recruitment and compensation decisions (Bhagat et al., 2010). A strong educational background enhances an executive's status and enables more effective and appropriate decision-making (Certo, 2003). In this context, the prestige of the universities from which executives graduate emerges as a particularly salient factor in CEO selection processes. In their formulation of upper echelons theory, Hambrick and Mason (1984) argue that CEO characteristics are key to

understanding firms' strategic choices and performance, demonstrating that CEOs with higher levels of education tend to be more knowledgeable and possess more advanced cognitive capabilities. The core proposition of this theory suggests a positive relationship between CEOs' education and firm performance. Numerous studies conducted in different contexts provide empirical evidence that CEOs' education has a positive and significant effect on firm performance (Darmadi, 2013; King et al., 2016; Kokeno & Muturi, 2016; Ghardallou et al., 2020). Conversely, some studies report no significant relationship between CEOs' education and firm performance (Gottesman & Morey, 2010; Jalbert et al., 2011; Lindorff & Jonson, 2013). As such, the literature on the relationship between CEOs' education and firm performance remains in a developmental stage, with mixed and sometimes inconsistent findings, indicating the need for further research to reach a clearer consensus.

CEOs' educational backgrounds particularly the prestige of the universities from which they graduate have been regarded as a decisive factor in the formation of corporate elites. Institutional prestige is associated not only with academic knowledge but also with individuals' social capital, access to professional networks, and accumulation of cultural capital (Bourdieu, 1986). The seminal study by Khurana (2002) demonstrates that in CEO appointments in the United States, graduates of "elite MBA programs" such as Harvard, Stanford, and Wharton enjoy symbolic advantages in the managerial labor market. These graduates are perceived by investors and boards of directors as individuals with high leadership potential, thereby increasing their likelihood of appointment. Similarly, Useem and Karabel (1986) find that graduates of prestigious universities are two to three times more likely to attain CEO positions compared to graduates of less prestigious institutions. Other studies show that CEOs from elite universities enhance corporate reputation, increase international investor confidence, and generate favorable market reactions, particularly in publicly listed firms (Jalbert, Rao, & Jalbert, 2002). However, these advantages have also been interpreted as the continuation and

reproduction of socio-economic privilege (Rivera, 2012).

Graduates of prestigious universities are argued to enjoy advantages in accessing executive positions through social networks, symbolic capital, and prestige effects (Khurana, 2002; Useem & Karabel, 1986). In Türkiye, similarly, graduating from a prestigious university provides not only a higher level of academic training but also a social capital advantage through enhanced access to post-graduation professional networks. Empirical evidence further suggests that firms led by CEOs from prestigious universities tend to exhibit higher corporate governance ratings and greater investor confidence. These findings indicate that graduating from a prestigious university does not merely endow executives with cognitive and technical skills, but also provides career-accelerating resources such as social capital, access to elite networks, and perceived managerial competence. Nevertheless, evidence regarding the direct effect of institutional prestige on firm performance remains mixed. Overall, having an educational background from a prestigious university appears to increase the likelihood of CEO selection and confer a symbolic status advantage.

The relationship between CEOs' educational backgrounds and organizational outcomes has long been a subject of debate in the management literature. CEO appointments constitute a critical process that directly influences firms' strategic orientation and performance. Within this process, CEO candidates' educational backgrounds particularly their field of study play a crucial role in determining the alignment between leadership capabilities and organizational needs. Evidence suggests that a CEO's field of education not only shapes individual competencies but also affects a firm's strategic orientation and performance through its fit with the industry in which the firm operates. Educational background directly influences candidates' knowledge bases, problem-solving abilities, and strategic thinking capacities. The discipline from which a candidate graduates shapes technical expertise and sectoral understanding, while also influencing leadership and managerial skills

(Khurana, 2002). For instance, individuals with degrees in technical fields such as engineering and technology may excel in analytical thinking and problem solving, whereas graduates of social sciences or business programs may demonstrate stronger capabilities in people management and strategic planning.

The relationship between field of study and CEO appointment may vary depending on the industry in which the firm operates and the leadership attributes it requires. For example, a technology oriented firm may prefer a CEO with an educational background in technical fields such as engineering or computer science, whereas in service or retail sectors, individuals educated in business administration or the social sciences may be viewed as more suitable (Useem & Karabel, 1986). Moreover, some studies indicate that graduates of certain academic disciplines are more heavily represented in specific industries. For instance, individuals with degrees in economics or finance are observed to be more prevalent in the financial sector (Khurana, 2002). The literature strongly emphasizes that CEOs educated in engineering, computer science, and the natural sciences are more highly represented in technology-intensive industries.

CEOs whose educational backgrounds closely match their industry contexts are argued to perform more effectively in terms of strategic alignment, operational efficiency, and innovation outcomes. Overall, when examining the relationship between a CEO's field of study and the industry in which they serve, a general pattern emerges whereby executives trained in technical or business-oriented disciplines are concentrated in sectors that demand similar knowledge bases. It is posited that the cognitive and technical congruence between a CEO's field of education and the industry in which they operate exerts a positive and statistically significant effect on the quality of strategic decision-making, operational efficiency, and innovation performance; moreover, executives trained in technical and business-oriented disciplines are systematically concentrated in sectors that require analogous domains of expertise.

Data and methodology

This section introduces the data analyzed in the study and provides an overview of the methods and statistical tests employed. The sample consists of CEOs who occupy the highest executive position in firms listed in the BIST 500 Index of Borsa İstanbul. The BIST 500 Index is a broad financial benchmark designed to measure the performance of the 500 largest and most liquid companies traded in Turkish capital markets. The index is calculated by Borsa İstanbul based on criteria including market capitalization, free float ratio, trading volume, and liquidity. The data were collected between February 24 and October 20, 2025. Information was obtained from firms' official websites, annual reports, the Public Disclosure Platform (KAP), press releases, interviews, and professional platforms such as Bloomberg and LinkedIn. The analyses employ descriptive statistics as well as Chi-square and Cramer's V tests.

Empirical findings

Information on all CEOs serving in BIST 500 firms was obtained; however, it was observed that 18 CEOs simultaneously held CEO positions in more than one firm (see Table 1), and that one firm Kron Teknoloji A.Ş. operated under a co-CEO structure in which both CEOs were women. Accordingly, the total number of CEOs serving in BIST 500 firms is 482. The 18 CEOs who simultaneously manage multiple firms oversee a total of 37 companies, nine of which are included in the BIST 100 Index. The incidence of co-CEO arrangements in the BIST 500 is approximately 0.2%. In comparison, a review by *Harvard Business Review* covering the period 1996-2020 reports that fewer than 100 out of 2,200 companies included in the S&P 1200 and Russell 1000 adopted a co-CEO structure during that period (Feigen et al., 2022), indicating that co-CEO arrangements are relatively rare. Consistent with this observation, Ponomareva et al. (2025), based on data from the Milan Stock Exchange for

Table 1. CEOs Holding CEO Positions in Multiple Firms

No	CEO Name	Number of CEO Positions	Firms Where the CEO Position Is Held
1	Akif Geçer	2	-Batiçim Western Anatolia Cement Industry Inc. -Batisöke Söke Cement Industry Co.
2	Alaittin Silaydın	2	-Yeşil Yapı Industry Inc. -Yeşil Investment Holding Inc.
3	Alistair Baran Blake	2	-Frigo-Pak Food Products Industry and Trade Inc. -Merko Food Industry and Trade Inc.
4	Burak Altay	2	-Odaş Electricity Generation Industry and Trade Inc. -Çan2 Thermal Power Inc.
5	Cemalettin Tunç Efe	2	-Bera Holding Inc. -Konya Paper Industry and Trade Inc.
6	Emir Münir Sarpyener	2	-Tera Financial Investments Holding Inc. -Tera Investment Securities Inc.
7	Fatih Nusret Dur	2	-Pacific Eurasia Logistics Foreign Trade Inc. -Pacific Real Estate Investment Trust Inc.
8	Hande Tubik	2	-Merit Tourism Investment and Management Inc. -Net Holding Inc.
9	Kasım Kahraman	2	-Ahlacı Natural Gas Distribution, Energy and Investment Inc. -Enerya Energy Inc.
10	Levent Sipahi	2	-Gözde Venture Capital Investment Trust Inc. -Makina Takım Industry Inc.
11	Mahmut Çelik	3	-İpek Natural Energy Resources Exploration and Production Inc. -Koza Gold Enterprises Inc. -Koza Anadolu Metal Mining Enterprises Inc.
12	Mehmet Sever Kalkan	2	-Adesa Real Estate Investment Inc. -Loras Holding Inc.
13	Nuri Şahin	2	-İzdemir Energy Electricity Generation Inc. -İzmir Iron and Steel Industry Inc.
14	Onur Topaç	2	-Gedik Investment Securities Inc. -Inveo Investment Holding Inc.
15	Ömer Yüngül	2	-Vestel White Goods Industry and Trade Inc. -Vestel Electronics Industry and Trade Inc.
16	Serkan Aslan	2	-Altın Yunus Çeşme Touristic Facilities Inc. -Marmaris Altinyunus Touristic Facilities Inc.
17	Tolgay Benderli	2	-Esenboğa Electricity Generation Inc. -Naturel Renewable Energy Trade Inc.
18	Ukaşe Gümüşer	2	-İhlas Journalism Inc. -İhlas Broadcasting Holding Inc.

the period 2003-2020, find that co-CEO structures are more prevalent in family firms. In the BIST 500, the only firm adopting a co-CEO structure is Kron Teknoloji A.Ş., where the two CEOs are sisters, further suggesting a family-based governance context.

Simultaneously holding CEO positions across multiple firms constitutes a marked departure from the traditional “one leader–one firm” governance paradigm that has long been emphasized in the conventional corporate governance literature. Such arrangements represent an alternative organizational configuration that transcends established boundaries of executive authority and firm-level oversight. By enabling a single executive to exercise strategic control over more than one organization at the same time, these multi-CEO structures have the potential to broaden informational networks, enhance cross-firm visibility, and facilitate the circulation of knowledge and strategic insights. Moreover, they may promote inter-organizational resource flows by fostering coordination, alignment, and relational embeddedness across firms. In this respect, holding multiple CEO roles can be conceptualized not merely as a deviation from traditional governance norms, but as an institutional mechanism that reshapes patterns of information exchange, strategic integration, and resource mobilization across organizational domains.

Of the 482 CEOs serving in the BIST 500, 38 (7.88%) are women and 444 (92.12%) are men. At the global level, women’s representation in CEO positions remains limited. In 2024, only 9% of Fortune 500 companies were led by female CEOs, down from 10.4% in 2023 (Catalyst, 2024). Similarly, as of 2024, women lead 9% of companies in the Russell 3000 Index, an increase from 6.2% in 2021. Women account for 9.2% of Fortune 1000 CEOs and currently hold 39 CEO positions in S&P 500 companies, corresponding to 7.8%. Moreover, in 2024, women represent 7.2% of CEOs of privately held firms valued at over \$1 billion (Women Business Collaborative, 2024). The representation of women in CEO positions within the BIST 500 remains limited but is broadly consistent with global

patterns. Nevertheless, increases in the share of female leaders have been observed in certain regions and indices, reflecting the potential impact of policies aimed at promoting gender equality and diversity. At the same time, fluctuations in the proportion of female CEOs suggest that progress in this domain must be sustained and supported through consistent and long-term efforts.

One of the more intriguing findings of the study is that 130 out of 482 CEOs (26.97%) have multiple given names. Comprehensive empirical studies or official reports on the prevalence of multiple given names in Türkiye could not be identified. The use of multiple given names is a common practice across cultures, often reflecting individuals’ identities, family ties, and social positioning. In the Turkish context, Sarıtaş’s (2009) study reports that among survey respondents with dual given names, one name was typically perceived as “modern” while the other was characterized as “traditional.” In many cultures including Latin America and other Spanish-speaking countries, Arab-Islamic societies, and Southeast Asian communities individuals commonly carry two given names along with both paternal and maternal surnames (Alford, 1987; Lieberman, 2000; University of Warwick, 2021). In certain regions of Africa, children are given an initial name at birth, with additional names later conferred through religious or social rituals, reinforcing both personal and collective identity (Ethnic Technologies, 2017). From a sociological perspective, having multiple names may confer advantages in terms of social capital. Name versatility that can be used across different cultural or linguistic contexts may facilitate individuals’ adaptation in international business or academic environments, thereby enhancing perceived legitimacy and social integration (Sue & Telles, 2007). While the sociological discussion on multiple given names provides contextual insight into identity formation and potential social capital dynamics, this variable is incorporated in the present study primarily as a descriptive demographic characteristic rather than as a core explanatory factor, and it is not posited to exert a direct effect on the relationship between

CEOs' educational backgrounds and industry alignment.

Turning to the core focus of the study the academic backgrounds of CEOs undergraduate university information was obtained for 449 of the 482 CEOs. Among these, 66 CEOs graduated from Middle East Technical University (METU), 47 from Istanbul Technical University (ITU), 44 from Boğaziçi University, and 37 from Istanbul University. In addition, 53 CEOs earned their undergraduate degrees from various universities abroad. The distribution of these proportions is presented in detail in Figure 1.

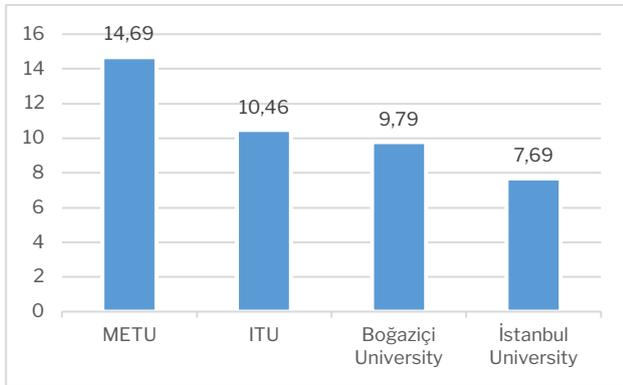


Figure 1. Distribution of CEOs by Undergraduate University

According to the *Times Higher Education* (2024–2025) rankings, the top three public universities in Türkiye are Middle East Technical University (METU), Istanbul Technical University (ITU), and Boğaziçi University. It is evident that these rankings are closely aligned with the findings of this study. These universities are also among the most preferred institutions by the highest-performing students in Türkiye's nationwide university entrance examinations. In Türkiye, the educational background of top executives particularly the prestige of the university from which they graduate is widely regarded as a decisive factor in the CEO selection process. The analysis of Borsa İstanbul (BIST) 500 firms indicates that a substantial proportion of CEOs graduated from long-established and prestigious Turkish universities. Specifically, graduates of METU (14.69%), ITU (10.46%), and Boğaziçi University (9.79%) are

markedly overrepresented in CEO positions. Istanbul University, which ranks fourth with a share of 7.69%, stands out as one of the oldest and most established universities in Türkiye. Overall, a pronounced “prestigious university effect” characterizes the educational backgrounds of CEOs in Türkiye. This pattern reflects the transmission of opportunity structures and social capital from the education system into the business elite. Consistent with the international literature, a prestigious educational background emerges as a key determinant of CEO selection. Accordingly, the findings provide positive support for the first proposition, which posits that there is a relationship between CEO selection and graduation from a prestigious university.

When examined by field of study, undergraduate major information was obtained for 438 of the 482 CEOs. Approximately 50% of the executives graduated from faculties of economics and administrative sciences, while about 40% hold degrees in engineering disciplines. Among the CEOs, 108 graduated in business administration, 42 in mechanical engineering, 30 in electrical and electronics engineering, 30 in industrial engineering, and 20 in civil engineering. The detailed distribution of undergraduate majors is presented in Figure 2.

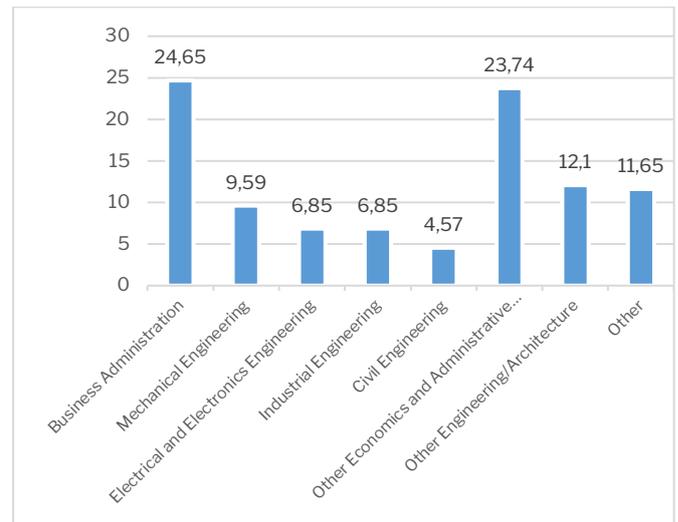


Figure 2. Distribution of CEOs by Undergraduate Field of Study

The study covers 500 firms across 15 main sectors and 46 sub-sectors. The sectoral distribution of the firms is presented in Table 2.

Table 2. Sectoral Distribution of Firms

Sector/Sub-Sector	Number of Firms	Sector/Sub-Sector	Number of Firms	Sector/Sub-Sector	Number of Firms
Information & Communication / Information Service Activities	1	Manufacturing / Chemicals, Pharmaceuticals, Petroleum, Rubber & Plastics	39	Financial Institutions / Holding & Investment Companies	44
Information & Communication / Telecommunications	2	Manufacturing / Fabricated Metal, Machinery, Electrical Equipment & Transport Vehicles	41	Financial Institutions / Insurance Companies	6
Information & Communication / Publishing Activities	3	Manufacturing / Wood Products & Furniture	3	Financial Institutions / Asset Management Companies	3
Education, Health, Sports & Entertainment / Human Health & Social Services	4	Manufacturing / Non-metallic Mineral Products	24	Professional, Scientific & Technical Activities / Architecture & Engineering; Technical Testing & Analysis	2
Education, Health, Sports & Entertainment / Sports, Recreation & Leisure Services	1	Manufacturing / Textiles, Apparel & Leather	19	Professional, Scientific & Technical Activities / Advertising & Market Research	1
Education, Health, Sports & Entertainment / Sports, Entertainment & Gaming Activities	4	Construction & Public Works / Construction & Public Works	13	Hotels & Restaurants / Accommodation	6
Electricity, Gas & Water / Electricity, Gas & Steam	35	Mining & Quarrying / Other Mining & Quarrying	1	Hotels & Restaurants / Food & Beverage Services	4
Real Estate Activities / Real Estate Activities	3	Mining & Quarrying / Crude Petroleum & Natural Gas Extraction	1	Agriculture, Forestry & Fishing / Fishing & Aquaculture	1
Administrative & Support Services / Office Administration & Business Support	2	Mining & Quarrying / Coal & Lignite Mining	2	Agriculture, Forestry & Fishing / Agriculture & Animal Husbandry	3
Administrative & Support Services / Rental & Leasing Activities	4	Mining & Quarrying / Metal Ore Mining	3	Technology / Information Technologies	35
Administrative & Support Services / Travel Agencies & Reservation Services	1	Financial Institutions / Brokerage Firms	8	Technology / Defense Technologies	4
Manufacturing / Basic Metal Industry	26	Financial Institutions / Banks	10	Wholesale & Retail Trade / Wholesale Trade	7
Manufacturing / Other Manufacturing	1	Financial Institutions / Real Estate Investment Trusts (REITs)	42	Wholesale & Retail Trade / Retail Trade	14
Manufacturing / Food, Beverages & Tobacco	40	Financial Institutions / Finance Companies	1	Transportation & Storage / Transportation & Storage	12
Manufacturing / Paper & Printing	4	Financial Institutions / Financial Leasing & Factoring	6		
Manufacturing / Paper Products & Printing	8	Financial Institutions / Venture Capital Investment Trusts	6		

Of the sampled firms, 205 (41%) operate in the manufacturing sector, 126 (25.2%) in financial institutions, 39 (7.8%) in the technology sector, 35 (7%) in electricity, gas, and water utilities, 21 (4.2%) in wholesale and retail trade, and 74 (14%) in other sectors. The relationship between field of study and industry was examined based on 456 CEOs for whom information on both educational background and sector affiliation was available. A Pearson chi-square test was conducted, yielding $\chi^2(364) = 649.416$ with $p < .001$.

This result indicates a statistically significant relationship between the field of undergraduate education and the sector in which the CEO is employed. To assess the strength of this association, Cramer's V was calculated and found to be 0.319. A Cramer's V value of .319 suggests a moderate association between field of study and industry. Accordingly, the proposition stating that "there is a significant relationship between a CEO's field of education and the type of industry in which they work" is supported at a moderate level.

The findings of the study reveal a statistically significant and moderate relationship between CEOs' fields of education and the industries in which they are employed. This result indicates that different industries tend to favor graduates from particular academic disciplines and that organizational structures are shaped in accordance with sector-specific characteristics. The prominence of certain fields of study in service, manufacturing, or hybrid sectors is consistent with principles of organizational specialization and division of labor. At the same time, the presence of sparse cells observed in the chi-square analysis suggests that the interpretation of statistical significance should be approached with caution. Prior literature emphasizes that chi-square test assumptions are frequently violated in cross-tabulations involving a large number of categories, which may lead to inflated or false-positive significance levels. In this respect, placing greater emphasis on effect size measures and relying primarily on Cramer's V provides a more robust and appropriate analytical approach.

The moderate value of Cramer's V indicates that although the association between industry and field of education is not strong, it nevertheless exhibits a meaningful and systematic pattern. This finding suggests that organizations tend to prioritize certain educational backgrounds in line with sectoral requirements; however, this relationship should not be interpreted as the sole determinant of executive placement. In other words, the distribution of educational backgrounds is shaped not only by industry affiliation but also by a range of additional factors, including firm size, the nature of core activities, technological infrastructure, and human resource policies. Overall, the results demonstrate that while there is a significant and moderate association between field of education and industry, this relationship is inherently complex and multidimensional, reflecting the interaction of multiple organizational and contextual dynamics.

Discussion and conclusion

The findings point that graduating from a prestigious university has a significant effect on the likelihood of being appointed as a CEO. Institutional prestige functions as a powerful signaling mechanism in board decision-making processes, serving as a proxy for candidates' unobservable attributes such as cognitive ability, strategic competence, and leadership potential. Strong alumni networks associated with elite universities facilitate faster early-career advancement, quicker access to key managerial positions, and stronger ties with boards of directors. In the Turkish context, the pronounced "prestigious university effect" observed in the educational backgrounds of BIST 500 CEOs clearly illustrates how educational credentials are translated into leadership positions in the business elite. The results suggest a patterned association between the prestige of the educational institution and representation in CEO positions. Rather than implying a direct causal mechanism, the findings indicate that graduates of prestigious universities are comparatively overrepresented among CEOs in the sample. Accordingly, the first proposition is supported at the level of association, showing that CEO appointments are systematically distributed across universities with differing levels of institutional prestige within the Turkish context, in a manner broadly consistent with international evidence.

It is frequently emphasized that a CEO's field of education shapes mental models, problem-solving approaches, and the framing of strategic choices, thereby fostering a stronger and more natural alignment with certain industries. The findings of this study suggest that CEOs whose educational backgrounds are aligned with their industry contexts are better positioned in terms of strategic decision-making, innovation processes, and operational efficiency. Consistent with the literature, CEOs educated in engineering, computer science, and the natural sciences are more highly represented in technology-intensive sectors. In contrast, CEOs with backgrounds in business administration, economics, and finance tend to be con-

centrated in sectors that require strategic management capabilities and strong market orientation, such as financial services, retail, consulting, and corporate services. Overall, the results suggest that a CEO's field of education interacts closely with the industry in which they operate and that sector-aligned educational backgrounds constitute a critical factor in enhancing leadership effectiveness. Accordingly, in CEO selection processes, field of education should be regarded not merely as an individual attribute but also as an important indicator of organizational and sectoral fit. In this study, a statistically significant and moderate relationship was identified between a CEO's field of education and the type of industry in which they are employed.

This study points significant relationships between CEOs' graduation from prestigious institutions and their likelihood of being selected for top executive positions. Future research should examine how and through which mechanisms these relationships emerge. In particular, testing the mediating or moderating roles of mechanisms such as social capital, alumni networks, symbolic legitimacy, and signaling effects would provide more comprehensive explanations of executive selection processes. The patterned alignment between field of education and industry identified in this study should not be confined solely to appointment outcomes in future research. Rather, scholars should investigate how this alignment influences firm-level outcomes such as performance, risk-taking behavior, innovation, and corporate social responsibility orientations. Such analyses would allow for a more nuanced assessment of the role of educational background not only in executive selection but also in leadership outcomes. Finally, the findings derived from the BIST 500 context shed light on the dynamics of top executive selection in emerging markets. However, future studies should employ comparative research designs to test whether these relationships hold across different national contexts and varying levels of capital market development. Such efforts would make a valuable contribution to the growing

discussion of contextual embeddedness in the management literature.

Declarations

Funding: The author received no financial support, grant, or institutional funding for the research, authorship, and/or publication of this article.

Conflicts of Interest: The author declares no conflicts of interest related to this study.

Ethical Approval: Ethical approval was not required for this study because it relied exclusively on secondary data compiled from corporate and publicly/professionally accessible sources, including firms' official websites, annual reports, Public Disclosure Platform (KAP) disclosures, press releases, interviews, Bloomberg, and LinkedIn. The study did not involve human participants, human subjects intervention, or animal research.

Data Availability: The data used in this study were obtained from secondary sources cited in the manuscript.

AI Disclosure: The author declares that no artificial intelligence-based tools or applications were used in the conception, analysis, writing, or preparation of this manuscript. The study was conducted entirely by the author in accordance with academic research and publication ethics.

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