

EVALUATION OF DIFFERENCES IN PERFORMANCE BETWEEN SHAREHOLDER-CEO-LED AND PROFESSIONAL-CEO-LED LARGE COMPANIES IN LITHUANIA

Donatas VOVERIS 

Faculty of Economics and Business Administration, Vilnius University, Vilnius, Lithuania

Received 14 September 2022; accepted 21 November 2022

Abstract. There is an ongoing debate on what exactly are the differences between founder/shareholder-CEOs and professional-CEOs, and how those differences impact the performance of companies both from a managerial and financial standpoint. Though this issue attracted a lot of attention from scholars during the last 30 years, and the consensus has formed that there are indeed differences in motivational factors, managerial capabilities as well as risk-taking decisions between founder/shareholder-CEOs and professional-CEOs, the research on how this impacts firm performance provides inconsistent results. This paper aims to add to existing research in the field by evaluating whether there are significant differences in revenue growth rates and profitability between founder/shareholder-CEO-led and professional-CEO-led companies. Based on the revenue and profit data for the 5-year period of 2016 to 2020 of a sample of 205 of the largest companies in Lithuania, no significant differences in performance were identified. In this sense, this study confirms the generalization that the influence of a CEO diminishes as ventures grow and mature.

Keywords: founder-CEO, shareholder-CEO, professional-CEO, performance, revenue growth, profitability.

JEL Classification: L25, M12, M51.

Introduction

Companies that are led by founders or shareholders as a chief executive officer (CEO) constitute a significant group in the business world. In fact, most companies at least in their beginning stages are managed by founders. At some point, founders and shareholders are willingly or not replaced by professional outside managers as CEOs. Though founder/shareholder-CEOs legally are also employees at the company, in this paper it is assumed that they first act as shareholders in their decisions, while successor CEOs who have no shareholding in the company act purely as employees. The terms “founder-CEO” and “shareholder-CEO” as well as “professional-CEO” and “successor-CEO” are used interchangeably or in combination in this paper.

There is a consensus among scholars that founder/shareholder-CEOs and professional-CEOs are different in their managerial capabilities, risk-taking preferences, and social capital in the company. The motivation behind behavior differences between founder/shareholder-CEOs and professional-CEOs is extensively explained by the Agency theory. Contrary to founder/shareholder-CEOs,

professional-CEOs usually do not have shares in the company, and their decisions might be made from the point of self-interest, but not necessarily have the interests of the company as a priority. While managerial capabilities of CEOs represent their objective skill, risk-taking preferences, as well as performance decisions differ. As explained by agency theorists, the relationship between shareholders and professional-CEO is defined by additional agency costs which should be treated as any other costs in the organization and thus have an impact on the bottom line.

As a phenomenon, founder/shareholder-CEOs are a well-researched subject. Also, there is substantial research on differences between the founder and professional-CEOs, including research on company performance (especially, from a financial standpoint). Importantly, the findings of the research are not uniform. Depending on the sample of the companies, research questions, methodology, and/or available data, researchers might find that founder/shareholder-CEO-led companies perform better (e.g., Kumar et al., 2021; Abebe & Tangpong, 2018), worse (e.g., Mousa et al., 2014; Bamford et al., 2006), or at the same level (e.g., Lee & Ko, 2022; Zaandam et al., 2021;

*Corresponding author. E-mail: donatas.voveris@evaf.stud.vu.lt

Gao & Jain, 2011) as companies that are led by professional-CEOs.

Since the review of recent research regarding CEO status (founder/shareholder vs. outside professional) and firm performance confirmed the generalization by Jayaraman et al. (2000) that the results are inconsistent and produce contradictory results, a key motivating factor for this work was to further expand knowledge on performance differences between founder/shareholder-CEO-led and professional-CEO-led companies. Accordingly, this study aims to evaluate performance differences between founder/shareholder-CEO-led and professional-CEO-led largest companies in Lithuania.

While most of the research on the issue is based on initial public offering (IPO) companies that are listed on the stock exchanges in mature markets like the United States of America (U.S.) or the United Kingdom, this paper takes a different approach and focuses on companies from a post-Soviet country of Lithuania in which most of the private companies were established no more than 30 years ago and are not listed on any stock exchanges.

Having in mind the limitation of a shallow stock market in Lithuania, alternative measures to stock market performance had to be used to evaluate performance differences between founder/shareholder-CEO-led and professional-CEO-led companies. To control for data accuracy, reliability as well as availability, financial parameters of (1) revenue growth rate, and (2) profitability were selected for evaluation of performance differences.

1. Literature review

1.1. Founders/shareholders as CEOs

Founder-managed firms comprise an economically substantial component of the economy and a large body of research has begun to compare the behavior and performance of those managed by founder-CEOs with those of firms managed by professional-CEOs (Lee et al., 2017) and substantial body of knowledge about CEO succession has been developed (Wasserman, 2003). Founder-CEOs have garnered considerable research attention from entrepreneurship scholars. Researchers have built and tested hypotheses about when founders will leave their firms, when they will stay, and how their presence impacts firm performance (Krause et al., 2014).

Abebe et al. (2021) find that despite the extensive research, inconsistent results remain as some findings suggest a positive relationship while others point to the contrary. To reconcile these inconsistent findings, studies have examined various entrepreneurial (human capital), organizational (firm age and size), and environmental (stability vs. dynamism) contingencies. Such focus on contingency factors, indeed, has produced a more nuanced understanding of the relationship between founder-CEOs and firm performance with more insights yet to be achieved. Krause et al. (2014) also add that roughly 20 years of research have yielded a few reliable findings,

what keeps founders at their firms, what drives them away, and how both alternatives impact their organizations are issues with profound theoretical and real-world implications.

Evidence has suggested that the decision-making behavior, motivation, strategic choices, and performance of founder-CEOs tend to differ from that of non-founder-CEOs (Jain & Tabak, 2008). According to the research of Fahlenbrach (2009), founder-CEOs differ from successor-CEOs in several aspects. Founder-CEOs often consider their firm as their life's achievement. This intrinsic motivation encourages founder-CEOs to pursue the optimal shareholder-value maximizing strategy instead of concentrating on short-term actions or instead of "enjoying the quiet life." Founder-CEOs might have more organization-specific skills thanks to their equity stake and their entrepreneur status, founder-CEOs are likely to have more influence and decision-making power. Jain and Tabak (2008) emphasize innate advantage of founder-CEOs in having their founding vision, organizational influence, positive image, and ownership stakes in the firm. Compared to a CEO brought in from the outside, a founder-CEO will have greater personal identification with a firm, greater commitment to it and greater trust from the firm's employees, and thus substantial retained ownership provides founder-CEOs with the power and protection necessary to focus their full attention, capabilities, and resources on leading their companies (Fischer & Pollock, 2017). Lee et al. (2020) find strong empirical support to suggest that founder-CEOs are associated with greater innovation, i.e., they observe a significant drop in a firm's innovation performance when a founder-CEO is succeeded by a professional-CEO.

Though founders create their organizations, yet, according to Jayaraman et al. (2000), are often expected to eventually become liabilities to these same organizations. Needs, experiences, and circumstances of entrepreneurs at the helm of mature organizations differ substantively from those at nascent organizations (Zaandam et al., 2021). According to Willard et al. (1992), a frequently stated conclusion in the entrepreneurship/small business literature is that a rapidly growing firm soon outpaces the founder's managerial capabilities. When this occurs, the founder must step aside in favor of or be replaced by professional managers if the firm's performance is to be maintained or improved. This succession crisis is said to occur when the rate of growth and the accompanying increase in organizational complexity exceed the founding entrepreneur's information-processing/decision-making capabilities.

Bamford et al. (2006) conclude that the founder-CEO exit is a significant event for all business organizations. This thinking is supported by research by Wasserman (2003) in which he concludes that there are critical differences between later-stage succession and founder-CEO succession, and those include the higher level of attachment between founder-CEOs and the firms they

create, the much larger equity holdings of founder-CEOs (which give them much more control of the firm), the fact that many founder-CEOs remain in the firm (even though it is being run by their successors), and the fact that nearly all early-stage succession events involve outside successors (in contrast to later-stage succession research, which has focused on the insider-outsider distinction).

I assume that founder-CEO succession is universally understood process in the division of power and decision-making between professional-CEO and shareholders, which, from the shareholder standpoint, usually is implemented through the board of directors. On the other hand, researchers must be aware of the “Russian succession paradox” developed by Shekshnia (2008). This is a process whereby a company goes through the motions of seeking and appointing a successor to the founder, only for the new CEO’s role to become merely nominal, while the old regime continues to run the company as before.

1.2. Agency costs

Agency theory is considered the main theory in the business world separating ownership from management, which makes conflicts called “agency problems” because of interest conflicts between managers and shareholders (Saltaji, 2013). Jensen and Meckling (1976) define an agency relationship as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent. Agency theory assumes that employees and employers (shareholders) have different goals, act in a self-interested manner, and are willing to assume varying degrees of risk (Johnson & Droege, 2004).

Panda and Leepsa (2017) find, that the conflict of interest and agency cost arises due to the separation of ownership from control, different risk preferences, information asymmetry, and moral hazards. However hard principals try to minimize them, all agency relationships experience agency costs (Shapiro, 2005). According to Jensen and Meckling (1976) first and many other researchers later, agency costs are as real as any other costs. Agency costs include but are not limited to checks and balances created, reporting requirements implemented, redundancies introduced, employees rotated, responsibilities fragmented, layers of supervision added, revolving doors locked, and so on. Costs increase because principals, fearful of abuse, impose procedures, decision rules, protocols, or formularies to limit agent discretion (Shapiro, 2005).

Since as a rule in financial costs have a negative impact on the profitability company, an assumption could be made that agency costs exert a negative impact on company performance. Ur et al. (2020), Hoang et al. (2019) and Wang (2010) do indeed find evidence in their respective research that agency costs do impact the performance of a company negatively.

1.3. Managerial capability

Conventional wisdom and much of the entrepreneurship/small business literature hold that rapidly growing new firms quickly outgrow the founder’s managerial capacity (Willard et al., 1992). Bennett et al. (2016) find that founder-CEO firms have the lowest management scores of any owner-manager pair type and that this difference is associated with significant performance differentials and firms led by founder-CEOs are significantly less likely to implement basic management practices, even if these practices are associated with better firm performance.

Abebe and Alvarado (2013) emphasize the lack of fit between founder-CEO’s managerial skill sets and those required in a growing and complex organization. In their research they find empirical support for the importance of executive succession in rapidly growing business organizations. While founder leadership is crucial in establishing the identity and architecture of the emerging firm, it seems that their managerial skill set may not be compatible with the changing organizational and market complexity as the firm becomes larger and older. Hence, the findings suggest that thoughtful and well-orchestrated transition from founder to non-founder leadership may be critical to successfully manage the growing firm. According to Wasserman (2003), early on, founder-CEOs who are adept at solving such challenges are often able to attract high-quality technical people, to manage the product development process well, and to help their organizations succeed at developing the product efficiently. However, once the initial product has been developed, the CEO’s job broadens and gets much more complex, for he or she must begin selling the product to customers, building an organization to support the product, and creating a marketing team. This dramatic change in the contingencies faced by the firm often results in a mismatch between the skills of the technically adept founder-CEO – whose skills were the key to success until now – and the new needs of the organization.

Contrary to findings by Abebe and Alvarado (2013) and Wasserman (2003), research of Fahlenbrach (2009) suggests that founder-CEOs make different managerial decisions that have a positive impact on firm valuation and performance. Willard et al. (1992) find that founder-managers appear to have been able to adapt to the increasing complexity of rapid growth without sacrificing performance or losing control, and no evidence of management crisis was captured. Greater managerial experience strengthened the effects of founder-CEO on entrepreneurial orientation, highlighting the ability of founder-CEOs with experience to develop social networks, secure resources (including financial resources), and better exploit opportunities (Deb & Wiklund, 2017).

Research by Chen and Thompson (2015) shows that replacement of founders of high performing start-ups is justified only if the ability of founders is undermatched with the quality of the business idea. Scholars also

speculate that, contrary to the general belief that departing founders are almost inevitably replaced by professional managers with higher ability, their results show that founders frequently transfer operating control to managers with lower ability, particularly at firms with superior performance.

1.4. Risk-taking

Corporate risk-taking behavior is critical to firm performance (Wright et al., 2017). The contract structures of organizations limit the risks undertaken by most agents by specifying either fixed payoffs or incentive payoffs tied to specific measures of performance (Fama & Jensen, 2005). According to Bertrand and Mullainathan (2000), a CEO will not choose to get more pay for luck, he or she will also have luck shocks removed from her pay but will simply expect a higher average compensation. Aggarwal and Samwick (2003) find that managers diversify their firms in response to changes in private benefits rather than to reduce their exposure to risk. Agents are assumed to be risk averse in decisions regarding the firm to lower risk to personal wealth (Wright et al., 2001).

According to Wright et al. (2017), the nature of this risk taking, however, may be significantly influenced by insider ownership of a firm's equity. Indeed, if incentive stipulations in contracts permit a substantial accumulation of equity ownership by insiders, their risk-taking behavior may emphasize personal wealth and utility management rather than corporate risk taking and firm performance. Lee et al. (2017) provide empirical evidence that founder-CEOs are more overconfident than other executives working at their firms. Founder-CEOs might also have a different attitude towards risk than successor-CEOs, leading to different investment decisions (Fahlenbrach, 2009).

The study by Tang et al. (2015) offers evidence that firms managed by founder-CEOs tend to take more risks than agent-led firms. This study also shows that the positive relationship between founder-CEO status and firm risk taking weakens when the CEO is younger, when the CEO also chairs the board of directors, and when the CEO's task environment is less uncertain, less complex, and more munificent. Tang et al. (2015) also support findings of Lee et al. (2017) that a founder-CEO, due to his or her innate overconfidence, tends to take more risks. Thus, founder-CEOs pursue riskier innovation projects than do professional CEOs, which could lead both to hits or breakthrough innovations as well as flops or failures (Lee et al., 2020).

On the other hand, Bendickson et al. (2016) argue that, namely, since agents do not have stock or some tie to the firm, this makes them more prone to risk, rather than less prone. This demonstration of moral hazard is perhaps focal to the issue. If the moral hazard argument stands, agency theory's presumption of agent risk-aversion is either incorrect or even more complicated than expected.

1.5. Performance

Past empirical research on the relationship between CEO founder status (i.e., is the CEO also the founder/shareholder?) and firm performance has yielded inconsistent results (Jayaraman et al., 2000). Also, prior research, while somewhat inconsistent, has not found a significant performance impact related to founder-CEO exit (Bamford et al., 2006). This has been especially true as firms' age. Thus, beyond some impact from industry effects and/or small personal ability differences in a sufficiently sized sample, there would be limited impact from the loss of a founder-CEO or subsequent CEO exit event in mature firms (Bamford et al., 2006).

Buy and hold analyses as well as factor regression models by Gao and Jain (2011) provide evidence to indicate that while founder-CEO-led IPO firms outperform non-founder-CEO-led IPO firms, the significance of the results depends on choice of benchmark, portfolio weighting method, and factor regression model used to estimate abnormal returns. As such, they did not find strong or consistent evidence of superior long-run investment performance on the part of founder-CEO-led IPO firms relative to similar non-founder-CEO-led IPO firms. An analogous conclusion was also reached by Lee and Ko (2022) who in their research could not support a presumption of a positive correlation between the presence of founder-CEOs and the foreign firms' longer term survival post-IPO. Willard et al. (1992) found no significant differences in performance between founder-managed and professionally managed firms in the study of 155 mostly high-tech manufacturing firms from the list of the 100 fastest-growing publicly held firms in U.S. On average, founder-managed firms were somewhat (but not significantly) smaller and were growing at a slightly (but not significantly) lower rate. Founder-managed firms also showed higher (but not significantly so) rates of profitability. Employee productivity was virtually identical for both groups of firms. Share price performance of professionally managed firms exceeded that of founder-managed firms by more than was expected, but the difference was not significantly different from zero (Willard et al., 1992). Study of 94 founder- and non-founder-managed U.S. public corporations by Jayaraman et al. (2000) found that founder management has no main effect on stock returns over a 3-year holding period, but that firm size and firm age moderate the CEO founder status-firm performance relationship. Life cycle post-hoc results suggest that performance differences among founder and professional-CEOs across institutions may not differ across a firm's different life cycles (Zaandam et al., 2021).

Bamford et al. (2006) found that the loss of the founder-CEO is strongly related to a performance loss for a new venture. According to Mousa et al. (2014), in the high-tech firms they studied, greater founder-CEO involvement resulted in lower IPO values. Supporting the concerns of agency theorists, this outcome can be explained by a condition where investors feel that these small businesses

are dominated by their founders and are accompanied by less diversity of oversight, or have developed less potent boards, signaling the potential for weak future performance. Findings of research by Abebe and Alvarado (2013) indicate that there is indeed a statistically significant difference between founder-led and non-founder-led firms. The findings of the analysis of 41 matched pair (41 founder-led and 41 non-founder-led) publicly traded U.S. firms indicate a significant negative relationship between founder-CEO leadership and firm performance.

Contrary, Gao and Jain (2012) find that founder management in IPO firms plays a positive role in the market for corporate control and their beneficial influence is enhanced when the board leadership structure is designed to increase their power. According to Abebe and Tangpong (2018), founder-CEO firms have a higher accounting performance and a higher firm valuation, they invest more in research and development (R&D), have higher capital expenditures, and make more focused mergers and acquisitions. Fahlenbrach (2009) also finds that founder-CEO firms produce a higher return on assets and are valued higher than non-founder-CEO firms, they invest more in R&D, have higher capital expenditures, and make more focused mergers and acquisitions. Though, drawing from the research by Kumar et al. (2021), it could be argued that higher valuations are achieved because of the “founder firm premium”, i.e., that acquirers pay for founder human capital upfront which results in higher firm valuation. In the context of high technology IPO firms, founder-CEOs demonstrate substantially superior post-IPO investment performance relative to non-founder-CEOs, regardless of the choice of benchmark, portfolio weighting method or factor regression model used to assess performance (Gao & Jain, 2012). Deb and Wiklund (2017) find strong support for the hypothesis that firms with founder-CEOs have higher levels of entrepreneurial orientation.

Empirical analysis by Chen and Thompson (2015) demonstrates that the positive relationship between founder turnover and subsequent performance appears to be much weaker at firms that already performed well than at firms with lower initial performance. Also, turnover was not unambiguously associated with better subsequent performance; on the one hand, firms that experienced founder turnover were more likely to fail while, on the other hand, the surviving firms among them grew faster.

2. Research methodology

Most private sector companies in Lithuania were established in the last 30 years after the collapse of the Soviet Union. After establishing a company, the sole founder or one of the founders usually assumed the role of a CEO. Since founder-CEOs often consider their firm as their life's achievement (Fahlenbrach, 2009), some of the founders are continuing as CEOs still. On the other hand, over the past 5 to 10 years a substantial proportion of founder-CEOs have reached retirement age and retired from day-to-day management of a firm, while others stepped down

as CEOs admitting their limited managerial capabilities or deciding to focus on other activities and entrusting day-to-day management to professional-CEOs.

Usually, researchers in the field of performance differences of founder-CEO-led and professional-CEO-led companies base their research on publicly available data of IPO companies that are listed on the stock exchanges (e.g., Lee & Ko, 2022; Lee et al., 2020; Mousa et al., 2014; Gao & Jain, 2011) with the main measure being stock market performance. This approach was not valid in the case of Lithuanian companies since the Nasdaq Vilnius stock exchange had only 25 companies listed combined on the Main and Secondary lists as of August 1, 2022. Thus, an alternative approach for evaluating performance differences between founder/shareholder-CEO-led and professional-CEO-led companies were chosen.

A sample of the largest by revenue mature companies in Lithuania were selected and later compared by two of the most common financial measures: (1) revenue growth rate, and (2) profitability.

The List of 1000 Largest Companies in Lithuania 2021 (Verslo Žinios, 2021) which is produced yearly by the business newspaper *Verslo Žinios* was used to create the sample of companies for the research. The most recent available revenue data for the period of 5 years from 2016 to 2020 was used. The law in Lithuania does not require companies to disclose shareholder data publicly, thus, to check if a company's CEO is also a shareholder, secondary sources were used. CEO's name and surname are the domain of public information in Lithuania. To determine if an acting CEO is a shareholder of a company, first, the company's official website was checked. Second, the CEO's profile on LinkedIn, if a such profile exists, was reviewed. Third, other public sources of information, such as news websites, and lists of the richest people in Lithuania were analyzed. As a last resort, information about the company's shareholders was available on request at the database of the Centre of Registers of Lithuania (Centre of Registers).

Because of the limited availability of reliable data about shareholders of smaller companies in the List of 1000 Largest Companies in Lithuania 2021 (Verslo Žinios, 2021), the research was limited to the 300 largest by revenue companies. Then, only companies that meet all the following criteria were selected for the research:

1. Majority of shares in the company are controlled by the private sector (i.e., the company is classified as a private sector firm);
2. The company was fully operational during all the research period;
3. The CEO of a company during the period being researched was either one of the shareholders or a professional manager;
4. The CEO of a company is not a family member of shareholder(s), since family members cannot be classified as purely shareholder-CEOs or professional-CEOs;

5. The company has submitted financial statements to the Centre of Registers for at least years 2016 and 2020;
6. Reliable data on CEO status (shareholder-CEO or professional-CEO) could be acquired.

Following the criteria, 255 companies were selected for further evaluation.

According to Ang et al. (2000), there are significant differences in agency costs among industries. Also, it is reasonable to analyze separate industries because different industries display different patterns of disclosure (Botosan, 1997). Thus, to control for the influence on company performance of business cycles in different industries, a decision was made to only compare the performance of companies from the same industry. Since, the goal of this paper is to compare performance of shareholder-led and professional-manager-led companies, the research was limited to only those industries that had at least 5 of shareholder-CEO-led and professional-CEO-led companies apiece.

In total 205 companies from the following industries were selected for the evaluation (see Table 1 for distribution of companies among industries):

- Manufacturing;
- Wholesale and retail trade;
- Logistics and storage.

Table 1. Distribution of companies by sector and CEO type in the research sample

Sector	Shareholder-CEO		Professional-CEO		Total
	Sample	% of sample	Sample	% of sample	
Manufacturing	11	17%	55	83%	66
Wholesale and retail trade	32	30%	75	70%	107
Logistics and storage	7	22%	25	78%	32
Total	50	24%	155	76%	205

Revenue and profit data of companies in the research sample in thousands of Euros for years the 2016 and 2020 were taken from the List of 1000 Largest Companies in Lithuania 2017 (Verslo Žinios, 2017) and 2021 (Verslo Žinios, 2021) respectively, which are based on the data that companies are required to submit every year to the Centre of Registers. In rear cases that some of the data was not available in the lists, it was supplemented by revenue and/or profit data from public databases that are as well based on the same data provided by the Centre of Registers.

The hypotheses of this study were formulated as follows:

Hypothesis H1a. There is a significant difference in revenue growth rate between shareholder-CEO-led and professional-CEO-led large companies in the Manufacturing sector.

Hypothesis H1b. There is a significant difference in revenue growth rate between shareholder-CEO-led and professional-CEO-led large companies in the Wholesale and retail trade sector.

Hypothesis H1c. There is a significant difference in revenue growth rate between shareholder-CEO-led and professional-CEO-led large companies in the Logistics and storage sector.

Hypothesis H2a. There is a significant difference in profitability between shareholder-CEO-led and professional-CEO-led large companies in the Manufacturing sector.

Hypothesis H2b. There is a significant difference in profitability between shareholder-CEO-led and professional-CEO-led large companies in the Wholesale and retail trade sector.

Hypothesis H2c. There is a significant difference in profitability between shareholder-CEO-led and professional-CEO-led large companies in the Logistics and storage sector.

2.1. Revenue growth rate

To moderate for different sizes of the companies in the sample, revenue growth was measured in percentages, rather than absolute values. Compound annual growth rate (CAGR) was used to measure revenue growth for a single company using the following formula:

$$CAGR = \left[\left(\frac{EV}{BV} \right)^{\frac{1}{n}} - 1 \right] \times 100\%, \quad (1)$$

where: *BV* – beginning value (revenue for 2016), *EV* – ending value (revenue for 2020), *n* – number of periods (*n* = 4).

In the valuation of significance of difference in revenue growth rate CEO status (shareholder-CEO or professional-CEO) is an independent variable, while revenue growth is dependent variable.

2.2. Profitability

To moderate for different sizes of the companies in the sample, profitability was measured in percentages, rather than absolute values. Since not all the companies in the research sample have submitted net profit results to the Centre of Registers for the whole research period, profit before taxes was used to measure profitability in this study. Profitability for a single company was calculated using the following formula:

$$Profitability = \left(\frac{P_1 + P_n}{R_1 + R_n} \right) \times 100\%, \quad (2)$$

where: *P*₁ – profit before taxes for the 1st year of analysis (2016), *P*_{*n*} – profit before taxes for the last year of analysis

(2020), R_1 – revenue for the 1st year of analysis (2016), R_n – revenue for the last year of analysis (2020).

In the valuation of significance of difference in profitability CEO status (shareholder-CEO or professional-CEO) is an independent variable, while profitability is dependent variable.

3. Results

3.1. Revenue growth rate

Revenue CAGR from the year 2016 to 2020 at the selected Manufacturing sector companies (N = 66) constituted 9.17%, Wholesale and retail sector (N = 107) – 15.29%, and Logistics and storage sector (N = 32) – 25.2%. Revenue at Manufacturing sector companies grew faster when CEOs were also shareholders: 12.55% vs. 8.49%. On the other hand, at Wholesale and retail trade sector as well as Logistics and storage sector companies the opposite trend was observed, i.e., revenue grew faster at professional-CEO-led companies: for Wholesale and retail trade sector – 16.82% vs. 11.71%, for Logistics and storage sector – 26.8% vs. 19.44%. See Table 2 for full revenue growth group statistics.

An independent-samples t-test was conducted to determine whether there is a significant difference in revenue growth in companies that are led by either shareholder-CEOs or professional-CEOs (see Table 3).

Hypothesis H1a. t-test results for the Manufacturing sector sample did not indicate a significant difference in

revenue growth between companies that are led by shareholder-CEOs (M = 0.125480, SD = 0.0823359) and professional-CEOs (M = 0.084910, SD = 0.1522574), [t(64) = -0.855, p = 0.396 > 0.05]. The 95% confidence interval of the difference between means ranged from -0.1353182 to 0.0541771 and did not indicate a difference between the means of the sample. Consequently, the null hypothesis cannot be rejected.

Hypothesis H1b. t-test results for the Wholesale and retail trade sector sample did not indicate a significant difference in revenue growth between companies that are led by shareholder-CEOs (M = 0.117103, SD = 0.1538748) and professional-CEOs (M = 0.168186, SD = 0.3541613), [t(105) = 0.783, p = 0.435 > 0.05]. The 95% confidence interval of the difference between means ranged from -0.0782221 to 0.1803892 and did not indicate a difference between the means of the sample. Consequently, the null hypothesis cannot be rejected.

Hypothesis H1c. t-test results for the Logistics and storage sector sample did not indicate a significant difference in revenue growth between companies that are led by shareholder-CEOs (M = 0.194400, SD = 0.0850900) and professional-CEOs (M = 0.268084, SD = 0.4789146), [t(30) = 0.401, p = 0.691 > 0.05]. The 95% confidence interval of the difference between means ranged from -0.3018763 to 0.4492443 and did not indicate a difference between the means of the sample. Consequently, the null hypothesis cannot be rejected.

Table 2. Revenue growth group statistics

Sector	CEO status	N	Mean	St. Deviation	Median
1. Manufacturing	1.1. Shareholder	11	0.125480	0.0823359	0.098194
	1.2. Professional	55	0.084910	0.1522574	0.052152
	1.3. Total	66	0.091671	0.1432978	0.054781
2. Wholesale and retail trade	2.1. Shareholder	32	0.117103	0.1538748	0.082694
	2.2. Professional	75	0.168186	0.3541613	0.077445
	2.3. Total	107	0.152909	0.3082875	0.080668
3. Logistics and storage	3.1. Shareholder	7	0.194400	0.0850900	0.205000
	3.2. Professional	25	0.268084	0.4789146	0.178100
	3.3. Total	32	0.251966	0.4241787	0.195950

Table 3. Revenue growth independent samples t-test results

Sector	Levine's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Two-Sided P	Mean Difference	Std. Error Difference	Lower	Upper
1. Manufacturing	0.675	0.415	-0.855	64	0.396	-0.0405706	0.0474277	-0.1353182	0.0541771
2. Wholesale and retail trade	1.136	0.289	0.783	105	0.435	0.0510836	0.0652132	-0.0782221	0.1803892
3. Logistics and storage	1.009	0.323	0.401	30	0.691	0.0736840	0.1838934	-0.3018763	0.4492443

Table 4. Revenue growth independent samples effect sizes

Sector	Measurement	Standardizer	Point Estimate	95% Confidence Interval of the Difference	
				Lower	Upper
1. Manufacturing	1.1. Cohen's d	0.1435944	-0.283	-0.931	0.368
	1.2. Hedges' g	0.1453050	-0.279	-0.920	0.363
2. Wholesale and retail trade	2.1. Cohen's d	0.3088510	0.165	-0.249	0.579
	2.2. Hedges' g	0.3110792	0.164	-0.248	0.575
3. Logistics and storage	3.1. Cohen's d	0.4300412	0.171	-0.669	1.009
	3.2. Hedges' g	0.4411790	0.167	-0.652	0.984

To additionally validate t-test results, revenue growth independent samples effect sizes were also calculated (see Table 4). Cohen's d and Hedges' g values of less than 0.2 indicate that difference in revenue growth between shareholder-CEO-led and professional-CEO-led companies in the sample was trivial.

3.2. Profitability

Profitability for the period from the year 2016 to 2020 at the selected Manufacturing sector companies (N = 66) constituted 8.01%, Wholesale and retail sector (N = 107) – 2.75%, and Logistics and storage sector (N = 32) – 5.65%. Profitability at Wholesale and retail sector companies was higher when CEOs were also shareholders: 3.17% vs. 2.57%. On the other hand, at Manufacturing sector as well as Logistics and storage sector companies the opposite

trend was observed, i.e., profitability was higher at professional-CEO-led companies: for Manufacturing sector – 8.08% vs. 7.68%, for Logistics and storage sector – 6.25% vs. 3.50%. See Table 5 for full profitability group statistics.

An independent-samples t-test was conducted to determine whether there is a significant difference in profitability in companies that are led by either shareholder-CEOs or professional-CEOs (see Table 6).

Hypothesis H2a. t-test results for the Manufacturing sector sample did not indicate a significant difference in profitability between companies that are led by shareholder-CEOs (M = 0.076777, SD = 0.0614148) and professional-CEOs (M = 0.080803, SD = 0.0992046), [t(64) = -0.129, p = 0.898 > 0.05]. The 95% confidence interval of the difference between means ranged from -0.0581985 to 0.0662498 and did not indicate a difference between the

Table 5. Profitability group statistics

Sector	CEO status	N	Mean	St. Deviation	Median
1. Manufacturing	1.1. Shareholder	11	0.076777	0.0614148	0.072417
	1.2. Professional	55	0.080803	0.0992046	0.054519
	1.3. Total	66	0.080132	0.0935875	0.055005
2. Wholesale and retail trade	2.1. Shareholder	32	0.031726	0.0423500	0.021973
	2.2. Professional	75	0.025744	0.0297654	0.019277
	2.3. Total	107	0.027533	0.0339206	0.019767
3. Logistics and storage	3.1. Shareholder	7	0.035049	0.0152863	0.035429
	3.2. Professional	25	0.062537	0.0467800	0.051618
	3.3. Total	32	0.056524	0.0432751	0.046503

Table 6. Profitability independent samples t-test results

Sector	Levine's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
1. Manufacturing	0.266	0.608	0.129	64	0.898	0.0040257	0.0311474	-0.0581985	0.0662498
2. Wholesale and retail trade	0.332	0.566	-0.834	105	0.406	-0.0059814	0.0071726	-0.0202033	0.0082405
3. Logistics and storage	2.310	0.139	1.516	30	0.140	0.0274877	0.0181293	-0.0095373	0.0645127

Table 7. Revenue growth independent samples effect sizes

Sector	Measurement	Standardizer	Point Estimate	95% Confidence Interval of the Difference	
				Lower	Upper
1. Manufacturing	1.1. Cohen's d	0.0943035	0.043	-0.605	0.690
	1.2. Hedges' g	0.0954569	0.042	-0.598	0.682
2. Wholesale and retail trade	2.1. Cohen's d	0.0339694	-0.176	-0.590	0.239
	2.2. Hedges' g	0.0342145	-0.175	-0.586	0.237
3. Logistics and storage	3.1. Cohen's d	0.0423960	0.648	-0.211	1.497
	3.2. Hedges' g	0.0434941	0.632	-0.205	1.459

means of the sample. Consequently, the null hypothesis cannot be rejected.

Hypothesis H2b. t-test results for the Wholesale and retail trade sector sample did not indicate a significant difference in profitability between companies that are led by shareholder-CEOs ($M = 0.031726$, $SD = 0.0423500$) and professional-CEOs ($M = 0.025744$, $SD = 0.0297654$), [$t(105) = -0.834$, $p = 0.406 > 0.05$]. The 95% confidence interval of the difference between means ranged from -0.0202033 to 0.0082405 and did not indicate a difference between the means of the sample. Consequently, the null hypothesis cannot be rejected.

Hypothesis H2c. t-test results for the Logistics and storage sector sample did not indicate a significant difference in profitability between companies that are led by shareholder-CEOs ($M = 0.035049$, $SD = 0.0152863$) and professional-CEOs ($M = 0.062537$, $SD = 0.0467800$), [$t(30) = 1.516$, $p = 0.140 > 0.05$]. The 95% confidence interval of the difference between means ranged from -0.0095373 to 0.0645127 and did not indicate a difference between the means of the sample. Consequently, the null hypothesis cannot be rejected.

To additionally validate t-test results, revenue growth independent samples effect sizes were also calculated (see Table 7). Cohen's d and Hedges' g values of less than 0.2 indicate that difference in profitability between shareholder-CEO-led and professional-CEO-led companies in the sample of Manufacturing sector companies and Wholesale and retail trade sector companies was trivial. For Logistics and storage sector companies Cohen's d and Hedges' g values of more than 0.5 but less than 0.8 indicate a medium effect of a difference in profitability between shareholder-CEO-led and professional-CEO-led companies.

4. Discussion

The purpose of this study was to evaluate if there are significant differences in performance between founder/shareholder-CEO-led and professional-CEO-led largest companies in Lithuania. Through the review of scientific literature and then empirical research this study was successful in coming to conclusive findings.

The review of scientific literature on the differences in performance between founder/shareholder-CEOs and professional-CEOs established that there are indeed clear

differences between the two groups of CEOs in motivational factors, managerial ability, and risk-taking decisions. Also, it was established that a relationship between shareholders in a company and a professional-CEO creates agency costs, which should be treated as any other costs. On the other hand, no consensus among scholars on the influence of the differences on the performance of companies led by either founder/shareholder-CEOs or professional-CEOs was found. Though it can be speculated that the dominant opinion among scholars is of differences in performance being insignificant.

First, using an independent-samples t-test no significant differences in revenue growth in companies that are led by either shareholder-CEOs or professional-CEOs were observed. *Second*, using the same tool for analysis no significant differences in profitability in companies that are led by either shareholder-CEOs or professional-CEOs were observed.

With the conclusion that there are no significant differences in performance between founder/shareholder-CEO-led and professional-CEO-led large companies this study supports and supplements findings by Lee and Ko (2022), Zaandam et al. (2021), Gao and Jain (2011), Jayaraman et al. (2000), Willard et al. (1992) and others.

This study also confirms the generalization by Bamford et al. (2006) that the influence of a CEO diminishes as companies grow. New ventures are strongly influenced by a founder or group of founders/shareholders who are actively involved in the day-to-day operations of a company, and who use their human and social capital as the basis of the venture's activities. As companies grow and mature *ad hoc* actions are replaced by processes and procedures, management, planning, and reporting structures are put in place, and the company's human and social capital base is expanded. In this case influence of a single person on a company's performance – founder/shareholder-CEO or professional-CEO – gets diminished as shown by the results of this study.

On the other hand, since a CEO is still responsible for the implementation of the strategic decisions of a company, there is no denying that his or her influence on the company remains strong. Still, most large companies institute boards of directors as an even higher management body that is responsible for strategic decisions and oversight of a CEO, thus reducing the influence of a single person.

Conclusions

In summary, this study was successful in adding to the debate on performance differences between founder/shareholder-CEO-led and professional-CEO-led companies by coming to conclusive findings while deviating from the predominant research path of evaluating IPO firms.

In this study company performance was evaluated using two of the most common financial metrics: (1) the compound annual growth rate of revenue, and (2) profitability in the 5-year period from the years 2016 to 2020. 205 of the largest by annual revenue companies in Lithuania that represent Manufacturing, Wholesale and retail trade, and Logistics and storage sectors were selected for evaluation. To control for the influence on company performance of business cycles in different industries, companies were compared only on an intra-sector basis. 24% of the companies in the sample were led by founders/shareholders as CEOs, while the CEOs of 76% of the companies in the sample were professional managers, i.e., not founders nor shareholders of the companies they led. No significant differences in performance were observed.

Despite the conclusive results of the research in this study, four limitations must be considered. *First*, companies in the research sample represent only three sectors of the economy – Manufacturing, Wholesale and retail trade, Logistics and storage. Though these sectors constitute up to 50% of Lithuania's gross domestic product (Statistics Lithuania, 2019), still around half of the economy was not represented in the research. *Second*, the scope of the research was limited by publicly available data on CEO status as a shareholder/founder, i.e., with more available data the research could be expanded further to include a larger sample of companies. *Third*, this study focused on revenue growth and profitability as measures of the performance of companies and, respectively, CEOs. While the value of companies cannot be used as a measure because of the lack of publicly traded IPO companies in Lithuania, other criteria such as return on equity, return on assets, and corporate social responsibility behavior could be used in further research to evaluate performance differences. *Finally*, since there are significant size effects between small and large companies (Gray & Mabey, 2016), a similar study of small and medium enterprises may yield different results.

Despite the limitations, the results of this study could be useful to management practitioners, shareholders, directors of boards, and CEOs. I believe that especially founder/shareholder-CEOs of large companies who consider their company their life's work but are reaching retirement age should benefit from the findings of this study that most likely performance of their company would not be negatively affected by the event of succession by a professional-CEO.

Disclosure statement

The author does not have any competing financial, professional, or personal interests from other parties.

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