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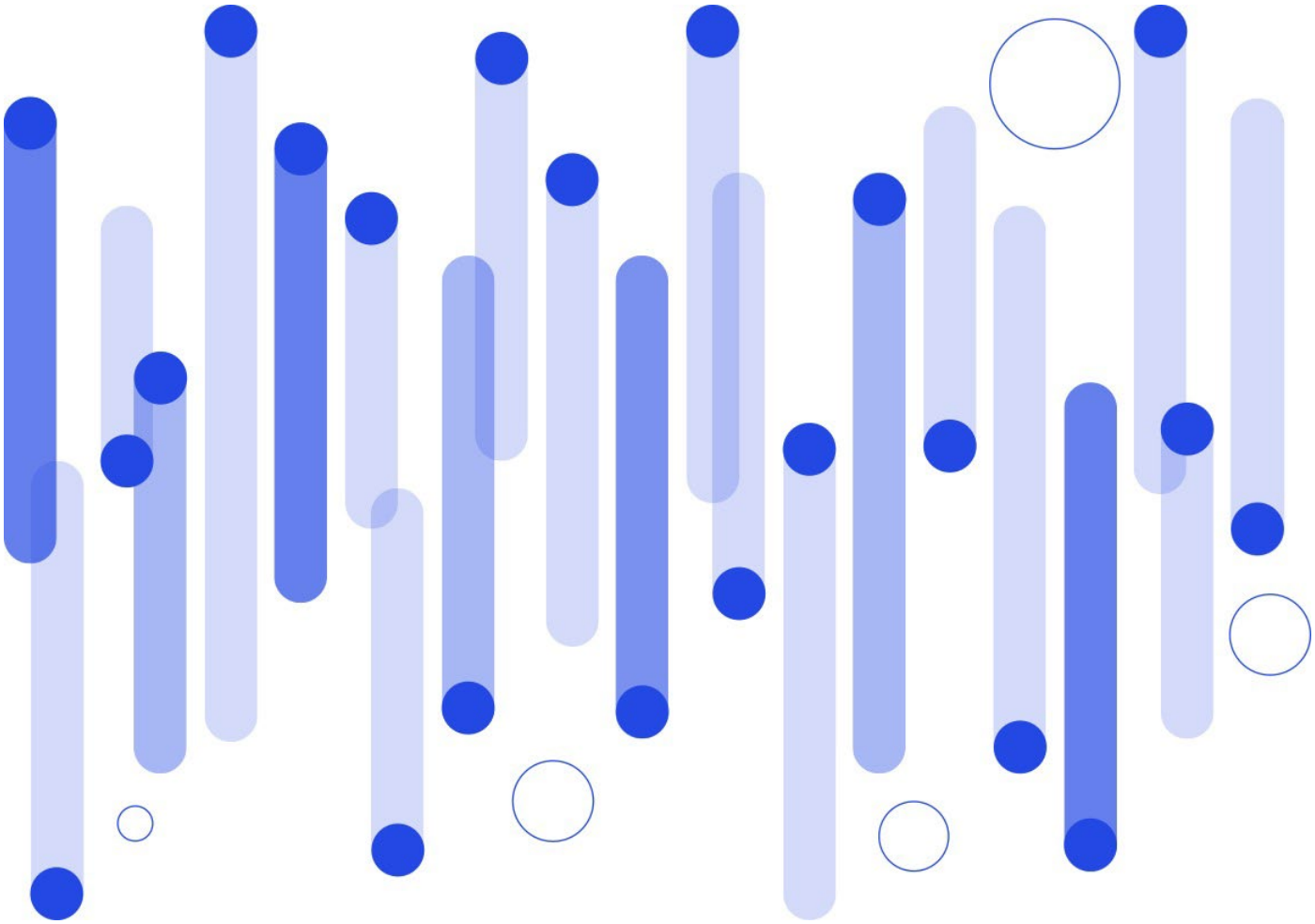

From investment to impact: how EIF supports governance evolution in Mid-Market firms

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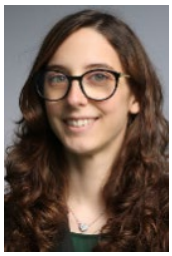

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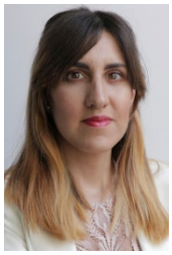

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Preface

Growth-phase companies in Europe often face limited access to equity and hybrid debt-equity financing. Private investors may consider these firms too large for early-stage venture capital yet not sufficiently appealing for large-scale private equity investments.

To address this gap, the EIF supports growth, expansion, and mid-market funds through its lower mid-market (LMM) activity. These funds are managed by first-time teams, emerging managers, or more established managers. Their objectives include fostering company growth, enhancing management professionalism, improving internal processes, facilitating family succession, and implementing turnaround strategies for distressed firms.

By facilitating access to financing and mitigating market shortcomings, the EIF plays a crucial role in the LMM space. As such, assessing the impact of this support is of critical importance. The EIF's interventions not only assist firms during pivotal growth stages but also aim to drive innovation, enhance productivity, and create jobs. Therefore, impact assessment should consider not only return metrics but also observable changes in firm performance and wider economic effects.

Building directly on the evidence and methodological framework established in the previous study (Bertoni et al., 2025), this new assessment deepens the analysis by investigating the organisational mechanisms through which LMM investments drive value creation. In particular, it focuses on CEO and management team renewal, managerial professionalisation, and the emergence of more formalised governance systems within portfolio companies.

This study employs advanced econometric techniques to rigorously compare firms that received EIF-backed equity financing with those that did not, enabling the isolation of causal effects. By applying this causal inference approach, the analysis provides credible evidence of the impact of LMM investments on managerial, organisational and governance outcomes.

The EIF has a strong tradition of conducting rigorous impact assessments. Through access to large-scale microdata and collaborations with leading academics, the EIF has developed a robust methodological framework and extensive expertise in evaluating the impact of its activities, including equity investments, guarantees, and other financial instruments.

This study holds significant policy relevance by offering valuable insights into the effectiveness of equity investments in supporting the professionalisation and governance upgrading of LMM firms. By complementing the findings of its predecessor, this study provides a more granular understanding of how LMM investments contribute to long-term competitiveness in Europe’s mid-market segment, reinforcing the EIF’s commitment to evidence-based policy and continuous improvement of its equity activities.

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Executive summary[1]

This report assesses the impact of EIF-supported Lower Mid-Market (LMM) private equity (PE) investments on the managerial professionalisation of portfolio companies. LMM investments can also act as a key exit route for early-stage VC-backed companies, often through institutional buyouts. This transition supports continued growth and leadership professionalisation, with a notable share of portfolio firms in our analysis (17%) having previously received VC funding.

Building on the earlier study *"Assessing the Economic Impact of EIF-Supported Equity Financing: The Case of the Lower Mid-Market"* (Bertoni et al., 2025), which focused on firm growth and financial performance, this second report investigates the organisational mechanisms through which LMM investments drive value creation, particularly Chief Executive Officer (CEO) renewal, top management team (TMT) composition, and the ensuing emergence of more formalised governance systems.

The EIF's LMM investment strategy targets established small and medium-sized enterprises (SMEs) and midcaps, typically providing equity tickets between 5–15 million EUR[2]. As of December 2024, around 16.5 billion EUR had been allocated to this segment. While prior analyses (Bertoni et al., 2025) revealed that LMM-backed firms experienced significantly higher post-investment growth in various metrics[3], they also showed no significant turnover gains and a short-term decline in labour productivity. These patterns suggested that LMM investments may initially fuel internal transformation, strengthening managerial and organisational capabilities, before translating into productivity and market expansion. The present study empirically tests this mechanism, analysing whether and how LMM investors drive managerial renewal and organisational upgrading within their investee companies to equip them for the next stage of their expansion (often evolving from local players to international challengers).

The analysis combines the EIF LMM investment dataset (2007–2023) with firm-level accounting data from Orbis and workforce data from Revelio Labs, covering 826 treated and 950 matched control firms. Using Coarsened Exact Matching (CEM), Propensity Score Matching (PSM), and difference-in-differences panel regressions, the study ensures comparability between invested and non-invested firms and isolates the causal effects of LMM investment on managerial outcomes.

The results show that LMM investments are associated with a substantial increase in CEO renewal, with treated firms being 2.5 times more likely to replace their CEO after investment compared with non-treated firms. This effect is concentrated in the first year following the investment and driven primarily by the appointment of external CEOs, indicating that LMM investors actively intervene to realign firms' strategic direction and governance practises. Beyond CEO renewal, LMM-backed firms significantly expand and diversify their TMT, increasing the number of functional areas represented by nearly half (0.44) an additional function on average. New TMT roles arise especially in finance,

[1] We are grateful for the valuable input from many EIF colleagues, especially Andrea Crisanti and Elena Stasi from Impact Assessment, and Marco Natoli for insightful comments and review.
[2] As these are typically equity tickets for small mid-caps. Otherwise, when investing in mid-caps, funds typically invest EUR 25-50 (or more, selectively).
[3] In Bertoni et al. (2025), companies saw a 6.5% higher growth in total assets, and a 3.6% higher growth in employee costs compared to control companies. Notably, they experienced a 148% higher growth in intangible assets, which our proxy for innovation.

sales, and business development, reflecting a shift toward better structured organisational setups with enhanced financial oversight, market orientation, and strategic planning capability.

This report complements the results of Bertoni et al. (2025) by revealing the mechanisms that underpin LMM-driven firm growth. The increases in intangible assets and employment costs documented in our first study can be interpreted as manifestations of the organisational and human-capital investments uncovered in this study, particularly those linked to CEO renewal and managerial upgrading. Indeed, the rise in employment costs can be directly attributed to the hiring of more experienced and (presumably) higher-paid managers. Consequently, the short-term drop in labour productivity aligns with firms investing in human capital before seeing improvements in performance.

The CEO renewal and reinforcement of key TMT functions such as finance, product development, and commercial operations, supported by the introduction of new senior managers, enables firms to build more structured processes, stronger internal capabilities, and more formalised organisational systems. These developments foster strategic reorientations that are conducive to improved intellectual property management and higher levels of intangible capital (Barron et al., 2011; Amess et al., 2016). Notably, we find that the effect of LMM investments on new CEO appointments is more pronounced in firms with low pre-investment levels of intangible assets. Coherently with the broader evidence presented in this report, this pattern suggests that such firms tend to enter the deal with less developed managerial and organisational structures, and are therefore those in which LMM investors intervene more decisively to re-build or upgrade leadership and reinforce governance.

In conclusion, the evidence demonstrates that EIF-supported LMM investors generate relevant organisational and governance improvements in portfolio firms, reinforcing the role of private equity as a driver of professionalisation and long-term competitiveness in Europe’s mid-market segment.

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1 Introduction

This report aims to assess the impact of equity financing from private equity investors – supported by the European Investment Fund (EIF) under its "Lower Mid-Market" (LMM) investment strategy – on the managerial professionalisation of target companies. As of December 2024, the EIF allocated approximately 16.5 billion EUR to this segment. Examining the short- and long-term effects of these initiatives is crucial to informing future policies that seek to enhance managerial capabilities and governance quality within growing firms.

1.1 The definition of LMM

This work builds on the framework provided by the EIF working paper "Assessing the Economic Impact of EIF-Supported Equity Financing: The Case of the Lower Mid-Market" (Bertoni et al., 2025).

The "Mid-Market" refers to private equity (PE) transactions involving smaller, privately held companies, distinct from large public-to-private buyouts (Kaplan & Strömberg, 2009; Davis et al., 2021). Although definitions vary, mid-market deals generally range between $25–1,000 million (source: Pitchbook) or £10–100 million in equity investment (source: BVCA[4]). Within this segment, the "Lower Mid-Market" (LMM) encompasses smaller transactions – roughly £5–15 million in equity or £10–50 million in total value (source: BVCA) – and is characterised by national or regional funds managing under £200 million. LMM deals often involve management buyouts or buy-ins aimed at strengthening or replacing management teams, sometimes as part of buy-and-build strategies (Hammer et al., 2022), typically targeting family-owned firms and achieving exits through trade sales or secondary buyouts within three to five years.

LMM investments can play an important role as an exit route for VC-backed companies, often through institutional buyouts. In our sample, a substantial share of companies (17%) had previously received VC funding prior to their LMM investment, underscoring the importance of LMM deals in the broader investment lifecycle. As companies mature beyond the scope of conventional venture capital investors, LMM funds can provide a natural next step, supporting further scaling-up and expansion, and promoting the transition to more institutionalised governance.

1.2 Aim of the study

Building on the findings of the previous EIF working paper "Assessing the Economic Impact of EIF-Supported Equity Financing: The Case of the Lower Mid-Market" (Bertoni et al., 2025), this study aims to deepen the understanding of how LMM investments contribute to managerial professionalisation of portfolio companies. The earlier analysis revealed that such investments significantly foster firm growth, particularly in total assets, intangible assets, and employment costs,

[4] British Private Equity & Venture Capital Association.

while showing a negative effect on one measure of productivity growth (i.e. the ratio of turnover to employment costs).

These results suggested that LMM investors catalyse firm growth primarily by enabling investees to undertake innovative projects and recruit skilled talent, as evidenced by significant increases in total assets, intangible assets, and employment costs. In Bertoni et al. (2025), we hypothesised that the observed rise in employment costs likely reflects the deliberate expansion of managerial functions and the recruitment of more highly skilled executives, leading to increased compensation levels that may not yield immediate gains in turnover.

The negative productivity effect may, thus, signal a transitional phase, marked by the lag between resource input (especially in talent and innovation) and output realisation, consistent with a staged impact pathway: LMM investments may initially drive internal transformation, with financial and market returns accruing over a longer horizon.

In the present study, therefore, we seek to examine and validate this hypothesised mechanism, through which LMM investors promote managerial and organisational changes, such as CEO replacement and the introduction of new management structures and roles, that likely lead to operational improvements.

1.3 The impact of PE investors on investees' managerial professionalisation

Prior studies have examined the impact of PE investments on investees' managerial professionalisation, while the specific implications of LMM PE deals have received only limited attention. We next review the main findings from the broader PE literature to contextualize our study. PE buyouts involve the acquisition of majority control of mature companies by financial intermediaries, i.e. PE funds, using a combination of equity and debt financing. These transactions are designed to generate superior financial returns for investors, but their broader "real impact" on portfolio companies, particularly in terms of operational efficiency, growth, and managerial professionalisation, remains debated (Degeorge et al., 2016; Morris & Phalippou, 2020).

Empirical research offers mixed evidence: while some studies find that PE ownership improves operational efficiency and stimulates growth (Meuleman, Amess, et al., 2009; Meuleman, Wright, et al., 2009; Alperovych et al., 2013; Jelic et al., 2019; Cohn et al., 2022), others report neutral or negative effects (Antoni et al., 2019). The heterogeneity in findings reflects both the complexity of isolating a causal relationship on organisational performance and the contextual dependence of PE's influence on the institutional environment peculiar to different countries (Verbouw et al., 2025), which shapes the effectiveness of governance mechanisms and ownership structures (Capron & Guillén, 2009; Aguilera & Jackson, 2010; Bruton et al., 2010; Cumming et al., 2010).

A central mechanism through which PE investors exert post-deal influence is governance and the introduction of organisational changes and managerial practises aimed at enhancing control, accountability, and value creation. PE investors play a crucial role in "professionalising" management. This process involves formalising decision-making structures, implementing performance monitoring tools, and recruiting specialised managerial talent. While the meta-analytic work by Verbouw et al. (2025) and related studies underscore PE's potential to drive operational improvements, the degree of professionalisation achieved depends largely on the nature of the pre-buyout organisation and the investor's governance approach. In companies previously characterised by concentrated ownership and informal management, PE intervention often represents a shift toward institutionalised corporate governance practises and a stronger performance orientation.

A key aspect of this PE-driven transformation concerns CEO replacement. Gong and Wu (2011) provide evidence on the governance role of PE sponsors in post-buyout firms in the U.S. Using a sample of 126 PE-sponsored LBOs between 1990 and 2006, they document a CEO turnover rate of 51% within two years of acquisition. Their results indicate that PE-backed boards tend to replace CEOs in firms exhibiting high agency costs – characterised by low leverage, high undistributed free cash flow, and low pre-buyout return on assets. Importantly, the study highlights that PE boards are more willing than those of public companies to dismiss entrenched or underperforming executives. This finding supports the agency theory perspective that PE ownership mitigates agency problems by tightening managerial discipline and aligning incentives.

Beyond CEO replacement, professionalisation under PE ownership extends to the broader managerial structure and internal control systems. Although not always explicitly quantified, the introduction of new executive talent – such as CFOs (Chief Financial Officers) and COOs (Chief Operating Officers) with experience in larger organisations – enhances firms' ability to execute strategic and operational plans effectively. Such changes reflect PE's broader governance engineering, which, as noted by Verbouw et al. (2025), represents a central dimension of their "real impact" on portfolio companies' efficiency and long-term growth prospects.

In addition, insights from the Venture Capital (VC) literature illuminate the relationship between investor involvement and CEO renewal. Although PE and VC operate in different contexts the underlying governance rationale is comparable: both investor types intervene to optimize leadership when they deem it necessary for value creation. Lerner (1995) provides early evidence that the presence of VCs on companies' boards increases the likelihood of CEO turnover. Similarly, Hellmann and Puri (2002) show that the receipt of VC funding is positively associated with CEO replacement, as investors seek to professionalise management and align leadership capabilities with the firm's growth trajectory.

Conti and Graham (2022) further investigate the influence of prominent VCs on CEO replacement, defining VC prominence through network centrality and reputation. Their analysis demonstrates that companies backed by prominent VCs experience CEO turnover more frequently and more rapidly than others, especially when incumbent CEOs are entrenched or possess highly technical expertise. Moreover, replacement CEOs tend to be experienced outsiders, often with prior CEO experience, and their appointment correlates with higher post- renewal performance. This evidence parallels the

governance logic observed in PE-backed buyouts, where investors act to replace ineffective leadership and introduce managerial expertise that fosters subsequent firm growth and performance.

Taken together, the literature on PE investments highlights the centrality of governance intervention – particularly through CEO replacement and managerial professionalisation – in driving performance improvements.

1.4 Contributions of this study

The Mid-Market segment has attracted less scholarly attention than large-scale PE buyouts, and empirical evidence on the specific dynamics of LMM remains particularly limited. This paper contributes to advancing understanding in this area by analysing the causal impact of EIF-supported LMM investments on the governance and managerial structures of beneficiary companies. For this purpose, we investigate a sample of 992 LMM investments[5] undertaken by EIF-backed LMM investors between 2007 and 2023. These include majority investments (ownerships higher than 30%), typically targeting well-established SMEs.

We examine a comprehensive set of variables, encompassing CEO replacement, the size and composition of top management teams, and the creation of new functional positions within the top management teams. We employ Coarsened Exact Matching and Propensity Score Matching techniques to identify an appropriate counterfactual of non-invested companies with similar pre-investment characteristics. Then, the empirical design incorporates fixed-effect panel regressions to account for unobserved heterogeneity and time-invariant firm characteristics, alongside a series of robustness checks to ensure the consistency and reliability of our findings.

The results reveal a pronounced reconfiguration of corporate leadership following LMM investments. Beneficiary firms experience a significantly higher rate of CEO renewal compared to their matched peers, with a clear tendency toward the appointment of external executives compared to the promotion of internal managers. This shift signals an active investor role in aligning managerial profiles with strategic growth objectives and governance professionalisation.

Moreover, LMM-backed companies demonstrate a notable expansion of their top management teams, not merely by increasing the number of managers but by introducing new specialised functional roles. New managerial functions emerge particularly in areas such as finance, sales, and business development, reflecting a move toward more structured, professionalized management practises. This diversification of expertise within the executive team enhances the firm's strategic and operational capacity, facilitating scaling processes, and more rigorous performance monitoring. This is in line with the typical investment strategy of LMM investor teams as already shown by our previous report on LMM impact on investee companies (Bertoni et al., 2025), showing an increase in company growth and employment costs after LMM investment.

Overall, the evidence indicates that LMM investors - as part of their recipe for success - act as catalysts for managerial and organisational upgrading. Their involvement extends beyond financial

[5] Of the 992 companies, 826 are classified under the Main Treatment group and 166 under the Secondary Treatment group. For a detailed explanation of the differences between these two groups, see Bertoni et al. (2025).

support to include governance restructuring, leadership renewal, and the introduction of new formal managerial roles. The rest of the report is structured as follows: in Section 2, we describe the data source, the sample construction, and the econometric techniques used in this study. In Section 3, we present the results of the empirical analysis. Finally, Section 4 presents the conclusions and proposes future research directions.

2 Methods

2.1 Sample construction

For this study, we started from a sample of target companies drawn from the EIF dataset covering investments made by EIF-backed investors between 2007 and 2023. Following the same multi-step filtering criteria applied in Bertoni et al. (2025), we identified the investments qualifying as Lower Mid-Market (LMM) deals, discarding investments where both the total invested amount was below 7.5 million EUR and the maximum stake was below 30%. Moreover, with respect to the geographical scope, we focused exclusively on investments received by companies located in the European Union, the United Kingdom, Norway, and Switzerland. Finally, we excluded all follow-on investments, as well as early-stage, venture debt, and hybrid debt–equity deals. After merging the resulting set of investments with Orbis to retrieve accounting information, we removed companies with missing key information, such as incorporation year or NACE industry code, and further restricted our sample to include only those investments where the target companies had non-missing values for total assets, either in the year before or in the same year as the first LMM investment. We focused exclusively on companies with available total assets data, since firms' size (measured through total assets) is a crucial control variable in our estimates.

The final set of treated companies consists of 1,483 investments in the Main Treatment group, that is, companies receiving investments where the cumulated equity stake exceeded 30% over a five-and-a-half-year period from the first investment, and 274 investments in the Secondary Treatment group, corresponding to cases where the cumulated invested amount was at least 7.5 million EUR but the equity stake remained below 30% over the same period. For further details about the construction of the treated sample, we refer to Bertoni et al. (2025).

Moreover, we built a control sample starting from a random set of companies extracted from Orbis, operating in the same countries and incorporated in the same years as the treated firms (treatment-to-control ratio 1:400), excluding those that had received LMM investments from non-EIF-backed private equity investors. As in Bertoni et al. (2025), we applied a two-step matching procedure combining Coarsened Exact Matching (CEM) and Propensity Score Matching (PSM) to ensure comparability between treated and control firms.

The CEM was performed for each investment year between 2007 and 2023 (17 years in total) based on the following variables: company age, geographic area, main industry of operation, total assets and EBITDA.[6] This procedure generated 51,000 strata, allowing us to match 1,378 companies in the Main Treatment group and 223 in the Secondary Treatment group.

Subsequently, we implemented a 1:3 PSM model, based on the lagged value of total assets (in natural logarithm), company age (in logarithm), industry classification (five categories as in the CEM,

[6] The specific data clustering criteria were as follows: company age (five categories corresponding to age distribution quintiles), geographic area (eight categories: Benelux; France; German-speaking countries–Austria, Germany, and Switzerland; Iberian Peninsula; Italy plus Malta; Nordic countries–Scandinavia and Baltics; the UK plus Ireland; and all remaining countries, including Eastern Europe and Greece), main industry of operation (five categories, based on the Invest Europe sectoral classification: see https://www.investeurope.eu/research/research/methodology/), total assets (five categories corresponding to distribution quintiles), and EBITDA (three categories: ≤0, >0, and missing).

see footnote 6), and a dummy equal to one for companies that had received an early-stage VC investment prior to the first LMM deal (source: VICO). This approach significantly improved the balance across all covariates between treated and control groups. This process resulted in a final sample of 1,378 companies in the Main Treatment group matched with 3,622 control firms, and 223 companies in the Secondary Treatment group matched with 476 control firms.

We complemented our dataset with workforce information retrieved from Revelio Labs, a workforce intelligence company that aggregates publicly available employment records from online professional profiles, job postings, and other open sources to build a global database of employer–employee relationships. The Revelio Labs dataset provides longitudinal information on individuals' job titles, roles, start and end dates, and associated companies, thereby enabling the reconstruction of firm-level managerial structures over time.

We matched the treated and control companies, both for the Main and Secondary groups, using a fuzzy matching algorithm based on company name, country, and year of incorporation. In our treated and control samples, the country variable represents the firm's headquarters. In the Revelio dataset, where company location information is only available at the employee level, the country is assigned as the most frequently reported country among employees for each company.

The fuzzy matching procedure was complemented with extensive manual verification to ensure the accuracy of each match. Based on this process, we constructed two distinct analytical samples. The first sample, used for the analysis of CEO renewal, includes firms for which at least one CEO was identified in Revelio Labs during the observation period, in any year. After discarding companies without a valid match in Revelio Labs and with no CEOs, this sample comprises 739 firms in the Main Treatment group, 762 in the Main Control group, 146 in the Secondary Treatment group, and 144 in the Secondary Control group.

The second sample, employed for the analysis of Top Management Team (TMT) completeness and renewal, includes firms with at least one identifiable TMT member in at least one year in Revelio Labs data. After applying the same data-cleaning criteria, this sample consists of 826 firms in the Main Treatment group, 950 in the Main Control group, 166 in the Secondary Treatment group, and 181 in the Secondary Control group. For more information on all the cleaning steps related to the matching with Revelio Labs data, please refer to Table A1 in Annex A.

To assess whether the number of observations available in our samples allows for meaningful statistical inference, we performed a power analysis comparing the share of firms experiencing a new CEO appointment, one of our dependent variables in the empirical analysis, in the post-treatment period between treated and control companies belonging to the Main group[7].

The resulting power curve, displayed in Figure 1 in Annex A, shows that the statistical power increases with the total sample size, approaching the conventional threshold of 0.80 only when the number of observations exceeds approximately 2,500. Given the actual number of firms included in our Main Treatment group, the corresponding power is slightly above 0.60, which, although below the ideal level of 0.80, can be considered acceptable for exploratory analyses and allows us to proceed with reasonable caution.

[7] The analysis was conducted using Stata's `power two means` command, assuming two-tailed tests with a 5% significance level, equal group sizes, means of 0.17 and 0.22 (respectively, means of the new CEO appointment dummy for control and treated company of the Main group), and standard deviations of 0.376 and 0.415 respectively. The standard deviations were computed under the assumption of a Bernoulli distribution, i.e., $\sigma = \sqrt{\mu \cdot (1-\mu)}$, where μ represents the proportion of firms appointing a new CEO in each group.

By contrast, when applying the same reasoning to the Secondary Treatment group, whose sample size is considerably smaller, the estimated power falls well below acceptable levels, implying a high probability of Type II error (i.e., failing to detect a true effect). For this reason, we do not discuss the results of our main analysis for the Secondary group – though for completeness these results are provided in Annex 2.

The power analysis indicates that statistical power in this study is lower than in Bertoni et al. (2025), which is attributable to having fewer observations after matching the initial sample with Revelio Labs data. However, the Main Treatment sample remains large enough to allow for empirical investigation.

2.2 Variables description

2.2.1 Dependent Variables

In our analysis, we focus on three main dependent variables capturing different dimensions of managerial change and professionalisation within portfolio companies.

The first variable, *New CEO Appointment*, measures CEO turnover. Following Chahine and Zhang (2020), we defined it as a dummy variable equal to one if, in a given year, a firm appoints a new CEO, and zero otherwise. This variable captures whether a leadership transition has occurred during the observation period, regardless of whether the successor is a person internally promoted or externally hired by the firm.

The second variable, *Type of CEO Succession*, provides a more nuanced view of CEO change. It is a categorical variable that equals 0 if no new CEO is appointed, 1 if the new CEO is an internally promoted manager, and 2 if the new CEO is an external hire. This measure enables us to distinguish between internal succession processes and external recruitment, reflecting different strategic approaches to leadership renewal.

The third variable, *New Top Management Team (TMT) Appointment*, captures broader adjustments within the upper managerial ranks. It is measured as the number of new TMT entrants observed in year t, both in total and disaggregated by functional category. This variable reflects the intensity of managerial renewal and expansion beyond the CEO level, signaling the firm's ongoing organisational transformation.

Finally, *TMT Completeness* assesses the degree of functional completeness of the executive team. Following Beckman and Burton (2008), we construct a count variable ranging from 0 to 7, corresponding to the number of functional areas represented in the firm's TMT in year t. Firms with no executive positions are coded as 0, whereas those with executives covering all seven functional domains receive a score of 7. The seven categories include sales and marketing, science/R&D/engineering, operations, finance/accounting, general administration (including HR), business development or strategic planning, and other residual functions (related e.g. to sustainability or legal issues).

The construction of the variable identifying Chief Executive Officers (CEOs) was carried out through a comprehensive, multi-step linguistic and contextual procedure designed to capture the top executive position consistently across European countries. CEOs identification relied on multiple sources of information within each individual record, including the person's job title in the original

language, a cleaned version of that title (e.g., lower case), and a Revelio Labs-translated English version. These were used jointly to ensure that the algorithm could detect CEO positions even when spelling, punctuation, or linguistic conventions differed across countries. The first set of rules identified internationally recognized titles such as “Chief Executive Officer” and their abbreviation “CEO”. The algorithm scanned all available title fields and flagged any individual whose job title matched these expressions, either as a standalone word or embedded within longer strings.

The second and most extensive part of the procedure addressed the fact that the CEO role is expressed with a wide range of abbreviations and titles across Europe. To capture these national variants, we developed a set of country-specific detection rules.[8] Each abbreviation was detected both when appearing alone and when surrounded by other text (although always as standalone words), ensuring that titles embedded within longer expressions were captured correctly. To further refine accuracy, in several countries, abbreviations were considered valid only when the individual was also identified as a founder. This rule was introduced because in some contexts, CEO abbreviations might also denote lower managerial or divisional roles. By combining the title and founder information, we increased the probability that the classification referred to the firm’s top executive rather than to a mid-level manager.

In addition to abbreviations, the algorithm recognized full-length job titles corresponding to the CEO position in all major European languages.[9] For each language, the procedure included masculine and feminine forms, alternative spellings, and regional variants. By running these rules on both the native and the translated versions of job titles, the process ensured comprehensive coverage even in cases where partial or incorrect translations could otherwise obscure the CEO role.

After identifying potential CEOs, the algorithm implemented an extensive exclusion phase to prevent false positives.[10] These exclusions were applied in more than 25 European languages, including local spellings and gender variants. In some cases, specific adjustments were made to avoid unintended exclusions. For instance, the term “intern” was only removed when it referred to internship positions, not when part of words like “internal” or “international.” Likewise, common two-letter acronyms such as “PA” (for personal assistant) were checked across different alphabets to prevent false identifications.

This highly detailed, language-sensitive coding process allowed the identification of CEO roles with a high degree of precision across a linguistically and institutionally diverse set of European countries. By integrating multiple sources of textual information, contextual cues such as founder status, and a broad set of exclusion filters, the procedure ensured both comprehensive coverage and accuracy.

The inclusion of executives in the Top Management Team (TMT) was determined through a structured two-step procedure that combines a hierarchical assessment of roles and the functional

[8] For example, the abbreviation “MD” (Managing Director) was recognised in English-speaking countries such as the United Kingdom, Ireland, India, Australia, New Zealand, and South Africa; “DG” (Direttore Generale or Directeur Général) was used for Italy, France, Belgium, Luxembourg, and Switzerland; “PDG” (Président Directeur Général) was used for France, Belgium, and Switzerland; and “GF” (Geschäftsführer) for Germany, Austria, Switzerland, and Liechtenstein. Similarly, “CD” (Consejero Delegado) was recognized for Spain, “PZ” (Prezes Zarządu) for Poland, “VD” (Verkställande Direktör) for Sweden, “TJ” (Toimitusjohtaja) for Finland, and “ID” (Izvršni Direktor) for Croatia, Serbia, and other Balkan countries.

[9] Examples include “Managing Director” and “Chief Executive” in English, “Directeur Général” and “Président-Directeur Général” in French, “Geschäftsführer” and “Vorstandsvorsitzender” in German, “Direttore Generale”, “Amministratore Delegato” and “Amministratore Unico” in Italian, and “Consejero Delegado” and “Director Ejecutivo” in Spanish. The same approach was extended to smaller languages, such as “Tegevjuht” in Estonian, “Diefthynon Symvoulos” in Greek, and “Verkställande Direktör” in Swedish.

[10] Titles containing terms such as “assistant [to the CEO]”, “associate,” “advisor,” “intern,” “trainee,” “representative,” or “personal assistant” were excluded, since these roles do not correspond to executive leadership but rather to supporting staff.

classification of each executive position. This method ensures consistency across firms and countries while minimizing the risk of overcounting or misclassifying managerial positions.

First, we established a hierarchy of roles that applies uniformly across all functions. To determine whether an individual belongs to the TMT, we consider only the highest hierarchical position available within each functional area of the focal firm. The hierarchy includes three levels: a) the first and highest level comprises roles carrying the title "Chief" (e.g., Chief Sales Officer). These roles are always included in the TMT; b) the second level corresponds to Vice Presidents or Presidents (e.g., Vice President of Marketing, President of Operations), who are included in the TMT only if no Chief-level executive is present in the same function; c) the third level includes "Head of" positions (e.g., Head of HR, Head of R&D, Head of Innovation), which are considered part of the TMT only when neither a Chief nor a Vice President/President is identified for that functional area. This hierarchical rule ensures that, within each functional area, only the highest-ranking executives are included in the TMT. If there are several titles within the same function, only the most senior one is retained[11].

Second, TMT inclusion is determined by the functional area to which the executive belongs. We identify TMT members across seven predefined areas that reflect the core domains of corporate management (for a similar approach, see Beckman & Burton, 2008). See Table 1 below for details.

Table 1 – Main Top Management Team (TMT) areas

Area	Description	Example Roles
Sales & Marketing	Roles related to commercial strategy, revenue generation, branding, and client management	Chief Commercial Officer, VP of Sales, Head of Marketing
Science, Engineering, R&D, Technology & Innovation	Roles overseeing research, product development, and technological innovation	Chief Technology Officer, VP of Engineering, Head of R&D
Operations & Supply Chain	Activities related to production, logistics, and delivery	Chief Operating Officer, VP Operations, Head of Supply Chain
Finance	Responsible for accounting, treasury, capital management, and investor relations	Chief Financial Officer, VP Finance, Head of Accounting
Strategy & Business Development	Focusing on corporate planning, strategic growth, and mergers and acquisitions	Chief Strategy Officer, VP Corporate Development
Administration & Human Resources	Administrative coordination, personnel management, and organisational development	Chief HR Officer, VP People, Head of Administration
Other / Unclassified Senior Roles	Senior managerial positions not fitting the six main areas but reflect top-level leadership responsibilities	Chief Sustainability Officer, equivalent divisional roles

[11] For example, if a Chief Financial Officer (CFO) is present, positions such as "Head of Corporate Finance" are excluded.

2.2.2 Independent Variables

As in Bertoni et al. (2025), our key independent variable is a step dummy equal to 1 starting from the year of the focal firm's first LMM PE investment and 0 otherwise (post). This variable identifies the post-treatment period. Firms are then distinguished according to whether they belong to the treated group, i.e., those that received at least one EIF-backed LMM PE investment during the observation period, or to the control group, which did not. This distinction is captured by the dummy variable *treatment*. The empirical analysis adopts a difference-in-differences (DiD) framework, as detailed in the following section.

2.2.3 Control Variables

We control for a set of company-based covariates, similar to Bertoni et al. (2025). In all the models, we controlled for the total assets (in natural logarithm) at the beginning of the year t ($\ln\_assets_{i,t-1}$), the ratio between cash and total assets at the beginning of the year t ($cash\_ratio_{i,t-1}$), the ratio between debt (i.e., total liabilities) and total assets at the beginning of the year t ($debt\_ratio_{i,t-1}$), a step dummy variable equal to 1 starting from the year following the focal firm's first VC investment ($vc\_dummy_{i,t-1}$), and the logarithm of age ($ln\_age_{i,t}$). In cross section or random effect estimates, we also included some time invariant firms' characteristics, like macro-region fixed-effects (8 region groups), industry fixed-effects (5 industry groups), and year fixed-effects. Tables B1.1 and B1.2 in Annex B show summary statistics and the correlation matrix for the variables used in our main models.

2.3 Descriptive analysis

2.3.1 Descriptive analysis on CEO renewal

Before turning to the multivariate analysis, we conduct a univariate analysis to provide preliminary evidence on the relationship between LMM PE investments and managerial changes in the top management team. Specifically, we compare the pre- and post-treatment means of the dependent variables across treated firms (that is, companies that received at least one LMM PE investment during the observation period) and their matched control firms, which never received a LMM PE investment but are observed over an equivalent time window before and after the matching. This comparison allows us to examine whether the incidence of CEO replacement increases following the first LMM PE investment in treated firms relative to control firms, and whether such changes are primarily driven by internal promotions or external hires, before introducing control variables and firm fixed effects in the regression framework.

We begin by analysing the variable *New CEO Appointment*. Results from the two-sample t-tests, reported in Table B2, in Annex B show a significant increase in the mean of this variable for treated companies following the first LMM PE investment (yearly mean rises from 0.09 pre-treatment to 0.18 post-treatment, $p < 0.001$). This indicates that, after investment, treated firms are significantly more likely to experience CEO turnover. In contrast, for control companies, the change in mean between the pre- and post-period is not statistically significant (0.13 vs. 0.13, $p = 0.52$), suggesting that the observed increase is specific to the treated firms. These results provide initial evidence of a strong

association of CEO renewal with LMM PE investments, consistent with the hypothesis that investors intervene to reshape firms' top leadership after the acquisition.

We then decompose CEO turnover by analysing the categorical variable *Type of CEO Replacement*, distinguishing between internal promotions and external hires. Results of these tests are reported in Table B3, in Annex B. For treated firms, both *CEO Replacement – Internal* (equal to 1 in case of a new CEO appointment driven by an internal promotion, 0 otherwise) and *CEO Replacement – External* (equal to 1 in case of a new CEO appointment driven by an external hire) display significant post-investment increases: the mean of the dummy *CEO Replacement – Internal* rises from 0.02 to 0.06 ($p < 0.001$), while *CEO Replacement – External* increases from 0.07 to 0.12 ($p < 0.001$). Among control firms, internal promotions increase slightly (0.03 to 0.05, $p < 0.001$), whereas external hires show only a small, though statistically significant, reduction (0.10 to 0.08, $p = 0.01$).

2.3.2 Descriptive analysis on TMT composition

Table B4 in Annex B provides descriptive evidence on changes in Top Management Team (TMT) composition before and after the LMM PE investment. The share of firms with at least one TMT member increases across all functional areas, suggesting a broad managerial expansion following the investment. The most pronounced growth is observed in finance (from 25.1% to 55.9%) and sales (from 5.4% to 28.1%), while administration, technical, and operations roles also rise, although less. These patterns indicate that LMM PE investors tend to strengthen the managerial structure of portfolio firms, particularly in functions related to financial oversight and market development.

To provide a consistent basis for comparing how firms staff different managerial functions, we derive relative TMT shares, calculated as the ratio between the share of firms with at least one executive in a given function and the share of firms with at least one executive in administrative roles. We selected the admin function as a baseline because it is the most represented function across firms, providing a stable benchmark for comparing changes in other managerial areas. A value of this ratio above one indicates that a function is more widespread across firms than administration, whereas a value below one denotes lower diffusion.

Before the investment, administrative and technical roles dominate the TMT, while finance and sales are relatively marginal (finance/admin ratio = 0.55; sales/admin ratio = 0.21), reflecting a managerial focus on operational rather than financial or commercial capabilities. After the investment, however, the functional balance shifts substantially. Finance and sales functions become more prevalent, both in absolute and relative terms: the finance/admin ratio rises from 0.55 to 1.28, and the sales/admin ratio from 0.21 to 0.64. This means that, post-investment, financial executives appear roughly 28% more frequently than administrative ones, whereas sales executives, though still less frequent compared to administrative ones, experience a threefold increase in their relative prevalence within the TMT. In other words, commercial capabilities gain significant ground within managerial teams, moving from a marginal to a structurally relevant presence after LMM PE investment.

In contrast, the relative weight of technical (R&D) and operations roles increase after the investment to a lesser extent – ratios rising from 0.50 to 0.75 and from 0.44 to 0.75, respectively. This more moderate growth suggests that, while LMM PE investors strengthen these functions, their primary focus remains on enhancing financial oversight and commercial capabilities.

Control firms, by contrast, display much smaller changes in TMT composition over the same period. Although there is a mild increase in the share of companies with financial (from 20.5% to 31.7%) and administrative executives (from 36.6% to 48.7%), these variations are substantially lower than those observed among treated firms. Moreover, the relative shares across functions remain pretty stable, indicating no comparable rebalancing of managerial roles. This contrast supports the interpretation that the observed shifts among treated firms stem from LMM PE investors' post-investment interventions rather than broader market or time trends.

Overall, these descriptive statistics suggest a process of managerial professionalisation and strategic realignment induced by LMM PE investors, who appear to reshape the TMT structure toward functions more directly tied to financial control, performance monitoring, and market expansion.

3 Results

3.1 CEO renewal

To estimate the impact of LMM PE investments on CEO and TMT renewal, we employed a difference-in-differences (DiD) estimation approach on the matched sample.[12] This approach compares the change in the outcome variable for treated firms, i.e. those that received an LMM PE investment, with the corresponding change for the control group of similar non-treated firms over the same period. The rationale for using a DiD model lies in its ability to control for both time-invariant firm-specific characteristics (e.g., managerial capabilities, industry positioning, or intrinsic growth potential) and time-varying shocks that affect all firms equally (e.g., macroeconomic conditions). Hence, any differential evolution in performance between treated and control firms after the investment can be interpreted as the causal effect of the treatment, provided that the parallel trends assumption holds, as suggested by the univariate analyses in the previous section.

The model was estimated on an unbalanced panel dataset including several years before and after the LMM investment. Each company is tracked from either its year of incorporation or from 1998, whichever is later, through 2024. This yields a potential study period spanning 1998 to 2024. The baseline specification is:

$$Y_{it} = \alpha + \beta(treatment_i * post_{it}) + \gamma\, treatment_i + \delta post_{it} + \mu_i + \lambda_t + \varepsilon_{it}$$

where Y_{it} represents the outcome of firm i in year t; $treatment_i$ is a dummy variable equal to 1 for firms that received an EIF backed LMM PE investment, 0 otherwise; and $post_{it}$ is a dummy equal to 1 for the years following the first LMM PE investment, 0 for the years before. The term μ_i denotes firm fixed effects, controlling for all time-invariant unobserved heterogeneity at the firm level, while λ_t captures years fixed effects, accounting for macroeconomic shocks common to all firms. ε_{it} is the idiosyncratic error term. The use of firm-level fixed effects in all baseline specifications mitigates concerns related to sample selection, as identification relies on within-firm variation rather than cross-sectional differences that may correlate with treatment assignment.

Because, in the main model, we include firm fixed effects, the coefficient γ associated with the time-invariant dummy $treatment_i$ drops from the estimation. The coefficient of interest is therefore β, which captures the average treatment effect of LMM investment on CEO or TMT renewal. A positive and statistically significant β indicates that treated firms experienced higher CEO or TMT renewal after the LMM investment compared to similar non-treated firms.

The results support the interpretation that private equity investors actively intervene in the top management structure after their entry, using CEO renewal as a primary channel of leadership change. Indeed, Model 1 of Table 2 reports the results of the logit fixed-effects estimation examining the relationship between LMM PE investment and CEO renewal, measured by the New CEO

[12] Although the final sample includes 739 companies in the Main Treatment group and 762 in the Main Control group, after discarding firms without a valid match in Revelio Labs, the effective number of firms used in each regression may vary depending on the outcome analysed. This occurs because, when estimating the firm-level panel models, companies exhibiting no within-firm variation in the dependent variable over time (i.e., those with a constant value of zero) are automatically excluded from the estimation due to the within transformation inherent in fixed-effects models.

Appointment dummy. Among the control variables, firm size, proxied by the lagged logarithm of total assets ($L.ln\_assets$), is positively and significantly associated with CEO replacement (β = 0.095, p < 0.05), indicating that larger firms tend to experience higher CEO renewal, possibly due to more structured governance and formalised succession processes. Other firm characteristics, such as age (ln_age), leverage, liquidity, and prior VC involvement, are not statistically significant, suggesting that these factors do not systematically affect the likelihood of CEO change once firm fixed effects are accounted for. The coefficient on the interaction term post × treatment is positive and highly significant (β = 0.388, p < 0.01), implying that after the first LMM PE investment, the log-odds of appointing a new CEO increase substantially for treated firms compared with control firms.

To assess the magnitude of this effect in log-odds terms,[13] we computed the Average Marginal Effects (AME) conditional on treatment status. For treated firms, the AME of *post* is equal to 0.478 (p < 0.01), while for control firms it is 0.090 and not statistically different from zero (p = 0.47). This coefficient corresponds approximately to an odds ratio of exp(0.478) ≈ 1.61, meaning that the odds of appointing a new CEO are about 1.6 times higher post-investment for treated firms compared to control firms; however, following standard econometric practise, we report all results in log-odds.

The emerging pattern supports the view that LMM PE investors promptly realign leadership at entry to implement early-stage strategic and operational changes. Model 2 of Table 2 introduces a dynamic specification to capture temporal heterogeneity in the treatment effect. In this model, $post1$ represents the year of the LMM PE investment (treatment year), while $post2$, $post3$, and $post4plus$ correspond respectively to the first, second, and later post-treatment years. The results show that the effect of LMM PE investment on CEO replacement is concentrated in the first year following the investment, as the coefficient of post1 × treatment is positive and highly significant (β = 1.042, p < 0.01). Interaction terms for subsequent years are statistically non-significant, suggesting that most CEO transitions occur immediately after investment, rather than being distributed over the holding period. The AME of $post1 \times treatment$ on the log-odds of CEO replacement equals 0.91, corresponding approximately to an odds ratio of exp(0.91) ≈ 2.48, meaning that the odds of appointing a new CEO are about 2.5 times higher post-investment for treated firms.

[13] The fixed effects logit estimator β gives us the effect of each independent and control variable x_t on the log-odds ratio, $\log\{\frac{\Lambda(x_t\beta+c)}{[1-\Lambda(x_t\beta+c)]}\}$. We cannot estimate the partial effects on the response probabilities unless we assume a certain value for c. Because the distribution of c_i is unrestricted – in particular, $E[c_i]$ is not necessarily zero – one would not know what to provide for c. Furthermore, it is also not possible to estimate average partial effects, as doing so implies finding $\mathrm{E}[\Lambda(x_t\beta + c)]$, a task that requires specifying a distribution for c_i, that again we do not know. Hence, we can express our results only in terms of effects on the log of odds ratio (Wooldridge, 2010).

Table 2 - Results on New CEO Appointment

	Model 1	Model 2
	New CEO Appointment, Fe	New CEO Appointment, Dynamic
$post$	0.091	
	(0.125)	
$post \times treatment$	0.388***	
	(0.146)	
$L.ln\_assets$	0.095**	0.109***
	(0.041)	(0.041)
ln_age	0.023	-0.002
	(0.169)	(0.169)
$L.debt\_ratio$	-0.012	0.059
	(0.155)	(0.154)
$L.cash\_ratio$	-0.041	-0.144
	(0.238)	(0.240)
$L.vc\_dummy$	0.061	0.263
	(0.170)	(0.173)
$post1$		-0.129
		(0.171)
$post1 \times treatment$		1.042***
		(0.212)
$post2$		-0.042
		(0.169)
$post2 \times treatment$		0.323
		(0.212)
$post3$		-0.179
		(0.182)
$post3 \times treatment$		0.144
		(0.223)
$post4plus$		-0.187
		(0.180)
$post4plus \times treatment$		-0.033
		(0.178)
Log-Likelihood	-3,059.661	-3,035.826
R2	0.025	0.032
N	9,812	9,812
N_g	962	962

Results from Table 3 clearly indicate that LMM PE investors significantly influence CEO transitions, predominantly by appointing external CEOs, while internal promotions play a smaller yet positive role in the post-investment adjustment process. Specifically, Models 1–3 of Table 3 present the multinomial logit estimates distinguishing between internal CEO promotions and external CEO hires, using the absence of a new CEO appointment as the baseline outcome. In addition to the control variables included in the previous model, these models include country, sector, and year fixed effects and are estimated on a cross-sectional sample, allowing for comparison of predicted probabilities of each CEO succession outcome across treated and control firms before and after the LMM PE investment. Together with the predictive margins reported in Table 4, these estimates provide a clear picture of how LMM PE investors influence CEO renewal and the nature of the leadership transitions within portfolio firms.

Firm-level covariates behave as expected. Firm size ($L.ln\_assets$) is positively and significantly associated with both internal promotion (β ≈ 0.16, p < 0.01) and external hiring (β ≈ 0.15, p < 0.01), indicating that larger firms are more likely to experience CEO changes of either type. Conversely, firm age (ln_age), liquidity ($L.cash\_ratio$), and prior venture capital involvement ($L.vc\_dummy$) show no significant relationship with CEO succession type. The debt-to-asset ratio ($L.debt\_ratio$) is negatively and significantly related to CEO external hires (β = –0.31, p < 0.05), suggesting that financially constrained firms are less likely to replace their CEO with an external candidate, possibly due to the higher costs and risks of outside recruitment.

Turning to the variables of interest, the $post \times treatment$ interaction term is positive and significant for both internal promotion (β = 0.434, p < 0.05) and external hire (β = 0.598, p < 0.01), confirming that LMM PE investors substantially increase the likelihood of CEO replacement following investment. The predictive margins reported in Table 4 clarify the magnitude of these effects.

Before the investment, treated and control firms exhibit statistically similar probabilities across all three outcomes (with no significant difference between treated and control firms, p > 0.10): the probability of no CEO change is 88.6% for treated firms and 87.8% for controls, while internal and external replacements are similarly rare (around 3.5%–3.8% and 7.8%–8.6%, respectively). These pre-treatment similarities confirm the validity of the parallel trends assumption.

After the investment, however, CEO renewal increases sharply among treated firms while remaining virtually unchanged among controls. The probability of no CEO replacement decreases by 6.9 percentage points for treated firms, and the difference between the pre- and post-investment periods is statistically significant (p < 0.01). In contrast, the change for control firms is negligible (–0.2 percentage points) and not statistically significant (p > 0.10). Similarly, the probability of internal promotion increases by 1.8 percentage points for treated firms, with the difference between pre- and post-investment periods being statistically significant (p < 0.01), while the corresponding change for controls (+0.2 percentage points) is not significant (p > 0.65).

The effect is even more pronounced for external hires: treated firms experience an increase of 5.1 percentage points between the pre- and post-investment periods, a difference that is statistically significant (p < 0.01), whereas the small change among control firms (–0.1 percentage points) is not (p > 0.90). Finally, the difference-in-differences estimates at the bottom of Table 4 confirm that these changes are significantly larger for treated firms. The decrease in the probability of no CEO replacement is 6.7 percentage points greater for treated firms than for controls (p < 0.01), while the

increases in internal promotions and external hires are 1.6 percentage points ($p < 0.05$) and 5.2 percentage points ($p < 0.01$) higher, respectively.

The dynamic specifications in Models 2-4 of Table 3 provide a more granular understanding of the timing of these leadership transitions. Results reveal that the strongest effects occur in the treatment year, as reflected by the large and highly significant coefficients on $post1 \times treatment$ ($\beta = 1.634$, $p < 0.01$ for internal promotions; $\beta = 1.126$, $p < 0.01$ for external hires). For external hires, the effect persists in the following years ($post2 \times treatment$: $\beta = 0.936$, $p < 0.01$; $post3 \times treatment$: $\beta = 0.564$, $p < 0.05$), indicating that LMM PE-backed firms continue to replace or reinforce their leadership teams beyond the initial investment period. By contrast, internal promotions are concentrated in the investment year, showing no significant effects thereafter.

Taken together, these findings suggest that *LMM PE investors act quickly and decisively to modify top leadership structures*, often by introducing external CEOs to realign strategic direction and strengthen governance. Internal promotions, while also stimulated at the time of investment, appear to play a more limited, transitional role, possibly aimed at maintaining continuity during the initial phase of ownership change rather than representing a sustained governance approach.

Table 3 - Results on *Type of CEO Succession*

	Model 1	Model 2	Model 3	Model 4
	Internal Promotion	Internal Promotion, dynamic	External Hire	External Hire, dynamic
$post$	0.069		-0.009	
	(0.159)		(0.118)	
$treatment\ main$	-0.016	-0.002	-0.107	-0.098
	(0.172)	(0.173)	(0.111)	(0.111)
$post \times treatment$	0.434**		0.598***	
	(0.193)		(0.134)	
$L.ln\_assets$	0.164***	0.171***	0.154***	0.158***
	(0.030)	(0.030)	(0.024)	(0.024)
ln_age	0.105	0.104	-0.010	0.002
	(0.072)	(0.073)	(0.051)	(0.050)
$L.debt\_ratio$	-0.097	-0.070	-0.316**	-0.284**
	(0.172)	(0.171)	(0.133)	(0.133)
$L.cash\_ratio$	-0.233	-0.295	-0.286	-0.382*
	(0.275)	(0.279)	(0.198)	(0.201)
$l.vc\_dummy$	-0.049	0.004	-0.068	-0.010
	(0.126)	(0.126)	(0.095)	(0.096)
$post1$		-0.426		-0.019
		(0.299)		(0.171)
$post1 \times treatment$		1.634***		1.126***
		(0.352)		(0.218)
$post2$		0.120		-0.103
		(0.232)		(0.181)
$post2 \times treatment$		0.243		0.936***
		(0.319)		(0.222)
$post3$		0.051		-0.146
		(0.243)		(0.185)
$post3 \times treatment$		0.291		0.564**
		(0.330)		(0.234)
$post4plus$		0.060		-0.143
		(0.193)		(0.144)
$post4plus \times treatment$		0.210		0.286*
		(0.214)		(0.157)
$cons$	-5.972***	-5.958***	-5.268***	-5.072***
	(0.621)	(0.633)	(0.484)	(0.489)
Log-Likelihood	-6,286.563	-6,254.787	-6,286.563	-6,254.787
R2	0.033	0.038	0.033	0.038
N	13,538	13,538	13,538	13,538

Table 4 - Predictive margins on *Type of CEO Succession*

		No new CEO	New CEO – internally promoted	New CEO – externally hired
Treated	Post	81.78	5.33	12.89
	Pre	88.65	3.52	7.83
	Delta 1 (Post – Pre)	***-6.87***	***1.81***	***5.06***
	P value	0.000	0.008	0.000
Control	Post	87.68	3.78	8.53
	Pre	87.84	3.54	8.62
	Delta 2 (Post – Pre)	***-0.16***	***0.24***	***-0.09***
	P value	0.888	0.657	0.921
	Diff-in-diff (Delta 1 – Delta 2)	***-6.71***	***1.57***	***5.15***
	P value	0.000	0.026	0.000

3.2 TMT completeness

Model 1 in Table 5 examines how LMM PE investment affects TMT completeness, defined as the number of distinct functional areas represented within a firm's top management team (ranging from 0 to 7). The model includes firm and year fixed effects, thereby exploiting within-firm variation over time while controlling for time-invariant unobserved heterogeneity and time shocks.

The coefficient on the interaction term $post \times treatment$ is positive and highly significant (β = 0.496, p < 0.01), indicating that, following LMM PE investment, treated firms experience a substantial increase in the number of functional areas represented in their TMT relative to control firms. The average marginal effects of *post* confirm this interpretation: moving from post = 0 (pre-investment) to post = 1 (post-investment) increases TMT completeness by approximately 0.44 functional areas in treated firms. In contrast, the corresponding change for control firms is a reduction of 0.06 functional areas (p = 0.005). The two AMEs are significantly different (p<0.01). This contrast highlights the active role of investors in enhancing managerial professionalisation for treated companies.

Among the control variables, firm size, measured as the logarithm of total assets, is positively and significantly associated with TMT completeness (β = 0.154, p < 0.01). In particular, a one–standard deviation increase in $L.ln_{assets}$ equal to 1.74 log points, corresponding to approximately $e^{1.74} \approx 5.7$ times larger total assets, is associated with an average increase (i.e., AME) of 0.30 functional areas represented in the TMT. This result underscores the tendency of larger firms to develop more functionally complete executive teams as their organisational complexity increases.

Firm age, measured as the logarithm of the number of years since founding, is negatively associated with TMT completeness (β = –0.081, p < 0.01). The corresponding average marginal effect (AME = –0.076, p < 0.01) indicates that a one–standard deviation increase in $L.ln\_age$, equal to 0.74 log

points, corresponding to a firm about $e^{0.74} \approx 2.1$ times older, is associated with an average decrease of 0.08 functional areas represented in the TMT. Although statistically significant, this effect is rather small, suggesting that *firm age exerts only a minor influence on the breadth of managerial functions represented at the top.*

Financial structure variables also exhibit statistically significant but modest effects on TMT completeness. The *L.debt_ratio* variable is positively associated with TMT completeness ($\beta = 0.088$, $p < 0.01$). The corresponding average marginal effect (AME = 0.022, $p < 0.01$) indicates that a one–standard deviation increase in the lagged debt ratio is associated with an average rise of about 0.02 functional areas represented in the TMT. Although statistically significant, this effect is economically negligible, suggesting that higher leverage is only weakly related to the breadth of managerial functions.

In contrast, the *L.cash_ratio* variable shows a negative relationship with TMT completeness ($\beta = -0.129$, $p < 0.01$). The average marginal effect (AME = –0.024, $p < 0.01$) implies that a one standard deviation increase in liquidity corresponds to a reduction of roughly 0.02 functional areas in the TMT. The magnitude of this effect is again small, indicating that firms with greater short-term liquidity buffers tend to have marginally less complete executive teams.

Finally, being VC-backed ($L.vc\_dummy$) is positively and strongly associated with TMT completeness ($\beta = 0.290$, $p < 0.001$). The corresponding average marginal effect (AME = 0.290, $p < 0.001$) indicates that, holding other factors constant, firms that have received VC funding display on average 0.29 additional functional areas represented in their TMT compared to non-VC-backed firms. This effect is both statistically and economically meaningful, suggesting that *the involvement of venture capital investors may accelerate the professionalisation of managerial structures, resulting in more complete executive teams.*

Overall, these findings suggest that *LMM PE investors play a decisive role in structuring invested firms' top management teams.* After investment, PE-backed firms significantly increase the breadth of their top management teams, while no comparable evolution occurs among control firms.

3.3 TMT renewal

Models 2–8 of Table 5 investigate how LMM PE investors affects top management turnover and the distribution of new appointments across functional areas.

Model 2 examines the effect of LMM PE investment on the number of new TMT appointments. The coefficient on the interaction term $post \times treatment$ is positive and highly significant ($\beta = 0.147$, $p < 0.001$), indicating that PE-backed firms appoint significantly more new executives after investment than control firms. The corresponding average marginal effects further clarify the magnitude of this effect. Among firms in the control group, observed over the same post-period as their matched treated counterparts, the transition from the pre- to post-period is associated with a negligible and statistically non-significant increase in new appointments (AME = 0.027, $p = 0.295$). In contrast, PE-backed firms experience a substantial and statistically significant rise of 0.175 additional TMT appointments per firm-year ($p < 0.001$). The difference between these two effects (approximately 0.15 new appointments per firm-year) represents the average causal impact of LMM PE ownership

on managerial renewal. While this effect may appear small in absolute terms, it is economically meaningful given the typically low rate of executive replacement and the limited size of TMTs, underscoring that PE investors actively drive leadership renewal and organisational restructuring within their portfolio firms.

Models 3–8 disaggregate the overall TMT appointment effect by functional area, revealing which managerial domains are most affected by LMM PE investment. Across all specifications, the coefficients on the interaction term $post \times treatment$ are positive and statistically significant, suggesting that the observed rise in new executive appointments is distributed across functions. The largest and most robust effects are found in finance (β = 0.071, p < 0.001), business development (β = 0.032, p < 0.001), and sales (β = 0.030, p < 0.001), followed by relatively smaller yet significant increases in administration (β = 0.041, p < 0.05), R&D (β = 0.019, p < 0.10), and operations (β = 0.018, p < 0.10). These results indicate that LMM PE investors tend to reinforce not only financial oversight but also commercial and strategic capabilities within portfolio firms, in line with their focus on value creation through the professionalisation of management structures.

The magnitudes of the effects, as shown by the corresponding AMEs, further clarify their economic relevance. Transitioning from the pre- to post-investment period is associated with an average increase of approximately 0.07 new finance executives per firm-year, 0.03 in business development, and 0.03 in sales and 0.04 in administration, holding other factors constant. In contrast, changes in operational, and R&D appointments are smaller, around 0.02 per firm-year, and only marginally significant. Although the absolute values appear modest, they represent substantial proportional increases given the small baseline number of annual TMT appointments in these categories.

Among control variables, firm size (L.*ln_assets*) remains a strong and positive predictor of new appointments across all models (β ranging from 0.005 to 0.019, all p < 0.01). The corresponding AME (≈ 0.01) implies that a one–standard deviation increase in firm size is associated with an additional 0.01 new TMT appointments per firm-year, reflecting the tendency of larger firms to expand and diversify their managerial structures. By contrast, firm age (L.*ln_age*) shows weak or negative effects, particularly in administration (β = –0.041, p < 0.05), where the AME (≈ –0.08) suggests that more mature firms are less likely to renew their administrative leadership, though the magnitude of this effect is negligible in practical terms. Leverage and liquidity display opposite but limited effects: a one–standard deviation increase in *L.debt_ratio* is associated with 0.02 more TMT appointments per year (AME = 0.022, p < 0.01), while a similar increase in liquidity (*L.cash_ratio*) reduces appointments by roughly 0.02 per year (AME = –0.024, p < 0.01), suggesting that financially constrained firms may rely more on management reinforcement as a response to performance pressures. Finally, prior venture capital involvement has a positive and significant relationship with both overall and functional TMT appointments (β ≈ 0.02–0.07, p < 0.05), indicating that firms previously exposed to professional investors are more accustomed to leadership renewal and structured governance.

Overall, these results show that *LMM PE ownership systematically accelerates the renewal of top management teams, particularly by strengthening financial, commercial, and strategic functions, that are key levers for performance improvement and post-investment value creation*.

Table 5 – Results on TMT Completeness and Renewal

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
	TMT Completeness	New TMT Appointment	New TMT Appointment - Admin	New TMT Appointment - Sales	New TMT Appointment - R&D	New TMT Appointment - Operations	New TMT Appointment - Business Dev	New TMT Appointment - Finance	New TMT Appointment - Other
$post$	-0.059***	0.027	-0.007	0.011	0.017	0.002	-0.010	0.042***	0.002
	(0.021)	(0.026)	(0.015)	(0.008)	(0.010)	(0.008)	(0.006)	(0.012)	(0.004)
$post \times treatment$	0.496***	0.147***	0.041**	0.030***	0.019*	0.018*	0.032***	0.071***	-0.007
	(0.022)	(0.029)	(0.017)	(0.009)	(0.011)	(0.009)	(0.007)	(0.013)	(0.005)
$L.ln\_assets$	0.154***	0.072***	0.019***	0.011***	0.006*	0.005*	0.011***	0.014***	0.006***
	(0.007)	(0.009)	(0.005)	(0.003)	(0.004)	(0.003)	(0.002)	(0.004)	(0.002)
ln_age	-0.081***	0.010	-0.041**	-0.009	-0.020	-0.003	-0.004	-0.026*	0.002
	(0.023)	(0.033)	(0.019)	(0.010)	(0.013)	(0.011)	(0.008)	(0.015)	(0.006)
$L.debt\_ratio$	0.088***	0.086**	0.022	-0.015	-0.003	0.017	-0.013	-0.030*	-0.000
	(0.028)	(0.035)	(0.020)	(0.011)	(0.014)	(0.011)	(0.009)	(0.016)	(0.006)
$L.cash\_ratio$	-0.129***	-0.076	-0.008	0.004	0.027	0.036**	0.004	0.054**	0.016*
	(0.039)	(0.051)	(0.030)	(0.016)	(0.020)	(0.017)	(0.013)	(0.024)	(0.009)
$L.vc\_dummy$	0.290***	0.073**	0.021	0.024**	0.017	-0.010	0.007	-0.022	0.007
	(0.029)	(0.035)	(0.021)	(0.011)	(0.014)	(0.011)	(0.009)	(0.016)	(0.006)
$cons$	-0.591***	-1.330***	-0.130	-0.122**	0.016	-0.046	-0.126***	-0.150*	-0.089***
	(0.121)	(0.169)	(0.099)	(0.051)	(0.067)	(0.055)	(0.042)	(0.078)	(0.028)
Log-Likelihood	-2.82e+04	-1.72e+04	-8,324.725	2,376.034	-1,985.120	1,366.830	5,674.173	-4,464.078	12,138.582
R2 overall	0.1604	0.0412	0.0112	0.0196	0.0080	0.0082	0.0084	0.0218	0.0113
N	25,646	16,431	16,431	16,431	16,431	16,431	16,431	16,431	16,431
N_g	1,672	1,646	1,646	1,646	1,646	1,646	1,646	1,646	1,646

3.4 Robustness checks

We conduct two main robustness checks. First, we re-estimate the model on *New CEO Appointment* using a random-effects specification instead of firm fixed effects. Model 1 in Table C1 in Annex C reports the random-effects logit estimates corresponding to the baseline model presented in Table 2 where the dependent variable is *New CEO Appointment*. The results shows that the interaction term ($post \times treatment$) remains positive and statistically significant ($\beta = 0.514$, $p < 0.01$), confirming the robustness of the relationship between LMM private equity (PE) investment and CEO renewal. The coefficients and significance levels of the control variables remain virtually unchanged compared to Model 1 in Table 2, reinforcing the robustness of the main findings across estimation approaches.

Second, we test the robustness of our results using an alternative measure of CEO renewal. Instead of identifying a renewal event when a new CEO is appointed for a given firm in a given year, we construct a dummy variable, *CEO Dismissal*, which equals 1 when a previously serving CEO is no longer identified as holding the position in that year and 0 otherwise. Results in Model 2 (firm fixed effects) and Model 3 (random effects), are consistent with the main analysis. The $post \times treatment$ coefficient remains positive and significant, providing additional support for the robustness of the relationship between LMM PE investment and CEO renewal. We rely on *New CEO Appointment* as the primary specification because, in the Revelio Labs data, a non-negligible share of users do not report the end date of their appointments. Therefore, renewal estimates based solely on CEO dismissal are likely to undercount actual replacement events, making *New CEO Appointment* a more reliable proxy for managerial transitions.

3.5 Moderators

This section examines how the effect of LMM investment varies across firm characteristics, industries, and countries for each of the three managerial-outcome variables considered: *New CEO Appointment*, *TMT completeness*, and *New TMT Appointment*.

We begin with CEO appointment. Models 1–8 in Table D1, Annex D evaluate whether the impact of LMM PE investors on the likelihood of appointing a new CEO depends on firm characteristics. The moderators include firm size (Models 1–2), prior early-stage VC backing (Models 5–6), intangible asset intensity (Models 7–8), all measured in the year prior to the first LMM investment for treated firms and prior to the matching year for controls, and firm age (Models 3–4) at first LMM investment year for treated firms and matching year for controls. Each analysis splits the sample at the median value of the corresponding variable. For example, Model 1 reports estimates for firms below the median total assets, and Model 2 for firms at or above that threshold. The same logic applies to age, VC involvement, and intangible intensity.

The results show that firm size does not materially moderate the effect of LMM investors on *New CEO Appointment*: the interaction term remains positive and statistically significant in both large and small firms. This finding is conceptually distinct from the positive coefficient on firm size included in the baseline regressions as a control variable. While larger firms exhibit a higher probability of appointing a new CEO, size at entry does not influence the marginal effect of LMM involvement. In

other words, size affects the level of CEO replacement but not the treatment effect of LMM investment.

By contrast, the analyses for the remaining firm characteristics reveal a marked asymmetry. The effect of LMM investments is significant only among younger firms, firms without prior VC backing, and firms with low intangible-asset intensity. These results align with theoretical expectations: younger firms typically have less formalised managerial structures and may rely more heavily on founder-led governance, increasing the scope for leadership realignment after acquisition. Firms without prior VC monitoring may not have undergone earlier phases of professionalisation, amplifying the effect of PE oversight. Similarly, firms with low intangible intensity, often more operationally oriented, offer greater potential for performance improvements through changes in top management. High-intangible firms, by contrast, rely more on tacit knowledge and specialised human capital, reducing both the feasibility and desirability of CEO renewal.

Table D2 extends the CEO renewal analysis to heterogeneity across industries and countries. The treatment effect remains positive and statistically significant only in Life Science, Services, and the Italy–Malta subsample. In other sectors and regions, the effect is not statistically distinguishable from zero, suggesting that sectoral and institutional conditions shape the extent to which CEO replacement accompanies LMM investment.

We then turn to outcomes at the broader TMT level. Results for *TMT Completeness* reported in Table D3 show a sharply different pattern. Across all firm-level characteristics subsamples, the interaction term is positive and highly statistically significant, indicating that LMM investors systematically enhance the completeness of the top management team regardless of firms' size, age, prior VC exposure, or intangible intensity. Table D4 confirms that this effect also holds across all industries and national contexts. Although magnitudes vary, the direction and significance of the estimates are remarkably stable. Unlike CEO renewal, which was concentrated in particular organisational profiles, strengthening TMT completeness emerges as a pervasive feature of LMM value-creation efforts.

Finally, Tables D5 and D6 examine *New TMT Appointment*, further distinguishing how LMM investors reshape the executive team. Table D5 shows that the interaction term *post x treatment* is positive and statistically significant across virtually all firm-level splits, with the sole exception of the high–intangible-assets group, where the effect is positive but not significant. This suggests that adding new executives is a widespread response to LMM ownership across diverse organisational types. Table D6, however, reveals substantial heterogeneity across industries and countries. The effect is significant only in ICT and Services. A similar pattern appears across countries: the effect is significant in Benelux, the German-speaking region, Nordic countries, and the UK–Ireland, but not in France, Italy-Malta or the Iberian area. These results imply that while LMM investors broadly use new appointments to reinforce the executive team, industry structure and institutional environments strongly condition the extent to which this governance lever is deployed.

Taken together, the evidence paints a coherent picture of LMM investors' managerial interventions. Strengthening the top management team, particularly through enhanced TMT completeness, is a core and consistently applied component of their value-creation strategy, observable across firms, industries, and countries. New CEO and new TMT members appointments, in contrast, exhibit meaningful heterogeneity: they are more likely to occur in organisational or institutional contexts where managerial restructuring is both feasible and potentially more valuable.

Table 6 - Summary of treatment effects by moderator and outcome

Moderator	New CEO Appointment	TMT Completeness	New TMT Appointment
Firm Size	0	+	+
Firm Age (Younger)	+	+	+
Firm Age (Older)	0	+	+
Prior VC Backing (No VC)	+	+	+
Prior VC Backing (VC)	0	+	+
Intangible Asset Intensity (Low)	+	+	+
Intangible Asset Intensity (High)	0	+	0
Industry			
Life Sciences	+	+	0
Service	+	+	+
Green Tech	0	+	0
ICT	0	+	+
Manufacturing	0	+	0
Country			
Italy/Malta	+	+	0
Benelux	0	+	+
Dach	0	+	+
Nordic	0	+	+
UK/Ireland	0	+	+
France	0	+	0
Iberian	0	+	0

Note: “+” indicates a positive and statistically significant treatment effect; “0” indicates a non-significant effect. No negative or significant negative effects were observed in any specification. Results are derived from sample-split models, where the treatment effect is estimated separately within each subsample defined by the moderator. See tables in annex D for magnitudes.

4 Conclusion

This study provides robust evidence that EIF-supported LMM PE investments play a pivotal role in driving managerial professionalisation among portfolio companies. By fostering leadership renewal, particularly through the appointment of external executives, and expanding the breadth and functional completeness of top management teams, LMM investors promote more structured and performance-oriented governance systems. Specifically, they tend to introduce new functional roles in finance, sales, and business development. These organisational transformations suggest that LMM financing generates value not only through capital injection but also by strengthening managerial capabilities and institutionalising professional management practises.

The findings of this report build directly on and complement those of the first LMM Impact Assessment (Bertoni et al., 2025), which focused on the economic growth effects of LMM investments. That report demonstrated that LMM-backed firms experience significantly higher post-investment growth in total assets, intangible assets, and employment costs than comparable non-invested firms, while showing no significant effect on turnover and a short-term decline in labour productivity. Together, the two studies outline a coherent impact pathway. LMM investments appear to trigger an initial phase of internal transformation, characterised by management renewal, recruitment of skilled professionals, and reinforcement of key functions such as finance, sales, and business development. These organisational changes likely underpin the observed expansion in intangible assets and employment costs, representing investments in human and organisational capital that precede, and enable, long-term growth.

In this sense, the two reports capture complementary dimensions of the same developmental process. While the first study revealed that the immediate post-investment effects are concentrated in firm growth and capacity-building, the present analysis elucidates the underlying mechanisms through which such growth materialises; namely, through leadership renewal, top management team expansion, and functional diversification. The increased representation of financial and commercial roles within TMTs further indicates a shift toward more formalised, performance-driven governance structures, consistent with LMM investors' active involvement in value creation through governance engineering.

Overall, these findings reinforce the notion that EIF-backed LMM investors contribute to the professionalisation of their portfolio firms, helping them transition from entrepreneurial or family-led structures to more institutionalised and growth-ready organisations. Beyond short-term financial outcomes, this professionalisation process builds managerial and organisational capabilities that are essential for sustained competitiveness and scalability extending beyond the holding period of the LMM investors.

Future research could deepen our understanding of the transmission mechanisms linking LMM investment, managerial professionalisation, and firm performance. In particular, future work could disentangle the relative contributions of improved financial structures versus organisational upgrading in explaining LMM post-investment outcomes. This would consist in assessing whether LMM investors primarily create value by alleviating financial constraints, through recapitalisation, leverage optimisation, and access to follow-on financing, or by inducing managerial and operational

transformation, such as professionalising governance. A more granular analysis combining accounting, ownership, and organisational data could illuminate how these two channels interact and in which sequence they materialise over the investment lifecycle.

Moreover, exploring heterogeneity across firms and deal characteristics would offer deeper insights into the conditions under which LMM investments are most effective. For example, examining whether LMM investments effects vary between domestically focused and internationalising firms could shed light on how LMM investors support cross-border scaling by appointing external CEOs with international experience and strengthening managerial teams in functions related to global operations, finance, and business development.

Additional promising avenues for research include assessing how investor characteristics—such as fund size, sector expertise, and governance style—influence post-investment managerial changes and firm outcomes. Comparative analyses between EIF-backed and non-EIF-backed investors could help identify whether the institutional design and policy objectives of EIF-supported programmes amplify professionalisation effects relative to purely commercial PE funds. Furthermore, longitudinal studies tracking firms beyond exit would be valuable to determine the persistence of organisational and performance improvements after investors' divestment, thus offering a fuller picture of the effects of LMM intervention.

Finally, future studies could examine whether part of the employment-cost dynamics observed after LMM investment reflects not only managerial upgrading but also broader strategic reshaping of the firm's activity portfolio. Such processes, including selective divestitures or carve-outs, may temporarily depress sales while increasing the average seniority, strategic relevance, and pay of the remaining workforce, in line with the results found in the first LMM Impact Assessment (Bertoni et al., 2025). Understanding whether and how LMM investors actively streamline the business perimeter would offer a more complete view of the channels through which organisational change and value creation unfold.

Annexes

Annex A: Database construction

The construction of the samples used in this report followed a multi-step refinement process designed to ensure the reliability and accuracy of the matched data between the original LMM dataset and Revelio Labs' employee-level information. Starting from the two treatment samples (i.e. Main and Secondary) developed in Bertoni et al. (2025), the initial step consisted of a propensity score matching approach that paired each treated firm with up to three control firms based on pre-investment characteristics. This resulted in a baseline sample of 1,378 treated companies and 3,622 matched controls for the Main sample, and 222 and 476 for the Secondary sample, respectively.

Subsequently, the datasets were merged with Revelio Labs at the company level to retrieve firm-level employment records. This merge yielded coverage rates of 85.4% for treated firms and 59.9% for control firms in the Main sample, and 94.6% and 68.3% respectively for the Secondary sample. The lower coverage observed among control firms primarily reflects structural differences in the visibility of non-invested companies. Non-invested firms are less likely to maintain public profiles on professional platforms such as LinkedIn or updated company websites, which Revelio Labs uses as its main data sources. Indeed, non-invested firms face weaker incentives to disclose their human capital and organisational characteristics, whereas firms that undergo equity investments typically engage more actively in such disclosure activities to reduce information asymmetries with external investors (Spence, 1973). The higher coverage rates observed in the Secondary sample reflect the larger average firm size of these companies compared to those of the Main sample, which increases the probability of being represented in Revelio Labs data.

A further step involved matching firm-level data with individual-level position files in Revelio Labs, which contain detailed information on job titles, start and end dates, and geographic location for each executive. Some companies identified at the firm level were excluded at this stage because they lacked any individual-level employment record. After this refinement, the sample was reduced to 1,142 treated and 2,069 control firms in the Main group, corresponding to 82.9% and 57.1% retention from the previous step, and to 204 treated and 313 control firms in the Secondary group (91.9% and 65.8% retention, respectively).

Next, inconsistencies in Revelio Labs' firm identifiers were identified and corrected. In some cases, the same identifier had been erroneously assigned to multiple related entities, such as subsidiaries, local branches, or investors, instead of the focal portfolio company. Only records that unambiguously referred to the correct firm were retained. This correction reduced the number of observations to 1,045 treated and 1,846 control firms in the Main sample (75.8% and 51.0% retention, respectively), and to 187 and 270 firms in the Secondary sample (84.2% and 56.7% retention).

Subsequently, all individual records without valid start dates were removed, as they would have prevented reliable reconstruction of managerial appointment sequences over time. This filtering step affected both CEOs and other executives, yielding 1,041 treated and 1,811 control firms in the Main sample, and 185 and 267 firms in the Secondary sample (approximately 75.5% and 50% retention for Main, and 83.3% and 56.1% for Secondary).

Firms with no identified CEO across all Revelio Labs records were then excluded, ensuring that only companies with at least one verifiable leadership entry remained in the dataset. This step reduced the sample to 742 treated and 780 control firms in the Main sample (53.9% and 21.5% retention) and to 151 and 146 in the Secondary sample (68.0% and 30.7% retention).

To further improve data consistency, a geographic cross-check was performed to ensure that each individual's recorded work location matched the headquarters country of the focal firm. This verification aimed at avoiding cases in which employees were associated with branches, subsidiaries, or parent companies located abroad. After applying this filter, 742 treated and 779 control firms were retained in the Main sample (53.8% and 21.5% retention), and 150 and 146 in the Secondary sample (67.6% and 30.7% retention).

Last, residual companies with clear classification errors in Revelio were removed. These included incubators, retail chains in which each local manager was incorrectly labeled as CEO, and large multinationals where numerous branches were aggregated under a single identifier, making it impossible to isolate the correct set of executives for the focal company. After this final cleaning step, the dataset for the CEO-level analysis consisted of 739 treated and 762 control firms in the Main sample (53.6% and 21.0% retention), and 146 and 144 firms in the Secondary sample (65.8% and 30.3% retention).

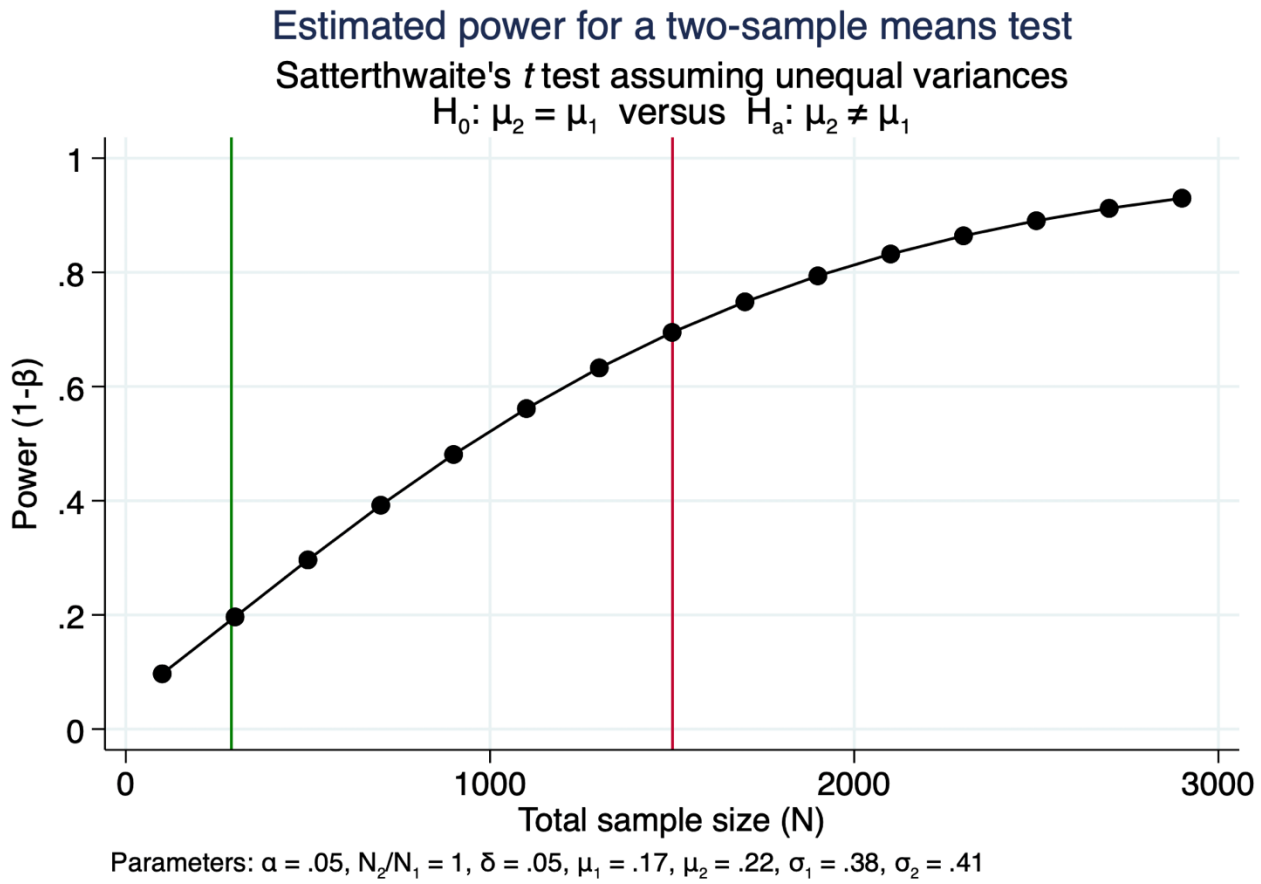
For the TMT-level analysis, the same multi-step procedure was applied, with the only difference being that firms were excluded not on the basis of missing CEOs but rather for lacking any record of top management team (TMT) members. The resulting final sample comprised 826 treated and 950 control firms in the Main sample (59.9% and 26.2% retention) and 166 treated and 181 control firms in the Secondary sample (74.8% and 38.0% retention).

Overall, this rigorous, multi-stage refinement process, combining algorithmic matching procedures with extensive manual validation, ensured that the final analytical datasets capture correctly identified firms with consistent and reliable information on their executive composition. This approach significantly enhances the internal validity and interpretability of the subsequent analyses on managerial professionalisation.

Table A1 – Steps followed to build the two datasets

Step	Treatment Main (N)	Retention (%)	Control Main (N)	Retention (%)	Treatment Secondary (N)	Retention (%)	Control Secondary (N)	Retention (%)
Bertoni et al. (2025) initial treatment Sample + PS matching 1:3	1,378		3,622		222		476	
After matching with Revelio (company level)	1,178	85.49%	2,168	59.86%	210	94.6%	325	68.28%
After checking for individual positions data in Revelio	1,142	82.87%	2,069	57.12%	204	91.9%	313	65.76%
After correcting for Revelio IDs inconsistencies (e.g., same user identifier assigned to branches, subsidiaries, or investors instead of focal firm)	1,045	75.83%	1,846	50.97%	187	84.2%	270	56.72%
After removing all individual records with missing start dates	1,041	75.54%	1,811	50%	185	83.33%	267	56.09%
After excluding firms without any identified CEO in all Revelio labs records	742	53.85%	780	21.54%	151	68.02%	146	30.67%
After checking for geographic consistency (ensuring that individuals' locations match the headquarters country of the focal firm, removing cases linked to branches or parent companies)	742	53.77%	779	21.51%	150	67.6%	146	30.67%
After removing residual companies with evident classification errors in Revelio (e.g., incubators, retail chains, or multinationals with duplicated branches)	739	53.63%	762	21.04%	146	65.8%	144	30.25%
After excluding firms without any identified TMT members	826	59.94%	950	26.23%	166	74.8%	181	38.03%

Figure 1 – Power Analysis



The green line represents the size of the Secondary Treatment group (CEO sample), as reported at the end of Table A1. The red line represents the size of the Main Treatment group (CEO sample), as reported at the end of Table A1.

Annex B: Descriptive statistics and correlation matrix for the variables of main models

Table B1.1 - Descriptive statistics and correlation matrix - CEO Appointment sample

Variables	Mean	Std. Dev.	Min	Max	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) New CEO Appointment	0.182	0.386	0	1	1.000								
(2) Internal Promotion	0.062	0.241	0	1	0.543***	1.000							
(3) External Hire	0.126	0.332	0	1	0.806***	-0.025	1.000						
(4) treatment main	0.478	0.5	0	1	0.009	0.003	0.000	1.000					
(5) ln_assets	16.56	1.745	9.928	20.553	0.065***	0.057***	0.043***	-0.140***	1.000				
(6) ln_age	2.752	0.721	.693	5.242	-0.031***	0.002	-0.039***	0.055***	0.257***	1.000			
(7) debt_ratio	0.202	0.294	0	1.705	0.003	0.015	-0.009	0.043***	0.012	-0.071***	1.000		
(8) cash_ratio	0.148	0.179	0	.877	-0.025	-0.014	-0.024	0.087***	-0.327***	-0.049***	-0.134***	1.000	
(9) vc_dummy	0.166	0.372	0	1	0.012	0.016	0.004	0.029***	-0.077***	-0.096***	0.028***	0.138***	1.000

*** p<0.01, ** p<0.05, * p<0.1

Table B1.2 - Descriptive statistics and correlation matrix - TMT sample

Variables	Mean	Std. Dev.	Min	Max	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) TMT Completeness	1.33	1.569	0	7	1.000							
(2) New TMT Appointment	0.39	0.94	0	6	0.532***	1.000						
(3) treatment main	0.45	0.497	0	1	-0.034***	-0.067***	1.000					
(4) ln_assets	16.366	1.741	10.177	20.634	0.274***	0.167***	-0.147***	1.000				
(5) ln_age	2.67	0.738	0.693	5.242	0.028***	-0.033***	0.037***	0.292***	1.000			
(6) debt_ratio	0.193	0.258	0	1.456	0.077***	0.044***	0.031***	0.080***	-0.064***	1.000		
(7) cash_ratio	0.146	0.181	0	.871	-0.035***	-0.057***	0.075***	-0.306***	-0.056***	-0.161***	1.000	
(8) vc_dummy	0.132	0.339	0	1	0.159***	0.018	0.015	-0.039***	-0.088***	0.059***	0.117***	1.000

**** p<0.01, ** p<0.05, * p<0.1*

Table B2 – Univariate analysis – CEO replacement (New CEO Appointment)

Group	Treatment Status	Obs	Mean	Std. Err.	Std. Dev.	95% CI Lower	95% CI Upper	Diff (post-pre)	Std. Err. (diff)	t-stat	p-value
Main Treatment	Pre (0)	4,196	0.093	0.004	0.291	0.084	0.102	-0.086	0.007	-11.572	0
	Post (1)	4,117	0.179	0.006	0.384	0.168	0.191				
Main Control	Pre (0)	4,985	0.127	0.005	0.333	0.118	0.136	-0.005	0.007	-0.65	0.516
	Post (1)	4,172	0.131	0.005	0.338	0.121	0.142				

Table B3 – Univariate analysis – CEO replacement (New CEO Appointment) – Internal Promotion VS External Hire

Type	Group	Treatment Status	Obs	Mean	Std. Err.	Std. Dev.	95% CI Lower	95% CI Upper	Diff (post-pre)	Std. Err. (diff)	t-stat	p-value
Internal Promotion	**Main Treatment**	Pre (0)	4,196	0.023	0.002	0.151	0.019	0.028	-0.039	0.004	-8.785	0
		Post (1)	4,117	0.062	0.004	0.247	0.054	0.069				
	Main Control	Pre (0)	4,985	0.031	0.002	0.175	0.026	0.037	-0.021	0.004	-4.943	0
		Post (1)	4,172	0.053	0.003	0.223	0.046	0.059				
External Hire	**Main Treatment**	Pre (0)	4,196	0.072	0.004	0.258	0.065	0.08	-0.049	0.006	-7.53	0
		Post (1)	4,117	0.12	0.006	0.326	0.11	0.13				
	Main Control	Pre (0)	4,985	0.1	0.004	0.3	0.091	0.108	0.015	0.006	2.519	0.012
		Post (1)	4,172	0.084	0.004	0.278	0.076	0.093				

Table B4 – Univariate analysis – TMT composition

	Function	Pre (% with at least one TMT by cat)	Post (% with at least one TMT by cat)	% of Admin	
Treated	Admin	25.11%	43.76%	--	--
	Sales	5.39%	28.08%	0.21%	0.64%
	Finance	13.79%	55.87%	0.55%	1.28%
	Business Dev	3.64%	16.79%	0.14%	0.38%
	Operations	11.13%	32.69%	0.44%	0.75%
	R&D	12.66%	32.78%	0.50%	0.75%
	Other	1.16%	5.75%	0.05%	0.13%
Control	Admin	36.62%	48.71%	--	--
	Sales	9.03%	16.89%	0.25%	0.35%
	Finance	20.50%	31.66%	0.56%	0.65%
	Business Dev	7.74%	12.75%	0.21%	0.26%
	Operations	13.30%	21.81%	0.36%	0.45%
	R&D	14.82%	25.63%	0.40%	0.53%
	Other	2.84%	6.68%	0.08%	0.14%

Annex C: Robustness checks

Table C1 – Robustness checks

	Model 1 New CEO Appointment, re	Model 2 CEO Dismissal, fe	Model 3 CEO Dismissal, re
$post$	0.054	0.016	0.114
	(0.102)	(0.142)	(0.119)
$treatment\ main$	-0.006		-0.424***
	(0.100)		(0.129)
$post \times treatment$	0.514***	0.786***	0.734***
	(0.116)	(0.173)	(0.145)
$L.ln\_assets$	0.152***	0.124**	0.200***
	(0.021)	(0.052)	(0.026)
ln_age	0.010	0.171	-0.001
	(0.047)	(0.213)	(0.058)
$L.debt\_ratio$	-0.212*	0.104	0.093
	(0.110)	(0.176)	(0.124)
$L.cash\_ratio$	-0.220	-0.221	-0.402*
	(0.179)	(0.275)	(0.217)
$L.vc\_dummy$	-0.070	0.400*	0.262***
	(0.087)	(0.211)	(0.100)
$cons$	-4.932***		-5.409***
	(0.426)		(0.518)
Log-Likelihood	-5,154.290	-2,147.381	-3,862.343
R2		0.084	
N	13,538	7,696	12,569
N_g	1,357	719	1,333

Annex D: Moderators

Table D1 – Results on split samples by firms' characteristics for dependent variable *New CEO Appointment*

	ln_assets (t-1)		ln_age (t-1)		vc_dummy (t-1)		ln_intangible assets (t-1)	
	High	**Low**	**High**	**Low**	**Yes**	**No**	**High**	**Low**
$post$	0.033	0.159	0.078	0.123	0.024	0.112	0.280	0.189
	(0.161)	(0.204)	(0.184)	(0.174)	(0.319)	(0.139)	(0.197)	(0.226)
$post \times treatment$	0.391*	0.443**	0.279	0.525**	-0.119	0.487***	-0.075	0.655***
	(0.201)	(0.220)	(0.210)	(0.204)	(0.476)	(0.165)	(0.226)	(0.246)
$L.ln\_assets$	0.128**	0.059	0.087	0.095*	0.085	0.100**	0.064	0.019
	(0.056)	(0.064)	(0.064)	(0.053)	(0.127)	(0.045)	(0.064)	(0.076)
ln_age	0.250	-0.195	0.855**	-0.381	-0.093	-0.063	-0.280	-0.253
	(0.225)	(0.269)	(0.391)	(0.266)	(0.615)	(0.185)	(0.291)	(0.296)
$L.debt\_ratio$	0.014	-0.035	-0.246	0.092	-0.024	-0.039	-0.018	-0.366
	(0.220)	(0.220)	(0.293)	(0.184)	(0.328)	(0.181)	(0.268)	(0.292)
$L.cash\_ratio$	0.253	-0.260	-0.302	0.079	-0.450	0.166	-0.232	0.130
	(0.365)	(0.314)	(0.363)	(0.317)	(0.532)	(0.277)	(0.425)	(0.381)
$L.vc\_dummy$	-0.293	0.354	-0.095	0.091	-0.205		0.153	0.259
	(0.268)	(0.227)	(0.296)	(0.211)	(0.270)		(0.252)	(0.318)
Log-Likelihood	-1,740.159	-1,298.397	-1,523.642	-1,518.921	-480.006	-2,481.514	-1,195.748	-1,013.451
R2	0.033	0.03	0.031	0.03	0.037	0.028	0.028	0.031
N	5,415	4,397	5,025	4,787	1,477	8,002	3,749	3,309
N_g	520	442	428	534	189	802	373	329

Table D2 – Results on split samples by sector and country for dependent variable New CEO Appointment

	Model 1 Green Tech	Model 2 ICT	Model 3 Life Sciences	Model 4 Manu-facturing	Model 5 Service	Model 6 Benelux	Model 7 France	Model 8 Germany	Model 9 Iberian	Model 10 Italy/Malta	Model 11 Nordic	Model 12 UK-IE
$post$	0.745	0.053	1.061	0.485	-0.148	0.430	0.298	0.383	-0.831	-0.097	0.018	-0.157
	(0.689)	(0.236)	(0.661)	(0.331)	(0.188)	(0.550)	(0.325)	(0.435)	(0.693)	(0.378)	(0.240)	(0.305)
$post \times treatment$	-17.780	0.346	1.408*	0.211	0.461**	0.223	0.199	0.156	1.313	1.293***	0.156	0.547
	(1,472.2)	(0.271)	(0.789)	(0.375)	(0.212)	(0.623)	(0.399)	(0.489)	(0.810)	(0.458)	(0.283)	(0.343)
$L.ln\_assets$	0.013	0.025	0.320	0.057	0.111**	0.359*	0.207**	-0.082	-0.216	-0.014	0.141	0.153*
	(0.439)	(0.087)	(0.225)	(0.112)	(0.055)	(0.201)	(0.099)	(0.129)	(0.235)	(0.120)	(0.094)	(0.093)
ln_age	0.260	0.176	0.181	0.133	-0.163	0.942	-0.258	0.329	0.213	-1.096**	0.126	-0.200
	(1.521)	(0.362)	(1.275)	(0.479)	(0.228)	(0.914)	(0.405)	(0.729)	(0.845)	(0.526)	(0.332)	(0.416)
$L.debt\_ratio$	-1.673	0.136	-0.146	-0.533	-0.028	0.370	-0.360	0.447	1.495	0.682	0.377	-0.257
	(1.700)	(0.285)	(0.656)	(0.540)	(0.216)	(0.624)	(0.485)	(0.460)	(0.966)	(0.799)	(0.389)	(0.258)
$L.cash\_ratio$	-0.693	-0.603	0.284	0.964	0.231	1.057	0.394	-0.527	1.531	0.618	-0.813*	0.155
	(2.412)	(0.403)	(1.119)	(0.872)	(0.339)	(1.358)	(0.631)	(0.836)	(1.394)	(0.856)	(0.484)	(0.454)
$L.vc\_dummy$	-1.013	0.228	-0.898	-0.451	0.176	-0.921	-0.117	0.197	-0.206	-0.373	0.477	0.176
	(1.450)	(0.334)	(0.771)	(0.524)	(0.238)	(0.835)	(0.419)	(0.563)	(0.960)	(0.590)	(0.338)	(0.396)
Log-Likelihood	-79.096	-830.664	-126.205	-510.624	-1,439.423	-177.083	-461.131	-229.720	-156.829	-335.890	-747.642	-609.868
R2	0.228	0.030	0.144	0.076	0.027	0.126	0.055	0.105	0.187	0.121	0.040	0.044
N	290	2,626	487	1,918	4,491	597	1,505	858	638	1,325	2,334	1,917
N_g	26	239	50	195	452	56	143	91	65	124	229	187

Table D3 – Results on split samples by firms' characteristics for dependent variable *TMT Completeness*

	ln_assets (t-1)		ln_age (t-1)		vc_dummy (t-1)		ln_intangible assets (t-1)	
	High	**Low**	**High**	**Low**	**Yes**	**No**	**High**	**Low**
$post$	-0.008	-0.125***	-0.026	-0.098***	-0.203***	-0.057***	-0.064*	-0.126***
	(0.029)	(0.030)	(0.028)	(0.032)	(0.070)	(0.021)	(0.038)	(0.034)
$post \times treatment$	0.501***	0.528***	0.387***	0.640***	0.907***	0.515***	0.427***	0.550***
	(0.032)	(0.031)	(0.028)	(0.035)	(0.093)	(0.023)	(0.038)	(0.034)
$L.ln\_assets$	0.128***	0.183***	0.119***	0.182***	0.264***	0.128***	0.150***	0.146***
	(0.009)	(0.010)	(0.009)	(0.009)	(0.025)	(0.007)	(0.011)	(0.011)
ln_age	-0.114***	0.008	-0.054	-0.035	-0.515***	-0.056**	-0.035	-0.063*
	(0.032)	(0.034)	(0.040)	(0.046)	(0.122)	(0.023)	(0.041)	(0.037)
$L.debt\_ratio$	0.192***	0.021	0.100**	0.094**	0.089	0.051*	0.043	0.075*
	(0.042)	(0.037)	(0.041)	(0.039)	(0.073)	(0.030)	(0.050)	(0.044)
$L.cash\_ratio$	-0.125*	-0.139***	-0.052	-0.181***	-0.125	-0.139***	-0.079	-0.267***
	(0.065)	(0.049)	(0.054)	(0.058)	(0.113)	(0.041)	(0.073)	(0.057)
$L.vc\_dummy$	0.156***	0.377***	0.331***	0.248***	0.201***		0.235***	0.449***
	(0.046)	(0.036)	(0.043)	(0.040)	(0.063)		(0.044)	(0.046)
$cons$	0.002	-1.366***	-0.164	-1.098***	-0.939*	-0.236*	-0.424**	-0.587***
	(0.176)	(0.166)	(0.196)	(0.191)	(0.502)	(0.124)	(0.205)	(0.190)
Log-Likelihood	-1.50e+04	-1.30e+04	-1.48e+04	-1.32e+04	-4,193.230	-2.27e+04	-1.08e+04	-9,201.584
R2	0.132	0.176	0.142	0.143	0.089	0.144	0.173	0.149
N	13,451	12,195	14,094	11,552	3,398	22,248	9,428	9,120
N_g	840	832	663	1009	387	1537	590	600

Table D4 – Results on split samples by sector and country for dependent variable *TMT Completeness*

	Model 1 Green Tech	Model 2 ICT	Model 3 Life Sciences	Model 4 Manu-facturing	Model 5 Service	Model 6 Benelux	Model 7 France	Model 8 Germany	Model 9 Iberian	Model 10 Italy/Malta	Model 11 Nordic	Model 12 UK-IE
$post$	0.247*	-0.025	-0.283**	-0.080**	-0.039	-0.500***	-0.126***	-0.137*	0.222***	-0.077	0.020	-0.082
	(0.146)	(0.049)	(0.113)	(0.034)	(0.032)	(0.092)	(0.044)	(0.072)	(0.069)	(0.047)	(0.054)	(0.060)
$post \times treatment$	0.338**	0.704***	0.643***	0.279***	0.524***	1.186***	0.454***	0.233***	0.154**	0.314***	0.512***	0.924***
	(0.168)	(0.053)	(0.111)	(0.035)	(0.033)	(0.093)	(0.049)	(0.076)	(0.067)	(0.052)	(0.059)	(0.060)
$L.ln\_assets$	-0.027	0.224***	0.130***	0.136***	0.130***	0.140***	0.224***	0.175***	0.204***	0.169***	0.134***	0.055***
	(0.052)	(0.016)	(0.030)	(0.012)	(0.009)	(0.024)	(0.013)	(0.024)	(0.021)	(0.016)	(0.019)	(0.018)
ln_age	0.202	-0.211***	0.279**	-0.203***	-0.130***	0.146	-0.037	-0.356***	-0.574***	-0.161***	0.307***	-0.105
	(0.181)	(0.061)	(0.118)	(0.039)	(0.034)	(0.098)	(0.048)	(0.097)	(0.067)	(0.051)	(0.064)	(0.068)
$L.debt\_ratio$	0.214	0.224***	-0.163	0.129**	-0.024	-0.030	0.036	0.092	0.095	0.384***	0.036	-0.005
	(0.199)	(0.059)	(0.118)	(0.056)	(0.041)	(0.115)	(0.075)	(0.075)	(0.091)	(0.090)	(0.083)	(0.056)
$L.cash\_ratio$	0.803***	-0.099	-0.519***	-0.132	-0.102*	-0.056	-0.081	-0.311**	0.109	0.028	0.241**	-0.380***
	(0.300)	(0.080)	(0.181)	(0.084)	(0.058)	(0.166)	(0.085)	(0.126)	(0.134)	(0.125)	(0.101)	(0.089)
$L.vc\_dummy$	-0.060	0.376***	-0.006	0.167***	0.272***	0.440***	-0.030	0.371***	0.264***	0.255***	0.185**	0.749***
	(0.220)	(0.059)	(0.141)	(0.062)	(0.042)	(0.125)	(0.055)	(0.088)	(0.089)	(0.074)	(0.077)	(0.077)
$cons$	1.736*	-0.938***	-0.877	-0.234	-0.062	-0.367	-1.859***	0.159	-0.114	-0.867***	-1.293***	1.295***
	(1.014)	(0.286)	(0.623)	(0.227)	(0.171)	(0.560)	(0.241)	(0.424)	(0.377)	(0.287)	(0.324)	(0.342)
Log-Likelihood	-840.18	-7,606.69	-1,277.21	-6,275.81	-1.2e+04	-1,333.18	-5,216.71	-1,930.54	-2,937.32	-3,715.36	-5,094.17	-5,353.64
R2	0.011	0.235	0.149	0.156	0.154	0.174	0.178	0.193	0.128	0.133	0.151	0.139
N	695	6,130	1,125	6,895	10,801	1,312	4,991	1,909	2,751	3,848	4,349	4,451
N_g	42	425	72	368	765	78	306	149	161	221	325	300

Table D5 – Results on split samples by firms' characteristics for dependent variable *New TMT Appointment*

	ln_assets (t-1)		ln_age (t-1)		vc_dummy (t-1)		ln_intangible assets (t-1)	
	High	**Low**	**High**	**Low**	**Yes**	**No**	**High**	**Low**
$post$	0.044	0.007	0.062*	-0.012	0.055	0.019	0.075*	-0.004
	(0.039)	(0.032)	(0.035)	(0.039)	(0.069)	(0.029)	(0.043)	(0.045)
$post \times treatment$	0.145***	0.153***	0.119***	0.195***	0.171*	0.179***	0.071	0.200***
	(0.045)	(0.035)	(0.037)	(0.045)	(0.092)	(0.033)	(0.044)	(0.049)
$L.ln\_assets$	0.080***	0.061***	0.057***	0.082***	0.085***	0.067***	0.079***	0.046***
	(0.014)	(0.012)	(0.014)	(0.013)	(0.026)	(0.010)	(0.014)	(0.018)
ln_age	0.028	0.005	0.142**	-0.008	-0.050	0.009	0.043	0.005
	(0.047)	(0.044)	(0.064)	(0.061)	(0.128)	(0.036)	(0.052)	(0.061)
$L.debt\_ratio$	0.112*	0.059	0.058	0.109**	0.041	0.111***	0.039	0.180***
	(0.058)	(0.039)	(0.055)	(0.047)	(0.070)	(0.041)	(0.056)	(0.061)
$L.cash\_ratio$	0.015	-0.136**	-0.124*	-0.036	-0.159	-0.046	-0.038	-0.178**
	(0.092)	(0.054)	(0.072)	(0.073)	(0.109)	(0.060)	(0.086)	(0.081)
$L.vc\_dummy$	0.078	0.077**	-0.016	0.118**	0.105*		0.043	0.127**
	(0.061)	(0.038)	(0.055)	(0.048)	(0.061)		(0.050)	(0.063)
$cons$	-1.624***	-1.042***	-1.519***	-1.448***	-1.411***	-1.241***	-1.588***	-0.845***
	(0.268)	(0.199)	(0.285)	(0.256)	(0.527)	(0.192)	(0.253)	(0.300)
Log-Likelihood	-1.05e+04	-6,276.750	-8,234.136	-8,903.560	-2,762.411	-1.43e+04	-6,626.303	-5,751.68
R2	0.024	0.059	0.017	0.052	0.046	0.038	0.041	0.04
N	8,977	7,454	8,320	8,111	2,720	13,711	6,373	5,571
N_g	834	812	659	987	380	1451	588	586

Table D6 – Results on split samples by sector and country for dependent variable *New TMT Appointment*

	Model 1 Green Tech	Model 2 ICT	Model 3 Life Sciences	Model 4 Manu-facturing	Model 5 Service	Model 6 Benelux	Model 7 France	Model 8 Germany	Model 9 Iberian	Model 10 Italy/Malta	Model 11 Nordic	Model 12 UK-IE
$post$	0.044	0.020	0.551***	0.014	0.002	-0.224*	-0.002	0.070	0.141*	0.030	-0.014	0.042
	(0.227)	(0.052)	(0.146)	(0.036)	(0.043)	(0.122)	(0.061)	(0.097)	(0.081)	(0.050)	(0.053)	(0.089)
$post \times treatment$	0.025	0.211***	-0.248	0.068	0.169***	0.388***	0.092	0.257**	0.054	0.077	0.136**	0.244***
	(0.265)	(0.058)	(0.153)	(0.042)	(0.048)	(0.136)	(0.068)	(0.109)	(0.084)	(0.059)	(0.060)	(0.091)
$L.ln\_assets$	-0.081	0.101***	0.122**	0.025	0.063***	0.124***	0.086***	0.052	0.085***	0.008	0.071***	0.104***
	(0.081)	(0.020)	(0.047)	(0.016)	(0.014)	(0.040)	(0.020)	(0.034)	(0.028)	(0.018)	(0.022)	(0.029)
ln_age	0.095	-0.213***	-0.248	0.080	0.085*	0.103	0.088	-0.108	-0.123	0.047	0.012	0.005
	(0.328)	(0.073)	(0.199)	(0.050)	(0.050)	(0.150)	(0.072)	(0.146)	(0.093)	(0.061)	(0.076)	(0.111)
$L.debt\_ratio$	0.357	0.154**	-0.166	-0.030	0.090	0.242	0.110	0.218**	0.128	0.037	-0.017	0.067
	(0.298)	(0.064)	(0.156)	(0.067)	(0.056)	(0.156)	(0.097)	(0.101)	(0.130)	(0.107)	(0.083)	(0.079)
$L.cash\_ratio$	-0.195	-0.201**	0.350	0.008	-0.017	-0.070	-0.131	-0.228	0.094	-0.272**	0.031	-0.046
	(0.530)	(0.088)	(0.254)	(0.101)	(0.084)	(0.250)	(0.118)	(0.177)	(0.184)	(0.136)	(0.104)	(0.137)
$L.vc\_dummy$	-0.139	0.102	0.059	-0.110	0.120**	-0.072	0.066	-0.172	0.126	0.148*	0.085	0.117
	(0.329)	(0.063)	(0.205)	(0.070)	(0.056)	(0.161)	(0.071)	(0.126)	(0.110)	(0.081)	(0.077)	(0.114)
$cons$	1.071	-1.097***	-1.589*	-0.709**	-1.438***	-2.328**	-1.756***	-0.572	-1.296**	-0.299	-1.269***	-1.948***
	(1.701)	(0.352)	(0.954)	(0.301)	(0.255)	(0.928)	(0.361)	(0.625)	(0.508)	(0.344)	(0.375)	(0.575)
Log-Likelihood	-601.737	-5,083.498	-691.940	-2,345.105	-7,741.679	-1,051.719	-3,487.317	-1,349.086	-1,497.110	-1,652.688	-3,004.425	-3,618.315
R2	0.017	0.08	0.107	0.006	0.035	0.044	0.057	0.073	0.032	0.011	0.046	0.064
N	444	4,532	655	3,765	7,035	935	3,252	1,281	1,590	2,310	3,115	2,837
N_g	41	418	71	364	752	77	300	147	158	219	323	294

Annex E: Secondary Group's estimates

Table E1 – Results on *New CEO Appointment* for the Secondary Group

	Model 1 New CEO Appointment, fe	Model 2 New CEO Appointment, dynamic
$post$	0.364	
	(0.299)	
$post \times treatment$	-0.005	
	(0.307)	
$L.ln\_assets$	0.238***	0.232***
	(0.088)	(0.088)
ln_age	-0.291	-0.237
	(0.387)	(0.391)
$L.debt\_ratio$	-0.414	-0.417
	(0.261)	(0.265)
$L.cash\_ratio$	0.221	0.180
	(0.512)	(0.512)
$L.vc\_dummy$	-0.354	-0.360
	(0.308)	(0.310)
$post1$		0.594
		(0.368)
$post \times treatment$		-0.445
		(0.473)
$post2$		0.130
		(0.409)
$post2 \times treatment$		0.308
		(0.464)
$post3$		0.273
		(0.424)
$post3 \times treatment$		-0.085
		(0.466)
$post4plus$		-0.089
		(0.476)
$post4plus \times treatment$		0.244
		(0.402)
Log-Likelihood	-603.296	-601.701
R2	0.034	0.037
N	1,796	1,796
N_g	167	167

Table E2 – Results on *Type of CEO Succession* for the Secondary Group

	Model 1 Internal Promotion	Model 2 Internal Promotion, dynamic	Model 3 External Hire	Model 4 External Hire, dynamic
$post$	1.067**		0.121	
	(0.433)		(0.303)	
$treatment\ main$	0.065	0.071	-0.159	-0.160
	(0.381)	(0.379)	(0.234)	(0.233)
$post \times treatment$	-0.603		0.092	
	(0.439)		(0.306)	
$L.ln\_assets$	0.301***	0.308***	0.243***	0.244***
	(0.069)	(0.071)	(0.045)	(0.045)
ln_age	0.268	0.295	0.038	0.050
	(0.187)	(0.184)	(0.123)	(0.121)
$L.debt\_ratio$	-0.024	-0.001	-0.408	-0.403
	(0.244)	(0.237)	(0.285)	(0.283)
$L.cash\_ratio$	-0.097	-0.155	-0.750*	-0.767*
	(0.585)	(0.587)	(0.453)	(0.447)
$L.vc\_dummy$	-0.185	-0.117	-0.146	-0.127
	(0.206)	(0.212)	(0.160)	(0.159)
$post1$		1.564***		0.298
		(0.496)		(0.394)
$post \times treatment$		-1.265*		-0.066
		(0.728)		(0.490)
$post2$		0.485		0.212
		(0.686)		(0.428)
$post2 \times treatment$		0.403		0.087
		(0.755)		(0.514)
$post3$		1.004*		0.043
		(0.606)		(0.457)
$post3 \times treatment$		-0.500		0.095
		(0.715)		(0.501)
$post4plus$		0.715		-0.119
		(0.556)		(0.378)
$post4plus \times treatment$		-0.728		0.202
		(0.530)		(0.380)
$cons$	-9.483***	-9.336***	-6.589***	-6.468***
	(1.491)	(1.521)	(1.074)	(1.085)
Log-Likelihood	-1,169.109	-1,165.471	-1,169.109	-1,165.471
R2	0.071	0.074	0.071	0.074
N	2,484	2,484	2,484	2,484

Table E3 – Results on TMT Completeness and renewal for the Secondary Group

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
	TMT Completeness	New TMT Appointment	New TMT Appointment - Admin	New TMT Appointment - Sales	New TMT Appointment - R&D	New TMT Appointment - Operations	New TMT Appointment - Business Dev	New TMT Appointment - Finance	New TMT Appointment - Other
$post$	-0.304***	0.058	-0.062	0.047	0.013	0.031	0.038	-0.009	-0.016
	(0.066)	(0.091)	(0.051)	(0.034)	(0.034)	(0.028)	(0.029)	(0.040)	(0.016)
$post \times treatment$	1.023***	0.106	0.143***	0.013	0.006	0.011	0.025	0.113***	0.007
	(0.066)	(0.091)	(0.051)	(0.034)	(0.034)	(0.028)	(0.028)	(0.039)	(0.016)
$L.ln\_assets$	0.211***	0.081***	0.049***	0.014	0.013	0.014*	0.009	0.011	0.003
	(0.016)	(0.024)	(0.013)	(0.009)	(0.009)	(0.007)	(0.007)	(0.010)	(0.004)
ln_age	-0.027	-0.012	-0.041	-0.022	0.033	-0.038	-0.006	-0.092*	0.018
	(0.071)	(0.109)	(0.061)	(0.040)	(0.041)	(0.034)	(0.034)	(0.047)	(0.019)
$L.debt\_ratio$	-0.117**	-0.130*	0.010	-0.046*	-0.034	-0.061***	-0.046**	-0.019	-0.013
	(0.049)	(0.068)	(0.038)	(0.025)	(0.025)	(0.021)	(0.021)	(0.029)	(0.012)
$L.cash\_ratio$	-0.141	-0.288**	-0.040	-0.043	0.013	0.030	-0.038	-0.003	-0.006
	(0.098)	(0.136)	(0.076)	(0.050)	(0.051)	(0.042)	(0.043)	(0.059)	(0.023)
$L.vc\_dummy$	0.204***	0.074	0.044	0.050	-0.052	0.018	0.039	-0.023	-0.015
	(0.062)	(0.088)	(0.049)	(0.032)	(0.033)	(0.027)	(0.027)	(0.038)	(0.015)
$cons$	-1.076***	-1.360***	-0.592**	-0.153	-0.179	-0.104	-0.095	0.176	-0.009
	(0.310)	(0.456)	(0.253)	(0.169)	(0.170)	(0.142)	(0.142)	(0.197)	(0.078)
Log-Likelihood	-4,909.135	-4,156.611	-2,377.591	-1,146.262	-1,164.814	-623.489	-637.983	-1,622.247	1,189.538
R2 overall	0.2035	0.0624	0.0300	0.0329	0.0113	0.0125	0.0301	0.0123	0.0101
N	4,025	3,026	3,026	3,026	3,026	3,026	3,026	3,026	3,026
N_g	314	310	310	310	310	310	310	310	310

References

- Aguilera, R. V., & Jackson, G. (2010). Comparative and international corporate governance. *Academy of Management Annals, 4*(1), 485–556.
- Alperovych, Y., Amess, K., & Wright, M. (2013). Private equity firm performance and the heterogeneity of portfolio companies. *Venture Capital, 15*(2), 79–102.
- Amess, K., Stiebale, J., & Wright, M. (2016). The impact of private equity on firms' patenting activity. *European Economic Review, 86*, 147-160.
- Antoni, M., Maug, E., & Obernberger, S. (2019). Private equity and labor productivity: Evidence from buyouts. *Journal of Finance, 74*(2), 957–1006.
- Barron, J. M., Chulkov, D. V., & Waddell, G. R. (2011). Top management team turnover, CEO succession type, and strategic change. *Journal of Business Research, 64*(8), 904-910.
- Bertoni, F., Colombo, M. G., Montanaro, B., Quas, A., & Tenca, F. (2025). Assessing the economic impact of EIF-supported equity financing: The case of Lower-Mid Market (No. 105/2025). European Investment Fund (EIF).
- Bruton, G. D., Filatotchev, I., Chahine, S., & Wright, M. (2010). Governance, ownership structure, and performance of IPO firms: The impact of different types of private equity investors. *Strategic Management Journal, 31*(5), 491–509.
- Capron, L., & Guillén, M. (2009). National corporate governance institutions and post-acquisition target reorganization. *Strategic Management Journal*, 30(8), 803-833.
- Cohn, J. B., Mills, L. F., & Towery, E. M. (2022). The evolution of capital structures in private equity portfolio companies. *Management Science, 68*(3), 1981–2001.
- Conti, A., & Graham, S. J. H. (2022). Valuable choices: Prominent venture capitalists' influence on startup CEO replacements. *Management Science, 68*(5), 3412–3431.
- Cumming, D., Fleming, G., & Schwienbacher, A. (2010). Legality and venture capital governance around the world. *Journal of Business Venturing, 25*(1), 54–72.
- Davis, S. J., Haltiwanger, J., Handley, K., Lipsius, B., Lerner, J., & Miranda, J. (2021). The economic effects of private equity buyouts. Available at SSRN 3465723.
- Degeorge, F., Martin, J., & Phalippou, L. (2016). On secondary buyouts. *Journal of Financial Economics, 120*(1), 124–145.
- Gong, J. J., & Wu, S. Y. (2011). CEO turnover in private equity sponsored leveraged buyouts. *Corporate Governance: An International Review, 19*(3), 195–209.

- Hammer, B., Marcotty-Dehm, N., Schweizer, D., & Schwetzler, B. (2022). Pricing and value creation in private equity-backed buy-and-build strategies. *Journal of Corporate Finance*, 77,102285.
- Hellmann, T., & Puri, M. (2002). Venture capital and the professionalisation of start-up firms: Empirical evidence. *Journal of Finance, 57*(1), 169–197.
- Jelic, R., Wright, M., & Gilligan, J. (2019). Exit decisions in private equity buyouts: Empirical evidence from the UK. *European Financial Management, 25*(2), 371–403.
- Kaplan, S. N., & Strömberg, P. (2009). Leveraged buyouts and private equity. *Journal of economic perspectives*, 23(1), 121-146.
- Lerner J. (1995). Venture capitalists and the oversight of private firms. *Journal of Finance,* 50(1), 301–318.
- McGrath, R. G., & Nerkar, A. (2023). Institutional context and firm adaptation: Lessons from the private equity sector. *Strategic Entrepreneurship Journal, 17*(1), 45–65.
- Meuleman, M., Amess, K., Wright, M., & Scholes, L. (2009). Agency, strategic entrepreneurship, and the performance of private equity-backed buyouts. *Entrepreneurship Theory and Practice, 33*(1), 213–239.
- Meuleman, M., Wright, M., Manigart, S., & Lockett, A. (2009). Private equity syndication: Agency costs, reputation and collaboration. *Journal of Business Finance & Accounting*, 36(5-6), 616-644.
- Morris, D., & Phalippou, L. (2020). Thirty years after Jensen's prediction: Is private equity a superior form of ownership? *Oxford Review of Economic Policy, 36*(4), 764–791.
- Verbouw, J., Meuleman, M., & Manigart, S. (2025). Institutions and the real effects of private equity buyouts: A meta-analysis. *Strategic Entrepreneurship Journal*, 19(1), 196-221.
- Wooldridge, J. M. (2010). Estimating panel data models in the presence of endogeneity and selection. *Journal of Econometrics*, 157(2), 119–136.

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