A typology of private investor-ownership in health service provision and related regulatory frameworks in five countries

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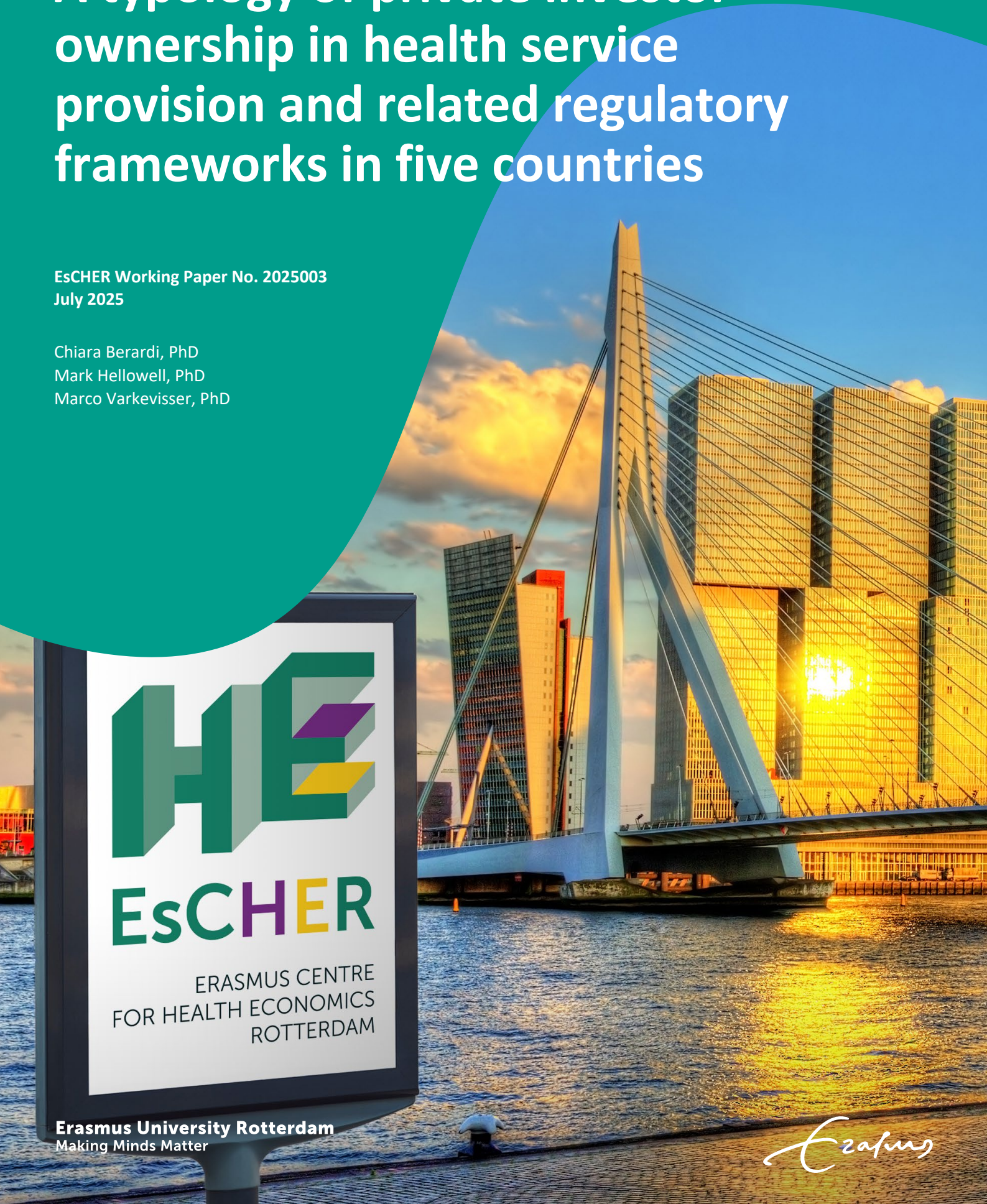

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Title

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Abstract

Private sector entities can invest in and own the means of healthcare provision, creating opportunities and risks for health systems. While private investment can enhance access to capital, promote competition, and foster innovation, it can also exacerbate incentives for providers to engage in supplier-induced demand, undue price increases, quality compromises, and 'cherry-picking' of the most profitable patients and services. Despite the growing presence of private investors in the healthcare sector, heterogeneity in investor types remains poorly understood. This limits the ability of policy-makers to consider whether, and to what extent, regulatory intervention is called for in relation to different forms of investor-ownership. This article begins to address this gap by presenting a typology of investor-ownership in healthcare provision. Examining the policy-relevance of such a typology by drawing on principal-agent theory, we present a comparative case study analysis of current regulations directed at ownership across five countries, representing different health system models. We find that regulatory frameworks that differentiate between different types of for-profit investor-ownership are largely absent in Europe, but more developed in the US. We argue that private investment requires a combination of entry regulation and behavioral oversight to better align the incentives of investor-owners with public health objectives.

Keywords

For-Profit Healthcare, Private Investors, Private Equity, Asymmetric Information, Equity, Efficiency

1. Introduction

The influence of financial motives, markets, and investors on healthcare provision has strongly increased in recent decades (OECD, 2024). Since the 1990s, market-oriented reforms have reshaped healthcare provision, driven by promises of efficiency, competition, and enhanced patient choice. Policies such as the separation of funding and service delivery, performance-based reimbursement, and diagnosis-related group (DRG) payment models have facilitated the expansion of private for-profit providers in healthcare provision (Molinuevo et al., 2017). Unlike public or non-profit organizations, private for-profit entities allocate a share of their surplus (revenues minus expenses) to shareholders and/or other investors (Herrera et al., 2014). While private sector involvement has long been embedded in social health insurance (SHI) systems such as Germany and the Netherlands, internal market reforms have also expanded its role in NHS systems, such as Italy and the UK (Montagu, 2021). The global financial crisis of 2008 led to acute fiscal constraints in many countries, placing pressure on policymakers to undertake public hospital closures and bed reductions (Berardi et al., 2024). This, combined with rising demand and growing waiting times in the wake of the pandemic, has reduced public sector capacity and created opportunities for expanded private sector involvement in both publicly and privately funded healthcare (Bagri, 2023; Brenna, 2025; Dayan et al., 2024; Molinuevo et al., 2017; Vicarelli, 2024). Given rising military expenditures, competition over limited public funds is unlikely to ease, further constraining public financing for healthcare.

The involvement of for-profit private investment in healthcare provision and its impact on access, quality, efficiency and costs is a contentious social and political issue worldwide, reflecting significant variations in private sector ownership and investment across countries

(Chalkley & Sussex, 2018). The literature does not establish a clear link between ownership — whether public, for-profit, or non-profit — and health system outcomes (Borsa et al., 2023; Goodair, 2024). From an economic perspective, private investors can help address major challenges in the healthcare sector by increasing providers' access to capital, promoting competition, and fostering innovation (Barros et al., 2015). However, depending on their organizational objectives, the presence of private investors can also pose risks, especially when policy failures (made more likely by the combination of asymmetric information and misaligned financial incentives), enable undesirable but potentially profitable actions such as supplier-induced demand, undue price increases, cost-cutting at the expense of care quality, and cherry-picking of the most profitable patients and services. In addition, competition authorities have raised concerns over the growing consolidation of the healthcare market, calling for further investigation to better assess its implications (OECD, 2024). This includes the emergence of 'too big to fail' providers, whose scale may limit regulatory leverage and create pressure for state support in the event of failure.

In general, mitigating the risks of private for-profit investment in, and ownership of, healthcare providers requires a robust regulatory framework and, for those included in state purchasing arrangements, effective contracts (Borsa et al., 2023; Heins et al., 2010). While governments implement a range of interventions – including entry barriers, oversight mechanisms, and contractual agreements – to influence the structure, conduct and performance of private providers, these frameworks inevitably contain gaps that can be exploited by investors to increase profits. Striking this balance requires careful consideration of the capacity of government to intervene effectively and its tolerance for risks related to private investor-ownership. A key policy question is how policymakers can encourage investors that have objectives and incentives aligned with social goals while curtailing the

influence of others, whose activities may undermine key health system objectives, such as equity of access and quality of care.

The role of for-profit private providers in healthcare and their impact on service delivery remain subjects of polarized policy debate (Chalkley & Sussex, 2018). In addition, research on the different forms of investor-ownership and the implications of this for public policy – particularly in European countries – remains limited (Tracey et al., 2025). While existing literature largely focuses on private equity firms in the US (Borsa et al., 2023; Kannan et al., 2023; Unruh & Rice, 2025), private investment in healthcare is more diverse, with different ownership models operating under distinct regulatory systems, giving rise to different incentives. Without a nuanced understanding of the diverse configurations of private investor-ownership and regulatory models across countries, it is impossible to engage in informed policy analysis. Understanding these variations is critical to identifying both the opportunities and risks associated with different investment models, particularly in determining whether different types of investors have equally strong incentives to pursue positive or negative behaviors that may affect purchasers and patients. Therefore, after presenting a typology of private investor-ownership in healthcare provision, this study examines the configurations of private ownership and investment in healthcare across different national contexts, situating them within the broader regulatory frameworks that shape market incentives.

This paper aims to: (i) categorize the different types of private investor-ownership in healthcare provision in terms of their objectives, capital structures, profit strategy and other attributes; (ii) for each investor-ownership type, examine the opportunities and challenges from a health policy perspective, drawing on principal-agent theory; and (iii) examine five

country case studies (the UK, Italy, Germany, the Netherlands, the US) (iii) map current regulations directed at private investor-ownership, assess their strengths and limitations, and provide an outline of key overarching lessons and recommendations for policymakers.

2. Developing a typology of private investor-ownership in the market for healthcare provision

This section outlines a typology of private investor-ownership in healthcare provision. Unlike previous typologies, which have primarily examined public and private providers within health systems and different forms of privatization (Cortez & Quinlan-Davidson, 2022; Molinuevo et al., 2017; Montagu, 2021), our focus is on the *nature of ownership as conferred by the nature of equity investment in healthcare provision.* Our analysis is focused on investor-ownership of private health service providers and thus excludes producers, distributors or retailers of medical equipment, devices and pharmaceuticals. By distinguishing between different ownership and investment models, we aim to provide a more granular understanding of the various forms of private investor-ownership and their policy relevance. This framework offers a more nuanced perspective on the objectives and incentives of private investors in healthcare provision, highlighting the implications of different ownership structures for healthcare outcomes such as equitable access, quality, efficiency, and cost.

Economic theory suggests that under conditions of perfect competition – including no barriers to entry, complete contracts and perfect information among all buyers and sellers – there is no inherent difference between public and private ownership in healthcare provision (Shleifer, 1998). However, in actual healthcare markets, barriers to entry are significant, including high capital investment requirements and technological constraints; and, as

healthcare services are highly complex, making it impossible to specify every aspect of quality and delivery in contractual agreements (Chalkley & Sussex, 2018) patients cannot make fully informed choices on their own behalf in the market for health services, and contracts entered into, e.g., by public authorities or state purchasers to provide services to patients are always incomplete. Thus, as the regulatory architecture inevitably contains important limitations, and contracts are incomplete, ownership is, in reality, an important driver of provider behaviour. Due to their distinctive characteristics – e.g., clarity of objective (i.e. profit-maximization, pressures on organizational/managerial performance from shareholders and creditors, and hard budget constraints (i.e. the fact that a failure to generate adequate profits eventually leads to insolvency), for-profit entities are likely to prioritize financial returns by exploiting regulatory gaps, incomplete contracts, and information asymmetries by engaging in adverse behaviours such as supplier-induced demand, cherry picking of profitable patients and services, and quality-shading, or externalizing costs onto the public system (Heins et al., 2010).

Thus, while economic theory suggests that private sector competition fosters innovation, efficiency, and consumer choice, in the healthcare sector, close attention should be paid to how for-profit entities respond to market failures, and the potential for such responses to undermine equity, access, and quality of care.

Our typology (Table 1) distinguishes between five ownership models in healthcare provision: non-profit, sole proprietor and partnership, shareholder ownership (in the form of a public corporation), venture capital (VC), and private equity (PE). For each type, eight attributes are defined: ownership structure, capital structure, investment horizon, role of investors in provider management, access to external capital, growth orientation, profit focus, and extent

of public transparency (Chang, 2023, Eckbo, 2007). By examining these dimensions, the framework highlights how different investor-ownership types shape strategic, operational, and financial incentives in the healthcare market (Schoenmaker & Schramade, 2023). Notably, PE-owned provider organizations – being highly sensitive to the concerns of investors – is characterized by highly geared capital structures, with debt typically borne by the acquired asset. This introduces an element of financial fragility into the healthcare network and raises the potential for a 'too big to fail' scenario. PE ownership also entails an aggressive focus on profit-maximization within a short investment time-horizon (Eckbo et al., 2023). In contrast, other forms of investor-ownership of corporates, such as public corporations, are marked by less direct involvement in strategic, operational, and financial decision-making, lower levels of gearing, a more gradual growth orientation, and a less aggressive emphasis on short-term profits. These differences also extend to levels of public transparency. While PLCs are subject to the highest disclosure requirements due to securities regulation, PE and VC firms, as well as sole proprietors, operate with minimal obligations for public financial reporting, limiting external oversight and accountability (Table 1).

Notwithstanding the different objectives, capital structures, and profit strategies defining the different forms of ownership, all private firms – including non-profits – may be incentivized to exploit regulatory gaps, contractual incompleteness, and information asymmetries, including those between providers and patients, and providers and purchasing agencies. However, these incentives are typically more pronounced for some ownership forms than for others – in particular, PE firms, and potentially VC investors, due to their stronger financial return imperatives and shorter investment horizons – are a priori most likely to respond sensitively, and opportunistically, to any such lacunae. PE firms are motivated to aggressively pursue short-term returns because the dominant performance metric (Internal Rate of

Return; IRR) disproportionately overvalues cash-flows received in the early years of an investment (Phalippou, 2020). This reliance on a gameable and misleading metric can distort investor expectations and drive strategies that undermine long-term outcomes, with potentially significant implications for the provision of healthcare services. Previous studies have shown that ownership structure significantly affects healthcare delivery outcomes. While being effective at providing cost-efficient care (Beyer et al., 2022), PE ownership has been consistently associated with increased costs to patients or payers, and mixed to harmful impacts on quality and access (Borsa et al., 2023; Cerullo et al., 2021; Matthews & Roxas, 2023; Singh et al., 2025). The highly leveraged financial structures typical of PE firms have also been found to pose risks to operational sustainability and patient safety (Karamardian et al., 2024).

The effects of ownership are therefore highly context-dependent, shaped by variations in local market structures and the strength of regulatory oversight. Understanding the configurations of private ownership and investment within national health systems – situated within their broader regulatory frameworks – is thus essential for identifying the risks and opportunities associated with different investor-ownership models. Despite the rise of PE across high income countries, much of the existing evidence focuses on the US healthcare system (Cerullo et al., 2022; Nie et al., 2022; Pauly & Burns, 2024; Singh et al., 2025b), which is characterized by institutional arrangements that differ significantly from those in other high-income countries, thereby limiting the generalizability of these findings (Borsa et al., 2023). To address this gap, in section 4 we draw comparisons between case studies from the US and selected European health systems to further contextualize the regulatory environments and market dynamics shaping private healthcare provision across different contexts.

Table 1: A typology of private investor-ownership in the healthcare sector

Domain	Non-profit ownership	Sole-proprietor and partnership models	Shareholder ownership (Corporation)	Venture Capital (VC)	Private Equity (PE)
Ownership	Ownership is held by foundations, associations or other "mission-oriented" bodies.	Ownership is held by a single individual, or by a partnership comprised of a small number of individuals.	Ownership is distributed among a large number of public shareholders who can buy and sell shares.	Ownership is by a small number of venture capitalists or institutional investors.	Ownership is by a small group of investors, of two types: General Partners (The PE Firm), who invest and manage the PE Fund; and Limited Partners (pension funds, or other institutional investors), who are passive investors in the Fund.
Capital structure	Debt-to-equity ratio is generally low, due to regulatory constraints and focus on long-term sustainability.	Debt-to-equity ratio is generally low: firms operate with individual/ partners' equity investment and moderate use of debt for capital expenses or working capital needs.	Public corporations typically have a balanced debt-to-equity ratio. Larger corporations may issue bonds or take on loans to fund growth, acquisitions, or capital expenditures.	Debt-to-equity ratio is generally low, or even zero, as VC targets firms in the early stages of growth and which do not have adequate cash flow to meet debt service costs.	Debt-to-equity ratio is generally high, as this allows PE firms to acquire assets with a small upfront equity investment. In addition, debt is often used to enhance returns, leveraging the acquired asset's future cash flow to pay off interest and principal.
Investment horizon	No specific investment horizon; long-term focus.	No specific investment horizon; long-term focus.	No specific investment horizon; long-term focus, albeit market-driven by shareholder interests.	Short-medium-term, focused on achieving scale and achieving profitability quickly (typically 5-10 years).	Short-term investment horizon – as PE Fund aims to increase the value of the acquired asset and sell it within 3-7 years.

Role of investor(s) in provider management	Management is by the board of trustees, with stakeholder representatives (where present), and their appointed executive team.	Strategic and operational management (clinical and financial matters) is by the owner(s); no formal decision-making role for external investors.	Shareholders exert limited and indirect influence – e.g., through voting rights, board appointments, and strategic oversight. Larger shareholders (e.g., institutional investors) may exert influence on strategy, executive pay, and capital use, etc.	VC investors have direct involvement in strategic and operational decisions; however, this may transition to a more hands-off approach once the company matures.	General Partners (The PE Firm) have direct involvement in strategic and operational decisions; Limited Partners have no direct involvement. They are directly involved in appointment of executives, approach to cost-cutting, restructuring for profitability.
Access to external capital	Limited: sources include government grants, charitable donations, loans and retained earnings.	Limited: Primary reliance on small loans, individual/partner equity investments, and retained earnings.	Very high: By issuing shares on public markets, firms can raise large amounts of equity capital, and can also issue bonds or take on loans.	Moderate: VC investors can mobilize substantial amounts of equity capital, but access to debt is usually limited.	High: PE firms can mobilize substantial amounts of equity and debt capital.
Growth focus	Focus on gradual, organic growth – aimed at e.g., expanding scopes of service and geographic reach.	Focus on gradual, organic growth – aligned with individual/partners' capabilities and market demand.	Focus on gradual, organic growth, incremental market share expansion, and the creation of long-term value for shareholders.	Focus on quick growth, often focusing on disruptive innovation, market entry, and substantial, rapid scale-up.	Focus on aggressive, accelerated growth – e.g., through acquisitions, profit-maximization, and market consolidation.
Profit focus	No profits. Surpluses is reinvested.	Profits belong to the sole proprietor/partners; may be taken as income or reinvested into the business.	Profits are distributed as dividends to or share buy-backs from shareholders or are reinvested into the business for future growth.	Profits are often reinvested into the business to enable growth, with eventual returns expected on exit (e.g., acquisition, IPO).	Targeted to maximize Return on Investment (RoI), often via dividends or capital gains on exit (e.g., sale, IPO, or acquisition).

Extent of public transparency	Moderate to high levels of public financial transparency, especially when in receipt of government grants or charitable donations.	Minimal legal requirements for public financial transparency.	Among for-profits, public companies have the highest level of public financial transparency requirements (including those imposed by securities regulators).	Minimal legal requirements for public financial transparency.	Minimal legal requirements for public financial transparency.

3. Method

A literature review was conducted to compare regulatory frameworks of relevance to private ownership in healthcare provision across five countries. The UK, Italy, Germany, the Netherlands, the US were chosen for their diverse financial models, ranging from market-oriented systems to Social Health Insurance (SHI) and National Health System (NHS)-type settings, allowing to generalize our findings to different settings. The literature review was carried out using Google Scholar for peer-reviewed articles and Google for grey literature, including both qualitative and quantitative sources, with language restrictions to English, Italian, German, and Dutch. To minimize the risk of missing relevant studies, forward and backward snowballing was applied. Studies were included if they referred to regulation and dynamics of private investment in healthcare service provision and were relevant to the selected countries. Selected studies were used to perform a comparative case study analysis to identify archetypes of private ownership and investment across diverse healthcare systems (Bartlett & Vavrus, 2016). The process included case selection, data collection, data analysis, and reporting (Ebneyamini & Sadeghi Moghadam, 2018; Goodrick, 2020). Before data collection, the authors established reporting guidelines to ensure consistency across countries (Table 2). Findings from multiple sources, including peer-reviewed articles, government reports, and international organization reports (e.g., OECD, European

Commission), were integrated to address potential biases, ensure data triangulation, and enhance internal validity. The results were synthesized and discussed narratively.

4. Private ownership and regulation in healthcare provision: a comparative case study analysis

The aim of this section is to systematically analyze the nature of private ownership and investment in healthcare provision across the UK, Italy, Germany, the Netherlands, and the United States, with particular attention to the role of government regulation through entry barriers and incentives.

4.1 The UK

The Healthcare Market

Despite the UK's publicly financed and state-owned healthcare system, privately delivered services have long played a significant role, particularly in general practice, optometry, and dental care (Chalkley & Sussex, 2018). Both for-profit and non-profit providers deliver NHS-funded and private services. The private healthcare market reached a record £12.4 billion in 2023, driven by bolt-on acquisitions and a strong M&A market, with top private hospital providers generating 75% of revenue - particularly in ophthalmology and orthopaedics, where NHS outsourcing has increased (LaingBuisson, 2024). In general practice, new organisational models have emerged, including "super-partnerships" of up to 100 partners, some GP-owned and others acquired by US firms (Fisher & Alderwick, 2023). The UK healthcare market has seen increasing entry of private equity investors introducing more aggressive profit extraction

strategies in both NHS and non-NHS-funded services (Bayliss, 2022). Some financial investors have also capitalized on the security of rental income in NHS-funded services. The Priory, one of the largest private mental health providers, derives 85% of its revenue from NHS and public sources (Bayliss, 2016). In mental health, four companies control 65% of the private market, including Cygnet, Elysium Healthcare, and The Priory, all owned by for-profit investors (Bayliss, 2022). In long-term care, five major for-profit corporate providers – HC-One, Four Seasons, Care UK, Barchester, and Bupa – together hold about 11% of the market, operating around 50,000 beds (Bourgeron et al., 2021).

Regulatory Framework

The Competition and Markets Authority (CMA) enforces provisions of the Competition Act 1998 (CMA, 2016), responsible for preventing anticompetitive behaviours such as cartels, price-fixing, and abuse of dominant position in healthcare markets (Guy, 2019). Under the UK's Enterprise Act 2002, the CMA can review mergers if the acquired firm's UK turnover exceeds £100 million or if the merger results in or increases a 25% share of supply in the UK (CMA, 2025). The Digital Markets, Competition and Consumers Act 2024 enhances scrutiny in cases of suspected "killer acquisitions" by introducing a new threshold of £350 million in turnover and a 33% share of supply. In response to the collapse of Southern Cross in 2011, the 2014 Care Act introduced a market oversight regime - large investor-owned care home providers (often offshore-owned) must submit financial data to the Care Quality Commission (CQC) to enable early warnings of failure – aimed at ensuring continuity of care in case of failure.

Effectiveness of regulation

Strategies pursued by private equity firms in the acquisition of care home chains in the UK have been linked to their financial collapse. Many of the strategies used by investment firms to generate returns expose entire chains of care homes to high costs and debt, increasing the risk of bankruptcy and closure, while shifting profits offshore through complex corporate structures and subsidiaries in tax havens (Horton, 2021). Investor returns are often achieved by cutting labor costs, with pay disparities in care firms resembling those seen in large corporate sectors (Walker et al., 2022). The market oversight regime introduced following the collapse of home care chains has been criticized as reactive, with insufficient regulation of ownership and limited investor accountability (Horton, 2022). The Act also created a moral hazard by shifting the financial burden of provider failure onto local authorities, weakening incentives for financial prudence among large private providers. Despite a significant share of services provided by private investors is publicly funded through revenue from local authorities, taxpayers receive little transparency or accountability in return (Burns et al., 2016).

4.2 Italy

The Healthcare Market

Italy's NHS is primarily tax-funded, with a mixed healthcare provision model that includes both public and private providers, operating on a for-profit or non-profit basis (Toth, 2016). Around one-third of all SSN-funded services are outsourced to private actors (Toth, 2016). Sole proprietorships are prevalent among general practitioners (GPs) and specialists (Green,

2012). Between 2017 and 2021, 69 PE deals were recorded in the healthcare services sector (Bava & Tamborini, 2023). The total PE investment across healthcare and pharma reached its record – €17.1 billion in 2021 (Bava & Tamborini, 2023). The highest concentration of financial capital is found in outpatient diagnostics and specialist ambulatory care, as well as in long-term care services (Trianni & Gazzetti A., 2023). Private equity has capitalized on the growing demand for elderly care, with residential care (RSA) operating at full capacity. In 2023, elderly care facilities experienced the highest revenue growth among private healthcare subsectors (+14.0%), surpassing diagnostics, rehabilitation, and acute hospital care (Area Studi Mediobanca, 2014). While PE involvement in public-private partnerships has traditionally focused on non-clinical services (e.g., infrastructure and facility management (Cappellaro & Longo, 2011)), it is now shifting toward direct clinical service provision. This expansion is particularly targeting smaller, highly profitable providers in Northern regions as part of broader consolidation strategies (Bava & Tamborini, 2023).

Regulatory Framework

In Italy, Article 3 of Law No. 287/1990 prohibits the abuse of a dominant position in the healthcare market, preventing practices such as unjustifiably high prices, restrictive contractual conditions and concentration (Gazzetta Ufficiale, 1990). This law mandates that mergers and acquisitions exceeding €517 million, and the individual turnover of at least two parties exceeds €31 million must be notified to the Italian Competition Authority (AGCM) for prior approval to (Salvadé et al., 2023). AGCM the authority to 'call in' below-threshold transactions for review if they pose potential competition concerns, particularly in sectors like healthcare (Immordino et al., 2022; Modrall, 2023).

Effectiveness of regulation

Overall, in Italy, while the role of private investors has long been consolidated, the role of private equity in healthcare provision is still emerging and is expected to expand in the coming years. Despite these trends, evidence on the financialization of healthcare in Italy remains limited, highlighting the need for further investigation. Given the scarce evidence on the implementation and effectiveness of current regulations and the growing financialization of profitable sectors such as nursing homes, additional research is needed to assess the broader implications for the healthcare system.

4.3 Germany

The Healthcare Market

Over the past decades, regulatory changes have reshaped the German healthcare market, both facilitating (early 2000s) and restricting (recently) private investment. In 2004, there was a health system financing reform that enabled private investments into primary care. This opened the door for PE funds to enter the sector. Following this reform, private investments in German primary care indeed expanded significantly (Tille, 2023). In 2015, legislation passed which strongly facilitated the expansion of so-called 'Medizinisches Versorgungszentrums' (MVZs); i.e., healthcare facilities providing a platform for various medical specialties to collaborate, bolstering outpatient care as well as treatment coordination and resource sharing. In that year the requirement for cross-specialty integration was removed. This made the MVZs an attractive business venture for private investors. Since 2015, the number of MVZs has nearly doubled to about 4,200 of which 21% are owned by PE with the highest percentages in dentistry, ophthalmology, radiology and orthopedics (Deloitte, 2023). Most PE

firms are from neighboring countries and the US (Scheuplein et al., 2019). Due to privatizations, also the share of for-profit hospitals has also increased significantly over the years (Klenk, 2011). In this sector there are four major players: Rhon-Klinikum, Fresenius-Helios Group, Asklepios Kliniken, Sana Kliniken AG.

Regulatory Framework

In Germany, the Federal Cartel Office (Bundeskartellamt) enforces the prohibition on abuse of a dominant position. It also reviews transactions exceeding turnover thresholds. In addition to the general antitrust law, in healthcare private investors can only acquire MVZs when using an existing hospital as a transaction 'vehicle'. To ensure that acquisitions do not pose risks to German society, the Federal Ministry for Economic Affairs and Climate (BMWK) reviews foreign direct investments, with stricter rules for investments in critical infrastructure (including healthcare). As a result, when an investor acquires >10% of the voting rights they must notify the BMWK.

Effectiveness of regulation

In response to concerns about the growth in private investments in MVZs and its impact on costs and quality, the German government in 2019 introduced restrictions on how PE firms can establish and operate MVZ's in dentistry and non- medical dialysis services (Marwood Group, 2019). The legislative changes, based on regional market shares, did not prohibit private equity investments in these areas nor did they affect PE investment in other health care sectors. New legislation – i.e., the 'Versorgungsgesetz 2' – aims to further develop the regulatory framework for MVZs focusing on their establishment, licensing, operation and transparency. Hence, due to concerns about profit maximization at the expense of quality and accessibility Germany is attempting to limit the influence of PE in its healthcare system.

4.4 The Netherlands

The healthcare market

The Dutch health system has a unique institutional setting. It is the result of many decades characterized by incremental changes which can be described as an "evolution of market-oriented health care reforms" (Helderman et al., 2005). The result can be described as a "complex layered system of financial arrangements consisting of direct public funding, national, social and private health insurance with complex interdependencies" (Bertens & Vonk, 2020). Most health and long-term care services in the Netherlands are covered by two social insurance schemes, the Health Insurance Act (HIA) and the Long-Term Care Act (LTCA). Participation in both schemes is mandatory for the entire Dutch population. Except for the university medical centers and Public Health Services, all healthcare providers are private entities operating on a profit or non-profit basis. Under the current legislation, healthcare institutions are not allowed to have a profit motive – meaning they cannot distribute profits to stakeholders or employees (non-distribution constraint) – except for categories of institutions to be designated by the Minister of Health. In practice, however, almost all healthcare providers are designated as exception to general the rule: e.g., primary care (incl. GPs), pharmaceutical care (incl. pharmacies), dental care, midwifery care, district nursing. The mandatory not-for-profit in fact therefore only applies to providers of inpatient care like hospitals and nursing homes. Although private for-profit ownership is widespread within the Dutch healthcare system, this most often does not involve PE. Recent research by (EY Consulting, 2024) found that almost all cash flows under social health insurance (Zvw/Wlz) concerns healthcare institutions without PE participation (>95%), except for maternity care (75-80%) and dental care (75-80%). Nevertheless, there are concerns about the growing share

of private equity in Dutch healthcare. Between 2014 and 2023, almost 50% of the concentrations assessed by the Healthcare Authority (NZa) were traceable to firms in which private equity has a stake (NZa, 2024).

Regulatory Framework

The Dutch Competition Act (Mw), enforced by the Authority for Consumers and Markets (ACM), prohibits the abuse of a dominant position. This prohibition of course also applies to private for-profit healthcare providers. This also true for ACM's preventive merger control. Mergers between any firms (including those in healthcare) whose combined and individual turnovers exceed €500 million, of which at least two of the merging parties each received at least €100 million in the Netherlands, are subject to notification and prior approval by the Authority for Consumers and Markets (ACM). The lower turnover thresholds for the healthcare sector, that had been in place since 2008, ceased to apply from 1 January 2023. Following the Healthcare Market Regulation Act (Wmg), healthcare provider are prohibited from entering a concentration as defined in the Competition Act without the prior approval of the Dutch Healthcare Authority (NZa). Through the healthcare-specific concentration test, the NZa checks that the concentration process has been carried out carefully. In addition, the concentration and the planned changes must not affect the continuity and accessibility of healthcare services. This applies to clients, staff and other stakeholders involved in the concentration process. The NZa also examines whether the standards of essential care are at risk. Between 2014 and 2023, almost 50% of the concentrations assessed by the Healthcare Authority (NZa) were traceable to healthcare institutions in which private equity had a stake (NZa, 2024). These most often involved dental care.

Effectiveness of regulation

In the Netherlands, although the traditionally private nature of the Dutch healthcare system is not in question, there is growing concern about the role of private equity in healthcare. Some worrying case studies – see for example (De Rijk, 2023) and the bankruptcy of the new commercial GP chain Co-Med in 2024 – have fueled to public and political debate about private investments in healthcare. Contrary to the wishes of parliament, the government has repeatedly stated that there will be no total ban on PE. Instead, earlier this year a proposal for additional regulation has been proposed. As part of this broader plan, in the Healthcare Market Regulation article 40f will be added stating that healthcare providers are only allowed to distribute any profits if specific conditions are being met, including strict financial thresholds and the absence of quality complaints. In response to the abolishment of the lower notification thresholds for healthcare mergers, the ACM warned that this makes the Netherlands more attractive for PE firms. It has therefore asked for the introduction of a 'call-in' option meaning the power to assess transactions that do not meet the thresholds for a mandatory merger control notification.

4.5 United States

The healthcare market

In the US health system, private for-profit ownership is historically widespread. However, over the past 10-15 years PE market penetration increased substantially (Abdelhadi et al., 2024; Aldridge et al., 2024). This mainly concerns investments in hospitals, hospices and physician practices. From 2010-2020, PE acquisitions nearly tripled (Cai & Song, 2024). This involves funds from different investors, including pension funds, endowments, institutions,

sovereign funds and individuals. At the Metropolitan Statistical Area (MSA) level, for some specialties the market share of physician practices owned by PE firms may now exceed 50% which has raised concerns about their market power (Abdelhadi et al., 2024). In some states more than 15% of the hospitals are owned by PE (Blumenthal et al., 2024).

Regulatory Framework

At the federal level, mergers and acquisitions in which PE is involved are part of the regular antitrust enforcement by FTC and DOJ. Same applies for the prohibition on abuse of a dominant position. Most existing state laws require that transactions exceeding a certain threshold are disclosed to the state. However, most PE acquisitions fall below the notification thresholds resulting in limited antitrust oversight. In 2021, the Biden administration issued an Executive Order to encourage federal agencies to work toward improving competition. As a result, the FTC has issued guidelines to expand regulatory review of merger impact on competition to include 'roll-ups'; i.e., serial acquisitions that together exceed regulatory thresholds above which a merger is considered anticompetitive (Cai & Song, 2024). There is no specific federal legislation for regulating PE in healthcare while only five states currently do have this, but legislation is pending in some other states (Blumenthal et al., 2024).

Effectiveness of regulation

In their systematic review, with most of the studies included occurring in the US, Borsa et al. (2023) conclude that PE ownership is often associated with harmful impacts on costs to patients or payers and mixed to harmful impacts on quality. In a later study and as another example, (Kannan et al., 2023) find that PE acquisition of hospitals was on average associated with increased hospital-acquired adverse events. Despite these concerns, there is no federal action on regulating PE in healthcare (Blumenthal et al., 2024). At the state level, some

policies have tried to increase pre-transaction regulation of mergers & acquisitions, empower attorney generals, increase transparency of PE, cap profits & establish spending floors, and limit corporations form owning physician-operated medical practices (Cai & Song, 2024). Overall, Democratic states are more likely to regulate PE than Republican states.

Table 2: Regulatory Frameworks and Market Dynamics of Private Healthcare Provision in Selected Countries

Countries	Health System Type based on (Rothgang, H. (2010) Barros & Siciliani, 2011)	Is private ownership allowed?	Is for-profit private ownership allowed?	Type of services provided by for-profit private providers	The role of for-profit private ownership in each country e.g., investment	Healthcare market regulation and regulation targeting ownership types
The UK	Mainly tax financing, Public-private mixed provision	Yes	Yes	Hospital care, secondary care, general practice, optometry, and dental care, mental health services, nursing homes, ambulance fleets, eye-care clinics and diagnostics, digital care, learning disabilities and substance abuse, reproductive health	• ***Non-profits:*** 15% of private hospital revenue (Almeida, 2017). • ***For profit:*** top private hospital providers generating 75% of revenue (LaingBuisson, 2024) • ***Partnerships***: GP practices owned by US investors (Fisher & Alderwick, 2023). ***Private equity***: in both NHS and non-NHS-funded services (Bayliss, 2022) – mainly in mental health and long-term care, ophthalmology, and orthopaedics	**Anticompetitive behaviour and abuse of dominant position** (*Competition Act 1998)* (Guy, 2019). **Mergers and acquisitions (***Enterprise Act 2002):* Competition and Markets Authority (CMA) can review mergers if the acquired firm's UK turnover exceeds £100 million or if the merger creates or enhances a 25% share of supply in the UK (CMA, 2025) (*Digital Markets, Competition and Consumers Act 2024*): Enhances scrutiny of suspected "killer acquisitions" by introducing an additional threshold - £350 million in turnover and a 33% share of supply - for CMA review (CMA, 2025) **Market oversight regime** (*The Care Act 2014*): Submit regular financial data to the Care Quality Commission to enable early warnings of failure (Horton, 2022)
Italy	Mainly tax financing, Public-private	Yes	Yes	Hospital care, outpatient specialist care, residential community care	• ***For profit:*** Ownership of private for profit hospital facilities is highly concentrated - 50% of private hospitals have between one and three	**Anticompetitive behaviour and abuse of dominant position** (*Article 3 of Law No. 287/1990*) (Gazzetta Ufficiale, 1990).

	mixed provision			e.g., nursing homes, centers specializing in Alzheimer's, long-term care and rehabilitation (Area Studi Mediobanca, 2014 ; Giulio de Belvis et al., 2022)	shareholders, while the remaining 50% have an average of 11 shareholders (Belfiore et al., 2022). • ***Sole proprietorships:*** (GPs) and specialists • ***Private equity*****:** Between 2017 and 2021, 69 PE deals. Healthcare and pharma reached €17.1 billion in 2021, the specific share attributed to healthcare services alone is not reported (Immordino et al., 2022; Modrall, 2023) • PE investment is expanding, driven by elderly care facilities (Area Studi Mediobanca, 2014).	**Mergers and acquisitions** (*Article 3 of Law No. 287/1990*) Mergers and acquisitions exceeding €517 million, and the individual turnover of at least two parties exceeds €31 million must be notified (Salvadé et al., 2023) Below-threshold transactions for review if they pose potential competition concerns (call-in) (ref). **Market oversight regime** (*Legislative Decree No. 142 of 30 May 2005*) - supplementary financial supervision for groups operating across multiple financial sectors (Camera dei Deputati, 2013)
Germany	Mainly social insurance financing, Public-private mixed provision	Yes	Yes	Primary care, hospital care, dental care, nursing home care	• ***For profit:*** Share of for-profit hospitals has increased significantly over the years due to privatizations (Klenk, 2011). There are four major players: Rhon-Klinikum, Fresenius-Helios Group, Asklepios Kliniken, Sana Kliniken AG. • ***Private Equity (PE***) is now accounting for a significant portion of investments in the MVZ landscape. Over the past decade the number of MVZs has almost doubled (Deloitte, 2024) - highest percentages in dentistry, ophthalmology, radiology and orthopedics • Following the health system reform in 2004, opening the doors for PE funds, also in primary care private	**Anticompetitive behaviour and abuse of dominant position** Federal Cartel Office (Bundeskartellamt) **Mergers and acquisitions** Federal Cartel Office (Bundeskartellamt) reviews transactions exceeding turnover thresholds **Entry barriers** Private investors can only acquire MVZs when using an existing hospital as a transaction 'vehicle' **Market oversight regime** Federal Ministry for Economic Affairs and Climate (BMWK) reviews foreign direct investments, with stricter rules for investments in critical infrastructure (including healthcare); i.e., when an investor acquires >10%

					investments increased significantly (Tille, 2023). • Most PE firms are from neighboring countries and the US (Scheuplein et al., 2019)	of the voting rights they must notify the BMWK.
Netherlands	Mixed financing (mainly compulsory PHI), Private provision	Yes	Yes	Mandatory not-for-profit motive only applies to providers of inpatient care; e.g., hospitals and nursing homes. All other all providers – primary care (incl. GPs), pharmaceutical care (incl. pharmacies), dental care, midwifery care, district nursing – are designated as an exception to this general rule.	• The healthcare sector is essentially private. Except for the university medical centers, public ownership is absent. • ***For profit***: primary care (incl. GPs), pharmaceutical care (incl. pharmacies), dental care, midwifery care, district nursing • ***Private equity***: 50% of the concentrations assessed by the Healthcare Authority (NZa) were traceable to healthcare institutions (between 2014 and 2023) – dental care, maternity care, • 38 PE parties using healthcare-specific merger decisions, of which 3 parties do not provide care that is part of social health insurance (Zvw/Wlz) (EY Consulting, 2024) • In the same report, it was found that 40% of all identified PE parties is from the Netherlands, the remainder are spread across 9 different countries, with the most (5) from the UK.	**Abuse of dominant position** (*Article 24 of the Dutch Competition Act; Mw*) **Mergers and acquisitions** *(Article 34 of Dutch Competition Act; Mw)* Mergers between any firms (including those in healthcare) whose combined and individual turnovers exceed €500 million, of which at least two of the merging parties each received at least €100 million in the Netherlands, are subject to notification and prior approval by the Authority for Consumers and Markets (ACM). The lower turnover thresholds for the healthcare sector ceased to apply from 1 January 2023. **Mergers and acquisitions** (*Article 49a Healthcare Market Regulation Act; Wmg*): "A healthcare provider is prohibited from entering into a concentration as defined in the Competition Act without the prior approval of the Healthcare Authority." **Entry barriers** (*Article 5 Care Institutions Admission Act; Wtzi*): "An institution is not for profit, except for the categories of institutions to be designated by a governmental decree." **Rules of conduct** (*legislative proposal*): in the Healthcare Market Regulation article 40f will be added

						stating that healthcare providers are only allowed to distribute any profits if specific conditions are being met, including the absence of quality complaints and financial thresholds.
US	Mixed financing (mainly voluntary PHI), Public-Private Mixed provision	Yes	Yes	Private for-profit ownership is historically widespread within the US health system, but over the past 10-15 years PE market penetration (e.g., hospital, hospices, physician practices) increased substantially (Abdelhadi et al., 2024; Aldridge et al., 2024)	• ***Private equity***: PE acquisitions nearly tripled from 2010-2020 (Cai and Song, 2024). Investors include pension funds, endowments, institutions, sovereign funds and individuals. • At the Metropolitan Statistical Area (MSA) level, for some specialties the market share of physician practices owned by PE firms may now exceed 50% which has raised concerns about their market power (Abdelhadi et al., 2024). • In some states more than 15% of the hospitals are owned by PE (Blumenthal, 2024).	**Abuse of dominant position**: part of regular antitrust enforcement by FTC and DOJ **Mergers and acquisitions**: most existing state laws require that transactions exceeding a certain threshold are disclosed to the state; at the federal level the FTC and DOJ merger guidelines apply **Entry barriers** & **Rules of conduct**: no federal legislation for regulating PE in healthcare; but only 5 states currently regulate PE in health care (legislation is pending in some other states)

5. Discussion

This study contributes to the emerging literature on ownership in healthcare markets (Borsa et al., 2023; Tracey et al., 2025) by presenting a typology of private investor-ownership in healthcare provision. Our framework is underpinned by the recognition that, under conditions of information asymmetry, incomplete regulation, and contract incompleteness, ownership becomes a key driver of provider behavior (Arrow, 1963; Chalkley & Sussex, 2019; Heins et al., 2010; Shleifer, 1998). While all health systems involve some level of government regulation and purchasing, the impact of these on the incentive and accountability environment in which providers operate varies. Where there are gaps and limitations in these mechanisms of state influence, for-profit providers are more likely to engage in practices such as cherry-picking and quality skimming (Barros et al., 2016). This highlights the need to consider ownership-specific risks in policy design, as different investor types face different incentives.

Our typology can serve as a country assessment tool to map emerging trends and regulatory gaps and to support a better understanding of transitions, associated risks, and required regulation. Though static, it can be applied ex ante and ex post, across countries or within one, to analyse ownership dynamics by allowing provider classification to evolve as ownership models or investment horizons change. A similar approach has been used in health system typologies to track shifts over time (Wendt, 2009; Reibling et al., 2019).

Our comparative analysis shows that, despite differences in public–private financing and provision, all five countries are seeing rising private equity (PE) involvement, particularly in areas with relatively low barriers to entry, such as outpatient care, elderly care, and diagnostics.

Yet, despite the financial risks that PE involvement may pose, regulatory interventions that target *ownership* are lacking, albeit, Germany and the Netherlands are moving to strengthen oversight of ownership, while the UK and US remain focused on regulation of markets, regardless of ownership. The latter is notable in the context of recent developments. For example, the collapse of homecare chains in the UK raises concerns about systemic risks. Although the presence of PE in Italy remains limited, it is expanding – particularly in homecare – where similar vulnerabilities may arise.

To our knowledge, only Tracey et al. (2025) have reviewed policy options for regulating PE in healthcare. They focus on countries such as Canada, Germany, Finland, France, Ireland, the Netherlands, and the US. We broaden this by including other forms of private investor-ownership and additional countries such as Italy and the UK. Similarly to Tracey et al. (2025), we found that regulation of PE and other investor-ownership remains largely absent across countries.

Our typology examines how ownership models shape financial, strategic, and operational incentives. These incentives affect financial sustainability – such as the degree of debt leveraged – which, in the event of collapse, can undermine quality and access. They may also generate broader systemic risks, including 'too big to fail' scenarios and care deserts. Given the role of private equity in delivering publicly financed services like community and mental healthcare, such failures risk undermining public confidence in the national health system. In contexts with limited public provision, governments are often forced to intervene to correct market failures. Failure to do so may require absorbing losses or ensuring emergency service continuity using public funds.

For-profit ownership is increasing and diversifying in many countries (Singh, 2025b). Newer investor types, such as PE, operate under incentive structures for which regulatory frameworks have yet to adapt. Current regulation may not adequately address agency problems from investment models deeply involved in clinical and financial decisions, operating with high leverage and short-term profit goals. These dynamics are most evident in PE, but may also apply to VC-backed or publicly listed corporations. Existing regulatory and contracting systems were built around more relational models – public or non-profit entities, or businesses growing gradually and transparently. Other private actors – such as physician-owned or socially driven providers – create long-term value and align business goals with professional ethics. Trust-based relationships work better in these contexts.

5.1 Limitations

The study included mainly European countries, where research is still limited. The sample, however, could be extended to include more European and extra EU countries. We focus on healthcare services, but the typology can be applied to other sectors – such as digital health technologies, medical devices and the pharmaceutical markets which have seen significant private equity activity – which require further analysis. However, in these services areas, the presence of investors tends to be less politically or ethically contested, as these sectors are historically associated with commercial innovation. Instead, investor involvement in the delivery of healthcare services often raises concerns in the public debate. While contract failure enables for-profits to exploit information asymmetries, contract design is beyond the scope of this

analysis. Future research should examine contracting in more depth to clarify how governments can use contracting authority to align private sector behavior with public goals.

6. Conclusion

Policy debates and ad hoc regulatory responses often marginalize the importance of different forms of private ownership, yet in the context of market and policy failures, these matter greatly. What is needed is a more nuanced understanding of different forms of investor-ownership in healthcare, along with a more tailored regulatory approach -one that can balance the potential benefits of private ownership in its different forms with safeguards that effectively mitigate potential disadvantages. Our findings suggest that private investment requires a combination of entry regulation and behavioral oversight to better align the incentives of diverse private investors with public health objectives. Regulatory and contracting frameworks should be informed by a clear understanding of the heterogeneity among for-profit ownership models. New types of investors may pose agency problems that existing regulatory systems are not equipped to address, and regulation currently lags behind market developments – and, indeed, for some types of private ownership, related risks may of a scale that even generally well-specified, well-enforced regulations may fail to mitigate adequately. Forms of regulation specifically related to ownership – reflecting what forms of ownership in healthcare provision societies, regulatory, purchasers, etc. should (not) be promoted – are notable for their absence. This may need to be revisited going forward, as greater diversity in ownership becomes the norm**.** Overall, there is an urgent need for more anticipatory, rather than reactive, regulatory strategies. On the one hand

these strategies must protect against investor-ownership types that focus on aggressive, short-term profitability with high leverage, while ensuring that owners focused on long-term growth can achieve that goal in a manner consistent with key health policy goals of equity, efficiency and quality of care.

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