Public Health Systems and Private Expenditure in Non-US Countries. Toward a Regulated Health Insurance Model?

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Abstract

Traditional healthcare models (National Health System and Social Health Insurance) are increasingly converging into mixed systems as advanced economies seek to balance equity with fiscal sustainability. Despite long-standing debates on regulated competition, systematic evidence regarding its multidimensional effects remains fragmented. This study aims to identify the regulatory principles governing private health insurance markets and determine the contextual conditions necessary for their successful implementation, with a particular focus on applicability to the Italian context. A systematic literature review (SLR) was conducted, focusing on OECD countries, identifying some possible solutions to be studied in depth. Inclusion criteria prioritized European and international cases transferable to the Italian paradigm, while U.S.-based evidence was excluded due to significant institutional and structural divergences. The study proposes a novel conceptual framework suggesting that a system's expenditure profile (specifically per-capita spending, private expenditure share, and intermediated pooling) is a more robust predictor of regulatory efficacy than its formal institutional type. While high-expenditure systems like Germany and the Netherlands demonstrate sophisticated oversight, mixed models like Switzerland underscore the necessity of institutional reforms to safeguard universal access. Our findings suggest that transitioning toward regulated competition requires a sequenced policy approach, characterized by the establishment of robust intermediaries and dedicated regulatory authorities to mitigate risks such as adverse selection and provider backlash.This study proposes an innovative framework that bridges the benefits and risks of emerging models with diverse national contexts.

Keywords: Public Health Systems; Private Expenditure; Regulated Health Insurance Model; Systematic Literature Review.

1. INTRODUCTION

The traditional health systems models (NHS - National Health System and SHI - Social Health Insurance) are based on the nature of funding (Busse et al. 2007). Nevertheless, due to the global financial crisis, health systems in which expenditures are financed by a single source, either through public or private funds, are increasingly rare (Del Vecchio, 2021; Lombrano 2020; Cavazza et al., 2016). To the contrary, countries with advanced economies are moving towards mixed systems where the policymaker is called to find the right balance between equity and sustainability of expenditure across public and private funds (Rothgang et al., 2008). Despite the identification of the necessary conditions for the successful implementation of regulated competition in healthcare being a long-standing subject of debate in the literature (van de Yen, 1990), there are no systematic findings on the effects (both risks and benefits) of introducing a

regulated health insurance market. Therefore, this contribution aims to identify possible principles for regulating the private health insurance market through a systematic literature review (SLR) (Tranfield et al., 2003), as this is a prodromic approach to identifying some possible solutions to be studied in depth (Linnenluecke et al., 2020) and applied to the Italian context in the next steps of the research. For this purpose, inclusion and exclusion criteria were established based on contextual relevance and the transferability of observed models (Alshahrani, 2023). Specifically, empirical evidence from the United States was excluded due to its significant divergence from the Italian paradigm in terms of historical traditions, scale, and structural socio-economic variables (Matten and Moon, 2008). Conversely, European and non-US international case studies were prioritized to ensure greater alignment with the national systemic framework and to facilitate the analysis of evolutionary dynamics (Schneider et al., 2021).

This is something significant and innovative since health intermediaries often adopt the choice criteria of generalist insurances (e.g., calculation of risk by aggregates, selection of the best risks, risk management, opportunistic behaviour, etc.) (Cavazza et al. 2016), which, in turn, does not contribute to the spread of private coverage. As a matter of fact, health coverage is still seen as a not widespread “luxury product”, unable to develop in a market of competitive bargaining and to integrate into the healthcare system.

Thus, our research questions are defined as follows: (Q1) Are there examples of regulated health insurance markets in Organization for Economic Co-operation and Development (OECD) advanced countries? (Q2) Can they be traced back to typical healthcare system models? (Q3) What are their contextual conditions (i.e., degree of economic development, legalist Rechtsstaat vs. common rule context)? (Q4) What are the benefits and risks of the emerging models? (Q5) Have control authorities been established?

This study elucidates the potential benefits and inherent risks of regulated health insurance markets, identifying the specific contextual conditions under which such models succeed. By analyzing OECD countries, we propose a novel conceptual framework which suggests that a system’s institutional type (SHI vs. mixed) is less predictive of regulatory strength than its specific expenditure profile (namely, per-capita spending, private expenditure share, and the presence of intermediated pooling). Our findings reveal that while high-expenditure contexts like Germany or the Netherlands foster sophisticated oversight, mixed systems such as Switzerland highlight the critical need for parallel institutional reforms to safeguard equity. Ultimately, this research argues that any transition toward regulated competition requires a sequenced policy approach, emphasizing the role of robust institutional intermediaries and dedicated regulatory authorities to monitor market behavior and ensure universal access.

This research offers both theoretical and practical contributions. Theoretically, this study provides a pioneering systematic analysis of the effects of regulated health insurance markets, filling a critical gap in the existing literature. Moreover, this study proposes an innovative framework that bridges the benefits and risks of emerging models with diverse national contexts.Practically, our findings are particularly relevant for policy evaluation, especially as regulated competition has faced scrutiny due to professional resistance and significant backlash from healthcare providers (Duijmelinck & van de Ven, 2016).

The remainder of this paper is structured as follows. Section 2 introduces the methodology, Section 3 presents the descriptive statistics of the sample, and in Section 4 we present the thematic analysis. Finally, Section 5 includes the implications and concluding remarks.

2. THEORETICAL BACKGROUND

2.1 Healthcare System Models

We considered the Bismarck Model, the Beveridge model, and the mixed model (Lombrano, 2020) as typical healthcare system models. The Beveridge Model (Brenna, 2011), commonly referred to as the “universalistic system” or “National Health Service”, is predicated on a tax-funded framework where healthcare expenditures are financed through general taxation levied by

the State or its sub-national entities on citizens, corporations, and similar organizations. Under this model, there is no direct correlation between an individual taxpayer's contributions and the services they receive. Instead, contributions are scaled according to a taxpayer's income, consumption, or total wealth (assets), whereas service utilization is dictated by the specific health needs and subsequent demand for care of the individual. In contrast, the Bismarck Model (Hassenteufel & Palier, 2007) (also known as the mutualistic system, compulsory social insurance, or SHI) relies on mandatory social contributions paid by employers or the insured individuals themselves. Within this framework, a correlation (albeit a weak one) may exist between the demand for healthcare and its financing, particularly in cases where premiums are adjusted to reflect the social or health status of the individual. Finally, mixed models (Lombrano, 2020) are characterized by a diversified financing structure where no single source of funding is absolute, though one may dominate in relative terms. In these systems, various funding streams contribute to total healthcare expenditure to varying degrees. While public funding often maintains a significant, and sometimes decisive, role, it does not define the system's primary orientation. Furthermore, in many mixed systems, with notable exceptions such as Austria, a substantial portion of healthcare services is financed either directly by citizens (referred to as "out-of-pocket" spending) or indirectly through the purchase of voluntary private insurance.

2.2 Previous SLRs on the Topic

The existing literature has extensively examined the macro-determinants and structural classifications of healthcare systems through various systematic reviews, providing a broad foundational landscape for health policy research. A significant portion of this prior work focuses on the drivers of national healthcare expenditures. Specifically, systematic reviews by Amiri et al. (2021) and Martín Martín et al. (2011) have synthesized socio-demographic, economic, and technological factors influencing HCE growth, identifying variables such as per capita income, population aging, and medical technology as primary determinants. This economic perspective is further reinforced by Okunade (2005), who used econometric modeling to analyze how changes in GDP and Official Development Assistance affect healthcare spending in the context of developing African nations.

Beyond expenditure drivers, other researchers have aimed to establish robust conceptual frameworks for comparing healthcare systems. Wendt et al. (2009) and Böhm et al. (2013) developed deductive taxonomies to classify systems according to the interaction among three key dimensions: regulation, financing, and service provision. Their work identifies various system types by distinguishing the dominance of state, societal, or private actors within these dimensions. Complementing these structural analyses, Qi and Ren (2023) provided a bibliometric and visual mapping of research on government regulation in healthcare, highlighting academic hotspots and shifts in content brought about by the COVID-19 pandemic and the rapid expansion of telemedicine.

While these contributions offer essential insights into cost drivers, systemic taxonomies, and evolving research trends, the present study diverges from the prior literature in its analytical focus and practical objectives. Whereas most existing reviews address either the macro-drivers of healthcare costs or the classification of systems into theoretical "ideal types," this research specifically targets the regulatory principles governing private health insurance markets. Furthermore, rather than providing a descriptive map of historical academic trends, this study seeks to determine the critical contextual conditions necessary for the successful implementation of these principles, thereby addressing a gap in the literature regarding the operational and environmental requirements for effective private health insurance regulation.

3. METHODOLOGY

To address the research questions (RQs), we employ a SLR (Tranfield et al., 2003), as it represents a methodology designed to synthesize existing knowledge and establish a robust theoretical foundation (Linnenluecke et al., 2020), and is thus appropriate for addressing our research question. Specifically, we analyze literature concerning health insurance in regulated markets within the timeframe from 1990 to 2025.We didn't set a time frame in the query, but

during the screening process, a thirty-five-year period was deemed appropriate, given the rapid evolution of health systems (Lewis, 2011; Okma, 2011; Velasco Garrido et al., 2011). Following a rigorous screening process, the final sample comprises 45 articles. Subsequently, the research approach involves an in-depth analysis of the selected studies. The following subsections detail the applied research methodology.

3.1 Sample Selection

For the sample selection, we followed the rigorous SPAR-4-SLR protocol (Paul et al., 2021) shown in Figure 1. According to this protocol, the methodology is segmented into three distinct phases: the assembling phase, the arranging phase, and the assessing phase. The first outlines the identification and acquisition processes, the second phase addresses the organization and purification of the collected data, and the third is dedicated to the final evaluation and formal reporting of the findings.

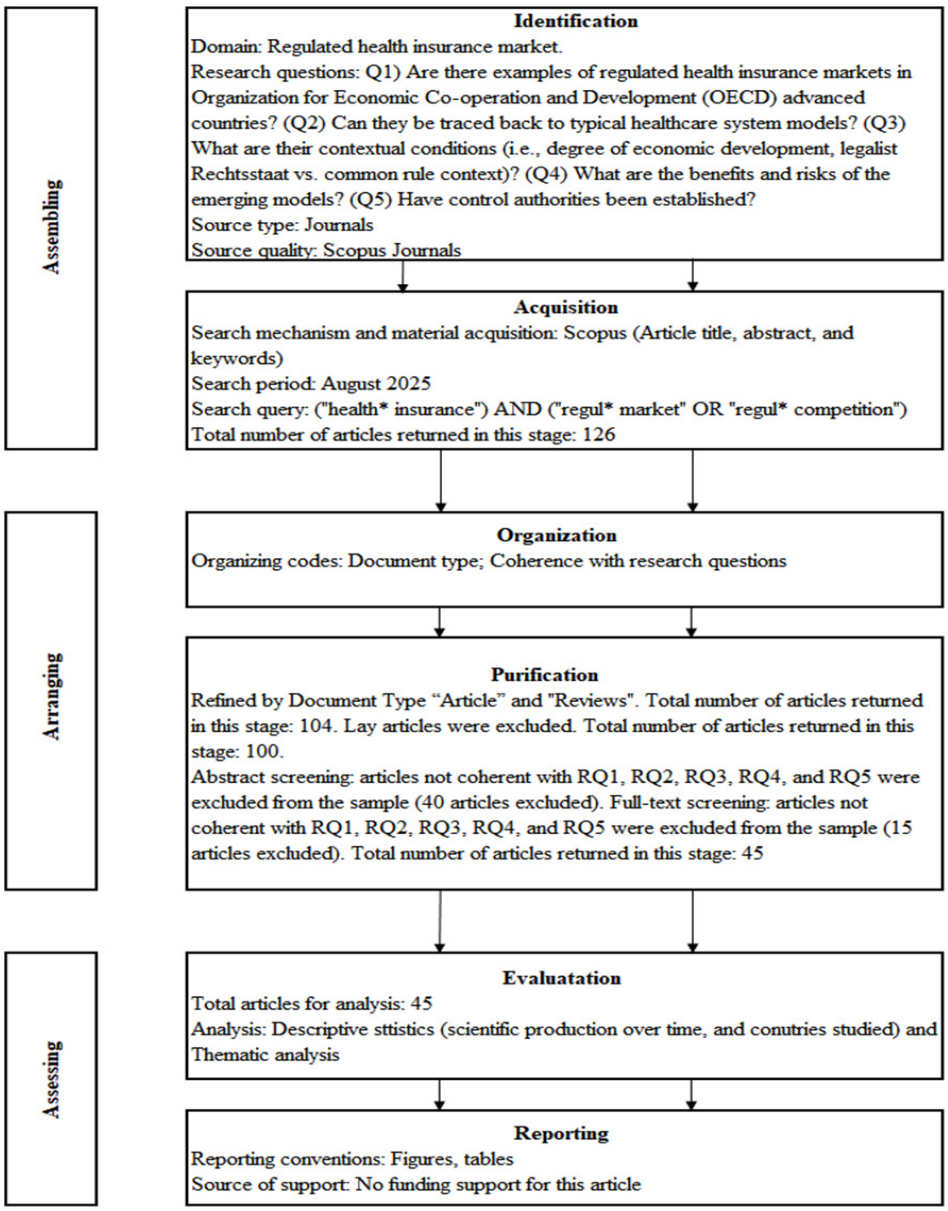

FIGURE 1: SPAR-4-SLR protocol following (Paul et al., 2021).

The keywords selected are “health* insurance” to intercept the field of study and “regul* market” or “regul* competition” to define the regulated health insurance market (Table 1). The latter keywords are selected from Van Kleef et al. (2013), who studied the risk selection and used these keywords to define the regulated health insurance market. Furthermore, this is more compatible with non-US scholarly and policy environments, considering that, within the United States, the concept is almost uniformly referred to as “managed competition” (Ellis et al., 2025). Despite this, some studies emerged that focus on the US context, primarily conducted by scholars who utilize the US for comparative studies with European countries.

Keywords	Scope
“health* insurance”	to intercept the field of study
“regul* market” or “regul* competition”	to define the regulated health insurance market (Van Kleef et al., 2013)

TABLE 1: Keywords for sample selection. Source: own elaboration.

We rely on the Scopus database and, after searching for the identified keywords using a Scopus query (searched within article titles, abstracts, and keywords), we selected a total of 126 articles. We proceeded by selecting articles and reviews as the article type. After applying these filters, 22 articles were excluded, resulting in 104 contributions. Finally, we excluded the lay articles (non-peer-reviewed publications), resulting in a total of 4 articles. Thus, in this step, the sample consisted of 100 articles. Initially, we didn’t set a time frame in the query, but during the screening process, a thirty-five-year period was deemed appropriate, given the rapid evolution of health systems (Lewis, 2011; Okma, 2011; Garrido et al., 2011); thus, the time frame ranged from 1990 to 2025.

The next step was the abstract screening. We carefully read the abstracts of the sample and included only the articles that addressed the RQs (i.e., health insurance in a regulated health market). After that, another 40 articles were excluded, including those that addressed countries outside the OECD; 60 articles remained at this stage. The final step was the screening based on the full texts of the articles, following the coherence with the RQs. After this step, 16 articles were excluded, resulting in a final sample of 45 articles for the SLR. We separately read all the abstracts and articles in these two steps to avoid sample selection bias (Linnenluecke et al., 2020) and ensure a rigorous protocol for the SLR.

3.2 Data Analysis

The sample is first analyzed through descriptive statistics (please see Section 3). The descriptive statistics concern the scientific production over time and the principal aspects of the sample (i.e., country analyzed and methodology adopted).

Subsequently, we coded the sample following our RQs to analyze the articles. To achieve this, we developed a framework to guide the coding process (Figure 2).

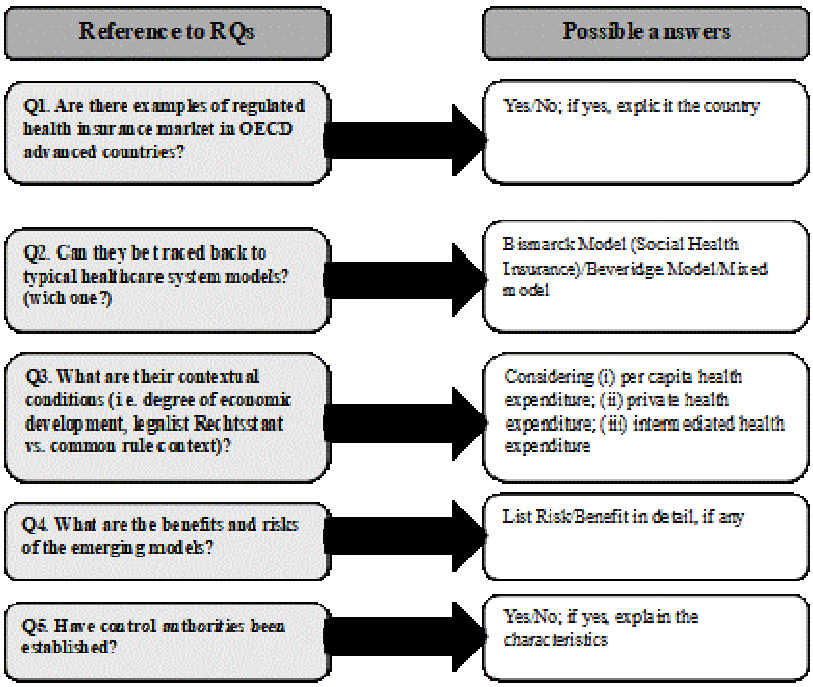

FIGURE 2: Coding Framework. Source: own elaboration.

In particular, for each article, we asked how they addressed our RQs and what the related findings were. This framework enabled us to understand the key concept of the sample, which was useful for the scope of our analysis.

Following the coding process, we finally analyzed the sample through a thematic analysis (Braun & Clarke, 2006) to synthesize the evidence and obtain the key information for answering our RQs (Section 4).In the thematic analysis, we presented the findings organized by each specific research question (Q1, Q2, Q3, Q4, and Q5). Subsequently, these results were synthesized and interconnected within the implications and concluding remarks section (Section 5), where the overall outcomes are illustrated through the conceptual framework.

3.3 Research Objectivity and Reliability

Following previous SLRsin the management and accounting field (Hristov et al., 2022), we adhere to the approach proposed by Seuring and Müller (2008), relying on constant interaction between the authors, which ensured real-time validation and the prompt resolution of critical issues. Although specific procedural stages of the review were conducted individually, all authors performed a final assessment of the papers, providing independent feedback. This helped ensure the reliability and consistency of the coding process.

4. DESCRIPTIVE STATISTICS

The total sample of 45 articles encompasses the time frame from 1990 to 2025. As Figure 3 shows, the number, relevance, and scientific nature of the contributions have grown since 2007 (Medin et al., 2013; Tenbensel et al., 2012).

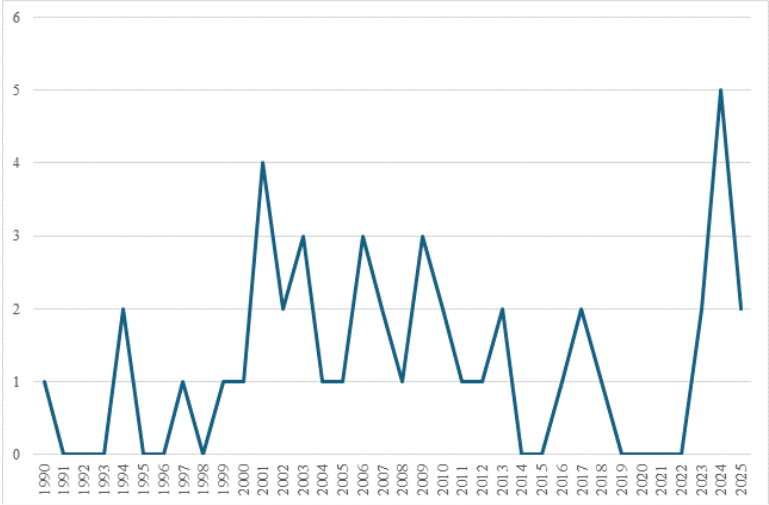

FIGURE 3: Annual scientific production. Source: own elaboration.

The period from 2007 to 2024 encompasses the time during which the recent global financial crisis spilled over into the real economy, and the health sector was subjected to the stress of the pandemic crisis. Hence, during this period, the performance of health systems emerged as a crucial issue (Wenzl et al., 2017; Tapia Granados & Rodriguez, 2015).

Figure 4 shows the scientific production of the most prolific journals. In particular, the journals that addressed the topic of healthcare in a competitive market more are Health Policy (12 papers); Social Science and Medicine (5 papers); Journal of Health Politics, Policy and Law (3 papers); BMC Health Services Research (3 papers); Health Economics, Policy and Law (2 papers).

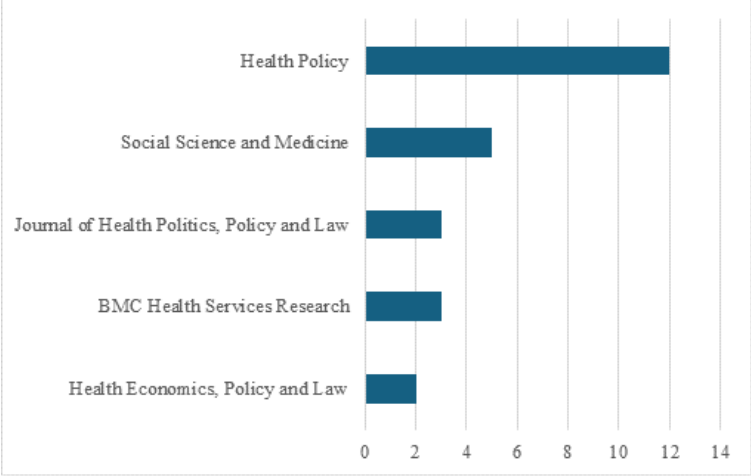

FIGURE 4: Journal scientific production. Source: own elaboration.

To describe the methodologies used in the sample, we divided them into three main aspects: research type, data source, and data analysis (Table 2). For the research type, we considered the research design overall, so the paper could be conceptual or empirical. The empirical papers could be quantitative, qualitative, or mixed if they presented characteristics of both types. As data source and data analysis we considered the primary source or analysis, so if there were more than one source or analysis we considered only the main. The primary data analysis observed are regulations (25), interviews (7), archival (6), survey (3), database (2), case study (1), and literature (1). Primary data analysis observed were the content analysis (35) and statistical

analysis (10). The most common studies of the sample were conceptual papers that drew from regulations, analyzing or criticizing them through content analysis.

Research type	N	Data sources	N	Data analysis	N
Conceptual	22	*Interviews*	7	Content Analysis	35
Quantitative empirical	7	*Survey*	3	Statistical Analysis	10
Qualitative empirical	13	*Archival*	6		
Mixed	3	*Case Study*	1		
		Regulations	25		
		Literature	1		
		Database	2		

TABLE 2: Research methodologies. Source: own elaboration.

5. THEMATIC ANALYSIS

As described in the methodology section, we analyzed the sample following our coding framework. The resulting data from the coding of a subset of the reviewed articles are presented in Table 3.

Author name(s)	Title	Journal Name	Coding
Kifmann (2017)	Competition policy for health care provision in Germany	Health Policy	Q1. Y – Germany Q2. Y – SHI Q3. The market of insurers (public and private) and producers, per capita expenditure higher than the OECD average. Overall private expenditure lower than the OECD average, with unintermediated expenditure being low, at one-third of the OECD average Q4. Individual contracting has been effective only when combined with incentives or mandates (obligation). Reason: Fear of attracting excessively high-risk patients. The risk-adjusted premium scheme remains a subject of unresolved discussion (as of 2017). The corporatist model persists Q5. Competition Authority. It has intervened only once.
Pardo and Sabat (2025)	Equity and efficiency effects of flat premiums	International Journal of Health Economics and Management	Q1. Y – Chile Q2. Y - SHI (Public or Private) Q3. A private market (service-oriented) in competition with public insurance (standardized premiums and benefits). Workers are mandated to contribute at least 7\% of their income to health insurance. No data (ND) on health expenditure are available in the provided text. (If necessary, these data should be searched for) Q4. Flat-rate premiums may incentivize cross-subsidization among individuals (the form is not specified) with diverse health risks, leading to adverse selection. Individuals with low risk would see their premiums increase (or coverage decrease) and would consequently opt for public insurance coverage Q5. No. However, the Chilean Constitutional Court has intervened, questioning the utilization of age and gender to determine health insurance prices in the private system. Note: In this regard, the European Court of Justice has prohibited the consideration of gender in rate determination.
Victoor et al. (2012)	Free choice of healthcare providers in the Netherlands is both a goal in itself and a precondition: Modelling the policy assumptions underlying the promotion of patient choice through documentary analysis and interviews	BMC Health Services Research	Q1. Y – Netherland Q2. Y – SHI Q3. The private market of insurers and producers; per capita expenditure higher than the OECD average; overall private expenditure in line with the OECD average, with intermediated expenditure slightly above the OECD average. Q4. Issues arise concerning the mechanisms implemented by the Government to enable patients to exercise active choice and, consequently, regarding the potential inequities that may ensue. Q5. Dutch Health Care Authority (NZa) – only cited but not the subject of study.

TABLE 3: Resulting data from the coding of a subset of the reviewed articles. Source: own elaboration.

Following the coding process, we were able to capture the most relevant parts with reference to our research questions. As presented in the descriptive statistics, the findings came from various countries belonging to the OECD. We present the findings of the thematic analysis in the following subsections.

5.1 Regulated Health Insurance Markets (Q1)

The sample presents studies from severe countries with regulated health insurance markets. The markets analyzed are from OECD. In particular, there is evidence of studies regarding Europe (Netherlands, Germany, Switzerland, Belgium), Asia (Israel, Japan), North America (USA), and South America (Colombia, Chile), as Figure 5 shows.

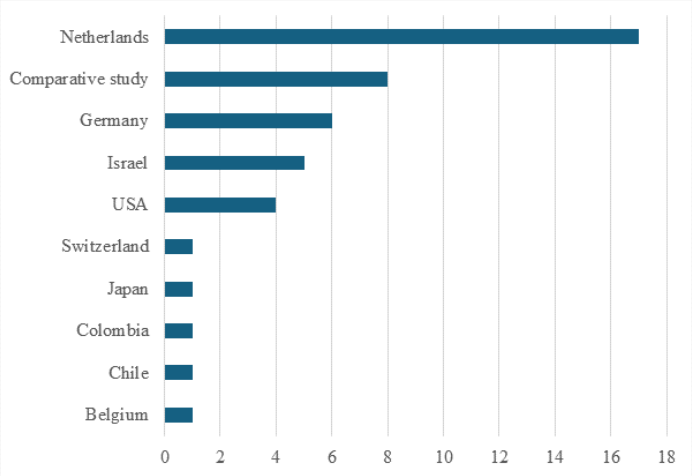

FIGURE 5: Regulated health insurance markets.Source: own elaboration.

As can be seen, regarding the regulated health insurance markets (Q1), most studies focus on the Netherlands (13 papers), as it has always represented a country with particular attention to these aspects with numerous reforms and regulations (Helderman et al., 2005; Lieverdink, 2001). The other markets analyzed are Germany (6 papers), Israel (5 papers), USA (4 papers), Switzerland (1 paper), Japan (1 paper), Colombia (1 paper), Chile (1 paper), Belgium (1 paper).

5.2 Typical Healthcare System Models (Q2)

The sample presents several healthcare system models, most of all SHI, which is the focus of 28 papers (62% of the sample). Mixed models are studied in 10 papers (22% of the sample). It is essential to note that the sample includes mixed models with a strong prevalence of mutualistic (e.g., Israel) or private (e.g., USA) financing. The remaining 7 papers are comparative studies, divided between SHI only (2 papers, 5% of the sample) or SHI and mixed models (5 papers, 11% of the sample) depending on the countries analyzed. Figure 6 presents the typical healthcare models studied in the sample.

Regarding typical healthcare system models (Q5), a prevalence of SHI and mixed models is therefore observed. The predominance of systems leaning toward a Social Health Insurance (SHI) model, as opposed to the Beveridge model, is attributed to the inherent characteristics of these frameworks and their respective financing mechanisms.

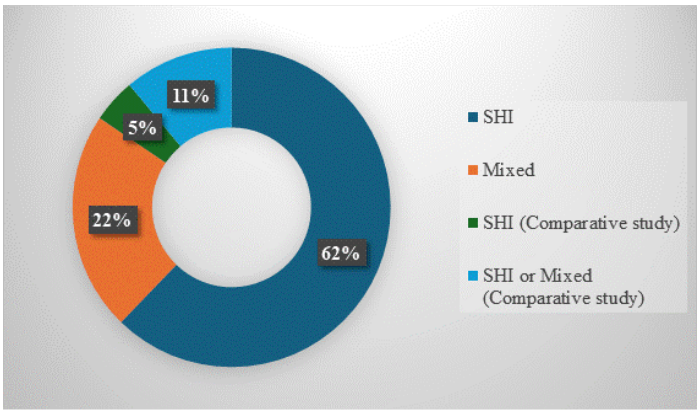

FIGURE 6: Typical healthcare system models. Source: own elaboration.

5.3 Contextual Conditions (Q3)

The contextual conditions refer to (i) per capita health expenditure; (ii) private health expenditure; (iii) intermediated health expenditure, compared with the average of the OECD countries.

The contextual conditions vary depending on the country being studied. For the Netherlands, per capita expenditure exceeds the OECD average; total private health expenditure is in line with the OECD average, with intermediated spending slightly above the OECD average. For Germany, per capita expenditure exceeds the OECD average, while total private health expenditure and the intermediated spending are lower than the OECD average. Regarding Chile, per capita expenditure and total private health expenditure are lower than the OECD average, and the intermediated spending exceeds the OECD average. In Switzerland, per capita expenditure, total private health expenditure, and the intermediated spending alike exceed the OECD average. For Colombia, both per capita expenditure and total private health expenditure are lower than the OECD average, while the intermediated spending is higher. In Israel, per capita expenditure exceeds the OECD average, and both total private health expenditure and the intermediated spending exceed the OECD average. For the USA and Japan, all three contextual conditions are higher compared to the OECD average. Finally, in Belgium, per capita expenditure is slightly higher than the OECD average, while total private health expenditure and intermediated spending are in line with the OECD average.

Table 4 summarizes the contextual factors of the countries analyzed.

	Netherlands	Germany	Chile	Switzerland	Colombia	Israel	USA	Japan	Belgium
Per capita expenditure - OECD average	Higher	Higher	Lower	Higher	Lower	Lower	Higher	Slightly higher	Slightly higher
Total private health expenditure - OECD average	In line	Lower	Higher	Higher	Lower	Higher	Higher	Higher	In line
Intermediated spending - OECD average	Slightly higher	Lower	Higher	Higher	Higher	Higher	Higher	Higher	In line

TABLE 4: Contextual conditions. Source: own elaboration.

As indicated by the highlighted results, with few exceptions, the majority of the contextual conditions (Q3), namely per capita expenditure, total private health expenditure, and intermediated spending, are in line with or above the OECD average.

5.4 Benefits and Risks of the Emerging Models (Q4)

The efficacy of regulated competition varies significantly across different national contexts (Chinitz et al., 2009), particularly depending on the country's income level and economic development (Vargas et al., 2009).

Sick fund and consumers' responses deviated from theoretical expectations, compromising some of the objectives of the reform (Rosenau & Lako, 2008; Gross, 2003). Service quality appears to have stagnated, failing to demonstrate the anticipated gains following the reforms (Rooijen et al., 2011; Gross & Harrison, 2001). In particular, in the Netherlands, Germany, and USA, it has been observed that the regulated market has exacerbated adverse selection (van Kleef et al., 2024a; November et al., 2009; Greβ, 2006), notwithstanding the implementation of incentives (Van de Ven et al., 2007) and improvements in risk equalization formulas (van Kleef et al., 2024b; Van de Ven et al., 2013) with growing inequities (Victoor et al., 2012).

Concerns regarding the attraction of high-risk patients have also influenced individual contracting, which has proven effective only when supported by specific incentives or regulatory mandates (Kifmann, 2017); even if, regarding Israel, Shmueli and Chinitz (2001) points out insurers know about factors that cause variation in medical expenditures within age groups, they might use this information to select good risks, even though explicit rejection of applicants is prohibited.

While sophisticated risk equalization reduces incentives for insurers to select risks, it does not necessarily reduce selection incentives for consumers (van Kleef et al., 2024c). Therefore, the mechanisms for mitigating adverse selection must be improved; otherwise, the system faces the risk of structural failure (Withagen-Koster et al., 2023; Greß et al., 2002). Flat-rate premiums may incentivize cross-subsidization between individuals with varying health risks, which can inadvertently trigger adverse selection. A possible strategy to reduce risk selection is to improve the payment formula by including health-based risk adjusters (Lamers et al., 2003). Hendrikse & Schut suggest (2004) suggest that a gradual transition is difficult because organizational attributes (decision rights, rewards) are complementary. Changing one without the others leads to inefficiency; therefore, a structural change in governance structures is often necessary to achieve coherence.
According to Pardo & Sabat (2025), in Chile low-risk individuals often face higher premiums or reduced coverage, prompting them to opt for public insurance alternatives instead.

According to Groenewegen & Greß (2000), in the Netherlands, competition did not emerge because the relationships between funds and patients are embedded in a broader social framework where competition is viewed as unattractive and transaction costs for selective contracting are high. So, the reforms failed to trigger structural competition among providers. Moreover, van Barneveld et al. (1997) highlight the challenges in calculating reimbursement for catastrophic risk coverage.

Still regarding healthcare reforms in the Netherlands, after fifteen years, Maarse & Jeurissen (2024) observed increased systemic fragmentation. Although premiums cannot be risk-adjusted (as they are independently determined and must be publicly disclosed under a guaranteed issue mandate), they have nonetheless risen. Furthermore, the hospital sector has undergone significant consolidation, with a 27% reduction in facilities. Public health expenditures have failed to decrease, and there has been a notable decline in public trust toward the government.

A fundamental aspect is that the introduction of regulated competition and private health arrangements in Israel has raised serious concerns about respecting basic human rights and principles, such as equal access to necessary health care services (Shmueli & Chinitz, 2001).

Finally, regarding the government involvement to control budgets, Gross et al. (2001) observed that regulated competition alone did not ensure economic stability, while Nonneman & Van Doorslaer (1994) pointed out that the regulated competition is the best path forward, as direct government budget control creates rigidities.

Overall, several benefits and risks of the emerging models (Q4) are highlighted. The main benefits and potential advantages are the Avoidance of State Rigidity, Targeted Effectiveness, and the potential to mitigate the risk. The primary risks observed are context dependency, stagnant service quality, exacerbated adverse selection, systemic fragmentation, insurance premiums rising, social and human rights concerns, implementation barriers due to high transaction costs, and the loss of public trust.

5.5 Control Authorities (Q5)

Finally, we asked whether any control authorities had been established. Just part of the sample evidence of the presence of control authorities. Within Germany, Kifmann (2017) evidences the intervention (only once) of the Competition Authority.

In the context of France and Germany, the control authorities are the Agences Régionalesd Hospitalisation and the Institut für Qualität und Wirtschaftlichkeitim Gesundheitswesen (Hassenteufel & Palier, 2007); however, the authors address the role of these authorities only marginally.

Gross & Harrison (2001) and Gross et al. (2001) address the Ministry of Health and the Ministry of Finance as control authorities for Israel. Also, Van de Ven (2013), Victoor et al (2012), Den Exter (2010), and Helderman et al. (2005) mention the Dutch Health Care Authority in the Netherlands, which was established in October 2006 to “ensure the success of regulated market forces” only in passing, as it does not constitute the primary focus of the research.

Vargas et al. (2010), Bitran (2002), and Giedion et al. (2000) reveal regulatory deficiencies, specifically regarding the authorities’ inability to oversee a vast number of institutions in the context of Colombia. This incapacity stems from inadequate financial resources, a deficit in robust oversight mechanisms, and an overabundance of sometimes conflicting regulatory frameworks.

Van de Yen (1990) proposes the establishment of a certification authority for providers. In the absence of such accreditation, providers would be unable to secure contracts with insurers, and patients would consequently seek care at alternative facilities.

Finally, while Pardo & Sabat (2025) do not emphasize the role of regulatory authorities, the Chilean Constitutional Court has intervened by challenging the use of age and gender as determinants for health insurance premiums within the private sector. Similarly, the European Court of Justice has prohibited the inclusion of gender as a factor in rate-setting.

Overall, the established control (Q5) authorities identified throughout the research are the Dutch Health Care Authority, the Competition Authority, the Institut für Qualität und Wirtschaftlichkeitim Gesundheitswesen, the Ministry of Health and Ministry of Finance, and the intervention of the Chilean Constitutional Court.

6. IMPLICATIONS AND CONCLUDING REMARKS

The paper shows the potential benefits of regulated insurance markets, as reported in the selected articles, and the contextual conditions under which they are achievable. The benefits are balanced with the potential underlying risks represented, for example, by the ultra-activity (Gerdtham & Jönsson, 2000), the opportunistic lengthening of waiting lists, or the ineffectiveness of gatekeeping mechanisms (De Cos & Moral-Benito, 2014; Hadad et al., 2013; Wranik, 2012; Bhat, 2005). Moreover, the key concern with regulated insurance markets remains the risk of adverse selection, where market dynamics can encourage insurers to prioritise lower-risk groups, thereby placing individuals with greater healthcare needs at a relative disadvantage. As a consequence, the opportunity of external control becoming gradually more stringent is considered, as well as the establishment of ad hoc Authorities.

The scope of our analysis, limited to OECD countries, represents the main limitation of this work. Although this scope ensures methodological consistency and comparability, it excludes insights

from emerging economies and non-OECD systems whose structural and institutional arrangements might produce markedly different regulatory trajectories. Notwithstanding this limitation, it is possible to extract preliminary implications of broader policy relevance.

To this aim, we propose a conceptual framework (Figure 7) drawing from our research questions.

Typical healthcare system models	Regulated health insurance markets	Contextual conditions	Benefits and risks of the emerging models	Control authorities established
SHI	Netherlands Germany Chile Colombia Belgium Japan	Per capita expenditure H; Total private health expenditure IL; Intermediated spending H Per capita expenditure H; Total private health expenditure L; Intermediated spending L Per capita expenditure L; Total private health expenditure H; Intermediated spending H Per capita expenditure L; Total private health expenditure L; Intermediated spending H Per capita expenditure H; Total private health expenditure IL; Intermediated spending IL Per capita expenditure H; Total private health expenditure H; Intermediated spending H	Adverse selection Growing inequities Flat-rate premiums may incentivize cross-subsidization between individuals with varying health risks Competition did not emerge because it is viewed as unattractive, and transaction costs for selective contracting are high Challenges in calculating reimbursement for catastrophic risk coverage Decline in public trust toward the government Regulated competition alone did not ensure economic stability	Dutch Health Care Authority Competition Authority; Institut für Qualität und Wirtschaftlichkeit im Gesundheitswesen Chilean Constitutional Court has intervened
Mixed	Swtzerland Israel USA	Per capita expenditure H; Total private health expenditure H; Intermediated spending H Per capita expenditure L; Total private health expenditure H; Intermediated spending H Per capita expenditure H; Total private health expenditure H; Intermediated spending H	Reducing risk selection by improving the payment formula by including health-based risk adjusters Raising serious concerns about respecting basic human rights and principles, such as equal access to necessary health care services	Ministry of Health and Ministry of Finance

FIGURE 7: Conceptual framework. Source: own elaboration.

The comparative table suggests that institutional model type - whether Social Health Insurance (SHI) or mixed insurance arrangements – is in itself insufficient to predict the nature and strength of regulatory frameworks. Rather, the contextual expenditure profile emerges as a more robust set of conditioning variables. Specifically, three dimensions appear particularly relevant: (a) per-capita expenditure, which signals macro-fiscal space for regulation; (b) the share of total private expenditure, which indicates the potential extent of market-driven financing pressures; and (c) intermediated spending, reflecting the degree to which resources are pooled through actors capable of managing risk-adjusted flows.

Countries such as Germany, Belgium, and the Netherlands illustrate how SHI systems embedded in high per-capita expenditure contexts, with moderate or low private spending and structured intermediaries, tend to develop sophisticated regulatory instruments, including dedicated authorities. Conversely, even in high-income Europe, mixed systems such as Switzerland reveal that risk-adjustment and payment formula refinements require parallel institutional reforms to safeguard universal access, raising normative considerations on equity and social rights.

Generalised to a European policy discourse, these findings imply that any movement toward regulated insurance markets must be accompanied by the construction of institutional intermediaries capable of actuarially managing funds, alongside regulatory authorities endowed with executive capacities to monitor insurer behaviour. In contexts where public financing remains predominant, changes in financing architecture should be treated as sequenced policy interventions rather than abrupt transitions. This offers an important insight for policymakers considering whether and how regulated competition could be integrated within predominantly universalistic health systems.

This study represents the initial phase of a broader research project conducted by the authors. While the current analysis focuses on systematizing the existing literature, the subsequent stages of our research aim to propose a framework for implementing a regulated competition system for private expenditure in Italy. This future proposal will be directly informed by the strengths, weaknesses, and structural characteristics identified through the international experiences analyzed in this review.

Future research could address the gaps identified in this literature review, such as the role and efficacy of control authorities. Furthermore, the themes highlighted in this study could be further explored through empirical investigations, including single and comparative case studies, mixed-methods analyses, and longitudinal evaluations.

Finally, despite the rigorous protocol applied to this SLR, this study is not without limitations. As with any systematic review, specific choices were made regarding the sample selection to ensure rigor and robustness; however, these criteria may have inadvertently excluded some relevant contributions. Specifically, the selection of the keywords represents a potential limitation, as it may have led to certain omissions within the search strategy.

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