

Governing the Energy Transition: Management Privatization as a Path to Security of Supply and Infrastructure Development

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Abstract – Today, the OECD Guidelines for Corporate Governance of State-Owned Enterprises (SOEs) are recognized worldwide as the benchmark for professionalizing the state's role as an owner, ensuring that state-owned enterprises operate in an equally efficient and transparent manner to private enterprises.

These international standards have become indispensable in the modern global economy, where the state remains a dominant actor in strategic sectors such as energy and infrastructure. The goal of this paper is to address the systematic issue of the "Implementation Gap" in the energy sectors of transition economies, focusing specifically on the case of the Republic of North Macedonia. In these contexts, the imperative of a sustainable energy transition encompassing both security of supply and climate change mitigation is constantly challenged by the entrenched reality of state-led governance. Despite the normative commitment of SOEs in the Macedonian energy sector, such as JSC ESM and JSC MEPSO, toward these international benchmarks, the reality of political interference and institutional decoupling remains a significant barrier to progress.

We have used the quantitative methods to investigate the quality of corporate governance through an instrumental multiple case study design, incorporating findings from 80 structured surveys and qualitative insights from 6 in-depth expert interviews. The findings have shown that there is a massive "Perception Gap" of 1.70 points between the self-perception of internal board members and the observations of external stakeholders. The comparative aspect is covered by examining various types of governance structures, from the highly professionalized and centralized holding structures of Singapore (Temasek) and Slovenia (SDH) to the ongoing restructuring of the Serbian national utility, EPS – Elektroprivreda Srbije. Although the appointment of international experts for the EPS Supervisory Board, following IMF conditionalities, is a step towards OECD best practices, it is argued in the following research that North Macedonia needs to look beyond advisory-type oversight mechanisms. Instead, by synthesizing best practices from global and regional role models, a better solution for institutional insulation and operational efficiency is proposed.

To break this cycle, the paper proposes a radical structural reform: a Mixed-Ownership Model with "Management Privatization." By inviting a highly credible international strategic partner to acquire a minority stake, the state can establish a robust "contractual shield" against local political influence.

The core rationale for inviting a strategic international partner through a mixed-ownership model is the urgent national need for

both substantial capital injection and advanced technical expertise. This approach provides a direct benefit to the state by facilitating the construction of critical energy infrastructure, a sector where North Macedonia has faced a stagnation point with no significant large-scale projects realized in the past 30 years. By outsourcing management to a credible partner, the state secures the necessary investment and "know-how" to finally modernize its aging assets and build the critical systems required for long-term energy independence.

Index Terms – OECD Guidelines, Corporate governance, Energy transition, Mixed-ownership model, Security of supply

I INTRODUCTION: THE GLOBAL AND LOCAL DYNAMICS OF STATE-OWNED ENTERPRISES

State-owned Enterprises (SOEs) have remained a substantial part of the global economy over time, despite initial perceptions of their eventual disappearance with the process of privatization [1]. SOEs have traditionally been created by governments in an attempt to address market failure in various sectors of the economy. SOEs have also been used as an alternative form of regulation in sectors with natural monopoly characteristics, including capital-intensive industries in the areas of energy, telecommunication, and transport infrastructure [2]. These sectors have traditionally been dominated by SOEs in an attempt to address the need for long-term investment, price stabilization, and public sector interest in these sectors. Contemporary research indicates that the role of the state in these sectors cannot be overemphasized [3]. The Republic of North Macedonia is no exception in these developments.

During the transition from a socialist economy to a market economy in the 1990s and early 2000s, the country experienced a series of privatization reforms in various sectors of the economy. These reforms led to the closure of most of the SOEs in the manufacturing sector of the Republic of North Macedonia [4]. However, in the energy sector of the Republic of North Macedonia, SOEs have remained a dominant force in an attempt to address the need for long-term investment in electricity production and transmission [5]. Currently, the production and transmission of electricity in the Republic of North Macedonia are conducted by two major SOEs: JSC Power Plants of North Macedonia (ESM), which is responsible for electricity production, and the Macedonian Electricity Transmission System Operator (MEPSO), which is responsible for transmission of electricity in the Republic of North Macedonia.

The governance of these enterprises has therefore emerged as an important area of public debate and research. The corporate governance challenges associated with SOEs are generally related to their dual institutional role. On one hand, SOEs are required to function efficiently as business organizations, while on the other hand, these organizations are used as instruments to achieve various social and economic objectives of governments [6]. These dual roles are particularly likely to result in conflicts in transition economies where institutional governance systems are still in the process of development. The major governance challenge associated with SOEs is related to the multi-layered accountability structure associated with these organizations. Unlike private sector organizations, where shareholders are responsible for providing clear directions to management, SOEs are characterized by a multi-layered governance structure involving governments, ministries, supervisory boards, and management teams [6]. These types of structures are likely to undermine oversight and management accountability. In the Macedonian context, these governance challenges are further complicated by perceptions related to political influences in management appointments. Surveys related to public perception regarding SOEs indicate that around 81 percent of respondents are of the opinion that "membership in a political party is critical in selecting management structures in state-owned enterprises" [7].

These governance constraints also find expression in the investment pattern of the national energy sector. Thus, while the contribution of new generation capacity by private investors has been nearly 1,500 MW since the country's independence, the state's generation capacity has registered an increase of only 165 MW during the same period [8],[9],[10]. This also gives expression to the structural constraints of the prevailing governance pattern and raises pertinent questions about the capacity of state-owned enterprises to deliver the scale of investments that the modernization of the energy sector and the green transition require.

The sense of urgency in the need to reform governance is further emphasized by the worsening financial situation faced by the country's energy supplier, JSC ESM. According to the data published by the Ministry of Finance, in fiscal year 2024, the company suffered a net loss of over 120 million euros, and this trend has been maintained in 2025, with an additional loss of 90 million euros in the first three quarters of the year [11],[12]. In order to maintain even basic levels of operational liquidity, JSC ESM has had to seek emergency funding from commercial banks in excess of 110 million euros up until early 2025, with state guarantees [13]. Discourse on the financial situation faced by JSC ESM, both from state and media sources, suggests that there are underlying issues, including an oversized administrative burden and the use of the company as a tool for social support in order to maintain low electricity prices, effectively exhausting all capital investment potential [14], [15].

In the above context of the structural constraints of the prevailing governance pattern and the pertinent questions it raises about the capacity of state-owned enterprises to deliver the scale of investments that the modernization of the energy sector and the green transition require, the basic research question that the

research aims to address is whether SOEs in the Macedonian energy sector can attain the levels of efficiency, transparency, and accountability that private enterprises have the capacity to achieve through the adoption of internationally accepted corporate governance principles. Thus, the research examines the structural constraints to the adoption of corporate governance principles in the Macedonian energy sector, including the role of political interference and the institutional constraints on the operational autonomy of the ESM and MEPSO.

II LITERATURE REVIEW AND THEORETICAL FRAMEWORK

II-1 State-Owned Enterprises and Corporate Governance

The concept of state-owned enterprises (SOEs) represents a special form of organization in which states maintain ownership and control over businesses that participate in market competition. According to the international institutions, state-owned enterprises can be defined as those in which states exercise ownership rights and participate in economic activities [6]. World Bank is defining state-owned enterprises as government-owned businesses that earn most of their revenues from economic activities while at the same time are fulfilling government policy objectives [2].

In general, state-owned enterprises are playing an important role in the global economy, particularly in strategic areas like energy, transport, and infrastructure. Even in advanced market-based economies, state ownership in businesses operating in areas like natural monopoly and infrastructure is not uncommon, particularly in areas that require long-term investments in infrastructure. According to the OECD, state ownership in these areas is necessary in order to ensure security, protect strategic interests, and ensure public access [16].

Despite their significant contribution to the global economy, state-owned enterprises have significant governance challenges in comparison to private corporations. This is because, unlike private corporations that only have one objective, state-owned enterprises have to fulfill multiple roles and objectives defined by states and governments [6].

Effective corporate governance is necessary in order to ensure transparency, accountability, and responsible conduct in businesses while at the same time balancing interests between shareholders and all relevant stakeholders [17]. State-owned enterprises have significant governance challenges, particularly due to the fact that there are multiple principals and institutions involved in state-owned enterprises. This is because states, while acting as owners, regulators, and policymakers, can easily create conflicts of interest, thereby compromising accountability.

II-2 International Governance Frameworks

International frameworks for governance standards were developed by international organizations with aim to improve governance practices in SOEs. The most influential among them is the OECD – Organization for Economic Cooperation and Development, which brought the Guidelines on Corporate Governance of State-Owned Enterprises, widely recognized as the global benchmark for governance reform in publicly owned companies [16], [6].

The OECD Guidelines are highlighting several core principles designed to strengthen transparency and accountability. Governments are expected to act as informed and active owners while avoiding direct political interference in operational management. The ownership function of the state should be clearly separated from regulatory and policy-making roles in order to prevent conflicts of interest. In addition, SOEs should operate under high standards of transparency, disclosure, and financial reporting comparable to those applied to publicly listed companies.

The guidelines are also stressing the importance of professional and independent boards of directors responsible for strategic oversight and monitoring management performance. Board members should be appointed based on professional competence and relevant industry expertise rather than political affiliation. Transparent reporting practices, internal controls, and independent auditing are essential components of effective governance systems.

International financial institutions, such as the European Bank for Reconstruction and Development (EBRD), likewise are emphasizing that stronger corporate governance can improve operational efficiency, reduce fiscal risks associated with poorly performing state enterprises, and enhance investor confidence in state-controlled sectors [18]. For transition economies such as North Macedonia, alignment with international standards is important as countries pursue integration with European institutional frameworks.

II-3 Theoretical Perspectives on SOE Governance

The governance challenges of SOEs may be understood through a number of theoretical lenses that seek to explain the relationships between owners and managers and other stakeholders. These include agency theory, transaction cost economics, stewardship theory, and stakeholder theory.

The agency theory views the governance issues of SOEs as a result of the agency problem. In the context of corporate governance, the owners of the firm are the principals, and the managers are the agents. The managers are responsible for running the firm on behalf of the owners. However, when managers engage in political and personal goals instead of those of the owners, agency problems result [19]. However, the agency problem in the case of SOEs is complicated by the fact that the owners are the people of the country. The government represents the people in the ownership of the firm. The managers are the agents who run the firm. This creates what is called the "double agency problem."

The transaction cost economics provides a second explanation for the persistence of the state ownership problem. This theory holds that the government owns those sectors of the economy in which the market is inefficient or expensive [22], [20]. A typical case of such a sector is the energy sector.

The stewardship theory provides a more optimistic view of the agency problem. It holds that managers may behave as stewards of the organization when they are able to identify with the long-run goals of the organization [22]. However, the motivation of managers may not exist when the political system interferes with the running of the firm.

The stakeholder theory provides a broader view of the agency problem. It holds that the firm must consider the interests of a wide range of stakeholders including employees, customers, suppliers, the government, and the community [23]. This is particularly relevant in the case of SOEs because they have a significant impact on the community.

II-4 Political Interference and Governance Challenges

Political intervention is perceived as one of the most important governance challenges facing state-owned enterprises. Empirical research has shown that political intervention in board appointments and management decisions may result in efficiency loss as it may prioritize political objectives over long-term economic objectives [24].

In transition economies, political patronage is often related to governance challenges. Empirical research has shown that political intervention is perceived as most significant in public enterprises; for example, political intervention is perceived to influence management appointments depending on political party affiliations as opposed to professional qualifications [7].

III COMPARATIVE GOVERNANCE MODELS

The professionalization of state-owned enterprises is thus a divergent and institutionally specific phenomenon, depending largely on the state's institutional capabilities in disentangling the functions of regulation from ownership [16]. According to the OECD's guidelines for the implementation of the Principles of Corporate Governance, the main challenge for state-owned enterprises is that they need to be as efficient and transparent as any other private entity [2], [16]. In order to understand the ways in which the "Implementation Gap" may be bridged, the following chapter will examine three divergent benchmarks for state governance, from global best practices to regional restructuring strategies.

III-1 Singapore: The Temasek Investment Holding Model

Singapore offers a global benchmark for professional state ownership through Temasek Holdings, an investment holding company that manages strategic investments, including the national energy provider, SP Group [26], [24].

Temasek is a private company owned by the Singapore Ministry of Finance, but it is subject to a unique constitutional requirement that the President of Singapore exercises oversight and confirms the appointment of the board members and CEO. This ensures that the Temasek board is made up of international business leaders and experts rather than political appointees [26].

Temasek is a professional buffer, with the government playing a role as policymaker and regulator, and Temasek playing the role of owner with a commercial mandate [24]. Temasek grants full operational freedom to its portfolio companies, requiring them to deliver long-term results without any government subsidies [26].

This institutional arrangement introduces an additional layer of oversight in the appointment process and creates a governance mechanism that limits direct executive control over board composition. By establishing procedural safeguards in the selection of board members and senior executives, the model supports the professionalization of enterprise leadership and

strengthens strategic decision-making autonomy within state-owned enterprises [24], [27].

III-2 Slovenia: The Centralized Holding Model

Slovenia is a regional frontrunner in the implementation of OECD recommendations [28], with the Slovenian Sovereign Holding (SDH/SSH) centralizing the management of state assets.

The Slovenian Parliament selects the Supervisory Board at SDH based on strict professional criteria in finance, law, and management. Politicians are constitutionally forbidden from holding these positions. In turn, the SDH Management Board is selected by competitive international tenders [28], [16].

SDH is responsible for managing the state's stakes in energy giants such as HSE and Gen Energija. SDH establishes clear KPIs and appoints professional Supervisory Boards for these companies, with line ministries constitutionally forbidden from intervening in the day-to-day management, creating a professional "filter" between politics and energy companies [28], [24].

This centralized holding structure functions as a strategic intermediary that decouples the state's political objectives from the operational management of the energy sector. By consolidating ownership rights within a single professional entity, the model institutionalizes a 'firewall' that prevents line ministries from exercising informal influence over technical decisions. Consequently, this arrangement replaces discretionary political control with a merit-based governance framework, ensuring that the management of critical energy infrastructure is guided by long-term corporate stability and professional accountability rather than short-term political cycles [28], [24].

III-3 Serbia: The Transition to Joint Stock Company

The restructuring of Elektroprivreda Srbije (EPS) is the most recent regional effort to modernize energy governance, in line with IMF conditionality [29].

EPS was transformed from a public enterprise to a closed Joint-Stock Company in 2023, shifting from the Law on Public Enterprises to the Law on Business Companies [30].

A major breakthrough was the appointment of international experts, including three energy veterans from Norway, to the Supervisory Board, intended to "import" institutional integrity to the supervision process [31].

Despite these developments, the state remains the 100% shareholder. This means that there remains a high level of "Double Agency" risk, as the government still has an impact on electricity prices and social employment [32].

III-4 Summary of Comparative Governance Benchmarks

The cases presented for Singapore, Slovenia, and Serbia reflect different governance models for SOEs. In the cases presented for Temasek in Singapore and SDH in Slovenia, a centralized system and a constitution are used to create a professional distance between the government and the management of the SOE [25], [28]. In the case of EPS in Serbia, a shift is noted in the direction toward a joint stock company, where the government maintains 100% ownership and has a significant influence on commercial

decisions, including pricing and employment [32].

IV METHODOLOGY AND RESEARCH DESIGN

IV-1 Research Design

The research design of the present study is based on the mixed research method. This method is considered appropriate for the research on corporate governance in state-owned enterprises operating in the energy sector of North Macedonia. The use of the mixed method is based on the fact that the research on state-owned enterprises needs to consider the influence of the institutional environment on corporate governance practices. This is because the corporate governance practices in state-owned enterprises are influenced by factors beyond the institutional environment.

The research of the present study is based on the two most important state-owned enterprises operating in the energy sector of North Macedonia. One of the state-owned enterprises is the JSC Power Plants of North Macedonia (ESM), which is responsible for the generation of electricity. The second state-owned enterprise operating in the energy sector of North Macedonia is the Macedonian Electricity Transmission System Operator (MEPSO), which is responsible for the electricity transmission.

In order to deconstruct the *Implementation Gap* phenomenon between legal adoption and actual implementation/governance, the specific research design is tailored to address the following key questions: (1) To what extent does political intervention affect the normal functioning or strategic decisions of these SOEs?; (2) How are board members appointed, and to what extent do these processes ensure competence over political allegiance?; and (3) To what extent do existing disclosure practices actually hold any substantive significance for external stakeholders, or are they only for *tick-box* compliance purposes only?

Through the triangulation of both quantitative data collected from 80 respondents and qualitative data collected from 6 expert interviews, it is possible to identify the Perception Gap between the *logic of compliance* and the *logic of accountability* itself.

IV-2 Sampling and Data Collection

The empirical part of the research is based on a structured survey and semi-structured expert interviews. A survey was used to measure perceptions on the following crucial governance dimensions: board independence, political interference, transparency, professional state ownership and board diversity.

The sample for the survey consisted of two groups of respondents, whose perceptions on governance dimensions were compared. These groups were internal and external stakeholders. The first group consisted of board members from the analyzed state-owned enterprises. The second group consisted of external stakeholders who interact with these enterprises in a professional and institutional capacity.

The total sample for the survey consisted of eighty respondents. The sample was divided equally between internal and external stakeholders. Forty respondents were from the supervisory and management board (present and former) of ESM and MEPSO.

The other forty respondents were from the group of external stakeholders, who were representatives from regulatory bodies, ministries, international financial institutions, energy consultants, academia, and media.

The survey instrument was based on a triangulated approach to data collection. The core governance indicators were measured using five-point Likert scale, ranging from strong disagreement to strong agreement, the survey also incorporated YES/NO questions and percentage-based questions. This helped respondents rate governance indicators and provided a standard way for comparing internal and external stakeholders' perceptions.

In addition to the survey, six semi-structured interviews (three with Board respondents, and three with Stakeholder respondents) were carried out with experts who have direct experience in the governance of the companies and external stakeholders.

IV-3 Data Analysis

The quantitative data collected through the survey were analyzed using statistical methods in order to identify patterns in governance perceptions and differences between respondent groups. Reliability testing of the survey instrument was conducted using Cronbach's alpha to assess the internal consistency of the governance indicators included in the questionnaire.

Table 1. Reliability analysis

Governance scale	Cronbach's α	Reliability level
Political interference	0.86	Excellent
State Professionalism	0.72	Acceptable
Board Independence	0.78	Good
Transparency & Disclosure Quality	0.82	High

Board Diversity was operationalized as a governance composition indicator rather than as a reliability-tested multi-item scale. It captures whether the board composition reflects diversity in gender, age, and professional background, as well as the categorical share of women on the board. Since this variable combines a perception-based assessment with a structural composition measure, it was retained in the regression model as an observed predictor of board effectiveness, but it was not included in the Cronbach's alpha reliability table.

To examine differences between board members and external stakeholders, independent sample t-tests were applied. This statistical method allows comparison of mean responses between the two groups and helps determine whether differences in governance perceptions are statistically significant.

The qualitative interview results were analyzed according to a thematic analysis method in order to identify recurring patterns and explanations related to governance challenges in state-owned enterprises. These qualitative results will complement the quantitative results and provide further context for analyzing the dynamics of corporate governance in the Macedonian energy sector.

The research design will incorporate both quantitative survey results and qualitative interview results, thus providing a full

picture of the dynamics of corporate governance in state-owned enterprises in the Macedonian national energy sector.

V RESULTS AND FINDINGS

V-1 Respondent Structure

The empirical analysis is based on survey responses collected from 80 respondents with direct experience or professional interaction with state-owned enterprises in the Macedonian energy sector. The sample was intentionally divided into two equal groups in order to capture the difference between internal governance perception and external institutional scrutiny.

The first group of the stakeholders included the internal stakeholders (n=40), who were former or present members of the Management and Supervisory Boards of the JSC ESM and the JSC MEPSO. The second group of the stakeholders included the external stakeholders (n=40), who were experts in the energy sector, representatives of the regulatory bodies and the government sector related to energy policy, and representatives of international organizations, academia and media sector.

This sampling structure allows the study to directly compare internal governance self-assessment with external institutional evaluation of governance performance.

V-2 The Perception Gap

The most interesting result from the empirical analysis is the identification of a significant perception gap between internal and external respondents in relation to the general quality of governance practices.

Table 2. Overall Governance Perception Gap

Respondent Group	Mean Score
Internal Stakeholders (Board Members)	4.17
External Stakeholders	2.47
Difference	1.70

The 1.70-point difference on a 5-point Likert scale reflects a significant degree of divergence in governance perceptions. Internal respondents have a significantly more favorable perception of governance practices compared to external stakeholders. This result suggests that, while governance structures may be formally in line with international standards, there are significant weaknesses in the effective implementation of these structures from the point of view of external stakeholders. This divergence in perceptions may be characterized by a "compliance vs. accountability" divide.

V-3 Political Interference

Political interference stands out as the most important governance issue from the findings of the empirical study. The Independent Samples T-test points out a notable gap between the perceptions of the internal and the external stakeholders on the political interference in the decision-making process.

The findings reveal that the boards perceive a relatively lower political interference in the decision-making process, whereas the opposite is true from the perspective of the external stakeholders. The extremely high value of t ($t = 11.20$) and the extremely strong significance value ($p < 0.001$) confirm the significance of

the findings and rule out the possibility of the findings being due to mere chance.

Table 3. Perceived Political Interference

Indicator	Board Members	Stakeholders
Mean score	2.40	4.10
Standard deviation	0.82	0.74
t-value	11.20	
Significance	$p < 0.001$	

The findings of the further statistical analysis reveal a very strong negative correlation between political interference and the effectiveness of the boards ($r = -0.78$).

V-4 Transparency and Perception Gap

Significant differences in perception were also found regarding transparency practices and board independence.

Table 4. Transparency Perception Gap

Group	Mean
Board Members	3.95
Stakeholders	2.65
Significance	$p = 0.002$

The research findings indicate that internal respondents believe that reporting mechanisms are adequate, while external stakeholders believe that there is no meaningful transparency regarding strategic decisions and operational processes.

Perception regarding board independence shows a considerable divergence between internal and external respondents.

Table 5. Board Independence Perception Gap

Group	Mean
Board Members	3.80
Stakeholders	2.15
Significance	$p < 0.001$

This shows that board members tend to believe that they are independent in their profession, while external respondents believe that board appointments are politically motivated.

V-5 Regression Analysis

In order to test the combined effect of governance variables on board effectiveness, a regression model has been employed. In this regression model, Board Independence, State Ownership, Board Diversity and Political Interference are employed as predictor variables.

Board Independence refers to the perceived autonomy of board members from political or governmental influence and their ability to act on the basis of professional judgement. State Professionalism refers to the perceived capacity of the state to act as an informed and professional owner, separating ownership responsibilities from political and regulatory interference. Board Diversity refers to the composition of the board in terms of gender, age and professional background, and is treated as a governance composition indicator rather than as a reliability-tested multi-item scale. Political Interference refers to the

perceived influence of political actors on board appointments, strategic decisions and operational autonomy.

Table 6. Regression Model Summary

Indicator	Value
R	0.735
R ²	0.541
Adjusted R ²	0.528
F-statistic	42.150
Significance	$p = 0.000$

The regression model explains 54.1% of the variance of board effectiveness. The results show a strong predictive relationship between governance variables and governance performance.

Coefficient analysis is employed to identify the most significant determinants of board effectiveness.

Table 7. Regression Coefficients and Multicollinearity Diagnostics

Variable	Beta	Significance	Tolerance	VIF
Board Independence	0.420	$p = 0.000$	0.364	2.751
State Professionalism	0.280	$p = 0.002$	0.422	2.367
Board Diversity	0.210	$p = 0.001$	0.654	1.529
Political Interference	-0.350	$p = 0.000$	0.628	1.593

Multicollinearity was assessed using tolerance and Variance Inflation Factor (VIF) values. The results indicate that multicollinearity was not a methodological concern in the regression model, as all VIF values were below the commonly accepted threshold of 5.0 and all tolerance values were above 0.20.

Board independence is found to be the most important positive predictor of board effectiveness, while political interference has a significant negative effect on board effectiveness ($\beta = 0.420$; $\beta = -0.350$). These results provide empirical support for the fact that governance reforms that enhance board independence and reduce political interference are important for improving the effectiveness of state-owned enterprises.

V-6 Summary of Empirical Findings

The empirical analysis confirms the systematic nature of the challenges facing the Macedonian energy sector governance. The answers to the research questions are provided by the combination of the findings. The data shows a massive Perception Gap of 1.70 points. This shows that while the internal board members perceive the operations to be professional, the external stakeholders perceive a significant absence of operational autonomy. With regard to the political interference, the high negative correlation coefficient of $r = -0.78$ and the regression coefficient of $\beta = -0.350$ confirm the assumption that political pressure is the major challenge facing the board. Additionally, the findings indicate that the board independence is the most important factor to success with a coefficient of $\beta = 0.420$, while the external stakeholders perceive the board

appointments to be political rewards rather than merit-based appointments. This provides a solid foundation for the discussion on the Mixed Ownership Model.

VI DISCUSSION AND POLICY IMPLICATION

The implications of these research findings are particularly relevant to governance reform in the Macedonian energy sector.

Firstly, governance reform should focus on the professionalization of board appointment processes. Such processes are required to ensure that board members are appointed on the basis of possessing requisite professional expertise to manage infrastructure enterprises. These recommendations are in line with OECD Guidelines on Corporate Governance of State-Owned Enterprises, which highlight the importance of merit-based board appointment processes as a critical component of governance reform [6].

Secondly, governance reform should focus on strengthening institutional separation between the state's ownership role and its regulatory and policy-making functions. International corporate governance standards highlight that governments should act as active and informed owners while avoiding direct involvement in operational management decisions [2],[6]. Strengthening institutional separation between these roles is likely to minimize the risk of political influences on corporate governance processes and enhance managerial autonomy.

Thirdly, governance reform should focus on strengthening transparency and stakeholder engagement. Such processes are required to minimize the perception gap identified in this research and to increase stakeholder confidence in governance processes [6].

On the other hand, comparative experience from global and regional benchmarks underlines the ongoing efforts to bring state-owned enterprises in conformity with international standards regarding corporate governance. Based on a successful example such as Singapore's Temasek Holdings and Slovenian Sovereign Holding (SDH), effective corporate governance is built on a centralized structure of ownership acting as a sort of buffer or filter between political authorities and management [28], [25]. Similarly, in the Western Balkans, efforts to restructure Elektroprivreda Srbije (EPS), with support from programs financed by the International Monetary Fund [29], are aimed at enhancing supervisory oversight and modernizing board tasks through the integration of international expertise. However, as highlighted by Musacchio & Lazzarini [24], and more recently by the OECD [6], success in these efforts depends on the overall institutional framework. Indeed, operational autonomy in strategic sectors such as energy is a particularly complex issue in sectors considered to be of national importance. As emphasized in the literature on corporate governance, upgrades to corporate governance structures are likely to be confronted with structural barriers to achieving an optimal balance between business viability and overall socio-economic interests of the state, particularly in economies undergoing a process of transition where the state is the sole or dominant shareholder [32].

Against this background, overall findings from this study are consistent with introducing a governance model that is mixed in

its structure and is aimed at enhancing governance independence while ensuring state control over strategic energy assets in the Macedonian economy. In this regard, the state maintains majority control over strategic assets in the Macedonian energy sector while introducing a credible international strategic investor through minority equity participation, a structure that can effectively be as a buffer against political interference [24] particularly to mobilize capital investment that has been explicitly absent in the state-owned generation company JSC ESM over the past three decades. Overall empirical evidence indicates that over the past three decades, state-led generation capacity has only been increased by 11.3% while private investors have been able to invest nearly 1500 MW of new generation capacity. Overall literature on privatization and corporatization indicates that such a governance model is likely to improve governance efficiency in SOUs while introducing external market discipline to improve overall governance and reduce political interference in strategic sectors such as energy [32],[28].

Under these circumstances, it is within this context that the empirical findings of this study support, with strong evidence, the adoption and implementation of a Mixed Ownership Model, serving as an exit strategy from the current fiscal impasse. Within this context, it is proposed that a 75/25 ratio, whereby the state maintains a 75% majority share while introducing an international strategic investor with a 25% minority share, can effectively address the current governance issues. This model, in fact, enables the state to maintain full and absolute control over strategic energy assets while at the same time introducing an external market discipline, necessary and required, in order to halt the current cycle of recurring losses [33]. Moreover, within this context, it is proposed that the 75/25 ratio, whereby the management of JSC ESM is separated from political influences, can function as a buffer, prioritizing capital investment over political over-staffing and social pricing policies. In fact, the presence of a strategic investor in the energy sector is not only required from a financial perspective in order to mobilize investment but also from a governance perspective in order to ensure technical and financial viability in the Macedonian energy sector.

VII CONCLUSION

This research aimed to assess the governance performance of state-owned enterprises in North Macedonia's energy sector with regard to board independence, political interference, transparency, professional state ownership and board diversity. The research's empirical results show that there is a considerable perception gap between internal and external stakeholders. Additionally, the research shows that political interference is a major governance constraint. The research's empirical results support the notion that board independence has a strong positive impact on governance performance. On the other hand, political interference has a significant negative impact on board effectiveness.

The research's empirical results indicate that governance performance is unlikely to be improved through incremental governance reforms. The persistent "Implementation Gap" and the deteriorating financial position of the state-owned provider,

characterized by record-breaking net losses of over 120 million euros in 2024 and reliance on state-guaranteed liquidity loans [11], [12], confirm that purely normative changes are insufficient to ensure professional autonomy.

Based on the research's empirical results, this study proposes a Mixed Ownership Governance Model as a structural solution to address these challenges. The proposed solution is based on a 75/25 ownership structure: the state will retain 75% of the company's shares, while a strategic international investor will own 25% minority shares. Such a governance model allows for continued public control over strategic assets while introducing much-needed capital, technology, and governance discipline. By establishing a professional 'buffer' through minority equity participation, this model structurally limits discretionary political interference and ensures that enterprise management is aligned with technical efficiency and long-term investment goals rather than short-term political cycles.

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Upravljanje energetsom tranzicijom: Privatizacija menadžmenta kao put ka sigurnosti snabdevanja i infrastrukturnom razvoju

Rezime – Danas se Smernice OECD-a za korporativno upravljanje u državnim preduzećima (SOE) širom sveta prepoznaju kao referentni standard za profesionalizaciju uloge države kao vlasnika, čime se obezbeđuje da državna preduzeća posluju podjednako efikasno i transparentno kao privatna preduzeća. Ovi međunarodni standardi postali su neizostavni u savremenoj globalnoj ekonomiji, u kojoj država i dalje ostaje dominantan akter u strateškim sektorima kao što su energetika i infrastruktura.

Cilj ovog rada je da analizira sistemski problem „jaza u implementaciji“ (eng. implementation gap) u energetskim sektorima ekonomija u tranziciji, sa posebnim fokusom na slučaj Republike Severne Makedonije. U takvim okolnostima imperativ održive energetske tranzicije, koji obuhvata i sigurnost snabdevanja i ublažavanje klimatskih promena, stalno je suočen sa ukorenjenom realnošću upravljanja pod dominantnom ulogom države. Uprkos normativnoj posvećenosti državnih energetskih preduzeća u Severnoj Makedoniji, kao što su AD ESM i AD MEPSO, ovim međunarodnim standardima, političko mešanje i institucionalno razdvajanje između formalnih pravila i prakse i dalje predstavljaju značajnu prepreku napretku.

U istraživanju su primenjene kvantitativne metode za ispitivanje kvaliteta korporativnog upravljanja kroz instrumentalni dizajn studije višestrukog slučaja, koji obuhvata nalaze iz 80 strukturiranih anketa i kvalitativne uvide iz šest dubinskih ekspertskih intervjua. Rezultati pokazuju postojanje značajnog „jaza u percepciji“ (eng. perception gap) od 1,70 poena između samopercepcije internih članova odbora i ocena eksternih zainteresovanih strana. Komparativna dimenzija istraživanja obezbeđena je analizom različitih modela upravljanja, počevši od visokoprofesionalizovanih centralizovanih holding modela Singapura (Temasek) u Slovenije (SDH), pa sve do tekućeg restrukturiranja srpskog nacionalnog preduzeća, Elektroprivrede Srbije (EPS). Iako imenovanje međunarodnih stručnjaka u Nadzorni odbor EPS-a, podstaknuto uslovima MMF-a, predstavlja korak ka OECD standardima, ovo istraživanje tvrdi da Severna Makedonija mora ići dalje od savetodavnog nadzora. Sintetizujući pouke iz ovih globalnih i regionalnih primera, studija predlaže robusniju strukturnu reformu model mešovitog vlasništva kako bi se osigurala dugoročna institucionalna izolacija i operativna efikasnost.

Kako bi se prekinuo ovaj ciklus, rad predlaže radikalnu strukturnu reformu u vidu modela mešovitog vlasništva sa „privatizacijom upravljanja“ (eng. management privatization). Uključivanjem visoko kredibilnog međunarodnog strateškog partnera koji bi stekao manjinski vlasnički udeo, država bi mogla uspostaviti snažan „ugovorni štit“ protiv lokalnog političkog uticaja.

Ključni razlog za uključivanje međunarodnog strateškog partnera kroz model mešovitog vlasništva jeste hitna nacionalna potreba za značajnim prilivom kapitala i naprednim tehničkim znanjem. Ovakav pristup donosi direktnu korist državi jer omogućava izgradnju ključne energetske infrastrukture, sektora u kojem se Severna Makedonija suočava sa dugotrajnom stagnacijom, bez realizacije značajnih projekata velikih razmera u poslednjih trideset godina. Poveravanjem upravljačkih funkcija kredibilnom partneru, država obezbeđuje potrebne investicije i „know-how“ za modernizaciju zastarelih energetskih kapaciteta i izgradnju sistema neophodnih za dugoročnu energetska nezavisnost.

Ključne reči – smernice OECD-a, korporativno upravljanje, energetska tranzicija, model mešovitog vlasništva, sigurnost snabdevanja