

## The Role of University Governance in Enhancing Research Performance: Evidence from Ethiopian Public Universities

Bekele Atanaw<sup>1</sup>, Ashebir Bezabih<sup>2</sup>, and Habtamu Gezahegn<sup>3</sup>

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**Abstract:** Inadequate implementation of university governance principles in public universities can severely impact academic research performance, affecting not only the academic institutions but also the broader community and society. This study aimed to assess the role of university governance in enhancing the research performance of public universities in Ethiopia. To achieve this objective, a total of 377 instructors and academic officials were selected from six public universities using a multistage random sampling method. Data collected from these participants were analyzed using SPSS, employing descriptive statistics, correlation analysis, and a multiple linear regression model. The findings showed that factors such as academic freedom, accountability, and responsibility exhibited a significant negative correlation with university governance, highlighting their influence on research performance. Conversely, autonomy and transparency did not show a statistically significant impact. To foster improved governance practices, it is essential for academic leaders in public universities to enhance support for academic freedom and bolster accountability among decision-makers. By prioritizing these aspects, universities can better implement governance principles that promote effective decision-making and ultimately improve research outcomes. This research underscores the need for a more robust governance framework to enhance the research environment in Ethiopian public universities, paving the way for future studies to further explore these dynamics.

**Keywords:** University governance; research performance, education service quality; Ethiopian public universities, Ethiopia

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<sup>1</sup> PhD Candidate, Department of Educational planning and Management, College of Education, Hawassa University, Email: [bekeleatanaw@gmail.com](mailto:bekeleatanaw@gmail.com)

<sup>2</sup> Associate Professor, Department of Educational planning and Management, College of Education, Hawassa University, Email: [ashbeze@yahoo.com](mailto:ashbeze@yahoo.com)

<sup>3</sup> Associate Professor, Department of Educational planning and Management, College of Education, Hawassa University, Email: [ghabtamu59@gmail.com](mailto:ghabtamu59@gmail.com)

## 1. Introduction

Over the past few decades, higher education systems worldwide have undergone significant transformations due to factors such as globalization, the economic value of knowledge, advancements in information technology, and reduced public funding (Gebremeskel & Feleke, 2016). These changes have pressured higher education institutions to adapt and evolve. Universities are seen as public institutions addressing broad societal needs beyond individual benefits or financial gain (Abugre, 2018). They play a crucial role in expanding and enhancing national economies, both in developed and developing nations. Therefore, universities must adapt their governance structures and practices to effectively navigate these challenges and continue serving their vital role in society.

In recent years, university governance has emerged as a critical factor in transforming public universities' education programs globally. Effective university governance is essential for enhancing the overall growth and quality of higher education (Pham, 2012). At its core, university governance emphasizes sharing decision-making authority among academic leaders to ensure the efficient delivery of educational activities (Yudianto et al., 2021). By adopting robust governance structures and practices, public universities can navigate the complex challenges of the modern higher education landscape and fulfill their missions by providing high-quality education to a diverse student population.

University governance has transformed the role of academic leaders, requiring them to be accountable in their decision-making processes. By strengthening internal consistency in education service delivery and decision-making, universities can implement competitive teaching and learning processes to enhance their global competitiveness. Studies in Africa have highlighted the significance of university governance, emphasizing practices such as promoting transparency and accountability in decision-making, fostering a culture of responsibility

among academic leaders, and aligning institutional goals with societal demands (Bingab et al., 2018; Asiimwe & Steyn, 2013).

Historically, universities primarily served as teaching institutions until the mid-19th century, when research became a fundamental function alongside teaching, particularly in German universities (Vorley & Nelles, 2008). Today, this dual role of teaching and research is essential for universities to effectively serve as centers of learning and innovation. World-class universities are built on four foundational pillars: robust research, engagement with society, high-quality teaching, and effective research and innovation management services. Scientific research achievements have become a primary factor in assessing universities' academic performance and global ranking (De Los Ríos-Carmenado et al., 2021; Truong et al., 2021).

The success of instructors and their advancement in conducting problem-driven research will shape the future direction of higher education. Factors such as organizational and individual influences on lecturers' research productivity significantly shape research practices within universities (Hue et al., 2022). Establishing research universities through effective university governance is crucial in ensuring higher education's role in promoting social and economic development (Rungfamai, 2018). University governance is a fundamental aspect of higher education institutions, engaging various stakeholders in the decision-making process (Abdelaziz, 2022).

In Ethiopia, the government has implemented strategies and policy frameworks to monitor governance efforts related to university development. Despite these efforts, studies have shown that university governance remains a critical area for improvement in enhancing research practices in public universities (Yirdaw, 2016; Melu, 2022). This study aims to explore the role of university governance in enhancing research performance in Ethiopian public universities, addressing the gaps in current research and providing insights into how governance structures impact research outcomes.

### *1.1 Rationale of the Study*

Strong governance systems in universities are essential for enhancing research output, which plays a crucial role in fostering innovation and supporting national development. In Ethiopia, the government has prioritized research as a key component of its Growth and Transformation Plans, recognizing its significance for socio-economic progress. Despite substantial funding allocated to public universities for research activities, many institutions continue to struggle with inadequate resource allocation and administrative inefficiencies. This situation underscores the urgent need for effective governance to optimize resource distribution and management, which are vital for conducting high-quality research.

Effective governance fosters accountability and transparency, qualities that enhance stakeholder trust and attract additional funding for research projects. Moreover, it creates collaborative environments that facilitate partnerships with businesses and other institutions, which are essential for impactful research initiatives. Robust governance mechanisms also support the establishment and implementation of research policies that protect academic freedom and encourage innovation.

In addition to improving research output, effective university governance enhances opportunities for staff training and development, thereby increasing research capacity. By cultivating a supportive research culture, governance can stimulate greater participation from faculty and students in research activities, fostering a vibrant academic community engaged in meaningful inquiry.

Hence, assessing university governance is critical to understanding its influence on research quality. Enhancing governance structures in Ethiopian public universities can lead to improved research outcomes that are vital for the nation's socio-economic development and the attainment of quality education. To this end, this study aims to address the following research questions:

1. How do Ethiopian public universities implement university governance principles to improve the existing research performance?
2. What are the impacts of implementing university governance principles in enhancing the research performance of Ethiopian public universities?

In sum, this study contributes to the understanding of university governance and its impact on research performance by addressing several key gaps in the literature. It explores the relationship between governance and research outcomes in an international context, focusing specifically on Ethiopian public universities. More importantly, this study offers valuable insights for policymakers and educators seeking to improve research performance and governance effectiveness in higher education institutions.

## **2. Literature Review**

Higher education has become a vital pillar of social development, serving as a foundation for scientific and technological innovation, while producing a highly skilled workforce (Sun, 2023). Teichler (2015) noted that higher education influences societal development by enhancing competencies and skills related to occupational structures and employment requirements. Abualrub and Pinheiro (2022) highlighted its role in addressing regional and local demands, forming a knowledge economy essential for both industrialized and developing nations. Smolentseva (2023) added that higher education benefits society through teaching and knowledge production as well as the transmission of culture, norms, and values. While some contributions are clear, such as advancements in research, others, such as the impact of degree on social inequality, remain debated. Higher education plays a multifaceted role in shaping society.

This study focuses on the role of university governance in enhancing research performance using evidence from Ethiopian Public Universities. The researchers were actually encountered by a lack of

sufficient studies in the area. Many researchers have tried to investigate the importance of university governance in its general aspects, but did not focus on its influence on the research performance of public universities. For instance, Mekonnen et al., (2022); Melu, (2022); and Dea, (2021) conducted studies on university governance, but none of them linked their research to the role of university governance in enhancing research performance.

Good governance encompasses the process of policymaking and macro-level decision-making within higher education institutions (Kezar, 2004). Effective governance is essential for addressing the complex challenges that higher education institutions face. It requires the implementation of governance practices that provide for the diverse needs of stakeholders, such as teaching staff, students, and administrators. This collaborative decision-making process is vital for achieving the organization's objectives (Ochara, 2021). Agency theory is particularly pertinent for examining governance principles in autonomous agencies across various sectors, including public administration and educational organizations. It provides valuable insights for analyzing governance-related issues (Schillemans & Bjurstrøm, 2020). According to Kivistö (2008), this theory has two primary options for controlling agents: they can establish a contract that is either behavior-based or outcome-based. This distinction is crucial for shaping effective governance strategies and ensuring accountability. Moreover, university governance involves not only interactions among universities but also their relationships with state authorities. It encompasses internal dynamics, power relations, and decision-making processes within the institutions themselves (Musselin, 2021).

### *2.1 Empirical Studies*

Empirical studies have consistently shown that effective university governance plays a crucial role in enhancing research performance in both developed and developing countries. Scholars such as Vorley and

Nelles (2008), Leisyte et al. (2009), De Rassenfosse and Williams (2015), and Truong et al. (2021) emphasize the importance of research in sustaining the knowledge economy, similar to how electricity powers the industrial economy. Research is a vital indicator of the significance of knowledge economy, driving innovation and development. Huang (2018) identified significant advancements in higher education development and expansion since the late 1980s, highlighting governance as a crucial component that profoundly impacts both teaching and research.

Effective governance in universities is essential for creating an environment conducive to research excellence and innovation. This environment fosters the generation and dissemination of knowledge, which is vital for driving economic growth and societal progress. Universities are key to high-quality human resource development, as knowledge generation has replaced capital asset ownership and labor productivity as the main drivers of growth and wealth (Kusuma et al., 2018). The concept of university governance is critical due to the increasing complexity and duties of higher education institutions, which face pressures from the state, business sector, and other external stakeholders (Atashzadeh-Shoorideh et al., 2019).

Over the past decades, education governance has shifted from centralized to decentralized forms, driven by the need for inclusive decision-making processes (Ozga, 2009). Effective governance is crucial in addressing complex challenges by implementing practices that meet diverse stakeholder needs (Ochara, 2021). Despite its significance, there is a scarcity of studies examining the relationship between university governance and research performance internationally (Sedláček, 2017). This study aims to assess the role of university governance in enhancing research performance, focusing on evidence from Ethiopian public universities.

Despite the recognized importance of university governance, there is a notable scarcity of studies examining its relationship with research

performance in an international context (Sedláček, 2017). This study aims to assess the role of university governance in enhancing research performance, focusing on evidence from Ethiopian public universities. In higher education, governance refers to the structures and processes that enable staff to manage their activities and responsibilities. However, university leadership often faces challenges in understanding effective outcomes due to the complexity of governance-related issues (Abdelaziz, 2022; Lee, 2017).

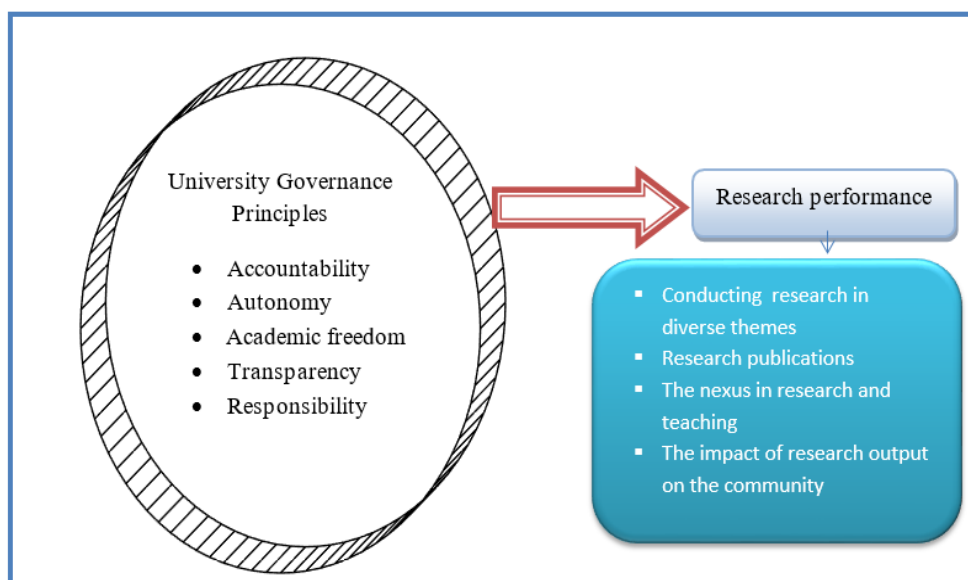
The significance of university governance is widely acknowledged, yet research on its impact on university performance in international comparisons remains limited. This gap is highlighted in reports like "Progress in Higher Education Reforms Across Europe," which includes governance and funding reform data from 2009 to 2016 (Sedláček, 2017). Scholars have investigated factors influencing lecturers' research outcomes, but there is a lack of research on governance elements affecting faculty outputs in scientific research, as observed in Vietnam and Kenya (Truong et al., 2021). A study by Nafukho et al., (2019) revealed that universities play a crucial role in research, scholarship, and innovation, serving as essential conduits for the adoption and dissemination of knowledge generated worldwide.

In Ethiopia, there is a dearth of studies on university governance issues. For instance, Dea (2021) studied governance aspects like accountability and autonomy. The Higher Education Proclamation of 2003 granted autonomy to Ethiopian universities, establishing a legal framework for their operations (Melu, 2022). Current governance trends in Ethiopia show decentralization, but universities still face significant control from the Ministry of Education, leading to tensions between autonomy and oversight. Efforts to improve governance effectiveness are ongoing, including enhancing gender equity and inclusiveness, though progress is uneven.



## 2.2 Conceptual Framework of the Study

This section outlines the conceptual framework guiding the study, detailing the relationship between the independent and dependent variables that are essential for exploration.



**Figure. 1 Conceptual framework of the study (Source: Musselin, 2021; Lera, 2019; Yirdaw, 2016).**

As illustrated in Figure 1, the framework identifies five key independent variables that significantly impact research performance at both global and local levels: governance, accountability, autonomy, academic freedom, transparency, and responsibility. Each of these elements is crucial in shaping the university environment and influences various outcomes related to research performance. Understanding the relationship between university governance and research performance

is essential for pinpointing areas needing improvement, thereby enabling academic institutions to effectively foster knowledge and innovation.

Figure 1 illustrates the conceptual framework of the study, highlighting the relationship between the independent variables/predictor variables, on the right side, and their influence on the dependent variables (outcome variables). To enhance research performance in public universities, it is vital for both academic and administrative leaders to synchronize their efforts in applying effective university governance principles. This alignment is critical for achieving the desired objectives of research performance, which serves as a foundational pillar for every higher education institution (Musselin, 2021, and Lera, 2019). The successful implementation of university governance principles within the study area not only improves the research process but also ensures that the dissemination of research outputs adheres to these governance standards.

In the conceptual framework of this study, the dependent variable is the research performance of public universities in Ethiopia. This outcome variable is influenced by the academic staff and their research activities, which are closely tied to the implementation of university governance. Key aspects include utilizing allocated budgets specifically for research purposes, conducting problem-solving research responsibly and accountably, and ensuring transparency to engage all relevant stakeholders.

### **3. Research Methodology**

#### *3.1 Research Approach*

Important research issues necessitate in-depth investigation so that a holistic understanding is achieved (Creswell, 2014). Hence, for this study, a quantitative research method has been adopted because it relies on numerical data and statistical analysis, which helps minimize

bias. This objectivity enhances the reliability of the findings (Kumar, 2011). Furthermore, large sample sizes in quantitative research enable researchers to conclude the population as a whole from the group under study (Babbie, 2013). With the use of statistical data analysis techniques, quantitative research enables the testing of hypotheses and offers a transparent framework for comprehending the relationships between variables. This study's general objective is to assess the role of university governance in enhancing research performance in the Ethiopian public universities. Data were gathered from six public universities to understand the rationales, strategies, and significance of university governance principles with the aim of encouraging research undertakings in the universities.

### *3.2 Research Design*

This research employed a descriptive research design, which is commonly used by researchers to facilitate the examination of multiple study variables. Cohen (2011) and Dawson (2009) further demonstrated that large-scale survey research utilizing questionnaires is a common approach in quantitative research to produce statistics.

To gather data, a questionnaire was designed for various respondent groups. Creswell (2014) revealed that when conducting descriptive research, a questionnaire is used to collect quantitative data that can be used to describe patterns, attitudes, or opinions of a population based on sample data. As a result, the researchers' survey instrument and background questionnaire served as the primary data collection tools to collect quantitative data that could be used to describe the patterns, attitudes, and opinions of the target population, which in this case consisted of various stakeholders in Ethiopian public universities.

### *3.3 Participants and Sampling Procedure*

The study participants were selected from six public universities using a multistage sampling technique, drawn from a total of 46 public universities across the country. The researchers began by obtaining a

comprehensive list of universities from the Ministry of Education's annual abstract for 2020, which categorizes institutions into three types: research universities, applied science universities, and comprehensive universities. This classification allowed the researchers to purposefully select participants from both research and applied science institutions. The focus of the study extended across four regional states: Oromia, Amhara, Addis Ababa, and the Southern Nations, Nationalities, and Peoples' Regional States (Now it is divided into four different regions, namely Sidama region, South Ethiopia region, Central Ethiopia region and South West Ethiopia region). Initially, public universities were categorized based on their founding locations. Specific universities within each category were then deliberately chosen to ensure geographical representation. The selected institutions included Dire Dawa University, Arsi University, Kotebe Education University, Wolaita Sodo University, Bahir Dar University, and Arba Minch University. To determine an appropriate sample size for the study, the researchers employed Yamane's sample size determination formula (Madow, 1968) as presented below. This method ensured that the sample accurately represented the diverse academic environments in the Ethiopian public universities while facilitating a thorough examination of governance principles and their impact on research performance.

$$n = \frac{N}{1 + N(e)^2}$$

N= the total population of the study and n, shows the sample size of the study used in  
e= 0.05

$$n = \frac{7488}{1 + (0.05)^2} = 377$$

### *3.4 Data Collection Instruments*

#### *3.4.1 Questionnaire*

The development of the questionnaire for this study involved a systematic process. An extensive literature review was conducted to select key items from previous studies. An expert panel of three educational management specialists reviewed and approved these items, ensuring their relevance and accuracy.

The questionnaire was then refined through a pilot test with 20 academic leaders and 40 academic staff members at Hawassa University. The pilot test resulted in a Cronbach's alpha of 0.8676, indicating high internal consistency and reliability among the items. This suggests that the items effectively measure the same construct consistently, enhancing the comparability and accuracy of the collected data (Field, 2012).

The survey utilized a five-point Likert scale, a common psychometric tool in educational and social sciences research (Joshi et al., 2015). Moreover, South et al., (2022) added that using the scales, researchers can gather quantitative estimates of subjective characteristics, generating numerical data that can be summed up like other quantitative data gathered for an assessment. Respondents indicated their degree of agreement by choosing from a scale ranging from "strongly disagree" to "strongly agree." This format is user-friendly and facilitates straightforward data analysis (Creswell, 2014).

Before distributing the questionnaire, participants were provided with a detailed explanation of the study's objectives, the significance of their responses, and the importance of maintaining confidentiality. Finally, the questionnaires were administered face-to-face to both academic leaders and faculty members.

### *3.5 Validity and Reliability*

Validity, as defined by Cook and Beckman(2006), refers to the trustworthiness of test results for a specific purpose. To ensure validity, the questionnaire items were designed based on existing literature and

reviewed by supervisors for face and content validity. Based on their feedback, appropriate revisions were made to enhance the validity of the survey questionnaire.

Reliability, on the other hand, refers to the consistency or repeatability of scores obtained from a data collection instrument across multiple evaluations. According to Kimberlin and Winterstein (2008), reliability pertains to the consistency of scores across multiple evaluations. It assesses item equivalence and measurement stability over time. In this study, the Cronbach's alpha coefficient was used to evaluate internal consistency. The result,  $\alpha = 0.8676$ , indicates high internal consistency and reliability, suggesting that the items effectively measure the same construct. This value exceeds the threshold of 0.72 recommended by Edmonds and Kennedy (2017) and Gay et al., (2012), confirming significant item homogeneity and reliability.

### *3.6 Data Collection Procedure*

The data collection process spanned a period of three months, from June 1, 2023, to August 27, 2023, which gave sufficient time for the researchers to administer the questionnaires, collect responses, and ensure that the data gathered were comprehensive and representative of the target population. Before collecting the data, the survey questionnaire was developed by reading and modifying parts of another researcher's questionnaire to make it appropriate for the particular study, following the example of Lera (2019) questionnaire. Additionally, the researchers adapted Mekonnen's (2020) dissertation on the impact of governance and governmentality on the influence of the Bologna process on Ethiopian higher education to develop the instrument further. This allowed the researchers to draw up a well-established and relevant framework to develop their own instrument, ensuring that it captured the key aspects of university governance and its influence on research performance in the Ethiopian context.

### 3.7 Data Analysis

Data analysis was conducted using a structured protocol. Once gathered, the data were evaluated to ensure completeness, verified, coded, and organized according to the central themes of the study questions. This approach aligns with Creswell's (2014), quantitative survey design, which involves analyzing trends and opinions within the study population. The analysis was tailored to answer the research questions, employing statistical tests appropriate for the types of questions asked.

The researchers entered the data into SPSS version 20 for analysis. The primary objectives were to determine correlation and regression results, which were presented in tabular form for interpretation. By adhering to these protocols, the researchers ensured that the data analysis process was rigorous, reliable, and aligned with the study's objectives.

### 3.8 Econometric Specification

This study employed multiple linear regression (MLR) models to analyze the impact of university governance on research performance. The analysis was based on a basic econometric model (Equation 1), as outlined by Wooldridge (2012), which is commonly used to examine the causal relationship between independent and dependent variables. This model served as a foundation for designing a specific model tailored to the study's objectives.

The variables under study comprised accountability, autonomy, academic freedom, transparency, and responsibility, which were the basic pillars of governance principles as far as university governance is concerned. These variables have been emphasized in previous studies. In support of this, Pandey (2004), Lera (2019) and Musselin (2021) highlight their importance in university governance. Therefore, the study focused on these five independent variables to explore their influence on research performance.

The study employed research performance as a dependent variable and accountability, autonomy, responsibility, academic freedom, and

transparency, as independent variables to explain the role of university governance as depicted in Equation 2 as follows:

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon_i \quad \text{--- 1}$$

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon_i \quad \text{--- 2}$$

$Y_i$  = the unobserved variable that denotes the university governance,  $\beta_0$  constant term,  $X_1 - X_5$  are explanatory variables indicating  $X_1$  accountability,  $X_2$  autonomy,  $X_3$  responsibility,  $X_4$  academic freedom, and  $X_5$  transparency.

### 3.9 Ethical Considerations

This research project was approved by the Research Ethics Committee of the College of Education at Hawassa University, under reference number COE-REC/013/23. Informed consent was obtained from all participants, ensuring adherence to ethical standards throughout the study. The ethics statement aligns with the guidelines established in the 2008 Declaration of Helsinki. This process not only involved providing participants with a consent form but also included engaging them in meaningful discussions to ensure they fully understood the information presented. Researchers are tasked with fostering an environment where participants feel comfortable asking questions and expressing any concerns they may have.

## 4 Results

### 4.1 Demographic Characteristics of the Respondents

This study aimed to evaluate the role of university governance in enhancing research performance in Ethiopian public universities. The following table provides an overview of the demographic characteristics of the respondents, categorized by frequency and percentage.



**Table 1. Socio-demographic characteristics of participants**

<b>Variables</b>	<b>Category</b>	<b>Frequency(N)</b>	<b>Percent (%)</b>
<b>Sex</b>	Male	253	<b>67.10</b>
	Female	124	<b>32.90</b>
	Total	377	<b>100</b>
Educational qualification	B.A	39	<b>10.34</b>
	M.A	278	<b>73.74</b>
	PhD	57	<b>15.12</b>
	Post-Doctoral	3	<b>0.80</b>
	Total	377	<b>100</b>
Academic title	GA-I	9	<b>2.39</b>
	GA-II	24	<b>6.37</b>
	As .lecturer	50	<b>13.26</b>
	Lecturer	223	<b>59.15</b>
	Assistant professor	68	<b>18.04</b>
	Associate Professor	3	<b>0.79</b>
	Total	377	<b>100</b>
Work experience	1-5 years	32	<b>8.49</b>
	6-10years	88	<b>23.34</b>
	11-15years	156	<b>41.38</b>
	16-20years	99	<b>26.26</b>
	21-25 years	2	<b>0.53</b>
	26 & above	-	-
<b>Total</b>		<b>377</b>	<b>100</b>

Source: Own computation from survey data, 2023

Key: GA-I = Graduate Assistant I, GA-II = Graduate Assistant II, and As. Lecturer = Assistant Lecturer

The socio-demographic characteristics presented in Table 1 provide important insights into faculty experiences with university governance and research performance in the Ethiopian public universities. The gender distribution reveals a significant imbalance, with 67.10% males and only 32.90% females. This disparity suggests that male faculty members may exert a greater influence on responses related to governance and research performance.

In terms of educational qualification, a notable majority, (73.74%) had a master's degree, while 10.34% had a bachelor's degree. The remaining 15.12% had a doctorate degree, and a mere 0.80% held post-doctoral experience. This distribution indicates that the participants were highly educated, which is likely to provide adequate data related to university governance issues and research performance in the study settings.

The academic titles held by respondents further reflect their experience and authority within the academic structure. Among the surveyed population, 59.15% were lecturers, 18.04% assistant professors, 13.26% assistant lecturers, 6.37%, graduate assistant II, 2.39%, graduate assistant I, and 0.79% associate professors. This distribution suggests that most respondents possessed significant experience, which likely informs their opinions on governance practices. Additionally, those in higher academic positions may have different stakes in governance outcomes, potentially influencing their perceptions of research performance.

Regarding work experience, over 41.38% of the respondents had over ten years of experience, 23.34% had from six to ten years, and 26.26% had eleven to fifteen years. This work experience enhances respondents' understanding of the complexities involved in university governance and its impact on research performance.

#### *4.2 Statistical Analysis of Data Gathered*

This section presents the statistical analysis of data collected from participants in the study.

**Table 2. The grand mean and standard deviation of independent variables (n= 377)**

Variables	Grand Mean	Std. Deviation	Observations
Accountability	2.807	1.136	377
Autonomy	2.703	1.131	377
Responsibility	2.762	1.135	377
Academic freedom	2.697	1.087	377
Transparency	2.808	1.093	377

Source: Own computation from survey data, 2023

Table 2 interprets the data collected from the participants in terms of the role of university governance in enhancing research performance. As seen above, the grand mean and standard deviation of 2.807 and 1.136, respectively, for accountability, indicate that the application of accountability principles is not fully developed.

Similarly, the implementation of autonomy principles in research practices yielded a grand mean of 2.703 and a standard deviation of 1.131. These figures indicate a notable level of agreement among the participants on the importance and application of autonomy principles in decision-making processes associated with university governance. This consensus indicates that most participants acknowledge the importance of granting researchers the freedom to explore and define their own methods and inquiries, which is essential for fostering innovation and upholding ethical standards in academic settings.

In addition to autonomy, the study examined the current status of responsibility principles across the research areas. The findings, in this connection, yielded a grand mean of 2.762 and a standard deviation of 1.135. These values imply a somewhat similar level of agreement among participants, indicating that they also acknowledge and value the principles of responsibility when conducting research. Responsibility involves not only adherence to ethical guidelines but also accountability for decisions and the implications of research outcomes. The close similarity in the grand means between autonomy and responsibility

suggests that while participants see the necessity for autonomy in their research endeavors, they equally recognize the importance of being responsible in their conduct.

Moreover, the current state of academic freedom at universities is summarized by a mean score of 2.697 and a standard deviation of 1.087. Public universities have clearly outlined principles of academic freedom in their legislation, detailing how decisions are made, the responsibilities of everyone involved in research, and the freedom granted to researchers according to established rules and procedures. However, in practice, the actual implementation of academic freedom does not align with these stated principles.

Finally, Table 2 outlines the current state of teachers' transparent decision-making as reported by academic officers at various universities. The average mean score was 2.808, with a standard deviation of 1.093. This indicates that transparency in decision-making is exercised, but it varies among the public universities. Transparency is a key principle of university governance, necessitating clarity and participation in all matters. However, in practice, some decisions may lack transparency.

**Table 3. The relationship between university governance and research**

Variables	Matrix of correlations					
	(1)	(2)	(3)	(4)	(5)	(6)
(1) Research performance	1.000					
(2) Accountability	0.522	1.000				
(3) Autonomy	0.291	0.337	1.000			
(4) Responsibility	0.396	0.406	0.366	1.000		
(5) Academic freedom	0.409	0.391	0.385	0.377	1.000	
(6) Transparency	0.268	0.331	0.341	0.391	0.334	1.000

**Source: Model output, 2023**

Table 3 illustrates the relationship between educational accountability and research performance in the university context. The findings reveal

that 52.2% of respondents believe that the effective implementation of accountability principles positively influences research performance in higher education. This suggests that accountability is perceived as a key factor in enhancing the quality of research outputs in public universities in Ethiopia. However, the autonomy of these institutions to conduct problem-solving research is notably weaker, with a correlation result of only 29.1%. This suggests that many university researchers currently face challenges in their research processes and resource allocation due to interference from top management.

According to Shin et al. (2022), institutional autonomy empowers higher education institutions to set their own goals and programs. However, the correlation between institutional autonomy as a predictor variable was not significant in this study. This lack of significance highlights that power and authority remain concentrated among academic leaders and stakeholders, which hampers autonomous decision-making in research activities. The violation of governance principles further complicates this issue, as the implementation of autonomy is insufficient compared to the academic demand for independent research.

Despite its importance, institutional autonomy has not received adequate attention in the Ethiopian public higher education, primarily being viewed through the lens of strategic governance direction. Respondents indicated that autonomy is poorly practiced due to external pressures affecting university activities, including research initiatives and decision-making processes influenced by government directives particularly regarding budget allocations.

The correlation analysis also revealed a 39.6% relationship between responsibility in conducting research and the initiative to uphold accountability within research practices. Additionally, there is a 40% correlation between academic freedom and research performance, suggesting that academic freedom significantly impacts teaching and learning approaches at public universities. Furthermore, the correlation between transparency in university governance and transparent decision-making regarding research was found to be 26.8%. This indicates that while academic transparency is crucial for improving

university education services through research, the anticipated transparent actions and decisions were not consistently implemented. Overall, it appears that the principles of university governance and their theoretical and practical applicability are still at their infancy in the Ethiopian public universities. Many academic leaders and administrators struggle to distinguish governance principles from broader challenges facing these institutions. The data analysis suggests a disconnect between understanding university governance in general and its specific principles; global and international governance frameworks have not been effectively integrated into the dynamic educational processes in these institutions.

**Table 4. Regression analysis of the influence of university governance on research performance**

Variables	Coefficient	Std. err	T	P>  t
Accountability	-0.568	0.074	7.62	0.000***
Autonomy	0.206	0.062	0.33	0.0711
Responsibility	-0.264	0.068	3.85	0.000***
Academic Freedom	-0.162	0.062	2.60	0.010**
Transparency	0.016	0.059	0.27	0.784
_Cons	-0.031	0.209	0.15	0.880
Number of obs.		378		
F(5,371)		125.25		
Prob>F		0.000***		
R-square		0.6280		
Adj R-square		0.6230		
Root MSE		0.56322		

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

Source: Model output, 2023

Table 4 shows that the influence of accountability on the research performance of public universities is explained as  $t=7.62$ ,  $p=0.000$ , where the p-value is less than the significance level (0.05). This indicates

that the implementation of accountability principles strongly correlates with the research performance of public universities in the study area. Specifically, increasing accountability in university governance by one unit improves research performance by 0.568 units, and this finding is statistically significant. This indicates a clear relationship between accountability in governance and the effectiveness of research in public universities. Autonomy-wise, the table depicts a weak correlation between research and performance of public universities. The results indicated ( $t=0.33$ ,  $p=0.074$ ), with the p-value exceeding the significance level of 0.05. This suggests a weak correlation between the predictor variable and the outcome variable. In the public universities under consideration, all stakeholders who conducted research did not practice the academic freedom vested in them. The implementation of autonomy as a university governance principle was affected by (0.20 units). This implies that there is no strong alignment between the implementation of autonomy and the effectiveness of research performance in the universities. In the same way, regarding the impact of implementing responsibility while conducting research in public universities, it was found that  $t= 3.85$ , and  $p=0.000$ , with a p-value below the significance level of 0.05. This indicates that being responsible and following accountability principles significantly influences research transparency, which is crucial for achieving the desired results in public universities. Additionally, an increase of one unit in responsibility boosts research performance by (0.26 units), which is statistically significant. This suggests a clear relationship between responsible governance and effective research performance in these universities.

Table 4 also shows the regression result of academic freedom ( $t= 2.60$   $p=0.010$ ), where the p-value was less than the significance level (0.05). This result indicated that the predictor variable and the outcome variables have a cause-effect relationship that the implementation of academic freedom as a university governance principle affects performance by 0.162 units, which is statistically significant. This implies that applying academic freedom in university governance positively influences the effectiveness of research in public universities.

The last predictor variable in Table 4 was transparency, for which the regression analysis presented two conflicting scenarios. On the one hand, the t-value was 0.27 and the p-value was 0.784, which is above the significance level of 0.05. This indicates no significant relationship between the academic transparency implemented by university leaders and the academic staff assigned to conduct research. Additionally, the regression results indicate that the implementation of transparency actually has a negative effect of (-0.016 units). This suggests that, in the public universities studied, the situation has worsened for everyone involved.

Above all, the regression analysis shows that accountability, responsibility, and academic freedom are crucial for good university governance and play a significant role in research performance. This, in turn, impacts the teaching and learning experience in universities.

## **5. Discussions**

The study examined the role of university governance in enhancing research performance in Ethiopian public universities. In recent years, governance has evolved to encompass interactions among universities, state authorities, and internal dynamics, including power relations and decision-making processes. These governance systems are designed to guide and coordinate various stakeholders based on institutionalized rules, reflecting the changing relationships between the state, society, and educational institutions, as well as the growing expectations placed on higher education in a knowledge-based economy (Leisyte et al., 2009).

Despite the critical importance of governance for fulfilling academic missions in the twenty-first century, the findings indicate that university leaders are not effectively leveraging governance structures to improve research performance. This is particularly concerning given the limited research on governance issues in sub-Saharan Africa, including Ethiopia. Previous studies have highlighted similar challenges faced by institutions in Ghana (Bingab et al., 2018). Although higher education



governance has gained international attention and is recognized as a key policy concern, much of the existing research has been constrained by theoretical frameworks rooted in public administration and policy (Sultana, 2012). This study corroborates these findings, revealing a scarcity of empirical studies on the influence of university governance on research performance.

The involvement of stakeholders such as faculty, students, and administrators in decision-making is essential for effective university governance (Ochara, 2021). However, our findings indicate a lack of transparency in decision-making in public universities. The regression analysis revealed no significant relationship between academic transparency and the involvement of academic leaders and staff in research activities ( $t=0.27$ ,  $p=0.784$ ), with a negative effect of  $-0.016$  units. This suggests that a lack of transparent decision-making has led to non-compliance with established rules and regulations. In line with this, De Rassenfosse and William (2015) and Truong et al., (2021) asserted that the primary factor used to assess performance and a university ranking globally is the accomplishment of scientific research. The accomplishments of lecturers and advancements in science will determine universities' future development. Thus, it becomes the most significant responsibility of the faculty in every higher education institution to conduct problem-related scientific research.

Moreover, while university governance is expected to enhance research performance, our study found a negative correlation between institutional autonomy and research outcomes. Despite efforts to promote autonomy in decision-making for research activities, faculty and academic leaders appear to lack practical autonomy. This contradicts previous assertions that autonomy enables institutions to pursue their missions independently (Pandey, 2004). Instead, our findings indicate that external pressures from government entities significantly hinder the development of higher education systems by restricting institutional autonomy.

Institutional autonomy is generally understood as the right to self-determination regarding hiring practices, student admissions, teaching content and methods, standards control, funding allocation, and future

development (Hai & Anh, 2022). However, contrary to earlier studies (Varghese 2016), our research revealed a negative relationship between autonomy and transparency regarding its influence on research performance. The weak participation of faculty members in shared governance practices further highlights this issue.

Additionally, while academic freedom shows a 40 percent correlation with research performance, indicating its significant influence on teaching and learning approaches, transparency remains a critical area for improvement. The anticipated transparent actions and decisions are often not implemented effectively. As noted by Flórez-Parra et al. (2017), transparency and trust are fundamental for ensuring credibility and achieving good governance.

The correlation between autonomy and academic freedom appears to be weak when considering the overall academic autonomy afforded to stakeholders. Kováts (2018) further emphasizes the role of institutional autonomy in transforming the legal regulatory environment, particularly in public higher education. External bodies, specifically the government, intervened significantly in research-related decisions, which hindered the development of the higher education system. However, development of the system depends on institutional autonomy, which is commonly understood as the right to self-determination in the hiring of academic staff, student admission, teaching content and methods, standards control, priority setting, funding allocation within available amounts, and future development (Hai & Anh, 2022).

The study also explored whether applying university governance principles enhances research performance. While accountability, responsibility, and academic freedom were implemented relatively well, autonomy and transparency negatively impacted research enhancement. This inconsistency underscores the need for further investigation into bridging theoretical knowledge with practical implementation among academic leaders to improve research performance (Pham 2012).

The influence of university governance principles on enhancing research performance offers several benefits. It clarifies distinctions between

university governance principles and other forms of institutional governance, which can be complex for scholars. This research serves as a valuable foundation for further studies on similar issues while providing opportunities for academic leaders to deepen their understanding of governance by integrating global experiences into their existing research culture.

In conclusion, effective university governance plays a crucial role in enhancing research performance through appropriate management systems. Conducting problem-solving research is one of the primary functions of public universities that foster competitive environments both nationally and internationally. However, many institutions face challenges due to mismanagement and ineffective implementation of governance principles such as accountability, autonomy, academic freedom, transparency, and responsibility. Addressing these challenges is essential for improving the overall quality of higher education in Ethiopia.

## **6. Implication of the Study**

The study on the role of university governance in enhancing research performance in Ethiopian public universities can provide valuable insight for educational leaders and academics. It can help them understand the concept of university governance and its theoretical implications for enhancing the research performance of academic staff, stakeholders, and administrative staff. The study can also equip university presidents, vice presidents, college deans, faculty heads, and department heads with theoretical knowledge about effective governance practices that involve resource acquisition and utilization. Furthermore, it can help them understand the norms, values, and regulations embedded in the broader institutional environment and how they shape university governance structures, decision-making processes, and practices in the institution.

The practical implications of the study can ensure that academic leaders make transparent, accountable, and participatory decisions related to research performance within the university. Academic leaders can make

decisions that impact research practices, enhancing the quality of education. The findings emphasize that the university governance framework can facilitate continuous improvement in the engagement of stakeholders to conduct research. The specific governance structures, policies, and practices implemented in each public university will influence the outcomes, ensuring that the decisions made are in line with the institution's missions, goals, and objectives.

The study highlights the importance of university governance in improving research performance in the Ethiopian public universities. While accountability, responsibility, and academic freedom positively impact research, autonomy and transparency may have negative effects due to external influences and poor governance practices. This underscores the need for a comprehensive governance approach to boost research output and create a competitive academic environment. Hence, addressing governance challenges is essential to improve the research culture in these institutions.

## **7. Limitations and Suggestions for Further Research**

This study offers valuable insights into the relationship between governance principles and research performance at the university level. However, several limitations may affect the quality and applicability of the research outcomes. A primary concern is the generalizability of the findings, which is constrained by a small sample size. This limitation may restrict the applicability of the results to institutions beyond those studied. To enhance generalizability, future research should aim for a larger and more representative sample.

Another significant limitation is the reliance on self-reported data, which can introduce biases stemming from individual perceptions. To improve the reliability and validity of future studies, it is essential to incorporate diverse data collection methods, such as surveys, document analysis, and focus groups. These approaches will provide a more comprehensive view of the issues at hand.

Moreover, future research should explore how university governance influences development, and its practical implications for enhancing educational provision at various levels, both nationally and internationally. Investigating these areas will help fill existing gaps in the literature, leading to a more nuanced understanding of how governance affects educational quality.

Furthermore, future researchers should conduct comparative and cross-cultural studies to examine the impact of different governance models and practices on education quality in various contexts. This can help identify best practices and inform policy decisions related to university governance. Employing diverse methodological approaches, such as case studies, longitudinal analyses, and mixed-methods designs, will deepen understanding of the complexities surrounding university governance and its impact on education quality.

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### **References**

- Abdelaziz, S. (2022). The Relation between Good Governance and Improving Performance in the Higher Education -HE- Institutions. *Business and Management Studies*, 8(2), 24. <https://doi.org/10.11114/bms.v8i2.5789>
- Abualrub, I., & Pinheiro, R. (2022). Aligning University Roles and Strategic Orientations. In P. Benneworth, T. Iakovleva, L.

Nordstrand Berg, R. Pinheiro, & E. Thomas, *Universities and Regional Engagement* (1st ed., pp. 126–139). Routledge.  
<https://doi.org/10.4324/9781003150299-9>

Abugre, J. B. (2018). Institutional governance and management systems in Sub-Saharan Africa higher education: Developments and challenges in a Ghanaian Research University. *Higher Education*, 75(2), 323–339. <https://doi.org/10.1007/s10734-017-0141-1>

Atashzadeh-Shoorideh, F., Sadoughi, M.-M., Sattarzadeh-Pashabeig, M., Khachian, A., & Zagheri-Tafreshi, M. (2019). Factors predisposing to shared governance: A qualitative study. *BMC Nursing*, 18(1), 9. <https://doi.org/10.1186/s12912-019-0334-2>

Babbie, E. R. (2013). *The practice of social research* (Thirteenth edition). Wadsworth Cengage Learning.

Bingab, B. B. B., Forson, J. A., Abotsi, A. K., & Baah-Ennumh, T. Y. (2018). Strengthening university governance in sub-Sahara Africa: The Ghanaian perspective. *International Journal of Educational Management*, 32(4), 606–624. <https://doi.org/10.1108/IJEM-02-2016-0039>

Cadez, S., Dimovski, V., & Zaman Groff, M. (2017). Research, teaching and performance evaluation in academia: The salience of quality. *Studies in Higher Education*, 42(8), 1455–1473. <https://doi.org/10.1080/03075079.2015.1104659>

Cohen. (2011). Research Methods in Psychology Research Methods in Psychology. In *Psychology* (Vol. 63, Issue 1).

Cook, D. A., & Beckman, T. J. (2006). Current Concepts in Validity and Reliability for Psychometric Instruments: Theory and Application.

*The American Journal of Medicine*, 119(2), 166.e7-166.e16.  
<https://doi.org/10.1016/j.amjmed.2005.10.036>

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4. ed). SAGE.

Dawson, C. (2009). Introduction to Research Methods. In *How To Content* (Vol. 53, Issue 4th Ed.).

De Rassenfosse, G., & Williams, R. (2015). Rules of engagement: Measuring connectivity in national systems of higher education. *Higher Education*, 70(6), 941–956.  
<https://doi.org/10.1007/s10734-015-9881-y>

Dea, M. (2021). University-Government relationship in Ethiopian public universities in the Framework of information asymmetry and goal conflicts. *Journal of Science and Inclusive Development Vol.3 No 1, 3, 21*. <https://doi.org/10.20372/jsid/2021-59>

Edmonds, W. A., & Kennedy, T. D. (2017). *An applied guide to research designs: Quantitative, qualitative, and mixed methods* (Second Edition). SAGE.

Field, A. (2012). *Discovering statistics using SPSS: And sex and drugs and rock'n'roll* (3. ed., repr). Sage.

Flórez-Parra, J. M., López-Pérez, M. V., & López-Hernández, A. M. (2017). Transparency and its determinants at Colombian universities. *Higher Education Research & Development*, 36(4), 674–687. <https://doi.org/10.1080/07294360.2016.1239613>

Gay, L. R., Mills, G. E., & Airasian, P. W. (2012). *Educational research: Competencies for analysis and applications* (10th ed). Pearson.

- Gebremeskel, H. H., & Feleke, K. M. (2016). Exploring the context of Ethiopian higher education system using Clark's triangle of coordination. *Tertiary Education and Management*, 22(2), 99–120. <https://doi.org/10.1080/13583883.2016.1149739>
- Hai, P. T. T., & Anh, L. T. K. (2022). Academic staff's participation in university governance—A move towards autonomy and its practical problems. *Studies in Higher Education*, 47(8), 1613–1626. <https://doi.org/10.1080/03075079.2021.1946031>
- Huang, F. (2018). University governance in China and Japan: Major findings from national surveys. *International Journal of Educational Development*, 63, 12–19. <https://doi.org/10.1016/j.ijedudev.2017.05.006>
- Joshi, A., Kale, S., Chandel, S., & Pal, D. (2015). Likert Scale: Explored and Explained. *British Journal of Applied Science & Technology*, 7(4), 396–403. <https://doi.org/10.9734/BJAST/2015/14975>
- Kezar, A. (2004). What is more important to effective governance: Relationships, trust, and leadership, or structures and formal processes? *New Directions for Higher Education*, 2004(127), 35–46. <https://doi.org/10.1002/he.154>
- Kimberlin, C. L., & Winterstein, A. G. (2008). Validity and reliability of measurement instruments used in research. *American Journal of Health-System Pharmacy*, 65(23), 2276–2284. <https://doi.org/10.2146/ajhp070364>
- Kivistö, J. (2008). An assessment of agency theory as a framework for the government–university relationship. *Journal of Higher Education Policy and Management*, 30(4), 339–350. <https://doi.org/10.1080/13600800802383018>



- Kováts, G. (2018). The change of organizational structure of higher education institutions in Hungary: A contingency theory analysis. *International Review of Social Research*, 8(1), 74–86. <https://doi.org/10.2478/irsr-2018-0009>
- Kumar, D. R. (n.d.). *Research Methodology*.
- Kusuma, H., Negara, S., & Purnamasari, D. I. (2018). Implementation of Good University Governance Principles in Managing New Universities Assets. *IJCSN-International Journal of Computer Science and Network*, 7(5), 304–310.
- Lee, Y. (2017). Understanding Higher Education Institutions' Publicness: Do Public Universities Produce More Public Outcomes than Private Universities? *Higher Education Quarterly*, 71(2), 182–203. <https://doi.org/10.1111/hequ.12120>
- Leisyte, L., Enders, J., & De Boer, H. (2009a). The balance between teaching and research in Dutch and English universities in the context of university governance reforms. *Higher Education*, 58(5), 619–635. <https://doi.org/10.1007/s10734-009-9213-1>
- Leisyte, L., Enders, J., & De Boer, H. (2009b). The balance between teaching and research in Dutch and English universities in the context of university governance reforms. *Higher Education*, 58(5), 619–635. <https://doi.org/10.1007/s10734-009-9213-1>
- Lera, M. D. (2019). *Perceived Governance Practices in selected Ethiopian Public Universities: Relationship with the Government, Autonomy, Accountability and Empowerment Perceived Governance Practices in selected Ethiopian Public Universities: Relationship with the Govern*. Addis Ababa University.

Mekonnen, G. T. (2020). *Governance and Governmentality: The Influence of the Bologna Process on Ethiopian Higher Education* (Issue March).

Mekonnen, G. T., Kilpatrick, S., & Kenny, J. (2022). Constrained autonomy: Academics and institutional leaders empowerment in Ethiopia in the context of the Bologna Process. *Journal of Further and Higher Education*, 46(2), 143–158. <https://doi.org/10.1080/0309877X.2021.1895091>

Melu, A. (2022). 6 - Brief Assessment of Higher Education Governance in Ethiopia: Reflection on the Leap of the Decade. *Journal of Higher Education in Africa*, 14(2). <https://doi.org/10.57054/jhea.v14i2.1503>

Musselin, C. (2021). University Governance in Meso and Macro Perspectives. *Annual Review of Sociology*, 47(1), 305–325. <https://doi.org/10.1146/annurev-soc-090320-012708>

Nafukho, F. M., Wekullo, C. S., & Muyia, M. H. (2019). Examining research productivity of faculty in selected leading public universities in Kenya. *International Journal of Educational Development*, 66, 44–51. <https://doi.org/10.1016/j.ijedudev.2019.01.005>

N.V Varghese *African higher education governance*. (n.d.).

Ochara, N. M. (2021). Governance Mechanisms for Fourth Industrial Revolution Artifacts in Higher Education Institutions: A Systems Perspective. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3814133>

- Ozga, J. (2009). Governing education through data in England: From regulation to self-evaluation. *Journal of Education Policy*, 24(2), 149–162. <https://doi.org/10.1080/02680930902733121>
- Pandey, I. M. (2004). Governance of Higher Education Institutions. *Vikalpa: The Journal for Decision Makers*, 29(2), 79–84. <https://doi.org/10.1177/0256090920040207>
- Pham, T. L. P. (2012). The Renovation of Higher Education Governance in Vietnam and its Impact on the Teaching Quality at Universities. *Tertiary Education and Management*, 18(4), 289–308. <https://doi.org/10.1080/13583883.2012.675350>
- Schillemans, T., & Bjurstrøm, K. H. (2020). Trust and verification: Balancing agency and stewardship theory in the governance of agencies. *International Public Management Journal*, 23(5), 650–676. <https://doi.org/10.1080/10967494.2018.1553807>
- Sedláček, J. (2017). The Impact of Governance on the Research Performance of European Universities in Cross-Country Comparisons. *Review of Economic Perspectives*, 17(4), 337–362. <https://doi.org/10.1515/revecp-2017-0018>
- Shin, J. C., Li, X., Nam, I., & Byun, B.-K. (2022). Institutional Autonomy and Capacity of Higher Education Governance in South Asia: A Comparative Perspective. *Higher Education Policy*, 35(2), 414–438. <https://doi.org/10.1057/s41307-020-00220-y>
- Smolentseva, A. (2023). Contributions of higher education to society: Towards conceptualisation. In S. Marginson, B. Cantwell, D. Platonova, & A. Smolentseva (Eds.), *Assessing the Contributions of Higher Education* (pp. 38–60). Edward Elgar Publishing. <https://doi.org/10.4337/9781035307173.00011>

- South, L., Saffo, D., Vitek, O., Dunne, C., & Borkin, M. A. (2022). Effective Use of Likert Scales in Visualization Evaluations: A Systematic Review. *Computer Graphics Forum*.
- Sultana, R. G. (2012). Higher education governance: A critical mapping of key themes and issues. *European Journal of Higher Education*, 2(4), 345–369. <https://doi.org/10.1080/21568235.2012.719672>
- Sun, X. (2023). Higher education management in western regions by educational power strategy and positive psychology. *Frontiers in Psychology*, 14, 1015759. <https://doi.org/10.3389/fpsyg.2023.1015759>
- Teichler, U. (2015). Changing Perspectives: The Professional Relevance of Higher Education on the Way towards the Highly-Educated Society. *European Journal of Education*, 50(4), 461–477. <https://doi.org/10.1111/ejed.12146>
- Truong, H. T., Le, H. M., Do, D. A., Le, D. A., Nguyen, H. T., & Nguyen, T. K. (2021). Impact of Governance Factors over Lecturers' Scientific Research Output: An Empirical Evidence. *Education Sciences*, 11(9), 553. <https://doi.org/10.3390/educsci11090553>
- Vorley, T., & Nelles, J. (2008). (Re) conceptualizing the academy: Institutional development of and beyond the third mission. *Higher Education Management and Policy*, 20(3), 1–17. <https://doi.org/10.1787/hemp-v20-art25-en>
- Wooldridge, J. M. (2012). *Introductory Econometrics: A Modern Approach*.